PACIFIC PETROLEUM GEOLOGIST NEWSLETTER

of the Pacific Section
American Association of Petroleum Geologists

FEBRUARY 1983

PRESIDENT'S CORNER . . .

Back in the Mesozoic, the PPG ran a series of cartoons involving an enlightened geologist named Andy Cline. The other day I opened a letter and a check to the Pacific Section for $150 floated out. It was from Harold Sullwold, Jr., and represented half the proceeds from the sale of four of his old Andy Cline cartoons to Graham Campbell for a book recently published. In his transmittal letter, Sully hinted he might draw some further adventures of Andy. Let's all do some arm twisting.

Graham Campbell's book is titled "Well Sitting Rocky Mountain Wildcats." According to the blurb Sully sent me, "it covers well sitting from the point of view of the geologist, oil finder and petroleum investors . . . a stinging exposé of why we don't find more oil per dollar spent and how we could." Available from Hart Publications, Inc., Box 1919, Denver, CO 80201, for $19.95. Sounds like good reading. I've ordered my copy.

The Pacific Section has embarked on a new publication venture. The concept, originated by Dick Hester and others, is to publish a group of new and old papers on a specific basin or area of California. The old papers would be brought up to date by the original author. The initial publication will be on the gorges of the Sacramento Valley with Paul Hacker as editor. Contact Dick or me if you'd like to work on this project.

Also on the publication front, Hollis Record, with the help of John Curran, are attempting to get more of Tom Dibblee's mapping published at a reasonable scale. As a geologist for the Los Padres National Forest, Hollis is obviously interested in good coverage of the Forest. We oil geologists may wish to have some of Tom's other mapping in print. If you have any thoughts on the matter call Hollis or John Curran. Ultimately, it is hoped there will be a joint publishing effort financed by both government and other sources including the Pacific Section.

A few notes on conventions: Ben Cahill and his group in Sacramento have the final program almost in shape for the Red Lion Motor Inn May 18th-21st. The joint Monterey Symposium looks like a winner. Meantime John Minch is getting his committee organized for San Diego in '84. He was at our last Executive Committee meeting with a preliminary report.

Then last week I received a long letter from Arlen Ehm who has agreed to act as Convention Chairman in 1985 in Anchorage. The most important item at present is the tentative dates: May 22-24, 1985. Let's show up there en mass and show those northerners that Alaska is part of the West Coast.

STATE'S DRILLING SLUMP CONTINUES

By BILL RINTOUL

The drilling slump that hit California last year shows no sign of abating.

One out of two rigs continues idle.

A tally of 195 land rigs available out of California yards shows 101 rigs working, or 51.8 percent, and 94 rigs idle, or 48.2 precent.

A year ago, a count of 175 rigs then available showed 155 working, 20 idle.

As an index of drilling action, operators last year filed notices for 3,026 new wells in California, which compares with 4,361 such notices in 1981.

In comparison, the number of new well notices in 1980 was 3,660, which was also substantially more than last year. However, for the three years before that, the number of new well notices was lower than those in 1982, notably a total to 2,587 for 1979, 2,759 for 1978 and 2.809 for 1977.

Though the drilling pace was off last year, most of the new wells continued to be in Kern County. Approximately 67.3 percent of the notices, representing almost seven out of every 10 wells, were for Kern County, or a total of 2,035.

Three of the county's giant fields accounted for two out of every five wells drilled in the state. The fields are South Belridge, Midway-Sunset and Kern River.

Of 3,026 new well notices, 1,257 were for the three Kern County fields, or 41.5 percent of the total.

The vigorous development program by Shell's Kernridge Division put South Belridge out in front as the busiest field in the state, accounting for 561 of the new well notices.

The Midway-Sunset field was in second place with 424 notices, and the Kern River field in third place with 272 notices.

PRESIDENT SIGNS OIL-LEASE BAN

President Reagan, in early January, signed a $7.5-billion money bill for the Interior Department, although it includes an Administration-opposed ban on the sale of oil leases off the Northern California coast.

The compromise appropriations bill prohibits Interior Secretary James G. Watt from selling leases from Morro Bay north to the Oregon border, an area he has said is among the "most promising" for offshore oil and gas production. The measure also prohibits oil and gas leasing in wilderness areas.

The ban on drilling off California had been requested by environmentalists and by nearly every member of the state's congressional delegation.

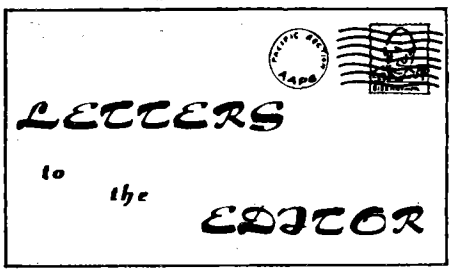
1983 PACIFIC SECTION CONVENTION, SACRAMENTO

"CAPITOLIZING ON ENERGY"
May 18 thru 21, 1983
Red Lion Motor Inn

The Keynote speaker, sponsored by the Division of Professional Affairs of AAPG, is Dr. Daniel N. Miller, Jr., Assistant Secretary for Energy and Minerals of the Department of Interior, District of Columbia. Dr. Miller has thirty years experience as a geologist, eleven spent working with oil and gas exploration. Besides being the Director of Wyoming Geological Survey, he was also state geologist for the state of Wyoming from 1969 to 1981, and is slated to be honored at the national A.A.P.G. convention as a recipient of the "National A.A.P.G. Public Service Award." Dr. Miller's keynote speech will be "Geologist at the Interface."

Another featured speaker at this year's convention will be John Artim, Director of Gas Purchasing, P.G.&E. He will discuss "Purchasing Policy of P.G.&E." There will definitely be a question and answer period following his presentation.

PPG DEADLINE
for APRIL ISSUE
MARCH 15



ANNUAL CONVENTION DALLAS—APRIL 17-20, 1983

Housing and Advance Registration is now open for the 1983 AAPG Annual Convention, to be held in Dallas, Texas from April 17-20, 1983. The theme for the meeting is "Energy Frontiers." Approximately 500 papers will be presented in technical sessions. The annual meeting of AAPG's Divisions—SEPM, EMD and DPA will be held in conjunction with the meeting.

Reservations must be made through AAPG on the official form available from AAPG, P.O. Box 979, Tulsa, Oklahoma 74101, (918) 584-2555.

During the meeting, the services of an Employment Interview Center will be available to facilitate arranging interviews between applicants and potential employers. If you are interested in this service contact: William F. Wilson, Placid Oil, 3900 Thanksgiving Tower, 1601 Elm, Dallas, Texas 75202, (214) 741-3081.

AAPG COURSE TO FOCUS ON FRACTURED RESERVOIRS

"Fractured Reservoir Analysis," an AAPG short course, will be held Sunday, April 17, during the AAPG annual convention in Dallas.

The course is an extension of one of AAPG's current Distinguished Lecture Tours—"Geological Evaluation of Fractured Reservoirs"—given by R. A. Nelson (AC '76). Nelson is currently research supervisor with Amoco Production Co. in Tulsa.

The course will include a compehensive examination of how fractured reservoirs are most efficiently analyzed. Fractured reservoirs will be addressed as a specific form of anisotropic reservoirs. Other anisotropic features discussed will be the effect of crossbedding and styolites.

Nelson will discuss the fracture system origin in which geological, geophysical and rock mechanics data are used to extrapolate limited wellbore data throughout the reservoir. Techniques to estimate fracture porosity and permeability will be covered, as well as the conceptual differences between fracture and matrix porosity. The effect of stress state on fracture porosity and permeability in both the lab and the reservoir environment will also be covered.

The course will emphasize the use of geological and whole-core data and current rock mechanics principles.

For more information contact AAPG education department, P.O. Box 979, Tulsa, Okla. 74101 or (918) 584-2555.

REGISTRATION—GEOLOGISTS & GEOPHYSICISTS

EXAMINATION SCHEDULE

Examinations will be given:

Geology & Geophysicist—May 20,1983
Engineering Geologist—May 21, 1983

Final filing date for May examinations—February 19, 1983.

Geology & Geophysicist—November 18, 1983
Engineering Geologist—November 19, 1983

Final filing date for November examinations—August 20, 1983.

Note new address:

California State Board of Registration
for Geologists and Geophysicists
1021 O Street, Room A-190
Sacramento, CA 95814

Telephone: (916) 445-1920

IN MEMORY OF MILTON T. WHITAKER

Milton T. Whitaker, 70, died suddenly at his home in North Hollywood November 17, 1982. Whitaker retired from Mobil Oil Company in Los Angeles in 1974 after 29 years of service. During much of his career he was actively involved in oil and gas reserve work and served on both the AGA and API national reserve committees.

Following retirement he was associated with the consulting firm of Babson and Shepard of Santa Fe Springs, California. At the time of his death he was serving as interim-manager of the Conservation Committee of California Oil Producers.

Milt became a member of AAPG in 1948. He served as Treasurer of the Pacific Section in 1963-64 and was on the national convention committee in 1967. He served as a communicator on the Strategic Committee for Public Affairs from 1974 until the time of his death.

by John E. Kilkenny

ANNOUNCING THE NEWLY FORMED CAL-STATE BAKERSFIELD PETROLEUM, MINERALS AND GEOLOGY CLUB

The club has approximately 50 members.

Officers are: President, Mike Wheeler; Senior Vice-President, Marty Smithey; Secretary, Gary Richardson; Public Relations, Carl Hulick; Social Events, Suzan Hooks; Sergeant-at-Arms, Cynthia Jung; Advisor, Dr. Steve Mitchell.

Meetings are on the 3rd Wednesday of each month at 4:00 p.m., Cal-State Geology Department.

The club is currently seeking speakers for their meetings. If you have a masters thesis, abstract, etc. that you would like to present, please call the Geology Department.

The club is planning a field trip to Death Valley in March.

The club is also currently planning its 1st Annual Spring Bar-b-que, to introduce the industry to the organization. The event will be held on Saturday, April 9, from 11:00 a.m. to 5:00 p.m.

For more information, contact:
Marty Smithey, 834-6844
Suzan Hooks, 393-6200
Carl Hulick, 397-6532

GEOLOGY OF DEATH VALLEY

National Association of Geology Teachers—Far Western Section. Spring Meeting is March 5 and 6. "Geology of Death Valley" with Field Trip Leaders Bennie Troxel and Lauren Wright. Includes an optional 1½ hour flight over Death Valley. For more information contact Dorothy L. Steller, Program Chairman, NAGT-FWS, 9200 Valley View St., Cypress College, Cypress, Cal. 90360 or call (714) 826-2220.

ORIGINS OF GEOLOGY

Cypress College presents "Origins of Geology" July 15 to August 6, 1983. A bus, train, plane and boat trip examining the sites of the beginning of geology and how they correlate with our current geological thought. Will include England, Wales and Scotland with collecting, museum visiting dialogue with local geologists, etc. For more information contact Dorothy L. Steller, Trip Organizer, 9200 Valley View St., Cypress College, Cypress, Ca. 90360 or call (714) 826-2220.

FIRST REGIONAL MEET

AAPG's first regional meeting was held Oct. 26-28, 1922, in Denver. The meeting was sponsored by the Rocky Mountain Association of Petroleum Geologists, which later became RMAG.

SEPM—1st NATIONAL MIDYEAR MEETING

The National SEPM has recently announced plans for a series of mid-year annual meetings which will not be held in conjunction with the National AAPG. The first of these meetings will be in San Jose, California over the week-end of August 10-13, 1984. This meeting will depart from past national AAPG-SEPM meetings in being strongly thematically oriented with a series of keynote addresses on important sedimentologic and paleontologic topics. Also tentatively scheduled is a new SEPM short course on "Depositional Models of the Monterey Formation." Plan ahead to attend this meeting—it will be a valuable opportunity!

Los Angeles

Officers for the 1983 calendar year for the Los Angeles Basin Geological Society:

President:
Bonnie Bloeser-Cooper
Texaco USA

Vice-President:
Greg Himes
Texaco USA

Secretary:
James B. Blankenship
Aminoil Inc.

Treasurer:
Gerald E. Marrall
Union Oil Company.

Coast

Coast Geological Society

President	Bill Stanton
	Conoco
Vice-President	Gary Nulty
	Argo
Secretary	Roger Brown
	Conoco
Treasurer	Tricia Young
	Argo

The Coast Society is attempting to have Tom Dibblee's geological maps of the Ventura and Santa Maria basins published. A proposal is being made to the Pacific Section for assistance.

Personnel News

Inedla Academia has joined Exxon as a geologist. She is a recent graduate of San Diego State University. Conoco announces the following: Susan Krosky, geophysicist, is transferred to Houston; Dave Nelson, geologist, new hire from Oregon State University; Jack Kepper, geologist, transferred in from Spokane; Chuck Lake, geophysicist, retired.

Union has hired Mark Boehm, geologist, from Stanford University.

Gary Nulty, geologist, and Bill Isaacs, geophysicist, formerly with Argo are now consultants.

San Joaquin

March 8, 1983—Speaker: Karl Stauffer (Chevron); Talk: "Rio Zulio field in Venezuela."

Personnel Changes:

ARCO has appointed two new scouts for the West Coast. Robert M. (Bob) Lewy, replacing recently retired Mozelle Pollok as scout for onshore California, is located in Bakersfield; and, Les Herndon, located in Ventura, will handle the offshore scouting.

Alaska

1982-83 Elected Officers

President-Elect . . . . . D. R. Scheel
Sohio Alaska Petroleum Company

First Vice-President-Elect . . K. A. Boyd
Marathon Oil Company

Second Vice-President-Elect . . John Best
ARCO Alaska Exploration Co.

Secretary-Treasurer-Elect . . . A. N. French
Union Oil Co. of California

Oil and gas industry expenditures in Alaska during 1982 were extensive and the pace considered quite healthy in comparison to that of the Lower-48. A considerable amount of these expenditures were devoted to continued development of the Prudhoe Bay and Kuparuk River fields. Lesser expenditures were devoted to Conoco's development wells in the Milne Point Field. A continuation of these high rates of expenditures should continue through 1983. Plans have also been announced for the development of the Sag Delta/Duck Island reservoir to the northeast of Prudhoe Bay. Attempts to revive the Katalla Oil Field failed for lack of funding.

The primary industry event of 1982 was the OCS Lease Sale #71, erroneously called the "Diapir Field," where $2.05 billion was spent. Exploratory interest has been high for a large structure labeled the "Mukluk Structure" which lies some 30 miles northwest of the Prudhoe Bay Field. Initial tests in this sale area could begin as soon as the next winter season.

Additional federal lease offerings included two sales in the NPRA which drew mild industry interest and two BLM offerings in the interior of Alaska. The BLM offerings drew no interest from the oil industry. The State of Alaska held four sales covering the North Slope, Middle Tanana, Copper River, and Cook Inlet basins. These also drew low interest. Other exploratory activities were dampened, however, as the rig count dropped from 34 active at the beginning of 1982 to 19 active at year's end. There were 43 rigs in Alaska during 1982 including one semisubmersible and one jackup. Rank wildcatting not related to OCS Lease Sale #71 activities waned.

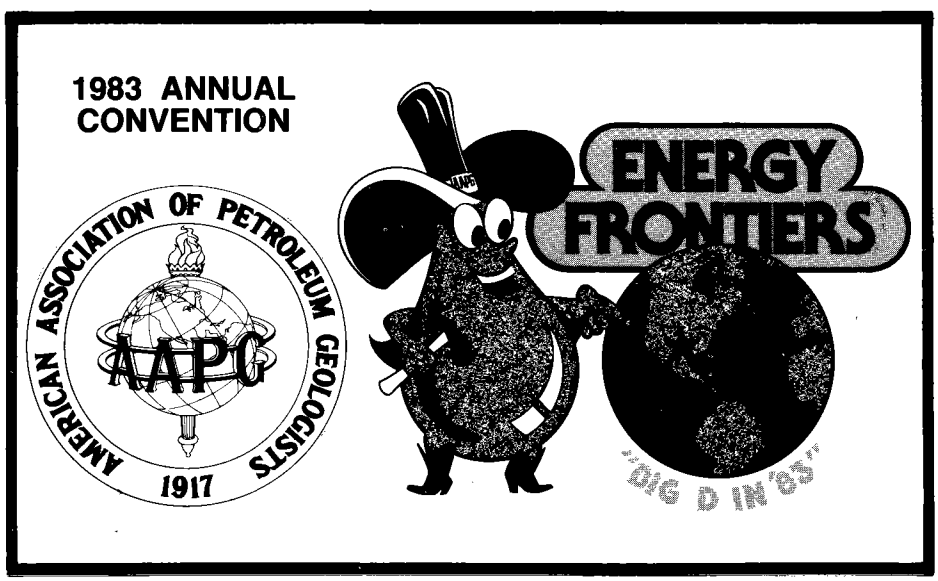
Three C.O.S.T. tests were drilled in the Bering Sea with one each in the North Aleutian Shelf, St. George Basin, and Norton Sound. The latter test, the Norton Sound #2 encountered significant shows of gas between 12,040 and 14,250 feet. For the first time in several years, a jackup rig was brought to Alaska to drill two tests in the Cook Inlet.

Geophysical activity continued at a high pace during 1982. Much of this was devoted to pre-sale evaluation. Detailed seismic surveys on leased tracts also continued at a steady pace.

Alaska's new governor, Bill Sheffield, has gone on record as being pro-development. This bodes well for all industry in Alaska after eight years of very little growth.

Northern California

Dates and speakers have been announced for the Northern California Geological Society's March meetings at the Elk's Club in San Francisco, 456 Post St., at 11:30 a.m. On March 3rd, Doris Curtis will discuss the topic "Comparative Cenozoic Petroleum Geology of Major Deltas—Mississippi, Niger and MacKenzie." She will be followed on March 23rd by Tom Fouch, addressing the subject "Character of Ancient Petroliferous Lake Basins of the World." Visitors are most welcomed. For reservations, call Sara Christensen at (415) 680-3657.



REMOTE SENSING IN CALIFORNIA'S ENERGY FUTURE SYMPOSIUM

Call for Poster Papers, Exhibits and Session Chair Volunteers

* * *

The California Remote Sensing Council and NASA Technology Applications Branch are co-sponsoring a symposium on Friday, March 25, and Saturday, March 26, 1983 at California State College, Bakersfield. The theme of the program is "Remote Sensing in California's Energy Future."

Poster papers, exhibits, and session chair volunteers for the symposium are invited. The application deadline is March 5th. If you are interested, please contact:

Dr. William H. Wake, Program Coordinator
Department of Physics and Geology
California State College
Bakersfield, CA 93311–1109
(805) 833-3044 or 322-7283

Friday, March 25th

10:00 a.m.- 3:00 p.m. NASA Technology Application Branch
REPORT ON THE CALIFORNIA INTEGRATED REMOTE SENSING PROJECT (CIRSS).

3:00 a.m.- 4:30 p.m. Optional Conducted Trip to Kern River Oilfield.

SYMPOSIUM PROGRAM

7:00 p.m.- 9:30 p.m. STATE OF THE ART APPLICATIONS OF REMOTE SENSING TO CALIFORNIA'S ENERGY NEEDS AND PROBLEMS.
Dr. Floyd Sabins, Chevron Oilfield Research.

Saturday, March 26th

8 a.m.-12:20 p.m. APPLICATIONS OF REMOTE SENSING TO THE EXPLORATION DEVELOPMENT, PROCESSING, AND UTILIZATION OF CALIFORNIA'S ENERGY RESOURCES.
Robert Prindle, Eureka Resources, Berkeley, California
and Two Concurrent Technical Panels.

APPLICATIONS OF REMOTE SENSING TO ENERGY RESOURCE PLANNING AND CONSERVATION.
Mona Myett, So. Cal Edison

12:20 p.m.- 1:40 p.m. Lunch.
Keynote Speaker: REMOTE SENSING FOR CALIFORNIA'S ENERGY FUTURES.
Dr. James A. Teranik, University of Nevada, Reno.

1:40 p.m.- 5:00 p.m. R & D TO INCREASE REMOTE SENSING APPLICATIONS IN CALIFORNIA'S ENERGY FUTURES.
Cathryn A. Kitcho, Geologist, Woodward-Clyde Consultants.

5:00 p.m.- 5:30 p.m. Summary: PAST, PRESENT, AND FUTURE PERSPECTIVE ON THE ROLE OF REMOTE SENSING IN CALIFORNIA'S ENERGY.
Dr. John (Jack) Estes, University of California, Santa Barbara.

REGISTRATION

Registration, Regular: $10.00. Full Time Student and Retiree Registration: $5.00.

Lunch: $6.00 each day for a special buffet. Option Oilfield Bus Tour: $6.00.

Course credit available: 1 unit in Geography 477.003 (degree or certificate programs); or Professional Development x800.000 (non-degree credit); or In-Service Education x991.059. title for all 3 numbers: Remote Sensing In Environmental Analysis Cost $15./1 unit.

For registration form, contact Dr. W. H. Wake at C.S.B. (805) 833-3044 or 322-7283.

Annual Meeting

PACIFIC SECTION

AAPG – SEPM – SEG

MAY 18 – 21, 1983

RED LION INN
Sacramento, CA

Watch mail for first registration packet — mailout mid-February.

