1976 ANNUAL MEETING
PACIFIC SECTIONS
April 21-24—San Francisco

This year's convention is the 51st Annual Meeting of the Pacific Section AAPG with the chosen theme "Tomorrow's Oil from Today's Provinces." The AAPG technical program will examine the geology, exploration and resources in the major energy provinces of the West Coast. The SEPM program will focus on the Neogene of the West Coast while the SEG will examine geophysical developments in exploration.

The keynote speaker, John E. Kilkenney, President of the National AAPG will present the challenge to our profession to further explore and exploit known energy provinces of the West Coast while moving into frontier areas of exploration.

An all day field trip on Saturday will visit the East Bay area, providing an opportunity to examine outcropping reservoir rocks adjacent to oil and gas fields.

The convention will begin with a cocktail party get-together Wednesday evening and wind up with a wine tasting party Friday evening.

And, of course, for further entertainment, Fisherman's Wharf, the Palace of Fine Arts, Golden Gate Park, the Civic Center Opera House, Chinatown, Japantown, Union Square, Nob Hill, Telegraph Hill, the Cliff House, the Embarcadero Plaza, the Cannery and Ghirardelli Square are just minutes away.

Don't leave your lady companion at home, come join the fun. The Northern California Geologic Society welcomes you to San Francisco and a great time!

BOB BLAISDELL
General Chairman

NATIONAL AARG


If you have any questions, please contact the Field Trip Chairman:
James A. Hartman
P.O. Box 60193
New Orleans, Louisiana 70110

GSA PENROSE CONFERENCE ANNOUNCEMENT

A GSA Penrose Conference on "Evaluation of Fault Activity" is scheduled for September 26-October 1, 1976 at the Sierra Nevada Inn, at Mammoth Lakes, California. Conveners are Duane R. Packer and George E. Brogan of Woodward-Clyde Consultants.

This conference will focus upon the determination of recurrence of surface faulting and related earthquakes for individual faults and regions, including identification of active faults, and styles of deformation that are related to seismicity.

Attendance at the conference will be limited to approximately 70 participants, representing diverse disciplines, and will include international attendees. Cost of the conference, including all meals, lodging, field trips, and registration, is expected to be $250-$275.

Those wishing further information or to attend the conference should write to the conveners: Duane R. Packer, Woodward-Clyde Consultants, Two Embarcadero Center, Suite 700, San Francisco, CA 94111; or George E. Brogan, Woodward-Clyde Consultants, 4000 West Chapman Avenue, Orange, CA 92668. Deadline for applications is June 1, 1976.

CALL FOR PAPERS

I am calling for papers in connection with the Gulf Coast Association of Geological Societies' annual meeting in Shreveport, Louisiana, October 14 to 16, 1976. As program chairman, I would like to present a high quality program with the theme—"Spirit of 1976—Energy Independence." If you have a paper suitable for presentation, please contact me as soon as possible.

Arthur H. Trowbridge
Program Chairman
P.O. Box 5424
Shreveport, LA 71105
EXECUTIVE COMMITTEE MEETING
SUMMARY OF ACTIONS
December 9, 1975

1. Motion passed to accept the minutes of the October 17, 1975 Executive Committee Meeting as submitted, with two corrections.

2. Sacramento is being considered as a possible alternative site for the 1978 Pacific Section Convention.

3. Motion passed to transfer $3,192 in the treasury from the Restricted Fund to the General Fund, making some $6,000.00 available in the General Fund for the coming year's operations.

4. Motion passed to distribute funds accruing from the 1974 and 1975 Conventions.

5. Motion passed to transfer both General Fund Savings Accounts to Ventura, California at higher rates of interest.

6. $4,350 has been pledged to date by the oil companies and the USGS to support the publication of the Southern California Borderlands Symposium.

7. Either Governor Brown or Congressman William Ketchum is a prospective guest and speaker at the 1976 San Francisco Convention Joint Luncheon. Dr. Clarence Allen will speak on "Earthquake Prediction in China" at the SEPM Convention Dinner.

8. The 1977 Bakersfield Convention dates have been changed from May 4 through May 6, 1977 to April 20 through April 22, 1977.

9. The National AAPG is holding a seminar for members of the press and television at the end of January 1976 at Asilomar, California (north of Monterey).

January 23, 1976

1. Motion passed to accept the Minutes of the December 9, 1975 Executive Committee Meeting as submitted.

2. Motion passed to accept the Treasurer's Report as submitted.

3. Motion passed to pay an additional $150.00 premium for liability insurance coverage at all 1976 Pacific Section functions.

4. Over 1,000 Pacific Section members have paid 1975-76 dues.

5. Motion passed to have the Membership Directory ready for sale at the 1977 Bakersfield Convention.

6. Mr. Jim Weddle has accepted the assignment of General Chairman for the 1978 Convention which will be held in Sacramento, California.

7. Motion passed to invite the Northern California Geophysical group (headed by Bob Merts, British Petroleum and designated BAGS) and the Southern California SEG President, D. R. Mett, Union Oil, to attend the February 27, 1976 Executive Committee Meeting at Carperinera to discuss the forthcoming 1976 San Francisco Convention and future Pacific Section business.

8. Bids for the pre-fabricated core storage building have been accepted. Completion is scheduled for February 1976 on 120 acres at the California State College at Bakersfield.

9. The 1976 San Francisco Convention, April 21-24 (Theme - "Tomorrow's Oil from Today's Provinces") is well organized; final details of the Field Trip Program and Guidebook-Convention Program, Papers, related events-activities are being completed. Motion passed to accept the estimated Convention Budget as submitted with an estimated $6,530.00 net receipts.

10. Bill Hunter, Past President, Pacific Section AAPG, was designated Chairman of the Nominating Committee for the selection of candidates for the 1976-77 offices of Vice-President, President-Elect and Secretary. The President-Elect, E. F. Reid, becomes President for the 1976-77 term. The Treasurer, Howard Stark, serves a two-year term and will continue in office during 1976-77. Included on the same ballot will be name(s) of nominee(s) for Representative to the National Advisory Committee (Henry Neel's three-year term as Representative expires June 1976).

11. Motion passed that space at the New Orleans National Convention, May 24-26, 1976, be not purchased by the Pacific Section.

12. Motion passed to accept changes in the Constitution and By-Laws as approved by the Executive Committee and the corrected Constitution and By-Laws will be mailed out together with the 1976-77 officer ballot for the membership vote.

13. E. F. Reid will bill the oil companies for any outstanding pledged contributions to the publication of the Southern California Borderland Symposium. To date some $4350.00 has been pledged.

14. The 1977 Bakersfield Convention, April 20-22, 1977 (Theme-"Back to Basics") is progressing. Speakers are being contacted.
President's Report

These kinds of columns are usually too long and dull to get much attention. Since you've read this far, I'll try to get you on through it as painlessly as possible.

It occurs to me that most of you haven't given much thought to what the Pacific Section really is. I hadn't prior to election. Since my request in April for a recount was denied (because the ballots had already been destroyed), it has come into pretty good focus, and I'll sum it up for you. As set forth in our Constitution, "The object of this Section shall be to provide for discussion of subjects and problems coming within the scope of the profession and, by such intercourse, to promote the advancement and aims of the American Association of Petroleum Geologists as set forth in its Constitution, By-Laws and Code of Ethics." To those ends, the Section is a federation of cooperating local geological societies which serves as a continuing vehicle for them and for individual Section members to pool their efforts and resources to thereby accomplish more than could be done singly. This includes representation in the governing bodies of the National AAPG.

1 In the AAPG Constitution, its aims are set forth in Article II:

Article II: Purposes

"The purposes of this Association are to advance the science of geology, especially as it relates to petroleum and natural gas; to promote the technology of exploring for, finding, and producing these materials from the earth; to foster the spirit of scientific research throughout its membership; to disseminate information relating to the geology and the associated technology of petroleum and natural gas; to inspire and maintain a high standard of professional conduct on the part of its members; to provide the public with means of recognition of adequately trained and professionally responsible petroleum geologists; and to advance the professional well-being of its members."

Its By-Laws generally outline the mechanics for running the association. Its code of ethics should be reviewed periodically by all members; basically they provide that members shall conduct themselves professionally in relations with the public, their employer or clients, and other members.

The operations of the Section are pretty much run by its Executive Committee. There was a time in years past when members from the Los Angeles area bore the brunt of these chores and, consequently, gave the Section a distinct L.A. flavor. The LA Basin Geological Society is, by far, the largest cooperating society and its members still contribute their full share to the work of the Section, but the management of the Section's affairs has become more truly representative of all its members. The present Executive Committee is made up of five elected officers, the Editor of the PPG Newsletter, and one representative from each of its six cooperating societies. The elected officers come from four of the six local societies. Much of the work of the Section is accomplished by nine standing committees; these are currently chaired by members from five of the six local societies.

The Alaska Geological Society is still relatively under-represented in Section affairs because of logistics. Some better mechanism for AGS participation needs to be worked out. The Executive Committee even explored the possibility of holding the 1978 Convention in Anchorage with the AGS (that is, bringing the Mountain to Mohammed) but it didn't pan out. I still think it was a good idea.

In the meantime, the Sacramento Petroleum Association has made a bid for the '78 Convention; with its new convention center, Sacramento should be an excellent site and the SPA always puts on a good shindig.

And this is a good place to tell you that this year's convention in San Francisco (April 21-24) promises to be a dandy. Convention Chairman Bob Blaisdell and his troops have organized a first-class program. Stan Eschner, 1977 Convention Chairman, has begun the planning phase of the '77 meeting to be held in Bakersfield.

Your Executive Committee has spent considerable time on administrative affairs in an attempt to improve the operations of the Section. Now if that doesn't make for dull reading, I don't know what does—but pay attention because you are going to be asked to vote on some of it. We have made new arrangements for some of our contingency funds in order to realize maximum interest income; various officer's expenses previously paid by the Section will no longer be so charged; and an active membership campaign, led by V.P. Bob Hindle, increased paid-up membership from a low of 814 in October to 1011 in December. These measures were designed to reduce non-critical spend-
PROPOSED CONSTITUTIONAL AMENDMENTS

The following Constitutional amendments have been proposed by Doug Traxler, Box 2828, Long Beach, CA 90801, under the direction of the Planning and Organization Committee. Underlined portions reflect proposed changes or additions. *italic* portions will be deleted. These proposed amendments will be voted on by mail ballot this spring. Please address correspondence concerning these amendments to the above as soon as possible. The Executive Committee has unanimously approved the proposed changes.

CONSTITUTION

PACIFIC SECTION OF THE AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Adopted: September 1924 • Last Amended: April 1974

ARTICLE I

Name

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

ARTICLE II

Object

SECTION 1 The object of this Section shall be to provide for discussion of subjects and problems coming within the scope of the profession and by such intercourse, to promote the advancement and aims of The American Association of Petroleum Geologists as set forth in its Constitution, by-laws and code of ethics.

SECTION 2 The Pacific Section is a non-profit organization, and no portion of the financial assets inures to the benefit of any private individual or member.

ARTICLE III

Membership

SECTION 1 A member, in any classification, of the American Association of Petroleum Geologists in good standing shall be eligible for membership in this Section. The Executive Committee shall establish the membership year for the Section.

SECTION 2 Annual payment of the dues of this Section by any person qualified above shall be a declaration of Active membership in this Section.

The Executive Committee may honor the accomplishments of one or more members each year by designating "Honorary Life Members." Honorary Life Members shall be exempt from all future dues.

SECTION 3 Other persons not members of The American Association of Petroleum Geologists who are interested in the activities of this Section, may subscribe to the publication of the Section "Pacific Petroleum Geologist Newsletter" subject to the approval of the Executive Committee. Non-member subscribers shall not have the right to vote or hold office but may otherwise participate in all activities of this Section.

ARTICLE IV

Officers

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

SECTION 2 There shall be an Executive Committee consisting of the President, Vice-President, President-Elect, Secretary, Treasurer, Editor of the "Pacific Petroleum Geologist Newsletter" and one Representative each selected by such other cooperating geological societies *(including the Coast Geological Society and the San Joaquin Geological Society)* as *are at any time* approved by the then existing Executive Committee.

ARTICLE V

Funds

SECTION 1 The Executive Committee shall establish the fiscal year, review the financial position of the Section and have a current financial statement available at each annual business meeting. Annual dues of the Section shall be payable in advance in an amount established by the membership at the annual business meeting.

The Executive Committee shall not have authority to levy assessments against the membership and shall not have the authority to increase annual dues.

SECTION 2 The funds of this Section shall be deposited to the credit of Pacific Section of The American Association of Petroleum Geologists in any federally insured depository selected by the Treasurer but not to exceed the limit insured by the Federal Deposit Insurance Corporation. Whenever necessary, the President shall certify to the authority of the Treasurer in administering such account by providing the depository bank with a notice of the Treasurer's election and with a true copy of this Constitution.

The Treasurer shall have authority to issue checks against the bank account so established, on his sole signature, but in the event of his absence or incapacity to act due either to sickness or death, withdrawals or payments by check may be made on the signature of the President during the continuance or the absence or incapacity of the Treasurer, in which event the identity and authority of the President and the circumstances relating to the absence or incapacity of the Treasurer shall be certified to by the Executive Committee if so required by the depository.
ARTICLE VI
Meetings
SECTION 1 Pacific Section meetings shall be held annually or at other times on call of the President.

SECTION 2 The time and place of Pacific Section Business Meeting shall be determined by the Executive Committee.

ARTICLE VII
Elections
SECTION 1 The President of the Pacific Section of The American Association of Petroleum Geologists, with the approval of the Executive Committee, shall appoint a nominating committee at least three (3) months prior to the business meeting beginning of the next membership year of the Pacific Section, consisting of five (5) members, two (2) of whom shall be past officers of the Pacific Section.

The nominating committee shall, each year, select two (2) candidates for each of the following offices: President-Elect, Vice-President and Secretary, and every other year shall select two (2) candidates for the office of Treasurer. The slate of the candidates shall be announced in the "Pacific Petroleum Geologist Newsletter" at least five (5) weeks prior to the election. Additional nominations may be made by written petition of twenty-five (25) or more members of the Pacific Section in good standing, received by the Secretary within two (2) weeks following the publication of the nominating committee slate of candidates. The Executive Committee shall have the authority to name an additional nominee in case of necessity, to assure two candidates for each office. Voting shall be by mailed ballot. The Secretary shall set a date for counting ballots and shall mail ballots to all members not less than three (3) weeks prior to this date.

SECTION 2 In matters pertaining solely to the business of this Section, all active members of the Section may vote. In matters pertaining to the official business and the selection of business representatives or other officers of The American Association of Petroleum Geologists only active members of the Association shall be qualified to vote.

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

BY-LAWS
ARTICLE I
Committees
SECTION 1 Standing Committees
The Pacific Section of The American Association of Petroleum Geologists shall establish and maintain the following standing committees:

a. Committee on Finance
b. Committee on Membership
c. Committee on Planning and Organization
d. Committee on Legislation
e. Committee on Publications
f. Committee on Directories
g. Committee on Fall Field Trips
h. Committee on Spring Picnic
i. Committee on Conventions
  ★Advisory★
j. Committee on Public Affairs.

SECTION 2 Appointments and Tenure
The President shall appoint all committee chairmen and co-chairmen and fill vacancies whenever they occur. The committee chairmen or co-chairmen shall appoint all vice-chairmen and committeemen for their respective committees. The Executive Committee may remove any committee chairman or co-chairman. The chairmen and co-chairmen may remove any vice-chairman or member of their committee. The term of office of a member of a standing committee shall be one (1) year. Chairmen may succeed themselves from year to year if reappointed by each succeeding President. Committee members shall be active members and non-member subscribers of the Pacific Section.

SECTION 3 Committee on Finance
The primary function of the Committee on Finance shall be to prepare an annual fiscal budget for approval by the Executive Committee. The Treasurer shall serve as an ex officio member and no other member of the Executive Committee shall serve as a member of the Finance Committee.

SECTION 4 Committee on Membership
The primary function of the Committee on Membership shall be to encourage applications from qualified geologists for membership and to review and act upon such applications on behalf of and with the approval of the Executive Committee.

SECTION 5 Committee on Planning and Organization
The Committee on Planning and Organization shall be comprised of past Presidents of the Pacific Section, that can participate. Their primary function shall be to assist the President in long-range goals and objectives of the society as well as in specific problems that may require their backgrounds.

SECTION 6 Committee on Legislation
The primary function of the Committee on Legislation shall be to advise of Federal, State and local legislation that affects the profession.

SECTION 7 Committee on Publications
The primary function of the Committee on Publications shall be to assist in securing material for publication in the "Pacific Petroleum Geologist Newsletter." The Editor of the Newsletter shall serve as ex officio member and no other member of the Executive Committee shall serve as a member of the Committee on Publications.

SECTION 8 Committee on Directories
The primary function of the Committee on Directories shall be to annually update the Pacific Section of The American Association of Petroleum Geologists Membership Roster. Compilation of the directory shall be coordinated with that of the Society of Exploration Geophysicists and the Society of Economic Paleontologists and Mineralogists and shall be formally published as mutually agreed upon.

SECTION 9 Committee on Fall Field Trips
The primary function of the Committee on Fall Field Trips shall be to plan a fall field trip, and following Executive Committee approval, program and carry out this activity.

SECTION 10 Committee on Spring Picnic
The primary function of the Committee on Spring Picnic shall be to plan and following Executive Committee approval, program and carry out this activity, which may be sponsored by a cooperating society as mutually agreed upon and approved by the Executive Committee.

SECTION 11 Committee on Conventions
The primary function of the Committee on Conventions shall be to submit a convention plan, and following Executive Committee approval program and carry out this activity.

(continued on page 6)
AMENDMENTS . . .
(from page 5)

SECTION 12  Committee on Public Affairs

The primary function of the Committee on Public Affairs shall be to disseminate knowledge, following Executive Committee approval, to the membership and other relevant entities, about subjects within the scope of the profession.

San Joaquin

Dr. Dan Busch, an AAPG distinguished lecturer, delighted a hungry and thirsty audience of 170 in his discussion of "Integrated Disciplines in Petroleum Exploration." Exploration techniques in northern Mexico were described in relation to Busch's model organizational chart. Dr. Dan kept our attention with statements such as "37 out of 37, just as I predicted." If we all could . . . It was a great meeting.

We are looking forward to Donald Ziegler, Chief Geologist, Standard Oil Co. of Calif., and his discussion of "Offshore Oil and Gas, Past, Present and Future" in February, and J. N. Somosky, Senior VP-Natural Resources Division, United California Bank, and his talk "The Energy Picture, Past, Present and Future" on March 9th. The SJGS is planning to bring us up to date on our industry and its future. Send in those reservations!

