

PACIFIC PETROLEUM GEOLOGIST NEWSLETTER

of the Pacific Section

American Association of Petroleum Geologists

JANUARY 1995 NO. 1

A MESSAGE FROM THE PRESIDENT

As you read this, we'll be only a few months away from the May 1995 Pacific Section convention in San Francisco and registration packages will be in the mail. The PS-AAPG Executive Committee held its January meeting at the convention hotel to meet with members of the Convention Committee and to view the facilities. Everyone was impressed with the hotel and with the scheduled convention program. With over 150 abstracts received, the technical program is shaping up to be a strong one. Our traditional oral & poster sessions will comprise the bulk of the presentations, but a special electronic session will be offered, including internet demos, to give us a view of the future. Times are changing and we're changing with them. Also on the program will be the "Murder on the Menu" mystery dinner, a field trip to the wine country and other unique San Francisco social events for both you and your spouse to enjoy. Convention Chair Les Magoon and Vice-Chair Tom Wright, along with all the other committee members, richly deserve our thanks for their tireless efforts.

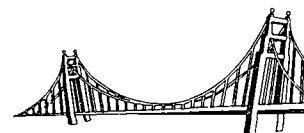
Although the San Francisco convention commands our immediate attention, a progress report on the joint 1996 National/Pacific Section convention in San Diego was given by incoming President Mark Wilson. The 1997 convention will be held in Bakersfield. A 6-man committee headed by Mr. John Howe and Mr. Paul Hacker is hard at work reserving the Convention Center and a convention hotel. Selection of a

Convention Committee Chair and key posts is getting started also. If you wish to participate in working on this convention, please contact any of the officers and we'll pass your name on to the Convention Committee. It's always gratifying to see so many society members working hard to ensure our future conventions are as successful as our past ones have been.

There are some changes in store for all of us in the Spring when our dues renewal cards arrive. Because the Post Office increased their rates at the beginning of the new year, we will have to increase our dues to \$12.00/year. The dues, supplemented by advertisements, are used to publish the PPG while all other society activities are paid for by convention and publication profits. Due to popular request, we've added a 3-year dues option to help those of us with bad memories. This way we'll be forgetting to renew our membership only once every three years instead of every year. A quick look at the PPG mailing label will remind us which year we will have to renew. Another change being made to the dues card is the addition of Fax and E-mail lines. These numbers will then be added to future directories so we can take advantage of these technical wonders.

— Robert Countryman
1994-95 President

**SAN FRANCISCO
MAY 3-5, 1995**



**CONVENTION ANNOUNCEMENT
1995 PACIFIC SECTION MEETING**

AAPG-SEPM-SEG-AEG-SPWLA-SCA-DEG-EMD-AWG



Hosted by

Northern California Geological Society
Bay Area Geophysical Society
Peninsula Geological Society

15 ORAL SESSIONS (over 125 papers)
Petroleum

Stratigraphy - Sedimentation
Environmental/Geotechnical
Northern California Geology

3 POSTER SESSIONS (over 26 posters)
4 Short Courses
5 Field Trips

BLUE-RIBBON KEYNOTE SPEAKERS, including:

Gordon Eaton, Director, U.S.G.S.
Douglas Wheeler, California Resources Secretary

plus our Gala Evening
"MURDER ON THE MENU"

SOCIETY'S NEWS

San Joaquin

The speaker at our January 10, 1995 meeting was Tony Reid of Bechtel Petroleum Operations who spoke on "Paleogeography of the Southern San Joaquin Basin". Tony stepped in at the last moment when our originally scheduled speaker, Donald Yeoman of the Jet Propulsion Lab in Pasadena, was unable to make it due to the flooding in the Los Angeles area. Hats off to Tony for an excellent talk.

Upcoming scheduled talks are:

February 14th, Don Lindsay will give a presentation entitled "Trekking in Nepal". This will be our annual spouse's night, so bring along your spouse or significant other for the special Valentine's Day event.

Dalton Lockman of Exxon in Thousand Oaks will be our guest speaker on March 14th with his talk on "Geology and Development of the Santa Ynez Unit."

On April 11th Donald Yeoman of J.P.L. will again attempt to present "Cosmic Collisions and Near Earth Objects".

Dinner meetings are held the second Tuesday of each month at the American Legion Hall, 2020 "H" Street, Bakersfield, CA. The adjustment of attitudes starts at 6:00 P.M., dinner is served at 7:00 P.M. and the talk begins at 8:00 P.M.

Coast

Future Speakers and Topics include:

2/21/95 - MILES HAYES - AAPG*
Distinguished Lecturer "Oil Spill Behavior"
* - This will be a joint meeting with SPE

3/21/95 - TOM HOPPS - Rancho Energy
"Oil and Gas Potential of the Los Padres National Forest"

4/18/95 - Dr. ED KELLER - UCSB
"Geology of the Santa Barbara Fold Belt"

Dinner meetings third Tuesday of each month, except July and August at the American Legion Hall, 83 S. Palm St.,

Sacramento

Noon luncheon meetings are held at the HUNGRY HUNTER RESTAURANT, 450 Bercut Drive, Sacramento, on the second and fourth Wednesdays of each month, when possible. For lunch reservations, please call Nancy Connolly of J.W. Bertholf at (916) 485-9164, at least one day in advance. If you have a topic for presentation, please discuss it with your President or Vice-President.

1994-95 SPA Officers

President:	Dale Gray
Vice-President:	Steve Burke
Secretary:	Arsen Shahnazarian
Treasurer:	Swiss Holmes

The last year was marked by several significant new discoveries, including step outs and new pools by North Valley north of Bounde Creek, Western Continental north of Willows-Beehive Bend, Tri-Valley on the south end of Rio Vista and north end of Dutch Slough, Nahama & Weagant at Bowman Road and two in the Grimes area, Samedan at the Yolo Airport, Enron/Amerada's Nixon Pool on Low Liberty Island, Anacapa's 3D discovery at Cache Slough, Amerada's Wineman well in Maine Prairie, several new pools by AA production using their new 3D survey and Vern Jones new pool discovery at Clarksburg.

Ventura. Meetings begin at 6:00 P.M. Reservations by Monday at (805) 644-9811.

1994-95 Coast Officers

President:	John T. Williams 805-296-6404
Vice-President:	Bernard Sentianin 805-525-5563
Secretary:	Scott G. Bates 805-650-2461
Treasurer:	Imelda Cragin 805-658-4681

Let's see, the scorecard shows that Vintage replaced Enron, Termo got Chevron's Willows stuff, Samedan took over Dekalb, the ex-Dekalb players turned into Cenex (and found some big gas along the way), Steve Ward left Reedy (RDR) to go to ARCO-Houston, Guy Burge is a geophysical consultant/skier, Ron Leineke wants to become Registered Geologist (-1) and Dalton Pollard is in on the Board of Registration for Geologists, Geophysicists and other lowly life forms.

But with all of this good news came the bad news of two operators going into bankruptcy (North Valley, Chapter 11 in August, 1994) and Nahama & Weagant (Chapter 7 in December, 1994). To add to the misery, PG&E hit the Sacramento Valley operators with the lowest price for gas since 1976 in August, \$1.06. This price quickly rebounded but hurt many operators, consultants, and drilling companies. The result was the lowest number of drilled holes in the Valley for as long as District 6 has kept records.

So, our current year, 1995, probably won't set any records, but we can expect a continued level of new discoveries and a level of activity similar to last year. I expect the success level to improve with the drilling of more locations based upon the 3D surveys, (four surveys planned for Spring, 1995) and drilling in areas of good well control. I expect there will be continued exploration efforts near the pipelines and in areas on non-PG&E dedicated acreage. Don't expect too many rank wildcats in 1995.

We lost more friends, a few more jobs and a few service companies. So, I for one am ready for the rebound. Give us \$2.50/MCF, 1000 BTU, 1/8th royalty and a quick connection and we will all be smiling this time next year.

Alaska

No report.
Alaska Geological Society
P.O. Box 101288
Anchorage, AK 99510

Northern California

Future Speakers and Topics include:

2/16/95 - WARREN J. NOKELBERG - U.S.G.S., Monterey
"The Russian Far East and Alaska - Geology and Mines" (unofficial title)

March (TBA) - DAVID G. GILLETTE - State Paleontologist of Utah, AAPG Distinguished Lecturer
"Seismosaurus, Mammoths, and the Real Jurassic Park"

April (TBA) - KENNETH R. MCCLAY - Royal Holloway, University of London, AAPG Distinguished Lecturer
"3-D Fault Systems in Rifts"

5/19/95 - JOSEPH DOMAGALSKI - U.S.G.S., Menlo Park
"National Water Quality Assessment Program in the Sacramento Valley, California" (unofficial title)

In addition to these speakers, the NCGS plans to host at least one field trip to Mt. Diablo led by Ron Crane and Craig Lyon. This trip was conducted twice in April-May, 1994, and is being held again in April and/or May by popular demand! Ron has spent much of his spare time mapping the flanks and areas adjacent to this Bay Area landmark, and has come up with some interesting (and controversial!) interpretations of the structural features there, based on his very detailed mapping and field work. He and Craig hosted an informative, enjoyable field trip, and have received many compliments from those who have attended the previous ones.

The focal point of this year's NCGS field trip agenda is the two day "Tectonic Belts of the Sierra Nevada" trip scheduled to be led by Dr. Howard Day of U.C. Davis on June 10 and 11, 1995. This trip has been painstakingly planned by NCGS Vice President and Field Trip Chair Tridib Guha. This year he has managed to arrange a very economical two-day trip with overnight camping in the Northern Sierras. It will be a transect of the range from the western Foothill Metamorphic/Ophiolite Belt to the crest of the Sierra Nevada Batholith. This is the most ambitious field trip the NCGS has hosted in recent years, and should be quite well received by its members.

Northwest

NWPA Speaker's Programs

February 10th - City Club of Portland/MAC

Mr. Robert Ridgley, CEO of Northwest Natural Gas and President of the American Gas Association will speak on his activities as president of the Country most active natural gas association. The AGA is the industry leader in natural gas marketing, production, and distribution assessment. Mr. Ridgley will outline the future potential and problems for natural gas as the fuel of choice.

March 10th - Sea/Tac

Ms. Hazel O'Leary, Secretary of Energy, Department of Energy will speak on the "The Nation's Energy Plan". The DOE currently has a number of proposals to enhance domestic petroleum production and distribution. Ms. O'Leary will explain the details and how the Northwest will meet its energy needs.

April 14th - MAC

Gunar A. Meneks, a representative of the Northwest Natural Gas will discuss alternative fuel vehicles (LNG/CNG).

May 12th-Seattle/Tacoma

Mr. Scott Montgomery, Editor Petroleum Frontier will speak on his latest publication the Petroleum of British Columbia. Mr. Montgomery in 1985 published an 80 page compilation of the published petroleum exploration history of the Northwest.

NWPA BOARD MEETING

NWPA Officers and Board of Directors met 2 hours before the regular luncheon meeting which was held at the Portland Multnomah Athletic Club on November 19, 1994. Present at the meeting were Bert Mueller, Dan Wermeil, Jeff Penick, Bill Rodgers, Peet Soot, Bob Pinotti and Joe Omelchuck. Mark Norby is revising the organization's by-laws. Bill Rodgers commented that NWPA may not be able to use it's name because someone has already filed this name with the State Corporation Department (didn't Kyle Huber do this in 1982 or 1983?). Some of the discussion concerned re-

viewing the purpose and scope of activity of the NWPA.

NAHAMA & WEAGANT FILES BANKRUPTCY

It was disclosed within the last few weeks that Nahama & Weagant Energy has filed for protection under Chapter 7 of the Federal Bankruptcy Law. This development is troublesome to other parties and royalty owners in the Mist Gas Field as Nahama & Weagant was operator and 2/3rds owner of the field. The company was aggressive and successful in finding many new producing wells. Oregon Natural Gas Development Corp. is a 1/3 owner in the field.

WASHINGTON STATE LEASE SALE

The State Department of Natural Resources is planning an oil and gas lease sale on February 23, 1995 in Olympia. Deadline for nomination of parcels was November 17, 1994. For information on the sale call: Nancy Joseph at (206) 902-1600.

Los Angeles Basin

Luncheon meeting alternate third Thursdays at noon at Unocal Center, Los Angeles.

No report.

1995 Pacific Coast S.E.G. Calendar

Feb. 7 - SD Mtg - Rob Negrini(CSUB). Groundwater.

Feb. 8 - ND Mtg - Rob Negrini(CSUB). Groundwater.

Mar. 7 - SD Mtg - Bruce Bowen (TGS). Slope Fan Plays of East Texas and Southeast Louisiana.

Mar. 8 - ND Mtg - Bruce Bowen (TGS). Slope Fan Plays of East Texas and Southeast Louisiana.

• ND-Bakersfield, Ken Baird 805-321-6613

• SD-Los Angeles, Gordon Stewart 818-796-6836

FEATURE ARTICLE

Late Prehistoric Earthquake(s) in Coastal San Diego County, California

Gerry Kuhn, 2439 Sacada Circle, Carlsbad, CA

Mark R. Legg, ACTA Inc., 23430 Hawthorne Blvd. #300, Torrance, CA

Eric Frost, Department of Geological Sciences, San Diego State University, San Diego

Paleoseismological investigations in California have typically focused on surface fault rupture of major, well defined faults such as the San Andreas. Unknown or blind faults pose more difficult problems for paleoseismological investigation, requiring surrogate features that evidence past earthquakes. Offshore faults represent another common type of "blind" fault in that their submerged character precludes direct investigation (at least with present technology) of paleo fault rupture. Like blind thrust faults in California and faults associated with major historic and pre historic earthquakes in the eastern U.S., offshore faults require identification of secondary ground failures, such as liquefaction related features, in coastal or island areas as evidence of paleoearthquake occurrences.

We recently identified evidence of large scale paleo liquefaction near the city of Carlsbad, in north San Diego County, California. In general, the paleo liquefaction is evident as abundant and widespread injection dikes of fine grained white sand, inferred to be ancient beach sands, into and through plastic clay rich surficial deposits, recognized as an ancient intertidal lagoon. Review of aerial photography of the region, taken prior to recent coastal development, showed areas covered by "Mima Mounds". Field inspection, in railroad cuts and within an undeveloped open field in the area of the mounds, showed them to be liquefaction "sand blow deposits" (terminology after Sieh, 1978). Along these exposures subcircular to linear areas of clean white sand were identified which were surrounded by brown to red brown clay and silty clay lagoonal deposits. At one location tan sands had been injected both vertically and laterally through clay rich deposits. Similar sand blow deposits have also been identified in the Camp Pendleton area near Las Pulgas Canyon.

The area covered by the sand blow features appears to correlate with the areal extent of ancient lagoons. In the Carlsbad area these deposits cover about 10 km and are now elevated more than 15 meters above sea level. At Camp Pendleton these features cover more than 10 km and are elevated in excess of 25 meters above sea level. The paleo lagoons lie within what is inferred to be the Nestor (ca. 120 ka) or Bird Rock terrace (ca. 80 ka) (Eisenberg, 1985; Lajoie and others, 1991), although fossils (*Donax gouldi* and *Mytilus* sp.) recovered from the lagoon and beach strata may show a younger age based upon excellent condition and preservation of color. Root casts and immature soil profiles developed at the top of the lagoon deposit are likely Holocene in age, and a north to northeast trending zone of faulting cuts this horizon in the vicinity of the liquefaction features.

Major known active faults in this area (Fig. 1) include the Newport Inglewood Rose Canyon fault zone (NIRC) which lies from 4-6 km offshore, west of the coastline where the liquefaction features are observed. North to northeast trending branch and secondary fault zones extend onshore from the NIRC at several places including the Christianitos fault zone near San Onofre and an unnamed zone about 10 km north of Carlsbad (Fig. 1; Euge and others, 1973; Hannan, 1975). Abundant fracturing and faulting within the lagoon deposit offset the young soil horizons present in the area of the liquefaction features, and may represent a similar branch or secondary fault zone. Lineaments identified in aerial photographs and spot checks from field mapping suggest that this zone is continuous for at least 5-10 km onshore. Slickensides and geomorphic features indicate a significant component of lateral slip on these faults. At present, the fault responsible for the mainshock(s) associated with the sand blow deposits and surficial faulting, and the length of the primary fault rupture are unknown. However, the large lateral extent (>25 km) and size of the sand blow deposits along the coast implies that an earthquake(s) of Magnitude 6.5 or greater was likely.

Although the age of faulting and liquefaction events remain to be precisely determined, the size of the sand blow deposits, area affected, and uplift of former intertidal deposits suggest that coastal uplift in this region may occur by infrequent, large earthquakes. Such events would be very destructive to coastal development in southern California both directly from the strong shaking and induced ground failures, and also by the potential for major local tsunami generation. Based upon the character of faulting in the area, especially the offshore faulting as imaged by multichannel seismic reflection profiles, we suggest that large earthquakes occur along the deeper parts of the offshore Newport Inglewood Rose Canyon fault zone, which we infer to become listric, dipping more gently eastward at depth into the major regional detachment fault system. Such a fault geometry is consistent with interpretations in the Los Angeles Basin where the Compton Los Alamitos trend is considered a major ramp structure of this detachment system (Shaw, 1993). Our postulated east dipping fault structure is consistent with wide angle seismic profiles obtained across the coastline in the Oceanside area (Y.G. Li, D. Okaya, and T. Henyey, personal communication, 1993). Youthful northwest trending thrust faults, which cut the seafloor in places, have been identified near the base of the continental slope in this area (Crouch and Bachman, 1989; Fischer and others, 1991) and demonstrate the late Quaternary obliquely convergent style of deformation in this region. This tectonic style provides a viable mechanism or the observed uplift of coastal marine ter-

ances in this region and may represent a serious earthquake hazard.

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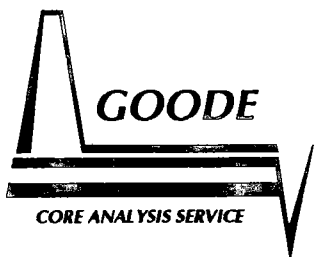
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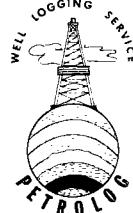
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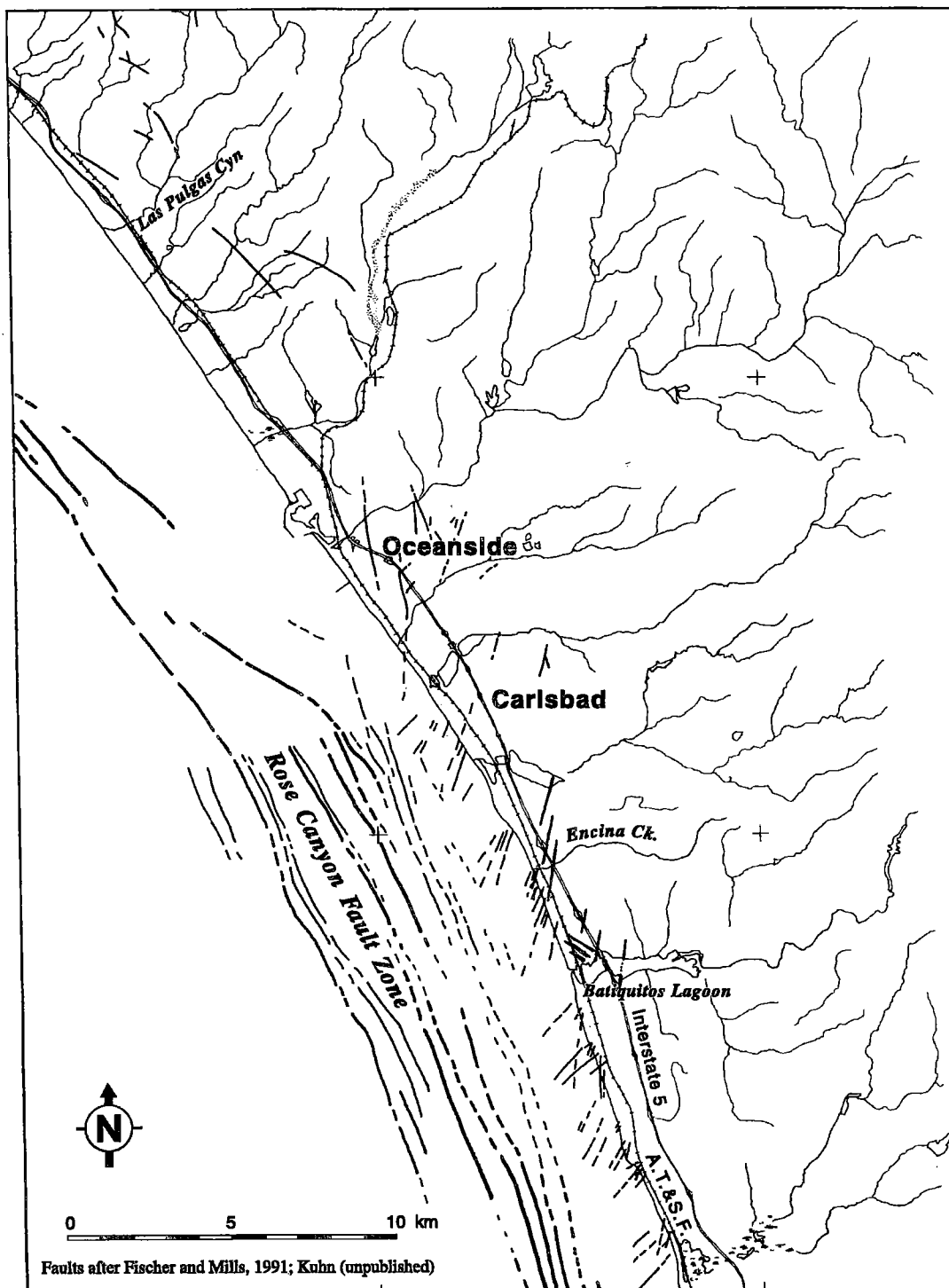
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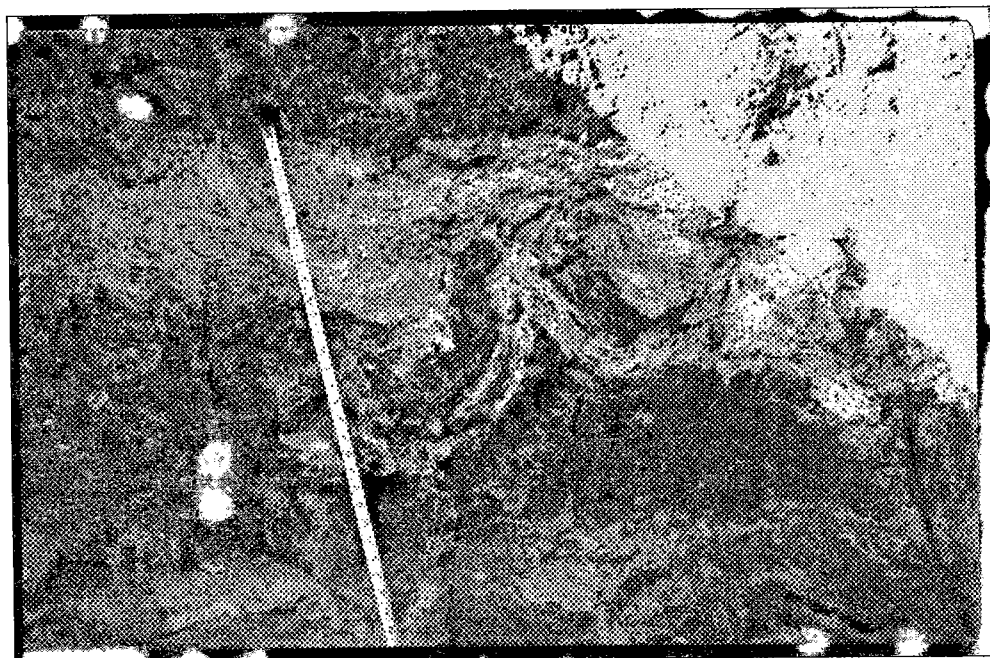
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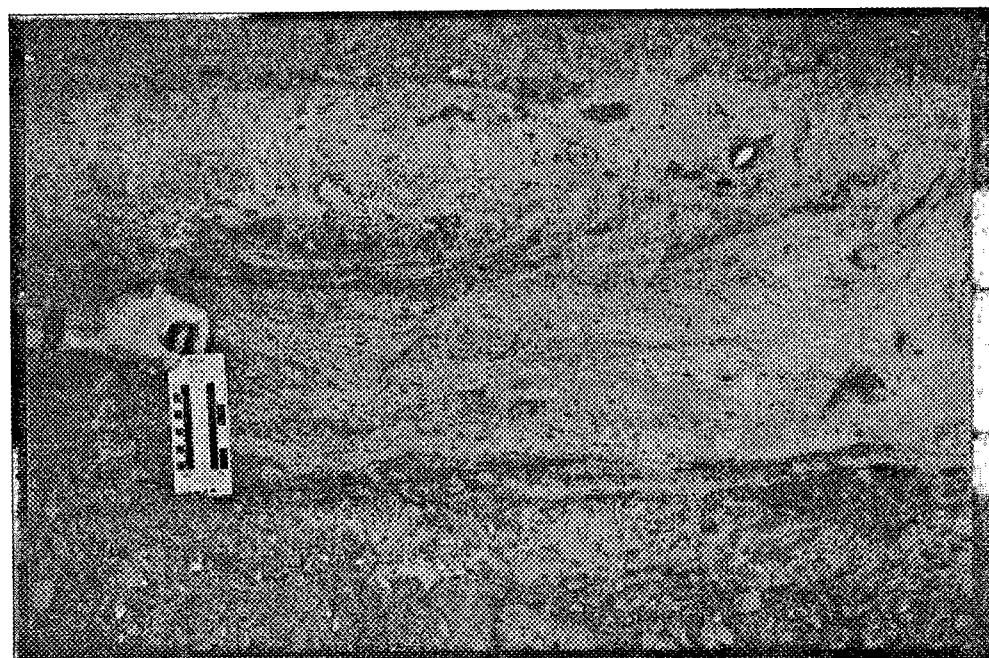
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Contorted liquefied sand layer below lagoon clays near Carlsbad, CA.



Microfaults in liquefied sand layer near Carlsbad, CA.

UNIVERSITIES OF THE PACIFIC SECTION

The Department of Geological Sciences at San Diego State University is an active and stimulating place to be. We have an involved faculty, a friendly group of students, and excellent support staff. If you're looking for a school to earn a B.S. or M.S. degree in the geological sciences, you couldn't find a better program. Our bachelor's degree program allows specialization in seven different areas, each adding additional coursework in a related discipline. B.S. degree options are: General Geology; Geophysics (extra physics courses); Hydrogeology (extra math); Engineering Geology (extra civil engineering); Paleontology (extra biology); Geochemistry (extra chemistry); and Marine Geology (extra oceanography courses).

San Diego State University has the largest enrollment of the 21 California State University campuses. During the fall 1994 semester, SDSU has 28,372 students. The SDSU Department of Geological Sciences has been one of the ten largest grantors of both B.S. and M.S. degrees in geology in the United States for over 30 years. Students have long been attracted to SDSU because San Diego is such a great place to live and offers easy access to diverse and exciting field areas. The campus is built on Eocene sedimentary rocks yet lies only minutes away from the Peninsular Ranges batholith, the Pacific Ocean, the opening ocean basin of the Salton Trough, and Baja California. Any type of geologic field study one desires is close at hand — and the department has always stressed field work as the bedrock of an education in geology.

The 20 full-time faculty and their research areas are:

Patrick Abbott, Ph.D. University of Texas: Sedimentation and tectonics; natural disasters

J. David Archibald, Ph.D. U.C. Berkeley: Vertebrate paleontology

Richard W. Berry, Ph.D. Washington Univ.: St. Louis; Clay mineralogy; marine geology

Kathe K. Bertine, Ph.D. Yale Univ.: Marine geochemistry

Steven M. Day, Ph.D. U.C. San Diego: Seismology; earthquake sources

Clive D. Dorman, Ph.D. Oregon State Univ.: Physical oceanography

Eric G. Frost, Ph.D. USC: Structural geology; computer imaging

R. Gordon Gastil, Ph.D. U.C. Berkeley: Geotectonics; Geology of Baja CA

Gary H. Girty, Ph.D. Columbia Univ.: Structural geology; regional tectonics

Barry B. Hanan, Ph.D. Virginia Tech: Isotope geochemistry

David Huntley, Ph.D. Colorado School Mines: Groundwater hydrology

George R. Jiracek, Ph.D. U.C. Berkeley: Geophysics; electromagnetics

J. Philip Kern, Ph.D. UCLA: Invertebrate paleontology

David L. Kimbrough, Ph.D. U.C. Santa Barbara: Geochronology; tectonics

C. Monte Marshall, Ph.D. Stanford: Paleomagnetism; petroleum geology

Richard H. Miller, Ph.D. UCLA: Micro-paleontology; biostratigraphy

Gary L. Peterson, Ph.D. Univ. Washington: Stratigraphy

Thomas K. Rockwell, Ph.D. U.C. Santa Barbara: Neotectonics; soils

Kathryn W. Thorbjarnarson, Ph.D. UCLA: Groundwater flow and organic contaminants

Michael J. Walawender, Ph.D. Penn State Univ.: Igneous petrology

There are five adjunct faculty on campus full time:

Victor E. Camp, Ph.D. Washington State Univ.: Volcanology

Lisa Dubois, Ph.D. Brown Univ.: Micro-paleontology; Quaternary oceanography

Charles Herzig, Ph.D. U.C. Riverside: Petrology; tectonics

George L. Kennedy, Ph.D. U.C. Davis: Quaternary invertebrate paleontology

Harold Magistrale, Ph.D. Caltech: Seismotectonics

SDSU emphasizes the teacher/scholar model where all faculty involve graduate and undergraduate students in their research programs. All students have opportunities to participate in research programs that cover the entire spectrum of the geological sciences. Students regularly are co-authors of scientific papers, present talks at professional meetings, help lead field trips and become an integral part of the professional community. Our graduates readily find employment and are spread throughout the energy industry, environmental and hydrogeologic realm, and academia.

The department has just completed a new four-story addition to our building featuring a complete, indoors, air-conditioned, multi-room rock processing facility and a computer room, reserved for geology students only, that has over 1 million dollars of new equipment. Students are issued plastic-card keys that allow 24-hour access to 30 work stations (486 Pentium type, Macintosh quadras; Sun x-terms), a map-scale digitizer and plotter, state-of-the-art laser and color printers, a Stardent visualization work station with software for image creation and production of computer fly-by videos, a up-to-date complement of software, and ties into the Internet system.

We also have moved out into three adjoining buildings to create a complex of research labs with NSF money, including a geochronology lab with a brand new VG sector 54 multi-collector, thermal ionization mass spectrometer. In addition to all the standard equipment that most geology departments possess, we now have a production well in the Sweetwater River Valley with 8 monitoring wells, and coring capability to 10's of feet depth.

At the foundation if it all, we are a relaxed and friendly group. If not before, come visit us during the 1996 AAPG national meeting. If we can provide any other information, please write or call Pat Abbott, Department of Geological Sciences, SDSU 92182-1020; (619) 594-5591.

RUSSIA: Simultaneous Lease Sale

The Russian Federation, Committee on Geology, has proposed that simultaneous oil and gas lease sales be held on both sides of the international border—in the Russian Northern and Southern Chukchi Sea Area and the U.S. Chukchi Sea and Hope Basin Planning areas.

Russian officials have already planned a 1997 sale in the Chukchi Sea as part of the Russian Far East Oil and Gas Leasing Program. The U.S. also has a proposed sale identified for the Chukchi.

A cooperative effort gives the U.S. an opportunity to provide Russia with training in environmental and resource analysis and involving different constituent groups, which will be transferable to other natural gas and oil projects.

"This effort also provides us an opportunity to develop an international resource management model," Kallaur said, "and for both our nations to learn more about the resources in the Arctic."

"We're interested in determining if combining our resources in this remote area would benefit both Russia and the United States by allowing us to coordinate environmental protection measures and increase the scientific data available to each country," said Kallaur.

"This project will enable MMS to share with the Russian counterparts our experience in developing environmental safety and economic conditions that are to be met by the private sector," she said.

PETROLEUM TECHNOLOGY OF THE WORLD — National Convention

"Petroleum Technology of the World" the 1995 AAPG Convention, will be held in Houston, Texas, March 5-8, hosted by the Houston Geological Society along with SEPM. This year's program includes approximately 600 papers in technical and poster sessions, and offers you an excellent opportunity to acquire up-to-date information on our ever-changing industry. The annual meeting of AAPG's Divisions – EMD, DPA, and DEG will be held in conjunction with the meeting.

The AAPG headquarters hotel will be the Hyatt Regency, and the SEPM headquarters hotel will be the Doubletree at Allen Center. Technical sessions, exhibits and our headquarters office will be at the George R. Brown Convention Center.



Association for Women Geoscientists to Offer Chrysalis Scholarship

The Association for Women Geoscientists is pleased to announce that at least 2 Chrysalis Scholarships will be awarded on March 31, 1995. The \$750 awards will be given to geoscience Masters or Ph.D. candidates to cover expenses associated with finishing their theses. The Chrysalis Scholarship is for women who have returned to school after an interruption in their education of one year or longer. The support can be used for anything necessary to assist the candidate in completing her thesis, such as typing, drafting expenses, field work, or child care.

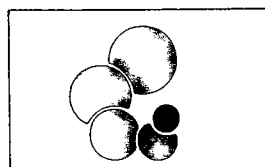
Applications should be made by February 29, 1995. The applicant should write a letter stating her background, career goals and objectives, her involvement in both the geosciences and her community, how she will use the money, and explain the length and nature of the interruption to her education.

The applicant should also submit two letters of reference. The reference letters should include a statement of the applicant's prospects for future contributions to both the geosciences and her community. Her thesis advisor should also include when the candidate will finish her degree and what requirements are as yet to be completed.

For information on obtaining an application or for additional information please contact:

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NATIONAL MAPPING DIVISION DATA GRANT PROGRAM FOR LAND PROCESSES RESEARCH

The United States Geological Survey's National Mapping Division (USGS/NMD), Department of Interior, is distributing limited amounts of remotely sensed satellite data at no cost to qualified nonprofit organization that will apply these data to land processes research. Digital data available through the Program include advanced very high resolution radiometer (AVHRR) data and Landsat multispectral scanner (MSS) data with coverage limited to the conterminous United States, Alaska, and Hawaii. A committee of National Mapping Division researchers will review the data grant applications.

NMD Data Grant Program awardees must sign a data rights agreement to become USGS affiliated users. In exchange for using NMD Data Grant Program data, awardees will be required to submit reports summarizing the use of the data products in land processes research.

Deadline for receipt of data grant requests in April 1, 1995.

To obtain forms, contact:

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COMMUNITY ENERGY NIGHT

*Dr. Margaret Maxey
Energy and the Environment:
Shot Gun Wedding or Custody Dispute*

Energy is vital to America's ability to maintain a healthy economy and to our nation's strategic security. It is essential that responsible and visionary public policies be implemented to ensure the continued development and conservation of our country's resources. An informed public is the most effective means of realizing the oil and gas industry's goals for the benefit of our nation.

To this end, 17 oil and gas related organizations have combined to present COMMUNITY ENERGY NIGHT to meet in a social setting with leaders and interested members of the community. We hope to provide a better understanding of the industry in their community and the nation; to give the community an opportunity to meet owners and employees of companies who are a part of this industry; and to learn the extent to which oil and gas utilization permeates our society.

FOR MORE INFORMATION, CONTACT:
Jim Joslyn (805) 589-7210

WEDNESDAY, APRIL 26, 1995
Social Hour 5:30 Dinner 6:30 Program 7:30
Red Lion's Main Ballroom
Bakersfield, California

Chips From the Well Sample Repository

The recent low interest rates, and continued low level of activity in the California petroleum industry have reduced the repository's revenues to a critical level. Presently we project that revenues will fall short of meeting the 1994/1995 budget by about two months operation. Fortunately this gives us just enough time to participate in the Pacific Section AAPG convention early next May.

Despite this grim situation work continues, more than 240 drawers of the 585 donated by the Walter Stern library have been filled with curated micro fossil and thin section slides. This nearly completes the curation of those micro samples on hand, however, discussions are now under way to acquire the collection of a major company.

Academia is presently providing the majority of users. Students from Stanford, Duke, Wyoming, and both Cal State Bakersfield and Sacramento are currently working with CWSR cores.

Well data, such as well Summaries or histories, core descriptions, and E-logs, are always needed so keep us in mind when cleaning out your files, garages, or mini-storage.

— Russ Robinson
Curator

Bill Rintoul

One of the largest independents in the United States has positioned itself for what could prove to be a major role in the Southern San Joaquin Valley oil patch.

Enron Oil & Gas Co., Houston, in late December closed the purchase of 404,000 acres of undeveloped fee mineral interest and 5,800 acres of undeveloped mineral leasehold interest from Arco that may be the most concentrated exploratory block of acreage to change hands in the nation since Arco acquired the fee properties from Tenneco in 1988. The purchase price was not revealed.

The acquisition complements Enron's purchase in June 1994 of mineral rights for 230,000 acres in the Southern San Joaquin Valley from Santa Fe Energy Resources.

Arco, in putting its acreage up for sale, described the package as offering some of the best onshore potential remaining in California. The assets, a spokesman said, represented a complete exploration company, though unstaffed, that had compiled decades of data, concepts, maps and studies with prospects in all stages of development.

The block covers 409,800 acres, or some 640 square miles, in the San Joaquin Valley. With exception of scattered parcels in Tulare County north of the Jasmin field and portions of Carrizo Plains and the Caliente Range in San Luis Obispo County, the acreage is in Kern County, mainly consisting of Kern

County Land Co. acreage acquired by Tenneco with purchase of the land company in 1967.

The largest shares of the Kern County acreage are in three sectors, including one extending northwest from the Rosedale field almost to the Trico gas field, another west of Bakersfield extending from the Strand field southeast to the vicinity of the Rio Viejo field and another at the south end of the valley extending from the Yowlumne field south to the foothills south of Wheeler Ridge.

The block also comprises parcels in the vicinity of the Mount Poso, Fruitvale, Mountain View, Cymric, Lost Hills, Semitropic, North Antelope Hills and Cal Canal fields, among others.

Prospects in the large block include three that have been permitted, six documented and ready to permit and 22 developing.

The three permitted prospects and the sections on which exploratory wells have been permitted are Tsunami, Sec. 10, 30S-28E, one-half mile northwest of the Mountain View field; Aktuno, Sec. 28, 11N-19W, one-half mile north of the central portion of the Tejon field; and Martinique, Sec. 1, 30S-25E, one-half mile west of the main area of the Strand field.

The six documented and ready to permit prospects have not been publicly identified. Among them, the nine developed prospects, if exploratory wells were successful, could prove up estimated unrisks reserves totaling 61.5 million barrels of oil equivalent, Arco said.

The assets include 3,335 miles of 2D seismic in 496 lines and 171 square miles of 3D seismic in 6 surveys. The 3D seismic surveys mainly were made in all or portions of 4 townships, including 30S-26E, 11N-20W, 11N-21W and 11N-22W, Kern County.

Also included are geological and geophysical assets consisting of approximately 100,000 well logs, more than 50 regional studies and technical reports, about 1,000 key maps and a Sun 3D workstation.

For the present, the land will be managed from Enron's Denver office. Rob Sterling, former vice president, exploration and development, for Nahama & Weagant Energy Co., joined Enron in January and, working out of Denver, will serve as principal geologist assigned to evaluation of the former Arco lands.

Enron ranked 11th in the OGI300 list published in the September 5, 1994, issue of Oil & Gas Journal. The company's total assets were \$11.5 billion. In net income, Enron ranked 9th with \$332.5 million.

Enron Oil & Gas Co. is active in the Sacramento Valley, with production in the Arbuckle, Bounde Creek, East Islands, Grimes, West Grimes, Kirkwood, Lindsey Slough, Malton-Black Butte, Putah Sink, Rice Creek, East Rice Creek, Rio Vista, Sutter City, Willows-Beehive Bend and Winters fields and an unnamed field, according to the Conservation Committee of California Oil & Gas Producers.



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DEG Environmental Issues Committee Review

Oilspills: A Geological Perspective

The U.S. offshore petroleum industry has been accused of causing great harm to the coastal waters from oilspills resulting from blowouts, tanker and other accidents.

Blowouts

The most notable blowout in U.S. waters, the 1969 Santa Barbara Channel spill, released between 35,000 and 110,000 barrels of crude. The greatest damage was to birds — 6,000 to 15,000 dead — and some local populations of barnacles. Local tourism also suffered very briefly. The fish, shell fish, borrowing fauna, kelp and marine mammals were not noticeably affected.¹ Industry's record since this accident is exceptional. Since 1971, offshore blowouts spilled a total of 910 barrels of oil from some 23,000 wells drilled in federal waters. This amounts to about six quarts of oil spilled per well — about as much as an oil change for the family car. Compare this to the submarine oil seeps of the same Santa Barbara Channel, perhaps the most prolific marine seeps in the world, flowing from 100 to 900 barrels of crude oil every day, since 1776, when a Spanish friar in the area described the "oil which the sea throws up" and "the springs of it which flow into the sea."²

Tankers

Accidents do happen, but they're seldom if ever the calamity they're made out to be. At least one observer said that the oil on the beaches from America's largest tanker spill, the Exxon Valdez, "...will probably last ten years."³ Yet a 1993 report showed that the oil is, in ecological terms, gone, confirming nature's ability to degrade and dissipate spilled oil in such a high energy environment.⁴ This was to be expected considering the history of almost all tanker spills. Perhaps the most dramatic example comes from WW2. In the first six months of 1942, tankers sunk by German submarines

within 50 miles of the U.S. Atlantic coast released 145 million gallons of petroleum, the equivalent of 13 Valdez spills. A 1977 study⁵ found that, aside from cleaning swimming beaches for tourists, no remedial action was taken. Yet in the few areas where enough data could be found, "...regional wildlife and economy survived with minimal difficulty....wildlife populations bear no traces of diminished numbers let alone exterminated species."