NEWSLETTER
Pacific Section A.A.P.G.
P.O. Box 1072
Bakersfield, California 93302

Richard L. Hester
1911 Montecito Dr.
Glendale, CA 91208

DA-AM

PACIFIC PETROLEUM GEOLOGIST NEWSLETTER

of the Pacific Section
American Association of Petroleum Geologists

April, 1983 SPECIAL ELECTION ISSUE

CANDIDATES FOR OFFICE — PACIFIC SECTION AAPG

STANLEY E. (Ed) KARP

Candidate for President-Elect

Present Position:
Professor of Geology, Bakersfield College, Bakersfield, California

Education:
1949, U.S.C., BA
1968, Washington State, MA

Employment:
1950–56: Fairchild Aerial Survey, Airbourne Magnetometer Project Manager, Los Angeles, California
1956–60: Gulf Oil Corp., Exploration Geologist, Los Angeles and Sacramento, California and Casper, Wyoming
1960–63: Kern Oil Co., Exploration Geologist, Bakersfield, Califoria and New Orleans, Louisiana
1966–Present: Professor of Geology, Bakersfield College, Bakersfield, California and Consulting Geologist, California and Latin America

Professional Activities:
National AAPG: 1975–76 Strategic Committee on Public Affairs; 1976–76 Distinguished Lecture Committee; 1978–83 Communicator
Pacific Section AAPG: 1968 Editor, Guide Book "West Side Southern San Joaquin Valley"; 1971–73 Editor, PPG *Newsletter*; 1972 Field Trip Chairman "West Side Central San Joaquin Valley"; 1977–78 Secretary; 1980 Convention Publicity Chairman; 1982–83 Vice President
San Joaquin Geological Society: 1962 Editor, "Selected Papers" Volume 1; 1962 Secretary-Treasurer (and Bartender); 1974–75 Vice President; 1975–76 President

Publications:
1972 Our Depleting Natural Resources
1975 West Coast Energy Requirements
1983 Calendar of Geologic Events

EUGENE C. TRIPP

Candidate for President-Elect

Present Position:
District Exploration Manager, Challenger Minerals, Inc., Bakersfield, California

Education:
B.A. Geology, University of Southern California
M.A. Geology, 1957, University of Southern California

Employment:
1957–1978 Texaco, Inc.
1978–1982 DEPCO, Inc.
1982–Present Challenger Minerals, Inc.

Professional Affiliations:
AAPG 1956
AAPG Pacific Section 1957
San Joaquin Geological Society 1957

Professional Activities:
San Joaquin Geological Society
President 1981–82
Representative to Pacific Section 1980–81
Field Trip Chairman 1968 Pacific Section Convention
Treasurer 1966–67

LEON J. EARNEST

Candidate for Vice President

Present Position:
District Geologist, Getty Oil Company, Taft, California

Education:
B.S. Geology, 1957, Oklahoma State University

Employment:
1957–1960 Humble Oil & Refining Co., Geologist, Texas
1960–1966 Shoemaker & Windham, Geologist and landman, Miss.
1967–present Getty Oil Company

Professional Affiliations:
AAPG, Pac. Sec. AAPG, AIPG, SPWLA, San Joaquin Geological Soc.

Professional Activities:
Delegate AAPG, 1971–1974
Treasurer, San Joaquin Geological Society, 1971–1973
Pacific Section Convention Registration Committee, 1977
Pacific Section Convention Entertainment Chairman, 1972

Publications:
1983 AAPG Pac. Sec. Tech. Paper "Diagenetically Enhanced Entrapment of Hydrocarbons, Southeastern Lost Hills Fractured Shale Pool, Kern County, CA."
1983 Geotimes, "Diatomite Deposits — McKittrick Field, Kern Co., CA."

JAMES H. DORMAN

Candidate for Vice President

Present Position:
Division Exploration Manager, Tenneco Oil Company, Bakersfield, California

Education:
B.S. Mississippi State College, 1954
M.A. University of Missouri, 1955

Employment:
1955–1964 California Oil Company, New Orleans, LA.
1964–Present Tenneco Oil Company

Professional Affiliations:
AAPG
San Joaquin Geological Society

JOHN W. RANDALL

Candidate for Secretary

Present Position:

Regional Geologist, Gulf Oil, Bakersfield, CA

Education:

B.S. Geology, 1967, Southern Illinois University

M.S. Geology, 1970, Southern Illinois University

Employment:

1968 Junior Geologist, Amoco, Fort Worth, Texas

1970–1977 Exploration Geologist, Union Oil Company, Santa Fe Springs and Bakersfield, CA

1977–Present Gulf Oil

Professional Affiliations:

AAPG

Pacific Section AAPG

Professional Activities:

Editor for Pacific Section AAPG *Newsletter*, 1979–1982

TERRENCE T. (Terry) BUDDEN

Candidate for Secretary

Present Position:

District Exploration Geologist, Union Oil Company of California, Ventura, CA

Education:

B.S. Geology, 1972, California Lutheran College

M.S. Geoscience, 1975, University of Arizona

Employment:

1975–Present Union Oil Company

Professional Affiliations:

AAPG

Pacific Section AAPG

Coast Geological Society

San Joaquin Geological Society

SEPM

Professional Activities:

Treasurer, Alaska Geological Society, 1978–1979

JAMES B. BLANKENSHIP

Candidate for Treasurer

Present Position:

Exploration Geologist, Aminoil USA, Huntington Beach, Calfornia

Education:

B.S. Geology, 1974, California State University, Long Beach

Employment:

1975 Core Laboratories

1975–1977 McCulloch Oil Corp.

1977–1981 Southern Calif. Gas Co.

1981–Present Aminoil USA

Professional Affiliates:

AAPG active member

Pacific Section AAPG (LABGS)

Southern Calif. Well Log Society

Pacific Section SEG

Professional Activities:

Treasurer, L.A. Basin Geological Society, 1981

Alternate to House of Delegates, AAPG

Secretary, L.A. Basin Geological Society, 1983

CAROLYN WALCH

Candidate for Treasurer

Present Position:

Senior Geologist, Husky Oil Company, Santa Maria, CA

Education:

B.S. Geology, Cal State University, Northridge

M.S. Geology, 1978, University of Southern California

Employment:

1978–1981 Texaco

1981–Present Husky Oil Company

Professional Affiliations:

Pacific Section AAPG

AAPG

SEPM

GSA

Professional Activities:

Secretary, Pacific Section SEPM, 1979

PACIFIC SECTION —
AMERICAN ASSOCIATION
PETROLEUM GEOLOGISTS

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Vice President ..... STANLEY E. (ED) KARP (805) 395-4438

Secretary ..... JOAN WINTERER (805) 656-7600

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Hisorical ..... BILL RINTOUL

Environmental ..... TOM WRIGHT

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Coast ..... ROGER BROWN (805) 642-8154

Los Angeles ..... DARLENE CONDRA (213) 385-0515

Northern California ..... TOM DIGNES (415) 680-3220

Sacramento ..... DON PINNELL (916) 483-8490

San Joaquin ..... MAGI NIELSEN (805) 395-8000

Recommended Reading ..... LUCY E. BIRDSALL (213) 688-2850

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Material for publication, requests for previous copies and communications about advertising costs should be addressed to MARC W. TRAUT, 5000 STOCKDALE HWY., BAKERSFIELD, CA 93309.

CHANGE OF ADDRESS, subscription, and membership inquiries should be directed to: MEMBERSHIP SECRETARY, PACIFIC SECTION AAPG, P.O. BOX 1072, BAKERSFIELD, CALIFORNIA 93302.

PUBLICATIONS COMMITTEE: Pacific Section American Association of Petroleum Geologists, P.O. Box 927, Camarillo, CA 93010.

Annual Meeting

PACIFIC SECTION

AAPG – SEPM – SEG

MAY 18 – 21, 1983

NEWSLETTER
Pacific Section A.A.P.G.
P.O. Box 1072
Bakersfield, California 93302

DA-AM
Honorary

J. D. Traxler
15510 Friends St.
Pacific Palisades, CA 90272

PACIFIC PETROLEUM GEOLOGIST NEWSLETTER

of the Pacific Section
American Association of Petroleum Geologists

MAY/JUNE 1983

PRESIDENT'S CORNER . . .

Elsewhere are important items for this issue of the PPG *Newsletter*— the May Convention in Sacramento and the candidates for election to office in the Pacific Section. There are three other subjects I would like to discuss.

First, Dick Hester has two more publication groups working. One is on the general geology of the Sacramento Valley and the other on the Ventura Basin following the original idea of combining new and old papers. If you have something to contribute on these subjects, please contact him. On this same subject, in your convention packett was a call for papers on the gorges of the Sacramento Valley which I discussed in the last issue. My face is red. you will note that the "call" was made by Al Almgren of Union here in Ventura. He is editing this volume with Paul Hacker's help. Somehow I left Al out of my announcement.

Second, at our last executive committee meeting, Hollis Record, geologist for the Los Padres National Forest, gave us a long presentation on the progress and problems (money) in publishing some of Tom Dibblee's mapping. There are approximately sixty 7½° quadrangles being drafted for publication . . . probably in a 2-color format with topography in brown and geology in black. A momentous undertaking. Somehow, with the help of the Pacific Section, the job will be done. (I have some strong feelings about the U.S.G.S.'s miserable publication record the past ten years or so but that's another problem in this period of financial belt tightening.)

Last, I'd like to put on my suit of armor and go play Don Quixote. There are at least four important papers that **will not** be presented at our Sacramento convention. They were to be on the following oil fields: Tulare Lake in Kings County, Santa Clara Avenue in Ventura County and Hondo and Point Arguello in the Santa Barbara Channel. Two of these papers were shot down by partners of the operator. The other two died on the desk of top management. If these fields were located anywhere in the world except California, we would have a presentation on them at the convention. Unfortunately, some operators in the California oil belt have a paranoid fear that somebody else may be smarter than them and unduly benefit from a public discussion of their work. I have no complaint with reasonable treatment of "proprietary" information. However, if we are to develop our Nation's resources, there must be a flow of information within the exploration fraternity. Fie on those who irrationally impede this flow.

TED OFF

"MONTEREY MONTH" at CALIFORNIA WELL SAMPLE REPOSITORY

Cores and outcrop samples of the Monterey Formation from the Coastal and San Joaquin basin areas of California will be on display at the California Well Sample Repository during the month of May. All geologists, engineers, and other interested persons are invited. No admission charge. The Repository is located at the south end of the campus of Cal State College, Bakersfield, on Stockdale Highway. Visiting hours are 8:00 a.m. to 12:00 Noon and 1:00 p.m. to 5:00 p.m. weekdays, except during the Pacific Section AAPG Convention at Sacramento, (May 18, 19, & 20).

The Monterey, with equivalent beds such as the Modelo, Puente, McLure, Antelope, Belridge Diatomite, and others, has long been a highly productive formation in California. Recent successful exploration and development in the Santa Barbara Channel at Point Arguello, on-and offshore in the Santa Maria Basin, at Lost Hills, and elsewhere has renewed interest in this complex and fascinating Miocene formation. Although not a part of the Monterey Symposium of the Convention, we believe this display may be a beneficial supplement to it, and certainly should be helpful to all who can come to the Repository.

We would be pleased to be able to augment this display with samples — cores or outcrop — which any of you may wish to donate or loan. If so, or for additional information, please contact Victor Church, 3120 18th Street, Bakersfield, 93301 – (805) 325-5924 or 833-2324.

University of California Annual Research Review Symposium

The Department of Geological Sciences of the University of California at Santa Barbara will hold its first Annual Research Review Symposium on June 6 and 7, 1983, at the Santa Barbara Campus. The Research Review will include a one-day field trip on Monday, June 6 to several sites in the Santa Ynez Mountains and the Santa Maria Basin. Leaders of the trip will be Professors J. R. Boles and D. W. Weaver. On Monday night, a hosted dinner will be held at the Faculty Club on campus. Formal presentations of current research in the department will take place on Tuesday, June 7. Topics will include research in California tectonics, diagenesis, structural geology, geophysics, paleobiology, and marine geology and geophysics. On Wednesday, June 8, Professor C. A. Hopson will lead a field trip to the Point Sal ophiolite for a limited number of attendees. Interested persons should contact Professor Bruce Luyendyk at the Department of Geological Sciences, University of California, Santa Barbara, California 93106 (805/961-3009) for registration forms. Registration is limited.

THE CALENDAR OF GEOLOGIC EVENTS — 1983-84

The "Calendar of Geologic Events — 1983-84", will be given free to pre-registrants of the Sacramento Convention. The Calendar includes some 340 entries of major earthquakes, volcanic eruptions, birth dates of geologic giants, discovery dates of California oil fields, and even some dam disasters. Calendars are available from Dick Williams at (805) 656-7600 for three dollars each ($3.00).

PPG DEADLINE for JUNE/JULY ISSUE JUNE 15

58TH ANNUAL MEETING
AAPG — SEPM — SEG PACIFIC SECTION
"Capitalizing On Energy"

Red Lion Inn, Sacramento
MAY 18 – 21, 1983

BEN CAHILL
General Chairman

HOSTED BY SACRAMENTO PETROLEUM ASSOCIATION

AAPG TECHNICAL SESSION

Thunderbird Ballroom

Thursday Afternoon; May 19, 1983

Presiding: Dave McGeary (CSUS) and Roland Bain (Tri-Valley Oil & Gas)

1:45 *Introduction*

2:00 Richard Boyd (Natural Gas Corp. of California: **Typical Trapping Mechanisms of the Paleocene Meganos Channel in the Sacramento Valley.**

2:20 Thomas E. Hopps (Rancho Energy Corp.) and Edwin P. Horan (Natural Gas Corp. of California): **Subsurface Stratigraphy: Eel River Basin.**

2:40 F. Tom Ise: **Petroleum Potential of the Pacific Northwest.**

3:00 W. Wornhardt (ERT): **The Sisquoc Formation is Pliocene in Age and the Monterey Formation is Miocene in Age in the Santa Maria Area, Santa Barbara County, California.**

3:00 Jonathan Kuespert (Stanford): **The Depositional Environment and Provenance of the Temblor Formation of North Kettleman Dome and Surrounding Areas.**

3:20 Don F. Collins (Oxy Petroleum, Inc.): **Ryer Island—Sacramento's Biggest Little Gas Field.**

3:40 Al J. Horn (Stanford): **The Resurrection of the Half Moon Bay Oil Field.**

4:00 I. R. Kaplan (UCLA): **Hydrocarbon Geochemistry in the Surface Sediments of the Alaskan Outer Continental Shelf.**

4:20 Herman B. Schymiczek (Getty Oil Co.): **Depositional Environments and Petroleum Occurrences, the Eocene Llajas Formation, Southwestern Santa Susana Mountains, California.**

4:40 L. F. Ivanhoe (Novum Corp.): **Limitation of Geological Consensus Estimates of Undiscovered Petroleum Resources or "How Big is the Ballpark?"**

5:00 M. S. Lico (USGS) and Y. K. Kharaka (USGS): **Subsurface Pressure and Temperature Distributions in the Sacramento Basin, California.**

5:30 *Closing Remarks.*

Donner Room

Friday Morning; May 20, 1983

Presiding: Bob Matthews (UC Davis) and Monte Doris (Capitol Oil Co.)

8:20 *Opening Remarks*

8:30 James R. Boles (UC Santa Barbara): **Secondary Porosity in Tertiary Arkosic Sandstone Reservoirs, Southern San Joaquin Valley, California.**

8:50 Edward J. Helley (USGS) and Cheryl Jaworowski (U. of Wyoming): **The Red Bluff Pediment, a Datum Plane for Locating Quarternary Structures in the Sacramento Valley, California.**

9:10 Charles W. Walker (George Maddox and Associates) et al: **Distribution and Geology of Potential Gas Bearing Eocene Sediments, Central Washington.**

9:30 Mont M. Warner (Boise State U.): **Seven Major Needs for Petroleum Exploration of the U.S. Northwest Region.**

9:50 Timothy S. Collett (U. of Alaska): **Detection and Evaluation of Natural Gas Hydrates from Well Logs, Prudhoe Bay, Alaska.**

10:10 Warren O. Addicott (USGS): **Circum-Pacific Map Project; Resource and Geologic Mapping of More than Half the World.**

10:30 Charles T. Walker (CSU Long Beach) et al: **Trace Elements in Illite Clay Fractions; Possible Clues to the Subtle Stratigraphic Trap.**

10:50 Michael Mulhern: **Business Strategies for Small Energy Companies During Hard Economic Times.**

11:30 *Closing Remarks.*

SEG TECHNICAL PAPERS

Thursday Afternoon; May 19, 1983

Donner Room

1:45 *Introduction*

2:00 W. J. Ostrander – Chevron USA: **"Plane Wave Reflection Coefficients for Gas Sands at Non-Normal Angles of Incidence".**

2:20 Gary S. Gassaway – Terra Linda Group, Inc. and Jack Richgels – Marjac Geo., Inc.: **"Sample: Seismic Amplitude Measurement for Primary Lithology Estimation".**

2:40 Bruce Gibson and Ken Larner – Western Geophysical Co.: **"Predictive Deconvolution and the Zero-Phase Source".**

3:00 Patrick Hooyman, Gary C. Robinson and Kevin Taylor – CGG: **"Quantatative and Qualitative Stratigraphic Interpretation in Mature Basins".**

3:20 Douglas G. Morgan – Houston Processors, Inc.: **"Vibroseis High Frequency Attentuation: The Problem; Vibrowav High Frequency Recovery: The Process".**

3:40 Phillip Schlutz: **"Binning and Time Variant Regridding of 3-Dimension Seismic Data".**

4:00 Laurie Bennett – Terra Linda Group, Inc.: **"Structural Interpretation from Multiple Offset Vertical Seismic Profiles".**

4:20 Steve Mayer – Schlumberger: **"Vertical Seismic Applications in the Northwest".**

SEG TECHNICAL PAPERS

Friday Morning; May 20, 1983

Donner Room

9:00 *Introduction*

9:10 R. F. Flege – Chevron Overseas Petroleum, Inc.: **"Regional Gravity and Magnetics in the Sudan: Applications to Petroleum Exploration".**

9:30 Robert C. Jachens and Andrew Griscom – USGS: **"An Isostatic Residual Gravity Map of California: A Residual Map for Interpretation of Anomalies from Intracrustal Sources".**

9:50 John Beyer, Audrey L. S. Roe and Brad R. Parker: **"A Comparison of Interpreted Magnetotelluric Data with Lithologic and Electric Log Data in the Columbian Plateau".**

10:10 Larry A. Beyer – USGS: **"Estimation of Reservoir Porosities from Borehole Gravity Surveys, Long Beach Unit, Wilmington Oil Field, California".**

10:30 Frank Morrison – UC Berkeley: **"Electromagnetic Methods in Petroleum Exploration".**

10:50 James Klein – Phoenix Geophysics, Inc.: **"Special IP Surveys for Oil Exploration: Case Histories for Alberta and Railroad Valley, Nevada".**

11:10 G. W. Starke and S. W. Nciksic: **"Electron Spin Resonance for Oil Exploration; Part 2: Detection of Asphatenes Absorbed on Reservoir Rock".**

SEPM SYMPOSIUM ON MONTEREY OIL FIELDS —

Presiding: S. A. Graham

Friday A.M.

Thunderbird Ballroom

8:25 *Introductory Remarks*

8:30 D. Woltz: **Structural, Stratigraphic, and Productive Characteristics of the Miocene "Cahn Zone", Monterey Formation, in South Lost Hills Oil Field, Kern County, California**

8:50 M. A. Kruge: **Diagenesis of Miocene Biogenic Sediments, Lost Hills Oil Field, Western San Joaquin Basin, California**

9:10 M. D. McGuire J. R. Bowersox, and L. J. Earnest: **Diagenetically Enhanced Entrapment of Hydrocarbons, Southeastern Lost Hills Fractured Shale Pool, Kern County, California**

9:30 M. E. Mulhern, J. C. Eacmen, Jr., and G. K. Lester: **Geology and Oil Occurrence of Displaced Diatomite Member, Monterey Formation—McKittick Oil Field**

9:50–10:10 L. S. Weber: **Organic Source Rock Analysis of Stevens Sand Interval (Upper Miocene), Cal Canal Field**

10:10 D. E. Schwartz: **Depositional Environments and Diagenesis of the Upper Monterey Formation at Chico- Martinez Creek and South Belridge Oil Field, California**

10:30 H. P. Heasler and R. C. Surdam: **A Thermally Subsiding Basin Model for the Maturation of Hydrocarbons in the Pismo Basin, California**

10:50 R. I. Kablanow II and R. C. Surdam: **Diagenesis and Hydrocarbon Generation in the Monterey Formation, Huasna Basin, California**

11:10 K. A. Mertz, Jr., G. Demaison, and R. E. Garrison: **Lithofacies, Organic Matter, and Source Rock Potential: Sandholdt Member (Middle Miocene), Monterey Formation, Northern Santa Lucia Mountains, California**

SEPM SYMPOSIUM ON MONTEREY OIL FIELDS —

Presiding: Caroline M. Isaacs and W. A. Jensky II

Friday P.M.