Last year the SJGS voted to donate $500 to the Kern County Public Library, Main Bakersfield Branch, to help update its geology reference section. Guidebooks and special publications from SEPM, AAPG Memoirs, and new texts relating to our industry make up the bulk of the donations. The new additions give our public library one of the most complete geological reference sections anywhere. We all should be proud of it—be sure to use it.

The National AAPG recently requested a brief history of the SJGC to be published in the Bulletin in the near future. Information is needed to make the history complete. Please send any such information to:

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

Attention: Jeff Smith

The SJGS is planning to begin a membership program intended to add new members and better communicate with current members, the results of which will be to inform everyone of our present and future activities. Our officers are now focusing energy towards timely arrival of reservations for our 2nd Tuesday of each month dinner meetings such that sufficient food and drink will be available to all comers. Again, send in those reservations!

JEFF SMITH

Coast

On December 16, the Coast Geological Society enjoyed a film and brief talk presented by William Brisby, instructor at Moorpark College and Director of the Ventura County Marine Biology Institute. The film, which has been viewed by over 16 million people, showed the abundance of marine life around Rincon Island—over 300 species—and compared it to the approximately one dozen species remaining on the mainland at Mussel Shoals. (Rincon Island is a man-made, oil production island, less than one-half mile off the California Coast. Wildlife is protected on and around this island.)

Following the film Mr. Brisby commented on how marine life on the island protected itself following the 1969 blowout. He also pointed out that in certain other areas organisms which were unaffected by the oil were destroyed during a clean up operation when rocks we steam cleaned.

On January 12, Dr. Daniel Busch, AAPG Distinguished Lecturer, discussed "Integrated Disciplines in Petroleum Exploration." This was an interesting lecture which was presented to several other Southern California audiences.

Members of the CGS are looking forward to hearing John Kilkenny, AAPG President, give a double-barreled talk on February 17th. He will discuss "AAPG Affairs" followed by "Geothermal Prospects in the Western United States."

On March 16th, Martin Link of Los Angeles Harbor College will discuss "Tertiary Submarine Fans of California."

The Coast Geological Society will host the Pacific Section spring picnic on June 4th. It will be held at Ferndale Ranch through the courtesy of Thomas Aquinas College and will follow the traditional golf tournament at Elkins Ranch Golf Course. In addition to the golf tournament, other activities will include a field trip and a "closest to the pin" contest, held at the "amazing one-green-multiple-tee-golf-course" on Ferndale Ranch.

TOM HOPPS

Northwest

NO REPORT.
Northern
California

LOVE STORY. It happened when he was shuffling up Hill Street in San Francisco, lined with honky tons and bars, tired feet aching, wishing he had the price of a drink. There, after 10 years he saw her again. She was seated alone at a small table in front of a bistro on the North Beach sidewalk, sipping something pink in a glass.

Can it be Angela? Yes, he decided it was. And the same old pink gin. She must have sensed the shock of recognition for she looked up as he approached and met his eyes. Incredible! He smiled. She frowned. He placed his shabby hat over his heart and held out his hand.

"Angela. How wonderful to see you again." He pulled out a chair and sat down at the table.

"Hello Henry," she breathed. "I'm Agatha, remember? But it has been so long, hasn't it?"

"Oh, yes of course, Agatha. Yes, a long time indeed. I'm Horace. The years do pass, don't they?"

He noticed a few wisps of gray under the small light colored straw hat, tilted slightly so that the two ends of a lime-green ribbon hung down to match the jade earrings.

"Do you still work for that oil company, Agatha? Let me think now—yes, you were a receptionist, weren't you? What was the name of that outfit? U S Geo . . . Geo . . . something or other, wasn't it?"

"No, dear. That must have been Helen. I worked for B & B for a while, until I got married. Then my husband made me quit, remember?"

"Oh yes, B & B. Old man Brab . . . Bolg . . . and his son. Yes, I do remember. The son was pretty sweet on you, wasn't he?" Her eyes dropped and he noticed the deep blue shadow on the lids. A little thick, he thought. Years ago when they had slipped out of Menlo Park and spent the weekend at Aptos, she hadn't worn nearly so much makeup. She was beautiful then. They had laid out on the warm sand and after trickling a small stream of sand on her smooth stomach, he had rolled over and laid his head on her breast. His eyes dropped to her stripped jacket over a low-cut beige waist. No, that must have been Graceie, he thought. Women do change so. He must be careful.

"And you, Henry," she was saying. "You do look so well—and prosperous.

The years have been good to you, haven't they?"

"Horace. Well, they've been so-so. For a while I rough-necked on a drilling rig and then I switched over to Chief Geologist for the company. Married the boss's daughter, you know. The old man took me into the family and . . ."

Blue eyes came alive with excitement. "Really? Who was she? She must have been lovely. Tell me about her, Henry."

He flicked at a fly arrogantly cleaning his legs on the table. Oh, hell, let it go. "Well . . . it turned out . . . well, you know. She was selfish. Just God-awful selfish. I divorced her."

"Oh, how sad." Her eyes dropped pitly. Or was it smugness. "The last I heard, you were working for the city, weren't you? For Mayor Bag . . . Oh, you know, that funny name. What was it?"

"Yes, for a while. Mayor Bag . . . No, Fos . . . He had a beard. Well, he and I didn't see eye to eye. I guess I'm too independent."

She was twisting the thin gold ring mounted with a tiny amethyst around the third finger of her left hand. Her eyes softened with emotion into his.

"I'm sure you must have been very good at your job, Henry. Very, very good." Their eyes elbowed.

"Angela, dear. He felt a small shiver trickle across his stomach and he leaned forward on the table. "You know something? You know what I think? We should have married. You and I. What good years, what wonderful years we would have had. But then, you married another, didn't you. I do hope he's still good, good, good to you. Who was he?"

"For a moment she gazed at him, pathos swimming in starlit eyes. Then she laughed, leaned back and gave a little pat on the top of her little straw hat. "Oh hell, Henry. Damned if I remember. It was so long ago."

She was gone. He sat thunderstruck. The waiter was moving about. Should I have a drink, he thought, or just coffee. Then he reached over and finished off the pink stuff left in her glass.

BY THE WAY. You who missed the last NGCS meeting at the old Leopard Cafe missed a crush. One hundred and eighty (180) of the faithful struggled for elbow-raising room around the bar, then shuffled in tight mass slowly into the dining room. Shades of the New York subway. An overflow chawed determinedly or paperthin roast beef outside the dining room doors and then jammed themselves into the packed meeting room to listen to Dr. J. Tuzo Wilson of the University of Toronto speak on Plate Tectonics.

"The trouble with the old theories of continental origin," he said in effect, "was that you can't fit a mobile concept into a static framework." Dr. Wilson's machine gun delivery kept the sweating masses wide awake with excellent slides and a highly knowledgeable discussion of the modern theory. Doubtless, all who shawed and squeezed went home with a deeply satisfied feeling inside although maybe a little bruised outside.

NARKOTICKS. Herb Caen's reference (SF Chronicle, Jan. 5, 1976) to "Hors de Combat, that old fractured French phrase for camp followers" brings to our laughable mind an incident in Korea c. 1953. One Major Provost Marshal of the 25th Infantry Division, was nursing his drink in our comfortable little Seoul Club made over from a bombed-out residence. A little brief-skirted waitress hovered nearby.

"The General was worried," he said, "about the big increase in VD among his troops so he ordered me to round up all the girls living in cardboard shanties in the Division area and get 'em the hell out of his area. The farther back, the better. Well, I did that. Took a long day for the round-up, five trucks and a three-hour trip to Wonju about fifty miles to the rear that night. The next afternoon we returned to Division and found that, with all the traffic going and coming, the girls had beat the trucks back."
FEA ISSUES FINAL REPORT ON OIL & GAS RESERVES

The United States had proved reserves of 38.0 billion barrels of crude oil and 240.2 trillion cubic feet (tcf) of natural gas as of December 31, 1974, according to the Final Report on Oil and Gas Resources, Reserves, and Productive Capacities released by the Federal Energy Administration.

The FEA report is based on a year-long survey of operators of oil and gas fields in the United States. Responses were received from nearly 12,000 active operators representing 97 percent of oil and 95 percent of natural gas production in the Nation.

The report also provides summaries of engineering studies of 59 major domestic oil and/or gas fields representing over half the Nation’s proved crude oil reserves and about 30 percent of U.S. natural gas reserves. These studies were made as an independent check of the reserve estimates submitted by operators.

Information in the report is required under Section 151(b) of the Federal Energy Administration Act of 1974.

The report indicates proved oil reserves in the U.S. to be 11 percent higher than figures previously published by the American Petroleum Institute (API). Nearly half the difference between the FEA figures and the API estimates results from reserves in California. Operators estimated a much higher recovery from the heavy crude oil-producing fields in that State than did the API.

BOOK REVIEW
1975 Guidebook of the New Mexico Geological Society

“Las Cruces Country” is a comprehensive 376-page volume prepared for the 26th Annual Field Conference of the New Mexico Geological Society held in the vicinity of Las Cruces in south-central New Mexico on November 12-15, 1975. This hardcover book contains detailed geological roadlogs into the San Andres Mountains, Sierra de Las Uvas, Aden Crater, Mesilla Valley, Cedar Hills, Seldon Canyon, San Diego Mountain, and Rincon Valley. Exit logs to the north, west, south, and east are also included.

In addition, the guidebook contains 41 articles on the history, botany, stratigraphy, paleontology, petrology, economic geology, environmental geology, hydrology, geothermal activity, structure, and geophysics of south-central New Mexico. The tectonics of the Rio Grande rift receives special attention in several papers and a large multicolor map features the structure of the Rio Grande region from Colorado to Texas.

“Las Cruces Country” priced at $22.00 postpaid is available from the Society at the address given below. All previous 25 guidebooks are also available as a free price list.

New Mexico Geological Society
Campus Station
Socorro, New Mexico 87801

Re: the announcement just received of the “Annual Meeting Pacific Sections”

May I take this means of publicly offering heartiest congratulations to the author (to me unknown) of the paragraph on “College Alumni Luncheon” for concocting what should surely rate as the malapropism of the year: “conjugate ... together.” It’s wonderful! (But now I’ll have to bring my old Latin grammar to that meeting, for I was never very good at conjugating verbs).

And then, to the same author, I would suggest a slight slap on the wrist for confining the “conjunction” to “alumni from all United States Universities.” I’m sure that the exclusion of our Canadian friends, and graduates of foreign universities was quite unintentional.

IAN CAMPBELL
REGULATIONS ADOPTED ON APRIL 30, 1975
TO DEFINE THE PRACTICE OF
GEOLOGY AND GEOPHYSICS

Subsection (n) of Section 3003 of
the regulations:
3003. (n) Practice of Geology or Geophysics.

(1) The practice of geology or geophysics "for others" includes but is not limited to the preparation of geologic or geophysical reports, documents or exhibits by any agency, board, department, district or division of the state or any political subdivision thereof or of any county, city or other public body or by the employees of such agency, board, department, district or division of the state or any political subdivision thereof or of any county, city or other public body when such reports, documents or exhibits are disseminated or made available to the public in such a manner that the public may reasonably be expected to rely thereon or be affected thereby.

(2) The practice of geology or geophysics "for others" includes but is not limited to the performance of any professional services by any individual, firm, partnership, corporation or other association or by the employees of such association or commission, board, department, district or division of the state or any political subdivision thereof or of any county, city or other public body or by the employees or staff members of such association or commission, board, department, district or division of the state or any political subdivision thereof or of any county, city or other public body when such reports, documents or exhibits are disseminated or made available to the public in such a manner that the public may reasonably be expected to rely thereon or be affected thereby.

(3) Geological or geophysical reports, documents or exhibits which are prepared by the employees or staff members of any individual, firm, partnership, corporation or other association or commission, board, department, district or division of the state or any political subdivision thereof or of any county, city or other public body which are for use solely within such organization are considered "in-house" reports, documents or exhibits and are not the practice of geology or geophysics for others unless or until such reports are disseminated or made available as set forth in subsection (1) or (2).

NATIONAL AAPG CONVENTION

The New Orleans Geological Society will host the AAPG-SEPM Annual Convention May 23-26, 1976. The meeting promises to be one of the best, and probably one of the biggest, sponsored by the societies in many years.

More than 250 technical papers will be presented in 34 sessions, in addition to the 50 plus papers to be presented in the new Poster Sessions on Tuesday and Wednesday. Six exciting field trips have been planned, two of which will be conducted outside U.S. boundaries. There will be three short courses on Saturday and Sunday in addition to the usual SEPM Research Colloquia. And, for fun, just a glance at the list of entertainment activities and especially note the Tuesday evening cruise down the mighty Mississippi on board the S.S. President and the Wednesday All-Convention Luncheon featuring Cajun cooking. Also, we have just learned that William E. Simon, Secretary of the Treasury, has agreed to present the address at the All-Convention Luncheon. To insure availability of tickets to these special events, be sure to sign up early.

SHELBY W. SMITH
Publicity Chairman

GROUP FLIGHTS
1976 AAPG CONVENTION
NEW ORLEANS
May 24, 1976 May 26, 1976

Group space has been reserved for AAPG members planning to fly to New Orleans for the 1976 Annual Meeting. Group airfares are normally available for groups of 10 or more, originating on the same flight, and the return flight can be on an individual basis provided the same airline is used within a 90 day period. No minimum stay is required. Group Fares will be lower than regular round trip airfares. Note: Airfares are subject to change by the airlines. The lowest airfare on the date of departure will be used. The following airfares are approximate and subject to change, but it is expected that the savings of group travel:

DEPARTURE  REGULAR  GROUP
Amarillo   $153.47 $115.47
Billings   263.47 232.47
Calgary   348.99 299.99
Denver     192.73 143.73
Dallas/Ft. Worth 106.73 81.73
Houston   84.73 59.73
Midland   149.47 112.47
Tulsa     121.73 97.73
Oklahoma City 127.47 102.47
Los Angeles 268.73 214.73
San Antonio 116.73 75.73
Salt Lake City 240.73 190.73
Jackson   58.73 43.73

Send all replies to:
Travel Unlimited, Inc. AAPG Flights
P.O. Box 25187
Houston, Texas 77005
Attention: Connie Burke

or from the Los Angeles area:
World Travel, Inc. AAPG Flights
1051 Westwood Blvd.
Los Angeles, California 90024
Attention: M. L. Irwin
(213) 477-8501
Northern California

SAVE YOUR MONEY for the next big Circum-Pacific Energy and Mineral Resources Conference coming up in Honolulu, Hawaii from July 31 to August 5, 1978. Should be a good one.

NEW MEMBERSHIP SECRETARY

Judy Hughes' duties as membership secretary will be assumed at the close of the San Francisco Convention by Betty Bean, Union Oil Company, 2700 "F" Street, Bakersfield, California 93301. Phone (805) 324-6571.

On behalf of the Executive Committee and the membership, I wish to thank Judy for her years of dedicated service as the focal point for much of the Section's business. We recognize that the monetary compensation is only a token amount, that these services were primarily on a voluntary basis, and that the Section undoubtedly took advantage of her good nature too long.

WES BRUER, President

NEW PUBLICATIONS

Pacific Section AAPG Miscellaneous Publication 24:


This publication will be available at the forthcoming Pacific Section AAPG Convention in San Francisco on April 21 to 23.
As a retired member of AAPG I have AAPG Bulletins from 1943-1971 (Vol. 27 thru 55) for sale. If you are interested, please contact:

John J. O'Keeffe
5290 Atherton Street #131
Long Beach, California 90815

We are pleased to announce that Mr. J. Perone (Jerry) Williams, formerly Vice President and Manager of Occidental's U.K. Exploration and Production subsidiary, has joined Paul N. McDaniel and the ERICO Group of Companies.

ERICO Research Laboratories Ltd.
Tammy House, Tammy Lane
Send, Woking, Surrey England

We plan to have an Employment Interviews Center at the upcoming AAPG-SEPM Annual Convention in New Orleans on May 23-26, 1976. I would appreciate your mentioning this service to your members at the next society meeting and in your local Newsletter.

Several good positions need to be filled and a large turnout for this Convention is expected. If any firm is interested in participating, they should contact me in care of:

Southport Exploration, Inc.
1360 Saratoga Building
New Orleans, Louisiana 70112
(504) 586-9227

Geologists possibly interested in changing jobs should register beginning at 8:00 a.m. on Monday morning, May 24, on the second floor of the Headquarters Hotel, Brauiff Place.

Times are good and opportunity abounds. I hope our fellow geologists can utilize these services to further their professional careers.

JAMES S. CLASSSEN
Chairman Employment Interview Committee
1976 AAPG-SEPM Annual Convention

You may never have heard of the Wildcat Committee of the Western Oil and Gas Association, but each year we put on a Gridiron-type show for approximately 1,800 oil company people at the Hollywood Palladium. One of the functions of the Wildcat Committee is to raise money for the R. M. Pyles Boys Camp, a fine oil-field-supported charity which provides summer camp for many underprivileged children through our annual Hi-Jinks and an invitational golf tournament.

As part of our show which was held in early December 1975, each attendee was given a copy of what we called a Declaration of Independents. We think this Declaration tells the story that all Olinmen need to tell—about the Oil Business and our Government.

We have had great interest from Industry groups, both in and out of our Industry, so we are enlisting your help to get our story to the people. If you are interested in supporting this effort, please contact us. "The Wildcat Committee, c/o Western Oil and Gas Association, 609 South Grand Avenue, Los Angeles 90017. The price for reprints is reasonable and all monies are paid directly to the R. M. Pyles Boys Camp and are qualified charitable deductions.