Oil in the Ocean

The world's oceans receive and cope with some 23 million barrels of oil every year, but the offshore oil patch is a minor contributor. According to a 1985 National Academy report:⁶

Source	MMB/year
Natural (seeps, erosion, atmosphere)	3.9
Transportation (accidents)	2.9
Transportation (all other)	7.4
Waste (municipal, industrial)	7.1
Runoff (municipal, industrial)	1.1
Offshore Oil Production	0.3

References

- 1 Mielke, James E., "Oil in the Ocean: The Short-and-Long Term Impacts of a Spill", Congressional Research Service Report for Congress, 90-356 SPR, 1990.
- 2 Wilkinson, Elbert R., "California Offshore Oil and Gas Seeps", report of the California Division of Oil and Gas, 11 p., 1972.
- 3 Gary Ott, NOAA Scientific Support Coordinator, Amicus Journal, summer issue, 1989.
- 4 Hans Jahns and Bruce Koons, "The Fate of the Oil from the Exxon Valdez: A Perspective", ASTM Symposium on Environmental Toxicology and Risk Assessment, 1993.
- 5 Brad Campbell, et al, "Impact of Oil Spillage from World War II Tanker Sinkings", MIT Dept. of Ocean Engineering, 1977.
- 6 National Academy of Science, "Oil in the Sea: Inputs, Fates and Effects", 1985.

RECENT DEVELOPMENTS IN CALIFORNIA WATER LAW AND POLICY

Santa Barbara, Calif.—For the seventh consecutive year, leading water experts will participate in an all-day conference in Santa Barbara that will provide information on recent developments in state water law and policy as well as on how environmental issues are affecting water resource development and management. "Managing California's Liquid Gold," sponsored by UCSB Extension, will be held on Friday, March 17 from 8:30 AM to 4:30 PM at Fess Parker's Red Lion Resort in Santa Barbara.

Speakers include David Kennedy, director, State Department of Water Resources, John Wodraska, general manager, Metropolitan Water District, Roger Patterson, regional director, United States Bureau of Reclamation, Floyd Wicks, president, Southern California Water Company, Bill Hetland, director of public utilities, City of Fresno, Doris Beutel, section chief for Section 9, United States Environmental Protection Agency, and Tom Clark, general manager, Kern County Water Agency.

The cost of the all-day event is \$185 per person which includes lunch and a course syllabus. The course is approved for seven hours of Minimum Continuing Legal Education. For a brochure, call 805-893-3351.

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Recommended Reading

This column has been missing from the last two issues of the *Pacific Petroleum Geologist Newsletter* primarily due to a lack of space. However, during this absence no word has been received from the membership either lauding or condemning the editors actions. Accordingly, if no further response is forthcoming by the next deadline, March 15, 1995, the Recommended Reading column will be permanently deleted from the *Pacific Petroleum Geologist Newsletter*.

— Russ Robinson/Pat Bell
Editors

SPE Western Regional Meeting

March 8-10
Bakersfield, California

The meeting theme, "Sharing Technology to Add Value" addresses the ways in which technology transfer can work to improve business and reduce costs. Technical topics include drilling, formation evaluation, production engineering, reservoir engineering, and environmental and safety issues.

MOVING ON...



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Senior Exploration Geologist
Maxus/Midgard Energy Company
P.O. Box 400
Amarillo, Texas, 79188
(806) 371-4406.



Formerly Senior Exploration Geologist, Maxus Ecuador, Inc., Quito, Ecuador, South America.

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Formerly with Nahama & Weagant of Bakersfield, CA.

INCREDIBLE SEPM PUBLICATION SALE

SEPM publications that are currently in print up through publication #49 will be sold for 10% of the listed member price. The 10% charge is to cover the cost of shipping and handling. Don't miss this opportunity to acquire some very good publications essentially for free. This offer will be good on orders received prior to March 31, 1995.

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*7. Symposium #1: <i>Paleozoic Paleogeography of the Western United States</i> : Stewart, J.H.; Fritsche, A.E. (eds), 1977, 502p., ISBN 1-878861-59-X	8.00
*8. Symposium #2: <i>Mesozoic Paleogeography of the Western United States</i> : Howell, D.G.; McDougall, C.A. (eds), 1978, 503p., ISBN 1-878861-58-1	8.00
*14. <i>Field Guide #4: Tertiary and Quaternary Geology of the Salinas Valley and Santa Lucia Range, Monterey County, California</i> : Graham, S.A. (ed.), 1979, 148p., ISBN 1-878861-55-7	2.00
*15. <i>Monterey Symposium: Monterey Formation and Related Siliceous Rocks of California</i> : Garrison, R.E.; Douglas, R.G. (eds), 1981, 327p., ISBN 1-878861-54-9	6.00
*20. <i>Upper Cretaceous and Paleocene Turbidites, Central California Coast -Fieldtrip Guide</i> : Frizell, V. (ed.), 1981, 117p., ISBN 1-878861-52-2	4.00
*22. <i>Geologic History of Ridge Basin, Southern California: (Maps included)</i> : Crowell, J.C.; Link, M.H. (eds), 1982, 304p., ISBN 1-878861-50-6	10.00
*25. <i>Monterey Formation and Associated Coarse Clastic Rocks, Central San Joaquin Basin, California</i> : Williams, L.A.; Graham, S.A. (eds), 1982, 95p., ISBN 1-878861-47-6	2.00
*26. <i>Neotectonics in Southern California</i> : Yeats, R.S.; Keller, E.A.; Lajoie, K.R.; Rockwell, T.K.; Sarna-Wojcicki, A.M.; Yerkes, R.F. (eds), 1982, (GSA Field Trip), 134p., ISBN 1-878861-46-8	1.00
*28. <i>Cenozoic Marine Sedimentation, Pacific Margin, U.S.A.</i> : Larue, K.K.; Steel, R.J. (eds.), 1983, 247p., ISBN 1-878861-44-1	6.00
*30. <i>Tectonics and Sedimentation Along Faults of the San Andreas System</i> : Anderson, D.W.; Rymer, M.J. (eds), 1983, 120p., ISBN 1-878861-42-5	4.00
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*33. <i>Petroleum Generation and Occurrence in the Miocene Monterey Formation, California</i> : Isaacs, C.M.; Garrison, R.E. (eds), 1983, 228p., ISBN-878861-39-5	6.00
*34. <i>Guidebook to the Stony Creek Formation, Great Valley Group, Sacramento Valley, California</i> : Bertucci, P. F.; Ingersoll, R.V. (eds), 1983, 32p., ISBN 1-878861-38-7	1.00
*35. <i>Cenozoic Geology of the Simi Valley area, Southern California: (Volume and Guidebook)</i> : Squires, R.L.; Filewicz, M.V. (eds), 1983, 266p., ISBN-1-878861-37-9	6.00
*36. <i>Upper Cretaceous Depositional Systems, Southern California-Northern Baja California</i> : Abbott, P. L. (ed), 1984, 140p., ISBN 1-878861-36-D	3.00
*37. <i>Kreyenhagen Formation and Related Rocks</i> : Blueford, J. E. (ed), 1984, 98p. ISBN 1-878861-35-2	1.00
*38. <i>Tectonics and Sedimentation Along the California Margin</i> : Crouch, J.E.; Bachman, S.B. (eds), 1984, 188p., ISBN 1-878861-34-4	5.00
*39. <i>Geology of the Baja California Peninsula</i> : Frizzell, V. A., Jr. (ed), 1984, 273p., ISBN 1878861-33-6	6.00
*42. <i>Geology of the Upper Cretaceous Hornbrook Formation, Oregon and California (Maps included)</i> : Nilsen, T. H. (ed), 1984, 257p., ISBN 1-878861-30-1	10.00
*43. <i>Franciscan Geology of Northern California</i> : Blake, M.C., Jr. (ed), 1984, 254p., ISBN 1-878861-29-8	7.00
*45. <i>Siliceous Microfossil and Microplankton Studies of the Monterey Formation and Modern Analogs</i> : Casey, R.E. (ed), 1986, 154p., ISBN 1-878861-27-1	6.00
*48. <i>Geologic transect Across the Western Transverse Ranges (includes fold-out sections)</i> , Southern California: Davis, T.L.; Namson, J. S. (eds), 1986, 74p., ISBN 1-878861-24-7	5.00
*49. <i>Geology of the Upper Cretaceous and Lower Tertiary Rocks near Lake Nacimiento, California</i> : Grove, K.; Graham, S. (eds), 1986, 63p., ISBN 1-878861-22-0	4.00

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Short Course #4

The Petroleum System: A Technique to Reduce Exploration Risk

Sponsored by the San Joaquin Geological Society

Date: Saturday, May 6
Time: 8:00 AM to 5:00 PM
Instructors: Wally Dow, DGSI, Houston, Texas
 Les Magoon, U.S.G.S., Menlo Park
Fee: \$170 (includes refreshments, lunch and a copy of AAPG Memoir 60, "The Petroleum System - From Source to Trap")
 (w/o AAPG Memoir 60, the cost is \$100)
Limit: 30

All explorationists need to reduce the risk related to finding oil and gas. The petroleum System is a practical way to identify and risk exploration opportunities. The best-selling AAPG Memoir 60, *The Petroleum System — From Source to Trap*, edited by the instructors, Les Magoon and Wally Dow, is the course notes. Exercises are included.

If you think you know about the petroleum system, think again; few explorationists can really pass the test. The course has a dual role of integrating geological and geochemical data with risk evaluation. Emphasis will be placed on the proper method to map a petroleum system so that complementary plays can be logically developed. Petroleum system case studies from around the world will be discussed, with special emphasis on the California petroleum systems.

Since 1964, Wally Dow has worked for Amoco Production Research, Superior Oil, and Getty Oil, and with Robertson Research (US). Currently he is president of DGSI. He has over 30 publications on geology and geochemistry, and has presented numerous scientific papers. On the basis of his 1972 AAPG paper on Williston basin "oil systems", Wally is considered the founding father of the petroleum system concept.

Les Magoon spent eight years as an exploration geologist for Shell in Los Angeles before joining the USGS in Menlo Park. He has more than one hundred publications on the petroleum geology of Alaska and California. For the past ten years, Les has devoted most of his time to developing and presenting The Petroleum System.

ECOLOGY FIELD TRIPS

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The Bureau of Land Management has initiated a program of monthly earth science field trips to points of ecologic, geologic, paleontologic and historic interest throughout central California. These trips are designed for persons of high school age or older. It is not necessary to have a technical background to attend or benefit from the trips.

These field trips are recommended for teachers and many of them can be taken for in-service continuing education credit through California State University Bakersfield. Each trip includes a full spectrum of environmental and land management topics. The field trips are conducted using buses or vans. Private vehicles are not used except in special circumstances. A field guide is prepared for each trip which includes maps and directions which can be used by anyone for self-guided investigation of the ecology along the field trip route.

To register for trips, call Dr. Gregg Wilkerson at (805) 391-6081

1995 SCHEDULE

Kern Canyon-Lake Isabella-Walker Pass: Sat., March 4, 1995

The geology and ecology of the Kern Canyon, Kern River and Lake Isabella is investigated. Stops are made at the Keysville, Kernville and Weldon Mining Districts. Processes for recovery of tungsten and gold are discussed. Archaeology sites in the Walker Pass area (Solstice Rock and Birthing Stone) are also visited.

Mother Lode 95 Part I: East Belt Gold Mines: Sat., April 1, 1995

This trip examines the geology, mineralogy and mining history of the East Belt Mines in the vicinity of Placerville, Coloma, Georgetown and Volcanoville. Several mine sites are visited and the affects of mining on the ecology of the region discussed.

Mother Lode 95 Part II: The Northern Mines: Sat., May 6, 1995

This trip looks at the structure and stratigraphy of the Northern Mines of the Mother Lode including Allegheny, Downieville, Sierra City, Johnstown and Quincy.

Registration for field trips is \$20.00 per adult or \$40.00 per family. Children under 16 are \$10.00. For persons taking their own vehicles, registration is \$20.00 per person or \$40.00 per vehicle. If you have any questions about this program call Dr. Wilkerson at 805-391-6081 or write to MOTHER LODGE c/o Gregg Wilkerson, 7005 Hooper Ave., Bakersfield, CA 93308.

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American Association of Petroleum Geologists

MARCH 1995 NO. 2

A MESSAGE FROM THE PRESIDENT

As I write this column, many of us have just returned (but perhaps not yet recovered) from the annual National AAPG convention in Houston. Yet now our attention must turn to the PS-AAPG annual convention coming up in May in San Francisco. The registration all been mailed and the preregistration deadline of April 10th is quickly coming up on us. Early registration returns show that the "Murder on the Menu" dinner is being heavily subscribed. Over 50% of the early registrants have signed up for it. In addition, several field trips look like they'll sell out so, if you haven't registered yet, you'd better warm up the fax machine if you plan to attend any special events. I hope to see all of you in San Francisco the first week of May.

One of the more interesting displays at the Houston Convention (aside from the tornado that hit the

convention center one evening) was at the AAPG booth where a demonstration of the new AAPG Internet WWW (World Wide Web) homepage, called GEOBYTE, was being displayed. You can now dial in AAPG and access abstracts for upcoming meetings, find out what new publications are in the mill, etc. Its pretty interesting stuff and I'm pleased to note that the abstracts for the PS-AAPG San Francisco meeting were already on-line. Now you can dial in, type in a few key words and get a list of all abstracts that match your interests. Future plans are to keep several years of back issues of the Bulletin on line also. This is the way future abstracts are going to be delivered as the AAPG editor appears very intent on banishing the regional abstracts from being published in the Bulletin, as has already been done to the national abstracts.

When you open this issue, you will note that our PS-AAPG election time is fast approaching. Past-President Reinhard Suchsland, and his merry band of advisors, have worked hard over the last few months to come up with a slate of very capable candidates to run our society in the future year. As you notice, all eight candidates are very worthy and it won't be easy to pick those for which to vote. But since this isn't Chicago, you can only vote once for each office and therefor you'll have read the published vitae, talk to the candidates at local meetings and make up your minds. You will have two months until the ballots come out in the next newsletter. Regardless of who is elected, thanks to Reinhard's efforts, we know the society will be in good hands.

— Robert Countryman
President

Pacific Section Convention Hydrogeology Sessions Realigned

The 1995 Pacific Section Convention in San Francisco on May 3-5 will feature four sessions on hydrogeology and related topics. In order to provide a full day of hydrogeological papers on Thursday, May 4, the morning and afternoon session on Geology and Hydrogeology of the South Bay have been switched. Hydrogeologists now can attend both Groundwater I in the morning and the many fine hydrogeology papers in South Bay Session II. The revised schedule for the South Bay symposium is shown in next column.

THURSDAY MORNING ORAL

(SEPM/DEG) Geology and Hydrogeology of the South Bay
Room: California Room

Presiding: E. Sangines and D.W. Andersen

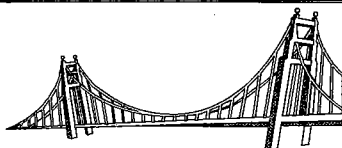
THURSDAY AFTERNOON ORAL

(SEPM/DEG) Geology and Hydrogeology of the South Bay
(continued)

Room: California Room

Presiding: E. Sangines and D.W. Andersen

SAN FRANCISCO MAY 3-5, 1995



CONVENTION ANNOUNCEMENT 1995 PACIFIC SECTION MEETING

AAPG-SEPM-SEG-AEG-SPWLA-SCA-DEG-EMD-AWG



Hosted by

Northern California Geological Society

Bay Area Geophysical Society

Peninsula Geological Society

15 ORAL SESSIONS (over 125 papers)

PETROLEUM

Great Valley Tectonics, Stratigraphy, and Petroleum Geology (8)
Pan-Pacific Exploration Frontiers (8)
New Growth for Old Fields / Resource Assessment (8)
California Resources, Tectonics, and Structure (8)

STRATIGRAPHY - SEDIMENTATION

Neogene History of Pacific Rim Basins (8)
Cenozoic Paleogeography of the Western U.S. (12)
General Session (6+)

ENVIRONMENTAL / GEOTECHNICAL

Environmental Applications of Remote Sensing (9)
Groundwater (13+)
South Bay Hydrogeology (9)

NORTHERN CALIFORNIA GEOLOGY

Neotectonics of the Greater Bay Area (8)
South Bay Geology (9)
Neogene Tectonics and Sedimentation of the East Bay Region (11)

3 POSTER SESSIONS (over 26 posters)

including a special Electronic Poster Session: Innovative Technology in the Earth Sciences (10+)

4 SHORT COURSES

The Petroleum System - Reduce Exploration Risk
Quaternary Environments of Deposition
Advances in Late Cenozoic Geochronologic Methods and their Applications
Soil Stratigraphy for Trench Logging

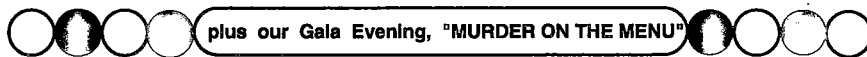
5 FIELD TRIPS

Earth Nectar: Wines and Geology of Napa Valley
Living on the Plate Edge: Golden Gate to San Andreas Lake
Geology of the Mt. Diablo Region
Sequence Stratigraphy - Black Diamond Mines
The San Francisco Bay - an Evolving Basin

BLUE-RIBBON KEYNOTE SPEAKERS, including:

Gordon Eaton, Director, U.S. Geological Survey

Douglas Wheeler, California Resources Secretary



April 1, 1995 is the deadline to order ANNOUNCEMENT

For CONVENTION ANNOUNCEMENT and registration material, fax or voice-mail to:

Zenon Valin

U.S. Geological Survey

fax: (415) 354-3224

voice-mail: (415) 354-3012

SPECIAL EVENTS

CALIFORNIA'S PLACE IN THE PAN-PACIFIC ENERGY FUTURE

A look into the crystal ball with our Keynote Panel : Mr. Douglas Wheeler, California's Secretary for Resources and 3 distinguished energy economists

- Dr. Fereidun Fesharaki, East-West Center, Honolulu
- Dr. Dale Nesbit, Decision Focus Inc.
- Mr. Thomas Burns, Chevron Overseas Petroleum, Inc.

discuss worldwide, Pan-Pacific and California supply and demand for oil and gas, and the effects of environmental regulations on the petroleum business on the West Coasts. Wednesday, May 3.

EARTH SCIENCE & THE NATION'S WELFARE - TODAY & TOMORROW

Dr. Gordon Eaton, Director, U.S. Geological Survey, addresses the All-Convention Luncheon on Wednesday, May 3.

THE PAST, PRESENT AND FUTURE FOR WOMEN GEOSCIENTISTS

A presentation by two charter members of the Association of Women Geoscientists during the AWG Breakfast on Thursday, May 4.

HYDROGEOLOGIST REGISTRATION - BLESSING OR CURSE?

California's got it - now what happens? A timely discussion by a panel of experts at the DPA/DEG Luncheon on Friday, May 5.

INNOVATIVE TECHNOLOGY IN THE EARTH SCIENCES

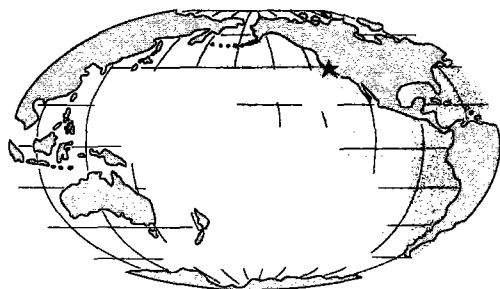
Sizzling geo-software and real-time continuous Internet during our special Electronic Poster Session on Friday afternoon, May 5.

MURDER ON THE MENU

During our Gala Dinner May 4th at the California Culinary Academy, crime is the entree and you will solve it for dessert!

PLUS:

- 16 oral sessions with 128 papers
- 3 poster sessions with 27 papers
- 4 short courses
- 4 field trips



1995 Pacific Section Annual Convention AAPG-SEPM-SEG-AEG-SPWLA-SCA-DEG-EMD-AWG

The Petroleum System: A Technique to Reduce Exploration Risk

Sponsored by the San Joaquin Geological Society

Leslie B. Magoon
General Chair
U.S. Geological Survey
345 Middlefield Road MS 999
Menlo Park, CA 94025
ph. 415-354-3006
fax 415-354-3224

Thomas L. Wright
General Vice Chair
Geologic Consultant
136 Jordan Avenue
San Anselmo, CA 94960
ph. 415-456-9244

Charles F. Kluth
Tech. Program Chair
Chevron Overseas
P.O. Box 5046
San Ramon, CA 94583
ph. 510-842-3748
fax 510-842-3030

Kenneth J. Bird
Operating Coordinator
U.S. Geological Survey
345 Middlefield Road MS 999
Menlo Park, CA 94025
ph. 415-354-3006
fax 415-354-3224

David G. Howell
Activities Coordinator
U.S. Geological Survey
345 Middlefield Road MS 902
Menlo Park, CA 94025
ph. 415-329-5430
fax 415-329-5490

Karen Grove
Convention Site Chair
Dept. of Geosciences
San Francisco State University
San Francisco, CA 94132
ph. 415-338-2617
fax 415-338-7705

David W. Andersen
Finance Chair
Dept. of Geology
San Jose State University
San Jose, CA 95192
ph. 408-924-5014
fax 408-924-5053

Date: Saturday, May 6
Time: 8:00 AM to 5:00 PM
Instructors: Wally Dow, DGSI, Houston, Texas
Les Magoon, U.S.G.S., Menlo Park
Fee: \$170 (includes refreshments, lunch and a copy of AAPG Memoir 60) or
\$100 (without Memoir 60)
Limit: 30 persons

All explorationists need to reduce the risk related to finding oil and gas. The petroleum System is a practical way to identify and risk exploration opportunities. The best-selling AAPG Memoir 60, *The Petroleum System — From Source to Trap*, edited by the instructors, Les Magoon and Wally Dow, is the course notes. Exercises are included.

If you think you know about the petroleum system, think again; few explorationists can really pass the test. The course has a dual role of integrating geological and geochemical data with risk evaluation. Emphasis will be placed on the proper method to map a petroleum system so that complementary plays can be logically developed. Petroleum system case studies from around the world will be discussed, with special emphasis on the California petroleum systems.

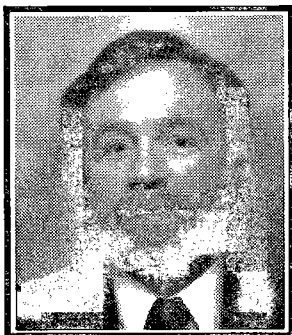
Since 1964, Wally Dow has worked for Amoco Production Research, Superior Oil, and Getty Oil, and with Robertson Research (US). Currently he is president of DGSI. He has over 30 publications on geology and geochemistry, and has presented numerous scientific papers. On the basis of his 1972 AAPG paper on Williston basin "oil systems", Wally is considered the founding father of the petroleum system concept.

Les Magoon spent eight years as an exploration geologist for Shell in Los Angeles before joining the USGS in Menlo Park. He has more than one hundred publications on the petroleum geology of Alaska and California. For the past ten years, Les has devoted most of his time to developing and presenting The Petroleum System.

Convention registration is not required to take this short course; however preregistered convention participants will be given preference. For enrollment information call Zenon Valin, U.S. Geological Survey; voice mail (415) 354-3012 or fax (415) 354-3224. For convention information see announcement in EXPLORER or call above number.

May 3-5, 1995 San Francisco, California

Candidates for President-Elect



Larry C. Knauer

Present Position:

Senior Geologist, Bechtel Petroleum Operations

Education:

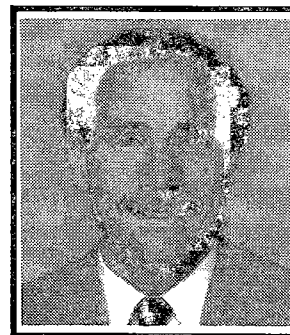
1976 Whittier College, B.A. Geology
1982 UCLA, M.S. Geology

Employment:

1982-1986 Geologist, Gulf Oil Corp./Chevron U.S.A.
1987-1989 Geologist, California Well Sample Repository, CSUB
1989-present Senior Geologist, Bechtel Petroleum Operations

Professional Activities:

1994-95 Vice-President Pac Sec AAPG; 1994-95 Editor Pac Sec AAPG Newsletter; 1994-95 Publications Chairman Pac Sec AAPG; 1992-93 President San Joaquin Geological Society; 1991-92 President-elect SJGS; 1990-91 Vice President SJGS; 1989-90 Treasurer SJGS; 1988-89 Secretary SJGS; 1992 organized seminar on horizontal drilling in California, PSAAPG publication MP42; 1989 Short course coordinator Pacific Section Convention; Pac Sec Member: AAPG; National Member: AAPG; California Registered Geologist.



Dalton F. Lockman

Present Position:

Senior Petroleum Geologist, Exxon Company, U.S.A., Santa Ynez Unit Production Organization

Education:

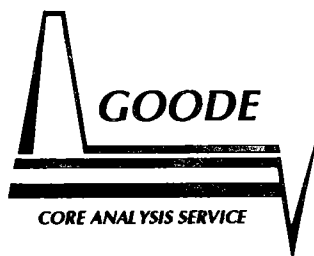
1979 Whittier College, B.A. Geology
1981 Wright State University, M.S. Geology

Employment:

1981-1986 Production Geologist, Alaska Group, Exxon Co. U.S.A., Western Production Division
1986-1988 Production Geologist, California Group, Exxon Co. U.S.A., Western Production Division
1988-1992 Production Geologist, Exxon San Joaquin Production Company, Exxon Co. U.S.A.
1992-present Production Geologist, SYU, Exxon Co. U.S.A., Santa Ynez Unit Production Organization

Professional Activities:

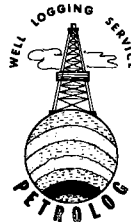
1994 General Chairman, Pacific Section AAPG Convention; 1990-91 President, Coast Geological Society; 1989-90 Vice President, Coast Geological Society; Pac Sec Member: AAPG & SEPM; National Member: AAPG, SEPM & GSA, California Registered Geologist.



Bryan A. Bell

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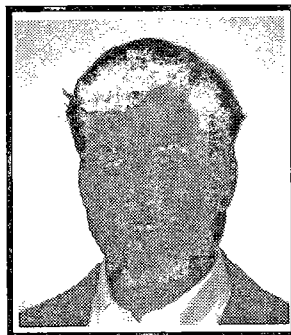


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Candidates for Vice President



Michael S. Clark

Present Position:

Senior Geologist, ARCO Western Energy

Education:

1975 Univ. of Calif., Santa Cruz, B.S. Earth Sciences

1979 Univ. of Calif., Davis, M.S. Geology

1991 Colorado School of Mines, Ph.D. Geology

Employment:

1980-1986 Senior Geologist, Amoco Production Company
1987-1990 Teaching assistant, Colorado School of Mines
1990 Summer geologist, Exxon Production Research
1991 Research geologist, Elf Aquitaine, France
1991-present Senior geologist, ARCO Western Energy

Professional Activities:

1994-95 Treasurer, San Joaquin Geological Society; 1993-94 Secretary, SJGS; 1992-present Board of Governors, California Well Sample Repository; 1989 Recipient AAPG Student Research Grant; Technical Program Committee, 1996 AAPG National Convention; Co-leader, 1994 SEPM Fall field trip—Eocene of Sespe Creek; Pac Sec Member: AAPG, SEPM & SEG; National Member: AAPG & SEPM; San Joaquin Well Logging Society, GSA & Rocky Mtn Assn of Geologists; Fifteen presentations (oral & poster) and five journal publications on the geology of California; Certified Petroleum Geologist (AAPG) and California Registered Geologist.



Donna M. Thompson

Present Position:

Vice President, San Joaquin Energy Consultants, Inc.

Education:

1982 Stanford University, B.S. Geology

Employment:

1982-1985 Petroleum Geophysicist, Gulf Oil Exploration and Production Co., Bakersfield
1985-1987 Petroleum Geologist, Chevron USA, Inc., Bakersfield
1988-present Vice President, San Joaquin Energy Consultants, Inc., Bakersfield

Professional Activities:

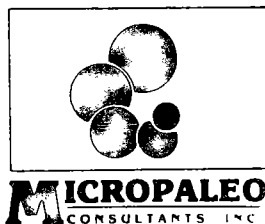
1993-94 Secretary Pacific Section AAPG; Pac Sec Member: AAPG & SJGS, National Member: AAPG; National Ground Water Assn and California Registered Geologist.

MOVING ON...



Mark Moon
c/o Kuwait Oil Company
P.O. Box 5046C-1309
San Ramon, CA 94583-0946

Formerly with Chevron Western Business Unit in Bakersfield, California.

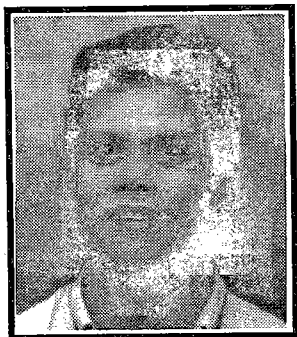


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NEW PROPRIETARY STUDIES

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WINTERS FM. & FORBES FM. STUDIES
WESTERN CANADIAN BEAUFORT SEA STUDY
N.E. ALASKA OFFSHORE WELL STUDIES

Candidates for Secretary



James P. Haerter

Present Position:

Geologist, U.S. Department of the Interior, Bureau of Land Management, Caliente Resource Area, Bakersfield, CA

Education:

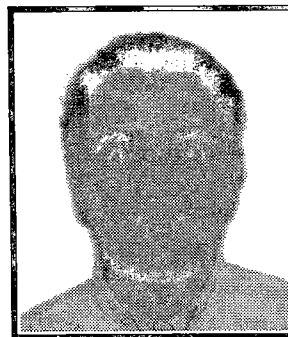
1981 University of North Dakota, B.S. Geology
1990 Colorado State University, M.S. Geology

Employment:

1979-1981 Hydrologic Technician, U.S. Geological Survey, Water Resources Division, Grand Forks, ND
1981-1986 Wellsite Geologist and Logging Geologist, EXLOG, Rocky Mtn Region, Denver, CO
1988 Graduate Intern, Geochemistry, Mobil Exploration & Production Services, Inc., Dallas, TX
1988 Graduate Intern, Geology, Mobil Exploration & Producing, U.S., Houston, TX
1990-1993 Development Geologist, Arco Oil and Gas Company, Bakersfield, CA
1988-present Geologist, Hazardous Materials Specialist, Bureau of Land Management, Bakersfield, CA

Professional Activities:

1986-91 Society of Economic Paleontologists & Mineralogists, Rocky Mtn Section; 1982-91 Rocky Mtn Assn of Geologists; Pac Sec Member: AAPG; San Joaquin Geological Society; Rocky Mtn Sec Member: SEPM, National Member: AAPG & DEG.



James Allen Waggoner

Present Position:

Geologist, WZI Inc., Bakersfield

Education:

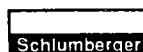
1976 San Diego State University, B.S. Geology
1979 San Diego State University, M.S. Geology

Employment:

1979-1985 Exploration Geologist, Senior Exploration Geologist, Tenneco Oil Company, Bakersfield
1985-1987 Senior Geologist, Great American Resources, San Diego
1988-1991 Project Geologist, ICG Inc., San Diego
1987-present Geological Consultant, World Resource Development, San Diego
1992-present Geologist, WZI Inc., Bakersfield

Professional Activities:

1981-82 Secretary, San Joaquin Geological Society; Pac Sec Member: AAPG & DEG; National Member: AAPG; San Diego Assn of Geologists, National Ground Water Assn, Golden Empire Air and Waste Management Assn; State of California Certified Engineering Geologist and California Registered Geologist.



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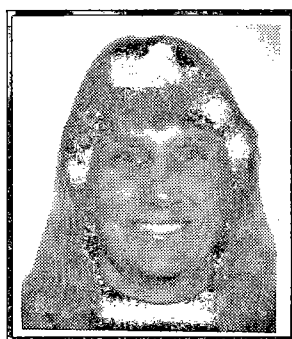
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TESTING & PRODUCTION SERVICES

5700 STOCKDALE HWY., SUITE 500
BAKERSFIELD, CA 93309

TEL.: (805) 328-1017

Candidates for Treasurer



Joan Roberts Barminski

Present Position:

Production and Development Section Chief, Minerals Management Service

Education:

1975 Smith College, B.A. Geology
1975-77 University of North Carolina, Masters work, Geology and Marine Science

Employment:

1977-1980 Oceanographer, U.S. Geological Survey, Washington, DC
1980-1984 District Geologist, Exploration, USGS, Hyannis, MA
1984-1991 District Geologist, Exploration and Development, Minerals Management Service, Santa Maria, CA
1991-present Section Chief, Production and Development Section, Minerals Management Service, Camarillo, CA

Professional Activities:

1992-93 Treasurer, Coast Geological Society; 1991-92 President, Coast Geological Society; Printing Chairman, 1994 Pacific Section Convention, Ventura; Pac Sec Member: AAPG & SEPM, National Member: AAPG; House of Delegates 1993-1996; Coast Geological Society; Society of Petroleum Engineers and Registered Geologist in California and Idaho.



David C. Salter

Present Position:

Ventura County Environmental Health, Leaking Underground Field Tank Program

Education:

1957 UCLA, B.A. Geology

Employment:

1957-1985 Exploration & Development Geologist, Foreign & Domestic, Gulf Oil Corp.
1985-1990 District Development Geologist, Chevron U.S.A.
1990-94 Geologist, Groundwater Technology
1994-present Ventura County Environmental Health, Leaking Underground Field Tank Program

Professional Activities:

Finance Coordinator for 1988 PSAAPG Convention, Santa Barbara; 1992-93 Chairman, PSAAPG Finance Committee; Finance Coordinator for 1994 PSAAPG Convention, Ventura; Secretary and Treasurer for Coast Geological Society for several terms.

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Director of Operations

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NEWS FROM THE LOCAL SOCIETIES

San Joaquin

On April 11th Donald Yeoman of J.P.L. will again attempt to present "Cosmic Collisions and Near Earth Objects".

Dinner meetings are held the second Tuesday of each month at the American Legion Hall, 2020 "H" Street, Bakersfield, CA. The adjustment of attitudes starts at 6:00 P.M., dinner is served at 7:00 P.M. and the talk begins at 8:00 P.M.

San Joaquin Geological Society
P.O. Box 1056
Bakersfield, CA 93302

Northwest

Future Speakers and Topics include:

*April 14 - MR. ROD MOORE -
Geologist, TriMet Light Rail Project.
Multnomah Athletic Club, Portland*

*May 12 - MR. SCOTT MONTGOMERY
- Editor, Petroleum Frontier. Meeting to
be held in the Seattle/Tacoma area*

For meeting reservations, please call
Shelley Thomas (503) 220-2573.

NOMINATIONS

The following members have been
nominated for office for the 1995-96 year:

President	Dan Wermiel
	Oregon Dept. of Geology
Vice-President	Bob Pinotti
	Oregon Natural Gas Development
Secretary	Bill Rodgers
	Stoel Rives Boley Jones & Grey
Treasurer	Bill Prehm
	Oregon Natural Gas Development

1995 SYMPOSIUM

Work has begun on the 1995 NWPA Symposium. The location is set for Astoria, Oregon on the beautiful northern coast, and planning is underway. Tentative dates for the symposium are September 17-19, 1995. Heading up the planning committee is Bob Deacon, with the help of members Andy Corcoran, Todd Thomas and Jack Meyer. Watch your newsletter for more information!!

Northwest Petroleum Association
P.O. Box 6679
Portland, OR 97228-6679

Sacramento

Noon luncheon meetings are held at the HUNGRY HUNTER RESTAURANT, 450 Bercut Drive, Sacramento, on the second and fourth Wednesdays of each month, when possible. For lunch reservations, please call Nancy Connolly of J.W. Bertholf at (916) 485-9164, at least one day in advance. If you have a topic for presentation, please discuss it with your President or Vice-President.

Here are the facts about the future price scenarios for natural gas I found with a little surfing on the Internet. The Canadians are selling their gas at the Alberta Hub for between \$0.70 and \$0.75/MCF and gas is selling at the El Paso Hub for between \$1.11 and \$1.17/MCF. The forecast is for warm weather where the futures market guys are wearing their shirts without sweaters to work back east. The prices we saw in September and October are related to the excess capacity from storage, successful drilling and the low prices we are seeing now are related to the requirement to drain storage back east rather than buying new gas from producers combined with extended fair weather over the last few months.

— G. Dale Gray

Side note: Paul Buika, former exploration manager has left McFarland and joined Samedan effective January 16, 1995. He will start their California office and can be reached at (310) 493-3351. The Samedan team just keeps getting stronger each year.

The Sacramento Valley Gas Patch is being 3D'd by Amerada Hess (CGG) in the Delta, AA - Slawson (Western) in the Tisdale - South Grimes - College City area. Anacapa/Saint Croix in the Lindsey Slough area, Reunion up in the Sutter City and Sycamore and more surveys are planned. Kemp is shooting 2D for Slawson down near Moffat Ranch and has plenty of 2D and 3D to shoot this spring up in the valley. Since seismic activity precedes drilling, there are a few wells coming up soon.

Sacramento Petroleum Association
P.O. Box 254443
Sacramento, CA 95865-4443

Los Angeles Basin

Luncheon meeting alternate third Thursdays at noon at Unocal Center, Los Angeles.

Los Angeles Basin
P.O. Box 1072
Bakersfield, CA 93302

Alaska

The AGS has entered into a co-operative agreement with the Alaska Center for the Environment, Trailside Discovery Camp, to sponsor a week long geologic day camp for youths. AGS is providing the "seed" money to start the program, the volunteer instructors, and will define the program contents. Trailside is providing advertising in their program catalog, aides, logistical support, and insurance coverage. The hope is to make the program self-sustaining annually from here on.

The AGS is participating in a multi-agency panel that will provide recommendations to the new Governor's office on candidates for the position of State Geologist.

As Co-sponsor of the GSA Cordilleran Section meeting, the AGS is assisting with advertising of the event. Our AAPG Explorer ad has been utilized by the organizing committee for nationwide exposure. We will continue to encourage and inform our members to participate and attend in May 1995.

The AGS organized Career Network continues to meet monthly.

Alaska Geological Society
P.O. Box 101288
Anchorage, AK 99510

Coast

Future Speakers and Topics include:

4/18/95 - Dr. ED KELLER - UCSB
"Geology of the Santa Barbara Fold Belt"

5/16/95 - Dr. DOROTHY STOUT -
CYPRESS COLLEGE
"History of California Geologists"

6/20/95 - Dr. LORNE EVERETT -
GERAGHTY & MILLER
"The Vadose Zone: Technical Break-throughs Influencing Regulatory Changes and Remediation Strategies"

Dinner meetings third Tuesday of each month, except July and August at the American Legion Hall, 83 S. Palm St., Ventura. Meetings begin at 6:00 P.M. Reservations by Monday at (805) 644-9811.

2/21/95 - MILES O. HAYES -
Research Planning, Inc.,
1994-1995 AAPG Distinguished Lecturer
"Exceptions to the Rules of Oil-Spill Behavior: Case Studies of Major Oil Spills of the Past Twenty Years"

Studies of major oil spills over the past 20 years have allowed an evolution of our understanding of how to respond to and remediate the environmental impacts from such spills. There have been a number of spills for which follow-up research has provided major turning points that allowed the development of certain rules of oil-spill behavior. For example, the spill of over 100,000 tons of crude oil by the tanker *Urquiola*, which impacted a wide range of habitat types on the coast of Spain in May, 1976, demonstrated the importance of hydrodynamic energy level in natural cleanup processes. Research on the spill of over 200,000 tons of crude oil along the coast of France by the tanker *Amoco Cadiz* in March, 1978, allowed a better understanding of the long term effects of spilled oil on exposed tidal flats and salt marshes. The oil spilled by the tanker *Exxon Valdez* in Prince William Sound, Alaska, in March 1989, impacted many miles of gravel beaches, which were treated by a number of methods, including some innovative berm-relocation techniques. As these studies progressed, it became increasingly clear that a thorough understanding of the coastal geomorphology and processes of the spill site was essential for the development of meaningful contingency and response plans.

NEWS! Spring Field Trip tentatively scheduled for May 20, 1995. Interested parties should contact either John Williams (805) 296-6404 or Bernie Sentianin (805) 525-5563.

3/21/95 - TOM HOPPS - *Rancho Energy*
"Oil & Gas Potential of the Los Padres National Forest, California"

Los Padres National Forest occupies portions of the Coast and Transverse ranges between Monterey and Gorman, California. High potential exists for the discovery of commercial quantities of oil and gas around the forest perimeter; much lower potential for such discoveries exists throughout most of the rest of the forest.

LPNF is comprised principally of lower Tertiary and older sedimentary rocks with crystalline basement exposed at its northern and eastern ends. The forest overlaps major oil producing basins containing thick sequences of upper Tertiary sediments. Folding in LPNF ranges from vertical and overturned structures to broad, upright features that commonly persist for miles.

Approximately 195 exploratory wells have been drilled within LPNF. Most of the reported shows occurred in Neogene strata of the surrounding basins. In Ventura Basin, shows were also reported from Paleogene rocks.

Of the nine high potential areas outlined in this study, South Cuyama, San Cayetano and Sespe areas clearly have the greatest potential for the discovery of significant quantities of hydrocarbons. In fact, Sespe and South Cuyama oil fields produced 769,000 equivalent barrels of oil from LPNF lease during 1992.

Coast Geological Society
P.O. Box 3055
Ventura, CA 93006

Northern California

The NCGS plans to host at least one field trip to Mt. Diablo led by Ron Crane and Craig Lyon. This trip was conducted twice in April-May, 1994, and is being held again in April and/or May by popular demand! Ron has spent much of his spare time mapping the flanks and areas adjacent to this Bay Area landmark, and has come up with some interesting (and controversial!) interpretations of the structural features there, based on his very detailed mapping and field work. He and Craig hosted an informative, enjoyable field trip, and have received many compliments from those who have attended the previous ones.