Thunderbird Ballroom

1:55 *Introductory Remarks*

2:00 W. Ziemianski, M. Ponek and B. Newman: **Zaca Field—Santa Maria Basin**

2:20 P. Roehl and R. Weinbrandt: **Geology and Production Characteristics of the Monterey Formation Fractured Reservoir, West Cat Canyon Oil Field, Santa Maria Valley, California**

2:40 C. E. Katherman: **Recent Oil Developments in the Monterey Formation of the Santa Maria Basin**

3:00 P. Lillis and M. Lagoe: **Regional Patterns of Oil Gravity in the Monterey Formation, Santa Maria Basin, California: Implications for Petroleum Exploration and Tectonic History**

3:20 T. Farley and M. Wilson: **Geology of the Airox Oil–Saturated Diatomite Deposit, Santa Barbara County, California**

3:40 C. M. Isaacs and M. A. Keller: **The Boundary of the Monterey and Sisquoc Formations and Diagenesis of Miocene Siliccous Strata in the Point Conception C.O.S.T. Well** #1 OCS 78–164 California, Outer Continental Shelf, Southern California

4:00 W. Belfield, J. Helwig, P. La Pointe, and W. Dahleen: **South Elwood Oil Field, Santa Barbara Channel, Californi—A Monterey Formation Fractured Reservoir**

4:20 R. S. Yeats: **Heavy Oil Accumulations in the Oxnard Field, Ventura Basin, California**

4:40 Concluding Remarks and Discussion

SEPM OPEN SESSION

Presiding: David W. Anderson and Noel G. Eberz

Friday P.M.

Cascade Room

2:00 Robert Linder, William Orr, and Paul Miller: **Mid-Tertiary Echinoids from the Oregon Western Cascades**

2:20 Noel Eberz: **Environments of Deposition of the Badger Flat Limestone, Lower Ordovician, Southeastern California**

2:40 Eric Frost and Donna Martin: **The Orocopia Schist and Chocolate Mountains Thrust System of Southeastern California and Western Arizona: New Insights From Removing the Overprint of Tertiary Detachment Faulting and Folding**

3:00 Kendall Dickinson: **Origin of Uranium Deposits in Tertiary Sedimentary Rocks in Ventura County, California**

3:20 Ron Steel and John Crowell: **Facies of the Violin Breccia, Ridge Basin**

3:40 R. J. McLaughlin and others: **Terrane Boundary Relations and Tectostratigraphic Framework South of Eel River Basin, Northwestern California**

4:00 David S. Harwood: **Late Cenozoic East-West Compressive Tectonism in the Northern Sacramento Valley, California**

4:20 Robert Wallace and others: **Mid-Tertiary Detachment Faulting West of the San Andreas Fault System in Southern California and Northernmost Baja, California**

4:40 Harold Sugden: **The Coriolis Effect and the Occurrence of Oil or Gas Basins on the West Coast of North America**

AAPG GEOTHERMAL TECHNICAL SESSION

Donner Room

Friday Afternoon; May 20, 1983

Presiding: Charles Breitsprecher (American River College)

1:45 *Introduction*

2:00 Donna Eberhart-Phillips (USGS) and David Oppenheimer (USGS): **Induced Seismicity at The Geysers.**

2:20 Richard Thomas (California Division of Oil & Gas): **Structural Control of Fluid Flow in The Geysers Geothermal Field.**

2:40 Gary Clifton (Exploration Research Laboratories): **Results of Soil-gas Geochemistry Study of the Desert Peak Blind Geothermal Field, Churchill County, Nevada.**

3:00 Richard C. Kent: **Geothermal Exploration in the Cascade Range: Bonneville, Washington.**

3:20 Rosawitha B. Grannell (CSU Long Beach) and D. Curtis (CSU Long Beach): **Repitative Precision Gravity Studies at Heber and Cerro Prieto Geothermal Fields, Salton Trough, California.**

3:40 *Closing Remarks.*

DOWN MEMORY LANE . . .

With fractured rocks and the Monterey Formation at the 1947 Convention.

PACIFIC SECTION OF
AMERICAN ASSOCIATION OF
PETROLEUM GEOLOGISTS
Twenty-fourth Annual Meeting
HUNTINGTON HOTEL
PASADENA, CALIFORNIA
November 6 and 7, 1947

Thursday Morning, November 6, 1947

9:00–9:30 — Registration

Presiding, James C. Kimble
General Petroleum Corporation
Los Angeles, California

9:30 Introductory Remarks of Symposium on Occurrence and Production of Oil from Fractured Rocks in California — Rollin Eckis, Richfield Oil Corporation, Los Angeles, California. (Five minutes)

9:30 Occurrence and Origin of Chert in the Monterey Formation — M. M. Bramlette, University of California at Los Angeles, West Los Angeles, California. (Twenty minutes)

10:05 Fractured Reservoirs of the Santa Maria District — L. J. Regan, Jr., General Petroleum Corporation, Santa Maria, and A. W. Hughes, Union Oil Company, Santa Maria, California. (Forty minutes)

* * * * * * * * * * *

After thirty-six years we are still asking the same questions.

P.S. Rex Young says it was a fine convention and a really good year.

Coast

Coast Geological Society

Calendar:

Tuesday, May 17th C.G.S. evening meeting: Dr. Patrick L. Abbot, San Diego State University, — "Sedimentation and Tectonics of the Eocene Strata — Channel Islands and Mainland".

Tuesday, June 21st C.G.S. evening meeting: Dr. Arthur Sylvester, U.S.C.S.B., — "Wrench Fault Tectonics".

C.G.S. evening meetings are held at the American Legion Hall, 83 So. Palm, Ventura, with Happy Hour starting at 6:00 p.m. and Dinner at 7:00 p.m.

Alaska

The list of officers inserted into the report for February are for the Geophysical Society of Alaska. The officers for the Alaska Geological Society remain as listed in the September issue. The exception to this is that Don Blasko, Vice President, has been transferred to Denver. The Board of Directors has appointed Gil Mull to fill out the remainder of his term.

Although exploratory drilling in Alaska has suffered the severe cutbacks that has plagued the Lower–48, the exploratory staffs working Alaska have been working at a frantic pace. The scheduling of state and federal sales has required long and steady hours of preparation. Federal Sale 71 in the Beaufort Sea was held in October, 1982. Sale 57 in Norton Sound was held on March 15, 1983, and Sale 70 in the St. George Basin of the Bering Sea was held last month. All of these sales have involved large acreages.

Additional sales scheduled for 1983 include State Sale 39 in the Beaufort Sea in May, 1983, and State Sale 40 in Cook Inlet in September, 1983. Federal Sale 83 in the Navarin Basin of the Bering Sea is scheduled for March, 1984.

IN MEMORY OF RAY P. WALTERS

Ray P. Walters, a retired exploration geologist for the Exxon Corp., died Saturday, February 12, at his home in Menlo Park, California. He was 85.

Ray walters spent 37 years with Standard Oil Co. of New Jersey, Exxon's forerunner, mostly in foreign work. He graduated from the University of Kansas in 1920 and for the next 19 years worked in Mexico, Czechoslovakia, France and Romania. He actually worked 15 years in Romania. During World War II he worked in the New York office of S.O.N.J. and returned to Romania in 1945 for two years as petroleum attache.

He then served as exploration manager in Egypt for two years followed by six years in Bordeaux, France. He was made a chevalier of the French Legion of Honor and an honorary citizen of Bordeaux for his part in the discovery of the Parentis oil field in 1954.

Ray became a member of A.A.P.G. in 1920 and was an Emeritus member at the time of his death.

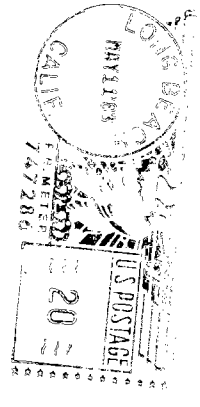
by J.Herbert Sawyer

Change of Address:

GARY NULTY, moved to Arkoma Oil, 1435 Riverpark Dr., Sacramento, CA 95815. (916) 920-5228).

WESLEY G. BRUER, from 2920 "H" St., Bakersfield, CA 93301 to 190 S. 1st St., #3, St. Helens, Oregon 97051. Telephone (503) 397-0248.

NEWSLETTER
Pacific Section A.A.P.G.
P.O. Box 1072
Bakersfield, California 93302



Richard L. Hester
1911 Montecito Dr.
Glendale, CA 91208

DA-AM

PACIFIC PETROLEUM GEOLOGIST NEWSLETTER

of the Pacific Section
American Association of Petroleum Geologists

JULY 1983

PRESIDENT'S CORNER . . .

In mid 1977 the National AAPG requested donations of money and perhaps something else to their new building in Tulsa. Several Executive Committee sessions later, after much discussion, a motion was passed to send money and a large rock to aid in landscaping the headquarters grounds. A bitter verbal battle was fought over the type of rock with the Bakersfield contingent's choice of a piece of the Button Bed winning out.

For close to 6 years the buck was passed from one Executive Committee to the next regarding the mechanics of selecting, collecting and shipping "the rock." For obvious reasons those who did not perform during this period shall remain nameless.

In May, a group headed by Sue Kiser retrieved a large chunk of the Button Bed from the Twisselman Ranch near McKittrick. It is now being crated for shipment to Tulsa. This momentus event was reported by Sue at our last Committee meeting. Her key comment was, "if I'd known how famous this procrastination was, we could have stalled for another year or two." My thanks to all involved.

In my last newsletter, I got specific and mentioned four oil field papers that were scheduled for the Sacramento meeting and then withdrawn. For the record, there were several others which met a similar fate. Unfortunately, my facts were incomplete and I received a stinging letter from Dick Ganong. There were important business considerations which resulted in the withdrawal of their paper on the Tulare Lake oil field. I have apologized in person and hereby apologize in print for the discomfort I may have caused the firm of Ganong & Ellison.

However, I do not withdraw the principal point I was trying to make in that discussion: Our conventions in California show a marked lack of "oiliness" as John Carver would say. We have numerous outstanding papers by accademia and governmental agencies, usually several by consulting geologists and a generally poor showing by the major oil companies (Notable exception to this was 3 papers *each* by Getty and Arco geologists. Thank you.) It is only through a reasonable *exchange* of geologic information that we can work together to solve our Country's resource problems.

The theme of next year's convention in San Diego will be "Getting it all together." In this regard, convention chairman, John Minch, and I have had discussions with most people concerned on the subject of a truly "joint convention." That is, instead of having sessions sponsored by either AAPG, SEPM or SEG, we would have *one* convention with papers allocated by *one* technical program committee to appropriate sessions. Hopefully, this will remove some of the space and other minor problems we have had in the past. If anyone disagrees with this concept, please contact John or me.

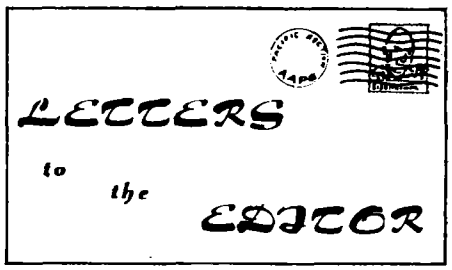
Both Don Zieglar of Chevron and Art Spaulding of the Western Oil and Gas Association recently testified on California offshore leasing at Congressional committee hearings. The basic message I received from each of them was that we are not getting the information across. Both as an organization and individually we must do more if there is to be any significant additional leasing of new areas. Politicians react to pressure, especially when they have a lack of knowledge. The environmentalists have done a good job of putting on the pressure. Well presented facts and a little pressure from our side can overcome this.

The message obviously didn't get across in the House of Representatives where an amendment to an appropriations bill was just passed which would slam the brakes on most offshore leasing and significantly slow various types of on-shore leasing. Due to effective work by many members of the oil industry, the Ventura City Council also just passed a resolution in opposition to this amendment. A few more similar resolutions by elected bodies in California would certainly help.

My sincere thanks to Ben Cahill of Energy Log and his enthusiastic crew for putting on an outstanding convention in Sacramento. Among other noteworthy items, the Monterey Symposium organized by Carolyn Isaacs and others was outstanding. Then too, the SEPM did a great job of getting out preprints.

This is my last President's Corner. I have especially enjoyed the office because of the people I have had a chance to work with on the Executive Committee. My thanks to all involved. Leaving office also with me are Joan Winterer, Secretary, and Mark Cole, Treasurer. Both have performed difficult jobs with excellence. My two other elected colleagues, Jim Weddle and Ed Karp, will obviously continue. The Section is in good hands.

In closing, a special note of thanks goes to Don Hallenger who I beat out by a couple of votes two years ago as president-elect. He has served on the Executive Committee as planning chairman but more important as an advisor and counselor to me. His help was there when needed.



'83 CONVENTION CONSIDERED BIG SUCCESS

The 1983 Pacific Section Convention is history and from all reports, it was a success socially, technically and in spite of the big spenders from Sacramento, we made a few bucks for the Pacific Section. The total number of registrants was 1308. Of this total, 220 were spouses,163 students and 281 nonmembers.

This was truly an AAPG-SEPM-SEG function and I cannot express my thanks enough to all three societies for the cooperation that was extended to me. Whatever problems that did occur were always amicably solved in short order. Thank you, Ted Off (AAPG), Ken Pisciotto (SEPM), David Butt (SEG) and Gary Gassaway (BAGS). It was a pleasure working with all of you presidents.

It looks like the right co-ordinators and chairmen were chosen and everyone did his job. The company that wins the prize for total manpower committed has to be TXO Production Corp. Our tally shows fourteen TXO people and three spouses. Gael Troughton was in charge of registration and at times everyone at TXO got in the act. I appreciate the patience of Tommy Knowles, TXO's manager of Sacramento. Exlog had eleven of their people. Ernie Burroughs had one of the most horrible jobs of any convention, Housing Chairman. The open house B-B-Q at Exlog's parking lot added the right touch to the convention.

(continued on page 2)

'83 CONVENTION

(continued from page 1)

The icebreaker and dinner-dance received high grades from all who attended either or both events. If one plans an occasion in Sacramento that calls for food, I would suggest calling Swiss Holmes, a Tenneco landman.

It has been my contention that the heart and soul of any Pacific Section convention will always be the technical papers. The Monterey Symposium was the main attraction as expected. However, as advertised, there was something for everyone.

The Red Lion Inn has received our thanks for an outstanding job. They made a lot of bucks off the Pacific Section so were happy to accomodate us. All in all, it's a good place to hold a convention.

We hope you enjoyed yourselves in Sacramento and I sure am glad it will be in San Diego next year. Good luck, John Smith.

Ben Cahill
General Chairman

RIG ACTIVITY SHOWS GAINS

By BILL RINTOUL
Californian Oil Editor

Drilling activity continues to show gains in California, with seven more rigs working now than had jobs a month ago.

Four of the rigs are based in Bakersfield.

A tally of 192 land rigs available in California shows 105 working, or 54.7 percent, compared with 98, or 51 percent, in June. There are 87 rigs idle, compared with 94 a month ago.

Of 93 rigs available out of Bakersfield offices, 50 are working, or 53.8 percent. A month ago, 46 rigs were working. Three months ago, only 32 of the rigs had jobs.

The pace is still far below that of the peak year of 1981, when virtually every rig in the state had an assignment, but slightly better than that in mid-1979 when the big boom began to develop. The boom climaxed in 1981, and the drilling market slumped soon after 1982 began. By August of that year, the number of rigs had dropped to 107. By early April of this year, the number of rigs with jobs was down to 82. Since then, there has been steady improvement, building to the present 105 active rigs.

In well-pulling ranks, the utilization rate is running neck-and-neck with that for drilling rigs. according to a well servicing rig count released by the Association of Oilwell Servicing Contractors, 340 of 616 available rigs were working in May, the most recent month for which figures are presently available. That represents a 55 percent utilization rate.

The figures are for the Western region, which is California. The utilization rate is better here than in any of the other regions covered by the report, which shows a 42 percent utilization rate for the Eastern, Mid Continent, West Texas and Texas Gulf Coast regions, a 41 percent rate for South Louisiana and a 36 percent rate for the Rocky Mountain region.

The figures are based on data supplied by Guiberson Division, Dresser Industries Inc.

ANDY CLINE . . .

Andy Cline, his trials and tribulations, in cartoon form is now available in paperback.

Send check for $5.00 (plus 30¢ sales tax for delivery in California) to author-publisher Harold Sullwold, 560 Concha Loma Dr., Carpinteria, CA 93013 or $5.00 plus 30¢ mailing cost to Pacific Section, AAPG, P.O. Box 927, Camarillo, CA 93010.

PAC SECTION ELECTION RESULTS

President . . . . . Jim Weddle
President Elect . . . . . Ed Karp
Vice President . . . . . Leon Earnest
Secretary . . . . . Terry Budden
Treasurer . . . . . Carolyn Walch

Jim Dorman was elected Vice President, resigning from the position upon his transfer to Houston. In accordance with the By-Laws, the Executive Committee appointed Leon.

HONORARY LIFE MEMBERSHIP AWARDED

Honorary Life Memberships in the Pacific Section AAPG were awarded to Thomas A Baldwin and Arthur S. Huey at the annual convention, May 19, 1983 in Sacramento, California.

Tom Baldwin received an A.B degree from the University of Southern California in 1943. He joined AAPG in 1947. During his career he was employed by Texaco, Inc., Jergins Oil Co., Monterey Oil Co., and Humble Oil and Refining Co. His later years were spent as a consulting geologist until his retirement in Mulaje, Baja California del Sur. Tom served as Pacific Section Secretary in 1956, Vice President in 1958 and President in 1960. He was a candidate for National Vice President in 1964 and was National Program Chairman in 1967. He was also an author of "Future Oil Provinces of the United States" in 1971 and served on the Advisory Council from 1971 to 1974.

Tom published and presented many papers most notably concerning the Salinas Valley and the San Ardo Oil Field. His papers (20 in total) were recently updated and combined into one publication entitled "40 Years—The Education of a Geologist."

Art Huey received his Doctorate from the University of California in 1940 and became a member of AAPG in 1941. He started his career as a geologist with Shell Oil Co. in 1936, later worked for Hancock Oil Co. as Chief Geologist and then with Signal Oil and Gas Co. in various positions of responsibility, mainly in foreign exploration.

He was President of the San Joaquin Valley Geological Society in 1946, Vice President of the Pacific Section in 1950 and candidate for President in 1951 and 1955. He organized the first Pacific Section directory in 1951. In 1951 he was one of the authors of "Future Oil Provinces of North America."

He has published and presented many papers at Pacific Section and National conventions as well as local society meetings including San Joaquin Valley west side Cretaceous, Moreno Grande Formation, Cuyama Oil Fields, Use of the Magnetometer to Locate Faulting at Seal Beach, and papers on South America and the North Sea.

In addition to serving the Pacific Section well for many years, these two honorees, both accomplished speakers, have made outstanding contributions to the understanding of the geology of California's oil and gas producing basins. These contributions have been either orally presented or published for the benefit of Pacific Section members.

John E. Kilkenny

CHEVRON'S ZIEGLER TO BE HONORED BY AAPG

The Executive Committee of the American Association of Petroleum Geologists has approved the recommendations of the Advisory Council for Honors and Awards. These awards will be presented at the annual meeting in Dallas next April. Don Ziegler of Chevron will receive the Distinguished Service Award.

GETTING IT ALL TOGETHER IN SAN DIEGO IN '84

The South Coast Geological Society and the San Diego Association of Geologists are honored to host the 59th Annual Meeting of the Pacific Sections AAPG-SEPM-SEG at the Sheraton Harbor Island Hotel, San Diego, California on April 18-21, 1984. This will be the ten-year reunion of those of you who enjoyed the 49th annual meeting at the Sheraton in 1974. We are planning to out do that meeting manyfold.

Tentative field trips include (1) The depositional environments of the Miocene and Cretaceous of Northern Baja California. This will include an evening in Ensenada. (2) Eocene depositional environments, Scripps to Torrey Pines (beach walk). (3) Others?

The theme for the meeting is, "Getting It All Together." This announcement is a preliminary "Call for Papers" for the meeting. We are soliciting papers from all facets of geology related to obtaining energy from the environment. We will follow continuing interest in the Monterey, Miocene, Cretaceous, Tectonics along with other topics. We will be particularly interested in papers which follow the theme, ie applying a number of disciplines to a problem, or several papers on an area or topic. Preliminary abstracts are due December 1, 1983.

(continued on page 3)

GETTING

(continued from page 2)

Mark your calendar, finish your research, write your paper and plan to get it all together in San Diego in '84.

Send inquiries, abstracts, etc. to John Minch, Saddleback College, Mission Viejo, CA. 92675, (714) 496-3080 (residence) of (714) 831-4820 (office).

A.I.P.G. MEETS IN SEPTEMBER

The California Section of the American Institute of Professional Geologists will hold their 19th Annual Meeting on the campus of Cal-State Bakersfield on September 3, 1983.

According to General Chairman, Michael R. Rector, the one-day meeting will emphasize "A Look Into the Future."

In addition to the morning business meeting and related society activities, an afternoon program of public interest will be presented.

After luncheon, on campus, speakers will discuss: "Diatomite-Oil Mining in Kern County"; "What About Geologists of Tomorrow"; "Air Pollution Control and Your Future" and "Production Potential—The Offshore Story."

A late afternoon fieldtrip through the Core Repository facility will precede a pre-dinner "Wine Tasting."

Dinner, on campus, will feature a keynote speaker from Security Pacific National Bank in a presentation of "A Banker's Economic Forecast of California's Future."

Arrangements are being made by Edwin H. Stinemeyer and reservations will be handled by Warren Cebell (805) 393-6200. Leon Ernest is in charge of Registration and Louis Villanueva is Finance Chairman; Dennis Shea is responsible for Publicity and Printing.

Mark your calendar and plan to attend this outstanding function, non-members and members will pay the same registration fees.