PAUL L. HOWARD, Chairman
Wildcat Committee
THURSDAY MORNING — APRIL 22
JOINT AAPG, SEG, SEPM
9:00 a.m.—Keynote Address: “Yesterday, Today and Tomorrow,” John E. Kilkenny, President, AAPG
9:30 a.m.—“Exploration Potential of Southern California,” George H. Freiter and Edward A. Hall, Union Oil Co.
10:00 a.m.—Break
10:30 a.m.—“Reservoir and Source Bed History in the Great Valley,” Donald L. Ziegler* and John H. Spotts, Standard Oil Co. of California
11:00 a.m.—“Exploration Potential of Alaska,” Thomas H. Need, Atlantic Richfield Oil Co.
11:30 a.m.—“Seismic Stratigraphy—A New Breakthrough in Geological-Geophysical Coordination,” Milton B. Dobrin, University of Houston

JOINT LUNCHEON

THURSDAY AFTERNOON — APRIL 22 — AAPG
2:30 p.m.—“Geological Estimates of Undiscovered Oil and Gas Resources in the U.S.,” Betty M. Miller and Harry L. Thomsen, U.S. Geological Survey
2:55 p.m.—“New Oil & Gas from Mature Provinces,” J. H. Dorman, Tenneco Oil Co.
3:20 p.m.—“Upper Cretaceous Lithofacies Model, Sacramento Valley,” K. F. Drummond,* K. D. Berry, and E. W. Christensen, Standard Oil Co. of California
3:45 p.m.—“Late Cretaceous Turbidite Sedimentation and Submarine Fan Facies of the Great Valley Sequence, Northern and Central California,” Raymond V. Ingersoll, Stanford University

THURSDAY AFTERNOON — APRIL 22 — SEG
2:30 p.m.—“Recent Results in Earthquake Prediction,” John H. Healey, U.S. Geological Survey
2:55 p.m.—“Regional Velocity Reduction,” John Sherwood,* David Judson, B. Meadows, Digicon, Inc., and J. Sattlegger, Sattlegger Ingenieurburo, Hasesfasse, West Germany
3:20 p.m.—“Processing of Non-Straight Seismic Lines Using the ‘Slalom Line’ Method,” D. Paturet and C. Dickeff,* Compagnie Generale de Geophysique

THURSDAY AFTERNOON — APRIL 22 — SEPM
2:40 p.m.—“Clast Populations in Sespe and Poway Conglomerates, Southern California,” John A. Minch,* Saddleback College; Keith N. Gibson and Gary L. Peterson, San Diego State University
2:50 p.m.—“Foraminiferal Zonation of the Refugian Stage, Uppermost Eocene of California,” Ann Tipton, Consultant
3:40 p.m.—“Late Miocene Paleobathymetry of the California Continental Borderland North of 32°,” Robert E. Arnal* and John G. Vedder, U.S. Geological Survey
4:00 p.m.—“Volcanic Ash Partings in Coals: Characteristics and Stratigraphic Significance,” Don M. Triplehorn, University of Alaska, Fairbanks
4:40 p.m.—“Elements of Tectonism Deduced from Miocene Stratigraphy,” Hugh McLean* and David G. Howell, U.S. Geological Survey
5:00 p.m.—“Miocene Volcanic and Volcanoidlastic Rocks of Santa Cruz Island: Evidence for Offset Along the Santa Cruz Island Fault,” Bruce M. Crowe, David G. Howell, and Hugh McLean, U.S. Geological Survey

FRIDAY MORNING — APRIL 23 — AAPG
9:00 a.m.—“A Possible Role of Nitrogen in the Formation of Petroleum Deposits,” George A. Sellers, U.S. Geological Survey
9:25 a.m.—“Tar Sands Give Clue to Search for Supergiant Oil Fields,” G. J. Decom, Chevron Overseas Petroleum Inc.
9:50 a.m.—Break

* Designated Speaker.
FRIDAY AFTERNOON — APRIL 23 — AAPG

2:30 p.m.—“Applications of Plate Tectonics to Petroleum Geology Along the Pacific Margin of North America,” William R. Dickinson,* Stephan A. Graham, Raymond V. Ingersoll and Teresa Jordon, Stanford University

2:55 p.m.—“Use of IR Color Photography and Canyon Photos in Photo-Geologic Mapping, Central Brooks Range, Alaska,” Spencer J. Reber, Standard Oil Co. of California

3:20 p.m.—“A Satellite-look at the Regional Geology of Northern California,” Ernest I. Rich, Stanford University

3:45 p.m.—“Depositional and Tectonic History of the San Francisco Bay Region East of the San Andreas Fault,” Thomas W. Dibblee, Jr., U.S. Geological Survey

4:10 p.m.—“Geothermal Resources of the Pacific Coast, Present and Future,” David N. Anderson, State of California—Division of Oil and Gas

4:35 p.m.—“Legislation and Tomorrow’s Oil from Today’s Provences,” Arthur O. Spaulding, Western Oil and Gas Association

FRIDAY AFTERNOON — APRIL 23 — SEG

2:30 p.m.—“Interpretive Uses of Seismic Modeling With Emphasis on Stratigraphy and Seismic Resolution,” N. S. Neidell,* J. P. Lindsey, F. J. Hilterman, Geoquest International Ltd.


3:20 p.m.—“Design of a High Frequency Resolution Airgun Array,” T. A. Marty, Amoco International Oil Co.

3:45 p.m.—“Structural Elements of the Offshore Gulf of Alaska Tertiary Province,” Terry Bruns, U.S. Geological Survey

4:10 p.m.—“Evidence for Low Free Gas Saturations in Water-bearing Bright Spot Sands,” H. J. Ritch and J. T. Smith, Shell Oil Co.

FRIDAY AFTERNOON — APRIL 23 — SEPM

2:20 p.m.—“Pliocene Biostratigraphy and Depositional Environment of the Jacalitos Canyon Area, California,” Robert J. Stanton, Jr.* Texas A&M University, and J. R. Dodd, Indiana University


3:00 p.m.—“Neogene Diatom Correlations in California—Their Problems and Solutions,” Walter W. Wornardt, Union Oil Co. Research

3:20 p.m.—“Middle Miocene—Lower Pliocene Marine Diatom and Silicoflagellate Correlations in the California Area,” John A. Barron, U.S. Geological Survey

3:40 p.m.—“Tertiary Stratigraphy and Depositional Environments near Indians Ranch, Monterey County, California,” Stephen Graham, Exxon Production Research Co.

4:00 p.m.—“Paleontologic Studies of the Middle Tertiary Skoone Gulch and Galloway Formations at Point Arena, California,” F. Jay Phillips* and Bruce Welton, University of California, Berkeley; and Joann Welton, Standard Oil Co. of California

4:20 p.m.—“Coccolithus pelagicus; a Clarification,” David K. Totten, Jr., Anderson, Warren & Associates

4:40 p.m.—“Coiling Ratios in Planktonic Foraminifera: Adaptive Significance and Paleoenvironmental Interpretation,” J. H. Lippis, University of California, Davis

ALUMNI LUNCHEONS


11:10 a.m.—“Salinas Valley, Today and Tomorrow,” Thomas A. Baldwin, Consulting Geologist

11:35 a.m.—“Role of the Small Independent in Tomorrow’s Oil,” Ted Off, Ojai Oil Co.

FRIDAY MORNING — APRIL 23 — SEG

9:00 a.m.—“The Commercial Application and Interpretation of the Borehole Gravimeter,” J. W. Bradley, Amoco Production Co.

9:25 a.m.—“Interpretation of Seismic Data from Derived Velocity Logs,” B. O. Lindseth, Teknika Resources Dev.

9:50 a.m.—“Wave-Equation Migration: Two Approaches,” K. Larner* and L. Hatton, Western Geophysical Co.

10:15 a.m.—Break

10:45 a.m.—“The Slant Wave Stack,” Jon F. Claerbout, Stanford University

11:10 a.m.—“Application of Surface Consistent Corrections,” Don W. Frye* and M. Turhan Taner, Seiscom Delta, Inc.


FRIDAY MORNING — APRIL 23 — SEPM

9:00 a.m.—“Neogene Tectonics of the Central Ventura Basin, California,” Robert S. Yeats, Stanford University

9:20 a.m.—“Late Neogene-Quaternary Tectonics and Depositional Environments of the Santa Barbara Basin, California,” P. J. Fischer, California State University, Northridge

9:40 a.m.—“Patterns of California Continental Borderland Sedimentation: Derived from Late Pleistocene and Holocene Studies,” D. S. Gorsline, University of Southern California

10:00 a.m.—“Paleo-Oceanographic Variations and Their Implication to Paleobathymetric Interpretation,” Gregg H. Blake* and Robert G. Douglas, University of Southern California

10:20 a.m.—“New Evidence for the Age of the Cenozoic Salt Lake Beds in the Northern Great Basin,” Patrick H. McClellan, University of California, Berkeley

10:40 a.m.—“Late Neogene Paleobathymetry and Paleo-environments of the Humboldt Basin, Northern California,” James C. Engle, Stanford University

11:00 a.m.—“Dispersal, Distribution and Thickness of Holocene Sediments on the Continental Shelf, Northern Gulf of Alaska,” Paul R. Carlson, Bruce F. Molnia and Erik Reimnitz, U.S. Geological Survey

11:20 a.m.—“Sedimentary Serpentinite of the Miocene Big Blue Formation near Cantua Creek, California,” Tom Ann L. Casey,* Sun Oil Co., Houston, and William R. Dickinson, Stanford University

11:40 a.m.—“Holocene Shelf Sedimentation Patterns Determined by Multivariate Statistical Analysis of Heavy Mineral Data—Monterey Bay, California,” Melvyn L. Rappeport, Stanford University
PACIFIC SECTION AAPG EXECUTIVE COMMITTEE MEETING — FEB. 27, 1976

The Pacific Section SEG now has in excess of 200 members excluding the Bay Area Geophysical Society (BAGS) which is not directly affiliated with the former.

The SEPM will have the Neogene Symposium for sale at the 1976 Pacific Section Convention in San Francisco. The 1976 field trip will be held in the White-Inyo Mountains on October 16 and 17 with John Moore of UCLA the leader.

The nominating committee submitted the following list of candidates for the 1976-77 offices for the Pacific Section AAPG.

President Elect
Vern Jones  Dalton Pollard

Vice President
Don Hallinger  John Truex

Secretary
Don Reynolds  Bruce Robinson

It was suggested that the certificates of appreciation be given to past Pacific Section AAPG officers be redesigned because they are poorly done.

The proposed changes of the Pacific Section AAPG Constitution and By-Laws will be published in the January-February Pacific Petroleum GEOLOGIST and will be included to vote on with the officers ballots.

The paid-up membership of the Pacific Section AAPG is now slightly in excess of 1,100.

Judy Hughes' duties as membership secretary will be assumed at the close of the San Francisco Convention by Betty Bean, Union Oil Company, 2700 "F" Street, Bakersfield, California 93301. Phone is 805-324-6571.

Motion passed to rescind last month's motion to pay $150.00 liability insurance for Pacific Section AAPG members and guests. Motion passed to pay present insurance as due on existing policies plus a rider on liability for Sexton Canyon publication storage.

The IRS has approved an accounting change for the Pacific Section AAPG from a calendar to a fiscal year.

A motion was passed to rescind the action of the Executive Committee of August 27, 1975 (Item 9) to raise the annual Pacific Section dues from $5.00 to $7.50 per member.

Motion passed to keep the Martin Van Couvering awards within the local convention areas (150+ miles).

There is enough money in the fund for eight students this year.

The cost of the Kleinpell project will total about $11,000 in all. All companies have been invoiced for their pledges supporting the Southern California Borderlands symposium and about $1,600 has been received.

A new membership directory will be completed in time for sale at the 1977 Pacific Section AAPG Convention in Bakersfield.

A second mailing for the 1976 San Francisco Convention consisting of the tentative program, a pre-registration form and a membership application will be sent in one week.

The 1977 Bakersfield Convention is progressing. Workers are being recruited.

The 1976 Pacific Section AAPG Spring Field Trip will be hosted by the Coast Geological Society on June 4, at the Ferndale Ranch in the Upper Ojai area.

______________________________________________________________

PACIFIC SECTION AAPG CONVENTION
April 21 to 23
Holiday Gateway Inn
San Francisco, California

CONVENTION ACTIVITIES

ICE BREAKER, Wed., 6:30 to 9:00 p.m., Emerald Ballroom.

JOINT LUNCHEON, Thurs., 12:30 p.m., Gold Rush Room, Speaker: Congressman W. M. Ketchum.

NO HOST COCKTAIL PARTY, Thurs., 5:00-7:00 p.m., Gold Rush Room.

SEPM DINNER, Thurs., 7:30 p.m., Gold Rush Room, Speaker: Clarence R. Allen.

ALUMNI LUNCHEONS, Fri., 12:15 p.m., Gold Rush Room. Circle the school luncheon table where you wish to be seated: UC Berkeley; Stanford; USC; UCLA; San Diego U.; U. of Ore.; Ore. St. U.; Cal Tech.; Long Beach St.; NE; SE; SW; MW; W United States Univ.

WINE TASTING, Fri., 5:30-7:00 p.m., Gold Rush Room.

FIELD TRIP, Sat., 8:30 a.m. to 4:00 p.m., reservoir rocks exposed on the North Flank of Mt. Diablo. Includes transportation, lunch, and guide book.

Sacramento

NO REPORT.
GEOLOGY, vol. 3, no. 12, December 1975
Mount Baker eruptions, by Don J. Easterbrook.
Effect of geologic structure and metamorphic fluids on seismic behavior of the San Andreas fault system in central and northern California, by William P. Irwin and Ivan Barnes.
Ancient southern margin of North America, by Philip B. King.
U.S. GEOLOGICAL SURVEY OPEN FILED REPORTS (Deposited in Los Angeles (LA), San Francisco (SF) and Menlo Park (MP) (For inspection only))
75-281: Reconnaissance landslide map of parts of Marin and Sonoma Counties, Calif., by C. M. Wentworth and V. A. Frizzell.
75-394: Geologic maps of the Paceco Pass, Hollister, Quiene Sabe, Ortega Peak, San Benito, Pancho Valley and "Tumey Hills" quadrangles (San Benito, Santa Clara, Merced and Fresno Counties) Calif., by T. W. Dibblee.
75-427: Helium surveys over known geothermal resource areas in the Imperial Valley, Calif., by A. A. Roberts.
75-446: Self-potential map, Steamboat Hills, Nev., by D. B. Hoover, Michael Batzle, and Rubby Rodriguez.
GEOLOGY, vol. 3, no. 10, October 1975
Early Paleozoic continental margin sedimentation, trilobite biofacies, and the thermocline, western United States, by Harry E. Cook and Michael E. Taylor.
GEOLOGY, vol. 3, no. 11, November 1975
Mapping the physical environment in economic terms, by Christopher C. Mathewson and Donald P. Piper.
Sinuosity of strike-slip fault traces, by R. J. Bridwell.
Primitive fossil flatworm from Alaska: New evidence bearing on ancestry of the Metazoa, by Carol Wagner Allison.
Diastem factor in Mississippian rocks of the northern Rocky Mountains, by William J. Sando.
AMERICAN JOURNAL OF SCIENCE, vol. 275, no. 8, October 1975
Linear vent systems and estimates of magma production and eruption for the Yakima Basalt on the Columbia Plateau, by D. A. Swanson, T. L. Wright and R. T. Helz.
What is type Paleocene?—discussion, by Philip D. Gingerich.
Offshore bars along the Alaskan Arctic Coast, by A. D. Short.
Phanerozoic diversity patterns: Tests for randomness, by Karl W. Fleese and Jeffrey S. Levinton.
Properties of one-dimensional diagenetic models, by Donald L. Graf and David E. Anderson.
Surface stone movement and scree formation, by M. J. Kirkby and Ian Statham.
THE JOURNAL OF GEOLOGY, vol. 83, no. 5, September 1975
Relationship between grain size of source rock and derived sediment, Biorka Island tonalite, southeastern Alaska, by Charles M. Hoskin and Daniel A. Sundeen.
LUCY E. BIRDSALL

NEWSLETTER
Pacific Section A.A.P.G.
P.O. Box 17486 Foy Station
Los Angeles, California 90017
Memorial Held for USGS Scientist

Memorial services were held June 18 at the U.S. Geological Survey, Western Region Headquarters, Menlo Park, for James C. Taylor, who died suddenly on June 8. He was 51.

At the time of his death, Taylor was in charge of evaluating the petroleum potential for the Pacific Coast, both onshore and offshore. Author of numerous technical publications, his latest, entitled, "Geologic appraisal of the petroleum potential offshore southern California: The borderland compared to onshore coastal basins," was released in April.

His professional career began as junior geologist for Buchans Mining Co. in Newfoundland, but in 1953 he began a 20-year association with Shell Oil Co. in Texas, the western states, and Alaska. He applied research to production and exploration problems, mainly in the fields of petrography and sedimentary petrology and in the properties of rocks as they relate to oil field reservoir characteristics. He also conducted geologic field and laboratory studies on tar sands, geothermal prospects, welded tuffs, subsidence, and the generation and migration of petroleum. He was involved in both primary development and secondary recovery operations, and in evaluations of known fields, and in bidding recommendations for offshore leases.

In 1973 he accepted an appointment with the U.S. Geological Survey where he concentrated on the acute energy problems facing the nation.

President's Corner

As outgoing (gone!) president of the Pacific Section, I wish to thank those who contributed most to keeping the Section informed and in business during the past year, increased its membership dramatically, helped to further stabilize its finances and consolidate its operations, and staged a highly successful annual meeting. In the interest of space, only the positions are noted rather than the many individual accomplishments:

Bob Hindle .......... Vice President and Membership Chairman
Bud Reid ............ President-elect and Public Affairs Chairman
Lou Heintz .......... Secretary (first part of term)
Ernie Rennie ......... Secretary (last part of term)
Howard Stark .......... Treasurer
John Lidstrom .......... Editor, PPG Newsletter
Bill Hunter .......... Past President
Jim Gibson .... LABGS President and Director Committee
Bob Davis .......... LABGS President
Ralph Cahill .......... CGS President and Spring Picnic
Ed Coughlin .......... SJGS Representative
Ed Karp .......... SJGS President
Dave Pfeiffer .... President of NCGS, annual meeting host society
Herb Wheeler .......... SPA President
Dick Atchison .......... AGS President
Hank Noel .......... Section Representative, AAPG Advisory Council
Bob Blaisdell .......... 1976 Convention Chairman (should be 30 more here!)
Don Hallinger .... Finance Chairman
Doug Traxler .......... Planning and Organization Chairman
Carl Evans .... Publications Chairman
Bob Paschall .... Legislative Chairman
Lynn Tennyson .... Directory Chairman
Judy Hughes .......... Membership Secretary
Gene Fritsche .......... Pacific Section SEPM President
Dennis Mett .... Pacific Section SEG President
Bob Mertz ...... Bay Area Geophysical Society President

Ladies and gentlemen, thank you!

WES BRUER

CALL FOR PAPERS PACIFIC SECTION SEPM

Do you have a paper that you would like to present at our next year's SEPM convention? Now is not too soon to start thinking about it. The theme for the 1977 Joint Annual Meeting of the Pacific Sections of SEPM, AAPG, and SEG will be "Up with Basics", stressing all the basic tools of petroleum exploration. The SEPM part of the meeting, to be held April 20-22, 1977, in Bakersfield, California, will consist of an all-day Research Symposium and a half-day session open to submitted papers on any sedimentary or paleontological topic that is in keeping with the convention theme.

The SEPM Research Symposium will be on "Pacific Coast Paleozoic Paleogeography" and will occupy the Friday morning and afternoon sessions, to be coordinated by Symposium Co-Chairman, John H. Stewart of the U.S. Geological Survey and Calvin H. Stevens of San Jose State University. Prospective speakers on topics not suitable for the symposium are invited to submit abstracts for consideration for presentation at the Thursday afternoon session.

This is our first call for papers for the Thursday session of our 1977 meeting. You are asked to submit abstracts of approximately 300 words to me no later than November 15, 1976. The Thursday afternoon program will be compiled from submitted abstracts.