The focal point of this year's NCGS field trip agenda is the two day "Tectonic Belts of the Sierra Nevada" trip scheduled to be led by Dr. Howard Day of U.C. Davis on June 10 and 11, 1995. This trip has been painstakingly planned by NCGS Vice President and Field Trip Chair Tridib Guha. This year he has managed to arrange a very economical two-day trip with overnight camping in the Northern Sierras. It will be a transect of the range from the western Foothill Metamorphic/Ophiolite Belt to the crest of the Sierra Nevada Batholith. This is the most ambitious field trip the NCGS has hosted in recent years, and should be quite well received by its members.

Nigerian Get-Rich-Quick Letters Continue

Many oil and gas industry professionals, including members of the Pacific Section AAPG and Western Regional SPE, have received letters from individuals in Nigeria that offer million of dollars in easy money. Usually, the writer says he is (or was) a Nigerian government official or a company officer who seeks your help to move sizeable amounts of funds (often portrayed as having been gained through kickbacks or bribery) out of the country. All you have to do to get your chunk of this free money is send the writer some of your company letterhead and invoice forms and your bank account numbers. Instead of free riches, however, the reward is usually a depleted bank account.

The letterhead, invoices and account numbers are used to transfer funds from your account to a Nigerian bank account. Once those funds have been transferred, there is virtually no way to recover them, and the return addresses on the letters are often untraceable. Despite newspaper and television reports on such schemes, people continued to be wooed by the promise of free, easy money. The U.S. Government estimates that more than \$200 million has been lost through these schemes. While AAPG and SPE policies prohibit unauthorized use of members' addresses, authorities can do little to help those defrauded through such ploys.

FEATURE ARTICLE

Highlights Of Natural Gas Drilling Activities In Northern California's Sacramento Valley During 1994

Roland J. Bain

It should come as no surprise that the industry's drilling performance during 1994 in Northern California's Sacramento Valley natural gas province was the worst in over 40 years. The continued dismemberment of the oil and gas industry in concert with the on-going slide in well-head prices suppressed drilling activity in a major way.

The 75 initial starts in 1994 represent a 42% decrease from the 130 holes recorded in 1993. Coincidentally, the 33 new gas-well completions in 1994 also represent a 42% drop from the 57 completions in 1993, as well as the lowest number of new wells in at least 40 years. Perhaps the only positive note is the completion percentage — 44% of the holes drilled found sufficient gas to justify their being cased and completed.

Interestingly, the 36 Operators that effected drilling operations during 1994 matches the number of previous year. Disappointingly, however, just over one-half of these (20, or 56%) drilled but one hole each. As has been common over the years, roughly one-half of the Operators completed at least one well (47% in 1994).

Whereas certain of the oil companies that have shouldered the bulk of the drilling burden in recent years retrenched noticeably last year, a relative new-comer stepped up to the drilling plate and out-performed the "regulars." Cenex, Inc. is credited with a respectable 9 holes, 4 of them having been completed as gas wells. Cenex was followed by Capitol Oil and Montis Niger, both having drilled 6 holes. Capitol realized 3 completions while Montis Niger completed all of their wells (6 for 6). Montis Niger was far and away the leader in 1993 with 35 holes drilled and 16 completions.

Other companies that drilled 4 or more holes were ABA Energy - 5 drilled/3 completions; Anacapa - 4/1; and Vern Jones - 4/1. The 6 companies that drilled 4 or more holes accounted for 45% of the holes and for 55% of the completions. Mobil, Nahama & Weagant and North Valley each drilled 3 holes.

Montis Niger and Cenex should receive credit for the 3 apparent New Gas Field discoveries, Montis Niger with 2 of them (Driver 20-1; 20-13N-2E and Yosubu Farms 9-1,9-13N-2E). Cenex's Kuhn 4-36 (36-6N-4E) is the third probable new field. Otherwise, the industry realized 4 new or deeper pool discoveries and 22 extensions.

The drilling activity during 1994 was concentrated in the southern and central parts of the valley. Seventeen (17) holes were drilled in both Sutter and Yolo counties, with 13 completions in Sutter County and 5 in Yolo County.

Solano County with 15 holes (and 5 completions) was close behind. The localization of the drilling is well-evidenced by the fact that 65% of the holes were located in just these 3 counties.

The shyness of the risk-dollar was evidenced by the absence of drilling ventures in the northern part of the valley, no holes having been drilled in Tehama County, and only 8 in Glenn County in 1994.

The continued soft well-head prices experienced in 1994 contributed to the depressed state of the industry. The year opened with a PG&E datum price of \$2.09. By October, the PG&E contract price had slipped to \$1.06. The December price of \$1.80 was indicative of the national setting wherein a relatively mild winter across the country depressed the demand for gas.

Whereas PG&E's average price for 1994 was \$1.58, producers selling to other outlets fared better. The average price paid by Tosco, for example, was \$1.77. Certain spot prices ranged as high as \$2.17.

Seismic exploration has taken on a progressively important role in the valley over the years with the result that most drilling projects, to one degree or another, have a seismic foundation. In more recent times, 3-D surveys have become much more common and are contributing directly to the discovery rate in the Sacramento Valley. In view of the fact that 3-D surveys currently are in progress and several others planned for the valley, it can be assumed that the attendant results will form the basis for near-term drilling projects. Whether or not sagging prices will stifle drilling plans remains to be seen. Logically, whatever level of drilling is achieved in 1995, it seems safe to predict a predominance of "close-in" drilling projects.

DAVID B. DEL MAR
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California Registered Geologist #634

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SACRAMENTO VALLEYDRILLING ACTIVITYHIGHLIGHTS1994

	<u>1994</u>	<u>1993</u>	<u>1992</u>	<u>1991</u>
Number of holes drilled	75	130	95	115
Redrills	<u>5</u>	<u>19</u>	<u>12</u>	<u>7</u>
TOTAL HOLES DRILLED	80	149	107	122
HOLES COMPLETED AS GAS WELLS (Including 2 Redrills)	33	57	45	48
Success percentage - all holes	44%	38%	42%	39%
Success percentage - original holes	41%	44%	47%	42%

Number of Operators	36	36	30	38
Operators finding gas	17(47%)	18(50%)	17(57%)	21(55%)
Operators drilling 1 hole	20(56%)	16(44%)	12(40%)	13(34%)
Operators drilling 2 holes	6(17%)	3(8%)	7(23%)	11(29%)

The six (6) Operators (or 17%) that drilled 4 or more holes effected 45% of the drilling (In 1993, 8 Operators accounted for 62% of drilling).

The same six (6) completed 55% of the gas wells (In 1993, 8 Operators completed 67% of the gas wells).

Compiled by Roland J. Bain, Consulting Petroleum Geologist
Sources: Munger Oilgram and California Division of Oil & Gas

1994RANGES IN TOTAL DEPTHS*

	<u>1994</u>	<u>1993</u>	<u>1992</u>	<u>1994</u>	<u>1993</u>	<u>1992</u>
Less than 2999 feet	3	6	3	4%	5%	3%
3000 - 3999 "	2	15	12	3%	12%	12%
4000 - 4999 "	6	30	11	8%	23%	11%
5000 - 5999 "	11	12	7	15%	9%	7%
6000 - 6999 "	17	16	11	23%	12%	11%
7000 - 7999 "	9	11	14	12%	8%	14%
8000 - 8999 "	19	22	23	25%	17%	23%
9000 - 9999 "	7	12	13	9%	9%	13%
10,000 - 10,999 "	-	5	1	-	4%	1%
11,000 - 11,999 "	-	2	2	-	2%	2%
12,000 - Plus	1	-	1	1%	-	1%

DEEPEST HOLE DRILLED

Presumably Amerada, Zuckerman No. 1 (19-2N-5E; San Joaquin County)
13,000+ Feet

AVERAGE TOTAL DEPTH*

<u>1994</u>	<u>1993</u>	<u>1992</u>	<u>1991</u>	<u>1990</u>	<u>1989</u>
6942 ft.	6388 ft.	6918 ft.	6320 ft.	6840 ft.	6563 ft.

1994MOST ACTIVE OPERATORS

	Number of Holes Drilled	Gas Wells	<u>1993</u> Drilled/ Wells
Cenex	9	4	1 / 1
Capitol Oil	6	3	12 / 6
Montis Niger	6	6	35 / 16
ABA Energy	5	3	6 / 3
Anacapa	4	1	0
Vern Jones	4	1	0

Three (3) Operators drilled 3 holes each.

POSSIBLE NEW GAS FIELD DISCOVERIES

Cenex	Kuhn No. 4-36	Sacramento County
Montis Niger	Driver No. 20-1	Sutter County
Montis Niger	Yosuba Farms No. 9-1	Sutter County

NUMBER OF HOLES BY DRILLING CONTRACTORS

	<u>1994</u>	<u>1993</u>	<u>1992</u>	<u>1991</u>
Paul Graham	32 (43%)	47 (36%)	30 (32%)	28 (24%)
Hexadyne Drilling	32 (43%)	48 (37%)	51 (54%)	42 (37%)
Gary Drilling	10 (13%)	14 (11%)	8 (8%)	7 (6%)
Cleveland	1 (1%)	-	-	-

1994ACTIVITY BY COUNTY

	Holes Drilled	Gas Wells	Percentage Success	Previous 2 Years Holes (Gas Wells)	
				<u>1993</u>	<u>1992</u>
Sutter	17	13	76%	21(9)	2(2)
Yolo	17	5	29%	28(12)	20(9)
Solano	15	5	33%	25(11)	24(8)
Glenn	8	4	50%	16(4)	11(2)
Colusa	6	2	33%	10(9)	18(11)
San Joaquin	6	1	17%	6(3)	12(2)
Contra Costa	4	2	50%	12(5)	2(2)
Sacramento	2	1	50%	7(2)	10(5)
Tehama	0	-	-	4(2)	3(2)

* Approximate due to incomplete industry reporting.

SUMMARY OF DRILLING ACTIVITY IN THE SACRAMENTO VALLEY (Continued)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Number of holes	270	241	148	174	159	141	156	115	95	130
Number of Redrills	<u>20</u>	<u>21</u>	<u>12</u>	<u>16</u>	<u>13</u>	<u>10</u>	<u>12</u>	<u>7</u>	<u>12</u>	<u>19</u>
Total number of holes	290	262	160	190	172	151	168	122	107	149
Holes completed as Gas Wells	114	124	76	67	74	59	69	48	45	57
Success Percentage	39%	46%	48%	35%	43%	39%	41%	39%	42%	38%
Number of Operators	65	72	46	56	41	51	47	38	30	36
Number drilled below 10,000 Ft.	15	12	8	14	11	2	3	1	4	7
Deepest hole (000 Feet)	11.8	12.2	16.8	12.2	10.9	10.3	11.4	10.3	12+	11+
Number of Gas Wells***	1611	1665	1685	1669	1670	1628	1639	1604	1554	
Total gas produced - D.O.G. District 6 (Million MCF)	207	199	191	155	143	122	119	139	121	110E
Remaining Reserves - D.O.G. District 6 (Million MCF)	964	935	879	856	726	620	583	585	531	
Well-head Price (PG&E Ave.)	\$3.72**	\$2.94	\$2.14	\$1.69	\$1.70	\$1.85	\$2.13	\$1.90	\$1.52	\$1.73

* Valley depth record

** Highest price = \$3.85 - Dec. 1984

*** Includes shut-in wells (D.O.G.)

SUMMARY OF DRILLING ACTIVITY IN THE SACRAMENTO VALLEY

	1966	1967	1968	1969	1970	1971	1972	1973	1974
Number of holes drilled	154	178	192	191	122	126	141	155	180
Number of Redrills	<u>7</u>	<u>27</u>	<u>12</u>	<u>23</u>	<u>10</u>	<u>11</u>	<u>25</u>	<u>20</u>	<u>30</u>
Total number of holes	157	205	204	214	132	137	166	175	210
Holes completed as Gas Wells	48	65	65	62	38	41	51	60	75
Success Percentage	31%	32%	32%	29%	29%	30%	31%	34%	36%
Number of Operators	59	59	59	57	42	47	48	47	41
Number drilled below 10,000 ft.					5	7	15	12	3
Deepest hole (000 Feet)					11.3	16.4	15.2	18.3	11.4
Number of Gas Wells***	1089	1122	1148	1174	1204	1218	1218	1257	1320
Total gas produced - D.O.G. District 6 (Million MCF)	255	215	251	234	256	264	267	258	167
Remaining Reserves - D.O.G. District 6 (Million MCF)	2793	2656	2938	2676	2498	2622	2371	2426	2358
Well-head Price (PG&E Ave.)				30¢	30¢	33¢	35¢	39¢	44¢

* Valley depth record.

** Highest price = \$3.85 - Dec. 1984

*** Includes shut-in wells (D.O.G.)

Compiled by R. J. Bain for the Sacramento Petroleum Association.

SUMMARY OF DRILLING ACTIVITY IN THE SACRAMENTO VALLEY (Continued)

	1990	1991	1992	1993	1994
Number of holes	156	115	95	130	75
Number of Redrills	<u>12</u>	<u>7</u>	<u>12</u>	<u>19</u>	<u>5</u>
Total number of holes	168	122	107	149	80
Holes completed as Gas Wells	69	48	45	57	33
Success Percentage	41%	39%	42%	38%	44%
Number of Operators	47	38	30	36	36
Number drilled below 10,000 Ft.	3	1	4	7	1
Deepest hole (000 Feet)	11.4'	10.3'	12+	11+	13+
Number of Gas Wells***	1639	1604	1554	1512	
Total gas produced - D.O.G. District 6 (Million MCF)	119	139	123	94	84
Remaining Reserves - D.O.G. District 6 (Million MCF)	583	585	531	496	412E
Well-head Price (PG&E Ave.)	\$2.13	\$1.90	\$1.52	\$1.73	\$1.58

* Valley depth record

** Highest price = \$3.85 - Dec. 1984

*** Includes shut-in wells (D.O.G.)

SUMMARY OF DRILLING ACTIVITY IN THE SACRAMENTO VALLEY (Continued)

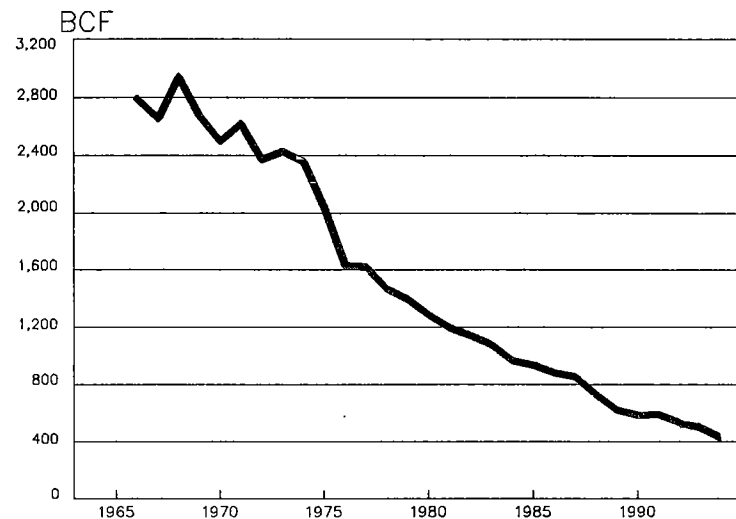
	1975	1976	1977	1978	1979	1980	1981	1982	1983
Number of holes drilled	164	153	155	163	156	228	238	214	234
Number of Redrills	<u>43</u>	<u>19</u>	<u>15</u>	<u>18</u>	<u>11</u>	<u>32</u>	<u>35</u>	<u>26</u>	<u>29</u>
Total number of holes	207	172	170	181	167	260	273	240	263
Holes completed as Gas Wells	49	60	74	51	41	83	96	82	97
Success Percentage	24%	34%	43%	31%	25%	31%	35%	38%	37%
Number of Operators	44	44	56	56	53	63	56	68	58
Number drilled below 10,000 Ft.	8	13	4	5	19	24	20	23	21
Deepest hole (000 Feet)	12.4	11.1	12.0	11.8	12.9	19.7*	12.8	14.1	13.2
Number of Gas Wells***	1344	1282	1434	1305	1315	1328	1420	1493	1542
Total gas produced - D.O.G. District 6 (Million MCF)	162	142	163	142	168	146	184	151	175
Remaining Reserves - D.O.G. District 6 (Million MCF)	2358	2034	1630	1467	1397	1289	1194	1140	1078
Well-head Price (PG&E Ave.)	60¢	98¢	\$1.20	\$1.45	\$1.74	\$2.04	\$2.60	\$3.14	\$3.43

* Valley depth record

** Highest Price = \$3.85 - Dec. 1984

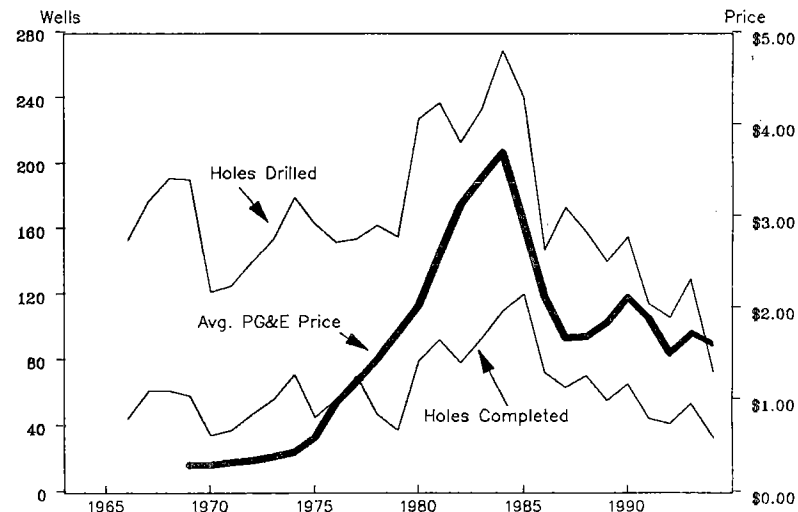
*** Includes shut-in wells (D.O.G.)

REMAINING RESERVES



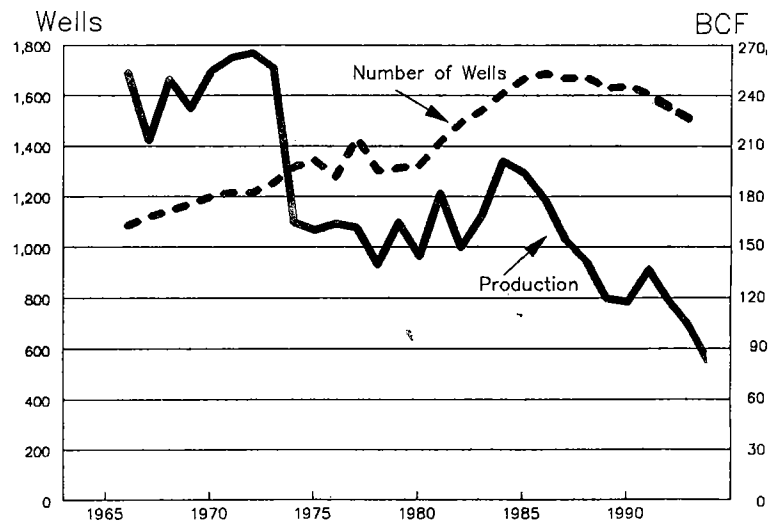
Source: California Division of Oil and Gas

IMPACT OF PRICE ON DRILLING Sacramento Valley Activity



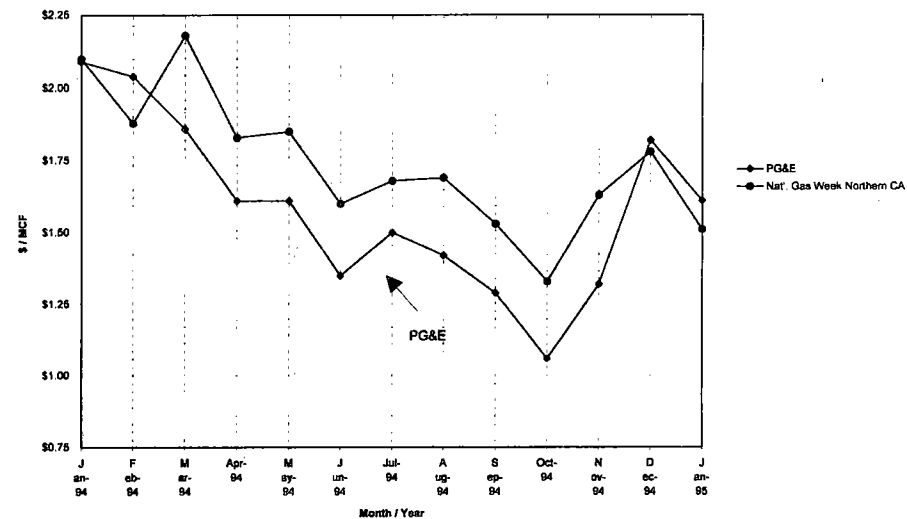
Source: PG&E and R.J. Bain

NUMBER OF GAS WELLS AND ANNUAL GAS PRODUCTION



Source: California Division of Oil and Gas

Sacramento Valley Natural Gas Price Trend



Data Used with the Permission of Natural Gas Week

COMMUNITY ENERGY NIGHT

*Dr. Margaret Maxey
Energy and the Environment:
Shot Gun Wedding or Custody Dispute*

WEDNESDAY, APRIL 26, 1995

Social Hour — 5:30 P.M.

Dinner — 6:30 P.M.

Program — 7:30 P.M.

Red Lion's Main Ballroom
Bakersfield, California

Energy is vital to America's ability to maintain a healthy economy and to our nation's strategic security. It is essential that responsible and visionary public policies be implemented to ensure the continued development and conservation of our country's resources. An informed public is the most effective means of realizing the oil and gas industry's goals for the benefit of our nation.

To this end, 17 oil and gas related organizations have combined to present COMMUNITY ENERGY NIGHT to meet in a social setting with leaders and interested members of the community. We hope to provide a better understanding of the industry in their community and the nation; to give the community an opportunity to meet owners and employees of companies who are a part of this industry; and to learn the extent to which oil and gas utilization permeates our society.

FOR MORE INFORMATION, CONTACT:
Jim Joslyn (805) 589-7210

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THE 1995 ANNUAL OIL & GAS CONFERENCE ENVIRONMENTAL TRADE SHOW— April 25-27

"S.O.S. - SOLUTIONS OFFER SURVIVAL"

This three-day conference will include a full day of technical papers and a two-day policy agenda. We intend to focus on four policy areas; Incentives, Threatened and Endangered Species, Aging Infrastructure, and Air Quality. The conference will begin at the Bakersfield Convention Center however on the third day, April 27th, we move the conference to the Red Lion Inn to finalize our policy sessions and enjoy the Keynote Luncheon. Our Keynote Speaker for the Luncheon will be Bob Armstrong, Assistant Secretary of Lands and Minerals, Department of the Interior. The Oil & Gas Industry Conference, held in conjunction with the Annual Environmental Protection Trade Show (over 50 exhibitors), has continued to grow in significance and stature and your participation is encouraged. If you have any questions regarding this event please contact Hal Bopp (CDOGGR) at (805) 322-4031 or Cindy MacWhinney (BLM) at (805) 391-6012.

REGISTRATION INFORMATION *Two Ways to Register:*

1) Register for all conference sessions, admission to exhibits, SPE BBQ, Wednesday Lunch, Thursday Keynote Session and Lunch; On or before April 4, \$75.00. After April 4, \$100.00.

2) Register for each event separately (Check which one you will attend):

☐ Tuesday, April 25 1995 (one day only)

Technical Presentations, Customer Outreach, Trade Show Admission; Before April 4, \$20.00. After April 4, \$25.00.

☐ Tuesday, April 25, 1995 — SPE Barbecue, \$ 15.00

☐ Thursday April 27, 1995

Keynote and Awards Luncheon; On or before April 4, \$25.00. After April 4, \$30.00.

☐ Conference and Exhibits

(no meals except Wednesday lunch); On or before April 4, \$50.00. After April 4, \$70.00.

Please complete form and remit with check for total registration fees. No cancellation refunds after April 4, 1995.

Return to: PetroTech Expos. Ltd., 1988 University Lane, Lisle, Illinois 60532.

Name _____

Title _____

Co./Org. Name _____

Address _____

City _____ State _____ Zip Code _____

Phone # _____ Fax# _____

Enclosed is \$ _____ check for registration.

HANK NEEL
1913 – 1994
As I Knew Him
Arthur O. Spaulding

Hank Neel died in December; the world, and especially the oil business, will never be quite the same, not as fully enriched.

I first knew Hank Neel on paper when both of us were in Ventura in the 50's, I was with Shell, he was with Tidewater Associated Oil Co. His name appeared on daily drilling reports which we exchanged in the Ventura Avenue oil field.

I next encountered Hank Neel on TV after both of us moved to Los Angeles in the early 60's. Hank was pictured on TV making the rounds in City Hall after his house in Bel Air slid down the hill in a rain storm. Much later, Hank was to say, "I am the only geologist who has owned and operated his own landslide!"

Hank and I became friends in the 60's when many geological forces converged. Registration of geologists in California was in crisis; AIPG was emerging as the professional arm of geological practice; oil well drilling in downtown L.A. was increasing; and Hank and I were involved in all of these activities.

Hank was a bear of a man, well over six feet tall and 200 pounds, replete with western hat and boots. All of us those days carry a knife for ease in opening packages; Hank kept his in his boot. After he was mugged on a bus in southwest L.A., he carried his wallet in his boot as well. His boots were always highly polished.

His demeanor was bluff, direct and imposing. He spoke in terse, blunt, short sentences with undisguised meaning. He never hesitate to call a pinhead a pinhead; conversely he was quick to applaud good work.

On once occasion, I was speaking to an evening audience shortly after the February 9, 1971 Pacoima earthquake. In the middle of my imperishable remarks, Hank interrupted my by telephone to tell me crude oil and natural gas were issuing from a crack in a concrete patio at Park La Brea Towers. I told him I had fifty people hanging on my every word. He replied, "Cut out the B.S., and get your ass out here where the work is!"

At a dinner party at my house Hank arrived, and after the usual social amenities, Hank sought out my daughter saying, "I talk to your father all the time; I want to find out about you."

Hank liked to hunt. He belonged to the Tejon Ranch Hunting Club. In the early 70's, I went quail hunting with him on Ted Bear's property near Fillmore. We found a covey of quail, and I noticed two remarkable things about Hank. The first was that he always hunted with the breech of his shotgun open, requiring him to close the gun and release the safety before firing at a fleeing quail. In my sixty years of bird hunting I've never seen another do that.

The second thing was my astonishment at seeing Hank missing a step and literally turning several somersaults to the bottom of the arroyo, shotgun spinning in his hand like the spokes of a wheel. When I reached him he said, "There's more than one way to hunt quail."

Hank excelled as a raconteur, either jokes or funny stories. He was an inveterate member of WOGA's Wildcat Committee. At their monthly lunches the chairman always asked

for reports from members. Hank was usually last by deference. Invariably, Hank would respond with something new and different, always delivered in his stentorian, unmodulated gruff tones to the general merriment. Bud McDuffie once told me that the man he most admired for amusement and just plain fun was Hank Neel.

Hank graduated from Stanford even before Tom Dibblee. He worked for years for Tidewater Associated Oil Co. and eventually became manager of foreign exploration. He traveled globally, and, typically of Hank, he kept a little notebook in which he logged every trip, dates, times, mileage, etc., a habit he maintained to his death. On one trip we took together he entered his data, and I noted he was well over 200,000 miles. Another time he arrived late for an AIPG Executive Committee meeting; we asked him why, and he consulted his log: "The DC-3 flight from Thunder Bay, Ontario was delayed by bad weather."

Hank was a patriarch of engineering geology long before the name became stylish in geological practice. In Ventura with Tidewater he figured out a way of preventing landslides from destroying well heads; he mapped slide areas and built revetments around the wells, so the slide mass would move around the wells rather than intersect them. When geologists became registered to practice in 1968, Hank was licensed and certified as an engineering geologist based on his experience in Ventura.

Hank and I became very close after WOGA moved next to his office in the Roosevelt Building in the late 70's. We both belonged to the Petroleum Club and the Jonathan Club. We frequently went to lunch together. Hank would ask beforehand, "Do you want to go to the Petroleum Club or do you want to eat like gentlemen?" At the Petroleum Club he habitually asked Tino, the bartender, for "bourbon on the rocks with no ice, a Neel euphemism for whiskey and a little water.

The Jonathon Club is located at 555 S. Figueroa St. in Los Angeles. Hank's membership number for awhile was 555. He told me in his terse way each year at Christmas time, the Club honored a distinguished member by hanging his membership number over the front door. It was fully a year before I caught on.

Reminiscences aside, Hank was a professional geologist. He was a member of AAPG for over fifty years, a candidate for President in 1975, and an Honorary Member of Pacific Section of AAPG. He was a Charter Member of AIPG, its President in 1970 and the recipient of the Ben Parker Award in 1982. He belonged to AIME and the GSA.

To me, Hank Neel was a singular resource, widely experienced and full of sound advice. When I needed some Hank provided it, and it was always useful. I miss Hank. Hell, we all do.

— Spaulding was Oil Administrator for the City of Los Angeles and V.P. and General Manager of the Western Oil and Gas Association, President of AIPG and President of the Pacific Section of AAPG. Currently, he is President of the Dibblee Foundation. He lives in Ojai.

Bill Rintoul

An important chapter in California oil history went up for sale in the Los Angeles Basin late last year.

The Pico Canyon property near Newhall that was the site of the state's first commercial oil well was included in some 23 Chevron properties in Los Angeles Basin, with exception of two, that have been decommissioned as oil producers and are being offered for their real estate potential. The two exceptions are properties that will produce awhile longer.

The 23 properties range in size from parking-lot parcels to a 3,100-acre tract. The sale is being managed by the Non-Producing Properties team of Chevron USA Production's Western Business Unit, based in Bakersfield.

The company cleaned up the sites in compliance with environmental regulations. In some cases, this required accommodation for the gnatcatcher, an endangered bird that inhabits some properties. Also to be decided is how to preserve oil field history in Pico Canyon.

Along with yielding California's first commercial oil well, Pico Canyon was the site of the first commercial oil well, Pico Canyon was the site of the first commercial refinery, where processing was done in barrel-shaped stills.

Even before the Drake discovery well in Pennsylvania gave official birth in 1859 to the nation's domestic oil industry, there were a number of persons in California who distilled oil taken from seeps to make "burning oil."

One such person was Andreas Pico, who in 1850 obtained oil from seeps in Pico Canyon. The oil was distilled for use as an illuminant at San Fernando Mission.

The first real oil boom in California came in Humboldt County in 1865-66. Union Mattole Oil Co. completed a shallow well as the first producing oil well drilled for that purpose. The company made at least one 30-barrel shipment of crude to San Francisco, where the refined "burning oil" is said to have been sold for \$1.40 per gallon. However, the well did not prove to be commercial.

By 1867, the boom had ended, a casualty of growing production in Pennsylvania that flooded the California market at a price California operators could not match.

A trickle of activity continued. In Pico Canyon, a San Francisco oil merchant named Frederick Taylor, who had a gambler's instincts, in the spring of 1875 purchased controlling interest in California Star Oil Works, a struggling independent.

The following year, the company completed Pico No. 4 making 30 barrels a day from a depth of 300 feet. The well proved to be the first truly commercial oil well in California. The performance led in the following year to the deepening of three wells that had been drilled earlier.

Increased production demanded refining capability. A small still built in 1874 at Lyons Station, a stage stop nine

miles from Pico Canyon, was dismantled and moved to a new location one-half mile east of Newhall near the Southern Pacific Railroad. Two larger stills shipped from Titusville, Pennsylvania, were added to the refinery, making it California's first commercial refinery.

With Pico Canyon's success, California Star Oil Works inherited the wildcatter's headache: marketing. Taylor's circumstances brought him together with a group of oil merchants and investors headed by Demetrius Scofield. In September 1879, Scofield and the others incorporated in San Francisco as the Pacific Coast Oil Co.

Formation of the company warranted only a one-sentence notice at the bottom of the front page of San Francisco's Daily Alta California newspaper. The company built a 500-barrel refinery at Alameda and launched California's first steel tanker, the "George Loomis," capable of carrying 6,500 barrels of oil.

The company's modest success attracted a suitor. In 1900, Standard Oil Co. (Iowa), California's dominant marketer, purchased Pacific Coast Oil Co. In 1906, the two companies became Standard Oil Co of California, the predecessor of today's Chevron.

As for Pico No. 4, the first commercial well, it continued producing until 1990, when it was plugged and abandoned by Chevron after 113 years of production, a state record.



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Oil Man of the Year

Dave Kilpatrick was chosen to be the Bakersfield Desk and Derrick Club's 1994 "Oil Person of the Year" in recognition of his contributions to the oil industry and to the community through volunteer efforts.

Kilpatrick is division manager for the Bakersfield-based Western Division of Santa Fe Energy Resources, the largest independent oil producer in California.

During his 18-year career at Santa Fe Energy Resources, he has managed the company's producing operations in Midland, Texas, and Southern California before coming to Bakersfield in 1990. He earned a bachelor's degree in petroleum engineering from USC and a bachelor's degree in geology and physics from Whittier College.

For the past two years, Kilpatrick served as president of the California Independent Petroleum Association, representing 550 oil and service companies throughout California. Under his leadership in 1993, CIPA fought the BTU tax, which was ultimately defeated.

This laid the foundation for CIPA's efforts to repeal the ban on export of Alaska North Slope crude oil (ANS). He has lobbied extensively in Sacra-

mento and Washington, D.C., to convince regulators and legislators of the plight of the independent producer in California.

In an effort to bring media attention to the declining domestic oil industry, Kilpatrick led the oil workers rally on the steps of the Capitol in Sacramento on February 22, 1994. A drilling rig was erected on the Capitol Mall and oil workers from throughout the state came to participate in the rally.

The rally was successful in gaining the attention of both regulators and legislators to the need for regulatory reform and lifting the ban on ANS export. Kilpatrick was honored with CIPA's highest award for leadership in furthering the cause and promoting the importance of California's oil and gas industry.

He also serves on the Board of Directors of the Conservation Committee of California Oil and Gas Producers, Bakersfield Memorial Hospital Foundation and R.M. Pyles Boys Camp and is an active member of the American Petroleum Institute.

Kilpatrick and his fellow employees at Santa Fe Energy support numerous community organizations, including the Gleaners and the Bakersfield Homeless Center. Though Santa Fe has a relatively small Bakersfield staff, they

undertake creative events such as Monday Night Football Pizza Parties for the homeless and White Elephant Auctions to raise funds for the Gleaners' "Oil Can Do" drive. The pink flamingos in Kilpatrick's front yard attest to some unique fund raising efforts from the 1994 action.

Santa Fe also supports the California Living Museum, the Foundation for the Kern County Museum, the Boys' and Girls' Club of Bakersfield, Project Clean Air and the United Way.

Kilpatrick and his wife, Danielle, reside in southwest Bakersfield and have two sons, Daniel and Dustin.

Presentation of the "Oil Person of the Year" award to Kilpatrick was made at Desk and Derrick's January 26 dinner meeting at the Bakersfield Petroleum Club. The meeting had been postponed from the original date of December 15 because Kilpatrick was called out of town by his company to make a trip to the Republic of Turkmenistan, an independent republic which formerly was a part of the Soviet Union.

The purpose of the trip was "to view existing oil and gas production and to look at exploration prospects," Kilpatrick said. The trip provided him with material for his role as featured speaker at the January awards dinner.

— Bill Rintoul

In Memory of Alan R. Hershey

Alan Hershey passed away in Bakersfield, California January 12, 1995 at the age of 73. He was born in Queens, New York of a Russian immigrant and his Australian wife in 1921.

Hershey fought in World War II in the 12th Airforce and spent time in Australia as a radio operator. He also served in the Korean War.

Alan received a BS degree from UCLA in 1952. He won a scholarship to study micropaleontology under Dr. Orville Bandy at USC. He was hired by Shell, in Bakersfield, as a micropaleontologist in September 1952. He had assignments in the San Joaquin and Sacramento Valleys and the Pacific Coast Marine Division. He was a good, conscientious, productive employee. He wrote paleontology reports as well as doing microscopic work. He was a good biostratigrapher and assisted in

developing time stratigraphic and paleoenvironment charts. He was trained in paleodata processing of faunal lists and summaries.

Alan was dedicated to health and fitness. He worked out with muscle builders, raced stock cars and rode bicycles. He was mild mannered and affable.

After Alan retired from Shell Oil, he consulted in micropaleontology from his home. He contracted work from Stinemeyer Paleontological Services, Dr. Peter Fischer and Associates, and others. He set up a consulting office at 3720 Easton Dr. #4, that he shared with his son, Mark, who operates an oilfield chemical service. He then consulted for Anderson World Wide on foraminiferal biostratigraphy and coauthored a geologic correlation chart with them. Alan contracted to do the paleo with the Department of

Energy on drilling wells at Elk Hills and examined the samples on DOE - Bechtel #934-29R, the deepest well in California. He was a California registered geologist and registered by the AIPG nationally. He was a longtime member of AAPG, SEPM and AIPG. He worked on many geological and paleontologic field trips and meetings.

Alan was a widower having lost his wife, Harriet, 19 years ago. He was survived by his son, Mark Hershey; daughter, Tina Velasquez; granddaughter, Sasha Velasquez and sisters, Sara Kaplan and Sophie Shapiro. He belonged to Temple Bethel and the Elk Club.

Alan fought a good fight and will be missed by all of us.

— Edwin H. Stinemeyer
Honorary Life Member
AAPG Pacific Section

Delegate's Column

Robert Countryman

195 delegates met Sunday March 5, 1995 in Houston at this years Delegates Meeting held in conjunction with the Annual Convention. Compared to the preceding 2-3 conventions, this years meeting was short and relatively quiet. Among the topics discussed was AAPG's very profitable 1994 year resulting primarily from much better than expected conventions in Denver and the International sites. As a result, the society showed a profit of greater than \$1 million. This allowed AAPG to reduce Houston's registration fees to \$160 from Denver's \$200. A possible reduction in Course and Book costs is also being investigated. Lets hope 1995 is equally successful. Fred Dix reported 1400 new members, a loss of 2000 old members and a 40% increase in student members (of which 50% were international). PSAAPG's percentage of AAPG's membership is 7.8% or 2,486. Two new affiliated societies were added: the Norwegian Association of Petroleum Geologists, and the Pakistan Association of Petroleum Geoscientists.

Controversy over AAPG's continuing efforts to open up the organization to International members, and to increase the influence of those members within the AAPG and the House of Delegates, continues to be a major and somewhat divisive issue. Although those forces were evident this year, the committees reviewing proposed changes in the Constitution and in the Bylaws had not completed their efforts. Consequently there were no specific proposals along those lines presented to be voted upon this year although it is expected that there will be at next years House of Delegates meeting in San Diego. The results of the Internationalization of AAPG is becoming more apparent. Currently about 22% of AAPG's members have non-US addresses. This understates the actual number of members working overseas because of the common use of US mailing addresses for expatriate geologists working for the US majors and US mail drops used by many large foreign companies such as

Venezuela's PDVSA. Research by Fred Dix suggest that 26% of AAPG's members are non-US citizens. A further indicator of the increasing Internationalization is that over the last few years roughly half of the new members joining the AAPG are foreign nationals. This trend, combined with continued reduction in demand for US domestic geologists, career changes by younger US geologists out of petroleum geology, and the increasing retirements and demise of older US geologists, suggest that the percentage of non-US AAPG members will continue to rise in the foreseeable future.

Reflecting these trends the Executive Committee of AAPG is investigating the initiation of a "5-step" program to further integrate the non-US members into AAPG. These steps are: 1) Increased access to AAPG Executive Committee (including the possibility of increasing the number of V. Presidents), 2) more affiliated societies in the international arena, 3) the possible creation of International Sections (analogous to Pacific Section), 4) increased recruitment of International members, 5) a possible name change from AAPG to a more generic name (without the American in the AAPG). Some of these steps are more controversial than others but the last is probably the most controversial. AAPG President Toby Carlton opened a discussion about the possibility of the name change to reflect the growth of the society away from being an American Association to an Intentional Organization. Needless to say, this is a very emotional issue amongst many of our members and heated arguments can be (and will be) made on either side of the issue. I suspect this debate will be carried out at local meetings, in the AAPG Explorer, and elsewhere over the next few years. Everyone should have their say before that decision is made. Please pass your views on to your delegates so we may carry them back to the House of Delegates.

King Vaughn Retires

The "oil patch" is losing a well known and respected pitch man to retirement. King Vaughn of Goode Core Analysis will no longer be beating the bushes on a regular basis. His great source of information and friendly demeanor will be missed by all of us.

King has a long history of working in the core analysis field. He moved to the big city of Wichita Falls, Texas to earn his mathematics degree at Midwestern State University (a first for the Vaughn clan). In 1954 King began his core analysis career working for Ryder Scott. He concurrently worked as a mathematics instructor at Shepard Air Force Base. In 1956 he began working for Core Laboratories, Inc. in Wichita Falls. He was transferred to the new oil frontier (Long Beach, CA) in 1965 to supervise operations in the Los Angeles basin. He almost single-handedly got the THUMS Long Beach project off the ground with innovative techniques for analyzing unconsolidated core. In 1977 when Core Laboratories got some competition (Goode) in the San Joaquin Valley, King was transferred to Bakersfield as a district sales engineer. He spent the next dozen or so years butting heads with the Core Laboratories corporate structure and making friends throughout the industry. King and Bryan Bell purchased Goode Core Analysis Service in 1988, providing King with an ability to do things his way.

A retirement party was held for King on February 3, 1995 at the Petroleum Club in Bakersfield, CA. There were over 130 in attendance, demonstrating the vast number of friends that he has made over the years. Although there was ample opportunity to roast King, no one could seem to muster a negative word or feeling — nothing but endearing accolades.

Our hopes are that King will continue to stop by even if on a less "official visit". Although King does not seem to have any hobbies (besides work), his wife, Jan, three daughters and six "current" grandchildren will keep him busy. King and Jan will likely spend a bit of time on the road since their children are spread far and wide. A trade of their house for a fifth wheel may be in store.