Pre-Registration . . $20.00 Includes Lunch
Registration (at door)
. . . . . $25.00 Includes Lunch
Students . . . . . $ 1.00
Dinner $10.00

(Contact Warren Cebell for more details)

FALL FIELD TRIP 1983

The 1983 Pacific Section SEPM guidebook and associated Annual Fall Field Trip is currently being organized. The meeting will be held during the second weekend of October, 1983. The theme is "Post-Cretaceous Geology of the Simi Valley Area."

PPG DEADLINE for AUGUST/SEPT. ISSUE SEPTEMBER 1

Alaska

New Alaska Geological Society officers for the 1983-84 year are as follows:

President . . . . . Bob Jones
Marathon
President-Elect . . . . . Bruce Clardy
SOHIO
Vice President . . . . . Cass Ariey
Alaska DMEM
Secretary . . . . . Alison Till
U.S.G.S
Board of Directors
. . . . . Mike Churkin, Arco
Jim Dyess, Marathon
Gil Mull, Alaska DGGS

Three sales have been held recently in Anchorage covering two previously-unleased OCS areas and one reoffering of State leases offshore from Prudhoe Bay. The State oil and gas lease sale was combined with a geothermal lease sale and a coal lease sale.

OCS Sale 57, in Norton Basin, was held on March 15 and $325 million were spent on 64 of the 418 tracts offered. Exxon acquired 22 tracts bidding jointly wih Elf Aquitane and 27 tracts bidding alone. The total Exxon expenditure was $264 million with $187 million of that left on the table. The Exxon-Elf combine acquired the high tract, tract 269, for $41.5 million while leaving $38 million on the table. Issuance of leases for this sale is pending court proceedings.

The St. George Basin Sale, OCS Sale 70, was held on April 12 with $427 million being spent on 97 of the 479 tracts offered. The high bid was $36.6 million by Chevron-Pennzoil for tract 428 with $23 million left on the table. Shell bidding alone and with Amoco and Marathon dominated the sale by acquiring 39 tracts. The combine spent $185.5 million on their tracts with Shell playing the dominant role. Leases for this sale are also pending court resolution.

On May 17 the State of Alaska held combined Oil and Gas, Geothermal, and Coal lease sales with interest ranging from modest to none. Oil and Gas lease Sale 39 received bids of $21 million for the 42 tracts offered with an Exxon-SOHIO combine spending $4 million for tract 5, the high tract for the sale. High bidders in the sale were Diamond Shamrock-Placid spending $6.4 million on 3 tracts, Exxon-SOHIO with 5.8 million on 4 tracts, and Arco with $3.9 million on 4 tracts. A lease brokerage firm, Bachner, Wagner, et al, spent $1 million on 14 tracts where there was little or no competition. The coal lease sale received no bids and the geothermal sale received 1 bid of $7,000 for geothermal rights for a prosective tomato-growing venture.

Applications for exploration permits for work in the Arctic National Wildlife Refuge (ANWR) have been received by the U.S. Fish and Wildlife Service from 19 companies. Ten applications were for surface geology permits, 8 were for seismic surveys, and 1 was for a gravity and magnetic survey.

Arco and Doyon, the Fairbanks-based Native regional corporation, have signed an agreement to explore some 386,000 acres in the Yukon-Kandik Basin. Arco has indicated an interest in the Step Mountain area.

Only 12 rigs are running in Alaska at the present time. Two of these are expensive offshore tests being operated by Arco. The Odeco Ocean Odyssey is drilling a 14,000-foot test 40 miles southwest of Yakutat in the Gulf of Alaska for Arco's own account. The Sedco 708 semisubmersible is drilling the Navarin Basin COST Well #1 some 290 miles southwest of Gambell, a village on St. Lawrence Island in the Bering Sea.

San Joaquin

The new officers for 1983-84 are:

Frank Amato . . . . . President
Consultant
Jack West . . . . . President-Elect
Cities Service
Bob Countryman . . Vice President
Gulf
Beth Kendall . . . . . Secretary
Consultant
Geoff Nicholson . . . . . Treasurer
Getty

A big thanks to Jack Kappeler, Sue Chandler Kiser, Frank Cressy, and Bill Long for all their work this past year.

The Fall Barbecue is set for Friday, September 9. All members of SJGS will receive flyers in the mail. All those outside the area who want information, please contact Bob Countryman or Geoff Nicholson at their respective companies.

There has been a fair amount of shuffling within the oil patch recently.

Getty reports that Leon Earnest is the new Division Exploration Geologist, replacing John Dieckman who has retired. Ric Bowersox is the District Geologist for the Taft District. New members of the exploration staff are Louis Villanueva as Regional Study Specialist, geophysicist Frank Krecow transfered in from Houston, and Kristi Stewart, formerly of Tenneco. Tenneco has a new Division Exploration Manager. Al Stevens has replaced Jim Dorman who has transferred to Houston. Matt Williams is a new geologist who has joined the Tenneco staff.

Santa Fe Energy moved its office, including Steve Luiz, Joel Pomerene, and John Landgard, from Taft to 4800 Easton Drive.

Oxy Domestic is now Cities Service and will probably move to the Westchester Plaza building. Cities geologists and geophysicists new to Bakersfield are: Wally Partridge, John Howe, Brian Stachitus and Joe Davidson. More are on the way.

(continued on page 4)

SAN JOAQUIN

(continued from page 3)

Oxy International just saw the retirement of Bob Tietsworth, Dick Vaughn, Bob Critchlow and Stan Eschner. Stan has joined Charlie Horace in consulting.

Bob Nesbit, Whit Stucker, and Lonnie Eaton recently retired from Gulf Oil.

Phil Ripey and Rex Young have joined the crew at Western Continental.

Whew! The list could be longer. Wait until Shell arrives this August and September. If anyone has any news to share, please contact Beth Kendall at 324-7029 or 327-5088.

APPLICATION FEE FOR STATE ENGINEERING GEOLOGY CERTIFICATION

An application fee of $40 for engineering geology certification is required as the result of a new California statelaw enacted in 1982. The application fee is the same for geology, geophysics, and engineering geology licenses.

In order to implement a procedure which would allow applicants to take the geology registration examination one day and the engineering geology certification examination the next day, Section 3025 of the regulations was adopted and it became effective on February 26, 1983. It reads:

> "If an applicant for registration as a specialty geologist is found by the Board to lack the qualifications required for admission to the examination for such registration the Board shall refund to him or her one-half of the amount of his or her application fee."

For those applicants who may wish to file an application for registration as a geologist and for certification as an engineering geologist at the same time, the fees will be $40 for each application.

The policy for refunding application fees for those people who file both applications at the same time is:

1. When the application for registration as a geologist is disapproved, only one-half of the geology and one-half of the engineering geology application fees will be refunded even though the applicant may have the experience to qualify for the engineering geology examination.
2. When the application for registration as a geologist is accepted, but the application for certification as a engineering geologist is disapproved, one-half of the engineering geology application fee will be refunded.
3. When the applicant qualifies for both examinations (geology and engineering geology) and fails the geology registration examination, only one-half of the engineering geology applicant's fee will be refunded.

The other alternative for the applicant is to file for the geology registration examination. When the examinee successfully passes the registration examination, then an application can be submitted for the engineering geology examination.

Engineering geology applications submitted after February 26, 1983 must be accompanied by a $40 application fee.

NORTHWEST PETROLEUM ASSOCIATION EXPANDED

The Northwest Petroleum Association (formerly the Northwest Association of Petroleum Landmen) has expanded its membership to include all those engaged in energy resource exploration, development and management. The Association's goal is to promote communication and education among its members, government, and the Northwest community. The Association will also promote exploration in the Northwest.

Officers for 1983-84 are Garth T. Tallman, (Tallman & Associates) President: Vern C. Newton, (Consulting Geologist) Vice President; Barbara B. Portwood, (Oregon Natural Gas Development Corporation) Secretary; and Ron L. Hordichok, (Northwest Natural Gas Company) Treasurer. Directors are Wesley G. Bruer (Consulting Geologist), Bert B. Mueller (Reichhold Energy Corporation), and S. Kyle Huber (Huber & Associates).

Those persons interested in membership should call (503) 226-4211, extension 4308, or write to Barbara B. Portwood, Secretary, Northwest Petroleum Association, 220 N.W. Second Avenue, Portland, Oregon 97209.

PACIFIC SECTION —
AMERICAN ASSOCIATION
PETROLEUM GEOLOGISTS

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NEWSLETTER of the Pacific Section - American Association Petroleum Geologists is published bimonthly by the Pacific Section.

Material for publication, requests for previous copies and communications about advertising costs should be addressed to MARC W. TRAUT, 5000 STOCKDALE HWY., BAKERSFIELD, CA 93309.

CHANGE OF ADDRESS, subscription, and membership inquiries should be directed to: MEMBERSHIP SECRETARY, PACIFIC SECTION AAPG, P.O. BOX 1072, BAKERSFIELD, CALIFORNIA 93302.

PUBLICATIONS COMMITTEE: Pacific Section American Association of Petroleum Geologists, P.O. Box 927, Camarillo, CA 93010.

JUDY RUSSELL '83–'84 EDITOR

Judy Russell of Oxy is the incoming editor of the *Pacific Petroleum Geologist Newsletter*. Judy, who works in John Carver's Latin American group, brings to the Pac-Section executive committee previous editorial experience. Watch-out, I get the impression she knows the meaning of the word **deadline.** After a year I am still trying to find it in the dictionary. As outgoing editor, I want to thank the members of the executive committee, especially Ted Off, for their support throughout the year. In addition, three people to whom I am most indebted are Magi Nielsen, Connie Lindley and Beth Kendall. They have patiently put up with my whims and antics throughout the past "editorial year".

MARC TRAUT
Editor

NEWSLETTER
Pacific Section A.A.P.G.
P.O. Box 1072
Bakersfield, California 93302

Richard L. Hester
1911 Montecito Dr.
Glendale, CA 91208

DA-AM

PACIFIC PETROLEUM GEOLOGIST NEWSLETTER

of the Pacific Section
American Association of Petroleum Geologists

AUGUST/SEPTEMBER 1983

PRESIDENT'S CORNER . . .

"Only presidents, editors and people with tapeworms have the right to use the editorial 'we'"—Mark Twain.

We have a healthy association. We have over 1400 members and a full treasury.

We are active. Our six affiliated societies have 1800 members with the Los Angeles Basin Geological Society being the largest. The newly formed Pacific Northwest Society and the South Coast Geological Society have been asked to join us.

We have undertaken an ambitious publications program which includes a symposium of papers on the gorge and updating the cross section series. Dick Hester and Don Hallinger are co-chairmen of our new Publications Coordinating Committee which will ensure that we have a balanced program. If you or your societies have papers that you feel should be in print, contact the committee.

Bakersfield is establishing itself as the center of the California oil business. What with the Shell contingent moving in augmented by Cities Service and expansion of existing companies, buildings are literally springing up out of the sagebrush to accommodate them. Concordantly, Bakersfield will be the site of the 1986 Pacific Section Convention.

We on the Executive Committee are looking forward to a productive year of service to the membership.

WELL SAMPLE REPOSITORY

The California Well Sample Repository, located on the campus of Cal State Bakersfield, gratefully acknowledges recent contributions of $2,500 from the Pacific Section, AAPG, and $1,000 from the Pacific Section, SEPM. These were timely grants, and sorely needed, as about one-third of the State of California's "more or less normal" support was eliminated this year as a result of budgetary cuts. About 40% of the Repository's annual budget of approximately $40,000 comes from three state agencies: Division of Oil & Gas, Division of Mines & Geology and the State Lands Commission. (The loss of revenue is from the DMG.) The remainder of the budget monies are derived from annual contributions by many major independent oil companies, individuals and various geological societies user fees and income from an Endowment Fund. The latter is increasing moderately over the years, but still far short of the original $500,000 goal.

The Repository is the only public facility of its type in California. Samples (ditch, sidewall and cores) from over 2,200 wells are presently in permanent storage. A large amount of material, donated by various operators, is at the Repository, and is being systematically processed, catalogued, boxed and shelved. Additional donations—of samples and money—are always gratefully received.

A portion of the recent gift by the Pacific Section AAPG was used for a publication of articles and photos relating to the recent display of cores and outcrop samples of the Monterey Formation. The display, which was open during May and part of June, was attended by over 250 geologists and engineers, many from out of state. This is the third of these Special Publications by the Repository. The other two related to similar displays of the Stevens Sand and the Winters Sand.

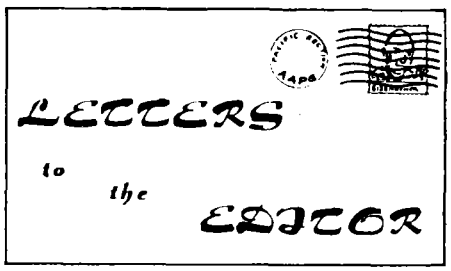
The repository is open 5 days a week, from 8 a.m. to 12 noon, and 1 to 5 p.m. A catalog of the materials permanently stored is available upon request. For further information, contact: Victor Church, Project Director, 3120 18th Street, Bakersfield, CA 93301 (805–325-5924), or Jack Tucker, Curator, California Well Sample Repository, Cal State Bakersfield, 9001 Stockdale Highway, Bakersfield, CA 93309 (805–833-2324).

1983-1984 MEMBERSHIP DIRECTORY IS COMING!

Barring further complications, the 1983-1984 AAPG/SEPM/SEG Pacific Section Membership Directory will be distributed at the first two general membership meetings of the local geologic societies. Directories are provided free by the AAPG Pacific Section to current Pacific Section members. After October 27, 1983, they may be obtained from the AAPG Pacific Section Publication chairman with $1.50 per order for shipping and handling. Non-members may purchase Directories at that time for $10.00 plus $1.50 per order. The address for the Publications Chairman, Hans Schwing, is 3600 S. Harbor Blvd., Oxnard, CA 93030.

Those who obtain Directories, and do not already have a binder from the previous Directory may obtain one free from the Publications Chairman.

Brian and Kay Pitts
Directory Co-Chairmen



SEISMIC HAZARDS AND OFFSHORE MORATORIUM LEGISLATION

The current session of Congress is producing an avalanche of bills which would ban further OCS leasing off New England, parts of Florida and 85% of the California coast until the next century. Legislators from California and other states are hopping on the anti-Watt bandwagon to please their environmentalist constituencies, and they pay no attention to the realities of offshore drilling and its exceptional record of environmental safety during the past decade. Worse yet, they manage to ignore the nation's need for secure future sources of domestic energy.

The irrational basis for this legislation is nowhere more clearly shown than by two recent moratorium bills, H.R. 3640 (Bates-San Diego) and a pending bill by Oregon's Congressman Weaver. These bills would add "studies of the effects of seismic activity on Outer Continental Shelf development" to the research elements of the National Earthquake Hazards Reduction Program. We must look behind this blameless scientific proposal and recognize the motivation. These studies have already been made and published. This is just one more excuse to delay offshore leasing. It is a thoughtless response to environmentalist claims—contrary to all the evidence—that earthquakes could cause major offshore oil-spills or, wilder still, that oil development might cause damaging earthquakes.

(continued on page 2)

LEGISLATION

(continued from page 1)

The fact that earthquakes don't cause signficant oil spills has been amply proved at Santa Barbara in 1925 and 1941, Long Beach in 1933, Kern County in 1952, Cook Inlet in 1964, San Fernando in 1971, and earlier this year at Coalinga. And none of those oil-field installations had the benefit of the state-of-the-art technology now mandatory in all OCS development: fail-safe automatic shut-off valves, actuated by any significant pressure drop such as from a pipe rupture, and installed offshore pipelines, and in offshore wells several hundred feet below the sea floor; independent verification of platform design and construction; and many other more general measures which prevent oil-spills.

Careful studies in California and elsewhere have refuted the suggestion that oil or gas production, including fluid injection for secondary recovery, might cause damaging earthquakes. These studies define the thresholds of subsurface fluid pressure associated with microseismicity, and with felt or damaging earthquakes, under differing tectonic regimes. They have suggested that several damaging earthquakes were caused by the impoundment of water in large reservoirs, but have not indicated any causative link between petroleum production and actual earthquakes.

It is clear that a lengthy moratorium to permit future seismic studies would add nothing to the safety of offshore drilling. What these legislators don't realize is that their bans on further offshore exploration would significantly retard progress towards the reduction of earthquake hazards in California's coastal regions. As petroleum geologists, we have been too modest in proclaiming the contributions our profession has made to the seemingly remote subject of earthquake studies. In California and other parts of the West, the petroleum industry has been a major source of geological and geophysical data used in evaluating earthquake hazards so that precautionary measures can be taken. Examples include:

1) The Diablo Canyon Nuclear Plant near San Luis Obispo, California, has been rebuilt to higher standards of earthquake safety, because offshore oil exploration during the 1960's discovered the Hosgri fault a few miles offshore. The fault was named for Ernest **Hos**kins and John **Grif**fiths, two Shell Oil Company geologists who published the evidence in the American Association of Petroleum Geologists Memoir 15, in 1971.

2) Important studies of Southern California earthquake faults have been made by Dr. Robert S. Yeats of Oregon State University and his students, using subsurface geological data from wells and furnished by the oil companies. Those sudies have been contracted by the U.S. Geological Survey as part of the Earthquake Hazards Reduction Program.

3) Petroleum geologists in Los Angeles eighteen years ago prevented the construction of the Corral Canyon nuclear plant on the active Malibu Coast fault. Highly confidential well data, which later led to the discovery of a major oil field, was shared with the U.S. Geological Survey. These data showed that the fault has moved thousands of feet in the last several million years, and is capable of causing a major earthquake.

4) A Denver petroleum geologist, David Evans, was responsible for a scientific revolution in earthquake theory. Evans defied the conventional wisdom of seismology when he proposed in 1965 that a series of small to moderate earthquakes had been caused by the high-pressure injection of atomic wastes in a deep waste-disposal well at the Rocky Mountain Arsenal. Oil companies have cooperated in subsequent experiments involving microseismicity ("earthquakes" too small to do any damage) that is sometimes associated with oil-field production.

5) Offshore oil development in the Santa Barbara Channel is yielding extremely useful data to help scientists understand the earthquakes which have rocked Santa Barbara in 1812, 1925, 1927, and 1941.

Offshore oil exploration in Santa Monica Bay, off San Diego County, and elsewhere along the California coast will make a major contribution towards earthquake hazard reduction in California's urban areas. The data include geophysical surveys costing millions of dollars, conducted both by the U.S. Geological Survey and by oil companies. Exploratory wells costing $5 million to $20 million each provide additional data and are essential for interpreting the geophysical surveys.

Moratorium legislation such as H.R. 3640 and the proposed Weaver bill would preclude obtaining those data vital to the reduction of California's earthquake hazards. Clearly, this legislation is ill-conceived, inconsistent, and self-defeating. Its authors obviously have been guided by the emotional, uninformed opposition to OCS leasing, which pays little or no attention to scientific fact.

Pacific Section members are urged to send a photocopy of this discussion, plus comments of their own, to their senator, representative, and state legislators. As their consitutents, you can provide them with the facts that will enable them to make an informal decision.

T. L. Wright
Environmental Correspondent

MONTEREY FORMATION FIELD SEMINAR HELD IN OCTOBER

A field course on the Miocene Monterey Formation in the Santa Barbara and Santa Maria areas will be held October 16-21. Field work is structured to develop a comprehensive picture of the Monterey in terms of its deposition, diagenesis, fracturing, and oil generation. Field identification of the many Monterey lithotypes will be emphasized. Field work will be supplemented by lecturing, including discussion of oil generation and also core examinations. The course begins and ends in Goleta. Leaders are: Caroline Isaacs and Margaret Keller, USGS; co-leaders are: William Belfield, ARCO, James Ingle, Stanford, Martin Link, Cities Service, and Neil Petersen, Superior.

Cost of the course is $875 which includes transportation, lunches and 5 nights' lodging.

To register contact: Betty Bean, Pacific Section AAPG, P.O. Box 1072, Bakersfield, CA 93302. Limit of enrollment is 28.

CALENDAR OF EVENTS

September

21—Northern California Geological Society monthly meeting: speaker, Tim Lawton, SOHIO.

22—L.A. Basin Geological Society monthly meeting: speaker, Dr. Gordon Gastill, S.D.S.U.

October

11—San Joaquin monthly meeting: speaker, M. D. McGuire (see abstract).

16-21—Monterey Field Seminar, Goleta, CA.

18—Coast Geological Society monthly meeting.

25-29—A.A.S.P., annual meeting, San Francisco.

27—L.A. Basin Geological Society, monthly meeting: speaker, Dr. Tom Rockwell, S.D.S.U.

EXECUTIVE COMMITTEE MEETS IN BAKERSFIELD

The Pacific Section AAPG Executive Committee held its meeting August 18 at the Petroleum Club of Bakersfield. Fourteen members attended. The usual items of business (budget, etc.) were discussed. Other items reported on or discussed included setting up a cross section committee and publications editor, directories availability, scope of Newsletter, appointing a field-trip coordinator, sites of future conventions (1984 — San Diego, 1985 — Anchorage, 1986 — Bakersfield, and 1987 — possibly Ventura/Santa Barbara) and establishing a continuing education committee. The meeting *was* very productive.