The program time available on Thursday afternoon will not accommodate all prospective speakers, so authors of abstracts are urged to observe the deadline for submission and to consider carefully the quality and suitability of their abstracts. Competition for the few time spots will probably be stiff. Authors will be notified in early January, 1977, as to the acceptance of their abstracts.

ANN TIPTON DONNELLY
SEPM Technical Program Chairman
6209 Hartman Avenue
Bakersfield, California 93309
Phone: (805) 323-4596
Northern California

Pacific Section Convention, San Francisco, April 21-23, Holiday Inn.

Upstairs, well-dressed men and women strolling North through the crowded lobby against a stream of same strolling South—old men with white hair and well-shaven jowls, knowledgeable faces with exploratory eyes, money in the pocket, expenses no sweat—youthful and middle aged executive types, smartly clad, good-looking, ambitious, sharp eyes—handsome women in 1. Magnin apparel, grandchildren in school hoping for handouts, charming conversation with men, serious tête-a-tête with women, looking each other over, rushing off to keep a date—young men in casual clothes, shirts open, long groomed hair, hanging on to their young wives in slacks and short hair, fresh serious faces wide-eyed by the afluence of the group, looking ahead, eager, confident, don't worry we'll make it.

Downstairs, more groups of neatsuited, intelligent men, talking in doubles over Schlumberger coffee, singles strolling about looking wisely at the complex gear, reading brochures, greeting old friends, occasional loud laughs identify risque stories, togetherness, courtesy, mutual respect and interests everywhere.

The Big Four—a quadruplet of gleaming helmsmen stand out among the chic bourgeois: Johnny Kilkenny, President of AAPG, trim in summer gray; genial, spirited, alert—a born leader; Wesley Bruer, President of Pacific Section AAPG, handsome in clerical black, vigorous, decisive, resolute—a man for all seasons; Dave Pfiffer, President of NCGS, debonnaire in charcoal tailoring, broad-shouldered, direct, buoyant—Gibraltar of industry; Bob Blaisdell, General Chairman of the convention committee, polished in gay jacket and slacks, blythe, energetic, indefatigable, wise in the organization of conventions.

For the many others who put on the show, we applaud loud and long.

For names, please consult your convention program.

Arcanum—Exploration has become a scientists milieu of complex machines, electrified, programmed, computerized, push-buttoned, instant results, guaranteed discoveries??? Time

Seiscrop of Seismic Data flashing numbered displays of Persian rug patterns all morning, one after the other, all afternoon, pattern after pattern, all night? What does it mean? No one knows. No attendant to explain. Came forth a knowledgeable Stanford Ph.D. We grabbed him. What is it? He stared expressionless. What does it mean? He shook his head. "God knows!"

Papers—Excellent presentations, well prepared. Geologists are improving in public-utterance capabilities. Years ago the average quality of presentation seems sub-minor in retrospect. Slides were unrecognizable except with binoculars. Weak, off-the-cuff hesitant language made for incredibly dull listening for the most part (some will disagree). Over the years progress has inserted her sharp, competitive needle into the minds of later generations who are responsive to demands for ever better preparation and delivery to critical listeners and lookers.

So it seems.

People—Friday, 11:00 a.m., registration count 1,138 souls made up of 535 Pacific Section members, 151 non-members, 86 complimentary guests in- cluding 65 speakers, 116 students, 250 wives, (AAPG-SEPM-SEG). Fine gathering, great crowd, outstanding throng, and three ripping cheers for Bob Blaisdell and his hard-working colleagues for putting together a smashing success.

Big Question—Is a convention worth the price of the gratuitous, monumental efforts expended by a dedicated staff? In preparation and delivery of papers? In tires, shoeleather and fatigue of the plebes who look and listen? In time and expense of those who eat and drink and frolic and pay and pay? The many millions who convene year after year, in places far and wide in greedy, troubled cities, must think the assets are equal to the liabilities and capital. On the day of registration, all would perhaps answer "Yes." On the way home, broke and tired, some may wonder. Are we just getting old?

"... and there warn't anybody at the church, except maybe a hog or two, for there warn't any lock on the door, and hogs like a puncheon floor in summer-time because it's cool. If you notice, most folks don't go to church only when they got to; but a hog is different."

Mark Twain: ADVENTURES OF HUCKLEBERRY FINN

OTT KOTICK

FIRST CALL FOR PAPERS
OFFSHORE TECHNOLOGY CONFERENCE
May 2-5, 1977 • Houston, Texas

Papers are being solicited for the 1977 Offshore Technology Conference to be held in Houston, Texas, May 2-5, 1977. Los Angeles Basin Geological Society members are encouraged to submit abstracts for consideration by the Program Committee. Papers covering all facets of offshore exploration, development and applied research are desired, e.g., assessment of hydrocarbon potential of the outer continental margins, marine geochemical prospecting techniques, identification of overpressured deepwater, sandstone reservoirs, slope stability, and recognition of nearsurface geologic hazards, remote sensing techniques applied to the oceans, and production characteristics of offshore reservoirs are particularly encouraged.

Papers submitted should not have had prior widespread publication or circulation. Twenty minutes will be allotted for each presentation with five-minute discussion intervals between papers. Authors submitting abstracts should note that a complete manuscript will be required for papers selected for presentation. The manuscripts will be printed in the Conference Proceedings and be distributed at the Conference. Maximum recommended length for a manuscript is 7000 words.

Abstracts, containing 200-300 words, should be submitted on standardized OTC Data Forms by September 15, 1976. Data forms can be obtained from AAPG/OTC Program Subcommittee Chairman Dana Baislin, Union Oil Company of California, Room 5M-29, P.O. Box 7800, Los Angeles, California 90051, (phone 213/486-7065), or from OTC Headquarters, 6200 North Central Expressway, Dallas, Texas 75206. Manuscripts selected for presentation must be submitted by February 18, 1977, to OTC Headquarters.

Employment Opportunity

Champlin Petroleum Company is looking for a petroleum geologist/petroleum engineer with several years of California oil field development experience to work with a special team on a detailed reservoir investigation of the Wilmington oil field. Interested persons should contact Herb Sweeney at: Champlin Petroleum Company P.O. Box 125 Wilmington, Calif. 90748 (213) 432-6929
AN ACKNOWLEDGEMENT
by MARTIN VAN COUVERING

The Pacific Section of AAPG (as well as its parent, the national AAPG) has been so kind to me, in so many ways, over so many years, that I feel an obligation to acknowledge my debt, and to express my appreciation publicly. The Pacific Petroleum Geologist is the obvious medium for doing so.

From my point of view, the present is a particularly appropriate time. Not only is this our nation's bicentennial year, but the Pacific Petroleum Geologist is in its 30th year. Finally, my birthday comes this month. I was born on a farm in Allendale Township, Ottawa County, Michigan, on June 15, 1888. The Lord willing, I will be 88 years old, 1888 plus 88 makes 1976. That is a coincidence so I do not wish to defer this note of appreciation any longer. It could well appear elsewhere in this issue.

It was a particular source of pleasure to me to encounter so many of my friends, old and new. I tried to visit the 51st Annual Meeting of the Pacific Section of AAPG and its affiliates in the charming city of San Francisco. In spite of the strike of many city employees, the attendance was a source of gratification to all who attended. Probably full details will appear elsewhere in this issue.

For me, there will never be another exposition to equal the Pan-Pacific, despite the fact that my models of Kettleman North Dome were on exhibition in the San Francisco world's fair of 1937-39 on Treasure Island.

If it meets with the approval of the readers of Pacific Petroleum Geologist, I may offer contributions, from time to time, based on my long experience in the profession and the Association.

OLAF P. JENKINS

GENERAL CALL FOR PAPERS
1977 PACIFIC SECTION AAPG FIELD TRIP GUIDEBOOK

Phil Ryall has been appointed chairman of the 1977 Pacific Section AAPG Field Trip. The Field Trip will concentrate on the Sycamores Sand on the West side of the Southern San Joaquin Valley. Those interested in contributing to the Guidebook please contact:

Phil Ryall
602 H Street
Bakersfield, California 93304
(805) 323-7759

GENERAL CALL FOR PAPERS
1977 AAPG, SEG and SEPM CONVENTION

Frank Weagant and Rodney Nahama have been appointed Program Chairmen for the 1977 Pacific Section Convention in Bakersfield.

The theme for 1977 is "Up with Basics" and we would like a general call for papers to be published in the Pacific Petroleum Geologist. The following are some suggested titles for specific papers:

- Origin and Migration
- Alaska (offshore and onshore)
- Washington (offshore and onshore)
- Oregon (offshore and onshore)
- California (offshore and onshore)
- Nevada
- Shoreline Processes
- Geochemistry
- Reservoir
- Economics of Oil Business
- The title and general contents of the paper should be mailed to Nahama & Weagant no later than August 1, 1976.

Nahama & Weagant, Inc.
602 H Street
Bakersfield, CA 93304
Pacific Section

SPRING PICNIC

The weatherman delivered a fine June 4th for the Pacific Section Spring Barbeque, Golf Tournament and Field Trip, hosted this year by the Coast Geological Society.

One hundred seventy-seven bodies piled into 51 cars to view the Pliocene geology of the eastern areas of the Santa Paula Oil Fields. Highlights of the geology and historic oilfield sites were described by Ed Hall, Chuck Barker, Manley Natland, and John Crowell.

Meanwhile, back at the ranch—Elkins Ranch Golf Course that is—the more serious minded folks participated in the annual golf tournament. Eighty-eight people hooked and sliced their way to glory. Those receiving trophies and prizes were:

1st Low Gross —
Bob Lindbloom .......................... 78
2nd Low Gross —
Tom Woodward ........................... 79
First Flight
1st Low Net —
Les Hermann .............................. 72
2nd Low Net —
Don Paddock .............................. 72
Second Flight
1st Low Net —
Bill Graham ............................... 74
2nd Low Net —
Bill Kistler ................................. 75

Later that same day... three hundred twenty souls gathered for the annual barbeque, held this year at Ferndale Ranch through the courtesy of Larry Barker. Two hundred pounds of Santa Maria beef, 20 pounds of hamburger, 38 pounds of beans, 40 pounds of salad, and 100 cases of beer and soft drinks helped quench the thirst of appetites. Entertainment included volleyball, horseshoes, and the ever popular First Annual "Amazing one-green-multiple-tee Ferndale Ranch Golf Tournament." Winners of this challenging course were, Pat Fazio, "closest to the pin" (1/5%); Gary Bell, "in the circle"; and Lou Villanueva, "in the circle." Nine winners of a bottle of alcoholic spirits discovered the secret to popularity and can indeed be bottled.

The "Ventura Basin Tectonic Map," published by the Coast Geological Society, made its debut at the barbeque and was well received. Publications may be ordered through the Coast Geological Society, P.O. Box 3014, Ventura, California 93003.

1976 Spring Field Trip
Guidebook ............................... $2.00
Ventura Basin Tectonic Map —
Ventura Sheet ............................. $3.00

Thanks to all who made this an event to remember. The old stage coach ad reads "Ride the Stage to Ferndale Ranch, wine, dine, and dance to the wee hours of the morning. We did!

The success of this picnic was also due to the generous support of corporate and service companies, and individuals. The Pacific Section AAPG membership wants to express our deep appreciation to the following supporters. Please remember them—they are truly our friends.

Argo Petroleum Corporation
Arrington & Associates
B & W Incorporated
B. J. Hughes, Inc.
Peter Bawden Drilling, Inc.
Bear & Kistler
Bendix Corporation
Borst & Giddens Oil Well Logging
C & R Blueprint
Core Laboratories, Inc.
Dresser Atlas
Dresser Magobar
Homer Dulin Company
Exploration Logging of U.S.A., Inc.
Geological Exploration, Inc.
General Oceanographics
Getty Oil Company
Gibson Directional Drilling, Inc.
Gulf Oil Corporation
H & H Oil Tool Co., Inc.
Hyla Oil Company
Johnson Velocity Surveys
Julian Well Logging Service
King & I Restaurant
Midway Fishing Tool Company
Munger Oil Information Service
Nicholeros Paleo Consultants
Norris Oil Company
Oilwell Research, Inc.
Pauley Petroleum
Petroleum Solids Control, Inc.
Petrolog Geological Well Logging Service
Professional Drilling Fluid Service
Reese Sales Company
Sammy's Oilfield Service
San Joaquin Fishing Tool Company
Schlumberger Well Service
Sealand Directional Drilling
Strata-Log
Texaco Inc.
Union Oil Company
United Directional Services Inc.
Welex
Don Padick Oil Well Logging

As predicted, John Truxel delivered a fine talk to the Coast Geological Society on May 18, when he discussed "Stratigraphic and Structural Similarity of the Santa Monica and Santa Ana Mountains." This talk, presented as a review of his paper, "Santa Monica and Santa Ana Mountains—Relation to Oligocene Santa Barbara Basin" published in the January 1976 AAPG bulletin, Volume 60/1, was received with a great deal of local interest.

Predictions weren't so accurate, however, when we said John's talk would be the last talk of the season. We are going to sneak another one in on June 15 when, by the time you read this, Larry Beyer of the USGS will have presented a paper on "Borehole Gravity Logging: How to get More Information (and maybe more petroleum) from new and old wells." It was a good talk.

At the same meeting we have installed the new officers for the 1976-77 season. They are: President—Al Hanson, Getty Oil; Vice-President—Tom Hoppes, Argo Petroleum; Secretary—Dick Berger, Argo Petroleum, and Treasurer—Harry Browne, Consultant.

A major undertaking for the limited membership of the CGS this year was hosting the Pacific Section Spring Golf Tournament, Field Trip and Barbeque. We think it was one of the best. Read about it in this issue.

The CGS has introduced two new publications for your libraries. A few copies of the 1976 Spring Field Trip Guidebook, "Pliocene Geology and the Santa Paula Oil Field Areas, Northeast part of Rancho San Buenaventura, Ventura Basin, California" are still available at $2.00 each. The Ventura Basin Tectonic Map, Ventura Sheet is available for $3.00. This map is the first in a proposed series of eight sheets extending from Point Conception to Castaic Junction.

The above publications may be ordered from:
Publications Chairman
Coast Geological Society
P.O. Box 3014
Ventura, California 93003

TOM HOPPS

Los Angeles

NO REPORT.
Sacramento

Drilling activity during the first six months of 1976 has not been particularly active in comparison with the past several years, however, the members have managed through a number and variety of meetings and discussions to keep active. The length of time allotted to "attitude adjustment" during these slow periods, has of course, been extended to prepare for the eventual year-end activity.

January was our most important month from a standpoint of electing officers for the coming year, both in the Northern California Chapter of API and the Sacramento Petroleum Association. Elected officers of both API and SPA are as follows:

API—Chairman:
Jim Cogbill, Go International
1st Vice Chairman:
Arsen Shanazarian, Hunnicutt and Camp Drilling Co.
2nd Vice Chairman:
S. T. Reynolds, Tri-Valley Oil & Gas Co.
Secretary-Treasurer:
B. R. "Swiss" Holmes, Hunnicutt and Camp Drilling Co.

Advisors:
Mike Bell, Schlumberger
Fred Harris, Western Mud Co.
Hack Kirkpatrick, Halliburton Services
Gene McCraw, Byron Jackson, Inc.
Joe Parmenter, Del Paso Exploration Co.
Ray Stein, Methan Engineering Co.
Past Chairman:
J. Hubert Mee, Jr., Standard Oil Co. of California

SPA—President:
Fred Harris, Western Mud Co.
Vice President:
Roland Bain, Tri-Valley Oil & Gas Co.
Secretary-Treasurer:
Don Pinnell, retired

During the months of January and February the Northern California Chapter of API presented two informative and timely dinner meetings before its members and guests. On January 21, Mr. John Sproul, P. G. & E. Vice President, Gas Supply, was the speaker at the Pheasant Club in West Sacramento. Mr. Sproul presented an overview of P. G. & E.'s anticipated estimates and future plans concerning their Northern California gas operations.

Mr. Grevelle Way, Chief of the Gas Division of the California Public Utilities Commission, was the distinguished speaker on February 25, at Rosie's Cottage in downtown Sacramento. Mr. Grevelle Way directed his comments toward the regulatory aspects concerning California producers, both now and in the future, and complemented well the talk given the previous month by Mr. Sproul. The above mentioned presentations before members of the local petroleum industry and guests, as well as a previous presentation by Mr. Henry F. Lippit, Jr., Executive Secretary of the California Gas Producers Association, on November 18, 1975, gave a rather comprehensive look at the energy field, principally natural gas, in California from various agencies. All three talks were well attended and enthusiastically received.

The SPA during the first half of 1976 has also been active, with the weekly luncheon meetings being well attended by members and guests. There have been a wide variety of talks and films presented over the months, and this in combination with the Annual Golf Tournament & Barbeque and API-SPA Softball Tournament & Barbeque, has provided everyone with a "super" first half.

On Friday, April 23, the SPA held its Annual Golf Tournament & Barbeque at Rancho Murieta Golf Course and Clubhouse, located 20 miles east of Sacramento. The golf course and clubhouse is one of the newest additions to the Sacramento area, and approximately 90 members and guests enjoyed the golf, "cocktail hour" and dinner. A "super skit" was given by Dalton Pollard, Consulting Geologist, and Fred Harris, Western Mud Co., depicting Dalton as the professional petroleum geologist who is explaining the art of "poking a wildcat" to a layman, played by Fred. The setting of course, for this discussion is the local bar.

Congratulations to Ron Leineke, Nevada, General Chairman for this event; Dalton, Fred, and too numerous to mention companies and individuals for the tremendous success of this year's event.

The "Dusters" did it again! Friday, May 21, was the day set aside for the Third Annual API-SPA Softball Tournament & Barbeque at Elk Grove Park. Although the crowd was small for the event, the enthusiasm was still there. The Rio Vista-woodland "Dusters" came from behind to score the winning run in the bottom of the ninth to take the game from the Sacramento "Gasers."

The tournament was followed by cold beer and barbequed steak dinner. There was, however, one injury this year. Herb Wheeler, Dow Chemical, broke his ankle in an all out attempt to steal home in the first inning.

Dow Chemical U.S.A., Oil & Gas Division, has within the last several weeks, closed its Sacramento office and established Western regional headquarters in Walnut Creek. The oil and gas division staff includes: Clark Ditzyler, Western Regional Manager; Terrence Plumb and Fred Hankinson, petroleum geologists; Jim Williams, geothermal geologist; Herb Wheeler, engineer; and Bob Hussey, landman. The new address for the division is:

Dow Chemical U.S.A.
Oil & Gas Division
2855 Mitchel Drive, Suite 150
Walnut Creek, CA 94598
Ph: (415) 944-2285

Monty Doris has recently joined Capitol Oil Corp., Sacramento, as a geologist. Monty, USC graduate, will assume the geologic responsibilities in the Sacramento Valley formerly held by Pat Robinson. Pat terminated his employment with Capitol in April, and is now residing in the L.A. area.