Thank you for the many good years.

— Bryan Bell

A Trust Fund In Memory of One of Our Graduate Students

Michael P. Gring was an enthusiastic young geologist who always got along well with other geologists. He was a kind and gentle person who always respected the opinions of others. He recently received his M.S. degree in geology from CSUN and was presented with the department's "Outstanding Graduate Award", at last year's graduation ceremonies. Late last June, while hiking on Mount Morrison in the high Sierra Nevada, Mike died unexpectedly. He was only 44 years old.

Mike came to CSUN after working for the UNOCAL Corporation (Ventura office) for 12 years as a micropaleontologist. He finished his thesis, entitled "Stratigraphic Analysis of the Mabury Formation, King and Kern Counties, California", with dispatch, and he gave a co-authored talk on this subject at last year's SEPM-Pacific Section meeting in Ventura. He chose the thesis topic after consulting with UNOCAL geologists, and he chose CSUN because of our emphasis of field studies.

He was the happiest when he was in the field, and he often made trips to the San Joaquin Valley Eocene rock section with Al Almgren and myself just to be out in the field again. He was especially good at collecting megafossils because of his patience and dedication to doing the job right. He and I were working on a paper that deals with the recognition of the first chemosynthetic cold-seep molluscan community ever found in the Eocene rock record of California. The paper is now in review.

As a tribute to Mike and his devotion to geology, the Department of Geological Sciences at CSUN has established a trust fund in his name. All monies donated to the Mike Gring Memorial Trust Fund will be given to worthy graduate students struggling to make financial ends meet. Preference will be given to those students that have left full-time employment in order to return to school to obtain an advanced degree. If you would like to make a contribution, please make out your check to the Geological Science Endowment Fund (which is a fund used only for scholarships).

Mike Gring Memorial Trust Fund
c/o: Professor Richard Squires
Dept. of Geological Sciences — C.S.U.N.
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— Professor Richard Squires
Mike's friend and thesis advisor

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ECOLOGY FIELD TRIPS

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The Bureau of Land Management has initiated a program of monthly earth science field trips to points of ecologic, geologic, paleontologic and historic interest throughout central California. These trips are designed for persons of high school age or older. It is not necessary to have a technical background to attend or benefit from the trips.

These field trips are recommended for teachers and many of them can be taken for in-service continuing education credit through California State University Bakersfield. Each trip includes a full spectrum of environmental and land management topics. The field trips are conducted using buses or vans. Private vehicles are not used except in special circumstances. A field guide is prepared for each trip which includes maps and directions which can be used by anyone for self-guided investigation of the ecology along the field trip route.

1995 SCHEDULE

Mother Lode 95 Part II: The Northern Mines: Sat., May 6, 1995

This trip looks at the structure and stratigraphy of the Northern Mines of the Mother Lode including Allegheny, Downieville, Sierra City, Johnstown & Quincy.

Bakersfield to Carpenteria: Sat., June 3, 1995

The ecology and geology of the San Joaquin Valley, Cuyama Valley and Coast Ranges is discussed. We visit scenic Santa Barbara Canyon and the San Andreas Fault. The trip ends at the Carpenteria oil seeps which is a historic and archaeological site.

Bakersfield to Point Sal: Sat., July 15, 1995

The ecology and Geology of the Santa Maria area is considered with stops at Point Sal and Celite's diatomaceous earth mine in Lompoc. Plate tectonics and continental accretion are topics of discussion.

Bakersfield to Ojai and Santa Paula: Sat., August 5, 1995

This trip explores the San Andreas Fault, the Cuyama Valley, Ojai, the Silverthread Oilfield, Sulfer Mountain Oil Mines, and Santa Paula Oil Museum. The tour returns to Bakersfield over the old ridge route between Castaic and Quail Lake. Watershed management and habitat restoration are discussed.

Breckenridge Mountain and Havilla: Sept. 2, 1995

This tour takes back roads up Breckenridge mountain exploring mines and hot springs and Havilla, the original county seat. The Bright Star mine, Claraville, and Weldon districts are investigated. Examples of interaction between ecosystems and geology are discussed.

Registration for field trips is \$20.00 per adult or \$40.00 per family. Children under 16 are \$10.00. For persons taking their own vehicles, registration is \$20.00 per person or \$40.00 per vehicle. If you have any questions or to register call Dr. Wilkerson at 805-391-6177 or write to MOTHER LODGE c/o Gregg Wilkerson, 7005 Hooper Ave., Bakersfield, CA 93308.

Society of Petroleum Engineers GENERAL LUNCHEON MEETING

Thursday, April 13, 1995

Speaker: SPE Distinguished Lecturer
Cheryl L. Stark, Director,
Technology Development for Baker
Hughes Oilfield Operations,
Houston, TX.

Topic: Drilling Cost Reduction

Time: 11:30 a.m.

Location: Hodel's (Hwy 99 and Olive Dr.)

Abstract: Reducing drilling costs can be done in a number of ways. Defining a critical path, for instance, and matching specific activities with other operators drilling in the same area can reduce costs. In addition, a number of alternative technologies and practices can be employed depending on the area, types of rigs available, and the environmental concerns associated with the area. Some of the topics covered in this talk include slim hole drilling, use of slag in place of cement, drain holes, the use of alternative mud systems to replace oil base muds, and closed mud systems.

DEADLINE FOR NEXT ISSUE -
MAY 15, 1995

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PACIFIC PETROLEUM GEOLOGIST NEWSLETTER

of the Pacific Section

American Association of Petroleum Geologists

JUNE 1995 NO. 3

1995-96 BALLOT & DUES CARD IN THIS ISSUE

A MESSAGE FROM THE PRESIDENT

As you look through this issue of the PPG, you'll notice that it is an interactive one in that there are lots of things for you to do. There is a ballot for next years officers, a dues card to send in (with a check), and a survey for you to fill out. Let's take them one by one. The ballot is important as you get to choose between eight excellent candidates to pick who will run the PS-AAPG next year. To help you reach your decision, brief vitae for each candidate appeared in the March 1995 PPG. Of course filling out, and returning, the Dues Card is very important as it allows you to remain a member, keeps your name in the membership directory (one will be mailed to you in the next few weeks), and your remitted dues help underwrite the publication of the PPG. This year, as a convenience, you can even pre-pay your dues for three years. Lastly, there is a survey, tied to this months delegate column, that surveys your position and feelings about National AAPG President Toby Carlton's outlined "5-point" plan for increasing the numbers and influence of AAPG's international members. It is a controversial subject and he's looking for some solid input to help guide the future directions of the AAPG. Please fill out all of the above items and send them in as soon as possible.

Once again San Francisco has been good to us. The Convention held there in early May was very successful: a very good technical program; well attended field trips, short courses, and special lunches; and a good number of exhibitors. All attendees of the "Murder on the Menu" dinner survived, although some of the actors didn't - but that led to the mystery we were there to solve. It is still too early to provide the final registration figures, but preliminary numbers indicate about 500 registrants and it appears that profits will be in the black. All in all, the convention was a great opportunity to catch up with current research and technology, as well as meet with old and new friends. Congratulations to Les Magoon, Tom Wright, and the rest of the '95 convention committee for a great convention!

With the successful conclusion of San Francisco, the heat now turns up for the folks working on the 1996 San Diego Joint National/PS-AAPG convention where Pacific Section members John Minch, Mark Wilson, Don Lewis, John Randall, Marty Wittstrom and others have been hard at work on organizing technical sessions, field trips, etc. Although it sounds very distant, the 1997, Bakersfield convention is shaping up with initial planning well under way. The new Holiday Inn/Convention Center complex will be the site and has been secured. Mr. Bob Timmer of Mobil has agreed to be the General Chair and is currently organizing a Convention Committee. They will soon be busy working the telephones lining up committee chairs. There is plenty to do on both of these conventions, so feel free to call in to volunteer your time and ideas. John Minch can be reached at (714) 367-1000 and Bob Timmer at (805) 665-4042. They'd love to hear from you.

This is the last column I'll be writing as your president. When I wrote my first one, the price of oil was down, but currently the price of WTC is above \$20.00. I can't take any credit for that, but I do feel that things are rapidly improving. Oil price and demand appear in rough balance and moving slightly toward a tighter market. California should get good news around Memorial Day as it appears that is when Congress will rescind the North Slope Export Ban. President Clinton has indicated that he will sign the bill. There is even talk in Congress of reviewing the decision not to explore the ANWR. Thus, things are looking up for those of us in the oil patch. I'd like to sign off by thanking you for the opportunity to serve as your president over the last year. I also thank the officers who served with me this year (V. Pres. Larry Knauer, Secretary, Laura Bazeley, and Treasurer Donna Miller) and who made this year a very pleasurable one. The gavel now passes over to incoming President Mark Wilson. Mark, I'm counting on you to write about \$25 oil a year from now.

— Robert Countryman

IF YOU HOLD IT, WILL THEY COME? The 1995 Pacific Section Convention

Close to 550 earth scientists enjoyed the 1995 Pacific Section Convention in San Francisco on May 2-5. Facilities, food, and the technical program all drew high praise. The ice-breaker and session rooms could have handled a substantially larger crowd. Our Convention Committee's only real disappointment was that more of the local geoscience community did not turn out. Two of the four short-courses were a "go", plus all five field trips (which fell into a fortunate break in this spring's miserable weather). Our preliminary accounting indicates that the meeting will return a comfortable net for distribution to the Pacific Sections of AAPG, SEPM, and SEG — these funds support Section publications and future conventions.

So we had fun, made money, and learned (or re-learned) some things pertinent to future conventions.

Our outreach program (to local research and academic geologists, hydrogeologists and others not affiliated with the Pacific Sections) was deemed a success. To reach those people, we expanded our local sponsorship, our technical program, and our mailings. At the meeting, non-affiliated local earth scientists, the target of our outreach program, made up 35% of the professional registrants (including Section and NCGS members, 52% of the total attendees were locals). Members of the three Pacific Sections made up 41%, plus another 6% from our affiliated Northern California Geological Society. From another angle, 13% of the Pacific Section's total membership attended, and we had 13% attendance from the Bay Area earth scientists who received our mailings. Further analysis may lead to a more cost-effective mailing list.

The three-day format worked in San Francisco, with its myriad of extra-curricular activities, though in other locations the two-day-plus format of the last several meetings may be more appropriate.

Our gala evening event, "Murder on the Menu", though lots of fun, was lightly attended and lost money, reinforcing recent experience that such events won't fly in our Pacific Section meetings. (The evening opened with a hilarious, unexpected reunion between Chevron and NCGS attendees and longtime local geophysical consultant Gary Gassaway, who was there in waiter's attire to serve our dinner. Gary is just completing his chef's training at the California Culinary Academy, our venue for that evening.)

Wednesday morning's panel discussion, "California's place in the Pan-Pacific Energy Future", was well attended and very well received, thanks to stimulating ideas and lively discussion from the panelists and audience.

All in all, the 1995 Convention was a scientific and financial success and a great experience for those of us who worked on it. Next year the Pacific Section convention will be preempted by the AAPG Annual Meeting, being held in San Diego. In 1997, we meet again in Bakersfield, where General Chairman Bob Timmer (Mobil) will receive our files, best wishes, unsolicited advice, and general sympathies!

— The 1995 Pacific Section Convention Committee

E&P JOBS AT 20 YEAR LOW

U.S. upstream employment fell in January to 330,100, its lowest monthly level in 20 years, according to the Bureau of Labor Statistics. (employment was 326,000 in May 1975.) 424,000 U.S. E&P jobs have been lost since February 1982, when monthly upstream employment peaked at 754,500.



Friday evening and its nearly all over. (left to right) Paul Hacker, Raconteur; Bob Countryman, PS-AAPG President; Tom Wright, Co-chairman of the '95 convention; Mel Erskine, Jack-of-all-Trades at the '95 convention.

NEWS FROM THE LOCAL SOCIETIES

Sacramento

Noon luncheon meetings are held at the HUNGRY HUNTER RESTAURANT, 450 Bercut Drive, Sacramento, on the second and fourth Wednesdays

Sacramento Petroleum Association
P.O. Box 254443
Sacramento, CA 95865-4443

Alaska

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Northwest

N.W.P.A. = N.W.E.A. CONTEST

The Northwest Petroleum Association may soon become the Northwest Energy Association!! The ballots are being counted, and it looks as if the name change will take affect very soon. With the change in name, it has been suggested that we also change our logo. That's where YOU come in! Let's see what our talented membership can come up with for our new N.W.E.A. logo!

Please submit your entries to:

Bert Mueller

Oregon Natural Gas Development
221 N.W. Second Ave., #200
Portland, OR 97209

The winning entry will be treated to a free N.W.E.A. luncheon at a meeting of their choice! So sharpen those pencils and Good Luck!

1995 SYMPOSIUM

The committee is hard at work formalizing plans for our upcoming Symposium. Beautiful Astoria, Oregon will be the location, and the date is September 17-19, 1995. The Tuesday field trip will head to the Mist Gas Field. The speaker list is impressive, so mark your calendar and plan to attend.

Northwest Petroleum Association
P.O. Box 6679
Portland, OR 97228-6679

San Joaquin

Next Meeting:

6/13/95 - Dr. DON PROTHERO -
OCCIDENTAL COLLEGE

"Vertebrate Paleontology and Magnetostratigraphy of the Sespe Formation"

The evening raffle will be sponsored by over 20 individual consultants! Odds of winning will be better than ever.

Funds Raised in Support of the California Well Sample Repository.

At the monthly dinner meeting on May 9th (annual Core Repository "pass-the-can" night), SJGS members contributed and pledged \$450.00. This amount was matched with funds from the SJGS treasury, bringing the total amount of money raised in support of the Core Repository to \$900.00. A check for this amount was presented to Core Repository Curator, Russ Robinson.

Elections have been completed and the new officers for the 1995-96 year are: Mike Simmons of ARCO, President

Elect; Scott Johnson of Chevron, Vice President; Richard Hager of Mobil, Secretary and Allen Britton of Core Lab, Treasurer. Tony Reid of Bechtel was elected as our AAPG Delegate for 1995-1998 with Earl Cumming as alternate. The SJGS Delegates to the AAPG for 1994-97 are as follows: Delegates-Eileen McMullin, Mobil Oil Corp.; Bob Countryman, Chevron U.S.A.; Bob Horton, Cal State Bakersfield. Alternates: Fred Bair, Chevron U.S.A.; Bill Fedewa, ARCO; Mark Milliken, Dept. of Energy.

The San Joaquin Geological Society annual fall barbecue will be held September 15, 1995 at 6:00 p.m. at Stramler Park on Chester Avenue in Bakersfield. Watch you mail for the announcement in late August.

Dinner meetings are held the second Tuesday of each month (except July and August) at the American Legion Hall, 2020 "H" Street, Bakersfield, CA. The adjustment of attitudes starts at 6:00 p.m., dinners is served at 7:00 p.m. and the trouble starts at 8:00 p.m.

San Joaquin Geological Society
P.O. Box 1056
Bakersfield, CA 93302

Coast

Next Meeting:

6/20/95 - ROBERT G. LINDBLOM —
Professional Member & President, Board of
Registration for Geologists/Geophysicists

"A Current Review of Geological & Geophysical Registration in CA"

For reservations, phone (805) 644-9811 by 10:00 A.M. the day before the meeting.

Dinner meetings third Tuesday of each month, except July & August at the American Legion Hall, 83 S. Palm St., Ventura. Meetings begin at 6:00 P.M.

Coast Geological Society
P.O. Box 3055
Ventura, CA 93006

Los Angeles Basin

Luncheon meeting alternate third Thursdays at noon at Unocal Center, Los Angeles.

Los Angeles Basin
P.O. Box 1072
Bakersfield, CA 93302

Northern California

FIELD TRIP ENTHUSIASTS: THE TIME HAS FINALLY COME

For several months now the NCGS has been advertising "Tectonic Belts of the Sierra Nevada" Field Trip, to be led by Dr. Howard Day of U.C. Davis, on June 10-11, 1995. This two day geological event through the northern Sierra Nevada range features a great dinner on June 10th with wood burning fire, Napa Valley vino, and talk about geology sitting on top of the Sierra Nevada — A GEOLOGIST'S DREAM! Now is the time to reserve your spot on this exciting trip through various tectonic belts in a transect across the northern Sierra Nevada. We are quite fortunate to have a leading expert on Sierran geology host this field trip. Dr. Day will take the participants to some of the best exposures of pre-Sierran batholithic ophiolitic, metavolcanic, and Paleozoic metasediments and metavolcanics in Northern California. Questions? Call Tridib Guha at 510-370-0685 (8-10 P.M.) / Tim Ault (days) at 510-263-2985.

FEATURE ARTICLE

PACIFIC SECTION AAPG FIELD SUMMARY

BIXLER GAS FIELD

Contra Costa County, California

by Scott Hector

The Bixler gas field is located in eastern Contra Costa County in the southern part of the Sacramento Basin. North Valley Oil and Gas Company discovered the field in September, 1992 after reentering the NGC "Bloomfield" No. 1, a dry hole, and redrilling it eight hundred feet to the west. The redrill resulted in the most exciting well drilled on the West Coast in 1992. Subsequent production resulted in the well receiving the 1993 "Pacific Coast Well of the Year" award from Hart Publications and the American Association of Drilling Engineers.

The original concept that led to the drilling of the "Bloomfield" discovery well was provided by consulting geologist Jim Tasker. His study of the Paleocene Meganos Gorge, one of four large Tertiary submarine canyons in the Sacramento Valley, led him to develop an erosional play for gas in the Blewett sandstone of Upper Cretaceous age. Key to the prospect was a 300 unit mudlog gas show in a Blewett sandstone in the NGC "Bloomfield" No. 1-11 (Section 11, T1N/R3E) drilled in 1985. The trap was defined updip of the original hole with west closure provided by an eastern splay of the Midland fault; north and east closure provided by regional Cretaceous dip; and critical southern closure provided by the truncation of the turbidite Blewett sandstone by the shale-filled Meganos Gorge. Five billion cubic feet of gas reserves were postulated for the prospect.

North Valley's staff, including the author and consulting geologist Andy Smith, reviewed and accepted the prospect. We noticed that the entire Second Massive, Third Massive and areally limited Fourth Massive sandstone members of the Cretaceous Mokelumne River formation were missing in the NGC well due to erosion by the Meganos Gorge. However, the thickness of the Blewett (H & T) shale in the well, which lies between the Blewett and the Fourth Massive sandstones, was nearly complete, suggesting the NGC hole was very near to some preserved Fourth Massive sandstone. Synthetic seismograms of the NGC well tied back to seismic control, especially west-east oriented lines, showed the likelihood of preserved Fourth Massive in an area west of the NGC well next to the Midland fault splay. North Valley felt the Fourth Massive was a viable objective and, although seismic data did not provide the comfort of a strong amplitude anomaly, and this unit was devoid of any production in the Valley, the Fourth Massive was added as a secondary objective for the prospect. The directional plan for the redrill was modified so the Fourth Massive could be evaluated on the upthrown side of the fault.

Gary Drilling Rig 16 commenced drilling on September 5, 1992. The well was deviated in a "S" curve fashion so that the borehole would be at, or near, vertical across potential pay zones. At a drill depth of 7792' the well topped a sandstone and strong mudlog gas shows up to 440 units were immediately encountered. Shows continued until 8015'. Only a few thin sandstones at the base of the unit did not show signs of gas. Confident of having a decent zone in the well, the test was deepened toward the original objective. Upon reaching that depth the Blewett objective was found to be missing, having shaled out in the short 800 feet between NGC's original hole and North Valley's redrill.

The induction log confirmed assumptions made from the mudlog. A gas column in the Fourth Massive sandstone, some 160' thick was logged from 7792' to 7950'. About half the gross thickness appeared to be net pay. Resistivity readings as high as 150 ohms were recorded with an average of 85 ohms across permeable zones. Sonic log travel times in the pay zones were not appreciably different from either Meganos Gorge or "Blewett" shales, revealing the reason for the lack of any strong amplitude anomaly on the seismic data.

As with most wildcats drilled on Gorge erosional traps, the post-drilling picture differed from the pre-drilling picture. The primary objective, a Blewett sandstone, was gone. It had shaled out. Log correlations put the equivalent section some 20 feet high to the original hole. The secondary objective, the Fourth Massive sandstone, had "come in" with some 160 feet of gross pay establishing the first production from this unit in the Valley.

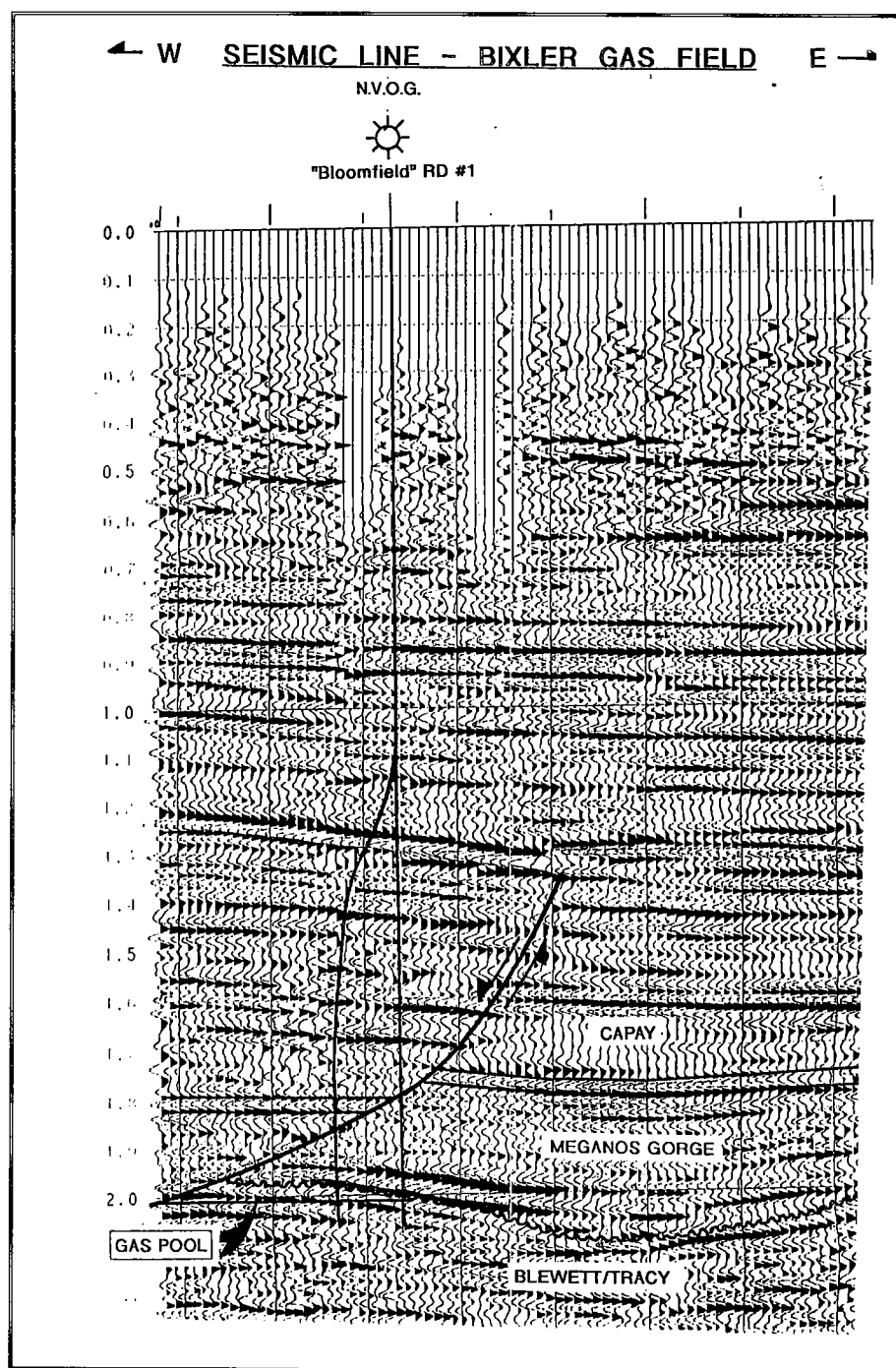
A two-day test of a 108' interval from 7792' to 7900' in the Fourth Massive was run on October 5th and 6th. After flowing the well at rates of only 5000 mcf/d and 7500 mcf/d, the well was flowed on the second day at a stabilized rate of 15,629 mcf/d on a 33/64 inch bean. Flowing pressures were 2,196 lbs. on the casing and 2,914 lbs. on the tubing. This amounted to only a 3 to 4 percent drawdown from virgin reservoir pressure. The gas was found to have a heating value of 925-931 Btu (with 9% nitrogen and 0.3% carbon dioxide) which was quite different from the 1000-1200 Btu gas from Massive sandstone pays to the west in the Brentwood area.

The "Bloomfield" No. 1 RD now stood as a new field discovery. The size was unknown, but a minimum near 3 bcf seemed assured, and a size of 6 to 12 bcf was conceivable. An eight inch pipeline was run easterly from the town of Brentwood to the Bloomfield area. Production started on January 31, 1993 at just under 8,000 mcf/d. Within a few days the rate was bumped to 15,000 mcf/d. At the higher rates the well quickly began to lose pressure, indicating an

expansion-drive reservoir of limited size. After a month and nearly 600,000 mcf of cumulative production, the well was shut in for a pressure build-up analysis which indicated an estimated ultimate recovery of 3.2 Bcf.

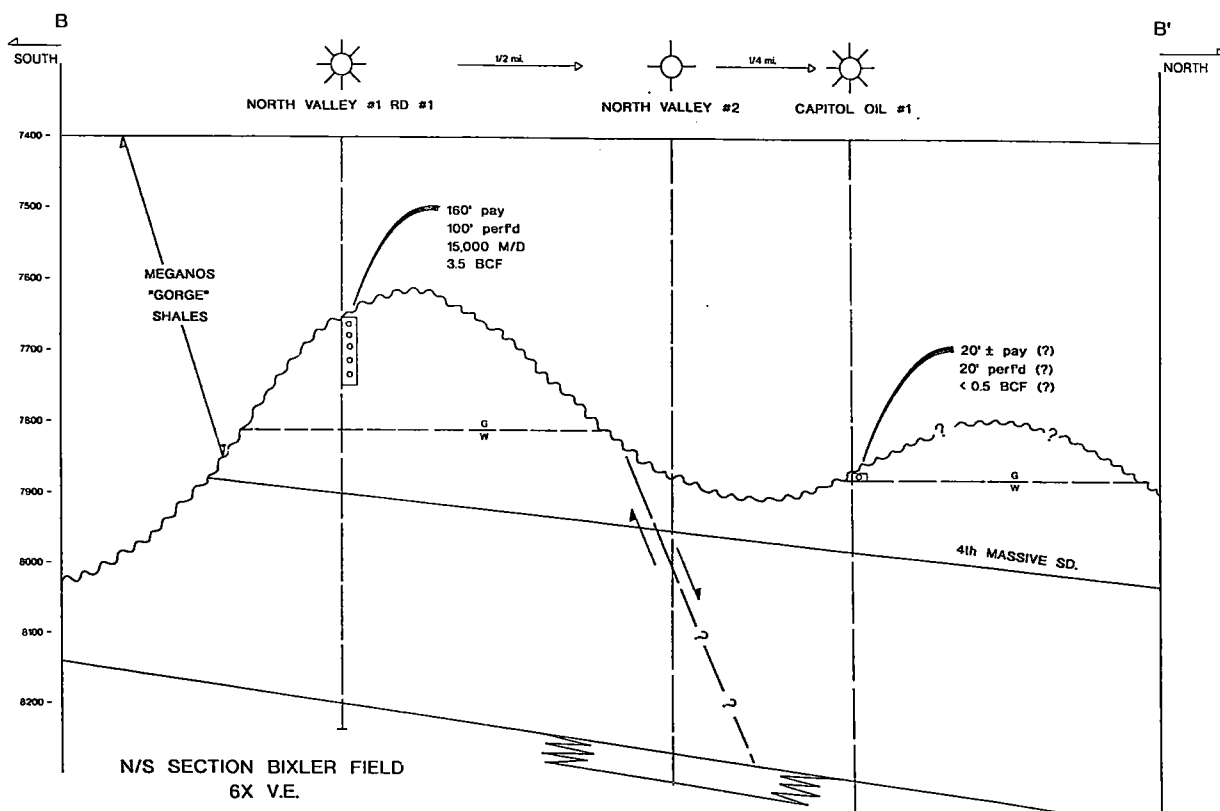
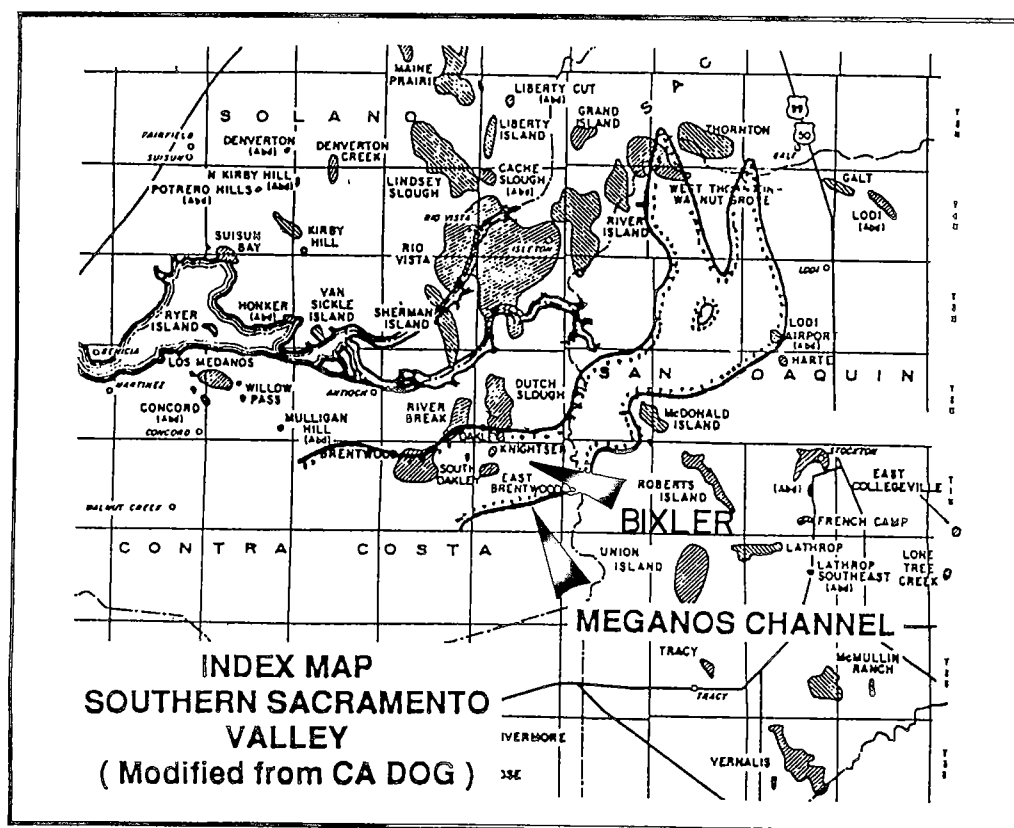
North Valley faced a dilemma as a drill string obligation was imminent. Knowing that the pressures in the well were rapidly declining, the company had to decide either to drill and keep the 660 acre unit intact or to quitclaim back to 160 acres. Assuming other gas pools existed nearby, the company decided to spud the "Bloomfield" no. 2 about one-half mile to the north. This offset encountered Fourth Massive sandstones which were structurally low to the first well, but logged encouraging 100 to 200 unit mudlog shows. Unfortunately, the zones proved to be wet and the well was abandoned. Capitol followed with its "Foley-Mass" test another quarter-mile to the north and established a new pool discovery. They reportedly found pay in a 20 foot thick sandstone in the basal portion of the Fourth Massive immediately below the Gorge. Although completed at a rate between 1000 and 1500 mcf/d, pressures declined rapidly indicating a very small areal extent to the reservoir. Ultimate production is likely to be near 0.3 bcf (data courtesy of Capitol Oil).

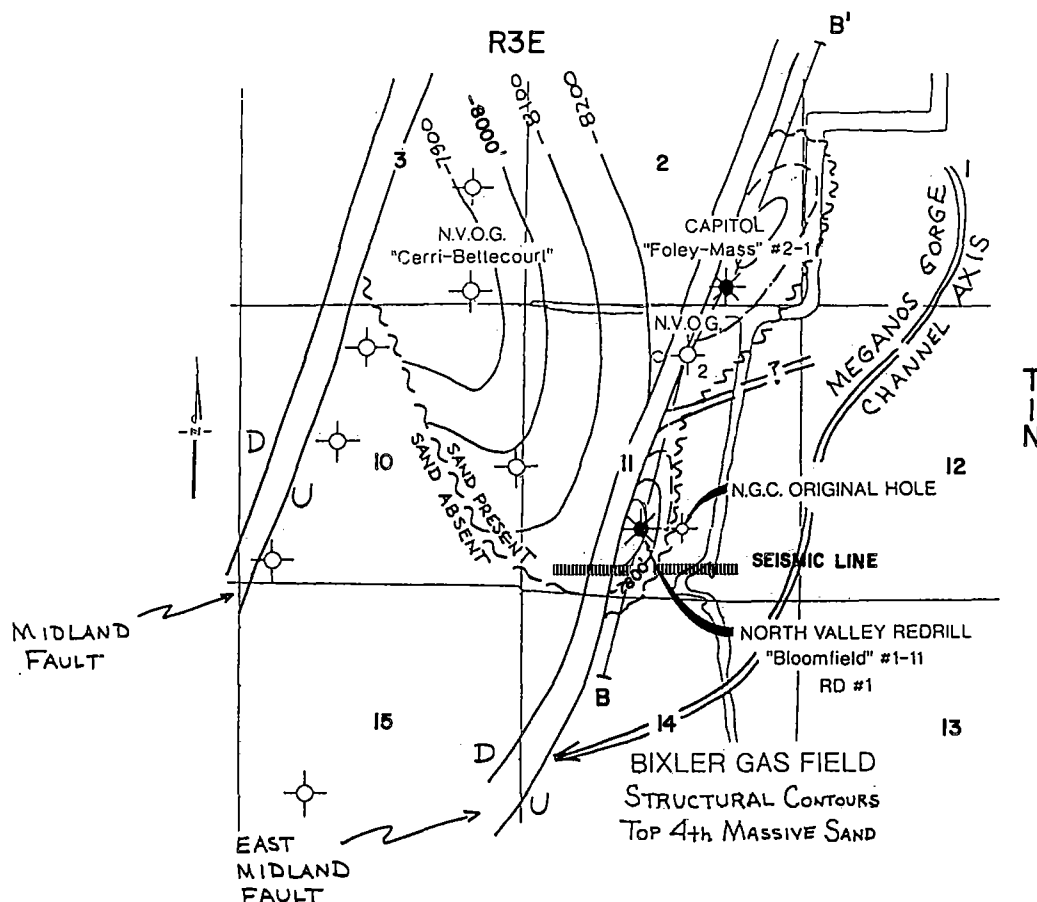
The resulting data defined the shape of the Bixler field (see structure map on top of Fourth Massive). Two pools are present, each occupying a separate high next to the East Midland fault. North of the Capitol well a tributary of the Gorge trending from west to east appears on seismic data to cut deeply enough to erode the Fourth Massive sandstone. Thus, closure of the field is afforded on three sides by the Meganos Gorge and on the fourth side by the fault. The fault has approximately 300 feet of throw at the base of the Gorge and has juxtaposed Fourth Massive sandstones against Meganos Gorge shales. The exact reason for the "bloomfield" No.2 dry hole and the separated gas pools is unknown. The No.2 well could lie in a structurally low area between two Fourth Massive highs, or a small fault could separate the pools. North Valley also drilled the "Cerri-Bettencourt" No. 1 (Section 10, T1N/R3E) in the pooled area along the main Midland fault to the west looking for Fourth Massive pay, but without success. Other operators were spurred to drill four other wells in close proximity to the discovery, but none were successful.



In summary, the Bixler gas discovery by North Valley was a remarkable well. A similar discovery had not been made in the area in over a decade. Unfortunately, the ultimate performance of 3.2 bcf met only minimum expectations. The gas pool is small, perhaps only 40 acres, but given the loose grid of seismic in the area, many such erosional highs may exist. The existence of a major gas line to the area makes the overall cost of exploration more attractive.

Scott Hector is a geologist with Gary Drilling Company.





SAN DIEGO IN '96

May 19-22 is the date set for The 1996 National Convention of The American Association of Petroleum Geologists and The Society for Sedimentary Geology (SEPM). San Diego with one of the most beautiful bays on the entire west coast of North America is the site of The America's Cup races and The 1996 Republican Convention. With sunny warm weather it is a vacation paradise at the gateway to Baja California, Mexico.

TECHNICAL PROGRAM

The 1996 convention Theme, 'Global Exploration and Geotechnology,' will emphasize the ever-increasing international cooperation in the geosciences that exist in the world today and recognize the growing need to share expertise and address common problems. During the three days of technical sessions, there will be more than 400 oral and 300 poster presentations. Sessions sponsored by the AAPG and SEPM will cover a broad range of topics including world petroleum perspectives, basin analysis, sedimentary processes, sequence stratigraphy, structural modeling, geothermics, exploration strategies, source-rock evaluation, gas geochemistry, reservoir characterization and modeling, heavy oil development and environmental applications. There also will be several lively debates to spice the diversified program. So, put the last touches on that research project, start preparing that abstract, and join us in San Diego in '96.

YOUR PROSPECT IS GREAT, BUT...

20. We do not have any exploration (development) dollars left for this one.

19. We're elephant hunting, and this is just a field mouse.

18. There is not enough of an acreage position to make this worthwhile.

17. There is too much ilgoat pasturell acreage. You're trying to over promote the prospect.

16. My boss drilled a dry strat near Bangor, Me., and he's burned out on that type of prospect.

15. We're looking for a prospect where you can get updip of a 300,000 bbl. well.

14. This prospect is downdip of a 300,000 bbl. well. It must have been drained.

13. We have reorganized, and management hasn't decided what direction to take.

12. Not enough well control.

11. Too much well control. It should have been found by now.

10. There are no downdip oil shows.

9. There are no updip oil shows.

8. There are too many oil shows. It should have been found by now.

7. Sample shows in the key well are too good. The reservoir must be tight.

6. There is not enough seismic closure on that strat trap.

5. There is too much seismic closure. It should have been found by now.

4. My boss doesn't like county.

3. We haven't run economics on this yet, but the terms are too tough.

2. Our plate is full.

1. It doesn't fit our pistol.

(next issue: Your Sacramento Valley prospect is great, but

Delegate's Column

Joan Barminski —
Coast Geological Society
and

Robert L. Countryman —
San Joaquin Geological Society

Those who have been following the discussions in the EXPLORER, at the National and Pacific Section Conventions, and even in this column over the last few issues, are aware that there are efforts being made to expand AAPG into a more international society. This is being done through the addition of international affiliated societies, increased recruitment of international members and other efforts to expand the input and influence of our international members within the structure of AAPG. The reason for this push is the same that is motivating so many oil companies to move to overseas arenas: that's where the oil and jobs are found. Already roughly one quarter of our members are from outside of the US borders. From the viewpoint of the AAPG, that is also where the future membership growth needed to arrest our current decline will be found. Rather than rehash the arguments, both pro and con, for this effort, we would refer the reader to the last few issues of the EXPLORER - especially AAPG President Toby Carleton's columns, Fred Dix's comments and the letters to the editor. Toby's April column, which duplicates his House of Delegates speech given at the Houston Convention in March, is especially important as it outlines his 5-point proposal for the future of AAPG.

Many of the steps being taken by AAPG are being viewed with varying degrees of controversy. Some are obviously needed and supported by most members. Others are receiving less universal support. The place where many of the proposed changes must be brought forward and ratified is the AAPG House of Delegates. President Toby Carleton has asked the delegates to open discussion within the membership of AAPG to determine the breadth of support for these ideas and to solicit additional or alternative ideas. Toward that end, we are requesting a few minutes of your time to fill out the survey attached to your ballot for the 1995-6 Pacific Section officers in this issue of the PPG. Modified slightly from the one originally sent out to the Coast Geological Society, it provides an excellent vehicle to gather the ideas of the entire population of the PS-AAPG. Your time, opinions and your ideas are highly valued. They will be tabulated, collated and forwarded to the National AAPG officers and to the House of Delegates for consideration where they will play an integral part in the current on-going discussions. They will also be reported back to you in a future Delegates column. Please take the time to think about the questions and to fill out the questionnaire. Also please contact any of your delegates at local meetings to advise them of your opinions. It is your society and it will reflect what you want.

DELEGATES SURVEY

You have doubtless noticed the discussions ongoing in the EXPLORER and other AAPG forums concerning changes being proposed in the structure of AAPG. For more information on these changes, please refer to this month's PPG Delegates Column and Toby Carleton's column in the April issue of the EXPLORER. As your representatives, the delegates to the AAPG House of Delegates have been asked to provide feedback to AAPG President Toby Carleton and to the House of Delegates, on these proposals. This survey is an effort to gather information on the collective thoughts of the members of PS-AAPG in preparation for future discussions and votes on these matters. Your time, opinions and your ideas are highly valued. They will be tabulated, collated and forwarded to the National AAPG officers and to the House of Delegates for consideration where they will play an integral part in the current on-going discussions. They will also be reported back to you in a future Delegates Column. Please take the time to think about the questions and to fill out the questionnaire. **Return the Questionnaire with your completed ballot to PS-AAPG, P.O. Box 1072, Bakersfield, CA 93302.**

1. Should the AAPG give greater access to International members by creating additional positions on the Executive Committee? (i.e., one or two more Vice-Presidents).

☐ Yes
☐ No
☐ No Opinion
2. Should AAPG work with international members to form more affiliated societies - such as was done recently with Norway and Pakistan? This would give them a greater voice in the House of delegates.

☐ Yes
☐ No
☐ No Opinion
3. Should AAPG create International Sections? These sections would have representation on the Advisory Council, and AAPG would have "offices" overseas.