ABSTRACTS OF SPEAKERS

San Joaquin Geological Society

October 11, 1983: *"Diagentically Enhanced Entrapment of Hydrocarbons-Southeastern Lost Hills Fractured Shale Pool, Kern County, California"* by M.D. McGuire, Getty Oil

The Lost Hills fractured shale pool, located along the SW flank of the Lost Hills field in Kern County, produces from the Miocene diatomite-rich Monterey shales. The coincidence of anticlinal structure and an abrupt facies change provides a complex trap for hydrocarbons. Detailed well log correlations, combined with XRD analysis, indicate that hydrocarbons are trapped by a diagenetically enhanced facies change. Diatomaceous mudstones (Opal A) lens out updip into less clay-rich diatomites which have been diagenetically altered to porcelanite (Opal CT). Conversion of Opal A to Opal CT has reduced porosity in the porcelanites whereas clay inhibition of silica diagenesis has preseved primary porosity and permeability in the uppermost portion of the mudstone lenses.

These relationships suggest that hydrocarbons have accumulated due to the following sequence of events: (1) Conversion of Opal-A to Opal-CT occurred early in diatomites before the onset of hydrocarbon generation; (2) Compaction, porosity reduction, and increased capillary pressures resulted; (3) Deeply buried mudstones began generating hydrocarbons while undergoing conversion of Opal-A to Opal-CT; (4) The increased capillary pressures expelled hydrocarbons into the updip portions of the mudstone lenses which retained primary porosity; (5) Updip diffusion was halted by the facies change; (6) With increasing burial, Opal-CT in the mudstones was converted to quartz, further concentrating hydrocarbons in the updip portion of the stratigraphic trap. Since these processes have been controlled by depth of burial, productive zones are encountered at approximately the same subsea depth throughout the pool.

REMEMBER YOUR DUES?

Bob Hindle, our Membership Chairman, reminds Pacific Section AAPG members that 1983-84 dues are now payable. Send your $5.00 now (so you won't miss a single issue of the *Newsletter)*! Mail to: Membership Secretary, Pacific Section AAPG, P.O. Box 1072, Bakersfield, CA 93302.

1984 AAPG ANNUAL MEETING CALL FOR PAPERS

San Antonio will host the annual meeting of the AAPG, SEPM, Div. of Professional Affairs and the Energy Minerals Division May 20-23, 1984. Papers are solicited for a technical program organized around the theme "Energy, Economics, Exploration—in Transition." The program will include research symposia, technical sessions and poster sessions selected to illustrate the special situation and problems, future trends and goals, and ongoing flow of information.

Use the 1984 AAPG abstract form for submittal of all abstracts. Forms are available from: AAPG Convention Dept. P.O. Box 979, Tulsa, OK 74101, (918) 584-2555.

Forms are due no later than November 1, 1983. Mail abstracts to: 1984 AAPG Abstracts, Gulf Energy and Development Corp. P.O. Box 32999, San Antonio, TX 78216.

General Chairman for this convention is Dr. Ed Ray, Trinity University, 715 Stadium Dr., San Antonio, TX 78284, (512) 736-7607.

PUBLICATIONS COMMITTEE REPORT

In progress is a series of symposia publications to cover the individual petroleum producing basins of the Pacific Coast. The first of these to be completed will be the Sacramento Gorge System volume scheduled for completion in February 1984 and for release at the Spring Convention in San Diego. Included will be updated versions of earlier papers combined with new research. This volume will be dedicated as a memorial to the late Lowell Redwine and will contain his most recent, unpublished, paper on the Tertiary Princeton Submarine Valley System.

Note that there is a new address to order publications. Contact: Pacific Section AAPG Publications Committee, 3600 S. Harbor Blvd., Box 198, Oxnard, CA 93030.

Don Hallinger and Dick Hester
Co-chairmen

RENNIE TO SERVE AS CHAIRMAN OF CROSS SECTION COMMITTEE

E. W. Rennie, Jr., is the new chairman of the Pacific Section Cross Section Committee. This committee will review the entire cross section series and form individual subcommittees to redo each area. The first section in this series was published in the late 50's and the last one was in the late 60's. Many stratigraphically important wells have been drilled since then, which points out the need for a new updated series.

Anyone wishing to help with this project please contact Ernie Rennie, 200 New Stine Road #105, Bakersfield, CA 93309 (805) 397-1370. *Volunteers are needed!*

PALYNOLOGISTS MEET IN OCTOBER

The 16th Annual Meeting of the American Association of Stratigraphic Palynologists will be held at the San Francisco Airport Hilton Hotel on October 25-29,1983. A one-day symposium on Palynology of the Western Tertiary Floras organized by Dr. Lanny Fisk is scheduled on October 25. Following the symposium will be three days of technical sessions. On Saturday, October 29 a field trip is planned which will visit the Geysers Geothermal Field and the Napa Valley. Lunch will be at the Souverian Winery.

Cost for the symposium is $15.00 and for the technical sessions it is $45.00 (pre-registered). Walk-in registration will cost $55.00. Contact: Virgil Wiggins, Chevron U.S.A. Inc., Box 8100, Concord, CA 94524.

Alaska

The summer geological field season is drawing to a close in Alaska. Industry, U.S.G.S., State of Alaska, and university crews have been in various parts of the state with the highest concentration being in the Arctic National Wildlife Refuge (ANWR). Investigations here are under the jurisdiction of the U.S. Fish and Wildlife Service and are a part of the appraisal of the coastal plain (1002 area) for reporting back to Congress.

Other areas of Alaska received less concentration as industry is no longer interested in conducting field investigations in many of the areas. One party is going to be in the Kuskokwim River area this month which should about finish the season. Termination dust was seen in the Chugach Mountains above Anchorage last month which usually signals the forthcoming end to the field season.

The Alaska Geological Society held their semi-annual hamburger and beer fest on September 8 at Dresser. This initiated the winter season of luncheon and dinner meetings and special events. All Pacific Section AAPG members are welcome at these events and we would encourage you to arrange your possible trips to Anchorage to coincide with our events. Some lonesome soul may even treat you to a libation. As long as it is not Gil Mull's "glacier cocktail," you might enjoy it.

Coast

The Coast Geological Society has elected the following officers for the 1983-1984 year:

President	Edward Magdaleno Exxon, USA
Vice-President	Mark S. Dockum Conoco Inc.
Secretary	Lori T. Cavette Ogle Petroleum Inc.
Treasurer	Lynn D. Gray Union Oil Co.

The CGS Fall Barbeque and Co-ed softball tournament was held Saturday, September 10th at the Lagomarsino Ranch in Ojai.

Exxon, USA has opened an office with approximately 30 geologists in Thousand Oaks.

Chevron, USA is opening an office in Ventura.

Several transfers have taken place at Union. Geophysicists Pat Prout and Bill Snydsman have transferred to Alaska, Dick Williams has transferred to Indonesia, and Tod Grimmett has transferred from the Southern district to the Northern distrcit. Nancy Brewster has left Union to take a position with the National Science Foundation and Dan Burns is currently working toward a PhD at MIT.

Two geophysicists have transferred to Conoco's Ventura office. They are Jack Horwell from Denver and Karen Christensen from Ponca City, Oklahoma. Bill Stanton has been promoted to Assistant Division Manager.

Los Angeles

The LABGS sponsored the July 15 San Diego Field Trip. The weather was good, as was the beer and chili—very special thanks to Core Lab and Gearhart Industries for helping out in those regards. The day was spent examining the Eocene Torrey Submarine Canyon and associated facies. We did hear a few complaints about the lack of nude sunbathers on the Blacks Beach section. However, we had little control over that matter. Dr. John Warme did an excellent job of leading the trip—thanks again. Special thanks should also be extented to John Dombrowski, Jerry Marrall, Lori Blankenship, Mike Henry and Bonnie Bloeser for their efforts in planning the trip.

On the personnel side, Frank Goodban recently retired from Texaco. Aminoil USA has added two more to their Huntington Beach staff. John Bickley comes in as an Exploration Geologist, and Ted Ehring comes back to California as Vice President of Western Region Operations. Both are transferring from the company's Houston office. At MCO Resources, Scott Hector was recently promoted to District Geologist—West Coast, and Ralph Hawkins moves to District Geologist for the Rocky Mountains.

The speaker for September 22 is Dr. Gordon Gastill and for October 27 is Dr. Tom Rockwell; both are from San Diego State. Dr. Gastill is speaking on "Mesozoic and Paleozoic Stratigraphy of Baja, California," and Dr. Rockwell is speaking on "Geology of North-Central Ventura Basin."

Northern California

New Northern California Geological Society officers for the 1983-84 year are as follows:

President	John Kleist Chevron
President-Elect	Dave Bushnell Natomas
Vice President	Tor Neilsen USGS
Program Director	Paul Weimer SOHIO
Secretary	Cathy Cavendish SOHIO
Treasurer	Debbie Hagan Chevron
Councilors	Ed Frankovic SOHIO
	John O'Rourke John T. O'Rourke Assoc.

Meetings are held on the 3rd Wednesday of the month.

For the meeting of September 21, Tim Lawton, SOHIO, spoke on "Tectonic Evolution of Late Cretaceous Foreland Basin, Central Utah."

Sacramento

No report.

San Joaquin

The barbeque was a big success with almost 150 people in attendance. The SJGS Executive Board thanks all those who came and all those who helped, especially Paul Hacker, K. C. Thompson, Buzz Delano, and the Cal State Geology Club students.

Gulf is increasing its geological staff to handle "frontier" exploration offshore California. Tom Heidrick, George Iusco, Tom Bishop, Spencer Winters and B. Collins have transferred to Bakersfield to fill new positions.

Getty Oil has one of the few new hires in the industry. Jon Parker has joined the Taft District geological staff.

Cities Service has more new arrivals. Jack Grippi, Larry Olwa, Bruce Bridenbecker and Carroll Shearer have joined the local staff. Cities is planning to move to the Westchester Plaza Building in October. Oxy has transferred Cities employees: Mike Cleveland, Dave Grooms, Frank Keith, Jack Gallagher, Don Dailey, Dick Waite, Evelyn Grossbard, Jim Work, Dirk Smith, Bob Shipman and John Thaeler, and Oxy Research employees Susan Teal and Phil La Mori to the local international staff. Oxy transferred in Peter Austin, Brian Barrick, Bob Dockweiller, Eno Weiske, Chuck McCollough, and Tom Perkins from foreign offices.

Jan Vargo is transferring to Tenneco's Bakersfield office to become a division geologist.

Shell has moved into its new office building which has raised the Stockdale skyline. Bill Hottman, Brett Rowland, Dan Bilezikian, Brian Jolly and George Canjar are working in the Kernridge Division. Other new arrivals in town working in Shell's West Coast Division are Guy Spencer, Mike Miller, Dean Christiansen, Tom Atkins, Lorraine Sawyer, Brian Casey, Earl Cumming, Craig Kemp, Tim Allen, Linda Johnson and R. J. Tobin.

Who says opposites attract—congratulations to Laura Merrill and Bill Bazeley, geologists with ARCO, and Pat Bell and Bob Countryman, geologists with Gulf who tied the knot this summer.

The October 11 meeting has M. D. McGuire of Getty Oil speaking on "Diagenetically Enhanced Entrapment of Hydrocarbons-Southeastern Lost Hills Fractured Shale Pool, Kern County, California". SJGS meetings are at the American Legion Hall, 2020 "H" Street, Bakersfield, with "attitude adjustment" starting at 6:00 p.m. and dinner at 7:00 p.m.

CLEARING OUT YOUR BOOKSHELVES?

The Cal State Bakersfield Geology Club would appreciate any donations of textbooks, field guides, professional papers, periodicals, etc. to fill the CSB Geology Department Student Library. Receipts are available upon request. Please contact Bishop Decker at (805) 393-1312, extension 2475, mornings or Nancy Newman at (805) 395-8310 afternoons or write to: Geology Club, Cal State Bakersfield, 9001 Stockdale Highway, Bakersfield, CA 93309.

REMEMBER "THE ROCK"?

Ted Off in his last "President's Corner" (June/July *Newsletter)* told the story of the infamous rock—sent to AAPG headquarters. He mentioned that Sue Kiser headed up a contingent who collected it. Sue reports that Getty Oil provided the truck and additional muscle in the form of Neal Livingston and Gary Richardson. Pac Section AAPG thanks Sue, Neal, Gary and Getty.

NATIONAL AAPG AWARDS AND APPOINTMENTS

Several Pacific Section AAPG members received awards and appointments at the National AAPG meeting April in Dallas. In addition to Don Ziegler receiving the Distinguished Service Award (June/July *Newsletter),* he also was appointed a member along with Victor Church of the Advisory Council. George B. Pichel also received the Distinguished Service Award, and Jim Crouch received the Wallace E. Pratt Award. The new chairman of the AAPG House of Delegates is Bruce O. Tohill.

LOWER ATTENDANCE PROMOTES HIGHER QUALITY AT 1983 OTC

HOUSTON— The 1983 Offshore Technology Conference closed with a lower attendance figure than in previous years, but with the acknowledgement by exhibitors and participants that the quality of the technical conference and exhibition had remained high.

Final attendance was 59,984, compared to 108,161 in 1982. The number of exhibitors for OTC '83 was 2,517. Overall exhibit space was 432,625 net square feet.

This year's conference featured 190 technical papers, which had been selected from more than 790 submitted to the OTC Program Committee.

Honored at the conference were Dr. Peter R. Vail and Cameron Iron Works of Houston, recipients of the 1983 OTC Distinguished Achievement Award for Individuals and Companies, respectively.

Two newly established awards were presented at the 1983 OTC by the Petroleum Division of the American Society of Mechanical Engineers.

Hydril Company, Tubular Products Division, was named the first winner of the Best Petroleum Mechanical Engineering Achievement Award. The winner of the Best Paper Award was J. Kim Vandiver for "Drag Coefficients of Long Flexible Cylinders." Both awards were presented by Dr. Walter von Nimitz of Southwest Research Institute in San Antonio, Texas, and chairman of the ASME Petroleum Division.

The 1984 Offshore Technology Conference, which will consist of a technical program only, will be held May 7 through 9 in Houston's Astrohall complex.

SEPM FIRST NATIONAL MIDYEAR MEETING

The National SEPM has recently announced plans for a series of mid-year annual meetings which will not be held in conjunction with the National AAPG. The first of these meetings will be in San Jose, California over the week-end of August 10-13, 1984. This meeting will depart from past national AAPG-SEPM meetings in being strongly thematically oriented with a series of keynote addresses on important sedimentologic and paleontologic topics. Also tentatively scheduled is a new SEPM short course on "Depositional Models of the Monterey Formation." Plan ahead to attend this meeting—it will be a valuable opportunity!

What is a "geoligust"?

"A geoligust is something that grubs around in the woods looking for little rocks and stones. When he finds they he smiles as he beats them brutally with a little hammer. Sometimes if he is really mad he uses a great big hammer. When he don't find the rock he wants he walks around all day like he is lost. A geoligust has one big eye and one little eye like popeye. He usually looks through a magnifying glas, which incidently always hangs around his nek, with his little eye so he can tell if he has found a for sure rock or stone. He usually walks bent over all the time which is why he always looks so stooped. What you can see of his face looks like old leather, the rest is usually covered with snarled and bushy hair. He cusses terribul. He always has a back ake from carrying around bags of rocks to beat on. He hasn't figured out yet that there are rocks everywhere he goes. He keeps saying he going back to school at the end of the summer, maybe they will teach him about that if he gets there. Every time he picks up a rock he wrights about it in a little book like it was a important thing to remember, and if he ever luzes his little book he looks like nobody fed him for a week. His pants are always tore from rocks and sticks, and his shoes look like they was made of mud. People stare at him, forest kritters chase him, and he always looks wore out. I don't know why anyone wants to be a geoligust."

—Rex Orgill, hellecopter pilot
Timerline Aviation
Pinedale, Wyoming

KEY TO GEOLOGICAL NONSENSE PHRASES

A	B	C
relative	stratigraphic	framework
partial	paleontologic	theory
integrated	tectonic	assemblage
parallel	geomorphic	evaluation
regional	petrologic	program
reciprocal	mineralogic	facies
repetitive	geochemical	time-frame
coeval	geologic	projection
compatible	geophysical	examples
balanced	sedimentary	data

How to use the phrases:

Simply choose one word from each column and include the three-word phrase in the desired paper, report or other needed place.

WANT AD

Sedimentary Petrologist/Sedimentologist—M.S. or Ph.D. Minimum two years experience. Duties will include petrographic analysis of sandstone or carbonate rocks, and paleoenvironmental and reservoir analysis. Excellent working conditions; small, growing company; salary commensurate with experience; equal opportunity. Located in Denver. Please send resume to AGAT Consultants, Inc., 1215 18th St., 260 Cable Building, Denver, CO 80202.

Change of Address:

WAYNE D. ESTILL, INC., moved to 30423 Canwood Street, Suite 107, Agoura Hills, CA 91201.

RICHARD E. WILLIAMS moved to Union Oil Company, Locked Bag Service #3, Killiney Road Post Office, Singapore, Rep. of Singapore 9123.

BRUCE TOHILL from Peppard-Souders & Assoc. to Basin Analysis Consultants, 14062 Denver West Parkway, #225, Golden, CO 80401.

LAURA MERRILL BAZELEY moved to ARCO Exploration, P.O. Box 5540, Denver, CO 80217.

JOHN GRIFFIN moved to 4920 Woodland Ave., Lincoln, NE 68516.

REX E. OLSEN moved to Sun Exploration, P.O. Box 340180, Dallas TX 75234.

ROBERT P. GENCO moved to Exploration Logging USA, Inc., P.O. Box 6279, Ventura, CA 93006.

New Member: VICTOR D. SANTOS SURIEL, Dept. of Geological Sciences, Univ. of Southern California, Los Angeles, CA 90007.

RECOMMENDED READING

CALIFORNIA GEOLOGY, vol.36, no. 7, June 1983

Coalinga earthquake, Fresno County, by Tousson R. Toppazada.

Watersheds mapping in northern California, by Trinda L. Bedressian.

Seismic safety at the local level: Does planning make a difference, by J. Laurence Mintier and Peter Arne Stromberg.

CALIFORNIA DIVISION OF MINES AND GEOLOGY

Special Publication 64: Processed data from the San Juan Bautista 101/156 separation bridge and the San Juan Bautista freefield records from the Coyote Lake earthquake 6 August 1979, by L. D. Parter, A. G. Brady, P. N. Mork and V. Perez 1983. $6.00

Special Report 152: Slope stability and geology of the Baldwin Hills, Los Angeles County, California, by E. Y. Hsu, R. B. Saul, S. S. Tan, J. A. Treiman, and F. H. Seber, Jr. (Project Leader and Editor) 1982. $10.00

Special Report 154: Catalog of strong-motion accelerograph records recovered by Office of Strong Motion Studies during 1982. Supplement A: By Office of Strong Motion Studies, (prepared under the direction of Tom M. Wootton.) $1.00

Open-File Reports (Must be obtained from the office listed in the code number.

OFR 83-15 SF: Geology and geomorphic features related to landsliding, Mendocino 7.5' quadrangle, Mendocino County, California, compiled by Richard T. Kilbourne, 1983.

GEOLOGY, vol. 11, no. 7, July 1983

Sedimentary record of subduction to forearc transition in the rotated Eocene basin of western Oregon, by Paul L. Heller and Paul T. Ryberg.

Model for Archean plate tectonics, by E. G. Nisbet, and C. M. R. Fowler.

Influence of time on metamorphism of sedimentary organic matter in liquid-dominated geothermal systems, western North America, by Charles E. Barker.

Radiocarbon-dated evidence of world-wide early Holocene climate change, by James E. Beget.

Ordovician conodonts from metamorphosed carbonates of the Salton Trough, California, by Richard H. Miller and Mark S. Dockum.

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 94, no. 7, July 1983

Sources and dispersal patterns of clay minerals in surface sediments from the continental-shelf areas off Alaska, by A. S. Naidu and T. C. Mowatt.

Correlation and provenance of upper Mesozoic chert-rich conglomerate of California, by Victor M. Seiders.

U.S. GEOLOGICAL SURVEY

Bulletin 1529-D: The Kern River Formation, southeastern San Joaquin Valley, California, by J. A. Barstow & G. M. Pittman. $4.00

Circular 0867: The U.S. Geological Survey in Alaska! 1982 programs, by K. M. Reed, editor. Free

Professional Paper 1198: Melanges and their bearing on late Mesozoic & Tertiary subduction & interplate translation at the west edge of the North American plate, by K. F. Fox, Jr. $4.75

P 1022-E. Origin, distribution, and rapid removal of hydrothermally formed clay at Mount Baker, Washington, by David Frank. $5.50

P 1213: Studies in Tertiary stratigraphy of the California Coast Ranges, edited by E. E. Brabb. $6.50

P 1247: Revision of LITHOSTROTIONELLA (Coelenterata, Rugosa) from the Carboniferous and Permian, by W. J. Sando. $6.00

SCIENTIFIC AMERICAN, vol. 249, no. 1, July 1983

How continents break up, by Vincent Courtillot and Gregory E. Vink.

SCIENTIFIC AMERICAN, vol. 249, no. 2, September, 1983

The dynamic earth, by Rayond Siever.
The earth's core, by Raymond Jeanloz.
The earth's mantle, by L. P. McKenzie.
The oceanic crust, by Jean Francheteau.

PACIFIC SECTION —
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Material for publication, requests for previous copies and communications about advertising costs should be addressed to JUDY A. RUSSELL, 5000 STOCKDALE HWY., BAKERSFIELD, CA 93309.

CHANGE OF ADDRESS, subscription, and membership inquiries should be directed to: MEMBERSHIP SECRETARY, PACIFIC SECTION AAPG, P.O. BOX 1072, BAKERSFIELD, CALIFORNIA 93302.