TERRY PLUMB

AAPG PUBLIC AFFAIRS COMMITTEE

The AAPG Public Affairs Committee is seeking individuals within the profession who personally know the Representatives in their districts and would be willing to be a liaison and pass on to the elected Representatives material furnished by the National Headquarters. It is felt that this type of personal approach will carry more weight than something being sent from Headquarters directly. If personal contact cannot be established, then the Committee would like individuals within the districts who would be interested in forwarding this data to maintain the personal approach. Any members interested in taking part in this program should contact George B. Pichel, Union Oil Company of California, P.O. Box 7600, Los Angeles, California 90051, and he will see that they are made aware of the function of this group.

Alaska

NO REPORT.
The discovery and development of these local gas supplies is the most realistic way to continue to bring low-cost gas to the consumer. A reasonably higher price to the producer to encourage more and deeper drilling—Not Regulation—is the most direct approach to increasing local supplies and to minimize the rising cost of gas to the consumer.

The CPUC's intended regulatory action can only result in sharply higher prices in the very near future and to the growing, heavy reliance on highly costly imported gas.

NATIONAL AAPG

President John E. Kilkenny of the American Association of Petroleum Geologists has announced that the following persons have been elected by membership ballot to serve on the 1976-77 executive committee which heads the 15,000 member organization. Ed R. Turner, with Getty Oil in Houston, has been elected president for the 1977-78 term and will serve as president-elect during 1976-77.

Elected to the vice-presidency was Ralph L. Miller, senior geologist with the U.S. Geological Survey in Reston, Virginia.

Beginning a two-year term as the association's treasurer will be George S. Gallbraith, independent geologist from Abilene, Texas.

Serving with the recently elected officers whose terms begin July 1 will be incumbent president-elect John D. Moody of New York City. Moody is a consultant, and will succeed to the presidency. Robey H. Clark, vice president of Diamond Shamrock in Amarillo, will serve the second year of a two-year term as secretary. Also serving the remainder of his two-year term will be Editor John W. Shelton, geology professor at Oklahoma State University, Stillwater, Oklahoma.

William Dow Hamm, a consulting geologist from Dallas, and retired executive vice president and director of Atlantic Richfield Company, has been named by the American Association of Petroleum Geologists as the 1976 recipient of that association's highest honor, the Sidney Powers Memorial Medal.

Honorary membership is given to persons to recognize service to the profession and to the association, and will go to three members this year. Leslie M. Clark of Calgary is a consultant and retired vice president of Pacific Petroleum. Sir Peter Kent of London is chairman of the United Kingdom National Environmental Research Council, having retired as exploration manager of British Petroleum several years ago. R. Dana Russell of Denver is a consultant, and a retired Marathon Oil consultant on geology and geophysics.

Lewis G. Weeks of Westport, Connecticut, chairman of the board of Weeks Natural Resources, will be the recipient of the AAPG Human Needs Medal, in recognition of his outstanding geological contributions benefiting human needs. Weeks, a past president of AAPG, is an honorary member, and a former recipient of the Powers Medal.

The Distinguished Service Award will be given to James R. Jackson, Jr., of Houston, recognizing his extraordinary service to AAPG. Jackson is Environmental Affairs Manager for Exxon Company, USA.

Other award recipients will be Paul Hoffman of Ottawa, Ontario, with the Geological Survey of Canada, who will receive the J. C. Sproule Award, given for the outstanding petroleum geology paper by an author under 35 years of age; Daniel A. Busch of Tulsa, a consulting geologist, who will receive the President's Award, given for the best published paper of the year; and Leigh C. Price of Denver, with the U.S. Geological Survey, who will receive the Matson Award for the paper judged the best of those presented at the 1975 national convention.

PACIFIC SECTION AAPG

BEST PAPER AWARD 1976

Donald L. Ziegler and John H. Spotts, co-authors of the paper "Reservoir and Source Bed History in the Great Valley, California," have been announced as winners of the A. I. Levorsen Memorial Award for the best paper presented at the 1976 Pacific Section AAPG Meeting in San Francisco. This award is given at the section and regional meetings of the AAPG for the best paper, with particular emphasis on creative thinking toward new ideas in exploration.

The paper, presented by Don Ziegler, showed reservoir data (porosity — permeability — depth) and geochemical concepts applicable in four major depocenters of the Great Valley of California, and focused on helping explorationists recognize the "best reservoirs" and relate them to source, migration and trap parameters to lead to successful finding of "Tomorrow's Oil from Today's Great Valley Province."

Don Ziegler and John Spotts are with Standard Oil of California, Western Operations' group in San Francisco.

BOB BLAISDELL
1) President Reid reviewed many fine accomplishments of 1975-1976. Among the most important and far reaching were:
   a) Constitution and By-Law changes to a) Solidify membership increase
   1) Year now July 1 thru June 30
   2) Membership over 1100
   b) Defined "cooperating societies" on b) Determine if any additional co-
      1) Alaska Geological Society operating societies plus the of-
      Coast Geological Society - i.e. San c) Have considerable investment in d) Will look into having "warehouse"
      Angeles Basin Geological storage problems.
      Society d) An outstanding Convention in San e) Conduct Fall Field Trip -
      Northern California Geological Francisco f) 1977 Convention in Bakersfield g) 1977 Spring Picnic
      Society h) Improve public awareness 1) Coast now doing and reaping the profit - makes them more
e) Sacramento Petroleum Assoc. easier! Coast probably best area.
f) San Joaquin Geological Society h) Improve public awareness

d) An outstanding Convention in San i) Activate Committee on Planning & Organization - determine di-
      Francisco rection on Publication, Directory, Accounting, Cooperating Societies, Streamline operations, sharing costs with other Societies on West Coast, etc.

d) An outstanding Convention in San Francisco 3) President Reid announced the following Committee assignments:
   a) Committee on Finance Don Hallinger, Chairman
   b) Committee on Membership Susan Cage, Chairman
   c) Committee on Legislation Robert Paschall, Chairman
   d) Committee on Publications Carl Evans, Chairman
   e) Committee on Directories Marilyn Tennyson, Chairman
   f) Committee on Conventions Stanford Eschner, Chairman
   g) Committee on Public Affairs Ted Off, Chairman

4) President Reid requested the Secretary to prepare a roster of officers, representatives, committee chairmen of cooperating societies plus the of-

ficers of the SEPM, SEG, Pacific Sections.

New Business
1) Considerable discussion about informing the Public concerning the Energy business was had. It was suggested that the Pacific Section coordinate efforts with the National AAPG and other industry organizations. The Committees on Legislation and Public Affairs must be very active. An effort must be made to turn around the uninformed, anti oil business attitude of the various government bodies and the public in general.

   a) Fred Harris and Ronald Bain discussed the "show cause order" of the California Public Utility Commission. This order could result in most gas producers being classified as Public Utilities.

2) Resolutions:
   a) Motion by John Truex, seconded by Vern Jones that: The Treasurer draw $5000 from savings and advance to the Publication Fund. The $5000 to be replaced when available. Passed.
   b) Motion by Vern Jones, seconded by Fred Harris that: The President, Treasurer and Secretary be authorized to furnish United California Bank, State Mutual Savings and Surety Savings with new signature cards. Passed.
   c) Carl Evans reported that publication inventory exceeds $38,000. He also reported that:

   a) Section still owes $1500 on Kleinpell publication
   b) Have considerable investment in Borderland Symposium (Approx. $5500).
   c) Have 500 1975 directories - will give as bonus with purchase of other publication.
   d) Will look into having "warehouse" sale.
   e) Need additional copies of "Global Tectonics" from San Joaquin Society.
   f) Should consider getting local Societies to help with sales.

3) Committee on Finance Don Hallinger, Chairman

5) General discussion was had concerning letter from Harold Bertholf, D.O.G. Mr. Bertholf has requested a meeting with industry to help chart the D.O.G.'s course of action.

   a) President Reid will follow-up on this.
   6) Ted Off mentioned that Tom Dib-
alized was underscored. Additionally, a case history of a multi-well drilling program in the Sacramento Valley was detailed to illustrate what the producer contends with, cost-wise, and the attendant short-comings of the present price structure.

Perhaps the chief points of focus centered on the role of the Independent, the dire need of an adequate price incentive to promote more drilling in the face of rising costs, and the Independent's sensitivity to negative legislation and the portent of governmental control.

The Commissioners were told that regulating the gas producer would effectively shut down the exploration side of this business.

Of the four Commissioners, Leonard Ross was the most expressive. He, and the others, were grateful for the information gained during the discussions, however, Ross is dedicated to pursuing the Commission's "Order to Show Cause" (as to why producers of gas should not be regulated as utilities) to its conclusion — regardless of the effects it will most likely have on the gas industry in the state.

Ross's reasoning and purpose is guided by the producer's ("outrageous") demands during the 1975 round of price renegotiations with PG&E. The request by some producers for $2 dollars or more for their gas in Ross's mind translates into a $200 million dollar "rip-off" of the Northern California consumer. Efforts to show that most of even this larger type of increase would be re-invested in Northern California in the search for gas fell on deaf ears. The case of two major oil companies recently purchasing non-energy companies (using oil and/or gas income dollars) serves as sufficient documentation for Ross and Batinovich.

These two Commissioners also failed to answer how they would rationalize to the consumer the near-future, inevitable, high cost of imported gas (e.g., LNG), or why the large volume of Northern California consumer dollars are going into the Canadian economy to the detriment of both the local consumer and the local gas industry. The point was made that Sacramento Valley gas is the cheapest in PG&E's system and that the consumer and the local economy could only stand to benefit from more local production and discoveries.

Ross's thinking extends to the "banking" of the gas in Northern California, i.e., preserving this gas for the future while using up Canadian, Alaskan, Indonesian, etc., gas. Much discussion evolved from this point. The incentive to drill in order to find more gas in the light of minimized production ultimately led to Ross's expressing his thoughts regarding a two-tier price system. Ross would favor a significant increase in the price of new gas while increasing the price for existing gas perhaps 15% to 20% a year. The relationship between this thinking and the CPUC regulating the producer is not clear.

It would appear that Batinovich agrees, at least tacitly, with Ross's thinking. On the other hand, Sturgeon and Symons appear to be friendly toward the petroleum industry. These latter form the conservative camp whereas the former two make up the liberal camp. President Holmes is the usual "swing" vote.

Interestingly, sometimes humorously, but most of all, sadly, there is a very noticeable level of animosity between the two camps. This, coupled with the "political expediency" nature of much of the Commissions' direction of voting, bears ill-tidings for the petroleum industry in this state.

ROLAND J. BAIN
NATIONAL AAPG

A groundbreaking ceremony for the Lewis G. Weeks Energy Resources Tower was held on the grounds of AAPG Headquarters in Tulsa on June 30. Honored guests were Dr. and Mrs. Weeks, who have contributed $1 million for the construction, and James E. Hara, president of Skelly Oil Co., which has contributed the property necessary for the expansion.

The Tower will rise from the parking lot of the present headquarters building and be joined to it. It will contain approximately 15,000 square feet which, with the 10,000 square feet in the existing building, will assure adequate expansion space for the future. A large petroleum geology library will be featured in the tower and, along with the DeGolyer collection at the University of Oklahoma, will provide an unparalleled resource base for studies in petroleum geology.

Expressions of gratitude were offered by executive director Fred Dix on behalf of the headquarters' personnel, by Tulsa Mayor Robert J. LaFortune on behalf of the city, by president John E. Kilkenny on behalf of the Association, and by chairman W. Dow Hamm on behalf of the Foundation. Members of the Board of Trustees of the Foundation and both the 1975-76 and 1976-77 executive committees were present.

Congratulatory messages were read from Vincent McKeelvey, USGS director; Senator Dewey F. Bartlett, U.S. Senator from Oklahoma (and an AAPG member); Bill Ayerton, president of the Canadian Society of Petroleum Geologists; past-president Frank Morgan, who, along with his vice-president, Lewis Weeks, laid the cornerstone for the present building 23 years ago; and past-president Grover E. Murray.

In attendance at the ceremony were past-presidents Dan Busch, Ben Carasey, and Bill Curry; SEPM president Robert Shaver; and Dallas Geological Society president Stan Pittman.

Completion of the facility is projected for late 1977.

1976 SEPM
FALL FIELD TRIP
Depositional Environments of Lower Paleozoic Rocks in the White-Inyo Range, Inyo County, California

The purpose of this year’s fall field trip is to examine the depositional environmental features of the Lower Paleozoic section in the White-Inyo Range. Starting in Owens Valley at Big Pine, California, the field trip will concentrate on two areas: (1) the area near Westgard Pass to examine Lower Cambrian strata, and (2) the Mazourka Canyon area to see the Ordovician-Silurian sequence and the overlying Mississippian rocks. The associated guidebook contains a set of papers dealing with aspects of paleontology, stratigraphy and depositional environments of the White-Inyo Paleozoic strata.

The field trip will be one day, October 16th, but will be followed the next day by informal short trips to selected areas in the White-Inyo Range. A dinner (plus keg) and talk will be presented the previous evening at Camp Inyo, west of Big Pine.

The itinerary follows:
October 15: 6:00 p.m. — keg opened at Camp Inyo
7:00 p.m. — Dinner
8:00 p.m. — Business Meeting
8:30 p.m. — Talk on the depositional environments and Cambrian grand cycles of deposition.

October 16: 7:30 a.m. — Assemble at the junction of Highways 395 and 168
8:00 a.m. — Leave junction of 395 and 168 to start trip.
5:00 p.m. — Field trip finishes at Independence, California.

The field trip will be one day, October 16th, but will be followed the next day by informal short trips to selected areas in the White-Inyo Range. A dinner (plus keg) and talk will be presented the previous evening at Camp Inyo, west of Big Pine.

The itinerary follows:
October 15: 6:00 p.m. — keg opened at Camp Inyo
7:00 p.m. — Dinner
8:00 p.m. — Business Meeting
8:30 p.m. — Talk on the depositional environments and Cambrian grand cycles of deposition.

October 16: 7:30 a.m. — Assemble at the junction of Highways 395 and 168
8:00 a.m. — Leave junction of 395 and 168 to start trip.
5:00 p.m. — Field trip finishes at Independence, California.

To reach the departure area from the Los Angeles area, drive north on Highway 395. Big Pine lies between Independence and Bishop about 275 miles from Los Angeles. In October reaching the Big Pine area from western or northern areas of California may require using one of the southern

Employment Opportunity

Los Angeles County Senior Oil Appraiser—Appraise oil mining rights and related facilities for property tax purposes. Permanent location in Los Angeles Basin, Los Angeles County Assessor’s Department.

Minimum requirements: Graduation from an accredited college with a degree in petroleum engineering, mining engineering or geology, and one year’s appraising or engineering experience in connection with oil wells and equipment. Experience in oil field engineering is desirable.


Current salary range: $18,526 - $23,086.

Contact:
Mr. Robert Cook
(213) 974-3341
Room 250, Hall of Administration
500 West Temple Street
Los Angeles, California 90012

1977 PACIFIC SECTION CONVENTION

The San Joaquin Geological Society will host the 52nd Joint Annual Meeting with the Pacific Sections of the AAPG, SEPM and SEG in Bakersfield, California, April 20-23, 1977.

The meeting will commence on Wednesday afternoon with participants being offered the opportunity to participate in either an APGS-sponsored geo-political and environmental seminar or a golf tournament. The Ice Breaker Cocktail Party will be held that evening.

Technical papers on Thursday and Friday will focus on the theme “Up With Basics,” emphasizing modern tools and techniques for finding hydrocarbons plus several case histories of their successful use. A tentative outline of the program will be issued at a later date.

The joint session will wind up Sat- (continued on page 5)
NATIONAL Aapg

Independent petroleum geologists from Texas will head the slate of candidates for office in the American Association of Petroleum Geologists in an election to be held in the spring. Robert Gunn, Wichita Falls, will oppose M. O. Turner, San Antonio, for president-elect. The successful candidate will serve in that office for one year and assume the presidency of Aapg in July, 1978. These and other candidates were announced by John D. Moody, current president.

Gunn, a native of St. Paul, Minnesota, is a graduate of the University of Minnesota and studied petroleum engineering at Tulsa University. He served as an Air Force pilot during the second World War and began his career as a geologist with Texaco in Wichita Falls in 1949. In 1953, Gunn became a consulting geologist in Wichita Falls, and in 1958 established himself as an independent oil operator.

Turner was born in Magnolia, Texas and graduated from the University of Houston after serving in submarines during World War II. His first job in petroleum geology was with Stanolind (now AMOCO) in Corpus Christi and later with the same company in San Antonio and Houston. In 1954, Turner became a consulting geologist and independent oil operator in San Antonio.

Candidates for vice-president are Edwin P. Kerr and Wilbur E. McMurry, both of Oklahoma City.

Kerr, a native of Marietta, Oklahoma and a graduate of the University of Oklahoma, began his career with Phillips in Bartlesville and subsequently worked for Bay Petroleum in New Mexico, for Northern Natural Gas in Midland and Omaha, and for Mobil in Oklahoma City. In 1973, he became an independent exploration geologist.

McMurry was born in Drumright, Oklahoma and graduated from the University of Oklahoma. He has held geologic positions with Magnolia (now Mobil), Phillips, and Stanolind (now AMOCO). In 1954, he established his practice as a consulting geologist.

John J. Amoroso, a consultant and independent from Houston, will oppose Cliff J. Nolte, an independent geologist from Denver, for a two-year term as secretary of the Aapg.

Amoroso was born in Portsmouth, New Hampshire and holds degrees from Tufts and the University of Michigan. He worked for Pan American (now AMOCO) prior to becoming a consulting geologist and independent in 1969.

Nolte, a native of Smiley, Texas, received degrees from the University of Oklahoma. He was employed by Skelly and Sterling Drilling before establishing a consulting practice in 1957 and beginning operations as an independent geologist in 1962.

Dr. John W. Shelton, Oklahoma State University, Stillwater, will run unopposed for a second two-year term as Editor.

Shelton was born in China Spring, Texas and obtained degrees in geology from Baylor University and the University of Illinois. After receiving his Ph.D. from Illinois in 1953, he joined Shell as a geologist, leaving in 1963 to join the faculty at Oklahoma State. He also serves as a director of ERICO, Inc., a geological consulting firm headquartered in England.

Successful candidates will assume their offices on July 1, 1977. The Aapg is the world's largest geological organization, with more than 18,000 members in all 50 states and 90 countries.

LABGS CONTINUING EDUCATION PROGRAM

November 1-3, 1976
2:30 to 6:30 p.m.
Union Oil Auditorium
461 South Boylston
Los Angeles, California

This year's Continuing Education Program will be "Tectonic and Stratigraphic Evolution of the California Continental Borderland from Cape Mendocino to Baja Mexico."