☐ Yes
☐ No
☐ No Opinion
4. Should AAPG continue to recruit more International members by having more international meetings, more visits from Distinguished Lecturers, more schools, more services for those members, and more reasons to join?

☐ Yes
☐ No
☐ No Opinion
- 5a. Should AAPG consider changing its name to de-emphasize the "American" in AAPG

☐ Yes
☐ No
☐ No Opinion
- 5b. Should AAPG consider changing its name to de-emphasize the "Petroleum" in AAPG

☐ Yes
☐ No
☐ No Opinion
- 5c. If the name of the AAPG is changed, the name should be changed to:

☐ Association for the Advancement of Petroleum Geologists (AAPG)
☐ International Association of Petroleum Geologists (IAPG)
☐ Association of Petroleum Geologists (APG)
☐ International Association of Geologists (IAG)
 Other Name _____

6. I am a member of the National AAPG as well as the Pacific Section of AAPG Yes No

7. Additional Comments on any of the above. Attach additional pages if needed.



Pacific Section American Association of Petroleum Geologists Election of Officers for 1995-96

Candidates for President-Elect

☐ Dalton F. Lockman

☐ Larry C. Knauer

Candidates for Secretary

☐ James Allen Waggoner

☐ James P. Haerter

Candidates for Vice-President

☐ Donna M. Thompson

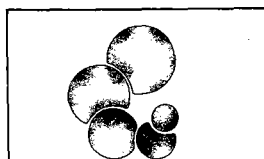
☐ Michael S. Clark

Candidates for Treasurer

☐ Joan Roberts Barminski

☐ David C. Salter

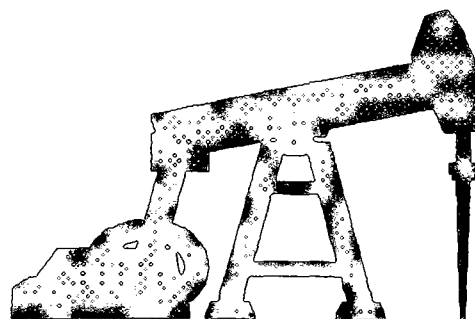
Please vote for one person for each office and return the ballot **BEFORE** July 14, 1995 to PS-AAPG, P.O. Box 1072, Bakersfield, CA 93302



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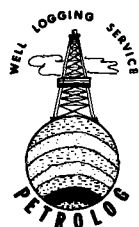


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DUES CARD

Dear West Coast Geoscientist:

I invite you to join, or renew, your membership to the PACIFIC SECTION, AAPG. For a small annual membership dues, you receive the following benefits:

Membership in one of the local geological societies affiliated with the PACIFIC SECTION, AAPG. These include: San Joaquin Geological Society, Coast Geological Society, Los Angeles Basin Geological Society, Sacramento Petroleum Association, Northern California Geological Society, Northwest Petroleum Association And Alaska Geological Society (several of these societies require local dues). These societies provide monthly meetings with strong technical speakers programs.

An annual subscription to the Pacific Petroleum Geologist Newsletter - a bi-monthly publication containing information of local and regional interest to the west coast geologist.

Reduced prices for PS-AAPG publications. A copy of the PS-AAPG/SEPM/SEG directory. Inclusion on the mailing list for all PS-AAPG business and activities.

Networking and socializing opportunities with fellow geoscientists from industry, academia and government backgrounds through local society meetings, field trips and the annual convention.

If you agree that the PS-AAPG is something in which you would like to participate, please fill out and return the membership dues card below. Note that we now have a three year membership option if you would like to avoid yearly renewals.

BOB COUNTRYMAN, PRESIDENT, PS-AAPG

PACIFIC SECTION - A.A.P.G.

Founded 1925

California - Oregon - Washington - Alaska
1995-96

Signature _____

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— or —
☐ Three year option \$36.00
- ☐ Extended Mailing List (*to receive meeting notices for LABGS, SJGS, Coast GS*) \$12.00
— or —
☐ Three year option \$36.00

Contributions:

- ☐ Bob Hacker Memorial Fund \$ _____
☐ Martin Van Couvering Fund \$ _____
☐ Dibblee Map Foundation \$ _____
☐ California Well Sample Repository \$ _____

TOTAL PAYMENT \$ _____

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IF NO CHANGE, PLEASE CHECK HERE ☐

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First, Middle Init. _____
Spouse's Name _____
Highest Degree & Year _____
School _____
Position - Title _____

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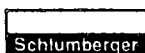
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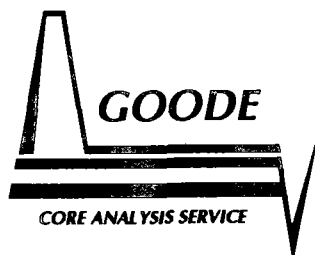
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LETTERS TO THE EDITOR

I want to thank Robert Countryman for the excellent review of the House of Delegates meeting at the Houston convention. I had been in New Zealand for two months and was unable to attend.

I did go to Houston in January on convention business and was surprised at the schism evolving between many of the members and the attempt of the Tulsa office to Internationalize the A.A.P.G. at what they felt was a cost to U.S. members. Threats of having the Gulf Coast Assoc. of Geological Societies pull out of the A.A.P.G. were bandied about. The G.C.A.G.S. can survive with the A.A.P.G. but the A.A.P.G. cannot survive in its present form without the G.C.A.G.S.

The A.A.P.G. has always welcomed all qualified members regardless of race, color or nationality and I, personally don't see the need for a radical change in the organization. The A.A.P.G. has been good to me and through my association I have made numerous friends that have survived downsizing, disastrous oil prices and now retirement. The future belongs to the young and the younger members of the P.S.A.A.P.G. should decide how they want the organization to go. At a committee meeting several years ago Fred Dix was exhorting on getting Russian geologists in the organization, I told him he better be careful, Russia with 100,000 geologists would take control and the Tulsa office rightly would have to move to Moscow.

The matter of conventions is another item that may come up before the members. When the A.A.P.G. was founded conventions were for the dissemination of geological information as it pertained to the search for oil and gas. I'm afraid that through the years it has become a cash cow, the Denver profits were obscene. Personally I think one national convention in the U.S. every other year with possibly one outside the U.S. in the off year would make more sense. In these days of (poor) economy only Tulsa staff members can afford to make every convention.

In spite of the above do try to make the San Diego convention, it's a great town and we will have a lot of things to see and do as well an excellent program that Don Lewis is putting together.

Again, thanks Robert Countryman for the excellent letter.

— George B. Pichel
33941 Pequito Dr.
Dana Point, CA 92629

ECOLOGY FIELD TRIPS

Sponsored by
Bureau of Land Management

The Bureau of Land Management has initiated a program of monthly earth science field trips to points of ecologic, geologic, paleontologic and historic interest throughout central California. These trips are designed for persons of high school age or older. It is not necessary to have a technical background to attend or benefit from the trips.

These field trips are recommended for teachers and many of them can be taken for in-service continuing education credit through California State University Bakersfield. Each trip includes a full spectrum of environmental and land management topics. The field trips are conducted using buses or vans. Private vehicles are not used except in special circumstances. A field guide is prepared for each trip which includes maps and directions which can be used by anyone for self-guided investigation of the ecology along the field trip route.

1995 SCHEDULE

Bakersfield to Point Sal: Sat., July 15, 1995

The ecology and Geology of the Santa Maria area is considered with stops at Point Sal and Celite's diatomaceous earth mine in Lompoc. Plate tectonics and continental accretion are topics of discussion.

Bakersfield to Ojai and Santa Paula: Sat., August 5, 1995

This trip explores the San Andreas Fault, the Cuyama Valley, Ojai, the Silverthread Oilfield, Sulfer Mountain Oil Mines, and Santa Paula Oil Museum. The tour returns to Bakersfield over the old ridge route between Castaic and Quail Lake. Watershed management and habitat restoration are discussed.

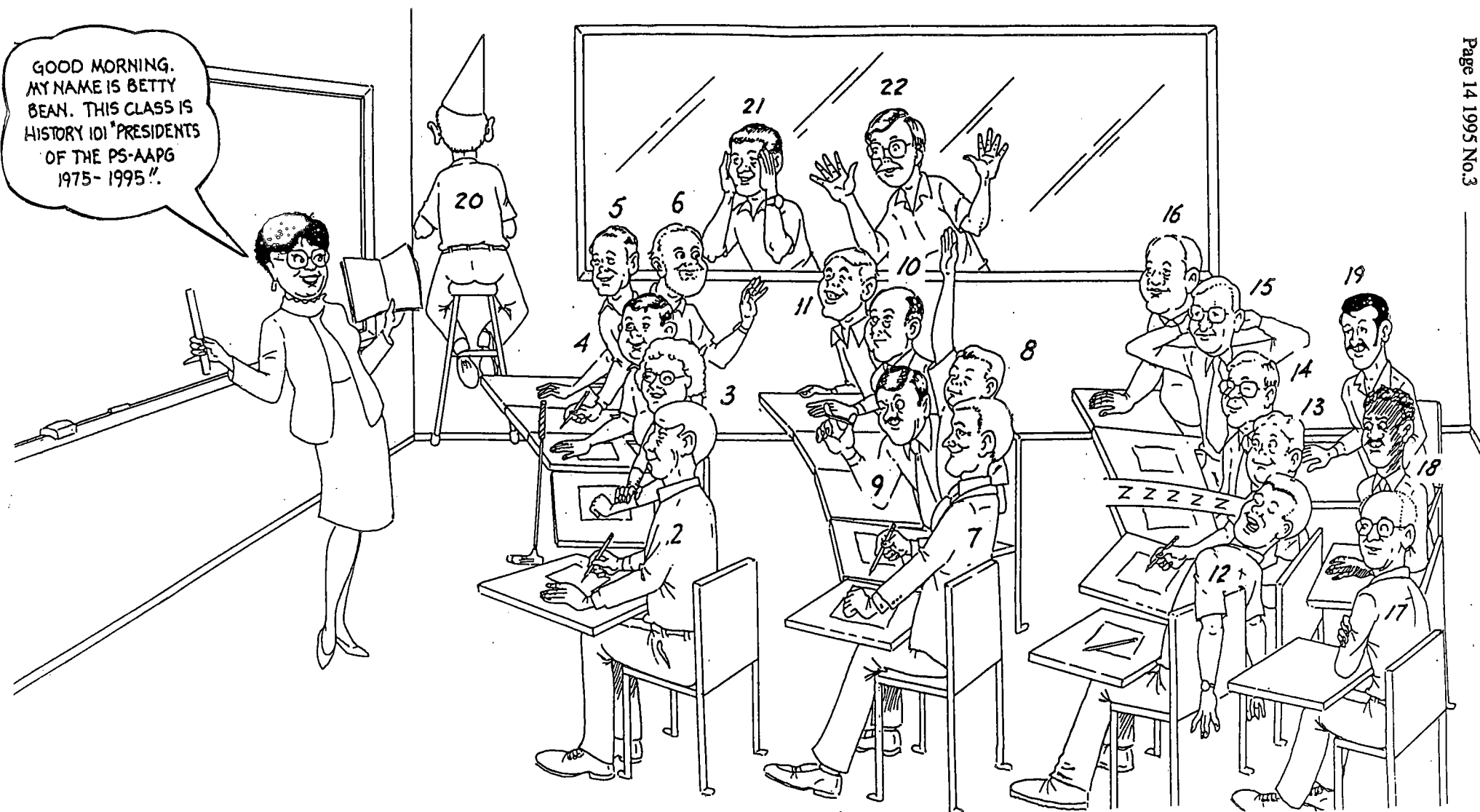
Breckenridge Mountain and Havilla: Sept. 2, 1995

This tour takes back roads up Breckenridge mountain exploring mines and hot springs and Havilla, the original county seat. The Bright Star mine, Claraville, and Weldon districts are investigated. Examples of interaction between ecosystems and geology are discussed.

Registration for field trips is \$20.00 per adult or \$40.00 per family. Children under 16 are \$10.00. For persons taking their own vehicles, registration is \$20.00 per person or \$40.00 per vehicle. If you have any questions or to register call Dr. Wilkerson at 805-391-6177 or write to MOTHER LODE c/o Gregg Wilkerson, 7005 Hooper Ave., Bakersfield, CA 93308.



(left to right). Les Magoon, General Chairman of the '95 convention; Laura Bazeley, Secretary of the PS-AAPG; John Minch, General Chairman of the '96 National AAPG/PS-AAPG convention in San Diego.



- | | | |
|----------------------------|----------------------------------|-----------------------------|
| 1. BETTY BEAN | 8. WESLEY G. BRUER 1975-76 | 15. ED KARP 1984-85 |
| 2. JOHN A. CARVER 1981-82 | 9. REINHARD J. SUCHSLAND 1993-94 | 16. BEN CAHILL 1989-90 |
| 3. LUCY BIRDSALL 1985-86 | 10. EUGENE F. "BUD" REID 1976-77 | 17. ROBERT HACKER 1978-79 |
| 4. ROBERT LINDBLOM 1986-87 | 11. TED OFF 1982-83 | 18. JOHN RANDALL 1991-92 |
| 5. VERN JONES 1977-78 | 12. JAMES R. WEDDLE 1983-84 | 19. PAUL HACKER 1992-94 |
| 6. JACK H. WEST 1988-89 | 13. STANFORD ESCHNER 1979-80 | 20. JEAN SENTEUR DE BOUC |
| 7. JACK CUNNINGHAM 1990-91 | 14. THOMAS L. WRIGHT 1980-81 | 21. DAN E. PASQUINI 1987-88 |
| | | 22. BOB COUNTRYMAN 1994-95 |

BETTY BEAN — SPECIAL RECOGNITION AWARD

Twenty years ago, Wes Bruer made of the most important appointments he ever made in his long and illustrious career. While he was President of the PS-AAPG, he appointed Betty Bean as Membership Secretary. Betty continued as Membership Secretary for the next twenty years, and finally this year has asked to step down. We considered turning down her resignation, but considering that this is a volunteer organization, we really didn't have any choice, and so we reluctantly agreed. We have discovered how hard it is to replace a legend. Betty really was the glue that held the organization together and made everyone's job easier. She knew all the details, what had worked before and what didn't work, who had done what and who hadn't done what. All the past presidents came to lean heavily on her advice and wisdom.

It occurred to us that we should come up with a unique way of thanking her for all that she has done for us and all the help she gave us. And this is what we came up with. For those of you who can't see this, it's a cartoon of all the Presidents that have served with Betty over the last twenty years sitting at desks in a classroom. Betty is in front of this unruly class of students and is valiantly trying to teach them how to run an organization.

It gives me great pleasure today to present this to Betty and to take the opportunity of recognizing one of the finest people to have graced the PS-AAPG over the last twenty years. You don't have to take my word for this, as I have the written testimony of the Past Presidents of the PS-AAPG for the last twenty years to back me up.

Thank you Betty for all the help. And if you decide you want to come back, just let us know.

— Robert L. Countryman, President, PS-AAPG 1994-95



Betty Bean received a special award for her 20 years of service as Membership Secretary for the PS-AAPG.

STANFORD ESCHNER — HONORARY LIFE MEMBER

It is a great pleasure for me to cite Stanford Eschner, a friend and co-worker for many years, as an honorary life member of the Pacific Section AAPG.

Stan is a native Californian with BA and MA degrees in geology from UCLA. He was a geologist with the Army Corps of Engineers, a production geologist with Shell Oil Company, a geologist, rising to vice-president, with the oil and gas subsidiaries of Occidental Petroleum with titles like: Manager of Domestic Operations and Chief Geologist. Stan presently is chairman of Trio Petroleum, Inc., based in Bakersfield, California.

Stan has been involved in the discovery of oil and gas production from at least 50 domestic fields including, here on the west coast, Downtown Los Angeles, East Beverly Hills, El Segundo, Sawtelle, Riviera, Beta in San Pedro Bay, Cal Canal, etc., and he has been active in the California Independent Producers Association.

In addition to work in the oilpatch, Stan has been deeply involved with the California Living Museum, an educational and recreational facility in Bakersfield exhibiting native plants and animals. He has also been involved with Kern Bridges, an organization which places abused children in foster homes and provides continuing therapy and support.

Stan has given much time and energy to the Pacific Section AAPG as a field trip leader, a convention chairman, a Levorsen Memorial Award winner in 1972 for the best paper at the annual meeting, and an officer, many times, leading to the presidency of Pacific Section AAPG in 1979-1980.

President Countryman, I present to you, Honorary Life Member, Stanford Eschner.

— Citationist E. F. "Bud" Reid



Stan Eschner (left) was made an honorary lifetime member of the Pacific Section AAPG. Bud Reid, President-elect of the National AAPG was Stan's citationist.

WILLIAM E. (BILL) KENNETT — HONORARY LIFE MEMBER

Bill is 80 years old and has been a member of Pacific Section AAPG for 55 years. That is the basic requirement for membership in the "Good Old Boys" club.

But, more than that basic stuff, he has held many important posts with Superior, Phillips, and Ogle, and is still working at it.

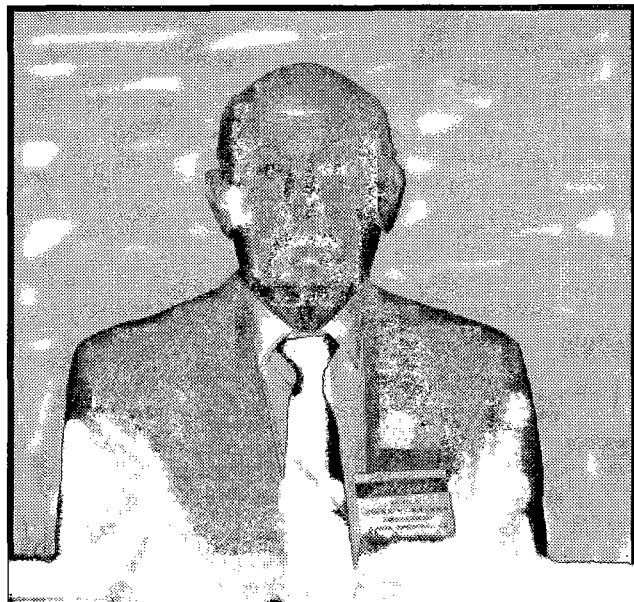
Bill is a graduate of Cal Berkeley, got his basic training for ten years in California with Superior, then advanced for seven more years with Superior management. He then switched to Phillips as the California Exploration Manager and Chief Geologist, winding up as Vice President and Regional Manager for Phillips New Zealand. Meanwhile, he was very active with WOGA and AAPG National committees, representing the oilpatch interests in Washington.

After "retirement" in 1980, he became Vice President with Ogle for six years. Since then he has been active in water-well locating and other activities of like nature. Bill is also the Vice President of the Thomas Dibble Foundation.

He did not retire to a leisurely life of golf and riotous living, but continued his interest in geology. Bill enjoys writing letters to newspaper editors in hopes of clarifying the public's conception of earthquakes and oil production.

Unfortunately, Bill had scheduled an extensive trip to the Far East coincident with this convention and cannot be here to accept his award. He is a neighbor of mine, living just the other side of the Lavigia fault. So it gives me great pleasure to not only give this citation, but to personally deliver the plaque to him on his return.

—Harold H. Sullwold
Citationist

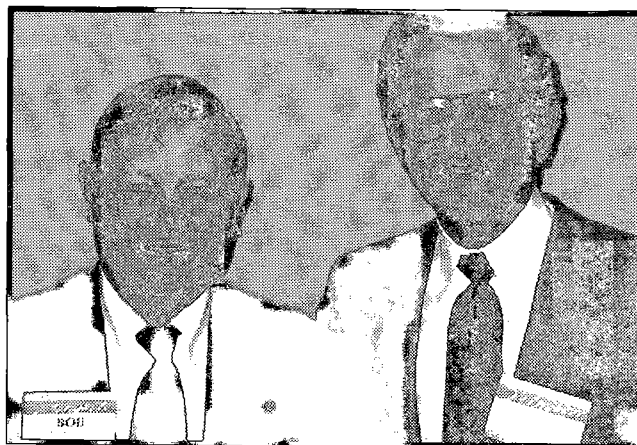


Harold Sullwold was the citationist for William Kennett who could not be present. Harold is the creator of the Andy Cline cartoons.

JOHN H. SILCOX — HONORARY LIFE MEMBER

John Silcox is not only a native Californian, born in Whittier, but a true native petroleum geologist raised in the oil town of Taft, located about 40 miles west of Bakersfield. John's father, Donald, was chief chemist for Standard Oil Company of California in the company's 11-C Headquarters. After graduation from Taft High School, John served in the United States Army Air Corps. Following his military service, he went on to the University of California at Berkeley and earned a bachelor's degree in geology, followed by graduate studies. He joined Standard Oil Company of California in 1951. Over the next 30 years he worked as a geologist with increasing management responsibility for the company's exploration activities in many western states, including Alaska. In 1980, he was elected vice president of exploration, Chevron Overseas Petroleum Inc., and assumed its presidency in 1984. John retired from Chevron in 1989 after a distinguished 38 year career. John's active and strong efforts in AAPG and the Pacific Section are reflected in two ways. First, he has been an active member of AAPG since 1954 and has served on the Advisory Council as the Pacific Section representative. Michel Halbouty asked John to be a director of the Circum-Pacific Council on which he served for 8 years. In 1980, John was a candidate for vice-president of the AAPG. He has also worked on various committees in the Pacific Section. John published in bulletin 181 and presented, also, at the annual meeting of AAPG in Los Angeles, the paper on the West Thorton and Walnut Grove gas fields in the delta area. The paper stressed the importance of the Meganos and Martinez channels for gas entrapment. Second, and importantly, John was that type of exploration manager who encouraged company geologists to join and become active in AAPG and in the Pacific Section. He advocated and supported those geologists to publish the results of work that would contribute to our science. I know, for myself, this type of support from Chevron management has made my years in AAPG and the Pacific Section such a rewarding experience. Finally, this citation would not be complete without acknowledging and recognizing John's wife, Colleen, always present, smiling and ever friendly. John, it has been a distinct pleasure and honor for me to present this citation. Please come forward to accept the Section's highest award—honorary membership.

—Bob Lindblom
Citationist



John Silcox (right) was made an honorary lifetime member of the Pacific Section AAPG. Bob Lindblom was John's citationist.

STEPHAN A. GRAHAM — SPECIAL TEACHING AWARD

It is my great pleasure to present my dear friend Steve Graham as the recipient of the Special Teaching Award.

As a youngster growing up in Evansville, Illinois there was little to indicate that Steve was marked for greatness. He began his geologic career collecting fossils in southern Indiana. He became an IU Hoosier and teamed up with Lee Suttner when Bobby Knight wouldn't offer him a basketball scholarship. His senior thesis was an elegant study of Cambrian islands and shorelines in southwestern Montana.

He came to Stanford as a graduate student in 1972, eager to embrace the emerging new paradigm of plate tectonics and sedimentation, as professed by our mutual mentor and previous recipient of this award, Bill Dickinson. I will always remember that great moment in science, when Steve's eyes lit up and he said "the Ouachitas" as he looked at a figure of the Bengal Fan. This insight led to the concept of remnant ocean basins, a major advance in our understanding of collision orogens and the inspiration for several joint papers.

After completing his PhD on the Cenozoic basins of Salinia, Steve moved to Houston to work for Exxon Production Research, but missed the tectonic excitement of California and returned to the Bay Area as a Chevron geologist. His several years in the oil patch

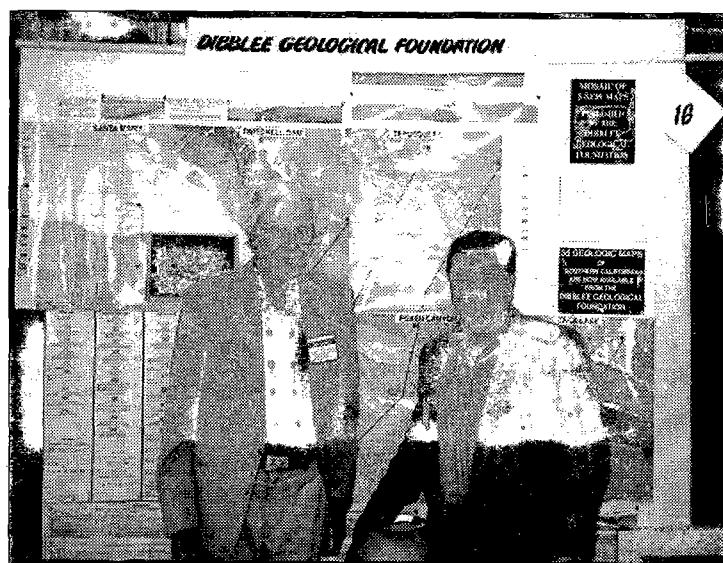
broadened his experience and put a practical stamp on his research. His return to Stanford as a Petroleum Geologist and Basin Analyst created one of the best programs in the world. Steve has put together enormously successful, industry-supported, research projects, especially his San Joaquin, China and Mongolia studies that have greatly advanced our understanding of these areas, developed new concepts in basin analysis, and trained a highly talented group of graduate students, who have been very successful in both industry and academia.

In addition, Steve has made major contributions to constraining strike-slip histories of California faults and basins, and to provenance modeling of foreland conglomerates. He has even dabbled in paleomagnetic studies of Bay mud and marine seismic studies of modern submarine fans.

In summary, you could not have chosen a more deserving recipient for this award. Steve Graham has had a great impact on our profession through his creation of new knowledge, and the teaching and training of many fine young geologists. Congratulations, Steve!

— Raymond V. Ingersoll

Below: Steve Graham (left) received PS-AAPG's Special Teaching Award. His citationist was Ray Ingersoll.



Above: Tom Dibblee (left) and Helmut Ehrenspeck in the Dibblee Geological Foundation booth in the exhibitors hall.

Bill Rintoul

In the early 1960's, rumors began flying about fantastic increases in production of heavy crude in California's aging oil fields.

There were unsubstantiated reports of wells that had been all but ready for abandonment surging back after steaming to behave like gushers.

One of the wilder rumors claimed that out at South Belridge the field's biggest producer, Belridge Oil Co., had injected steam for 15 days into a well that previously had pumped 27 barrels a day. The well was said to have been returned to production making more than 250 barrels a day.

Though not immediately recognized, the day of steam had dawned, opened by pilot tests conducted by Shell Oil Co. and Tidewater Oil Co. The enhanced recovery technology that would unlock billions of barrels of heavy crude had been born.

If anyone had predicted at the time what an enormous change steam would make in the revival of fading fields and the setting of production records, the person making the prediction probably would have been locked up as certifiably insane. Especially if the field quoted as an example was South Belridge.

The field had been an April 1911 discovery by Belridge Oil Co., which traced its beginnings back to 1910. Mericos H. Whittier, whose son Leland, would later head the company, was the prime mover along with Burton E. Green.

One of the company's first actions was an attempt to acquire minimal acreage around an oil seep 12 miles north of McKittrick. The owner of the grazing land refused to part with only a portion of the acreage. Belridge Oil Co. acquired the whole 30,000-plus acres in January 1911 from a Mr. Hopkins of New York City. The approximate price was \$1 million.

On April 21, 1911, Belridge Oil Co. completed No. 101 on Sec.33, 28S-21E, Kern County, as the discovery well for the South Belridge field. The 782-foot well tapped the Diatomite formation for an initial production of 100 barrels per day. The discovery was cloaked in confusion,

not the least of which concerned the company's name. Belridge was variously referred to in small news articles that noted the discovery as "Bell Ridge" or "Belle Ridge" before the correct name was used. The oil find was reported to be "in T28-R21 either Section 30 or 34."

A San Francisco newspaper described the discovery as "a small quantity of oil, not sufficient it is believed to be a commercial success."

The image didn't improve with time. Thirteen years later, the field had proved so unimpressive it was included in an article titled "The Minor Oil Fields of Kern County" published in the July 1924 issue of the State Mining Bureau's Summary of Operations—California Oil Fields."

The fortunes of Belridge Oil Co. fluctuated with the fortunes of heavy oil, more often down than up. There was a drilling flurry for a year or two after the discovery, a hiatus and another flurry during World War I followed by a long slump.

Production peaked in 1945 at 4.63 million barrels, or about 12,700 barrels per day. In 1959, the year before the first steam pilot, the field produced 4.15 million barrels, or about 11,370 barrels per day. Cumulative production as the steam era began stood at 81.05 million barrels.

As the use of steam injection came into its own, production climbed until by December 1979, the field was producing 49,500 barrels per day. In that same month, Shell Oil Co. purchased Belridge Oil Co. for \$3.65 billion. The purchase price at the time represented the largest corporate merger in U.S. history.

Cumulative production of the South Belridge field stood at 263.2 million barrels. Reserves were estimated at 445.4 million barrels, indicating an eventual recovery of total of 708.6 million barrels.

In May of this year, the South Belridge field produced its one billionth barrel of oil, becoming only the 15th oil field in the nation's more than 135-year history of oil production to produce one billion barrels of oil.

The field's top producers in the first quarter were CalResources, successor to Shell, 56,250 barrels per day from 2,545 wells; Mobil, 47,380 barrels per day from 711 wells; Santa Fe Energy Resources, 6,700 barrels per day from 480 wells; and Exxon, 4,010 barrels per day from 181 wells. All are active steamers.

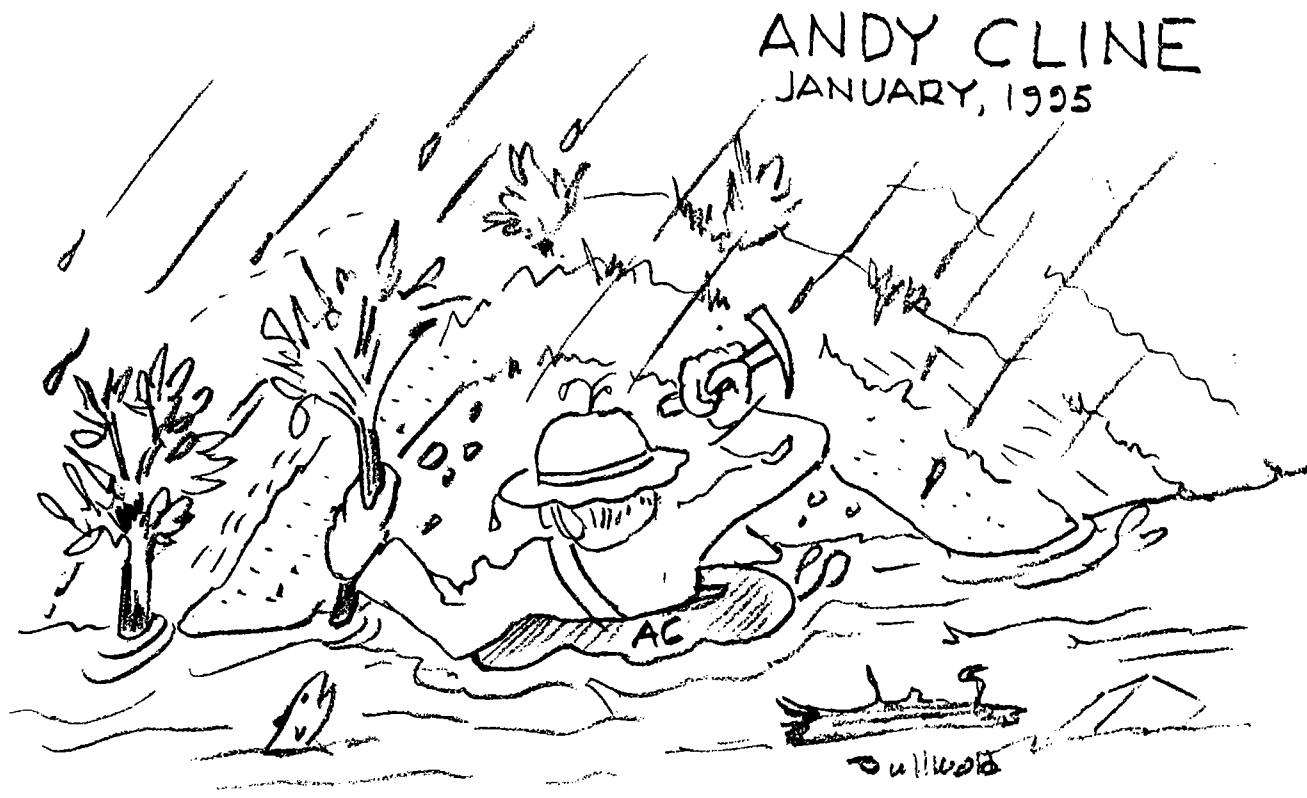
Looking ahead, South Belridge seems assured of many more productive years. The Division of Oil, Gas, and Geothermal Resources estimates the field's reserves at 387.3 million barrels.

As a new member of the exclusive 1-billion-barrel club, South Belridge joined five other California fields that had attained that milestone, notably Wilmington, Midway-Sunset, Kern River, Huntington Beach and Elk Hills. Other billion-barrel-or-more fields are Alaska's Prudhoe Bay and Kuparuk River; Oklahoma's Sho-Vel-Tum; and Texas, Yates, Kelly-Snyder, Slaughter, Wasson and Panhandle. One other field, Ventura, is believed to have the potential to eventually produce one billion barrels. To the first of this year, the field had produced 930.2 million barrels and had estimated reserves of 81.8 million barrels.

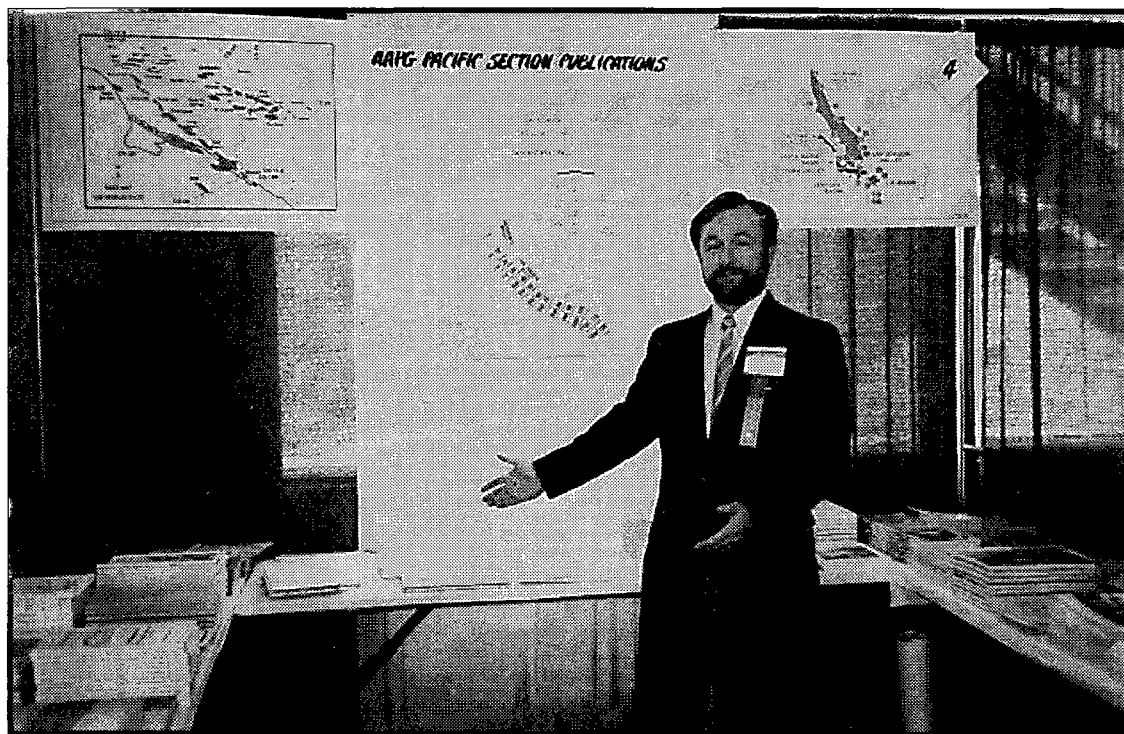
FOR SALE

M.J. Systems, Inc., Microfiche collection for Northern California, including the Sacramento Basin, Humboldt Base and Meridian, Oregon's Ochoco Basin, and portions of the San Joaquin Basin and Williston Basin. The Sacramento Basin portion in about 99% complete. The microfiche include well logs and well histories. The monthly update from M.J. Systems is \$26 plus shipping. Included with the microfiche is a M.J. Systems microfiche reader/continuous log printer. The printer uses both 5" and 8" wide dry silver paper. Also included is a horizontal reading microfiche reader on a lazy-susan base for quick visual examination of the logs or well histories. Price for the complete set is \$8,000, FOB, Fresno.

For questions or further information, please call Dane Johnson at (209) 445-5525 daytime M-F, or at (209) 299-8861 evenings and weekends.



Harold Sullwold has been entertaining us with the exploits of Andy Cline for many years. We appreciate this latest update into the life of Andy Cline. Obviously Andy was working near Mr. Sullwold's home in Carpinteria, California during the recent bit of rain the coastal communities experienced. I believe they got as much rain in January in Carpinteria as we get in five years in Bakersfield. A book of Mr. Sullwold's Andy Cline cartoons is available through PS-AAPG Publications.



Larry C. Knauer in the PS-AAPG Publications booth in the exhibits halls.

**PACIFIC SECTION AAPG
MEMBERSHIP REPORT
March 6, 1995**

	<u>93-94</u>	<u>94-95</u>
ALASKA GEOLOGICAL SOCIETY		
Active (AK)	8	6
ALL OTHERS		
Active (AO)	33	21
COAST GEOLOGICAL SOCIETY		
Active (CA)	194	130
Subscriber (CS)	19	12
Honorary	9	9
LOS ANGELES BASIN GEOLOGICAL SOCIETY		
Active (LA)	168	135
Subscriber (LS)	15	12
Honorary	8	8
NO. CALIFORNIA GEOLOGICAL SOCIETY		
Active (NC)	68	53
Subscriber (NCS)	7	4
Honorary	5	5
NORTHWEST PETROLEUM ASSN		
Active (NW)	21	18
OVERSEA MEMBERS		
Active (OS)	4	2
SACRAMENTO PETROLEUM ASSN		
Active (SA)	38	28
Subscriber (SAS)	8	7
Honorary	2	2
SAN JOAQUIN GEOLOGICAL SOCIETY		
Active (SJ)	326	256
Subscriber (SJS)	25	20
Honorary	6	6
Complimentary		2
	964	736

**DEADLINE FOR NEXT ISSUE -
SEPTEMBER 1, 1995**

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NEWSLETTER
Pacific Section A.A.P.G.
Post Office Box 1072
Bakersfield, CA 93302

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PACIFIC PETROLEUM GEOLOGIST NEWSLETTER

of the Pacific Section
American Association of Petroleum Geologists

SEPTEMBER 1995 NO. 4

Are your 1995-96 dues paid yet? Are your 1995-96 dues paid yet? Are your 1995-96 dues paid yet?

A MESSAGE FROM THE PRESIDENT

It seems incredible that another year has rushed by. Welcome to the Pacific Section AAPG for 1995-96! The executive committee and I have an exciting and hopefully productive year planned. We also hope that each of you come to feel that you are a part of that plan

First, congratulations to the officers **Bob Countryman, Larry Knauer, Laura Bazeley, and Donna Miller**, and committee members **John Howe, Mel Erskine, Tom Wright, Frank Cressy, Jim Weddle and Paul Hacker**, for a job well done. This past year, special thanks go to Bob and Larry; really tireless performers irrespective of whether the task provides any glory or is just plain work.

Plans for 1995-96 include a focus on expanding our membership and toward that end, I hope to provide you with a greater understanding of the relationship of the Pacific Section, AAPG, and the various local geologic societies. The convention committee for the San Francisco meeting really led the way in membership expansion, finding and using a very large mailing list of geoscientists in the Bay area. It will be a slow process, but if we let people know we are out there and can provide a valuable addition to their professional life, we are confident that our membership can grow. By expanding our membership, we can enrich our own geologic experience.

The geoscience business has changed dramatically in the past ten years. In the years before 1985, when most of us were entering the work force, our expectations often included eventually settling down with an employer and working for that employer until retirement. We could expect to be transferred several times as the company expanded our knowledge through new experiences. Nowadays, a geologist may have greater longevity than the company he works for. Most of us, and I include myself, have worked, or will work, for several companies while living at the same address or in the same town. The friendships and professional reputation cultivated at your local geologic society meetings may be just as important to

your future employment as becoming inculcated with corporate culture.

I, therefore, encourage you to become involved and active in your local society. Write a paper for the 1997 Pacific Section meeting in Bakersfield or the National next spring in San Diego. At the very least, plan to attend dinner meetings, the conventions, field trips, or short courses. You may find your fellows less likely to abandon you than your employer.

One of the keys to greater participation is understanding the relationship of the Pacific Section AAPG to the various local geologic societies. The Pacific Section is the connecting tissue to the national organization in Tulsa, an umbrella to the various affiliated local societies. Your dues, in the case of the San Joaquin for example, provide for your membership in that group. A portion of those dues, in fact, is forwarded to the San Joaquin. Those dues provide for printing and mailing our newsletter and such incidentals as the cost of storage for our publications. The Pacific Section provides a liaison to the national organization for the National Convention in San Diego and will sponsor a number of field trips and short courses at that convention. The Pacific Section will receive a percentage of the profits from the convention and those profits are used to publish books of local geologic interest. As we continue in our efforts to expand our membership, I will report more specifically on the relationships of the various local societies to the Pacific Section umbrella.

I, unfortunately, must close with a sad note. July 30, 1995, the society lost a good friend, John Kilkenny. John was a past National and Pacific Section President and was active in the Association until his death. He most recently served as chairman of the Honors and Awards Committee. We depended upon him greatly, and it will be impossible to replace the insight and expertise he brought to the Pacific Section.

— Mark Wilson
1995-96 President

THANKS !!!!!