PUBLICATIONS COMMITTEE: Pacific Section American Association of Petroleum Geologists, 3600 S. Harbor Blvd., Box 198, Oxnard, CA 93030.

The continental crust, by B. Clark Burchfield.

The ocean, by Wallace S. Broecker.

The atmosphere, by Andrew P. Ingersoll.

The biosphere, by Preston Cloud.

SCIENTIFIC AMERICAN, vol. 248, no. 248, June 1983

Giant volcanic calderas, by Peter Francis.

SCIENCE 83, vol.4, no.6, July/August 1983

The contours below, by Steve Olson.

PPG DEADLINE
for OCT./NOV. ISSUE
OCTOBER 10

NEWSLETTER
Pacific Section A.A.P.G.
P.O. Box 1072
Bakersfield, California 93302

Richard L. Hester
1911 Montecito Dr.
Glendale, CA 91208

DA-AM

PACIFIC PETROLEUM GEOLOGIST NEWSLETTER

of the Pacific Section
American Association of Petroleum Geologists

OCTOBER/NOVEMBER 1983

PRESIDENT'S CORNER . . .

"It could probably be shown by facts and figures that there is no distinctly native American criminal class except Congress"—Mark Twain.

Not only are the lawmakers continally trying to devise ways to separate us from our means, they are devising ways to separate us from our livelihoods.

Some members of Congress would like to: shut down offshore drilling (see PPGN last month) while the possibility of shut off of Arab oil is growing more likely, retain price controls on natural gas and extend the Windfall Profit Tax.

Mark Twain left out the State Legislature as a criminal class; there are three bills pending to impose a severance tax on oil and gas and two bills that would abolish the geology registration act unless new legislation was passed to continue it.

In the interest of enlightened discourse, we in the profession should attempt to educate our lawmakers. This is probably best accomplished through educating their aides. Aides exert much more influence than the legislators would like to admit. They are filters of information. They are generally younger, which perhaps would make them more tractable. Aides are also much more accessible than their bosses and more numerous; there are aides in every district.

Take it upon yourself to visit your legislator's local office. Let the staff know your concerns and your areas of expertise. You will probably be the only petroleum geologist they have ever met. And maybe, if they have a question later, they will call you for an answer.

The entrenched and appointed bureaucracy are also in need of education. Not only are they considered the in-house experts for the state, they many times originate legislation. Make yourself known to them also.

On behalf of the membership, I am writing to selected state appointees and offering our services. Similar letters will be sent to selected legislators at the State and Federal level.

Join me in this effort. Our livelihood depends on it.

James R. Weddle

NEW STRATIGRAPHIC CODE PUBLISHED

A new Code of Stratigraphic Nomenclature was published in the May 1983 AAPG *Bulletin*. The new Code was approved by the North American Commission on Stratigraphic Nomenclature (NACSN) at its annual meeting on October 19, 1982 in New Orleans. The 1983 Code will supercede the 1961 Code (revised in 1970) which has been widely used throughout North America and adopted by many organizations and publications. Official adoptions are invited for the new Code, and notice of adoptions should be sent to the NACSN in care of AAPG, P.O. Box 979, Tulsa, OK 74101, USA.

COALINGA FAULTS FOUND

Geophysicists from the U.S. Geological Survey, Menlo Park, Calif., have identified the fault responsible for the May 2 earthquake of Richter magnitude 6.5 at Coalinga, Calif., and another fault that caused most of the aftershocks. The May 2 event occurred on the Anticline Ridge fault some 6 km northeast of Coalinga. It is a reverse fault that strikes northwest and dips steeply northeast. The Nuñez fault northwest of the town has been the source of most of the earthquakes occurring since June 11. It also is a reverse fault, striking north-south and dipping east. Activity on more than one fault in a sequence of earthquakes is common and is often characteristic of reverse faults, as at Coalinga.

The Survey's Mark Zoback reported that the May 2 earthquake elevated Anticline Ridge about 40 cm and lowered the area around Coalinga about 20 cm. Analysis of those elevation changes and seismic-reflection records from the area pointed to the Anticline Ridge fault as the source of the movement. "The earthquake rupture moved upward along the fault from a depth of 9 to 11 km," Zoback said, "but did not reach the surface, apparently stopping at a depth of 1.5 to 3 km. Because the rupture did not reach the surface, there were none of the usual cracks and fissures that are clear surface expressions of the fault and that would have helped in our earlier attempts to identify the type and location of the fault." But the pattern of surface deformation shows that the May 2 earthquake was caused by movement on the Anticline Ridge fault rather than the Coast Range thrust fault, as had been thought at first.

Zoback noted that the warping of the ground surface caused by the earthquake is similar to the folding of Anticline Ridge and Pleasant Valley in recent geologic time. 'The Coalinga earthquakes,' he said, 'seem to be part of the continuing geologic processes responsible for folding and uplifting strata along the western edge of San Joaquin Valley.'

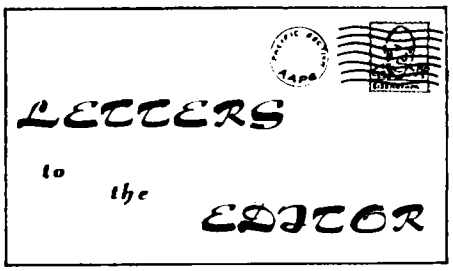
The aftershock of Richter magnitude 5.9 on July 22 and other major aftershocks on June 11, July 9, and July 25 appear to have been associated with the Nuñez fault, about 11 km northwest of Coalinga. William Ellsworth, of the Survey, said that the Nuñez fault ruptured in the Richter 5.2 magnitude aftershock of June 11; 'More than 50 cm of surface displacement occurred along the kilometer and a half of fault rupture. Succeeding aftershocks have increased the total offset by another 8 cm.

'Aftershock activity for an earthquake of this size should continue for several years, but the rate of activity should decline with time. By comparison, several aftershocks are felt each year in the San Fernando region 12 years after the devastating earthquake of Feb. 9, 1971, which had a magnitude of 6.5, like the Coalinga earthquake. Both the large number of aftershocks and relatively small difference in magnitude between the May 2 earthquake (6.5) and that of July 22 (5.9) point to the Nuñez fault as playing a significant part in the strain-release process at Coalinga.'

Ellsworth concluded: 'While the relationship between the Anticline Ridge fault, the Nuñez fault, and the many thousands of aftershocks is not completely clear, studies of ground deformation, seismicity, crustal structure and geology that are now under way will help refine our understanding of the earthquake potential and risk in the western San Joaquin Valley."

Geotimes, "News Notes," October, 1983, p. 18-19.

PPG DEADLINE for DEC./JAN. ISSUE DECEMBER 5



WOGA-API VOICE OPPOSITION TO H.R. 3640

EDITOR'S NOTE: Art Spaulding, VP of the Western Oil and Gas Association (WOGA) sent the following statement delivered by Doug Barman, geophysicist with Texaco. (He is also a Pacific Section AAPG member.) This statement was made on behalf of the WOGA and API to a special hearing of the House Interior Subcommittee on Mining, Forest Management and Bonneville Power Administration on September 12, 1983. Only the introductory remarks were deleted.

"The Western Oil and Gas Association and American Petroleum Institute appreciate the opportunity to appear here today and voice their strong opposition to H.R. 3640.

"It is crucial that we continue to evaluate the OCS and reverse the disastrous 34 percent decline in offshore oil production in the United States between 1970 and 1980.

"In the 29-year history of the federally administered offshore oil and gas leasing program, revenues to the federal government totaled 58.5 billion dollars through 1982. Over 6 billion barrels of oil and 58 trillion cubic feet of gas have been produced. This proposed legislation could significantly reduce the second largest source of federal revenues next to the IRS, increase our balance of trade deficits, and weaken the United States by making our country more dependent on foreign sources of oil.

"Let us look at the record. After reaching a peak of 419 million barrels in 1971, offshore oil production declined every year until 1980, where it fell to 277 million barrels. The trend turned upward in 1981 and continued upward in 1982 when it reached 321 million barrels. Gas production reached 4.86 trillion cubic feet in 1982.

"As of January 1, 1983, 20,955 wells have been drilled in federal waters and 8,619 wells were drilled in state waters throughout the United States. Off the coast of California, 692 wells have been drilled in federal waters, and 3,346 wells have been drilled in state waters.

"With this amount of drilling, let us look at the environmental risk. The industry has a remarkably good safety record. Since 1970, over 4 billion barrels of oil have been produced off U.S. coasts, and only 791 barrels have been lost due to blowouts. This is a spill rate of only 5 barrels for every 1 million barrels produced. Of all the oil pollution to the oceans from marine transportation, natural oil seeps, and OCS operations, only .05 percent has come from offshore oil and gas operations.

"Natural seeps contribute world-wide over 5 times as much oil to the oceans as offshore production. Natural seeps in the Coal Oil Point area off California alone contribute an estimated 22,000 barrels of oil each year. As I recall, there are approximately thirty-one natural seeps in the Santa Barbara Channel.

"Despite the low spill rate from offshore operations, industry continues to spend hundreds of millions of dollars in efforts to improve this record and make drilling even safer in offshore operations.

"It should be emphasized that since the federal leasing program began in 1954 to April, 1983, 84.8 million acres of the OCS have been offered for leasing with only 24.4 million acres actually leased. Of these 24.4 million acres 17.0 million acres were in the Gulf of Mexico, 2.8 million acres were offshore Alaska, and 2.2 million acres in the Atlantic. 2.4 million acres were leased in the Pacific with 1.7 million acres in Southern California, including the Santa Barbara Channel.

"This means in the 29 years from 1954 through March, 1983, the Federal Government offered 8.7% of its Outer Continental Shelf for leasing, with *only* 2.5% actually being leased.

"In May, 1981, the Interior Department conducted a lease offering off Central California. Some people objected claiming the area contained only a 17-day supply of oil. The sale went ahead and the United State received a record $333 million bonus bid on one tract. The company which acquired this lease proceeded with exploration and recently announced a major discovery.

"While we are currently experiencing a surplus of oil in the marketplace, this is only temporary. If we are to satisfy our nation's energy needs in the future, we must begin now to develop leases which could take from 5 to as much as 15 years to reach full production.

"I would now like to comment on the seismicity of the area.

"In Southern California, approximately 20,000 earthquakes take place annually with a magnitude of 0.5 or above on the Richter scale. It should be mentioned that the magnitude of an earthquake is measured at its focal point or the hypocenter, where the first motion of an earthquake originates. The epicenter of an earthquake is on the earth's surface below which the earthquake occurs.

"The question has been raised as to whether or not drilling for oil and gas may be the cause of some of these tremors.

"Thousands of wells have been drilled into faults, both offshore and onshore, and to the best of my knowledge, no authenticated scientific information is known to support the claim that earthquakes have been caused by drilling in California. And we know of no significant evidence that earthquakes have resulted in oil spills or that production wells have been seriously disrupted.

"In 1981, the Santa Barbara earthquake registered approximately 6.0. However, because offshore platforms, drilling rigs and pipelines are designed to accommodate the maximum expected earthquake, industry has experienced no offshore problems.

"Recently a major earthquake occurred in the Coalinga area of California. We do not have any scientfic evidence that this earthquake was caused by or triggered by oil field operations. While the focal depth or hypocenter was positioned at around 8 to 10 kilometers, the drilling objectives and well repressurization are conducted at very shallow depths of 2 kilometers or less.

"Since we know of no evidence that earthquakes have been cause by drilling, or have disrupted drilling or have resulted in spills, we see no reason to delay exploration and drilling to study a non-existent problem relative to seismic activity on the Outer Continental Shelf.

"In summary, I see no significant risk to continuing oil and gas exploration and drilling offshore. As a scientist, I see risks in all phases of life. Our risks offshore are manageable and controllable. We must continue to explore and drill today if we want oil and gas tomorrow."

Doug Barman

AAPL HOSTS WORKSHOP

The American Association of Petroleum Landmen hosted a one-day workshop on "West Coast Exploration Deals," at the Hyatt Regency in Los Angeles on November 4. The instructor, Raymond S. Blunk, CPL, is Staff Landman for Transco in Denver.

The Spring program for AAPL will include the Second Annual West Coast Landman's Institute on March 1-2, at Santa Barbara, Miramar Hotel and a West Coast Symposium, May 10-11 also at the Miramar. The symposium will be led by senior offshore landmen and government representatives.

For information on these programs contact: AAPL Educational Programs, Inc., Suite 1470, Continental Plaza, Fort Worth, TX 76102.

MINERAL RIGHTS AVAILABLE FOR LEASE

The CIPA (California Independent Producers Assoc.) office has received notification from a private party that he has mineral rights near theYowlamie Field and Elk Hills Field in Kern County, and the Coalinga Field in Fresno County are available for sale or lease. The surface rights are held by other parties. Interested members may obtain a copy of an explanatory letter and several maps with details and locations from the CIPA office, 12062 Valley View St., Suite 201 Garden Grove, CA 92645.

Alaska

Calendar:

October 20—Elks Club, 11:30 a.m., speaker: Will Harrison, Glaciologist, Fairbanks.

November 14—"Pub" in UAA sports facility, evening speaker: Michael A. Arthur, AAPG distinguished lecturer; topic: "Notions of Stinking Oceans."

News:

Union has two new geophysicists from Ventura, Pat Prout and Bill Snydesman. "Bon voyage" to Thor Cutler of Marathon who is transferring to Findlay, Ohio. It was good to see Bill Lyle, DGGS, striding purposefully down "C" Street the other day. On the subject of DGGS, we understand they are enjoying their new office space. ARCO has two new area managers, Gene Richards and Dana Grannell, as well as a new province manager, Wendy Patzewitsch. Another province manager, Bob Fahrenbruch is leaving. Our former illustrious editor, Don Blasko, is now Chief of the Intermountain Area, U.S.B.M., Denver, Colorado. Tom Mowatt of the U.S.B.M. is also now in Denver.

Minerals Management:

The Alaska OCS Regional Office of the Minerals Management Service (MMS) has recently gone through a reorganization and has emerged as one of the largest employers of petroleum-related and non-energy scientists and engineers in Alaska.

MMS was created in January 1982 by a Department of Interior Secretarial Order, when the Conservation Division of the U.S. Geological survey was abolished. In May of 1982, another Secretarial Order merged the former BLM/OCS Office into MMS.

MMS has three main functions: evaluation of oil and gas and mineral resources on the outer continental shelf (OCS), environmental assessment and leasing on the OCS, and regulation of all field operations resulting from exploration and development on the OCS.

Key personnel in the Alaska OCS Region are: Alan D. Powers, Regional Manager, Irven F. Palmer, Deputy Regional Manager, Steve Brooks, Public Information Officer, Roger Klepinger, Chief, Office of Program Services, Robert Brock, Regional Supervisor Leasing & Environment, Robert McMullin, Regional Supervisor Resource Evaluation, Rodney Smith, Regional Supervisor Field Operations, Brian Schoof, District Supervisor.

Personnel strength has been increased to 258 positions in order to handle the increased workload generated by the new 5-year OCS Leasing Schedule which includes 14 Alaskan OCS oil and gas sales beginning in March of 1984 and running until June 1987.

In addition, the Alaska MMS office will also conduct a "hard mineral" leasing program starting with an Arctic sand and gravel sale proposed for October 1983.

Coast

Calendar

Tuesday, October 18, 1983—
Dr. Peter Malin, UCSB, "Cal-Crust—University Consortium for Seismic Reflection Research—The Past 18 Months."

Tuesday, November 15, 1983—
Mike McGuire, Getty Oil, "Monterey Formation in the Lost Hills Area."

CGS meetings are held at the American Legion Hall, 83 S. Palm, Ventura, CA. Happy hour at 6:00 p.m., dinner at 7:00 p.m.

Los Angeles

In September, Gordon Gastill spoke on pre-batholithic terranes of northern Baja California and southern California. In October, Dotty Steller discussed the geology of the Andes. In November, Tom Hauge, from Cornell University, will discuss the COCORP Project, including newly acquired Nevada data. The LABGS will be sponsoring the newly formed AAPG Student Chapter at the University of Southern California. Darlene Condra will serve as liaison between the LABGS, USC, and the National AAPG.

The annual LABGS Fire and Ice Dinner Dance will be held December 10th at the Woodland Hills Country Club—open bar at 6:00 p.m., dinner at 7:00 p.m. and dancing until ?? Cost is $25.00 per person. Reservations should be mailed to Jerry Marrall, Union Oil, 461 Boylston, Los Angeles, CA 90017, or phone Debbie Johnston at (213) 977-7654.

Northern California

The October 4 meeting, held at the Oakland Museum, had Dr. John K. Balsley, AAPG Distinguished Lecturer, as the speaker. His talk was "Cretaceous Wave-Dominated Delta, Barrier Island, and Submarine Fan Depositional Systems of the Rocky Mountains: Clastic Models for Hydrocarbon Exploration."

On November 16 at Sheraton Palace Hotel, 639 Market St., at 11:30 a.m., Dr. Michael A. Arthur will speak on "Notions of Stinking Oceans? Models for Organic Carbon Burial during Cretaceous 'Anoxic Events'." Reservations are due by November 11.

The NCGS sponsored a field trip on September 24th which was led by Paul Bertucci and John Kleist, both of Chevron USA. There were 78 participants on the trip which originated in Concord and included stops at the Montecello Dam to view Cretaceous rocks of the Great Valley sequence west of Sacramento, and stops to inspect the Franciscan rocks of Marin County (with spectacular views from the Marin Redlands). Another particularly enjoyable stop was the lunch break at the Buena Vista Winery in Sonoma where people were able to sample wines from the oldest winery in the area.

The guide books used for the trip were "Field Guide to the Mesozoic-Cenozoic Convergent Margin of Northern California," (1981), S. A. Graham, ed., Pacific Section AAPG, v. 50 and "Upper Mesozoic Franciscan Rocks and Great Valley Sequence, Central Coast Ranges, California." (1981), V. Frizzel, Jr., ed., Pacific Section SEPM publication 18.

San Joaquin

The October meeting was attended by 175 people who heard an informative talk by Mike McQuire of Getty. The next meeting is scheduled for November 8th. Loretta Williams, PhD. of Stanford, will present: "Fossil Bacteria in The Monterey Formation and Other Organic-rich Rocks as Possible Source Contributors to Petroleum Formation." For reservations, call Sharon or Meg at (805) 327-5088.

Gulf Oil reports that Dave Salter has transferred to Bakersfield. They have a new hire, Gena Evola, who will be working with the Alaskan group.

Cities Service has transferred Bill LeBay to the local office. Oxy has brought in Dennis Brownlee, George Hicks, Richard Pulley, Herb Drushell, Al Kwentus, and George Guynes.

The SJGS donated $500 to the Scholarship Fund of the Physics and Geological Department at Cal State Bakersfield. Senior Ken Haney is a recipient of part of this scholarship. Another recipient will be announced at a later date.

C/COG FORMED

Eleven firms participating in offshore California exploration/production formed the California Coastal Operators Group (C/COG) to provide information on offshore exploration/development to government, news media, and the public. The C/COG budgeted $1 million/year to conduct research and educational programs on the effect of offshore oil on coastal communities.

Also, Union Oil conducted forums on industry issues October 11-13 in Oxnard, San Luis Obispo and Santa Barbara; Chevron USA, Inc. is running a series of information advertisements in area newspapers about offshore operations.

This public relations push has been sorely needed and long overdue. Those of us in the oil industry should throw our support behind this movement.

SAN DIEGO CONVENTION UPDATE

The 1984 Pacific Section AAPG-SEPM-SEG meetings in San Diego on April 18-20 are promising to be among the best ever. The Technical Program will include nearly 140 papers on many aspects of geology including the offshore-oilfields, gorges of the Sacramento Valley, detachment faulting, geophysics, source rocks, paleomagnetism, Baja California-Sur Mexico-Imperial Basin, diagenesis, continental margin sedimentation and tectonics, as well as open sessions. Contact one of the program chairs if you have a paper to contribute. *Don't miss this one!* The AAPG Program Chairman is Rick Belyea (714-546-2219), c/o John Minch, Saddleback College, Mission Viejo, CA 92692. The SEPM Program Chairman is Ken Pisciotto, SOHIO Petroleum, 100 Pine St., San Francisco, CA 94111 (415-979-3362). The SEG Chairman is Pierre Goupilland, ENPEX, P.O. Box 1620, La Jolla, CA 92038 (619-457-3340). We expect to fill 18,000 sq. ft. with a fine set of exhibits, many directly related to offshore exploration. Contact Exhibit Chairman Frank Monastero, NEKTON, Inc., 11578 Sorrento Valley Road, San Diego, CA 92121 (619-452-9540) for space.

Scheduled field trips include: a 2-day trip (Monday and Tuesday) to the Miocene of San Diego and Northern Baja California with a night in Ensenada; the Eocene from Scripps to Torrey Pines (Wednesday) and the Cretaceous of Point Loma or Sedimentation and Tectonics of the Imperial Valley (Saturday).

The AAPG is planning technical sessions on the following topics:

Offshore Geology Symposium: Contact Peter Fischer, Cal State University Northridge (314-885-3541) or Mesa 2 (213-701-5198).

Gorges of the Sacramento Valley Symposium: This session will complement the publication of the book on gorges. Al Almgren, Union Oil, (805-656-7600 Ext. 190) is coordinating this one.

In addition, we are soliciting papers on topics relative to petroleum geology to be included in open sessions. Titles are desired by December 1, 1983 with final camera-ready abstracts due December 31, 1983. The host hotel is the Sheraton Harbor Island in San Diego.