At present speakers will include:

David Howell, USGS
Gary Green, USGS
Jack Vedder, USGS
Eli Silver, USCS
John Crowell, UCSC
and possibly
Bob Yates, Ohio University

List of topics:
1. Strike Slip vs. Extension in the Continental Borderland
2. Provo San Andreas Fault
3. Mesozoic California and the Coast Range Thrust
4. Poway Fan
5. San Gregario-Hosgri Fault
6. Is the Great Valley Series Coeval with the Franciscan?

Those interested in attending please contact:
Bob Davis, Union Oil Co.
9465 South Santa Fe Springs Rd.
Santa Fe Springs, CA 90670
(213) 945-1221

or
Bruce Barron
Oil Well Research Inc.
1939 West 16th St.
Long Beach, CA 90813
(213) 496-4254

SEPM PUBLICATIONS

Coalinga Cretaceous Fild Trip Guidebook
Members $4.00
Non-members $5.00
Baja California Field Trip Guidebook
Members $4.00
Non-members $5.00
Miocene Symposium Volume
Members $7.00
Non-members $8.00
Turbidite Short Course Notes
Members $4.00
Non-members $5.00
The Paleogene of the Panche Creek-Cantua Creek Area
Members $7.00
Non-members $8.00
Future Energy Horizons of the Pacific Coast, Paleogene Symposium and Selected Technical Papers .......$15.00
Santa Maria Field Trip Guidebook ..................$3.00
Neogene Symposium .........................$5.00
Increased mailing costs force us to add a postage and handling fee of 85 cents per order.

Make checks payable to the PACIFIC SECTION SEPM. Send checks and form to:

Pacific Section SEPM
P.O. Box 70444, Ambassador Station
Los Angeles, CA 90070

PACIFIC SECTION
AMERICAN ASSOCIATION PETROLEUM GEOLOGISTS
EXECUTIVE COMMITTEE

President EUGENE F. REID (906) 324-6771
President Elect VERN C. JONES (916) 485-9590
Vice-President JOHN W. TRUEX (213) 436-6211
Secretary DONNOM. REYNOLDS (906) 324-6717
Treasurer HOWARD E. STARKS (805) 649-9590
Past President WESLEY G. BRANDER (906) 324-4601
Editor JOHN W. LIDSTROM (213) 385-0515

NEWSLETTER STAFF

Editor JOHN W. LIDSTROM
Assistant Editor DON WH. O'BRIEN
Membership Secretary BETTY BEAN

ASSOCIATE EDITORS

Alaska DICK E. ATCHISON (907) 278-5417
Alaska TOM HOPPS (907) 648-5541
Northern California OTTMAR F. KOTICK (415) 946-0560
Sacramento TERRY J. SMITH (916) 482-6490
San Joaquin TERRY J. SMITH (916) 482-6490

RECOMMENDED READING LUCY E. BIRDALL (213) 688-2359

NEWSLETTER of the Pacific Section—American Association Petroleum Geologists is published monthly by the Pacific Section.

Material for publication and requests for previous copies should be submitted to JOHN W. LIDSTROM, TEXACO INC., 3350 WILSHIRE BLVD., L.A. 90010.

Material received by the 10th of each month will be included in the following issue.

CHANGE OF ADDRESS—subscription, and membership inquiries should be directed to:
MEMBERSHIP SECRETARY PACIFIC SECTION AAPG, P.O. BOX 1072, BAKERSFIELD, CALIFORNIA 93302.
CONSTITUTION
PACIFIC SECTION OF THE AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Adopted: September 1924 • Last Amended: April 1976

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

ARTICLE II
Object
Section 1. The object of this Section shall be to provide for discussion of subjects and problems coming within the scope of the profession and by such intercourse, to promote the advancement and aims of The American Association of Petroleum Geologists as set forth in its Constitution, by-laws and code of ethics.

Section 2. The Pacific Section is a non-profit organization, and no portion of the financial assets inures to the benefit of any private individual or member.

ARTICLE III
Membership
Section 1. A member, in any classification, of the American Association of Petroleum Geologists in good standing shall be eligible for membership in this Section. The Executive Committee shall establish the membership year for the Section.

Section 2. Annual payment of the dues of this Section by any person qualified above shall be a declaration of Active membership in this Section.

The Executive Committee may honor the accomplishments of one or more members each year by designating "Honorary Life Members." Honorary Life Members shall be exempt from all future dues.

Section 3. Other persons not members of The American Association of Petroleum Geologists who are interested in the activities of this Section, may subscribe to the publication of the Section "Pacific Petroleum Geologist Newsletter" subject to the approval of the Executive Committee. Non-member subscribers shall not have the right to vote or hold office but may otherwise participate in all activities of this Section.

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

Section 2. There shall be an Executive Committee consisting of the President, Vice-President, President-Elect, Secretary, Treasurer, Editor of the "Pacific Petroleum Geologist Newsletter" and one Representative each selected by such other cooperating geological societies approved by the then existing Executive Committee.

ARTICLE V
Funds
Section 1. The Executive Committee shall establish the fiscal year, review the financial position of the Section and have a current financial statement available at each annual business meeting. Annual dues of the Section shall be payable in advance in an amount established by the membership at the annual business meeting. The Executive Committee shall not have authority to levy assessments against the membership and shall not have the authority to increase annual dues.

Section 2. The funds of this Section shall be deposited to the credit of Pacific Section of The American Association of Petroleum Geologists in any federally insured depository selected by the Treasurer but not to exceed the limit insured by the Federal Deposit Insurance Corporation. Whenever necessary, the President shall certify to the authority of the Treasurer in administering such account by providing the depository bank with a notice of the Treasurer's election and with a true copy of this Constitution.

The Treasurer shall have authority to issue checks against the bank account so established, on his sole signature, but in the event of his absence or incapacity to act due either to sickness or death, withdrawals or payments by check may be made on the signature of the President during the continuance or the absence or incapacity of the Treasurer, in which event the President shall certify to the authority of the Treasurer and the circumstances relating to the absence or incapacity of the Treasurer shall be certified to by the Executive Committee if so required by the depository.

ARTICLE VI
Meetings
Section 1. Pacific Section meetings shall be held annually or at other times on call of the President.

Section 2. The time and place of Pacific Section Business Meeting shall be determined by the Executive Committee.

ARTICLE VII
Elections
Section 1. The President of the Pacific Section of The American Associa-
tion of Petroleum Geologists, with the approval of the Executive Committee, shall appoint a nominating committee at least three (3) months prior to the beginning of the next membership year of the Pacific Section, consisting of five (5) members, two (2) of whom shall be past officers of the Pacific Section.

The nominating committee shall, each year, select two (2) candidates for each of the following offices: President-Elect, Vice-President, and Secretary, and every other year shall select two (2) candidates for the office of Treasurer. The slate of the candidates shall be announced in the “Pacific Petroleum Geologist Newsletter” at least five (5) weeks prior to the election. Additional nominations may be made by written petition of twenty-five (25) or more members of the Pacific Section in good standing, received by the Secretary within two (2) weeks following the publication of the nominating committee slate. The Executive Committee shall have the authority to name an additional nominee in case of necessity, to assure two candidates for each office. Voting shall be by mailed ballot. The Secretary shall set a date for counting ballots and shall mail ballots to all members not less than three (3) weeks prior to this date.

SECTION 2 In matters pertaining solely to the business of this Section, all active members of the Section may vote. In matters pertaining to the official business and the selection of business representatives or other officers of The American Association of Petroleum Geologists only active members of the Association shall be qualified to vote.

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

BY-LAWS

ARTICLE I Committees

SECTION 1 Standing Committees

The Pacific Section of The American Association of Petroleum Geologists shall establish and maintain the following standing committees:

a. Committee on Finance
b. Committee on Membership
c. Committee on Planning and Organization
d. Committee on Legislation
e. Committee on Publications
f. Committee on Directories
g. Committee on Field Trips
h. Committee on Spring Picnic
i. Committee on Conventions
j. Committee on Public Affairs.

SECTION 2 Appointments and Tenure

The President shall appoint all committee chairmen and co-chairmen and fill vacancies whenever they occur. The committee chairmen or co-chairmen shall appoint all vice-chairmen and committee members for their respective committees. The Executive Committee may remove any committee chairman or co-chairman. The chairmen and co-chairmen may remove any vice-chairman or member of their committee. The term of office of a member of a standing committee shall be one (1) year. Chairmen may succeed themselves from year to year if reappointed by each succeeding President. Committee members shall be active members and non-member subscribers of the Pacific Section.

SECTION 3 Committee on Finance

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

SECTION 4 Committee on Membership

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

SECTION 5 Committee on Planning and Organization

The Committee on Planning and Organization shall be comprised of past Presidents of the Pacific Section, that can participate. Their primary function shall be to assist the President in long-range goals and objectives of the society as well as in specific problems that may require their backgrounds.

SECTION 6 Committee on Legislation

The primary function of the Committee on Legislation shall be to advise of Federal, State and local legislation that affects the profession.

SECTION 7 Committee on Publications

The primary function of the Committee on Publications shall be to assist in securing material for publication in the “Pacific Petroleum Geologist Newsletter.” The Editor of the Newsletter shall serve as ex officio member and no other member of the Executive Committee shall serve as a member of the Committee on Publications.

SECTION 8 Committee on Directories

The primary function of the Committee on Directories shall be to annually update the Pacific Section of The American Association of Petroleum Geologists Membership Roster. Compilation of the directory shall be coordinated with that of the Society of Exploration Geophysicists and the Society of Economic Paleontologists and Mineralogists and shall be formally published as mutually agreed upon.

SECTION 9 Committee on Field Trips

The primary function of the Committee on Field Trips shall be to plan a field trip, and following Executive Committee approval, program and carry out this activity.

SECTION 10 Committee on Spring Picnic

The primary function of the Committee on Spring Picnic shall be to organize a spring picnic which may be sponsored by a cooperating society as mutually agreed upon and approved by the Executive Committee.

SECTION 11 Committee on Conventions

The primary function of the Committee on Conventions shall be to submit a convention plan, and following Executive Committee approval program and carry out this activity.

SECTION 12 Committee on Public Affairs

The primary function of the Committee on Public Affairs shall be to disseminate knowledge, following Executive Committee approval, to the membership and other relevant entities, about subjects within the scope of the profession.
1976 SEPM FALL FIELD TRIP
(continued from page 1)
Sierra passes. However, if heavy snowfall is late this year northern passes will allow quicker access to Highway 395 and the Owens Valley.

Published geologic maps and reports covering the area and useful on the field trip are: Big Pine Quad., USGS Prof. Paper 470; Blanco Mtn. Quad., USGS GQ 529; Independence Quad., USGS Bull. 1181-O; Inyo Mtns., USGS Map 1-506; Waucoba Mtn. Quad., USGS GQ 528. Also an excellent field guide written by Robert Sharp details the geology of the Owens Valley and the area to the south. This guide (Geologic Field Guide to Southern California, Wm. C. Brown, Pub.) is very interesting to follow from the Los Angeles area.

Lodging can be obtained in Big Pine at the Bristlecone Manor Motel, Starlight Hotel, or Big Pine Hotel (Big Pine, California 93513). Lodging is also available in Lone Pine and Bishop. Those wishing to camp may use the grounds at Camp Inyo (Oct. 15) or may use one of the many campgrounds in the area: Big Pine Triangle (junction of 395 and 108), Baker Creek (west of Big Pine), Tinemaha Creek, Taboose Creek, or Gooddale Creek (south of Big Pine). Arrangements should be made by participants. Transportation will be by private car and car pool is recommended.

The deadline for mail pre-registration is October 4, 1976. For further information or telephone reservations (deadline October 11, 1976) contact:

Kristin McDougall
Paleontology and Stratigraphy Branch
U.S. Geological Survey
345 Middlefield Road
Menlo Park, California 94025
415-233-8111, ext. 2150

---

San Joaquin

The new "cartel" of officers for the San Joaquin Geological Society are:

President
John Carver .................. Occidental
5000 Stockdale Highway
Bakersfield, California 93309

Vice President
Hy Seiden .................. Consultant
1401 Ming Avenue
Bakersfield, California 93304

Secretary
Wes Franklin ................. Tenneco
Box 9909
Bakersfield, California 93309

Treasurer
Dick Elliott .................. Occidental
5000 Stockdale Highway
Bakersfield, California 93309

---

Newsletter Correspondent
Jeff Smith, Chaparral Petroleum, Inc.
200 New Stine Road, Suite 295
Bakersfield, California 93309

Continuing Education Chairman
Wes Franklin .................. Tenneco

Membership Chairman
Carrol Blythe .................. Strata Log

Delegate to Pacific Section
Rex Young .................. Cities Service

Delegate to AAPG
Bob Morrison .................. Occidental

---

Alaska

Greetings again from the Land of the Midnight Sun or the Noonday Moon, depending on what time of the year you happen to be looking up. Speaking of looking up, in Anchorage this summer that's about the only direction you can look without having your eyeballs cluttered up with wall-to-wall snow. It's getting so motorized and civilized there is a rumor going around that the nicest thing left about Anchorage is that it is only about a 15-minute drive from Alaska. Just a rumor though, it is really more like a 45-minute hassle on an L.A. freeway without the freeway. Should thin out soon though because like the monkey said when he stuck his tail in a lawn mower — "It won't be long now." — there's already a top knot of termination dust on the Chugaches, and according to the trees, next week is going to be fall all week.

Speaking of fall, the AGS is going to have the first meeting of the '76-'77 season September 23 at noon somewhere, and a hamburger and beer bust Friday, September 24, at Jewell Lake, 4:00-8:00 p.m. Also of interest, the AGS and SEG Continuing Education Program is sponsoring a course, "Geo-Physics for Geologists" by W. B. "Robby" Robinson on October 12, 13, and 14 from 2:30 p.m. - 5:30 p.m. and 7:30 p.m. - 9:30 p.m. daily. The nominal fee is a mere $50 bucks, but you best sign up quick because we expect a limit on the number will be necessary. So sign up like now and send the long green (checks to AGS acceptable as long as they aren't rubberized) to:

Alaska Geological Society
Box 1288
Anchorage, AK 99510

New AKS officers debuting this fall are:

President
Alex Sisson .................. Union

Vice President
Thomas Miller .................. USGS

Secretary
Arlen Ehm .................. Consultant

Treasurer
Linda Bratlie .................. B.P.

President Elect
Keith Calderwood .................. Consultant

Enough for now, sure gotta keep my snow machines in tune with AI in office.

Buenos Snowshoes,

DICK E. ATCHISON
PACIFIC SECTION CONVENTION (continued from page 1) 
urday with a field trip and tennis tournament. Throughout the session, activities will be planned for the ladies. Please plan to attend and partake of Bakersfield’s famous hospitality.

STANFORD ESCHNER
General Chairman

Los Angeles

Everybody was in fine form for our last Northam Station barbecue. The steaks, wine and beer were great and so were our speakers, Dr. Marty Link of Harbor College and Dr. David Howell of the USGS in Menlo Park. Their discussion of the “Poway Fan” in the La Jolla area and the OCS was very timely but too limited in scope.

I would like to suggest that our Fall Continuing Education Program be a Symposium on the Tectonics and Sedimentary Evolution of the Continental Borderland from Cape Mendocino to Baja, Mexico. This would include discussions on controversial topics like “Strike-Slip versus Extension,” the “Coast Range Thrust,” a “Proto San Andreas Fault,” etc.

Students present at the barbecue included:

Chris Warren — Texas A & M
Cristi Stewart — Oregon State
Sorena Sorensen — Pomona College
Sean Carey — Cal State U, LA
Dean Dunn — USC
Lori Lyn Cameron — USC
Lynda Sue Wall — USC
Lee Husgrove — USC
Rex Pleg — USC
Jessie Vaughan — USC

After presenting the student guests, President Davis noted there were no students from UCLA. At this point he retched and muttered something about UCLA being a substandard university while USC was great.

Unfortunately, he didn’t realize it takes a graduating USC geology student at least three to four years of post graduate work at “Texaco Tech” on Wilshire Boulevard to attain the academic level of a UCLA Senior!!!

In the case of a Cal Lutheran graduate (Scott Knight excepted), it takes five years at Union, Santa Fe Springs, to achieve this level.

Future LABGS Event

Taix Restaurant, Sunset Boulevard, 12:00 Noon, Thursday, October 21, 1976. Jack Lord, Foreign Exploration Manager for ARCO will speak on the Geology of Indonesia.

TOM REDIN
52nd ANNUAL MEETING
PACIFIC SECTION
AAPG, SEPM, SEG

Beautiful Downtown Bakersfield (fun city of the San Joaquin) is the site of the 52nd Annual Joint Meeting of the Pacific Sections of the AAPG, SEPM and SEG, to be held April 20-23, 1977, at the Bakersfield Civic Auditorium.

Convention activities will begin at 2:00 p.m. on Wednesday, April 20, with a geopolitical seminar sponsored by the California Section, Association of Professional Geological Scientists or, for the athletically inclined, either a golf tournament at the Kern City Golf Course beginning at 11:00 a.m., or a tennis tournament at the Rio Bravo Tennis Ranch at 12:00 noon.

Serious conventioneers can get down to the really important business of the convention at the Icebreaker cocktail party, 6:30 p.m., Wednesday, April 20, at the Civic Auditorium.

Technical sessions will begin Thursday morning, April 21, following keynote addresses from AAPG President John Moody and SEPM President Robert Shaver. The AAPG program will emphasize the theme “Up With Basics,” which, while sounding vague and indecent, actually describes basic geological principles in the exploration of obscure stratigraphic and structural traps. Be sure to attend, so that you can find out what that means.

The SEPM program will consist primarily of a Symposium on the Paleozoic Paleogeography of the Pacific Coast, first of a three-year series on West Coast Paleogeography during the Paleozoic, Mesozoic and Cenozoic eras.

The SEG program will stress the relationship of well information to the seismic section, interpretation of the seismic section, and modern data acquisition. (More mysteries for the poor geologist to attempt to comprehend.)

The Joint AAPG-SEPM-SEG Annual Luncheon will take place at 12:30 noon.

SAN JOAQUIN GEOLOGICAL SOCIETY
SHORT COURSE

February 18-19, 1977

Title: Late Mesozoic and Cenozoic Sedimentation and Tectonics in California.

Speakers: Tor H. Nilsen, Convenor (USGS); Thomas W. Dibblee, Jr. (USGS); Ben M. Page (Stanford); Eugene A. Fritsche (CSU Northridge).

Topics: Friday, February 18 (9:00 a.m.-5:30 p.m.)
1. Subduction Zone Tectonics (Page).
2. Strike-slip Tectonics of the San Andreas Fault System and its role in Cenozoic basin evolution (Dibblee).
3. Turbidite Facies and Sedimentation patterns (Nilsen).
4. Some Principles of Tectonics and Sedimentation and their application to shallow marine and nonmarine sedimentation (Fritsche).
5. Sedimentary Tectonics of the Upper Cretaceous Great Valley Sequence, California (Nilsen).