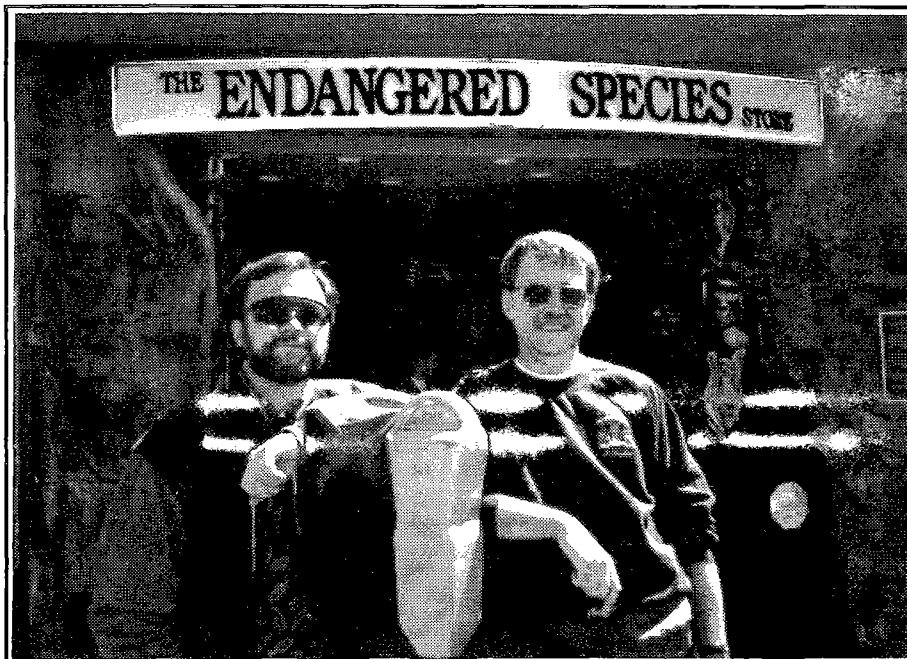
The Pacific Section Executive Committee and the 1995 Pacific Section Convention Committee would like to take this opportunity to thank the following exhibitors for supporting the 1995 convention in San Francisco:

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AAPG Insurance Administrator
AAPG Retirement Plan Administrator
Applied Earth Technology/Seis-Strat Inc.
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Geothermal Resources
Cal Graeber Minerals
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Seismic Micro-Technology
Trimble Navigation
Visual Communications/Studio Blue
Reprographics
Western Geophysical

AND

California Well Sample Repository
Dibblee Geological Foundation
Pacific Section AAPG Bookstore
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THANKS FOR HELPING MAKE THE
CONVENTION A SUCCESSFUL
ONE!!!



Bob Countryman (on the right), 1994-1995 President of the PS-AAPG and current Membership Chairman, stands next to Larry Knauer 1995-1996 PS-AAPG President-Elect. While strolling around San Francisco during the PS-AAPG 1995 annual convention they came upon this photo opportunity. They considered going into the store to see if it had Petroleum Geologists for sale, but opted instead to pose with the parking meter which indicated that their time had already expired.



Pete Richter, one of Schlumberger's service representatives, stands in front of a Schlumberger logging truck that was on display along with a new logging tool called the "Platform Express" in Bakersfield, CA. (see page 15, Rintoul article)

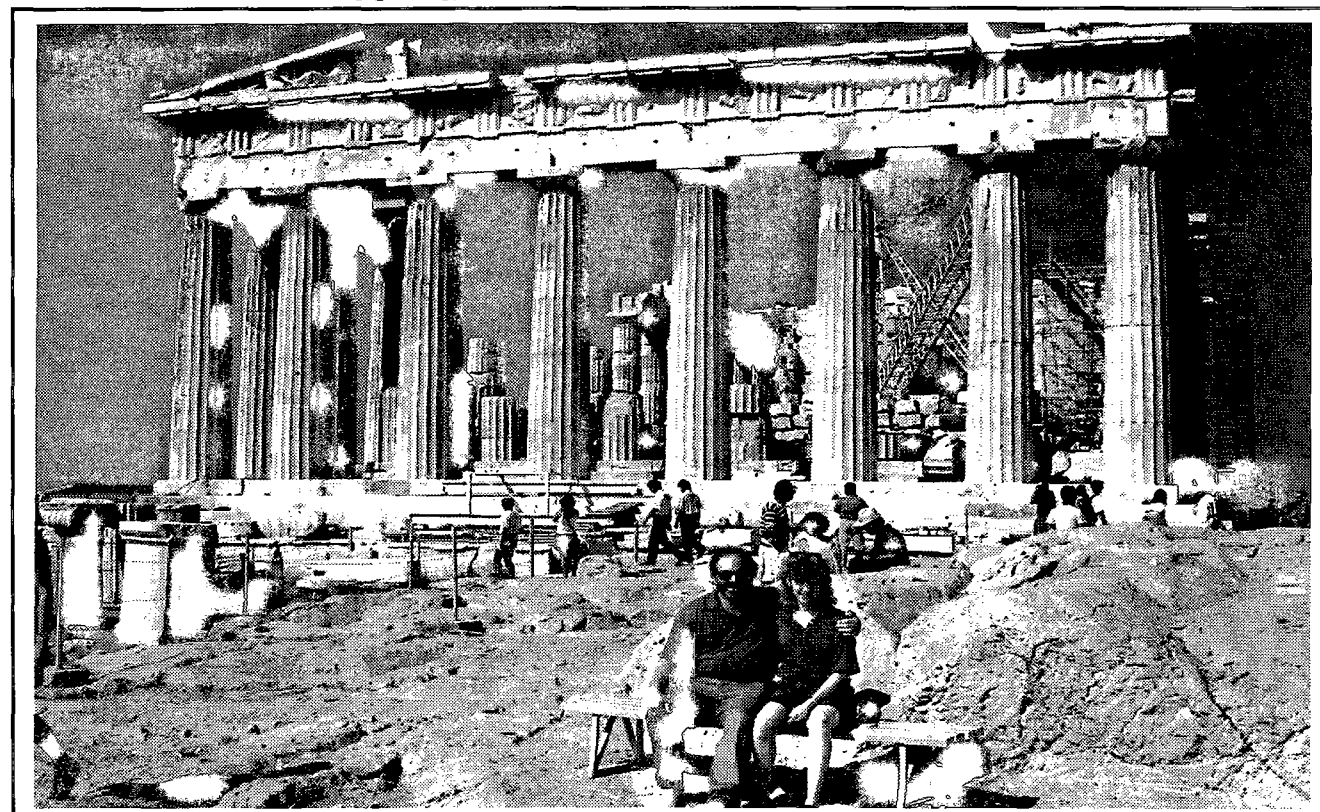
Schlumberger

Mark Rixon
District Manager

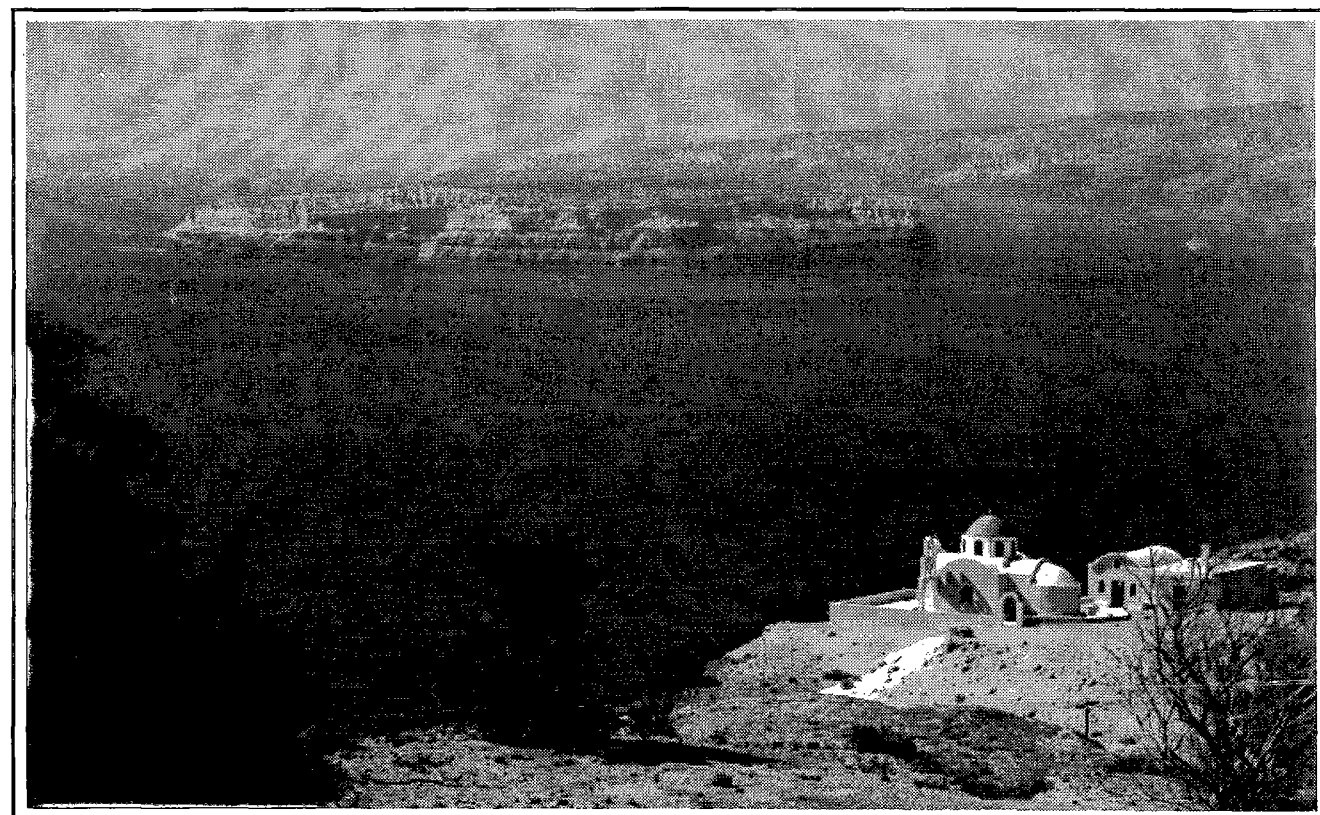
Bakersfield Office
2841 Pegasus Dr.
Oildale, CA 93308
24 HR 805-392-5245
FAX: 805-393-2741
E-Mail: Rixon @ Oildale. Wireline. Slb. Comm.

Sacramento Office
517 Houston St.
W. Sacramento, CA 95691
24 HR 916-371-6988
FAX: 916-371-1202
SHOP 916-325-4848

Jana McIntyre, a geologist with Bechtel Petroleum at Elk Hills and Rob Negrini, a geophysics professor at CSU Bakersfield were married this summer and spent their honeymoon in the eastern Mediterranean area. Highlights of the trip included visiting ancient Roman and Greek ruins in Rome, Athens and western Turkey, and admiring the beautiful beaches, striking geology and archeology of the islands of Milos and Santorini



The newlyweds in front of the Parthenon on the Acropolis in Athens.



A view into the caldera of Santorini, a Greek island in the Southern Aegean Sea. The caldera wall in view is capped by the whitewashed buildings of the town of Fira. In approximately 1500 B.C. an early Greek civilization was destroyed by the caldera-forming eruption. It is thought that the subsequent collapse of most of the island into the sea led to the legend of Atlantis.

NEWS FROM THE LOCAL SOCIETIES

Northwest

The NWPA had an election in which it adopted Amended and Restated Constitution and Bylaws. They included one change in particular which is a name change from the Northwest Petroleum Association to the Northwest Energy Association (NWEA). In addition, the members elected new officers which are:

Dan Wermiel, President
Bob Pinotti, Vice-President
Bill Rodgers, Secretary
Bill Prehm, Treasurer
Bert Mueller, Past President

The Oregon Department of Geology and Mineral Industries (DOGAMI) has released a new geologic map of the Charleston 7-1/2-minute quadrangle that covers the area around Barview, Charleston, and South Slough, just south of the city of Coos Bay in Coos County. The new map was developed with particular emphasis on the geologic structure of the area, to provide basic geologic information about potential earthquake hazards in coastal Oregon.

Entitled Geologic Map of the Charleston Quadrangle, Coos County, Oregon, the map was produced by Ian P. Madin, Galan W. McInelly, and Harvey M. Kelsey and has been published in the DOGAMI Geological Map Series as map GMS-94. The

project was funded by the U.S. Geological Survey and the National Earthquake Hazard Reduction Program.

The full-color geologic map is at a scale of 1:24,000 and is accompanied by three geologic cross sections. In addition to showing the distribution of various geologic units, the map shows complex folding and faulting and identifies numerous faults that have been active in geologically recent time and may be active in the future. The map area includes the first Quaternary thrust fault in western Oregon, the Winchester fault, that has been confirmed by the digging of trenches, up to 150 feet long and 15 feet deep, across the fault.

The eight-page text that accompanies the map contains rock-unit explanations, an extensive discussion of geologic structure, and brief description of geologic history, resources, and hazards.

DOGAMI map GMS-94 is now available for the price of \$8.00 over the counter, by mail from the Nature of the Northwest Information Center, Suite 177, State Office Building, 800 NE Oregon Street #5, Portland, Oregon 97232-2162.

Northwest Energy Association
P.O. Box 6679
Portland, OR 97228-6679
Contact: Bill Rodgers (503) 294-9681

San Joaquin

October 10 marks the beginning of another year of meetings and technical programs with the San Joaquin Geological Society. Our first program speaker is Mark McCaffrey from Chevron Petroleum Technology Company. He will present "Improved Reservoir Management of Heavy Oil Assets Using a Biomarker Variability in Sidewall Cores and Produced Oils: An Example from Cymric Field, Kern County, California".

November 14, Steve Mulqueen from the D.O.G.G.R. in Ventura will give a talk titled: "Petroleum Seeps: A

Natural Phenomena with Historical Significance".

Mark your calendars today! Meetings will be held at the American Legion Hall, 2020 "H" Street, Bakersfield, CA. As usual, attitude adjustment begins at 6:00 p.m. with dinner at 7:00 p.m. followed by the technical program.

San Joaquin Geological Society
P.O. Box 1056
Bakersfield, CA 93302
Contact: Richard Hager (805) 665-3732

Coast

September 19, Dr. Robert Yeats from Oregon State University will be the dinner speaker. His talk is titled "Thick-skinned vs. Thin-skinned Interpretation of Seismic Reverse Faults".

The 1994 Northridge earthquake focused attention on seismogenic south-dipping reverse faults in the western Transverse Ranges. We have shown that the Northridge blind thrust is the eastern end of the Oakridge Fault in the Ventura Basin. Long-term slip rates on the blind Northridge thrust are about 1.7 mm/yr whereas the slip rates on the Oakridge Fault are at least three times higher, more than 5 mm/yr. This means that the Northridge earthquake struck the slowest part of the Oakridge Fault, and also that the main Oakridge Fault in the Ventura Basin is a prime candidate for a soon-to-occur earthquake. This is supported by (1) convergence rates between the Santa Ynez-Topa Topa Mountains and the Oakridge block are 7-10 mm/yr based on GPS geodesy, (2) no large earthquakes have struck the onshore Ventura Basin in its 200-year recorded history, and (3) there is no evidence of fault creep anywhere in the Ventura Basin. Slip rates on the San Cayetano and Red Mountain Faults are less well known but may be as large as the Oakridge Fault. This long-range forecast is not meant to shout gloom and doom but to alert public officials and the public at large to upgrade building codes to withstand a Northridge type earthquake and to undergo earthquake preparedness drills in the counties, cities, schools, and individual families.

October 17, Dr. Dorothy Stout will be the dinner speaker. Her talk is titled "Disasters, Drilling and Discoverers; California Hazards, Resources and Geologists".

Coast Geological Society
P.O. Box 3055
Ventura, CA 93006
Contact: Terry Adcock (805) 650-2473

Los Angeles Basin

Luncheon meeting alternate third Thursdays at noon at Unocal Center, Los Angeles.

Los Angeles Basin
23430 Hawthorne Blvd., Ste. 380
Torrance, CA 90505
Contact: Mark Legg (310) 378-6254

Sacramento

Noon luncheon meetings are held at the HUNGRY HUNTER RESTAURANT, 450 Bercut Drive, Sacramento, on the second and fourth Wednesdays

Sacramento Petroleum Association
P.O. Box 254443
Sacramento, CA 95865-4443
Contact: Dale Gray (916) 974-7702

Alaska

9/21/95 - ANNE PASCH, PROFESSOR-
UNIV. OF ALASKA - ANCHORAGE
"A New Duckbill Dinorsaur from the
Matanuska Fm., southcentral Alaska"

10/26/95 - PAUL LAYER, PROFESSOR-
UNIV. OF ALASKA - FAIRBANKS
"UAF Ar/Ar Geochronology Laboratory
and new, and recent studies."

New officers are:

Tim Ryherd, President
Nancy Vaughn, Past President
Sue Karl, President-Elect
Kristine Crossen, Vice-President
Paul Deck, Treasurer
Julie Dumoulin, Secretary

Alaska Geological Society
P.O. Box 101288
Anchorage, AK 99510
Contact: Tim Ryherd (907) 762-2140

Northern California

The Northern California Geological Society has prepared its agenda for the Fall 1995. We have three firm speakers for our September, October and November evening meetings. On September 21, Dr. Susan DeBari of San Jose State University will present a talk entitled "Geological and Scenic Tour through the Kohistan Arc and Nanga Parbat Region, NW Himalayas, Pakistan." This will be a combined geological and scenic/cultural survey of an island arc complex accreted to the Asian continent during the collision between the Asian and Indian plates about 100 m.y. ago. The upended arc complex is transected from upper to lower crustal levels by the Indus and Swat valleys. Dr. DeBari will take her audience on a tour of the excellent valley outcrop exposures and will introduce them to the physiographic and cultural scenery of this region along the way.

Dr. Jill McCarthy, USGS Menlo Park, will speak on "Seismic Reflection Investigations of Faulting and Crustal Structure in the San Francisco Bay Area" at our October 19 evening meeting.

On November 16 Dr. Karen Grove of San Francisco State University will give a talk entitled "Investigating the Quaternary Geologic History of the Point Reyes Region." We are currently searching for a speaker for our December 14 meeting.

The NCGS has one field trip planned for the Fall 1995. It is scheduled for October 21, and is advertised as "A Geologic Guide to the Wines of Napa Valley." The leader is Dr. David Howell, USGS Menlo Park, who will introduce those on the trip to the geology of the Napa Valley and its influences on the microenvironments that control the

quality of wines produced there. A gourmet lunch will be provided for the participants, and of course, some wine tasting will be enjoyed by all.

Our Winter/Spring 1996 schedule has not been firmed up yet, but we are anticipating some excellent AAPG Distinguished Lecturers to complement the local speakers. Our Program Chair is selecting two speakers from the Distinguished Lecturer list: H. Edward Clifton, Conoco Inc., Houston, Texas ("Open Ocean Clastic Deposits: Theme and Variations"), and Bernard C. Duval, TOTAL, Paris, France (Bennison Distinguished Lecturer: "Stratigraphic Cycles and Major Marine Source Rocks"). We have selected Dale Leckie, Geological Survey of Canada, Calgary ("The Use of Sequence-Bounding Surfaces for Correlation and Mapping in Nonmarine, Incised-Valley Reservoirs") as an alternative. The finalized list will depend on scheduling availability of the lecturers.

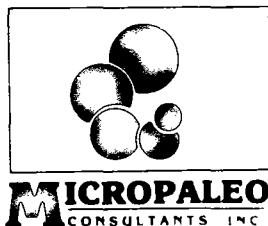
The 1996 NCGS Field Trip agenda is tentative, but we are considering several potential trip topics. These include a tour of key locations along the San Andreas fault, a visit to the New Idria Mining District with Dr. Robert Coleman, and a trip to the Sierra Nevada Foothill ophiolite/metamorphic belt with Dr. Eldridge Moores of U.C. Davis. As in the past, we have the ever-popular Mt. Diablo field trip led by Ron Crane and Craig Lyon as a strong favorite.

No. California Geological Society
9 Bramblewood Court
Danville, CA 94506-1130
Contact: Dan Day (510) 294-7530

Missed the Directory . . .

Tom Hopps
250 S. Hallock Dr. Ste. 101
Santa Paula, CA 93060
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Jim Haerter
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3801 Pegasus Dr.
Bakersfield, CA 93308
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Delegate's Column

Joan Barminski —
Coast Geological Society
and

Robert L. Countryman —
San Joaquin Geological Society

In the last issue of the PPG, a Delegates Survey was taken of your opinions concerning a number of suggestions made by Mr. Toby Carleton, the Past-President of AAPG, on how AAPG might respond to the increase in International Memberships. Well the results are in and 155 (about 20% of PS-AAPG's membership) of you responded. 45 of the 155 respondees also provided written comments to flesh out their ideas and opinions. A few surveys continue to trickle in but not in numbers great enough to alter the results. These numbers are low as far as surveys go but the results are so clear, that we don't believe they would change much if the percentage of participation were higher. The results will be written up and forwarded to AAPG President Bud Reid and to the House of Delegates Chair Mr. Tom Albrandt for consideration.

This survey suggests that PS-AAPG's membership strongly supports (60-77%) ideas such as increasing the number of affiliated international societies, recruiting new international members, increasing services to those members and possibly creating international sections or additional elected AAPG officers to be filled by international members. But when it comes to changing AAPG's name, we're in favor of retaining the status quo. 65% favored retaining the "American" and 85% favored retaining the "Petroleum" in AAPG's name. If we were to change the name, no particular favorite was indicated. None of the suggested names garnered more than 15% of the responses. As far as the Pacific Section is concerned, the name American Association of Petroleum Geologists is fine just as it is.

The results of individual questions are shown below. In a future column, we will share some of the comments (after minor editing to permit us to remove some of the more inflammatory rhetoric) from the 45 who wrote them. If analysis of the results indicate any interesting differences between responses from those respondents that are not National AAPG members from those who are, we'll share those also. So, here are the results of the survey. Please note that for item 5C, the totals do not equal 155 responses as several people indicated multiple choices.

1. Should the AAPG give greater access to International members by creating additional positions on the Executive Committee? (i.e., one or two more Vice-Presidents).

Yes — 92 (60%)
No — 47 (30%)
No Opinion — 16 (10%)

2. Should AAPG work with international members to form more affiliated societies - such as was done recently with Norway and Pakistan? This would give them a greater voice in the House of delegates.

Yes — 120 (77%)
No — 20 (13%)
No Opinion — 16 (10%)

3. Should AAPG create International Sections? This would give representation on the Advisory Council, and would also give us "offices" around the world.

Yes — 96 (62%)
No — 44 (28%)
No Opinion — 15 (10%)

4. Should AAPG continue to recruit more International members by having more international meetings, more visits from Distinguished Lecturers, more schools, more services, and more reasons to join?

Yes — 118 (76%)
No — 25 (16%)
No Opinion — 12 (8%)

5A. Should AAPG consider the changing their name to de-emphasize the "American" in AAPG?

Yes — 44 (28%)
No — 100 (65%)
No Opinion — 11 (7%)

5B. Should AAPG consider the changing their name to de-emphasize the "Petroleum" in AAPG?

Yes — 13 (8%)
No — 131 (85%)
No Opinion — 11 (7%)

5C. If the name of the AAPG is changed, the name should be changed to:

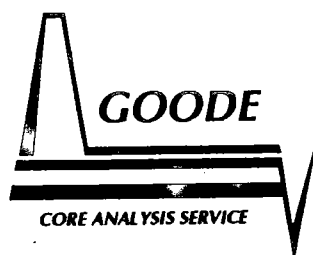
Association for the Advancement of Petroleum Geologists (AAPG) — 22 (14%)
International Association of Petroleum Geologists (IAPG) — 24 (15%)
Association of Petroleum Geologists (APG) — 20 (13%)
International Association of Geologists (IAG) — 8 (5%)
Other Name — 15 (9%)
Left Blank — 69 (44%)

6. I am a member of the National AAPG as well as the Pacific Section of AAPG.

Yes — 131 (85%)
No — 24 (15%)

7. Additional Comments on any of the above.

45 people (28%) responded with comments.



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SAN DIEGO IN '96

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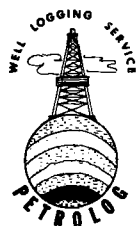
PACIFIC SECTION GEOLOGIST PART OF WINNING BICYCLE TEAM

Mike Wracher, a geologist with Mobil Oil, completed the Race Across America, a transcontinental bicycle race of 2,911 miles, beginning in Irvine, California and ending in Savannah, Georgia. He was a member of the Kern Wheelman/Action Sports Team. The other members on the team were Kerry Ryan (owner of Action Sports), Ron Jones, and Joe Petersen. The race team was supported by a crew of 14 people that included drivers, navigators, and massage therapists. Support vehicles included two minivans, a suburban and a 28-foot RV. The racers primarily stayed in the minivans which also held four bikes each on roof racks and supplies of food and drink. The suburban served as a scout vehicle and the RV was a rolling hotel for the relief-crew and occasionally the racers.

The team's racing strategy was to stay with the lead teams during the starting sprint on the first day and rely on their perceived superior climbing ability and endurance to take the lead either when climbing the Colorado Plateau or the Rocky Mountains. This strategy worked and they overtook and passed Team Pepsi-Brazil near Prescott, Arizona. The Kern Wheelman/Action Sports team then built a lead over the second place Brazilians of one and one half hours at Wolf Creek Pass in Southwest Colorado. They maintained this lead across the craton, Anadarko basin, Arcoma basin, Reel-foot Rift, the Appalachian fold and thrust belt, and Piedmont, to finish on the coastal plain of eastern Georgia. Their winning time was 5 days 17 hours 5 minutes.

Mike Wracher is a Production Geologist for Mobil Oil. He has been with Mobil five years, graduating with an M.S. from San Diego State University in 1991. Initially he worked on Tulare and upper Etchegoin steamflood development at the Lost Hills anticline. He is currently working on diatomite reservoirs.

Mike commutes almost daily to work on the bike path, a 25-mile round trip, and races for the Kern Wheelman bicycle club.



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JOHN KILKENNY

The Pacific Section was saddened by the news of John Kilkenny's death. Flowers were sent by the Section to the funeral service, which was held on August 5th in Whittier at the Friends Church on Philadelphia Street. Accompanying the arrangement was the following sentiment:

"In memory of John Kilkenny, a distinguished and devoted member of the American Association of Petroleum Geologists (AAPG). We will miss his wit and wisdom. With great respect, the Pacific Section of AAPG."

A donation will be made to the National AAPG Foundation in John's honor following the next PS-AAPG Executive Committee meeting.

FOR SALE

M.J. Systems, Inc., Microfiche collection for Northern California, including the Sacramento Basin, Humboldt Base and Meridian, Oregon's Ochoco Basin, and portions of the San Joaquin Basin and Williston Basin. The Sacramento Basin portion is about 99% complete. The microfiche include well logs and well histories. The monthly update from M.J. Systems is \$26 plus shipping. Included with the microfiche is a M.J. Systems microfiche reader/continuous log printer. The printer uses both 5" and 8" wide dry silver paper. Also included is a horizontal reading microfiche reader on a lazy-susan base for quick visual examination of the logs or well histories. Price for the complete set is \$8,000, FOB, Fresno.

For questions or further information, please call Dane Johnson at (209) 445-5525 daytime M-F, or at (209) 299-8861 evenings and weekends.

FRIENDS OF DIATOMITE

Field Trip - Bar B Que - Seminar October 14 & 15

**Meet: Jalama Beach Park
Large Campsite, Area B**

- October 13 – Friday – Campsite open for arrivals
Campsite reserved for all F.O.D. participants and families
- October 14 – **Saturday – at 10:00 A.M. – Outcrop Tour**
Saturday Dinner: Tri-tip, BBQ Beans, Garlic bread, Salad, Softdrinks & a keg of Beer.
Saturday Evening talk: Being scheduled
- October 15 – **Sunday Breakfast:** 6:00 A.M. - 9:00 A.M.
Pastry, Coffee, O.J. and Ziplock omelets!
Sunday at 10:00 A.M. – Outcrop Tour

It is with great pleasure that "the Friends of Diatomite" invite you to our weekend field trip. We have reservations for the large campsite for Friday and Saturday nights. There will be much to talk about. Families are welcome. "FOD" will provide Saturday dinner and Sunday breakfast. Please contact Dan Fargo at Core Laboratory if you can carpool or need a ride.

Company representatives: ARCO, Bob Swain; Chevron, Bruce Bilodeau; Santa Fe Energy, Mark Mercer; Bechtel, Mark Wilson; Oxy, Mike Metz; CalResources, Diane Hill; Exxon, Dalton Lockman; Mobil, Bob Timmer; Unocal, John Matthews; Berry, Jamie Roig.

PLEASE R.S.V.P.: Dan Fargo @ 392-8600 no later than Oct. 6



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LETTERS TO THE EDITOR

I just received the June PPG Newsletter with Sully's citation on behalf of my receiving Honorary Life membership at the annual meeting in San Francisco. I'm disappointed that I was not there in person to receive that important honor. At the time, Francis and I were at 36,000 feet in Northwest Airlines on our way to three weeks on a China cruise.

I'd like to take this opportunity to thank you, the executive committee and the award committee, for honoring me with this award. The plaque hangs in an eminent place in my home.

Sincerely,
Bill Kennett

DONATIONS

The Pacific Section Executive Committee would like to recognize all the individuals who sent in donations along with their 1995-1996 dues:

Bob Hacker Fund: *This fund provides money for publications such as field guides and regional cross sections-*

Ben Cahill	John Kilkenny
Frank Cressy	Robert Long
Paul Dudley	Don Padick
John Howe	J.D. Traxler
Leo Herrera	John Van Amringe

Martin Van Couvering: *This fund is used to provide assistance to geology students attending Pacific Section conventions-*

John Kilkenny	Donna Miller
Robert Levorsen	J.D. Traxler

California Well Sample Repository: *This fund is turned over annually to the CWSR to help defray expenses associated with storing and curating cores, cuttings and other well data-*

Malcolm Allan	Phil Ryall
Frank Cressy	Jeff Smith
Mark Gamache	Donna Thompson
Robert Hindle	J.D. Traxler
John Kilkenny	Eugene Tripp
Mark Moon	James Weddle

Dibblee Geological Foundation: *This fund is turned over annually to the DGF to help defray expenses associated with publishing Tom Dibblee's geologic maps of California-*

Wendy Lou Bartlett	Donna Miller
Kenneth Bird	John Minch
Dan Day	Kay Pitts
Sophie Dreifuss	George Potter
Robert Hindle	J.D. Traxler
Ed Kiessling	John Van Amringe
John Kilkenny	James Vernon
Robert Maynard	

ECOLOGY FIELD TRIPS

Sponsored by
Bureau of Land Management

The Bureau of Land Management has initiated a program of monthly earth science field trips to points of ecologic, geologic, paleontologic and historic interest throughout central California. These trips are designed for persons of high school age or older. It is not necessary to have a technical background to attend or benefit from the trips.

These field trips are recommended for teachers and many of them can be taken for in-service continuing education credit through California State University Bakersfield. Each trip includes a full spectrum of environmental and land management topics. The field trips are conducted using buses or vans. Private vehicles are not used except in special circumstances. A field guide is prepared for each trip which includes maps and directions which can be used by anyone for self-guided investigation of the ecology along the field trip route.

1995 SCHEDULE

Owens Valley-Mono Basin: Sat./Sun. Oct. 14-15, 1995

Water management, historic mining, glacial and volcanic geology are the main topics of this field trip. Stops or topics of discussion include Cinder Hill, Owens Lake, Alabama Hills, Mazourka Canyon, American perlite Mine, Tinnemaha Reservoir, June Lake, Devil's Post Pile, Inyo Craters, Mono Lake, Bodie State Park and Travertine Hot Springs. This year our focus will be on Bodie Ghost Town/Mining District, Aurora Mining, Hot Creek Kaolinite Mine, and Lee Vining Pumice mine.

Bakersfield to Mojave and Red Rock Canyon: Sat., Nov. 4, 1995

Mercury mines near Keeler and the Cactus gold mine near Mojave are visited. Then we go to Red Rock Canyon by way of the old salt mines at Saltdale. On the way we examine the Garlock Fault. The day ends with a tour down the Kern Canyon on our way back to Bakersfield. Management practices for the Mojave ground squirrel, Desert tortoise and Tehachapi salamander are discussed. We also learn about ongoing efforts to enlarge the Carrizo Plains Natural Area and wildlife reserve.

San Andreas Fault: Soda Lake (Carrizo Plains) to Parkfield: Sat. Dec. 2, 1995

Parkfield, the "earthquake capital of the world" is the final stop in this trip along the San Andreas. We learn about the complex and fascinating ecology at Soda Lake and Carrizo Plains Natural Area. We see examples of off-set fences and bridges in the fault zone. We investigate oil seeps at McKittrick. The stratigraphy and ecology of the La Panza and Gablin ranges are studied including Syncline Hill in the Carrizo Plains.

Make check payable to Mother Lode and mail to Gregg Wilkerson, 7005 Hooper Ave., Bakersfield, CA 93308. For persons taking their own vehicles, registration is \$20.00 per person or \$40.00 per vehicle. If you have any questions or to register call Dr. Wilkerson at 805-391-6177 or write to MOTHER LODGE c/o Gregg Wilkerson, 7005 Hooper Ave., Bakersfield, CA 93308.

Constitution and By-laws Pacific Section AAPG

Adopted September, 1924
Last Amended March, 1994

CONSTITUTION

ARTICLE I. NAME

This organization, whose area of interest comprises the Pacific Coastal Region, shall be known as "Pacific Section of the American Association of Petroleum Geologists" and is hereinafter referred to as "this Section."

ARTICLE II. OBJECT

SECTION 1.

The object of this Section shall be to provide for discussion of subjects and problems coming within the scope of the profession and to advance the science of geology and the professional well-being of our members. This Section, by such intercourse, will promote the advancement and aims of the American Association of Petroleum Geologists as set forth in its Constitution, By-laws and Code of Ethics.

SECTION 2.

This Section is a non-profit organization, and no portion of the financial assets inures to the benefit of any private individual or member.

SECTION 3.

This Section may affiliate with any other geological organization in order to further its purposes and to cooperate in activities including but not limited to the annual convention, newsletter, directory, and publication sales.

ARTICLE III. MEMBERSHIP

SECTION 1.

The members of this Section shall consist of persons concerned with or furthering the professional applications of the geological sciences.

SECTION 2.

Various classifications of memberships and the qualifications thereof shall be established by the By-laws of this Section.

ARTICLE IV. OFFICERS

SECTION 1.

The officers of this Section shall be a President, a Vice-President, a President-Elect, the immediate Past-President, a Secretary and a Treasurer. The duties of these officers shall be those customary for their respective offices. They shall assume these duties at the beginning of the membership year next following their election as hereinafter provided. Their term of office shall be for one (1) year, except for the Treasurer, whose term of office shall be for two (2) years, or until their respective successors are elected. During the absence of the President, the President-Elect shall assume the duties. In the event of the death or resignation of the President, the President-Elect shall succeed to the office and title of President. Should the President-Elect be unable to serve in this capacity, the duties and title of President shall be assumed by (First) the Vice-President or (Second) the Secretary. In the event of a vacancy of any office, other than the President and immediate Past-President, the Executive Committee shall appoint an active member to fill the vacancy. In making such an appointment, the Executive Committee shall give due consideration to appointing a member from the nominees at the last previous election.

SECTION 2.

There shall be an Executive Committee consisting of the President, President-elect, Past President and Vice President, Secretary, Treasurer, Editor of the "Pacific Petroleum Geologist Newsletter" and one Representative selected from each associated geological society approved by the then existing Executive Committee.

SECTION 3.

The Executive Committee shall meet at the annual meeting and at such other times during the year and at such places as designated by such Executive Committee and at the call of the President. Robert's Rules of Order shall apply at all meetings. Notice by mail of at least five (5) days shall be given to the members of the Executive Committee prior to meetings, unless waived. A quorum shall consist of seven (7) members.

ARTICLE V. FUNDS

SECTION 1

The Executive Committee shall establish the fiscal year, review the financial position of this Section, and have a current financial statement available at each annual business meeting. Annual dues of this Section shall be payable in advance in an amount established by the membership at the annual business meeting. The Executive Committee shall not have authority to levy assessments against the membership and shall not have the authority to increase annual dues.

SECTION 2.

The funds of this Section shall be deposited to the credit of Pacific Section of the American Association of Petroleum Geologists in any federally insured depository selected by the Treasurer but not to exceed the limit insured by the Federal Deposit Insurance Corporation. Whenever necessary, the President shall certify to the authority of the Treasurer in administering such account by providing the depository bank with a notice of the Treasurer's selection and with true copy of this Constitution. The Treasurer shall have authority to issue checks against the bank account so established, on the Treasurer's sole signature, but in the event of the Treasurer's absence, withdrawals or payments by check may be made on the signature of the President. The identity and authority of the President and the circumstances relating to the absence of the Treasurer shall be certified to by the Executive Committee if so required by the depository.

ARTICLE VI. MEETINGS**SECTION 1.**

The Pacific Section meetings shall be held annually or at other times on call of the President. If the annual meeting of AAPG is held in California, the Pacific Section will not hold their annual meeting that year.

SECTION 2.

The time and place of the Pacific Section business meeting shall be determined by the Executive Committee.

ARTICLE VII. ELECTIONS**SECTION 1.**

The President of the Pacific Section of the American Association of Petroleum Geologists, with the approval of the Executive Committee, shall appoint a nominating committee at least three (3) months prior to the beginning of the next membership year of the Pacific Section, consisting of four (4) members, two (2) of whom shall be Past-Presidents of the Pacific Section. The nominating committee shall, each year, select two (2) candidates for each of the following offices: President-Elect, Vice-President, and Secretary, and every other year shall select two (2) candidates for the office of Treasurer. The slate of the candidates shall be announced in the "Pacific Petroleum Geologist Newsletter" at least four (4) weeks prior to the election. Additional nominations may be made by written petition of twenty-five (25) or more members of the Pacific Section in good standing, received by the Secretary within two (2) weeks following the publication of the nominating committee slate of candidates. The Executive Committee shall have the authority to name an additional nominee in case of necessity, to assure two candidates for each office. Voting shall be by mailed ballot. The Secretary shall set a date for counting ballots and shall mail ballots to all members not less than three (3) weeks prior to this date.

SECTION 2.

In matters pertaining solely to the business of this Section, all active, associate and honorary members of this Section may vote. In matters pertaining to the Advisory Council and other official business of The American Association of Petroleum Geologists, only members of that Association in this Section shall be qualified to vote.

SECTION 3.

This Constitution and By-laws may be amended by a mail ballot. Ballots concerning such amendments shall be mailed upon the authority of the Executive Committee or upon receipt by the Secretary of a Petition for Amendment signed by fifty (50) or more members in good standing. A two-thirds majority of the ballots returned and received by this Section within three (3) weeks following mailing to the membership shall be required to pass any amendment.

BY-LAWS**ARTICLE I. MEMBERSHIP****SECTION 1. MEMBERSHIP**

Membership in this Section shall consist of the following classifications:

- a) Active Members
- b) Associate Members
- c) Honorary Members
- d) Nonmember subscribers

SECTION 2. ELECTION TO MEMBERSHIP

Every candidate for admission as a Member shall submit an application on an application form authorized by the Executive Committee and signed by the applicant. The Executive Committee shall be the sole judge of the eligibility of the applicant for membership and the adequacy of the applicant's qualifications. If the Executive Committee, after due consideration, that the applicant's qualifications meet the requirements of the Constitution and these By-laws, the committee shall cause to be published in the Newsletter or by other suitable means, the applicant's name. Any member of whatever classification who resigns, or who forfeits membership for nonpayment of dues ceases to have any rights in this Section.

SECTION 3. DEFINITION OF TERM: "ACTIVE MEMBER"

A member in good standing, in any classification, of the American Association of Petroleum Geologists. Any person engaged in the practice or teaching of geology who holds a degree in geological science from a college of acceptable academic standards.

SECTION 4. DEFINITION OF TERM: "ASSOCIATE MEMBER"

Any person not qualified for active membership who is interested in furthering the professional application of geology.

SECTION 5. DEFINITION OF TERM: "HONORARY MEMBER"

The Executive Committee may honor each year the accomplishments and distinguished service to this Section and profession by one or more active members by designating Honorary Life Members. The Active member honored must be a member in good standing, in any classification, of the American Association of Petroleum Geologists. Honorary Life Members shall be exempt from all future Section dues.

SECTION 6. DEFINITION OF TERM: "NON-MEMBER SUBSCRIBERS"

Other persons, not members of the Pacific Section of the American Association of Petroleum Geologists, who are interested in the activities of this Section may subscribe to this Section's publication "Pacific Petroleum Geologist Newsletter". Non-member subscribers shall not have the right to vote or hold office but may otherwise participate in the activities of this Section.

ARTICLE II. COMMITTEES

SECTION 1. STANDING COMMITTEES

The Pacific Section of the American Association of Petroleum Geologists shall establish and maintain the following standing committees: Committee on Finance, Committee on Membership, Committee on Planning and Organization, Committee on Legislation and Public Affairs, Committee on Publications, Committee on Directories, Committee on Honors and Awards, and Committee on Conventions.

SECTION 2. APPOINTMENTS AND TENURE

The President shall appoint all committee chairs and co-chairs and fill vacancies whenever they occur. The committee chairs or co-chairs shall appoint all vice-chairs and members for their respective committees. The Executive Committee may remove any committee chairs or co-chairs of the Standing Committees. The chair or co-chair may remove any vice-chair or member of their committees. The term of office of a member of a standing committee shall be one (1) year. Chairs may succeed themselves from year to year if reappointed by each succeeding President.

SECTION 3. COMMITTEE ON FINANCE

The primary function of the Committee on Finance shall be to prepare a fiscal budget for approval by the Executive Committee. The treasurer shall serve as ex officio member and no other member of the Executive Committee shall serve as member of the Finance Committee.

SECTION 4. COMMITTEE ON MEMBERSHIP

The primary function of the Committee on Membership shall be to encourage applications for membership and to review and act upon such applications on behalf of and with the approval of the Executive Committee.