The SEPM has organized the following symposiums (abstracts due December 1 and papers for the symposium volumes due February 1):

Diagenesis of Reservoir Sandstones, Pacific Margin: Contact Dave Barnes, SOHIO (415-951-8896) or Jim Boles, UCSB (805-961-2311).

Tectonics and Sedimentation along the California Margin: Contact Jim Crouch or Steve Bachman NEKTON, Inc. (619-452-9540).

Paleomagnetism of Tertiary and Mesozoic Sequences in California, Washington, and Oregon—Tectonics and Stratigraphic Resolution: Contact Ken Pisciotto, SOHIO (415-979-3362).

Dolomites of the Monterey Formation and Other Organic-Rich Units: Contact Bob Garrison, UCSC (408-429-2114), Miriam Kastner, Scripps (619-452-2065) or Donald Zenger, Pomona College (714-621-8000).

The Imperial Basin—Tectonics and Sedimentation, Stratigraphy, Petroleum and Geothermal Potential: Contact Cathy Rigsby, SOHIO (415-979-5741).

Geology of Baja California—Sur Mexico: Contact Virgil Frizzel, USGS (415-323-8111 Ext. 2987).

In addition there is a scheduled open session and a poster session (contact: Ken Pisciotto, SOHIO (415-979-3362) and a poster session (contact: Paul Bertucci, Chevron USA, (415-680-3316).

ABOUT ROCKS

Geology is mostly about rocks. There are three kinds of rocks, *Ignominious, Sedentary,* and *Metaphoric*. Ignominious rocks can be taken for granite. Sedentary rocks are mostly chalk, which comes in cliffs or small round sticks, and sandstone, about which the less said the better. Metaphoric rocks are more interesting. One kind is marble, which comes in little round balls, flat slabs, and shapes that look like naked people without arms, which are kept in museums. Another kind is slate, which is for geologists to write on with chalk. The only other kind worth mentioning is steatite, or soapstone, which is found in the shape of ash trays and old-fashioned kitchen sinks.

Stones come in a lot of different periods. These were invented by geologists, who have to have *something* to do, and they are the only ones who can remember which is which. The only one I can remember is the Plasticene Period, which is when man first learned to model and get oil stains on his rompers.

You have to sort of get used to geologists. At first they seem to have nothing but rocks in their heads, and when they talk about beds, they don't mean what you think. But underneath they are almost normal. When they go on field trips with their little hammers, they sit around the evening fire on their terminal moraines and sing just like anybody else, songs like "Lava Come Back to Me," "Shale Be Cambrian 'Round the Mountain," "Fossil I Do When Your Are Far Away?" "You'd Be So Gneiss To Come Home To," and "When the Chalk is on the Greensands I'll Come Huronian Back to You in my New Red Marl." When you meet a geologist, be nice to him; he may be somebody's mammal.

Murray Pease
Explorer's Journal,
September, 1970
from GŒA, Vol. III, No. 17

API PACIFIC COAST CHAPTER MEETS

The 1983 API Pacific Coast Joint Chapter meeting will be held in Bakersfield Civic Auditorium on Nov. 8-10. The San Joaquin Valley Chapter is the host. John R. Grey, president of Standard Oil Co. of California will speak at the welcoming luncheon on Tuesday.

The API and various oil-related companies will sponsor an ice breaker from 6-8:30 p.m. at the Red Lion Inn. Exhibits are scheduled for viewing at the Civic Auditorium Nov. 8-9, 8:30-5:00 and Nov. 10, 8:30-noon. The technical program includes 23 papers.

Glenn Kiser, Getty, is general chairman, assisted by Larry Williams, Eastman Whipstock Co., Arlo Oden, Cities Service, is general program chairman.

In Memory of Gregory W. Webb

GREGORY W. WEBB, 57, died October 4, 1983, at the University of Massachusetts Medical Center in Worcester after a long illness. He was a U.S. Navy veteran of World War II.

After the war, Webb studied geology at Columbia University, receiving a bachelor of science degree in 1948, a master's in 1950 and a PhD in 1954.

Webb worked for the Standard Oil Co. in California from 1952 to 1956, when he accepted a teaching assignment at Amherst College. He continued to teach there until 1959.

In 1958, he also began teaching in the geology department at the University of Massachusetts, where he remained until the time of his death.

Webb was a brilliant, thorough and practical geologist who perhaps contributed most through his teaching and willingness to share his knowledge of regional and basin studies.

Webb, during his work with Standard Oil Co., in Taft, California (1952-1956), recognized the Stevens as a deep-water clastics or turbidites deposited in topogrphic depressions or troughs on the sea floor. His regional studies of the Stevens and implications for hydrocarbon traps were later published in the AAPG *Bulletin* (1965, 1981), and AAPG Pacific Section (1977), plus he was committee chairman for theses by Flanagan (1980) and Gilbert (1980) which dealt with west-side Stevens equivalents. His latest work on the Stevens was published in the AAPG *Bulletin* (v. 65/3, March 1981, p. 438-465), entitled "Stevens and Earlier Miocene Turbidite Sandstones Southern San Joaquin Valley, California".

He is survived by his wife, the former Beverly Lister, and four children.

Change of Address:

SOHIO Petroleum, Alaska Petroleum, and Construction Companies moved to 50 Fremont St., San Francisco, CA 94105.

W. W. WORNARDT from Biostrat-ERT to Micro-Strat., Inc., 4960 S. Clinton St., Englewood, CO 80111.

JOHN E. HUGHES to Exxon Co., USA, P.O. Box 5025, Thousand Oaks, CA 91359.

CARROL A. RICHARDS to 25010 Gilbert St., Hemet, CA 92343.

STANLEY A. BECK to 1607 Calle Miradero, San Dimas, CA 91773.

WILLIAM C. RICHMOND from Minerals Management Serv. to Getty Oil, 3810 Wilshire Blvd., Los Angeles, CA 90010.

DONALD J. KROTSER to U.S.D.O.I.—MMS, 1340 W. Sixth St., Los Angeles, CA 90017.

WILLIAM J. M. BAZELEY to Arco Exploration, P.O. Box 5540, Denver, CO 80217.

WARREN A CEBELL to Kern County Water Agency, P.O. Box 58, Bakersfield, CA 93302.

LESLIE C. HENDON, Arco Exploration, 260 Maple Ct., Suite #208, Ventura, CA 93003.

JOHN P. CLINKENBEARD, 4700 Williamsburg Ln., La Mesa, CA 92041.

OWEN M. PEPPER-KITTREDGE incorrectly listed as OWEN M. PEPPER in *Directory*.

New Members:

Bakersfield, CA:

WINSTON BOODOO, Occidental; JOE D. DAVIDSON, Cities; LAWRENCE J. OLIVIA, Cities; ROY J. PICARD, Shell; TERRY W. THOMPSON, Getty; MARK YARLOT, Gulf; TIMOTHY J. ALLEN, Shell; WILLIAM R. BERRY, II, Occidental; RANDALL J. BISHOP, Baker Packers; VIVIAN K. BUST, Shell; SCOTT DENNETT, Burns Geological; JOE DUNWOODY, III, Seacoast Well Logging; DON HENRY, Seacoast Will Logging; LINDA J. JOHNSON, Shell; BILL LANGLEY, Gearhart, BRUCE LEWIS, Burns Geological; MIKE MILLER, Shell; NANCY A. NEWMAN, Occidental; MAGI NIELSEN, Cities; JAN PARKER, Getty; GUY E. ROBERTSON, Geological Expl. Inc.; L. M. SAWYER, Shell; MELISSA A. WATKINS, Occidental; C. V. WINGERDEN, GARIS C. SMITH, Seismograph Serice, MARTY GAYER, Occidental; TERRY BEASCHLET.

Southern Calif.

DAVID M. ANGSTADT, Texaco; JOHN C. HOFFMAN, Union; GEORGE DeVRIES, Consultant, Maywood, CA; K. D. JUNG, Thums Long Beach Co., Long Beach, CA; KATHRYN MUELLER, Redondo Beach, CA; JAMES B. VOHS, Schlumberger, Santa Fe Springs, CA; ROBERT D. LATTANZI, Exxon, Thousand Oaks, CA; MARTIN D. ESTILL, D.E.&O., Agoura Hills, CA; SHANNON FITZGERALD, Marina del Rey, CA; JEFF PLANK, Oilfield Tech Services, Huntington Beach, CA.

Northern Calif.

PAUL F. BERTUCCI, Chevron USA, Concord, CA; VERN BENNETT, Strata-Graphic Corp., Lodi, CA; MUNTHER JABBUR, Schlumberger, West Sacramento, CA; EDWARD C. (BEN) CAHILL, Energy Corp., Sacramento, CA.

Other States

SARA ANDREWS, Angus Petrotech, Golden, CO.

AAPG PLANS PICTORIAL HISTORY

The AAPG needs photos and stories for its pictorial history of the early days of petroleum geology. If you have anything to offer, get in touch with the editor, Ellen Sue Blakey, AAPG headquarters, Box 879, Tulsa, Okla., 74101.

ABSTRACTS OF SPEAKERS

San Joaquin Geological Society

November 8, 1983: *Fossil Bacteria in the Monterey Formation and Other Organic-Rich Rocks as Possible Source Contributors to Petroleum Formation,* by Loretta Ann Williams, Stanford University

The Miocene Monterey Formation contains thin organic-rich laminations which mimic in appearance benthic mats forming today in coastal upwelling regimes of the eastern Pacific. Modern mats are comprised dominantly of filamentous sulfur-oxidizing bacteria of the family Begiatoaceae. The characteristic spongy texture imparted to the sediments by these bacterial mats are most readily recognized using scanning electron microscopy. The spongy network becomes progresively compressed with increasing compation and diagenesis, but is still distinguishable.

Rock-Eval pyrolysis of modern mats reveal high S1 peaks and unusually high oxygen indices. Both parameters decrease gradually with diagenesis, as evidenced by Monterey Formation samples of different thermal grades. In addition, anomalously light nitrogen isotopic signatures of modern mats may be retained. ΔN values of Monterey Formation samples, although heavier, are still within the light range for organic matter from marine low-oxygen environments.

On the basis of organic richness and high hydrogen indices of mat-laminated samples, and coincidence of bacterial fossils and oil in some fields in the San Joaquin Valley of California, filamentous bacterial mats are suggested to be significant contributors to petroleum formation. Additional evidence for this conclusion is provided from similar investigations of subtidal cyanobacterial mats in carbonate rocks such as the Green River Formation oil shales.

Northern California Geological Society

November 16, 1983: *Notions of Stinking Oceans? Models for Organic Carbon Burial During Cretaceous "Anoxic Events,"* by Michael A. Arthur, Univ. of Rhode Island.

In modern marine environments, preservation of organic carbon in sediments is influenced by several variables: (1) primary production; (2) water depth and bottom-water oxygen content; and (3) bulk sedimentation rate—higher sedimentation rates enhance organic carbon accumulation rates. High organic carbon values and accumulation rates are found today under highly productive upwelling zones where intense oxygen-minimum zones (O_2<0.5 mL/L) impinge on upper continental slopes or outer shelves. However, high organic carbon concentrations are also found in the abyssal sediments of the anoxic Black Sea, where surface productivity is relatively low. Therefore, when examining occurrences of ancient marine "black shales," we must be able to distinguish the relative effects of the variables discussed above. The globally widespread "black shales," of some periods in the geologic past cannot be simply explained by patterns of upwelling alone; other, perhaps unusual, conditions must have contributed to their origin.

The Cretaceous is one period during which, at times, marine "black shales" were much more globally widespread than today. These intervals of time have perhaps unfortunately been termed "oceanic anoxic events," but the basic concept of an "anoxic event" involves a time envelope on the orderof 10^6 years, during which organic carbon burial appears to have been more widespread in a variety of marine environments than at other times. However, regional or interbasinal differences in the timing, amounts, and types of organic carbon preserved are apparent during a single "anoxic event" and "anoxic events" of different ages differ in overall character. Therefore, no single model can explain the origin of these widespread episodes of organic carbon deposition. There are common associations between "anoxic events;" they tend to occur during global marine transgressions, and they are marked by warmer, more equable global climates.

Three main "anoxic events" occurred during the Cretaceous. These were of late Barremian-mid-Albian age (peak at Aptian-Albian boundary), mid-Cenomanian-early Turonian age (peak at Cenomanian-Turonian boundary), and late Coniacian-early Campanian age. During portions of the first two "anoxic events," organic carbon burial in pelagic and hemipelagic environments may have exceeded 10 times that of today, as indicated by calculations of accumulation rates and model calculations from secular $\delta^{13}C$ curves. The amount and types of organic carbon preserved in strata of different basins suggest that expansion and intensification of deep-water oxygen deficits were responsible for or-

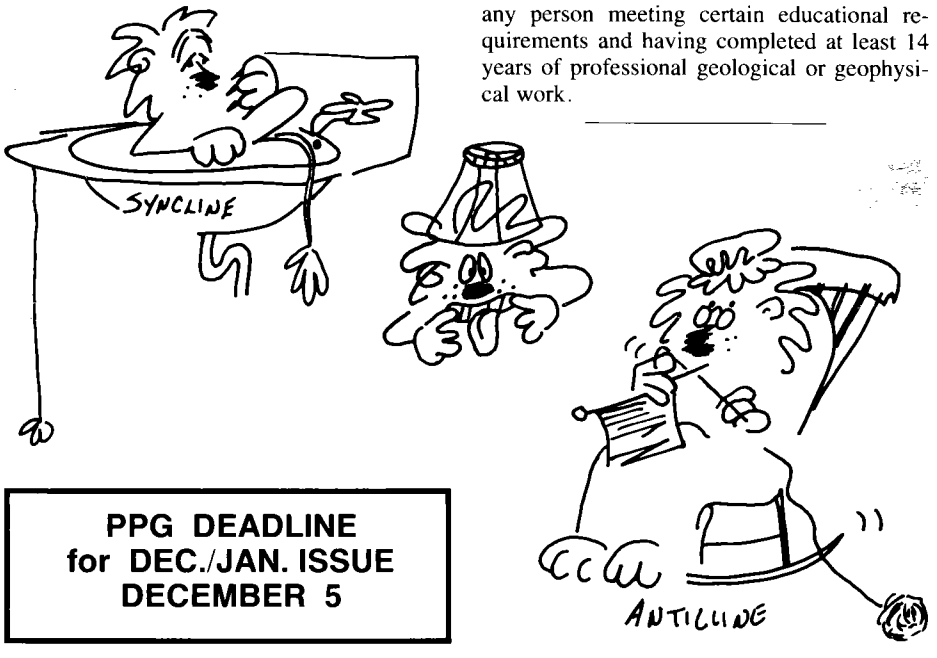
(continued on page 6)

ABSTRACTS

(continued from page 5)

ganic carbon preservation in many settings. This may have been partly due to the decreased solubility of oxygen in warm, saline deep-water masses. The feedback between sea level and development of surface and deep-water masses was an important factor. During the Aptian-Albian episode, overall surface-water productivity appears to have been low and burial of terrestrial organic carbon in marine environments was significant. Enhanced marine surface productivity may only have been important during the relatively brief Cenomanian-Turonian episode.

It is important that we understand the nature of these "anoxic events" so that predictive models of organic contents and types can be constructed and utilized in frontier areas of hydrocarbon exploration, among other reasons.



PPG DEADLINE
for DEC./JAN. ISSUE
DECEMBER 5

ACREAGE IN OFFSHORE CALIFORNIA SALE CUT

The Interior Department has reached agreement with the State of California to reduce the number of tracts offered in OCS Sale No. 73 to 154 from the 360 initially proposed. The November 30 sale will now have 900,000 acres instead of the 2-million acres announced in the notice of sale. The agreement sets stipulations to protect marine life and sea birds and requires that the initial oil processing be done at onshore facilities.

CLAUSE REPEALED

Please be advised that effective January 1, 1984, the California State Board of Registration for Geologists and Geophysicists has won repeal of the "Great-Grandfather Clause," specifically Sections 7847.5 and 7847.6 of the Business and Professions Code. Those sections had authorized the issuance of a certificate of registration as a geologist or geophysicist, without written examination, to any person meeting certain educational requirements and having completed at least 14 years of professional geological or geophysical work.

NEWSLETTER of the Pacific Section – American Association Petroleum Geologists is published bimonthly by the Pacific Section.

Material for publication, requests for previous copies and communications about advertising costs should be addressed to JUDY A. RUSSELL, 5000 STOCKDALE HWY., BAKERSFIELD, CA 93309.

CHANGE OF ADDRESS, subscription, and membership inquiries should be directed to: MEMBERSHIP SECRETARY, PACIFIC SECTION AAPG, P.O. BOX 1072, BAKERSFIELD, CALIFORNIA 93302.

PUBLICATIONS COMMITTEE: Pacific Section American Association of Petroleum Geologists, 3600 S. Harbor Blvd., Box 198, Oxnard, CA 93030.

CALIFORNIA NATURAL GAS POLICY ACT IS LAW

On Thursday, September 29, Governor Deukemejian signed AB 2117, the California Natural Gas Policy Act. The measure will require the Public Utilities Commission (PUC) to consider the economic cost to the state and consumers when it allows utilities to purchase higher cost gas produced outside the state while shutting in California producers.

NEWSLETTER
Pacific Section A.A.P.G.
P.O. Box 1072
Bakersfield, California 93302

Richard L. Hester
1911 Montecito Dr.
Glendale, CA 91208

DA-AM

PACIFIC PETROLEUM GEOLOGIST NEWSLETTER

of the Pacific Section
American Association of Petroleum Geologists

DECEMBER 1983/JANUARY 1984

PRESIDENT'S CORNER . . .

"Training is everything. The peach was once a bitter almond; cauliflower is nothing but a cabbage with a college education" — Mark Twain.

We all have our college educations. We have had considerable training by our employers. But all training is not equal, which is one reason that in order to practice our profession we are required to be registered.

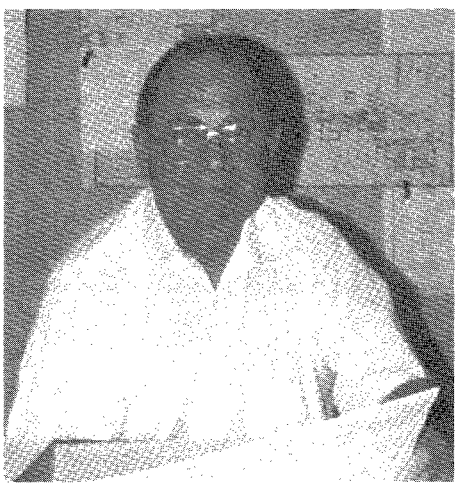
The process of registration was easy for most of us over 50, we were grandfathered in. Those who come later must be tested. The test, as most of you know, is quite comprehensive. About half who take it fail. Passing the exam does not guarantee that your are a competent geologist or that if you fail that you are incompetent. But it is a measure; a measure that protects the public from charlatans and ensures at least a modicum of knowledge in those that practice in areas of public safety.

Training and exam passing are only part of being a geologist. Professionalism is necessary. This embodies not only specialized knowledge but ethics, honesty, and integrity.

As we enter into the new year, let us all resolve to devote something to serving the profession.

James R. Weddle
President

In Memory of Paul S. Day 1926-1983



On September 23, 1983, the local geologic community was stunned and saddened to learn of the passing of Paul Day. Paul succumbed to complications during recovery from a routine operation. He is survived by his wife Sue and children Steve, Sandy, and Patty.

Paul was born September 27, 1926 in Provo, Utah and was a graduate of U.C. Berkeley in 1947. Employed by Gulf Oil for the last 35 years, Paul worked extensively throughout Alaska, the Pacific Northwest, and just about all of the California Basins. Early in his career he became known for his field mapping skills; in fact many of his maps in the Pacific Northwest are still used by Gulf geologists. More recently he was extensively involved in economic evaluations and analysis for Gulf's offshore efforts, farmouts, and prospect drilling. In between all these efforts, Paul found time to be a patient manager, effective teacher, and a good friend.

Although his technical skills will prove to be irreplaceable, Paul will be best remembered for his personal attributes. Superlatives flow easily when describing them; the openness, patience, warmth, and gentle humor that made him a pleasure to work with. His even-tempered approach to life and strong sense of proportion that allowed him to overlook the immediate crises and to focus on the longer-range goals. His dedication to his job, company, and profession served as an example to those of us in the early years of our own careers.

Everyone who worked with Paul has favorite memories of time spent with him. One of mine takes place during his last birthday gathering when he served as a gracious host for a number of us "Gulfies." As we gathered under his grape trellises during a warm rain, conversations ranged across various facets of geology, politics, wines, and open admiration for the cement work that was one of his hobbies. No one wanted to leave despite the rain.

Perhaps the best measure of a person is how they're remembered and the impact they've had on those around them. My memories are fond and my life is better for having known Paul.

Paul's family requests that all gifts and donations go to his Alma Mater, U.C. Berkeley. All gifts collected will be contributed to the Heart Research Center at the UCB Medical Center. Interested friends should contact Lisa Thacker or Rosalie Mellon care of Gulf Oil Exploration and Production, P.O. Box 1392, Bakersfield, CA 93302.

Bob Countryman

ABSTRACT OF SPEAKERS

Northern California Geological Society

December 6, 1983; *"Mode of Extension of Continental Crust Western North America Cordillera,"* by Warren Hamilton, USGS, Denver.