Topics: Saturday, February 19 (8:00 a.m.-4:30 p.m.)
1. Early Tertiary Tectonics and Sedimentation in California (Nilsen).
2. Oligocene Sedimentation and Diastrophism in relation to the San Andreas Fault System (Dibblee).
3. Early to Medial Miocene (Zemorrian to Relizian).
4. Medial to Late Miocene (Lusian to Delmontian), Sedimentation and Tectonics in California (Fritsche).
5. Plio-Pleistocene and Holocene event in the Great Valley and Coast ranges (Page).
6. The effect of San Andreas Fault Strike-Slip Tectonics on hydrocarbon accumulations in California (Dibblee).

Cost: $90.00 for member and nonmembers, $15.00 for students. This includes the publication, extra copies of which are $5.00.

Place: West (Bakersfield) High School Student Center, 1200 New Stine Road, Bakersfield, California.

Registration: Will begin at 8:00 a.m., Friday, February 18, 1977, at the Student Center.

Pre-Registration and additional information, contact:
TENNECO OIL COMPANY
Wes Franklin
Box 9909
Bakersfield, CA 93309

PACIFIC SECTION

a three-year program of the
SOCIETY OF ECONOMIC
PALEONTOLOGISTS
and
MINERALOGISTS

Fall, 1976 - 1977 - 1978 - Spring, 1979

The Pacific Section, SEPM, has undertaken a three-year program to document what is presently known about the paleogeography of the Pacific Coast of the United States of America. This program of study will manifest itself in three fall field trips and their accompanying guidebooks, three spring symposia, and a three-volume set of books on “Pacific Coast Paleogeography of the U.S.A.”

Area to be studied—
All the territory between 114° and 125° W, longitude and 32° and 49° N. latitude (California, Nevada, Oregon, Washington, Western Idaho, and the offshore regions of the Pacific Coast) will be included in this study.

Procedure—
We will concentrate our study on one geological era each year. In the fall there will be a field trip to study depositional environments of that era in a selected place and in the spring a symposium will be held where contributors will present what is known about the paleogeography of that era. A volume containing papers that include paleogeographic maps for selected time periods in the era as well as papers that deal with the paleogeography of selected areas will be published and available at the time of the symposium. To provide con-
ANNUAL MEETING . . .
(from page 1)

p.m. Thursday, and the SEPM Dinner Meeting at 7:30 p.m. Thursday, both at the Civic Auditorium. College Alumni Luncheons will be held at 12:15 p.m. Friday at the Hill House, across the street from the Civic Auditorium.

Serious conventioneers can bring the really important business of the convention to a fitting climax at the Dinner-Dance, 7:30 p.m. Friday at the Stockdale Country Club.

For those dedicated field geologists who can stagger out of bed on time the following morning, buses will leave the Civic Auditorium at 8:30 a.m. Saturday for a field trip to the outer area of Midway-Sunset and to Elk Hills.

If your wife refuses to turn you loose in the fun city of the San Joaquin and insists on coming along, ladies’ activities include a bus trip to Tehachapi for lunch and a tour of vacation homes at Stallion Springs on Thursday, and a choice on Friday between a round robin tennis tournament or a guided tour of Pioneer Village.

A schedule of events is as follows:

Wednesday, April 20 —
Noon to 5:00 p.m. — Tennis — golf
1:00 to 9:00 p.m. — Registration, Civic Auditorium
2:00 to 5:00 p.m. — Geopolitical Seminar
6:30 to 9:00 p.m. — Icebreaker Cocktail Party, Civic Auditorium
Thursday, April 21 —
7:30 a.m. — Speakers’ Breakfast
8:00 a.m. — Registration, Civic Auditorium
9:00 a.m. — AAGP-SEPM-SEG Joint Technical Session, Keynote Speakers
10:00 a.m. — Ladies’ Tour of Stallion Springs
12:30 p.m. — Joint AAGP-SEPM-SEG Luncheon, Civic Auditorium
2:30 p.m. — AAGP-SEPM-SEG Technical Programs
5:00 p.m. — Annual Business Meeting, Civic Auditorium
7:30 p.m. — SEPM Dinner Meeting, Civic Auditorium
Friday, April 22 —
7:00 a.m. — Delegates’ Breakfast
8:00 a.m. — Registration, Civic Auditorium
9:00 a.m. — AAGP-SEPM-SEG Technical Program
10:00 a.m. — Ladies’ Guided Tour of Pioneer Village
10:00 a.m. — Ladies’ Tennis Tournament, Rio Bravo Tennis Ranch
12:15 p.m. — Alumni Luncheons
2:30 p.m. — AAGP-SEPM-SEG Technical Programs
7:30 p.m. — Dinner-Dance, Stockdale Country Club
Saturday, April 23 —
8:30 a.m. — Field Trip to West Side San Joaquin Valley to observe outcrops of Stevens Sand

SEPM . . .
(from page 1)

continuity to the program and to the three-volume set of symposia publications, a standard base map will be used for all paleogeographic maps. Each of these standard maps, which will show paleoenvironments in the place where they exist today, probably will be supplemented with palinospastic maps.

Contributors to the Field Trip Guidebooks must have their papers submitted for referring and editing by July 15th of the appropriate year and have final typing done according to prescribed camera-ready form by September 1st.

Contributors to the Symposium Volumes must have their papers submitted for referring and editing by February 1st of the appropriate year and have final typing done according to prescribed camera-ready form by March 15th.

Schedule of the program——
Fall, 1976 — (October 15-16, meeting at Big Pine, California) Field Trip to study Paleozoic depositional environments in the Inyo Mountains.
Leader: Johnnie N. Moore, Department of Geology, University of California, Los Angeles, CA 90024.
Cochairmen: John H. Stewart, U.S. Geological Survey, 345 Middlefield Road, Menlo Park, CA 94025; Calvin H. Stevens, Department of Geology, San Jose State University, San Jose, CA 95192.
Fall, 1977 — (date and location unknown) Field Trip to study Mesozoic depositional environments.
Leader: unknown (looking for a volunteer).
Spring, 1978 — (date unknown, tentatively meeting at Sacramento, California) Symposium on Pacific Coast Mesozoic Paleogeography.
Chairman: Ivan P. Colburn, Department of Geology, California State University, Los Angeles CA 90032.
Fall, 1978 — (date unknown, tentatively meeting at Ojai, California)

Field Trip to study Cenozoic depositional environments.
Leader: A. Eugene Fritsche, Department of Geosciences, California State University, Northridge, CA 91330.

Spring, 1979 — (date and meeting place unknown) Symposium on Pacific Coast Cenozoic Paleogeography.

Call for organizers and contributors——
We are seeking your help to make the Fall, 1977 through Spring, 1979 part of this program of success. If you are interested in contributing to this program in any of the ways listed below, please contact the appropriate chairperson or field trip leader or A. Eugene Fritsche. 1. Field Trip Leader for a Mesozoic depositional environments trip in Fall, 1977.
2. Volunteers to write papers that include paleogeographic maps and that describe the paleogeography of the Pacific Coast for selected time periods. (Papers and maps to be published and presented orally. Volunteers must be prepared to meet deadlines described above.)
3. Volunteers to write papers on the detailed paleogeography of selected areas. (Papers to be published and presented orally. Volunteers must be prepared to meet deadlines described above.) Some papers will be accepted for publication without being presented orally.

MICROPALEONTOLOGY SHORT COURSE
University of Nebraska
June 27-July 7, 1977

Using a team of 10 specialists (J. Platt Bradbury, R. E. Casey, William E. Frerichs, Stefan Gartner, Paul R. Krutak, James L. Lamb, William A. S. Sarjeant, Walter C. Sweet, Leonard R. Wilson, Walter W. Wornhardt, Jr.), the 10 day course will review most of the biostratigraphically important microfossil groups, discuss their ecology and taxonomy, and evaluate their use in petroleum exploration. Course tuition is $600.00 and includes all required instructional materials. For further details contact Paul R. Krutak, Professor of Geology, Dept. of Geology, 418 Morrill Hall, University of Nebraska, Lincoln, Nebraska 68508, phone (402) 472-2645.
San Joaquin

The SJGS, as we hope you know, is hosting this year's Pacific Section annual fling. Stan Escher, our General Chairman, has so well organized the meeting that with nothing else to occupy those many busy minds, the SJGS is sponsoring a super (lative) symposium this February. It's designed to help us relearn those simple yet so complex - stratigraphic principles our profs hopefully crammed into immature, fun loving undergrad grad minds. Sound Greek to you too? well, here's another chance to learn it again. If the word stratigraphic confuses you, see you for sure in February.

On the action scene, Hy Seiden has again outdone himself in preparing a fantastic December ladies' night for the SJGS, but the details will be too late to help you by printing time. Let me say only that if Dr. Ed Laskowski knows as much about Laplanders as Mongolians, you missed a real treat. Shrimp again, Jerry!!! J. M. Sonosky of United California Bank will follow in January to discuss the over present "Problem of Financing Energy Companies." Maybe a few solutions, too!

Would any of you wonderful readers consider a short course (vcss Extension Course) aimed at preparing you to pass the Registered Geologist Exam given by the State each year? If so, drop me a line, Jeff Smith, 200 New Stine Road, Suite 295, Bakersfield, California 93309. A class, if there is sufficient response, will begin in September of 1977 or sooner. We need to know ASAP.

Rumors, Rumors! We hear Union is finally UNITING their Western Region in Ventura next summer. Thanks John. But they are leaving their two best young-uns, Beth Kendall and John Matthews to haunt Bob Carlson and Slim Jim Green. All of us, including those who chose to stay, will miss the whole group. But life goes on . . .

Gulf has been rumored to be preparing a "Regional" office to alleviate their present three to a room program. Let's hope it is true and that they move in on hire enough people to fill the void left by Union to keep our Society strong and active.

Let's hear it for a safe, sane MERRY CHRISTMAS and see you all in February and/or April.

Jeff Smith

NOR CAL GEOLOGIST WINS COVETED AWARD

Northern California Geological Society is proud to announce the presentation of a Citation for Distinguished Service to member John C. Maher, Office of International Geology, USGS Menlo Park, California on December 7, 1976 by Thomas S. Kleppe, Secretary of the Interior.

In recognition of achievements in stratigraphic geology and other contributions to the scientific programs of the Geological Survey, the citation states: "For his many outstanding achievements, John C. Maher is granted the highest honor of the Department of the Interior, the Distinguished Service Award."

The citation refers principally to Maher's subsurface stratigraphic correlations for locating ground water and petroleum supplies. "His subsurface stratigraphic studies have been a stimulus for the discovery and subsequent development of several oil and gas fields in the Mid-Continent area . . . future development of Elk Hills, California, oilfield will rely heavily on final results of his work."

Those of us who have worked with John Maher know that his technical ability in subsurface correlation is only part of his professional expertise. The competence he used to chair and organize the successful North Slope of Alaska seminar in February 1970 was repeated in his work as General Vice Chairman for Operations on the first Circum-Pacific Energy and Mineral Resources Conference in Honolulu, 1974. We are assured of the success of the second CPEMRC in Honolulu, 1978 for which John is again Vice Chairman.

Nor Cal Geological Society wishes to add to the citation that John C. Maher has all the qualities to preserve and maintain the current pride in the geological society, and promote steady progress toward higher levels of professionalism.

OTTMAR F. KOTICK

Los Angeles

NO REPORT.

Alaska

NO REPORT.
PACIFIC SECTION AAPG EXECUTIVE COMMITTEE MEETING
November 12, 1976

Committee Reports

a) Finance Committee. Proposed Budget 1976-1977 received from Don Hallinger showing income projected sufficient to cover expenses including $2,721.00 to be spent on special membership activities. IEC (Informal Executive Committee) recommends approval of Proposed Budget 1976-1977 and recommends use of $2,721.00 in funding national AAPG speakers for cooperating societies.

IEC recommends that the $2.00 per member rebate from the Pacific Section to cooperating societies be made as soon as practical after January first, each year, based on membership at January first. The rebate payments to be made in 1977 would be net of amounts paid after July 1, 1976, by the Pacific Section Treasurer for the accounts of cooperating societies. The effect after January 1, 1977, will be that each cooperating society will pay its own bills and there will be a full year between rebate payments.

b) Publications Committee. President Reid reported that no meeting had yet been held with Carl Evans to discuss the problems of the Publications Committee. Bob Davis reported that over 100 copies of "Aspects of the Geologic History of the California Continental Borderland" had been sold at the L.A. Basin Geological Society short course held November 1, 2 and 3. It was suggested that the President look into the possibility of utilizing storage space and paid personnel at the Bakersfield core repository for handling publications.

c) Directories Committee. President Reid reported that Marilyn E. Tennyson had resigned as 1977 Membership Directory Chairman and that Robert Davis had been appointed to take over as Chairman. Mr. Davis reported that one price quotation for typesetting, printing, etc., had been received and that the Pacific Section AAPG and SEPM membership had been furnished personal data cards, many of which had already been returned to him. He noted that the Pacific Section SEG membership still had to be circulated. Mr. Davis also recommended that a photographer be present at the Bakersfield 1977 Convention to take pictures for future directories. Mr. Davis was all finished personal data cards, many of that a photographer be present at the 1977 directory of be in his hands by the first week of January, 1977. He will have a mock-up of the directory ready by February 1. Mr. Davis will need some help to construct an employers' list for inclusion in the directory.

d) Spring Picnic Committee. Bob Davis reported that the new President of the L.A. Basin Geological Society will plan the Spring Picnic when he takes office next January.

e) Conventions Committee. Stan Eschner, General Chairman of the 1977 Convention in Bakersfield, reported through President Reid that the flier announcing the convention theme, program, and activities will be mailed on or before November 19. He noted that thumb nail abstracts of papers to be presented will be in the hands of national AAPG by November 15 for later printing in the Bulletin. A first exhibit flier is scheduled for mail out by December 1. The Committee had established a checklist of critical deadlines and everything appears to be on schedule.

Mr. Eschner also reported that he had received a call from Frank Simmons of Standard Oil Company in San Francisco suggesting a fishing trip to Baja California, following the convention, tied in with appropriate geologic meetings to make the trip deductible for tax purposes. It was the recommendation of the IEC not to sponsor such a trip.

Jim Weddle, General Chairman of the 1978 convention in Sacramento, reported that key committee assignments had been made and that the Red Lion Inn had been chosen as the convention site. He noted that some expenses were being incurred and asked for an advance of funds. Mr. Reid stated that he would discuss the matter with Treasurer Howard Stark and that he did not expect an advance to be a problem in view of the good financial position of the Section.

Old Business

a) State Board of Registration for Geologists and Geophysicists vacancies. The IEC recommended that the President contact Ted Off, Doug Traxler, Ed Hall, and Pete Hall (District 4) about serving on the State Board if appointed by the Governor, and if they accept, the President to submit their names to the Governor.

b) Printing the maps and works of Tom Dibblee.

Vernon Stephens reported that a USGS librarian had compiled a complete list of published and open-file maps, bulletins, professional papers, etc., which were the work of Tom Dibblee. Mr. Stephens estimated that the printing of the complete set would require a sales price of $150.00 per set and that it would be impractical to make individual maps available (i.e., break up sets). The IEC recommended against attempting publication, but suggested that the Executive Committee explore another method of honoring Mr. Dibblee in his lifetime such as a "Tom Dibblee Scholarship" or "Tom Dibblee Award for Excellence in Field Study," etc.

New Business

a) Reports from Societies. Los Angeles Basin Geological Society President, Robert Davis, reported that the L.A. Society had held on November 1, 2 and 3 a highly successful continuing education program entitled "Tectonics, Structure and Stratigraphic Evolution of California." Attendance was about 150 persons. The L.A. Society may hold a free program in January, 1977. Election of Society officers will be conducted in early December.

San Joaquin Geological Society will conduct a short course February 19 and 20, 1977, entitled "Late Mesozoic and Cenozoic Sedimentation and Tectonics in California."

b) Contacts with Legislators. The IEC recommended that an appeal be placed in the PACIFIC PETROLEUM GEOLOGIST NEWSLETTER for any members having personal contact with a Legislator (State or Federal) to get in touch with Art Spaulding at Western Oil and Gas to be placed on WOGA's "hotline" for contact when legislation vital to the industry is being considered.

c) Nominees for National AAPG Office. The IEC had no recommendation for nomination of persons for National AAPG office.

d) Endowment Fund for Core Repository. Jim Weddle reviewed the financial arrangements for building and maintaining the core repository in Bakersfield. He suggested that the Pacific Section AAPG consider an annual financial contribution toward maintaining the repository, paying salaries, etc. No recommendation was made by the IEC and the matter was taken under advisement.

e) Next meeting will be January 7, 1977, somewhere on the coast from Santa Barbara to Ventura. Other meetings are scheduled in Bakersfield on March 4 and April 1, 1977.