SECTION 5. COMMITTEE ON PLANNING AND ORGANIZATION

The Committee on Planning and Organization shall be comprised of past Officers of the Pacific Section. Their primary function shall be to assist the President in the long-range goals and objectives of this Section and any specific problems that may require their backgrounds.

SECTION 6. COMMITTEE ON LEGISLATION AND PUBLIC AFFAIRS

The primary function of the Committee on Legislation and Public Affairs shall be to advise of Federal, State and local legislation that affects the profession and to disseminate knowledge, following Executive Committee approval, to the membership and other relevant entities about subjects within the scope of the profession.

SECTION 7. COMMITTEE ON PUBLICATIONS

The primary function of the Committee on Publications shall be to advise the Executive Committee on proposed publications, estimate costs and pricing and potential sales, oversee editorial and printing processes, handle the storage and sale of the publications and maintain adequate records of costs, sales and inventory. The Chair may name a member of the committee as Managing Editor and, upon approval of the Executive Committee, the Chair may assign a number of the listed Committee functions to the Managing Editor.

SECTION 8. COMMITTEE ON DIRECTORIES

The primary function of the Committee on Directories shall be to update the membership directory of the Pacific Section of the American Association of Petroleum Geologists as directed by the Executive Committee. Compilation of the Directory shall be coordinated with the Society of Exploration Geophysicists and the Society for Sedimentary Geology (SEPM) and it shall be formally published as mutually agreed upon.

SECTION 9. COMMITTEE ON HONORS AND AWARDS

The primary function of the Committee on Honors and Awards shall be to recommend to the Executive Committee recipients for all honors and awards. All recommendations for these honors and awards by Section members or other Section Committees shall first be considered by this Committee before being presented to the Executive Committee for approval. Following Executive Committee approval, the awards will be presented at the Annual Convention of this

Section, or the Annual Convention of AAPG if held in California.

SECTION 10. COMMITTEE ON CONVENTIONS

The primary function of the Committee on Conventions shall be to initiate planning for the Section's Annual Convention, advise the Executive Committee on site selection and convention budgeting, and assist each year's Annual Convention's General Chair, as requested. The Committee will also assure that appropriate accounting standards and procedures are maintained. It will compile and maintain Convention records, statistics and guidelines for use by future annual Convention General Chairs. The members of the Committee will include the Past-President, President-Elect, General Chair of the current Annual Convention; the General Chairs, when appointed, for the following three annual Conventions and the President of the host Society of the current Convention.

AAPG Youth Activities (K-12) Report

Youth Activities are alive and well in the South San Joaquin Valley. We have teamed up with the Society of Petroleum Engineers, the Society of Woman Engineers, the American Petroleum Institute, and Kern County Schools to put together SEE (Science/math, Energy for Education). We are working with the Kern County Science Curriculum Committee and Kern County Schools Science program to coordinate resources for participation in Science Fairs, National Engineering Week, and Science Bowl. We are also developing a program to identify 2-3 key schools to assist through mentors and/or guest speakers.

In September, we will be sending surveys to Kern County schools to determine the level of support that they need. After we review the survey, YOUR part starts!! We will send a notice out to AAPG members to determine your interest in providing services/expertise. Look for more information in the November Newsletter. If you have questions please call me, Paul C. Henshaw, at (805) 395-6436 or email to phns@chevron.com.

Pacific Section AAPG Guidebook #68 "GEOLOGY AND TECTONICS AND THE EVOLUTION OF HYDROTHERMAL FLUIDS IN THE SIERRA NEVADA OF CALIFORNIA: GUIDE TO YOSEMITE AND THE MOTHERLODE GOLDBELT" has been reprinted. GB 68 was edited by L. A. Landefeld and G. G. Snow in 1990. This very popular book may be acquired through the Columbia State Museum in the old gold country town of Columbia or you may order it through PS-AAPG Publications by sending a check in the amount of \$21.50 (members) or \$23.50 (non-members) to Publications, P.O. Box 1072, Bakersfield, CA 93302. Price includes shipping and handling.

CAREER SEARCH OPTIONS

Are you considering a career change, have you been laid off, or is your company downsizing? Many geoscientists are not aware of the numerous resources available that can enable their job search to be effective and shorten the search time. An important example of a no-cost resource is found within the State of California, in Kern County. Other states and counties have similar resources, check your phone book or call state or county information if you are not in Kern County.

The agency that you should contact is Employers Training Resource. They act not only as a high powered placement agency, but help in retraining for other careers if you are eligible and desire to do so. Since geology is an impacted career, most of you will be eligible. In Kern County, Mr. William 'Bill' Conklin is a good person to contact at (805) 326-6722, or contact Pat Bell at (805) 398-9675.

The facilities that are available include a week long 'short-course' on how to search for a job. This includes networking skills, video taping mock interviews, resume writing, exposure to many data bases, publications and the Internet. The mock interview is very useful because many people are unaware of their strengths and weaknesses in interviewing until they see themselves on tape. Other important no cost job search facilities include: faxing, long distance calls, and access to job banks on the Internet. Employers who are contacted through the Internet can be assured that you are computer literate. There are web sites (locations on the Internet) where your resume can be posted for potential employers to read. For example, recently I found 15 geology/geoscience positions in one day. Many of these are in different states. Recent 'hot spots' are in North Carolina and Colorado, but some were in Kern County and elsewhere in California. There is a State of California job bank where you also can post your resume and search for career options.

Important job search tip #9: When you type your resume to be mailed or faxed be sure to use simple non-serif font like Chicago or Geneva and go no smaller than 9 point. Many employers scan resumes into data bases. If the font or layout on your resume is not easily scanable you may be eliminating yourself from a good opportunity. This is the sort of job tip many of us are not currently aware of, but one that can make a difference.

At this time, research is being conducted into the feasibility of conducting a Technical Careers Job Fair in Bakersfield for geologists, geoscientists, engineers and computer professionals. If you are an employer who wants a data base of qualified technical personnel or have information or ideas that you feel will be useful please contact:

Bill Conklin C/O Employers Training Resource
5121 Stockdale Blvd.
Bakersfield, CA 93309
ETR 1 @ Lightspeed.net, or ETR @ Lightspeed.Net

—Pat Bell



Mark Rixon (rt) Schlumberger's Bakersfield District Manager and Bruce Kaiser (lt) Schlumberger's Bakersfield Field Service Manager enjoying the food and the crowds at the July 20th unveiling of Schlumberger's newest logging tool called the "Platform Express".

Schlumberger's Service Rep., Pete Richter is flanked by Bill DeRose (lt) of Bechtel Petroleum and John Fricke (rt) of Chevron. A sizable chunk of the Kern County oilpatch turned out to look at the latest logging tool Schlumberger is offering. The crowds, while no doubt interested in the technology, were at least equally interested in the food and music that accompanied the debut of the "Platform Express" logging tool.



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Bill Rintoul

On July 20 in Bakersfield, Schlumberger Wireline and Testing unveiled the "Platform Express," a new logging tool designed to reduce production costs and enable users to better understand reservoirs.

Bakersfield was chosen as the site of the worldwide debut, Mark Rixon, Bakersfield district manager, explained, because of Schlumberger's long ties to the San Joaquin Valley.

"We're going back to our roots," Rixon said, pointing out that the international service company's first significant successes in the United States were made in California more than 60 years ago.

Among senior oil patch guests at the dinner that accompanied the unveiling, one name kept coming up, a name that for many will always be linked to the name Schlumberger.

Jacques Gallois had been with the Schlumberger brothers, Conrad and Marcel, since the experimental days before the first electric log was run in September, 1927, in a bore hole at Pechelbronn in the Alsace district of France.

He made the first electric log run in California at Shell's Boston Land Company No. 1 at Westhaven, Kings County, on August 15, 1929. Other runs soon followed in Kern County's Lost Hills field and other of the county's fields. Schlumberger opened an office in Bakersfield, directed by Gallois.

At the end of August, 1965, Jacques Gallois retired in Bakersfield, ending 45 years of continuous service with the well-logging company that spanned the entire history of electric logging in the oil fields.

Jacques' long service with Schlumberger was unequaled by any other employee of the firm. Among the trainees he helped break in were Milt Loy, who in 1965 was the president of the company, and F.L. Bryan, the vice president in charge of operation. Another he helped "bring up" was Army Kane, who had joined the company 22 years before and assumed Jacques' post as senior sales engineer in Bakersfield.

Jacques came to Bakersfield in the early 1920's, doing surface work around Shafter and Wasco. On his days off, he played tennis, winning a reputation as a skilled player who was hard to beat.

Long before he retired, Jacques had earned an enviable reputation among oil men for the fantastic knowledge he held of San Joaquin and Sacramento Valley fields. Along with encyclopedic memory, he was also known as undisputed champion when it came to giving the name "Schlumberger" the proper Gallic pronunciation.

Five years before his retirement, Jacques' long service with his company was enough to earn him—and Mrs. Gallois—a special invitation from Pierre Schlumberger, nearing retirement himself as president of the company, to fly to Houston to be guest of honor at a banquet marking Gallois' then 40 years of service.

The occasion inspired a telegram from Mort D'Evelyn, an independent producer, and more than 40 others of Jacques' Kern County friends:

"As the principal beneficiaries of Jacques Gallois' 40 years of devoted service to the oil industry of California, we would like to join in honoring him tonight. We have leaned heavily on his experience and judgement for many years and his willingness to aid an operator has been most helpful to each of us."

"His good nature and cheerfulness have earned the friendship of all who have worked with him. To us, he is Schlumberger's 'secret weapon,' and the premier electric logger of the San Joaquin and a wonderful co-worker of the oil fields."

"We represent the hundreds of geologists, petroleum engineers, and executives who would like to express their appreciation for the many contributions Jacques Gallois has made to our exploratory and development efforts. Our very best wishes to him and Mrs. Gallois on this memorable and happy occasion."

Among those with long memories at Schlumberger's July 20, 1995, dinner at the Bakersfield Country Club, sentiments expressed in the telegram still stand.

Jacques Gallois died in Bakersfield on December 31, 1965, four months after he retired. A native of Morbihan, France, he was 65 years old.

INDUSTRY RECOGNIZES OIL WRITER

Longtime oil writer Bill Rintoul was honored last April with the Independent Oil Producers Agency's highest award.

He was given the 1995 Ray Bradley/Tom Woodward Lifetime Achievement Award in recognition of "His many years of selfless contributions to the oilpatch." The award was presented during the IOPA's annual dinner meeting at the Stockdale Country Club.

Rintoul has worked as a freelance columnist specializing in oil and gas coverage in Kern County for more than 40 years. His columns, titled "Oilfield News," have appeared every day except Mondays in The Bakersfield Californian for most of those years.

Bill is a regular writer for the Oil & Gas Journal, the Pacific Section AAPG Newsletter and has written several books on the "oilpatch".

PACIFIC SECTION AAPG DUES ARE NOW PAST DUE!!!!

If you have not paid your 1995-1996 dues please send them in immediately so you will not be dropped from the mailing list. If you are not sure if you paid this year look at the mailing label on this newsletter. It will have a '96 after your name if you are paid up. If there is a '95 after your name you have not paid this year's dues and will soon be dropped from the mailing list. If you have any questions please contact Bob Countryman at (805) 633-4508.

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PACIFIC PETROLEUM GEOLOGIST NEWSLETTER

of the Pacific Section
American Association of Petroleum Geologists

NOVEMBER 1995 NO. 5

A MESSAGE FROM THE PRESIDENT

This past month saw the deadline for abstracts for the San Diego convention. Word from John Minch, this year's chairman, is that over a thousand abstracts were received. Congratulations to Don Lewis of Chevron, this year's technical program chairman. It looks like we can expect a full and exciting technical program.

I encourage everyone to attend. This is our convention. The Pacific Section is the "host" Society, and San Diego is one of those ideal locations for a convention. Bring your family – with the zoo, Sea World, beaches, Tijuana, Horton Plaza, the Old Globe, etc., there is something for everyone.

The San Diego Convention is an opportunity to not just attend, but to participate. In an area known for spectacular geologic exposures, we have a full slate of field trips. Pat Abbott and John Cooper have outdone themselves in organizing a total of 20 trips about equally divided between before and after the convention. As an added incentive, if your time will not permit or your company will not support both a field trip and the convention, convention registration is not required for field trip attendance. AAPG field trips are real bargains. The pricing is based on cost and a break even of 65% attendance. Fees are not paid to the leader. On most of these trips, you would be hard pressed to make a personal trip to these localities for the cost of the field trip, and on the field trip you have the advantage of a guided tour from a legitimate expert.

Another avenue of active participation is in judging oral or poster sessions. Volunteers are always needed. Plan to spend a morning or an afternoon critically analyzing some of your peers. You will be making a meaningful contribution and you'll see some great technical work.

The past two months have also seen Bob Timmer of Mobil put together his team for the 1997 convention in Bakersfield. The convention will be held in May of 1997 at the Convention Center and the adjacent Holiday Inn Select. The Convention Center has been remodeled (and improved) and the Holiday

Inn is a first class outfit. Their Sunday Brunch has just been awarded four-stars for the food, service, and atmosphere. The room rate negotiated by John Howe is about \$20 less than we had in Sacramento five years ago.

Again, plan to participate. Larry Knauer is the technical program chair for this convention. As you might expect, Larry has all kinds of ideas for technical sessions, and if there is something you would like to see, present, or organize, please let him or Bob Timmer know.

These conventions are very important to the Pacific Section as fund raisers. The money is well spent. Unlike local societies such as the Coast or the San Joaquin, the Pacific Section does not host monthly dinner meetings, but rather disseminates geologic information through publications. These publications provide a critical source of information about local oil fields and geology that would not be published at a national or international level. At the San Diego convention, we plan to co-sponsor the publication of a field trip guide with the SEPM.

At Pacific Section Conventions, a local society, hosts the convention and has the option of sponsoring field trips, short courses, or publications. The Pacific Section bankrolls the convention itself and is available to sponsor field guides and symposium volumes if the local society is not able to. Preliminary plans for Bakersfield include symposia on Midway Sunset, Elk Hills, the Santa Barbara Channel, and gas fields of the Northern San Joaquin. We plan to publish guidebooks. Let us know if you have any suggestions.

— Mark Wilson, President

**LAST ISSUE OF NEWSLETTER . . . for
anyone who hasn't paid their dues.
Check the mailing label on the back. If it
has a 1995, you need to send in your
dues immediately to avoid being
dropped from the mailing list. Dues are
\$12.00 per year. Send them to PS-AAPG,
P.O. Box 1072 Bakersfield, CA 93302.**

Bill Rintoul

Richfield's "Big Time" Discovery

On a cold Sunday afternoon in late November, a group of well-dressed men who looked as if they might just have come from church gathered expectantly near a towering steel derrick set down amongst mesquite trees and scrub growth on the flat floor of the souther San Joaquin Valley 15 miles southwest of Bakersfield.

The conservative dark suits, hats and ties seemed like attire more in keeping with that commonly seen on downtown streets in the business district of Los Angeles than what one might expect in the alkali setting of Kern County's Coles Levee area, so named for the elevated roadway that carried the Taft-Bakersfield highway over the sometimes swampy flood plain of the Kern River.

In fact, many of the men had come up from Los Angeles. The purpose of their trip was to watch the completion of a wildcat that had encountered encouraging gas and oil shows. The men were the top management of Richfield Oil Corporation. They had high hopes the well they were looking at was about to turn around the fortunes of their faltering company.

The year was 1938. Richfield, like many other companies in and out of the oil business, had been hard hit by the Great Depression that had not yet released its grip on the country. From top executives on down to the crew laboring on the rig floor, those present at the well site devoutly hoped the apparent discovery would be a big one.

For Richfield, the Tupman-Western No. 1 was a bold venture. The stock market crash in 1929 had caught the company off base, financially overextended and unrealistically trapped in debt. Richfield had gone into receivership in January 1931. A reorganization in March 1937 brought the company out of receivership, facing the immediate problem of finding oil fields that would provide it with a supply of low-cost oil.

Given the assignment, Frank Morgan, manager of exploration, quickly assembled a team that included many whose names would become legendary in the ranks of the oil-finding fraternity.

The team included John Porter, Rod Cross, Donald Birch, Drexler Dana, Tom Fitzgerald, Manley Natland, Allen Kelly, Rollin Eckis, Paul Dudley, Clifton Johnson, F.E. McPhillips, Lesh Forrest, mason Hill, Sam Stasast, Jimmy O'Flynn, K.M. Cook, Stanley Beck, Cordell Durell, Joseph LeConte, R.T. White, A.J. West, Harold Hoots, Tom Dibblee Jr. and Frank Tolman.

The team took a long look at the Coles Levee area. Richfield contracted with United Geophysical Co. to make a seismic survey. The geophysical company, headed by Herbert Hoover Jr., sent its crews into the field in the summer of 1938. The results outlined a promising structure. Richfield blanketed the structure with a 5,000-acre lease from Kern County Land Co.

While officials watched on that cold November afternoon, the rig crew began to swab the 8,677-foot wildcat. A long hour passed without response. An uneasy feeling supplanted the optimism that earlier had cheered the group. Workmen continued to swab.

It was several nervous hours before the first gas appeared. Spectators moved closer to the wellhead. Without warning, the well came in with a thunderous roar, blasting into the sump. Somehow a spark was set. Flames enveloped the wellhead.

While spectators retreated, workmen coolly turned control valves, shutting in the well. After flames were out, control valves were carefully reopened. At first, it looked like gas was all that was coming out. The condensate was so light it could scarcely be seen. Then there was a shout. The oil gauge showed a rate of 3,732 barrels a day.

In the Bakersfield Californian, Art Mason, the newspaper's oil writer, described the find as an event heralding Richfield's breaking into the "big time."

From Coles Levee, Richfield moved farther along the path of success with the South Cuyama discovery in Cuyama Valley in 1949, the Swanson River discovery on Alaska's Kenai Peninsula in 1957 and, in the winter of 1967-1968, discovery of the North Slope's Prudhoe Bay field, the largest oil field on the North American continent.

Though decline inevitably set in at the North Coles Levee field discovered by the Tupman-Western wildcat, the field proved to be a giant, i.e., one that produces 100 million barrels of oil Cumulative production to the first of this year was 162.2 million barrels, with reserves estimated at 2.3 million barrels. Production through the first half of this year averaged 615 barrels per day with the number of active wells varying from 56 to 59.

The discovery well, designated after completion as Coles Levee A No. 32-23, was not among those on the active list. The last production was in September 1988, when the well produced 56 barrels per day of oil along with 152 thousand cubic feet of gas and 1,368 barrels of water. In September 1995, ARCO Western Energy field notice to abandon the well that gave its predecessor, Richfield, its boost into the "Big Time" 57 years ago at Coles Levee.

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(503) 343-7218

Keith Allen
1796 Shannon Ave.
Ventura, CA 93004
(805) 647-8141

Phil Ryall
Stockdale Energy
1400 Easton Drive., Suite 133
Bakersfield, CA 93309
(805) 327-5505

Petroleum geologists to honor Tom Dibblee and Wes Bruer

At the American Association of Petroleum Geologists' convention next May in San Diego, a man who played a key role in the discovery of Cuyama Valley's oil resources will be one of two distinguished California geologists honored with awards.

Tom Dibblee, Santa Barbara, will receive AAPG's Honorary Membership Award. The association's Special Award will go to Wes Bruer, Bakersfield, who is credited with discovery of the Mist gas field in Oregon, among other successes.

In recommending Dibblee for the Honorary Membership Award, the late John E. Kilkenny, himself a distinguished geologist, had this to say: "Thomas W. Dibblee Jr. is unquestionably the most outstanding field geologist in California. He has mapped about one-fourth of the state covering an area well over 40,000 square miles. He has mapped a strip 40 miles wide covering the entire length of the San Andreas Fault. He has mapped in detail most all of California's oil producing provinces.

"In 1953 Tom was the co-author with the late Mason Hill of a paper entitled 'San Andreas, Garlock and Big Pine Faults' GSA Volume 64. This paper, one of the classics in geology, is recognized as one of the most significant papers on the structural geology of the Pacific Coast.

"In this paper they presented many data and sound arguments for large lateral movement as much as 450 miles on the San Andreas Fault. This was a jolt to many geologists whose thinking had been a mile or two or less. This theory paved the way for the theory of plate tectonics that has created a revolution in geological thinking.

"Tom's mapping in the Cuyama Basin in the late '40s revealed hitherto unknown faulting that led to the discovery of the giant Russell Ranch and South Cuyama oil fields. The producing sand in these fields was named the Dibblee sand," Kilkenny said.

Dibblee's role in the on-the-ground study that led to Cuyama discoveries became legendary through the exploratory ranks of California's geologists. Traveling afoot, he would drop out of sight for a week or more at a time, disappearing into Cuyama's wastelands to come back with precise drawings and notes from which geologic charts could be prepared.

After one such trip into the field, Dibblee was said to have turned in an expense account of \$14.92. Rollin Eckis, his superior, could not believe it. "Tom," Eckis said, "you couldn't even get enough to eat for \$14.92." Dibblee reportedly replied, "Oh, I find lots of things to eat up in the hills."

Dibblee continued field mapping in California until his retirement in 1978. In 1981, he received AAPG's Human Needs Award for the mapping that contributed so much to a better understanding of California's geology.

Since his retirement, Dibblee has continued to be active. The Dibblee Geologic Foundation was established in 1983 as a California non-profit education organization by his co-workers and others.

The purpose of the foundation is to preserve the scientific, educational and economic values of Dibblee's life work through timely publication. The immediate goal is to publish in full at least 100 of Dibblee's most important quadrangles. More than half have been completed.

In the nomination, Kilkenny wrote, "The many great accomplishments of Thomas W. Dibblee Jr. in mapping the surface geology of California's petroliferous basins, his publications and his continued work in this field long after conventional retirement well merit his consideration for Honorary Membership in AAPG."

**Lordy...Lordy...
Look who's 40!!!!**

*Congratulations from family, friends
and others(?) on making it to the big one.*



Curt Henderson is a geologist with the City of Long Beach and a graduate of Whittier College. His wife, Jean Henderson, is also a geology graduate of Whittier College.

NEWS FROM THE AFFILIATED GEOLOGISTS SOCIETIES

Northwest

Beginning with the November Luncheon, a new price schedule has been set by the Board of Directors. Accordingly, prices for the luncheon will remain at \$15.00 for members, but will be raised to \$17.00 for non-members. Please remember however, that you need not purchase lunch to come and enjoy our speakers. Complimentary coffee will be served for those attending the speaker only. Reservations are still required for either attendance.

Speaking of reservation . . . Our October luncheon was attended by just 14 NWEA members. Every effort is being made to mail out luncheon announcements in a timely manner so that you may plan to attend the meetings. There may not always be time or personnel available to make "reminder" phone calls the week before the meeting to boost attendance. A great deal of time and energy goes in to preparing our speaker schedules and luncheons for your enjoyment - please, take advantage!! Speaking of speakers . . .

The following speakers are scheduled for the remaining 1995-96 luncheon programs. This is an interesting group that will speak on a number of topics of interest to our broad base of members. All luncheons will be held at the Multnomah Athletic Club in Portland, except for the May 1996 luncheon, which will be held at the Red Lion in Kelso, WA. All meetings are the second Friday of the month. Please remember to get your reservations in early for our monthly luncheons. We need to notify the Multnomah Athletic Club at least three days in advance of the number of attendees. It is also important to notify us if you need to cancel your reservation for any reason. The association must pay for any lunches ordered, whether served or not.

January 12, 1996 - Bud Reid, President, American Association of Petroleum Geologists

February 9, 1996 - Bob Edmiston, Geothermal Manager, Anadarko Petroleum Co.

March 8, 1996 - Peet Soot, President, Northwest Fuel Development, Inc.

April 12, 1996 - Daniel Rader, Woodward-Clyde Consulting Company

May 10, 1996 - Bill Lingley, Assistant State Geologist, Washington Dept. of Natural Resources

Take the time now to mark your calendars!!

Mist Gas Field - Aging vs Sales Price
The Mist Field is now in its 16th year of production and like other gas fields has suffered the usual decline in producible reserves. This normal decline in production along with the current low gas price puts the Field in a marginal economic situation. A plot of Mist Field sale price shows that prices have declined 43% since August of this year. (Northwest Oil Report, Portland, Oregon - (503) 224-2156)

Northwest Energy Association
P.O. Box 6679
Portland, OR 97228-6679
Contact: Bill Rodgers (503) 294-9681

Coast

Nov. 21, 1995

Speaker: Dr. James Kennett, Marine Sciences Inst., U.C.S.B.

Topic: "Rapid Climate and Oceanographic Changes During the Late Quaternary, Santa Barbara Basin"

Social Hour: 6:00 p.m.
Dinner: 7:00 p.m.

Dec. 19, 1995

Speaker: Dr. Rick, PhD., Fullerton College, Orange co., CA

Topic: "Iceland - Where the World Splits Apart"

Fall Field Trip

Saturday, December 9, 1995
Geology of the Figueroa Mountain Area, Santa Ynez Valley, Santa Barbara Co., CA

San Joaquin

December 12, 1995

"Implications of a Late Santonian Submarine Canyon from the Great Valley Group, Sacramento Basin" presented by Thomas A. Williams, Stanford University.

January 9, 1996

"State of Stress in the San Joaquin Valley; New Observations and Technologies" presented by David Castillo, Lawrence Livermore Laboratories.

Meetings are held at the American Legion Hall, 2020 "H" Street, Bakersfield, CA. Attendance adjustment starts at 6:00 p.m. followed by dinner and the technical program. Come join us!

San Joaquin Geological Society
P.O. Box 1056
Bakersfield, CA 93302
Contact: Richard Hager (805) 665-3732

Alaska

Alaska Geological Society
P.O. Box 101288
Anchorage, AK 99510
Contact: Tim Ryherd (907) 762-2140

Field Trip Leaders: Thomas Dibblee & Helmut Ehrenspeck

Spectacular Geologic Features including folding and faulting, hydrothermal deposits (fossil black smoker!), the southernmost exposure of Franciscan Assemblage, Little Pine Fault, the Zaca Syncline, and Much more!! Cost \$18 (include meal, beverages and road log) Transportation is by carpool. Details at the CGS November meeting, or contact Bernie Sentianin at (805) 525-5563. Special offer for field trip participants! Buy the two map set of Dibblee Geological maps for the field trip area for \$19 and save \$5 off regular price.

Coast Geological Society
P.O. Box 3055
Ventura, CA 93006
Contact: Terry Adcock (805) 650-2473

Northern California

On November 16 Dr. Karen Grove of San Francisco State University will give a talk entitled "Investigating the Quaternary Geologic History of the Point Reyes Region." We are currently searching for a speaker for our December 14 meeting. These are evening meetings at the Walnut Creek Holiday Inn; no meal; \$5.00 per person fee.

The Tectonic Belts of The Sierra Nevada, Northern California, Field Trip

Reviewed by Dr. Susan DeBari
Assistant Professor of Geology, San Jose State University

The field trip Tectonic Belts of the Sierra Nevada, Northern California, led by Dr. Howard Day on June 10 & 11, 1995, was a tremendous success! Dr. Day, assisted by U.C. Davis students Timothy Fagan and Jason Mayfield, was an informative and energetic host, and shared with the participants his knowledge of the metamorphic and igneous rocks that make up the western, central, and eastern belts of the Western Metamorphic Belt of the Sierra Nevada.

All forces joined up on Saturday morning, June 10 at U.C. Davis. Participants received a professionally prepared field trip guide and logbook that outline all our stops, complete with a map, as well as informative background information useful for the Sierran geology neophyte and the specialist alike. The trip took us on a two-day loop from U.C. Davis up to Marysville, along Highway 20, to Marysville Road, the to Highway 49, past Downieville, From Highway 49 we went north on Highway 89 through Blairsden to Highway 70 bound for

Taylorville, then west on Highway 70 thorough Oroville, and back to Marysville. We overnighted at our far eastern point at the San Francisco State Sierra Nevada Field Campus near Bassetts.

At our first stop, we were able to see some spectacular examples of pillow lavas from the Smartville Complex in the westernmost belt of the Western Metamorphic Belt. Here we learned about the exotic terrane hypothesis, as well as how to tell which way is "stratigraphic up" in a section of pillow lavas. This stop was accompanied by a very informative background lecture on the geology of each of the belts that we would be seeing on our trip. Successive stops included viewing the sheeted dikes within the Smartville Complex, as well as some of the layered gabbros. A late lunch followed at Bullard's Bar Dam, quite an impressive structure, which we learned was built on the inactive fault zone that separates the westernmost belt from the central belt of the Western Metamorphic Belt (by this time we had finally figured out the names of the belts within the belts!)

After lunch, we moved eastward into the central belt and stopped to see some metasedimentary units (chert/argillite) along the North Yuba River. From there, we quickly moved further east to a stop within the Feather River Peridotite, where we saw some impressive serpentinites. Everyone had to think hard when we were faced with a large body of quartzite within the serpentinite. How did that get there? Continuing our journey eastward, we moved out of the Feather River Peridotite to the eastern belt, where we

rejoined North America. We paused to see sandstones and cherts of the Shoo Fly Formation, again along the North Yuba River.

From the Shoo Fly we headed to our evening's camp at the San Francisco State Sierra Nevada Field Campus. There we were greeted with tents on raised platforms, and a large wooden mess hall building. The staff was fantastic, and summoned us with a dinner bell to a delicious and filling meal. After dinner, we were able to relax under the stars around the campfire and get to know one another better. Some of the group took advantage of the snow patches around the camp to do a little late-night sledding on garbage bags.

The next morning, after waking up to a breakfast bell and a hearty breakfast, we continued on within the eastern belt and learned about three arc complexes built on North America's margin during the Devonian, Triassic, and Jurassic. Our first stop in the morning was to look at volcanoclastic breccias from the Taylor Formation of the Devonian arc. Next, we stopped to do some fossil hunting in the fossiliferous volcanoclastic sandstones and shales of the Jurassic arc near Taylorville. Everyone dove in like avid paleontologists, and brought back their fossil samples to the vans. From there, we headed west and homeward again, crossing once more through the Feather River Peridotite, where we saw less serpentinitized examples than we had the day before. Finally, we made one more pass through the Smartville Complex in the western belt, and then headed home. The whole trip was a great learning experience, and a fine way to make new friends. Cheers to all the van drivers; they did an excellent job!

— Dr. Susan DeBari, SJSU

Los Angeles Basin

Luncheon meeting alternate third Thursdays at noon at Unocal Center, Los Angeles.

Los Angeles Basin
23430 Hawthorne Blvd., Ste. 380
Torrance, CA 90505
Contact: Mark Legg (310) 378-6254

Sacramento

Noon luncheon meetings are held at the HUNGRY HUNTER RESTAURANT, 450 Bercut Drive, Sacramento, on the 2nd and 4th Wednesdays.

For luncheon reservations, please call Rose Kuntz of AA Production Inc. (916) 641-9360 at least one day in advance.

Sacramento Petroleum Association
P.O. Box 254443
Sacramento, CA 95865-4443
Contact: Dale Gray (916) 974-7702

No. California Geological Society
9 Bramblewood Court
Danville, CA 94506-1130
Contact: Dan Day (510) 294-7530

Delegate's Column

Joan Barminski —
Coast Geological Society
and

Robert L. Countryman —
San Joaquin Geological Society

In the June 1995 issue of the PPG, a Delegates Survey was taken of your opinions concerning a number of suggestions made by Mr. Toby Carleton, the Past-President of AAPG, on how AAPG might serve the increasing International Membership. In the last issue, we posted the results of the survey which showed that most responding PS-AAPG members were in favor of many of the proposed steps that would facilitate International Members to join and actively participate within AAPG but were strongly opposed to changing the name of the society. We also promised to post some of the written responses to the survey questions and so that is the subject of this column. There were 6 questions (Question 5 having 3 parts) and a request for additional comments. Questions 1-4 were generally popular ones and resulted in fewer than 5 comments each. All of the responses for these 4 questions are printed below with a "survey number" preceding the response. Question 5 (concerning name change options) was unpopular and generated lots of responses - a total of separate 52 comments for all three parts of the question. To save space and avoid redundancy, we've merged similar responses. The request for comments was also a popular option generating 8 additional responses. Comments in parentheses and lower case italics are editorial entries needed to clarify some responses and to modify some of the less than polite but flowery language. And so, on to the comments.

Question 1: *Should the AAPG give greater access to International members by creating additional positions on the Executive Committee? (i.e., one or two more Vice-Presidents).*

[4 comments out of 155 responses (3%)]

Yes 92 (60%) No 47 (30%) No Opinion 16 (10%)

- 006 (The "one" VP was underlined; suggests no support for more than one)
- 023 POSSIBLY
- 054 YES, ONE INTERNATIONAL VP MIGHT BE APPROPRIATE
- 083 OK;- NOT A STRONG OPINION (to a yes vote on this question)

Question 2: *Should AAPG work with international members to form more affiliated societies - such as was done recently with Norway and Pakistan? This would give them a greater voice in the House of delegates.* [One comments out of 155 responses (<1 %)]

Yes 120 (77%) No 20 (13%) No Opinion 16 (10%)

- 006 (The "affiliated societies" was underlined; suggests support for this traditional method of increasing membership and influence)

Question 3: *Should AAPG create International Sections? These sections would have representation on the Advisory Council, and would AAPG would have "offices" overseas.* [5 comments out of 155 responses (3 %)]

Yes 96 (62%) No 44 (28%) No Opinion 15 (10%)

- 023 POSSIBLY
- 071 (Overseas offices would be) COSTLY; (It's) TOO EARLY. WAIT TILL WE GET GOING
- 100 INTEREST SHOULD BE PROMOTED BY INTERNATIONAL MEMBERS MORE THAN BY AAPG; AAPG ASSISTANCE IS AAPG PROMOTION.
- 119 WANT CONTROL OF ORGANIZATION TO REMAIN AMERICAN
- 141 NO! THEY CAN APPLY LIKE OUR OWN SECTIONS DID

Question 4: *Should AAPG continue to recruit more International members by having more international meetings, more visits from Distinguished Lecturers, more schools, more services for those members, and more reasons to join?* [5 comments out of 155 responses (3 %)]

Yes 118 (76%) No 25 (16%) No Opinion 12 (8%)

- 058 IF IT (services for International Members) IS PROFITABLE OR BREAK EVEN. DOMESTIC MEMBERS SHOULDN'T SUBSIDIZE INTERNATIONAL (members)
- 059 (The word "International" was crossed out; suggests support for recruiting new members and offering more services regardless of where they live.)
- 100 RECRUIT YES, MORE MEETINGS NO; INTERNATIONAL SECTIONS SHOULD PROMOTE/ SPONSOR THEIR OWN MEETINGS WITH AAPG ASSISTANCE UPON REQUEST.
- 119 BEING ONSHORE U. S. IS DIFFICULT ENOUGH - DO NOT WANT INTELLECTUAL RESOURCES DIRECTED TO FOREIGN FOCUS
- 141 THE CURRENT NUMBER (of International meetings) IS OK. I SEE NO NEED TO RECRUIT ON THE INTERNATIONAL LEVEL. THEY KNOW WE ARE HERE.

Question 5A: *Should AAPG consider changing its name to de-emphasize the "American" in AAPG?*

[10 comments out of 155 responses (6.5 %)] [only selected representative responses shown below]

Yes 44 (28%) No 100 (65%) No Opinion 11 (7%)

- 001 (Golly Gee Whiz) NO!
- 014 I AM NOT IN THE LEAST ASHAMED OF HAVING SERVED MY COUNTRY AND THE PETROLEUM INDUSTRY FOR ALMOST 50 YEARS - INVOLVING MYSELF IN THE DISCOVERY OF SEVERAL BILLION BARRELS OF OIL WHILE SERVING IN VARIOUS CAPACITIES WITH AAPG. (Voted "NO" on this question)

- 054 THIS PRESTIGIOUS NAME (AAPG) SHOULD BE IDENTIFIED WITH ITS ROOTS (*Voted "NO" on this question*)
- 060 NO! NO! NO! KEEP IT AMERICAN!
- 079 THESE ARE EMPHATIC (*no*) VOTES. THIS IS AN AMERICAN ORGANIZATION WITH INTERNATIONAL MEMBERSHIP AND SHOULD REMAIN AS SUCH. IF INTERNATIONAL MEMBERS FEEL BADLY BECAUSE OF THE "AMERICAN" NAME . . . TOUGH! IT HAPPENS TO BE OUR HERITAGE AND THE BEST ORGANIZATION EVER FORMED.
- 119 WOULD PREFER (*remaining*) AAPG UNLESS INTERNATIONAL MEMBERS BECOME SO EXTENSIVE, THE NAME IS NOT REALISTIC. THEN COULD USE "ASSOC. OF PETROLEUM GEOLOGISTS"; DO NOT INCLUDE "INTERNATIONAL" IN NAME; DO NOT DROP "PETROLEUM" FROM NAME.

Question 5B: Should AAPG consider changing its name to de-emphasize the "Petroleum" in AAPG?

[11 comments out of 155 responses (7 %)] [*only selected representative responses shown below*]

Yes 13 (8%) No 131 (85%) No Opinion 11 (7%)

- 001 (*Golly Gee Whiz*) NO!
- 015 POSSIBLY TO ENCOURAGE OTHER SPECIALTIES IN GEOL. TO JOIN (*Voted "YES" on this question*)
- 041 WE ARE PETROLEUM AND THAT NEEDS TO BE CLEAR (*Voted "NO" on this question*)
- 054 CALL IT LIKE IT IS (*i.e. leave name as AAPG; Voted "NO" on this question*)
- 079 THESE ARE EMPHATIC (*NO*) VOTES. THIS IS A PETROLEUM ORGANIZATION. IF THE "WEEDS AND SEEDS" GUYS OR GAS MARKET PEOPLE NEED ANOTHER CONVENTION TO GO TO WITH AN INNOCUOUS NAME . . . LET THEM FORM IT.
- 119 ABSOLUTELY NOT. THERE ARE MANY ENGR., ENVIRON., AND ACADEMIC SOCIETIES.
- 143 WE SHOULD BE MINDFUL OF WHY THIS ASSOCIATION WAS FORMED! (*Voted "NO" on this question*)

Question 5C: If the name of the AAPG is changed, the name should be changed to:

Association for the Advancement of Petroleum Geologists (AAPG)	22 (14%)
International Association of Petroleum Geologists (IAPG)	24 (15%)
Association of Petroleum Geologists (APG)	20 (13%)
International Association of Geologists (IAG)	8 (5%)
Other Name _____	15 (9%)
Left Blank	69 (44%)

[27 comments out of 155 responses (17.5%)] [*only selected representative responses shown below*]

- 001 AMERICAN INTERNATIONAL ASSOCIATION OF PETROLEUM GEOLOGISTS - BUT ONLY AS A LAST RESORT
- 005 NO CHANGE (*in name; i.e. leave as AAPG; 10 comments were equivalent to this response*)
- 025 (*Name should be*) ASSOCIATION FOR THE ADVANCEMENT OF PETROLEUM GEOLOGY
- 041 SOCIETY OF PETROLEUM GEOLOGISTS (SPG)
- 050 AMERICAN PETROLEUM GEOLOGISTS ASSOCIATION (APGA)
- 056 ASSOCIATION OF PETROLEUM GEOLOGISTS INTERNATIONAL (APGI)
- 070 AAPG, AN INTERNATIONAL (OR GLOBAL OR WORLDWIDE) GEOLOGIC SOCIETY
- 082 ROCK KICKERS OF THE WORLD (*also wrote "NO" for names 1, 2, & 4; wrote "MAYBE" for name 3*)
- 095 WE MUST KEEP A PRIMARY FOCUS (*i.e. Petroleum; voted for IAPG name*)
- 096 AMERICAN ASSOCIATION OF GEOLOGISTS (AAG; 2 responses identical to this one)
- 097 ASSOCIATION FOR THE ADVANCEMENT OF PRACTICING GEOLOGISTS (AAPG)
- 119 (*choice 1 is*) SILLY; (*choice 2*) NO; (*choice 3*) OK BUT SORT OF BORING; (*choice 4*) NO; THERE ARE OTHER "INTERNATIONAL" AND "GEOLOGIST" ORGANIZATIONS.
- 151 NONE OF THE ABOVE (*4 comments were equivalent to this response*)

Question 6: I am a member of the National AAPG as well as the Pacific Section of AAPG. [One comment out of 155 responses (<1 %)]

Yes 131 (85%) No 24 (15%)

114 MEMBER 1953-1994 (current member of PS-AAPG but apparently no longer a National AAPG)

Question 7: Additional Comments on any of the above. Attach additional pages if needed. [8 comments out of 155 responses (5 %)]

- 015 ENCOURAGE WOMEN TO RUN FOR OFFICE (OTHER THAN SECRETARY AND ADMINISTRATION). (*Although this comment is not relevant to the survey, we include it to point out that women have ably served in every elected PS-AAPG office (including the presidency) as well as numerous appointed posts and local society positions. We actively encouraged all members to participate in PS-AAPG and local society activities.*)
- 017 THESE QUESTIONS ARE DUMB AND REFLECT VERY PROVINCIAL THINKING.
- 024 I CONGRATULATE YOU PEOPLE ON YOUR EFFICIENCY. BALLOT, SURVEY, DUES

Continued on page 8

Continued from page 7

STATEMENT, AND MEMBERSHIP CARD ALL IN ONE EXHIBIT. IF ONLY OUR GOVERNMENT COULD WORK THIS WAY. (*Thanks, we try hard.*)

030 NO VOTE! PLEASE NOTE THAT THIS IS VERY DIFFERENT THAN THE QUESTIONNAIRE SENT TO MEMBERS OF HOUSTON GEOLOGICAL SOCIETY. (*Respondent did not fill out our survey*)

050 I SEE NO NEED OR REASON FOR THE AAPG TO BE ANYTHING OTHER THAN WHAT IT HAS ALWAYS BEEN: AN AMERICAN INSTITUTION. TO ATTEMPT TO BELATEDLY BECOME SOME SORT OF INTERNATIONAL HYBRID IS FOOLISH AND DEMEANING. IT LOOKS MORE LIKE AN EFFORT TO PRESERVE THE SOCIETY AND EXPAND IT FOR WHAT REASON I CAN'T IMAGINE, AND IF IT HAPPENS, MY INTEREST IN IT WILL CEASE.