Cordilleran continental crust, from central British Columbia through Sonora, has been doubled in width by middle Eocene through Quaternary extension. Extensional structures seen at comparable levels of erosion are similar throughout the Cordillera, and elsewhere in the world, so a model of general application can be deduced. "Core complexes" form beneath normal-fault blocks of basin-range type.

The lower third of the crust (seen in the Cordillera primarily by seismic reflection profiling; typically granulite-facies rocks where exposed elsewhere) is extended by laminar ductile flow. Pre-existing rock masses are transposed into subhorizontal sheets.

The middle crust (seen in Cordilleran outcrop in Eocene through Pliocene "core complexes," as well as by reflection profiling) is extended by discontinuous ductile flow. Rocks are transposed, and recrystallized commonly in greenschist facies, in anastomosing ductile shear zones along which lenses of all sizes up to tens of kilometers long slide apart. The composite top of the lenses is a "detachment fault;" petrologic barometers indicate a pre-extension depth of 10 to 12 km to typify this level. Heating by magmatism preceded or accompanied much extension, but "core complex domes" are the tops of structural lenses of middle-crust rocks, and are neither anticlines nor products of thermal highs.

The upper third of the crust adjust to extension of its substrate by gravitational collapse of rotating brittle fault blocks. No correlation exists between direction of rotation and the local slopes of underlying lenses; blocks within panels up to 100 km across rotate in single directions. Sediments and slide breccias deposited against growing normal faults tend to maintain truncation angles near 50° as the strata are "reverse-drag" rotated on

(continued on page 2)

ABSTRACTS

(continued from page 1)

listric faults to abut gently undulating detachment faults.

Depth and temperature of all components lessen as extension continues, so effects of successively colder and more brittle styles of deformation are superimposed as rocks rise through pressure-temperature boundaries between ductility regimes.

January 18, 1984: "*Structural Development and Petroleum Potential of the Beaufort Sea, North Alaska,*" by Arthur Grantz.

Seismic-reflection profiles in the Alaskan Beaufort Sea and onshore geology indicate that the continental margin north of Alaska is of Atlantic type. Rifting appears to have begun in earliest Jurassic time, about 190 to 185 m.y. ago, when crustal extension created a rift-valley system beneath the Beaufort shelf and part of the adjacent coastal plain. Subsequent crustal warming caused rift-margin uplift and erosion, created a breakup unconformity, and initiated breakup and seafloor spreading in the Canada Basin about 125 m.y. ago. Subsequent cooling caused rapid subsidence of the margin, which was followed by vigorous progradation of the present continental terrace of the Beaufort Sea beginning in Albian time.

Alaska

The very expensive Mukluk #1 has been spudded in the Harrison Bay area of the Beaufort Sea by SOHIO for itself and ten other partners. This should determine whether hydrocarbons are present in this giant structure in commercial quantities. A successful test would be followed by a second test from this artificial island and an additional test by Texaco for themselves and their partners.

With reference to these exploratory activities, the following article appeared in the November, 1983 Alaska Geological Society NEWSLETTER:

HELLO MUKLUK — GOOD-BYE DIAPIR

Mukluk #1, the most expensive exploratory well ever to be drilled by the oil industry, was spudded on November 1. This industry test, which is operated by Sohio for themselves and ten other partners, should determine whether this giant structure in Harrison Bay contains commercial quantities of hydrocarbons. We wish them success in this costly and exciting venture.

Should a new field be discovered by this test, we would like to make an urgent request to the parties involved for a field name other than the "Diapir Field." While either Mukluk Field or Harrison Bay Field, among others, would be appropriate, it is high time that the unfortunate, inappropriate, ill-conceived, and erroneous term "Diapir Field" be purged from all press accounts. This would include local and national press as well as trade journals.

Shale diapirs, which are domes or anticlinal folds formed by rupturing and upwelling of the plastic core material, are present in the Canadian Beaufort Sea and the northeastern portion of the Alaskan Beaufort Sea. In the Mukluk structure, all of the sediments including basement are in the shape of a dome.

Secretary Watt has resigned and will be leaving the Department of Interior shortly. We suggest that he retrieve the term "Diapir Field" and retire it also.

GSI has been selected by the U.S. Fish and Wildlife Service from a list of nine applicants as the operator to conduct geophysical investigations on the coastal plain (1002 area) of the Arctic National Wildlife Refuge (ANWR). GSI's exploration plan had requested vibroseis surveys on a 2 mile x 2 mile grid with data collection to begin this winter. The USF & WS reduced this grid to a 6 x 12 grid and required a conventional dynamite shot-hole type survey. It is anticipated that approximately 20 companies will participate in this exploratory activity.

Coast

Calendar

Tuesday, December 20, 1983 CGS Evening Meeting: Dr. Tom Rockwell, SDSU, — "Quaternary Structural Evolution of the Ventura Basin."

Tuesday, January 17, 1984 CGS Evening Meeting: Dr. Perry Ehlig, CSULA, — "San Gabriel Fault and Associated Features"

Tuesday, February 21, 1984 CGS Evening Meeting: Dr. Miram Kastner, Scripps, — "Origin of Dolomite and its Spatial and Chronological Distribution — A New Insight."

CGS Meetings are held at the American Legion Hall, 83 S. Palm, Ventura, CA. Happy Hour at 6:00 P.M., Dinner at 7:00 P.M.

Los Angeles

On October 27, Dotty Steller presented a summary on the Geology of the Andes based on an expedition she led two years ago. Dotty is also planning a China trip for next summer thru Cypress College. On November 17, Tom Hague of Cornell University, discussed the preliminary findings of the newly acquired western Nevada COCORP deep seismic data. Tom also summarized the current status and accomplishments of the COCORP project. Many thanks to both speakers and especially to Texaco for covering Tom Hague's travel expenses.

On January 26, Dr. James Zumberge, President of the University of California, will discuss the Geology of Antarctica. Dr. Zumberge will still be thawing out at our meeting after just returning from Antarctica on January 24. Our February meeting is being moved up one week to the the 16th for an AAPG distinguished lecturer. Mr. Richard E. Wyman, with Canadian Hunter Exploration, will discuss the Future of Natural Gas.

Many thanks are extended to the outgoing slate of officers of the LABGS as a new crew comes in for the coming year.

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Northern California

Meeting announcements: Tuesday, December 6 at Sheraton Palace Hotel, Luncheon, 12:00 (noon), Warren Hamilton, "Mode of Extension of Continental Crust, Western North America Cordillera."

Wednesday, January 18 at Sir Francis Drake Hotel in San Francisco, Luncheon, 12:00 (noon), Arthur Grantz, "Structural Development and Petroleum Potential of the Beaufort Sea, North Alaska."

(See abstracts this *Newsletter*)

San Joaquin

More than 200 people attended the spouse-night meeting on December 13 and heard Bill Rintoul's talk: "Down Memory Lane." The speaker for January 10 is as yet undecided. The February 14 meeting tentatively has AAPG distinguished lecturer Richard Wyman speaking on: "The Future of Natural Gas."

Locally, Jack Kappeler and Walter Hart are retiring from Getty at the end of December. Einar Pedersen is transfering from Houston to fill Jack's position.

Jim Blom retired from Occidental. John Carver is now Vice-president of exploration in the Eastern Hemisphere, and Jim Taylor is Vice-president of exploration in Latin America.

Cities Service added Dave Fowler and Bob Williams to their local geological staff.

PPG DEADLINE
for FEB./MAR. ISSUE
FEBRUARY 1

USGS—Professional Paper 1213

Studies in Tertiary Stratigraphy of the California Coast Ranges, Edited by Earl E. Brabb

INTRODUCTION

by Earl E. Brabb:

The correlation of rocks of Paleogene age in California with those in Europe has had a long and complex history that can only be highlighted here. Kleinpell (1938, p. 168-181), in his classic work defining Miocene benthic[1] foraminiferal stages of California, attempted to correlate faunas of California with those of western Europe and elsewhere. He pointed out that rocks usually considered lower Miocene in California are probably correlative with those considered Oligocene in Europe. Schenck and Childs (1942) correlated the Vaqueros Sandstone of California with the middle and upper Oligocene of Europe and elsewhere, based on the stratigraphic occurrence of *Lepidocyclina*. Their correlation was discussed extensively by a number of paleontologists in the same report. Some favored a Miocene age based on similarities of the Vaqueros molluscan fauna with the Burdigalian faunas of Europe, and on the apparent Miocene age of vertebrates from beds below the Vaqueros. Others argued that some of the mollusks in the Vaqueros were similar to those considered Oligocene in Trinidad, and that the percentage of living mollusks in the Vaqueros Sandstone (1-2 percent) was most similar to faunas of Oligocene age. These differences in opinion proved to be irreconcilable in the attempt by the U.S. Committee on stratigraphy to provide a standard correlation chart for marine Cenozoic formations of western North America (Weaver and others, 1944). Two standards had to be provided, one based largely on mullusks, echinoids, and corals, and the other on benthic foraminifers. This dual classification has persisted almost to the present.

The validity of some California Tertiary stages based largely on benthic foraminifers has been questioned in recent years. Pierce (1972) and Barron (1976) believed that the Delmontian Stage of Kleinpell (1938), for example, is coeval with the lower and middle part of his Mohnian Stage. Steineck and Gibson (1971), Gibson and Steineck (1972), Schmidt (1975), Bandy (972) and Bukry, Brabb, and Vedder (1977) stated their belief that probably all of the California Paleocene and Eocene stages of Mallory (1959) are time-transgressive when compared to nannoplankton and planktonic foraminifer zonations. Hornaday and Philips (1972), on the other hand, challenged some of these opinions.

In order to further the study of the relation between California Paleogene stages based on benthic foraminifers with zonations based on planktic foraminifers and nannoplankton, nine paleontologists were invited to examine the faunas from several Coast Range sections measured by Brabb, Clark, and Throckmorton (1977). The results of their investigation were presented orally at a meeting of the International Subcommission on Paleogene Stratigraphy in Menlo Park, California on October 28, 1977. The talks were preceded by three days of field trips to the measured sections and were followed by a microscope workshop to debate the identification and age of the various faunas. The paleontologists were then encouraged to submit papers for this volume, and all have graciously complied.

Acknowledgments. — Professor Ch. Pomerol of the University of Paris, currently chairman of the International Subcommission on Paleogene Stratigraphy, provided the leadership and inspiration for a series of biostratigraphic meetings that began in Paris in 1968, continued in Germany in 1969 and in the Caribbean in 1973, and culminated in the 1977 California meeting.

REGIONAL SETTING

The Paleogene faunas described in this report are from the California Coast Ranges, (fig. 1). Most are from areas west of the San Andreas fault in the Santa Cruz Mountains of west-central California; a few are from areas east of the San Andreas fault from Mount Diablo to Devils Den. The Paleogene rocks west of the San Andreas fault rest either directly on crystalline metasedimentary and granitic rocks of the Salinian block or on sedimentary strata of Cretaceous age. East of the San Andreas fault, the Paleogene rocks commonly rest on Jurassic and Cretaceous strata of the Great Valley sequence, which in turn are faulted against a complex tectonic assemblage of Mesozoic sedimentary, metamorphic, and igneous rocks that are commonly referred to by petroleum geologists as Franciscan "basement." The relation of Franciscan "basement" rocks to the granitic basement rocks along which they are juxtaposed by the San Andreas fault has long been one of the most intriguing and complex problems of California geology. A series of lectures edited by Nilsen (1977) gives a synopsis of the problems and some working hypotheses for the tectonic evolution of California during Mesozoic and Cenozoic time. The most significant concept for the purpose of this report is that the San Andreas and other northwest-trending strike-slip faults have displaced the Paleogene sequences hundreds of kilometers with respect to each other. The Santa Cruz Mountains, for

(continued on page 4)

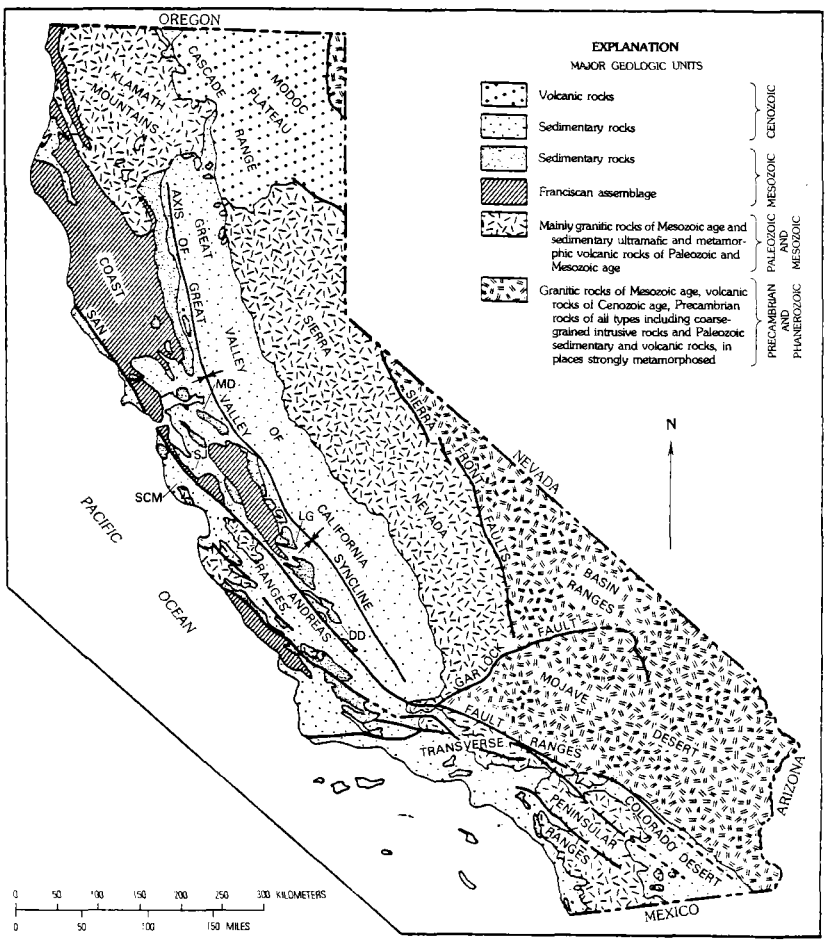

FIGURE 1—Natural provinces of California, major geologic units and general location of areas sampled (modified from Hinds, 1952), MD, Mount Diablo; SJ, San Jose, SCM, Santa Cruz Mountains; LG, Lodo Gulch; DD, Devils Den.

[1]In this report, *benthic* refers to the seafloor habitat, and *benthonic* refers to the foraminiferal stages based on benthic organisms. Likewise, *planktic* organisms, that is, free floaters and weak swimmers, are distinguished from the *planktonic* zones based on plankton.

Tertiary Stratigraphy

(continued from page 3)

example, were thought by Nilsen and Clark (1975) to have been opposite the Devils Den area, 250 km to the south, during the early Tertiary.

The paleogeography of central California during the Paleogene is not well established. Most published analyses are not based on a firm biostratigraphic framework, so that rocks of middle Eocene age in one area may be compared with rocks of late Eocene age in another. There is also a problem with displacement of the Paleogene sequences along secondary lateral faults. Although extensive lateral displacement along the San Andreas has been considered true since the classic report by Hill and Dibblee (1953), many new lateral faults have been discovered that make paleogeographic reconstructions more complex. Nevertheless, much progress has been made, especially by a few geologists who have attempted to apply modern sedimentological concepts to understanding Paleogene depositional patterns. Nilsen (1977) and Dibblee (1977) provided extensive bibliographies listing many of these studies, and they also provided the synthesis that is summarized below.

A generalized paleogeographic map of California during the early Tertiary, based on about 300 km of late Cenozoic right-lateral slip (fig. 2), shows that during the Paleogene the region between Devils Den and Mount Diablo was characterized by uplands in the Sierra Nevada, a linear basin in the area of the Great Valley in which a westward-thickening sequence of marine strata was deposited, islands on the continental borderland that contributed sediments in local areas, and a trench and subduction zone in what is now the Pacific Ocean. The La Honda basin, where all October 1977 field trips took place, was part of a continantal borderland, mostly at lower bathyal and abyssal depths with open connections to the ocean.

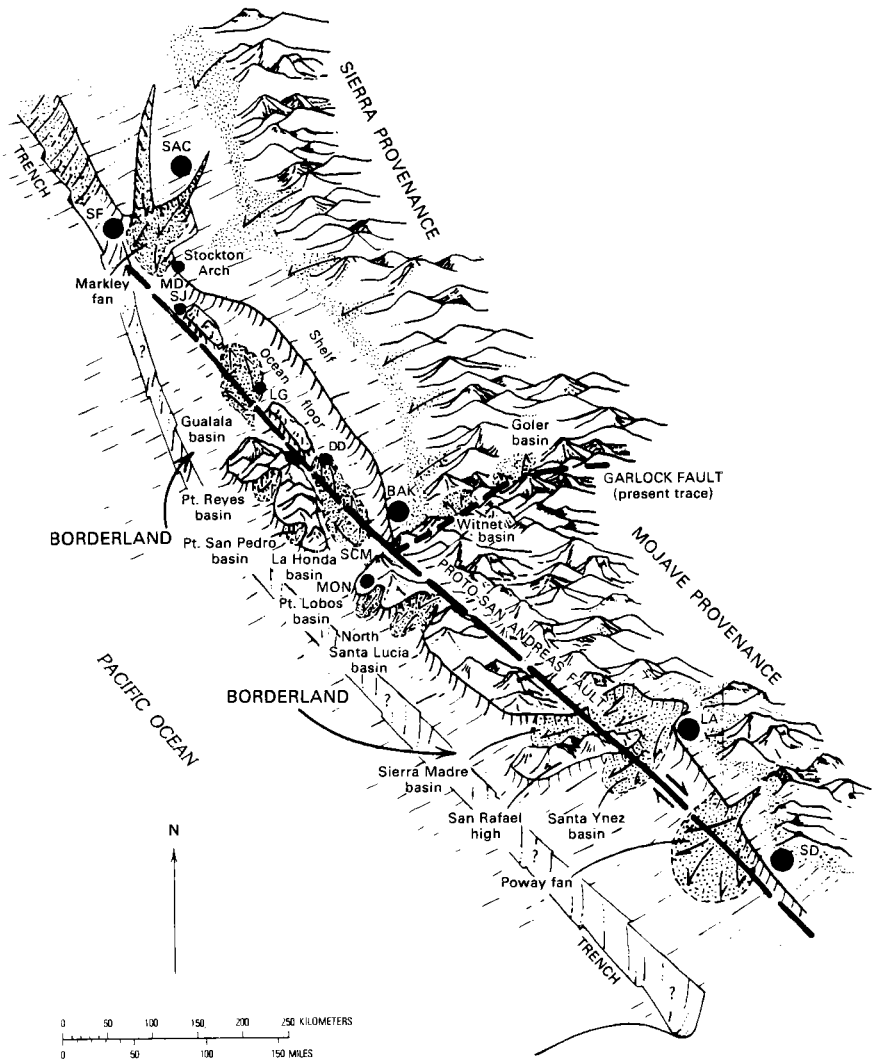

FIGURE 2—Generalized restoration paleogeographic map of California during early Tertiary, based on restoration of 305 km of late Cenozoic right-lateral slip along the modern San Andreas fault (from Nilsen and Clark, 1975). The present location of the Garlock fault and the following geographic features are included for orientation purposes: SAC, Sacramento;SF,San Francisco; BAK, Bakersfield; MON, Monterey; LA, Los Angeles; SD, San Diego; DD, Devils Den; LG, Lodo Gulch; MD, Mount Diablo; SJ, San Jose; SCM Santa Cruz Mountains.

Want Ad

Sedimentary Petrologist, Sedimentologist, or Geochemist — Primary responsibilities will include teaching courses in sedimentary petrology, sedimentology, or geochemistry and computer applications in geology. Research interests should be in an area of low-temperature geochemistry such as the petrology and diagenesis of sediments, fluid-rock interactions, geochemical exploration or the origin and migration of pore fluids. Particularly important is the applicant's interest in research and teaching at both the undergraduate and graduate levels. A Ph.D. in Geology or Geochemistry is required. A tenure track position. Deadline for applications: February 15, 1984. Submit applications to: Alan Greene, Chair, Department of Physics and Geology, California State College, Bakersfield, CA 93309.

CIPA RELEASES REPORT

California Independent Producers Association (CIPA) has released the report "The 1983 Session of the California Legislature." In this 10-page report is a summary of bills, including key measures affecting California producers. CIPA monitored 102 measures of interest to the petroleum industry. Of the bills studies, 33 were taxation issues. Also included is the voting record analyses of the legislators. Copies can be obtained for $1.00 each from CIPA, 12062 Valley View Street, Suite 201, Garden Grove, California 92645.

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CSB REQUESTS INFO

John R. Coash, Dean of Arts and Sciences, Cal State, Bakersfield, has requested information from the geological community. The College is considering the feasibility of establishing a new master's degree program in geology. The program would focus on the needs of the petroleum industry and the profession in general. There is a questionnaire available to fill out, or you can write any suggestions to John Coash, Cal State College, Bakersfield, 9001 Stockdale Highway, Bakersfield, CA 93309.

PPG DEADLINE for FEB./MAR. ISSUE FEBRUARY 1

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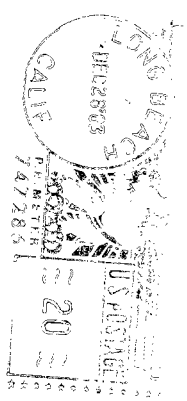

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