079 I DO NOT FEEL THAT AAPG HAS FAILED TO REPRESENT THE INTERNATIONAL PETROLEUM COMMUNITY. THIS ORGANIZATION WAS NOT FORMED TO KEEP AN EXECUTIVE COMMITTEE BUSY. IF "AMERICAN" AND "PETROLEUM" CAUSE THIS ORGANIZATION TO CEASE TO EXIST, SO BE IT; IT WOULD HAVE SERVED ITS FUNCTION PROFESSIONALLY AND WELL FOR OVER 80 YEARS (WHICH IS MORE THAN CAN BE SAID FOR MOST OF US)! THE AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS IS WORTH PRESERVING AS SUCH.

139 DON'T CHANGE ANYTHING.

141 THIS WAS (*these issues were*) TURNED DOWN 2 YEARS AGO. TULSA HAS TO PUT OUT A BETTER STORY ON WHY THIS IS NECESSARY - PROBABLY BECAUSE AN INTERNATIONAL (*member*) CANNOT WIN AN ELECTION. BY APPOINTMENT, THIS INTERNATIONAL MEMBERSHIP WOULD BE REPRESENTED MORE TO THEIR "FEELINGS".

LETTERS TO THE EDITOR

The nifty subliminal message on the front page of PPGN, coupled with the plainer exhortation to pay-up-or-else on page 15, did the trick.

Now, what is the trick that I seem to have missed? Surely the dues information is in there somewhere! I tried reading it upside down, I tried a black light. I tried holding PPGN under water. All to no avail. No mysterious numbers emerged from the margins, and so I am guessing. If twenty bucks isn't enuf, let me know. If it's too much, you lucked out - just keep it.

In addition to not remembering how much the dues are, I was going to guess at my name, but noticed that it is printed on the check, correctly, it seems. You know how it is when you get older. Lucky I could even find this pen.

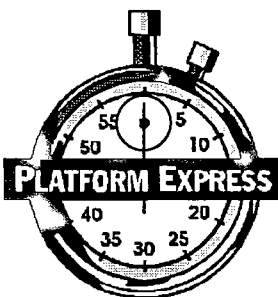
Thanx,
— Rusty de Mordaigle

from the editor: Thanks for the \$8.00 donation to the repository.

Thanks from the Dibblee Foundation

We appreciate the Pacific Section's new policy of recognizing in print all of you who have sent donations along with your dues. Your support over the past several years has really helped to publish Tom Dibblee's geologic mapping. Proof of your help is in the mosaic of 55 maps now printed, with only a few hundred more to go!

In the past we have received occasional checks from the Pacific Section, which represented total contributions, but from which we could not tell who the individual donors were. With the new procedure, we now know who to tip our hats to, as we say "Thank you very much"! Your individual support really has, and will continue to make a difference!



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DONATIONS

The Pacific Section Executive Committee would like to recognize all the individuals who sent in donations along with their 1995-1996 dues: (second installment)

Bob Hacker Fund: *This fund provides money for publications such as field guides and regional cross sections-*

Keith Berry	Phillip Kistler
Leo Herrera	Everett Pease
Clark Hill	Bud Reid
John Howe	Jack H. West
Charles Katherman	Tom Wright

Martin Van Couvering: *This fund is used to provide assistance to geology students attending Pacific Section conventions-*

Bill Bedford	Bud Reid
Keith Berry	Robert Smart

California Well Sample Repository: *This fund is turned over annually to the CWSR to help defray expenses associated with storing and curating cores, cuttings and other well data-*

Keith Berry	Bud Reid
Earl Hart	Jack H. West
Donald Lamar	

Dibblee Geological Foundation: *This fund is turned over annually to the DGF to help defray expenses associated with publishing Tom Dibblee's geologic maps of California-*

Keith Berry	Clark Hill
Andrew Chernak	Everett Pease
Nichole Gremillion	Dave Salter
George Gryn	Mel Wright

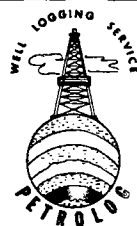
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ECOLOGY FIELD TRIPS

*Sponsored by
Bureau of Land Management*

The Bureau of Land Management has initiated a program of monthly earth science field trips to points of ecologic, geologic, paleontologic and historic interest throughout central California. These trips are designed for persons of high school age or older. It is **not** necessary to have a technical background to attend or benefit from the trips.

These field trips are recommended for teachers and many of them can be taken for in-service continuing education credit through California State University Bakersfield. Each trip includes a full spectrum of environmental and land management topics. The field trips are conducted using buses or vans. Private vehicles are not used except in special circumstances. A field guide is prepared for each trip which includes maps and directions which can be used by anyone for self-guided investigation of the ecology along the field trip route.

1995 SCHEDULE

San Andreas Fault: Soda Lake (Carrizo Plains) to Parkfield: Sat. Dec. 2, 1995 — Parkfield, the "earthquake capital of the world" is the final stop in this trip along the San Andreas. We learn about the complex and fascinating ecology at Soda Lake and Carrizo Plains Natural Area. We see examples of off-set fences and bridges in the fault zone. We investigate oil seeps at McKittrick. The stratigraphy and ecology of the La Panza and Gablin ranges are studied including Syncline Hill in the Carrizo Plains.

San Andreas Fault: Ft. Tejon to Wrightwood: Sat. Jan. 20, 1996 — This segment of the San Andreas fault takes us to several sag ponds and offset streams. Stops are made at Ft. Tejon, Quail Lake, Devil's Punchbowl and Wrightwood. Carbon 14 radiometric dating and its application to understanding the frequency of earthquakes along the San Andreas Fault is considered at the Pallet Creek paleoseismic site. Examples of the interaction between ecosystems and fault systems are discussed.

Make check payable to Mother Lode and mail to Gregg Wilkerson, 7005 Hooper Ave., Bakersfield, CA 93308. For persons taking their own vehicles, registration is \$20.00 per person or \$40.00 per vehicle. If you have any questions or to register call Dr. Wilkerson at 805-391-6177 or write to MOTHER LODGE c/o Gregg Wilkerson, 7005 Hooper Ave., Bakersfield, CA 93308.

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Association for Women Geoscientists to Offer Chrysalis Scholarship


The Association for Women Geoscientists is pleased to announce that at least 2 Chrysalis Scholarships will be awarded on March 31, 1996. The \$750 awards will be given to geoscience Masters or PhD candidates to cover expenses associated with finishing their theses. The Chrysalis Scholarship is for women who have returned to school after an interruption in their education of one year or longer. The support can be used for anything necessary to assist the candidate in completing her thesis, such as typing drafting expenses, field work, or child care.

Applications should be made by February 28, 1996. The applicant should write a letter stating her background, career goals and objectives, her involvement in both the geosciences and her community, how she will use the money, and explain the length and nature of the interruption to her education.

The applicant should also submit two letters of reference. The reference letters should include a statement of the applicant's prospects for future contributions to both the geosciences and her community. Her thesis advisor should also include when the candidate will finish her degree and what requirements are as yet to be completed.

For more information on obtaining an application or for additional information please contact:

Chrysalis Scholarship
Association for Women Geoscientists
G & H PRODUCTION COMPANY, LLC
 518 17th Street, Suite #930
 Denver CO 80202
 303-534-0708 (Phone)
 303-623-6724 (Fax)



For more information,
please call
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5401 Business Park South
Suite 210
Bakersfield, CA 93309
(805) 325-3987
Fax: (805) 322-2914

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Any logging suite - modern or old

YOUR SACRAMENTO VALLEY PROSPECT IS GREAT, BUT.....

1. The prospective zone has no amplitude anomaly.
2. The amplitude anomaly doesn't have increasing amplitude with offset.
3. We don't think AVO works in this zone.
4. We're only looking for 3-D prospects.
5. The critical closure is based on dipmeter, and our boss doesn't believe in dipmeter.
6. We're only exploring the Forbes.
7. It's a Forbes prospect and we don't understand the Forbes.
8. It falls just east of my low BTU line.
9. We don't give geologists overrides.
10. Nobody else is exploring this trend.
11. Everyone is exploring this trend. It should have been found by now.
12. It's too big. Nothing that large has been found in the last 20 years.
13. Permitting is too tough in _____ County.
14. A major company held the acreage for 20 years and never drilled it. They must know something we don't.
15. It's too shallow. It can't hold enough reserves.
16. It's too deep. The rocks are too tight.
17. We can't drill a straight hole to test it. Directional wells are too expensive.
18. We don't have a geologist familiar with the area.
19. We're only looking for oil prospects.
20. You haven't discussed potential source rocks in your report or how the prospect fits into a sequence stratigraphic framework.
21. It needs seismic to confirm. Come back when you've shot it.
22. You've shown this too many times. I've counted the tack holes in the corner of your montage.
23. It doesn't fit our preconceived ideas.
24. We're only drilling large, seismically defined, high BTU, inexpensive, close-in prospects.
25. Our consultant believes that his prospects fit better into our exploration strategy.

AAPG Youth Activities (K-12) Report

The Pacific Section wants to get more information exchange going on your activities with schools! If you are working with K - 12 programs send me a note so that we can print in the NEWSLETTER. We hope to have at least 2 entries for each edition.

Kern County members are still trying to get volunteers for the major "science" programs. A volunteer form from SEE is included in this issue. If you can help out please fill it out and send it to me.

SPECIAL NOTE!!! AAPG has started an award program: Excellence in the Teaching of Natural Resources in the Earth Sciences. Nominations are still being solicited. If you have a possible nominee contact me, and I will send you a nomination form. The award is for \$5,000 - \$2,500 for the teacher's school and \$2,500 for the teacher.

If you have questions please call me, Paul C. Henshaw, at (805) 395-6436 or email to phns@chevron.com .

SCIENCE SCIENCE/MATH, ENERGY FOR EDUCATION (SEE)

Join AAPG, SPE, SWE and API in an effort to provide better support to Kern County schools through volunteers for national educational programs in the science and math fields. For further information, contacts are provided on the back of this survey. Please feel free to contact any of these individuals if you have questions.

We respectfully request that you fill out this survey and return it by December 1, 1995. Feel free to attach additional pages, if sufficient room is not provided for your responses on this form. Confirmations will be sent out after December 15, 1995. Fold the form, staple, attach \$0.32 stamp and mail.

Please provide as complete answers as possible to the following questions:

Name: _____

Affiliation: SPE AAPG SWE API Other

Contact Phone: _____; FAX: _____;

email: _____

Best time to call: Day Evening

Company: _____

Mailing Address:

City _____ Zip Code _____

National Engineering Week (February 18-24, 1996)

Would you like to participate in National Engineering Week as a guest speaker or classroom participant?

Yes _____ No _____

If yes, please specify the days and hours for which you would like to volunteer.

Days (circle choices): M Tu W Th F ; AM , PM , Full Day

Specify school, if you have a preference

Would you prefer to give a career presentation or class activity? _____

If activity, please describe what you might do:

Science Fairs (Local/County)

Would you like to judge at a local school science fair?

Yes _____ No _____

If yes, do you have a school preference?

Grade Preference: 4-6, 7-9, 10-12 ?

Are you interested in judging at the Kern County Science Fair, April 16, 1996? Yes _____ No _____

Science Bowl (High Schools Only - January 27, 1996)

Would you like to participate in the science bowl?

Yes _____ No _____

As a coach _____; judge _____; or timer _____

If coaching, would you prefer afternoon or evening sessions training students? (Circle your answer)

Coaching materials will be provided for all coaches.

TO: Paul Henshaw
Chevron U.S.A. Production Company
P.O. Box 1392
Bakersfield, CA 93302

----- fold (2) -----

----- fold (1) -----

SEE is the coordinated effort of the following organizations:

Society of Petroleum Engineers
San Joaquin Valley Section

Joyce Holtzclaw, Chevron USA Production Company
(805)395-6423 fax: 805-395-6403

American Association of Petroleum Geologist
National and Pacific Section

Paul Henshaw, Chevron USA Production Company
(805)395-6436 fax: 805-395-6403
Jim Weddle, San Joaquin Energy Consultants, Inc.
(805)395-3029

San Joaquin Valley Chapter of the
American Petroleum Institute

Eric Korn, Texaco Exploration and Production, Inc.
(805)392-2261 fax: (805) 392-2884

Society of Women Engineers
Kern County Chapter

Helen Ordway, Chevron USA Production Company
(805)395-6400 fax: 805-395-6403

A special thanks to the Kern County Superintendent of Schools Office and the Kern County Science Foundation. Without their assistance we would not be able to so readily coordinate with all the local Kern County schools.

Board of Registration for Geologists & Geophysicists

FINAL RESULTS OF MARCH 1995 EXAMINATIONS After Appeals

Exam Taken	No. Taking	No. Passed	Pass Rate
Geology	312	120	38.5%
Geophysics	9	5	55.6%
Eng. Geology	48	33	68.8%
Hydrogeology	327	240	73.4%
Total	696	398	57.2%

The Board is very pleased with the improved percentage pass rates for these examinations.

ELECTION OF OFFICERS

At the Board Meeting of August 18, 1995 Robert Lindblom and Seena Hoose were reelected unanimously to serve second terms as President and Vice President, respectively, of the Board, through July 1, 1996.

COMMITTEE MEMBERS NEEDED

A pool of volunteers geologists and geophysicists is being established to fill opening on the Board's standing committees, as they occur. The committees are: Examination, Professional Affairs and Legislative. If appointed to a committee, an individual will be expected to donate 6 to 8 days per year to attend committee meetings, plus any additional time for projects one agrees to work on. These positions are unpaid, except for expenses. Subject matter experts are also needed by the Examination Committee to serve as question writers. If you are interested in volunteering for one of these positions, please submit your resume to the Board and specify your interests.

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THE BRANNER CLUB

PRESIDENT: Marie Hill, Geologist
VICE PRESIDENT: Peter Weigand, Professor
TREASURER: Martine Alter, Geologist

NOVEMBER MEETING

DATE: Thursday, November 30, 1995
PLACE: The Athenaeum, Caltech, Pasadena
(Hill Avenue & California Boulevard)
TIME: Social hour: 6:00 p.m., Dinner: 7:00
p.m.; Meeting and Talk: 8:00 p.m.
SPEAKER: Ms. Adriana C. Ocampo
TOPIC: The Chicxulub Impact Site and the
Cretaceous Mass Extinction

Ms. Ocampo will discuss various aspects of the large Chicxulub meteorite crater, located on the Mexican Yucatan peninsula, which has been implicated in the massive extinction at the end of the Cretaceous. Drawing on five years of research, she will describe the impact itself, the only known surface exposure of the ejecta blanket, and the biosphere effects of the impact.

Ms. Ocampo, currently in the Graduate Program at Cal State Northridge, has worked at the Jet Propulsion Laboratory for over 20 years and has been involved in numerous NASA projects, including the Very Long Baseline Interferometry Project, the Astronomical Interferometry Earth Survey, the Galileo Project, and the ill-fated Mars Observer. Recently, she has been at the forefront of studying the Chicxulub impact and its consequences.

RESERVATION ARE IMPERATIVE, and must be received by **Tuesday, November 28, 1995.**

Please detach the form below and return it with your check to:

Martine Alter or telephone: Martine Alter
2453 Prospect Avenue 818-248-7715
Montrose, CA 91020

Next meeting: Thursday, February 8, 1996
Dr. Robert E. Crippen - JPL - "Visualizing
the Earth's Crust: Geomorphically,
Spectrally, Temporally, and Seismically"

cut here

MEMBER NAME _____

NUMBER OF DINNERS _____ for November 30, 1995
meeting.

REMITTANCE ENCLOSED (please make check payable to
BRANNER CLUB) \$ _____

CORE LAB PRESENTS

CORING TECHNOLOGY BBQ SEMINAR

NOV. 29, 1995 – 11:00-3:00

BBQ LUNCH: Tri-tip, BBQ Beans, Garlic Bread, Salad, Softdrinks & our world famous "Core Cake"

PRESENTATIONS:

1. Low invasion coring systems (Coregard), Gel Core, Hydrolift system, Pressure core, Anti-whirl core bits, and the new Coredrill (Coring while drilling) system - questions.

Speaker - Baker/Hughes **INTEQ'S** Doug Bobrosky

2. Horizontal & Directional coring, Foam coring, Special applications (low invasion systems) coring - questions.

Speaker - **WEATHERFORD'S** Gary Clemens

3. Sponge coring, Posiclose system, Oriented coring, type of containerized coring, low invasion coring systems & its impact on core analysis results, Wireline retrievable coring w/ conventional drill pipe - questions.

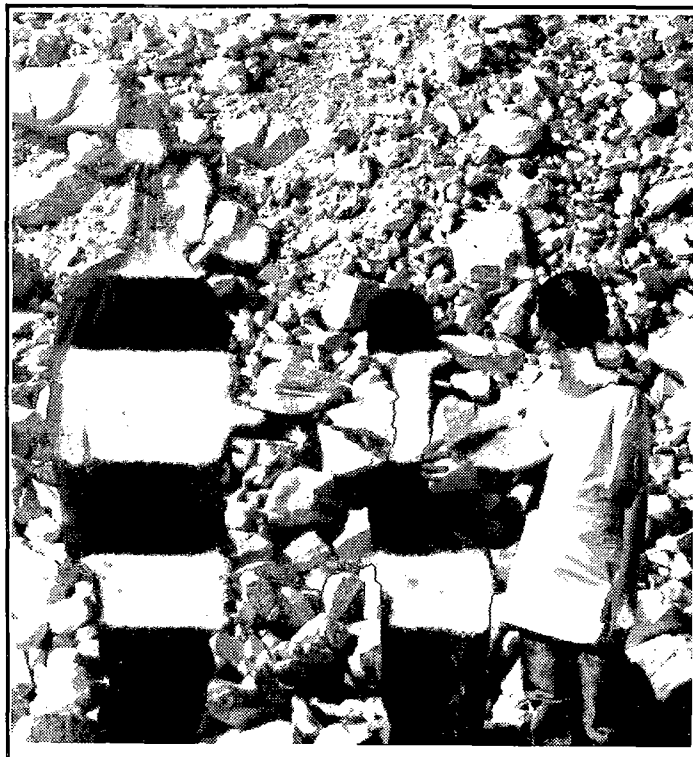
Speaker - Security **DIAMANT BOART STRATABIT'S** Monte Mann

Geologists, drilling & petroleum engineers or anyone concerned with getting high quality core sample for accurate lithology and petrophysical data should attend.

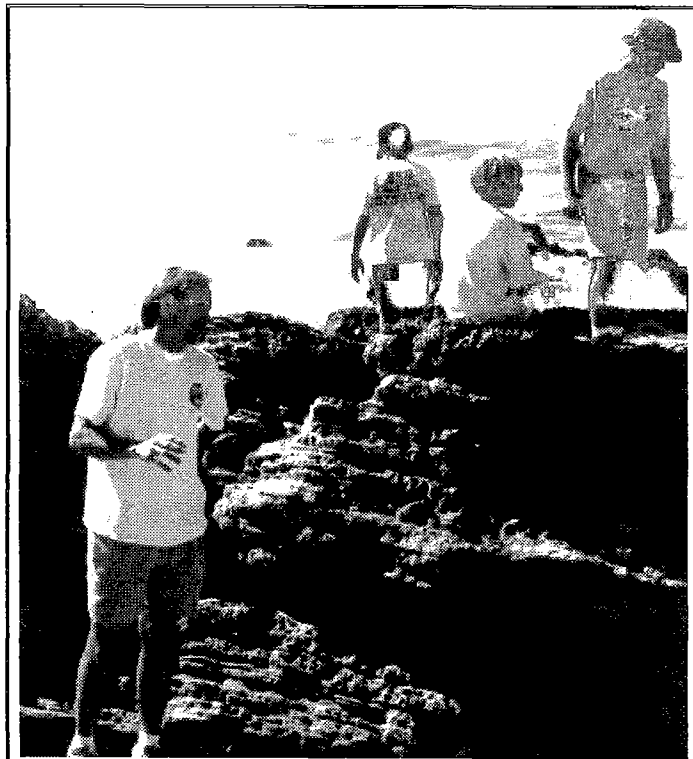
By discussing coring considerations with drilling and geology together, we hop to optimize the coring technique right for your future core project. Core equipment will be demonstrated. Literature will also be provided.

For more information, contact Dan Fargo/Core Lab 392-8600.

***FRIENDS OF DIATOMITE** — Jalama Beach Field Trip*
Dan Fargo and the crew at Core Laboratories hosted an extremely successful field trip to the coast in October to look at the Monterey Formation. The food was great, as was the weather and the company. Some world class fish fossils were collected by a lucky few.

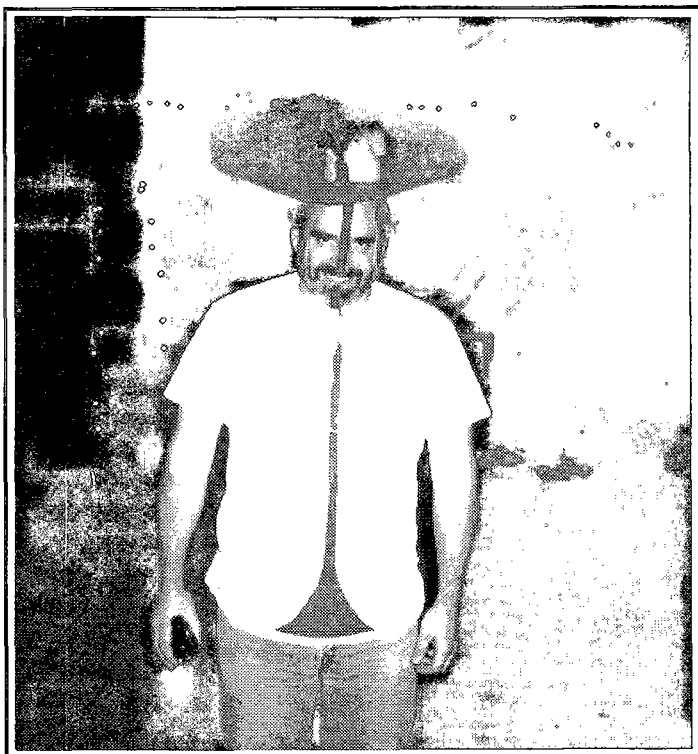


Mark Wilson, Pacific Section AAPG President and Senior Geologist with Bechtel Petroleum shows Tom Hampton's (engineer with Bechtel Petroleum) sons how to find fish fossils at Grefco's quarry.

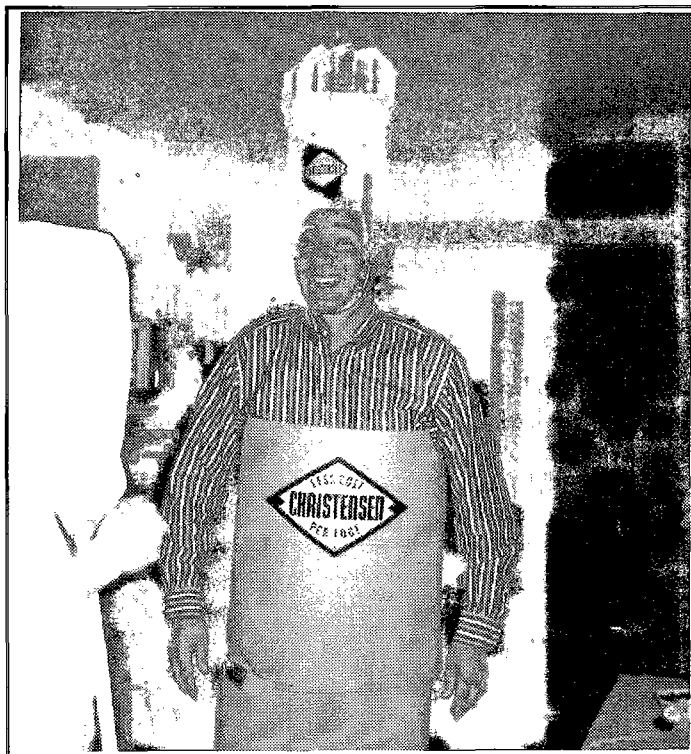


Dalton Lockman, Geologist with Exxon and past President of the Coast Geological Society, led a field trip looking at Monterey outcrops at Jalama Beach.

Halloween with a Geology Twist



Rob Negrini, Professor at California State University Bakersfield, came to the party as a HOT SPOT. The Hawaiian Islands are on his head. This outfit was subsequently worn in a GEO 100 class as an extra credit question on a midterm exam. Most of the class got it right!



Dan Fargo, Core Laboratories, came to the party as a CORE BARREL. He handed out small pieces of core to all the guests. We tried to pump him out, but he was stuck fast.



Terry Thompson, Senior Geologist with Bechtel Petroleum and past President of the San Joaquin Geological Society, showed up as "Salty" the sailor or a "tar" as he claimed for his geological tie-in. Accompanying the old "tar" was a "sea monster" who just happened to be his wife, Donna Thompson, Geologist with San Joaquin Energy Consultants and current Vice President of the Pacific Section AAPG.



Members of the Pacific Section AAPG Executive Committee 1994-1995 and 1995-1996:

(back row-left to right) Mike Simmons, Arco; Tom Wright, Consultant; Bob Countryman, Chevron USA; Mel Erskine, Consultant; Jim Weddle, San Joaquin Energy Consultants; Mark Wilson, Bechtel Petroleum; Allen Waggoner, WZI;

(front row-left to right) Larry Knauer, Bechtel Petroleum; Laura Bazeley, WZI; Joan Barminski (and guest), Minerals Management Service; Donna Miller, Chevron USA; Donna Thompson, San Joaquin Energy Consultants; Reinhard Suchsland, Consultant; Bob Timmer, Mobil.

(Apologies to the guys on the edges for the poor lighting)

Attention! all members of the Pacific Section AAPG/ San Joaquin Geological Society
We are looking for those folders and boxes of old notes, past newsletters, photographs and any other information which can be used to fill in the blanks in the history of the Pacific Section AAPG (officers, conventions, fieldtrips, publications) and the history of the San Joaquin Geological Society (officers, activities, publications, fieldtrips)

West Coast Biostratigraphy

Micropaleo Consultants, Inc. (M.C.I.) was founded in 1983; however, the professional staff has worked together since 1974. The company and its staff have been involved in numerous West Coast, Alaskan and Canadian Projects. Besides providing Biostratigraphic Analysis for Drilling Wells, M.C.I. also prepares Proprietary Biostratigraphy Reports for released wells and has been involved in several larger group Basin Analysis Projects in areas such as:

- 1) California Offshore (including dart core, dredge and shallow core hole programs)
- 2) California Coastal Basins
- 3) Sacramento Basin
- 4) Gulf of Alaska
- 5) Cook Inlet
- 6) North Aleutian Basin
- 7) Bering Sea (St. George Basin, Navarin Basin and Norton Basin)
- 8) Chukchi Sea (Selawik Basin and Chukchi Basin)
- 9) North Slope (Colville Basin and Beaufort Basin)
- 10) ANWR Shothole Program
- 11) Canadian Mackenzie Delta and Tuktoyaktuk Peninsula
- 12) Canadian Beaufort Sea

In addition to the above domestic work, M.C.I. has done various projects from 28 foreign countries including: Brazil, Peru, Belize, Guatemala, Mexico, China, Indonesia, the North Sea and Russia.

The staff includes four micropaleontologists and has a combined 115 years of industry experience. We provide a full range of multi-disciplinary biostratigraphic services, including:

- Foraminifera (including thin section identification)
- Palynology (Spore - Pollen and Dinoflagellates)
- Calcareous Nannoplankton
- Siliceous Microfossils (Diatoms, Radiolaria, Ebridians and Silicoflagellates)

In addition, we also offer Thermal Alteration Index (T.A.I.) and Vitrinite Reflectance (V.R.) services.

M.C.I. has just completed a Portfolio of Pre- to Post-Rift Maps that present and illustrate a Propagating-rift "Rotational" Model for the opening of the Canada Basin. This will be presented as a poster at the upcoming AAPG Annual Convention in San Diego in May, 1996.

We are also planning an Integrated Basin Modeling Study for the Sacramento Basin, and Northern San Joaquin Basin(?), involving the application of some of our newly developed High Resolution and Cluster Analysis Techniques integrated with Maturation-Migration modeling and Reservoir Quality appraisal. We also want to develop a greater involvement in Field Development and Secondary Recovery Projects where our high resolution techniques can

lead to more detailed correlation of reservoir intervals and a better understanding of facies distribution within the field. This can produce better reservoir simulation modeling and lead to more successful secondary recovery planning.

We are currently developing High Resolution Biostratigraphy and Cluster Analysis techniques for application to Sequence Stratigraphy and Basin Modeling Projects. There is a disturbing trend toward entering into these activities without the initial input of biostratigraphic (hard) data, resulting in a slick but unconstrained model-driven interpretation.

Any Basin Modeling Project will benefit greatly from early input of biostratigraphic data to constrain and guide the possible model-driven interpretations. It is essential to have the biostratigraphic data at the beginning of the project to avoid wasting time and resources on unconstrained model-driven interpretations.

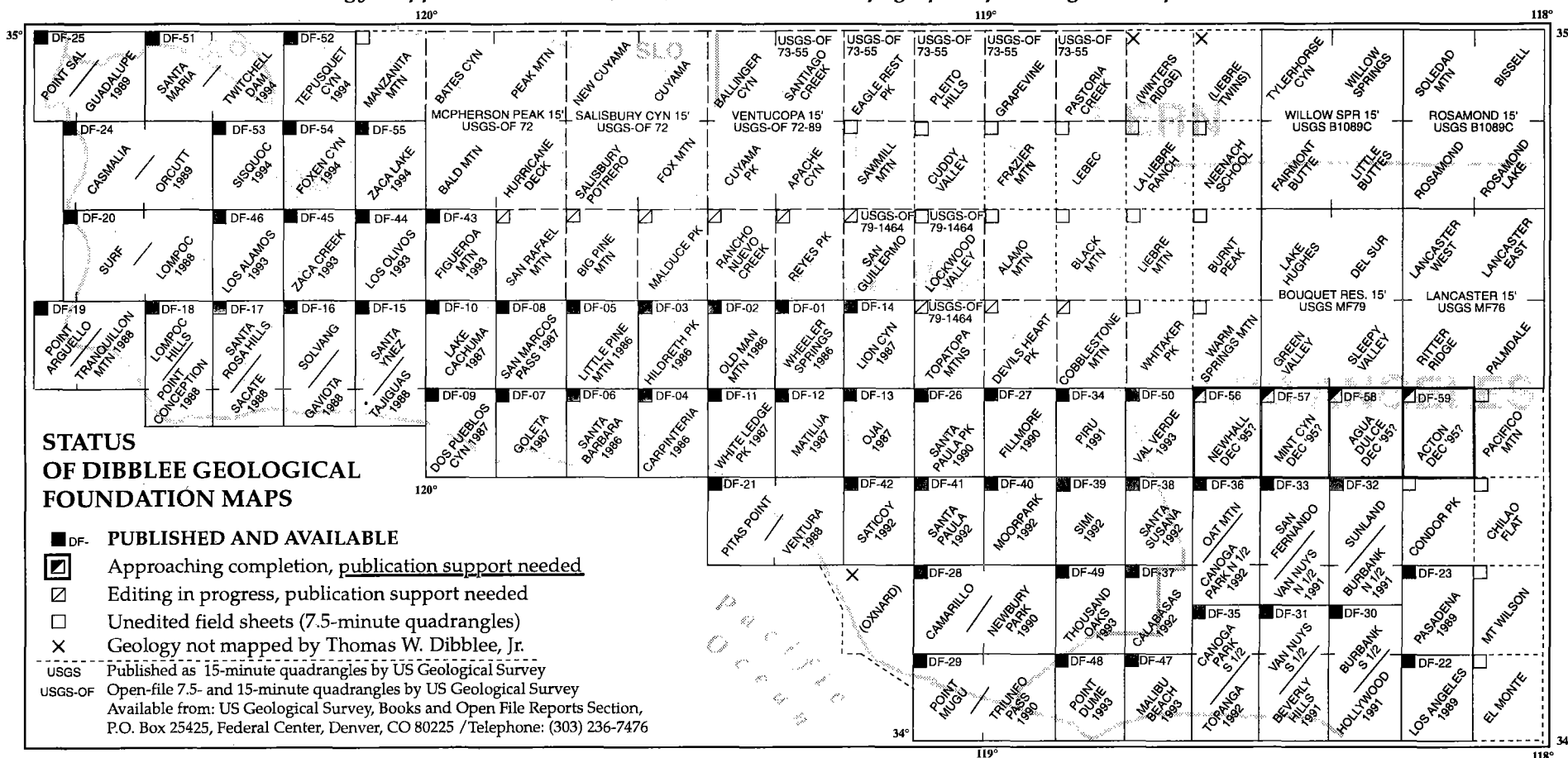
Multi-discipline Biostratigraphy is one of the key elements of Basin Analysis. It provides control for defining the source rock and reservoir rock age distributions within the basin. It identifies the environment of deposition (to assist with Systems Tract recognition) associated with the deposition of the source rock and reservoir rock. These age and bathymetric data lead to Paleotopographic Reconstruction and Geohistory Reconstruction which ultimately provides a better understanding of the Oil Generation and Migration History of the basin.

Seismic Stratigraphy interpretations are greatly enhanced by biostratigraphic data input. It provides age constraints on the seismic interpretations. The Foraminiferal and calcareous nannofossil abundance/diversity plots can assist in the recognition and location of Sequence Boundaries (SB) and Maximum Flooding Surfaces (MFS). Cluster Analysis (Multivariate Regression Analysis) techniques can provide detailed paleoenvironmental data to assist with the identification of Systems Tracts and their associated seismic facies.

In closing, we would like to make the observation that today's restricted budgets have drastically impacted the collection and use of biostratigraphic data. This is ironic because the proper integration of relatively low cost biostratigraphic data on a geologic or seismic work station can constrain model-driven interpretations and save large amounts of time and money otherwise wasted on chasing erroneous interpretations. Most of us have had the experience of investing a year or two interpreting e-log and seismic data to select a drilling location, only to find, after drilling, that the observed biostratigraphic sequence differs from the well prognosis based on the model-driven interpretation. Biostratigraphic data from several more wells is usually needed to correct the model, but there is invariably resistance to committing the necessary additional time and money. These situations can be avoided by the routine collection of biostratigraphic data as wells are drilled and the incorporation of these data into the seismic and geologic

INDEX OF DIBBLEE GEOLOGICAL FOUNDATION MAPS - LATE 1995

Geology mapped on 7.5-minute, 1:24,000-scale USGS topographic quadrangles, except as indicated



ORDERING INFORMATION

All published Dibblee Foundation geologic maps are available in full-color and black & white (B/W) editions.
 Full-color maps are available folded or unfolded (rolled); B/W maps are available folded only.

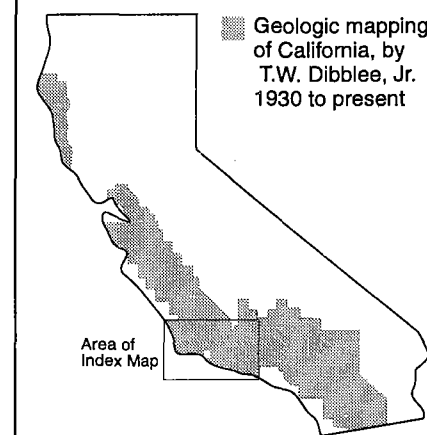
To purchase individual published maps
 (full-color edition, folded only) contact:

California Department of Conservation,
 Division of Mines and Geology
 107 S. Broadway, Rm. 1065, Los Angeles, CA90012
 Phone (213) 620-3560
 Maps are \$12.00 each, postpaid.
 Payment must accompany all orders.

To receive maps as they are published (standing order), and for
 individual maps or special orders (unfolded or B/W) contact the:

Dibblee Foundation Map Sales Contractor
 Attention: Mr. E.R. Jim Blakley
 958 Isleta Ave., Santa Barbara, CA 93109
 Phone or Fax (805) 962-9730
 Maps are \$12.00 each, postpaid. Order by DF number.
 Unfolded (rolled) copies are \$15.00 each, postpaid.

For all other inquiries, please contact Helmut Ehrenspeck, Editor, Dibblee Foundation, P.O. Box 60560, Santa Barbara, CA 93160,
 or phone (805) 968-0481. The Dibblee Geological Foundation is a California non-profit educational organization dedicated to the
 geological sciences. Funding for map publication is dependent entirely on individual and corporate contributions and from
 proceeds of map sales. Your support is encouraged and appreciated.



Dibblee Foundation to Publish 4 New Maps

The Dibblee Geological Foundation is nearing completion of four new 7.5-minute geologic quadrangles, with plans to go to press late this fall. The maps are the **Newhall, Mint Canyon, Agua Dulce, and Acton** quadrangles, all in northern Los Angeles County, along Hwy I-5 and 14. The four new maps will add to a growing mosaic of 59 geologic maps (of 74 quadrangles) continuous from downtown Los Angeles to the San Luis Obispo county line. Tom Dibblee's mapping of this region has been requested by many, because he originally mapped most of it in the 1930's and 1940's, before extensive development began. Recently he conducted additional field work to update and complete his earlier work. Each of the new maps will feature two or more geologic cross sections.

In the past, members of the AAPG Pacific Section and their companies have helped our nonprofit organization to publish these maps. Using innovative techniques, the Dibblee Foundation has been able to publish high quality, full-color geologic maps at a fraction of the cost, and time, of government-produced geologic mapping. However, as you can imagine, the field work, editing, drafting, preparation, printing and distribution of the maps still add up to a lot: nearly \$10,000 per map. The Foundation's executive committee and its directors, including Tom Dibblee, all volunteer their time and energy to help publish this important work as rapidly as possible.

To continue providing the maps that geologists need, the Foundation definitely needs your support now. As you know, previous oil company support has just about dried up, and government funding is even less available. So it's now up to individual geologists and geotechnical and environmental companies to help take up the slack. Please send your personal or corporate contribution to the Dibblee Foundation, P.O. Box 60560, Santa Barbara, CA 93160. We are a California 501(c)3 public benefit educational organization, and your support is tax-deductible.

Contributions of \$500 or more will be acknowledged on one or more of the new maps (or on a future map, if requested). We can also accept some alternate forms of support, such as stocks, securities, employer matching gifts, grants, endowments, real estate, and so on. Please call Helmut Ehrenspeck at (805) 968-0481, or Ted Off at (805) 988-0300 for publication deadlines or other information. Thank you for your continued interest and support!

California State University, Bakersfield
Department of Physics and Geology
Fall 1995

The geology department at CSU Bakersfield began the 1995-96 academic year celebrating the recent accomplishments and activities of its faculty and students. Department chair Rob Negrini and partner Bob Crewdson are conducting a study near Lake Isabella, using shallow geophysical methods to prospect for a local groundwater contaminant plume. Rob spoke about this subject at the October conference of the American Waste Management Association at the Bakersfield Red Lion Inn. Under Negrini's tutelage, graduate student Inge Ewing is correlating climate records across western North America using magnetic field records in sediments as a dating tool.

Jan Gillespie received a two-year, \$20,000 research grant from the petroleum Research Fund of the American Chemical Society. She is analyzing seismic, electric log and core data to determine the Pliocene paleogeography of the Bakersfield Arch and target shallow gas reservoirs. Jan's graduate student Dan Steward received a \$2,000 grant from the AAPG for his thesis using a 3-D seismic grid to interpret the sequence stratigraphy of the Pliocene strata on the Bakersfield Arch.

Gillespie and co-investigator Geoff Thyne also were awarded a two-year \$100,000 research grant from the National Science Foundation for their groundwater study entitled: "A proposal to study the significance of fracture-induced anisotropy on recharge into an alluvial aquifer." This work is taking place in Indian Wells Valley, in eastern Kern County. Graduate students Cheryl Blume, Jim Ostdick and Chuck Pierce are collecting data for their theses in this area, under the advisement of Gillespie and Thyne. Cheryl and Jim were both recipients of \$1,000 grants from the National Ground Water Association. Jim presented a poster of the aqueous geochemistry, surface hydrology and structural geology of Southwest Indian Wells Valley at the 20th Biennial Groundwater Conference sponsored by the University of California system in San Diego in September.

The geology department at CSU Bakersfield is proud of its high success rate in obtaining research grants, well above the national average of larger research institutions. We are currently in the process of using overhead grant money to fund a new computer lab with Pentium PCs, Power Macs and a color printer for both undergraduate and graduate student research projects. Prospective students, parents and friends are invited to visit the CSUB home page on the Internet at <http://www.geol.csubak.edu/Geology/> or to speak to Dr. Negrini at (805) 664-2185.

Berry Petroleum Company



Has an immediate opening for a DEVELOPMENT GEOLOGIST. 10-20 years experience with 3+ years steam project experience and strong computer skills, Work in team with engineers/operating staff for California Independent with 9500 BOPD production. Excellent benefits including transportation from Bakersfield to Taft. Salary DOE.

Send resume to:
Berry Petroleum Company
P.O. Box X
Taft, CA 93268
Attn: Human Resources

Berry Petroleum is a publicly traded independent oil and gas company located in Taft, CA.

NEWSLETTER of the Pacific Section-American Association of Petroleum Geologists is published bi-monthly (except in summer) by the Pacific Section. Material for publication, requests for previous copies, and communications about advertising costs should be addressed to LARRY KNAUER Bechtel Petroleum Operations, Inc., P.O. Box 127, Tupman, CA 93276. CHANGE OF ADDRESS, subscription, and membership inquiries should be directed to: MEMBERSHIP SECRETARY, PACIFIC SECTION AAPG, P.O. Box 1072, Bakersfield, CA 93302. To order publications, write to: PUBLICATIONS COMM.: Pacific Section-AAPG, P.O. Box 1072, Bakersfield, CA 93302.

NEWSLETTER
Pacific Section A.A.P.G
Post Office Box 1072
Bakersfield, CA 93302

DEADLINE FOR NEXT ISSUE -
JANUARY 5, 1996

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