REX YOUNG, Temporary Secretary
GUIDEBOOKS

GB 5—Geol. of Southeastern San Joaquin Valley, Calif.—Kern River to Grapevine Canyon (AAPG) 1965 ............................................ $4.00

GB 10—Gabilran Range and Adjacent San Andreas Fault (AAPG-SEPM) 1967 .......................... $10.00

GB 12—Geol. of the North Channel Islands and Southern Calif. Borderlands (AAPG-SEPM) 1969 $13.50

GB 13—Geol. and Oilfields of Coastal Areas, Ventura and the Los Angeles Basins, California (AAPG) 1969 ............................................. $5.00

GB 14—Spring Field Trip, Tehachapi Mountains Crossing of California Aqueduct (AAPG) 1968 .................................................. $1.50

GB 17—Guidebook to the Southeastern Rim of the Los Angeles Basin (AAPG-SEPM-SEG) 1970 $4.00

GB 18—Spring Field Trip, Ventura Avenue and San Miguelito Oil Fields (AAPG) 1970 ............... $2.00

GB 20—Pacific Slope Geology of Northern Baja Calif. and Adjacent Alta Calif. (AAPG-SEPM-SEG) 1970 $4.00

GB 21—Cook Inlet Basin Oil and Gas Fields Guidebook (AGS) 1970 ............................................. $10.00

GB 22—Field Trip San Andreas Fault—San Francisco Peninsula (AAPG) 1971 ................. $0.50

GB 23—San Fernando Earthquake Field Trip (LABGS) .......................................................... $2.00

GB 25—West Side Central San Joaquin Valley Field Trip Guidebook (AAPG-SEPM-SEG) 1972 ... $8.00

GB 26—Central San Inez Mountains Field Guide (AAPG) 1972 .................................................. $5.00

GB 28—A Profile of Southern Calif. Geology & Seismicity of L.A. Basin (SEG) 1973 ............ $4.00

GB 29—Metropolitan Oilfields & Their Environmental Impact (AAPG-SEPM-SEG) 1973 ........ $4.50

GB 30—Imperial Valley Regional Geology and Geothermal Exploration (SEG-AAPG-SEPM) 1973 ............................................. $4.00

GB 31—Santa Barbara Channel Region Revisited (AAPG-SEPM-SEG) 1973 ......................... $2.50

GB 32—Miocene Sedimentary Environment and Biofacies, Southeastern L.A. Bay (SEPM) 1973 $5.00

GB 33—Sedimentary Facies Changes in Tertiary Rocks, California Transverse & Southern Coast Ranges (SEPM) 1973 ................................. $4.50

GB 34—Field Guide of Traverse of Castaic Ridge Basins (AAPG) 1973 ................................ $1.75

GB 35—Guide to Geology and Hydrology, Anchorage Area (AGS) 1973 ................................. $3.00

GB 37—Geology of Peninsular California (AAPG-SEPM) 1974 ............................................. $10.00

GB 38—Paleogene of the Panoche-Cantua Creek Area (SEPM) 1974 ........................................ $8.00

GB 39—Oilfields of Whittier Fault Zone (AAPG-SEPM-SEG) 1975 ........................................ $3.00

GB 40—Geology of Torrey Canyon, Oakridge, Santa Susana, and Tapo Ridge Oil Fields, Ventura County .................................................. $1.00

REPRODUCED GUIDEBOOKS

GB 1-A—Guidebook to Gaviota Pass, Refugio Pass (AAPG-SEPM) 1947 ................................. $1.00

GB 2-A—Field Trip Guide to Ventura and San Miguelito Fields (AAPG-SEPM-AIME) 1956 ........ $3.00

GB 2-B—Spring Field Trip, Huasna Basin, San Luis Obispo County (AAPG-SEPM) 1956 ........... $1.75

GB 2-C—Guidebook, Chico Martinez Creek Area (SJGS) 1958 ............................................. $1.75

GB 2-D—Round Mountain Area Field Trip Guide (SJGS) 1958 ............................................. $2.50

GB 2-E—Death Valley to San Fernando (SEPM) 1951 .......................................................... $0.50

GB 2-F—Road Log San Marcus Pass to Jalama Creek (SEPM-AAPG) 1954 .......................... $1.00

GB 2-G—Cuyama District Field Trip 1951 .......................... $1.00

GB 3-A—Spring Field Trip Panoche Hills (SEPM) 1960 ........................................................ $1.75

GB 3-B—Spring Field Trip, Geol. & Paleontology of the Southern Border of the San Joaquin Valley (AAPG-SEPM-SEG-SJGS) 1961 .................. $4.00

GB 3-C—Guidebook to Geol. of Carrizo Plains & San Andreas Fault (AAPG-SEPM-SJGS) 1962 $3.50

GB 3-D—Spring Field Trip, Devil’s Canyon Area (AAPG-SEPM) 1963 ................................ $1.00

GB 3-E—Guidebook to the San Andreas Fault Zone from Temblor Mtns. to Antelope Valley Southern Calif. (AAPG-SEPM-SJGS) 1964 .................. $3.50
| GB 9-B | Guidebook to Western Santa Inez Mtns. (CGS-SEPM) 1965 | $4.50 |
| GB 4-B | Guidebook to Placerita Area (AAPG) 1965 | $3.00 |
| GB 8-A | Spring Field Trip, Santa Suzanna Mountains (AAPG) 1966 | $1.50 |
| GB 9 | Geol. of the Big Mountain Oil Field and Nearby Area, including notes on the trip from Piru to Big Mountain (AAPG) 1967 | $1.00 |
| GB 15 | Field Trip Guide to Santa Rosa Island (AAPG-SEPM) 1968 | $1.00 |

**1967 CONVENTION FIELD TRIPS**

| GB 9-B | Pliocene Seaknoll, South Mountain, Ventura County | $2.50 |
| GB 9-D | Steam Injection—Wilmington Oil Field | $0.50c |
| GB 9-E | Whittier Oil Field, NE L.A. Basin | $0.75c |
| GB 9-F | Baldwin Hills—Palo Verde Hills | $2.25 |
| GB 9-G | Central Santa Monica Mountains Stratigraphy and Structure | $1.25 |
| GB 9-H | Structural Complexities Eastern Ventura Basin | $2.00 |
| GB 9-J | Los Angeles to Death Valley | $2.50 |
| GB 9-J | Santa Catalina Island | $2.00 |
| GB 9-K | Hall Canyon and Wheeler Canyon | $1.50 |
| GB 9-L | Underwater Field Trip | $3.50 |

**CROSS SECTIONS** ($3.00 each or as marked)

| CS 1 | Mt. Diablo to East Side Sacramento Valley (2 sheets) 1951 |
| CS 2 | Eastern Ventura Basin, 1952 |
| CS 3 | Los Angeles Basin-Palo Verde Hills to San Gabriel Mountains 1952 |
| CS 4 | Salinas Valley, 1952 |
| CS 5 | Western Ventura Basin, Pt. Conception to Channel Islands (2 sheets) |
| CS 6 | Sacramento Valley—No. (2 sheets). From T23N/R1W to T16N/R1E |
| CS 7 | Ventura Basin-Central (1 sheet) 1956. From T5N/R23W to T1S/R1W |
| CS 8 | San Joaquin Valley—So. (1 sheet) 1957. From T31S/R20E to T28S/R30E |
| CS 9 | San Joaquin Valley—Central (1 sheet) 1957. From T21S/R12E to T15S/R23E |
| CS 10N | San Joaquin Valley—Central (1 sheet) 1958. From T4N/R3E to T18S/R20E |
| CS 10S | San Joaquin Valley—Central (1 sheet) From T18S/R20E to T10N/R19W |
| CS 11 | San Joaquin Valley—West Side (1 sheet) 1959. From T19S/R15E to T8N/R23W |
| CS 12 | Santa Maria Basin (1 sheet) 1959. From T11N/R34W to T5N/R34W |
| CS 13 | Sacramento Valley—No.—So. (1 sheet) 1960. From T29N/R2W to T3N/R2E |
| CS 14 | L.A. Basin (1 sheet) 1962. From T15S/R15W to T8S/R10W. SBB&M |
| CS 15 | Sacramento Valley—Central (1 sheet) 1967. From T4N/R1W thru T4N/R7E |
| CS 16 | Sacramento Valley—No. San Joaquin (1 sheet) 1967. From T3S/R10E to T8N/R1E |
| CS 17 | San Joaquin Valley Kingsburg—Tejon Hills (1 sheet) 1969. From T16S/R26E to T11N/R18W |
| CS 18 | Geological Section Upper Cook Inlet (AGS) 1967 |
| CS 19 | Cook Inlet Basin Stratigraphic Study, 5 sheets (AGS) 1969 | $15.00 |
| CS 20 | Lower Susitna-Knik Area Stratigraphic Sections, 2 sheets (AGS) 1970 | $6.00 |
| CS 21 | Copper River Basin Stratigraphic Sections, 2 sheets. (AGS) 1970 | $6.00 |
| CS 22 | No. Slope Stratigraphic Section (AGS) 1971 | $5.00 |
| CS 23 | No. Slope Stratigraphic Section-Prudhoe Bay to Ignek Valley (AGS) 1972 | $5.00 |

**SAN ANDREAS FAULT—CROSS SECTIONS 1964**

($3.00 each)

| SA 1 | Pacific Ocean to Gulf of Farallones |
| SA 2 | Gulf/Farallones to Bielwaski Mtn. |
| SA 3 | Bielwaski Mt. to Hollister |
| SA 4 | Hollister to Bitterwater Valley |
| SA 5 | Bitterwater Valley to Parkfield |
| SA 6 | Parkfield to Soda Lake |
| SA 7 | Soda Lake to Santiago Creek |
| SA 8 | Santiago Creek to Sawmill Mtn. |
| SA 9 | Sawmill Mtn. to Valyermo |
| SA 10 | Valyermo to Mexican Border |
| SA 11 | San Andreas Composite Cross Sec. Summary of SA 1-SA 10 on 1 sec. |

**MISCELLANEOUS PAPERS**

| MP 1 | San Andreas Fault Bibliography (AAPG) 1962 | $3.00 |
| MP 2 | Selected Papers Presented to the San Joaquin Geol. Soc. Vol. 1, 1962 | $3.00 |
| MP 3 | Selected Papers Presented to the San Joaquin Geol. Soc. Vol. 2, 1964 | $3.00 |
| MP 4 | Selected Papers Presented to the San Joaquin Geol. Soc. Vol. 3, 1965 | $2.25 |
| MP 8 | A Symposium of Papers Presented at the 40th Pacific Sec. AAPG Convention (AAPG) 1965 | $3.00 |
| MP 11 | Proceedings of North Slope Seminar (AAPG) 1970, Palo Alto, Calif. | $10.00 |
| MP 12 | Program Abstracts—1971 Arctic Symposium (AAPG-SEPM-SEG) | $1.00 |
| MP 13 | Program Reprints, 1972 Annual Meeting AAPG, SEPM,SEG, Pac. Sec. | $5.00 |
| MP 14 | Selected Papers Presented to the San Joaquin Geol. Soc. Vol. 4, 1972 | $2.50 |
| MP 17 | Geologic Literature on the San Joaquin Valley (NCGS-AAPG) 1973 | $9.00 |
| MP 18 | Global Tectonics Short Course (SJGS) 1974 | $5.00 |
| MP 19 | Preprints San Diego Meeting (AAPG-SEPM) 1974 | $2.50 |
| MP 22 | Current Concepts of Depositional Systems Short Course (SJGS) 1975 | $6.00 |
| MP 23 | Paleogene Symposium of Pacific Coast (AAPG-SEG-SEPM) 1975 | $15.00 |
| MP 24 | Geol. History of Calif. Continental Borderland (AAPG) 1976 | $7.00 |
| MP 25 | Tomorrow’s Oil From Today’s Provinces (AAPG) 1976 | $5.00 |
J. D. Moody on Energy

J. D. Moody is a widely experienced energy consultant based in New York City. He is 1976-77 president of the American Association of Petroleum Geologists and a former senior vice president of Mobil Oil Corporation. Condensed below is Mr. Moody’s presentation to a recent Transco-sponsored meeting for representatives of customer companies.

The events of recent years have made us all acutely aware of the critical interplay of three factors—utilization of natural resources, growth of population, and degradation of the environment. Our quality of life hinges on these three things.

The more natural resources we are able to make use of, the better our quality of life can become. If population increases but other factors remain constant, life quality declines. As population increases, so does environmental degradation.

These are the inescapable tradeoffs that will shape our future. Citizens and their governments must work to determine what sacrifices will be necessary, and which ones we are willing to make, to achieve a livable balance.

As this country’s population was climbing during the last 20 years, an area the size of the entire state of Ohio was paved or converted to urban use. What should we expect in the future?

In 1850, the world’s population was about one billion people. It doubled in the subsequent 75 years to two billion people. The next doubling time, from two billion to four billion, was 50 years.

Now, the next doubling period is estimated to be only about 35 years. There will be perhaps eight billion people in the year 2010, and it would seem that little can be done to change that rapid growth.

Against this backdrop, we must consider natural resource utilization as it affects our quality of life, and basically, a discussion of natural resources is a discussion of energy requirements.

All kinds of metals and industrial raw materials can be expressed in terms of energy because it takes energy to get them out of the ground and to make them available to us. We can therefore express any of these resources in terms of Btu’s (British thermal units).

Natural resource utilization is primarily use of energy for fuel and transportation, energy for space heating, and energy for food. The United States is far ahead of the rest of the world in agricultural activities, which are becoming more energy-intensive all the time. Energy for food production in the United States is highly efficient and the envy of other nations, but it is rapidly becoming more costly. A kilocalorie of protein in India, for example, costs about $10, whereas in the U.S. it costs about $40.

Back 100 years ago, agriculture was dependent solely on solar energy. But through the application of such things as high-energy fertilizers and high-energy tractors, we have greatly improved our agricultural output. Nevertheless, on an energy-balance basis, we are losing ground.

The most efficient method of feeding people is through hunting and gathering, where a single Btu of investment yields about 30 Btu’s in return (but this presumes that there is something to hunt and gather!). Contrast that with growing corn in Iowa, where we invest 1 Btu and get back only about 2.5 Btu’s. For soybeans, we invest 2 Btu’s for every Btu returned. We invest 10 Btu’s for a Btu of rice. We invest 33 Btu’s for a single Btu from commercial fishing. We invest 78 Btu’s for one Btu from cornfed beef.

These are extravagances and we can hardly afford them. The production of electricity takes three Btu’s of energy in the form of gas or coal to make one Btu of electricity. Yet our whole life style is moving in the direction of being electrified. The efficiency has to be improved if we’re going to be able to continue to do this.

In the past we have relied heavily on technological improvements—what I call quick technological fixes, or “QTF’s”—to solve our problems for us. We’ve been quite successful at it. However, we are running into physical limits of resource availability, physical limits in terms of population growth and the destruction to the environment, the reduction of the capability of the land to support life.

Energy is intimately involved in these tradeoffs of population, environmental degradation and life quality. We can’t punch one of these buttons and not have another button pop out.

What about energy source availability? The measure of the availability of energy is called entropy. There is a tremendous economic pressure to use our low-entropy energy sources first—those energy sources that are most concentrated. The higher-entropy energy sources are used later, since they cost more to develop.

The lowest-entropy energy source available is heavy hydrogen. The next most concentrated form is uranium. Then we have the fossil fuels, crude oil, natural gas, coal, tar sands. Next are geothermal steam, water power, solar energy, tidal energy, winds, geothermal hot rocks, atmospheric electricity, and so forth.

These regular sources of energy can be divided into stocks and flows. I use the word “stock” in an economic sense, that is, something replenishable but not renewable. A “flow” is renewable. Now we can see that heavy hydrogen, uranium, and the fossil fuels are all stocks, and uranium and the fossil fuels exist in limited amounts. On the other hand, the energy sources that are flows, or essentially unlimited, are generally higher-entropy types of energy: geothermal steam, solar energy, geothermal hot rocks, and atmospheric electricity.

The really vast sources of energy, and the ones which we must view as our ultimate energy sources, are heavy hydrogen and solar energy, geothermal hot rocks, and atmospheric electricity. If we could tap these sources in any meaningful way, we could solve a lot of our problems. All the other sources of energy are basically limited, the term “limited” being relative. Nevertheless, all of our fossil fuels and uranium, the sources of energy we’re using most now, are limited.

In addition to uranium, crude oil, natural gas, and coal, we now use some geothermal steam, some water power, and some solar energy. The application of solar energy is mainly limited to collectors for space heating. The optimum use of solar energy would be direct conversion into electricity, but this is probably going to become available only after the year 2000.

The only major new source of energy that might come on strong enough to make a real impact before the year 2000 is the development of tar sands. Nevertheless, the difficulties in producing this energy and in building the plants to make it available are such that we have a significant time lag with which to deal. All the other possibilities—heavy hydrogen, breeder reactors, synethics from coal, synthetics from oil shale—are probably beyond the year 2000. That means we’re looking at a time gap of 25 to 30 years until we must bridge with our present sources of energy—uranium and the fossil fuels.

We can convert the world’s oil, gas, tar, oil shale, coal, and uranium to

(continued on page 8)
Moody classifies present and future energy sources according to whether they exist in finite quantities (stocks) or replenish themselves (flows), and according to whether they are potentially vast or limited in application.

<table>
<thead>
<tr>
<th>Types and Magnitude of Energy Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STOCK</strong></td>
</tr>
<tr>
<td>Heavy hydrogen</td>
</tr>
<tr>
<td>Uranium</td>
</tr>
<tr>
<td>Crude oil</td>
</tr>
<tr>
<td>Natural gas</td>
</tr>
<tr>
<td>Coal</td>
</tr>
<tr>
<td>Tar sands</td>
</tr>
<tr>
<td>Oil shale</td>
</tr>
<tr>
<td>Geothermal steam</td>
</tr>
<tr>
<td>Water power</td>
</tr>
<tr>
<td>Solar energy</td>
</tr>
<tr>
<td>Tidal energy</td>
</tr>
<tr>
<td>Winds</td>
</tr>
<tr>
<td>Geothermal hot rocks</td>
</tr>
<tr>
<td>Atmospheric electricity</td>
</tr>
</tbody>
</table>

Btu’s in computed percentages and divide them geographically around the globe. Of the six major sources that we now use, Russia and China have a combined 33 per cent of the world endowment of energy. The United States has 30 per cent and Canada, 12 per cent, or about 42 per cent in North America. That means three-fourths of the world’s energy is either in the United States and Canada or in Russia and China. The rest of the world has about 25 per cent.

Relative percentages of fossil fuels and uranium show that oil and natural gas liquids represent only about 4 per cent of the world’s total; natural gas, 2 per cent; tar sands, 2 per cent; oil shale, 3 per cent; coal, 44 per cent; and uranium, 44 per cent. Therefore, the world is not facing an energy shortage; it’s facing an energy availability shortage, because economic considerations force us to use our low-entropy energy sources first, and those are oil and natural gas primarily. We are geared so heavily to using oil and natural gas that we’re drawing these stocks down at an unprecedented and unacceptable rate.

The total energy endowment of the Middle East is only 1 per cent, but that 1 per cent is highly concentrated in the world’s largest oil fields — extremely low-entropy sources of energy. So with just 1 per cent of the world’s total Btu’s, the Middle East is able to quadruple the price of crude oil and make it stick. OPEC can hold the world to ransom with only 1 per cent of the world’s energy.

We estimate the total natural gas resource base of the world at 8,500 trillion cubic feet. Of that amount, 3,000 trillion have been discovered and 5,000 trillion remain to be found. We’re better off in natural gas than we are in crude oil because we have large amounts of discovered natural gas that have not yet been produced; we have produced only 759 trillion cubic feet of our over 3,000 trillion cubic feet that have been discovered.

Russia and China are more heavily endowed with natural gas than any other area in the world, with a probable total of 2,731 trillion cubic feet, of which 2,000 trillion cubic feet is yet to be discovered, according to our estimates. That is twice the amount in the Middle East and approximately twice that in North America. Most of the natural gas that we can anticipate discovering in the future is going to be in Russia and a lesser amount in China. That doesn’t mean, however, that there’s not a lot of gas yet to be found in the United States.

The U.S. is the only area that has already experienced a really large amount of natural gas production, but Western Europe is producing natural gas at a large rate now and is drawing down its reserves fairly rapidly. Gas development in the Middle East and the U.S.S.R. is only getting started, even though vast amounts have been discovered there. A large percentage, probably over 75 per cent, of the world’s natural gas is in giant gas fields which we define as fields with more than 3 trillion cubic feet recoverable.

The Tyumen Basin of Siberia has over 40 giant gas fields, and it includes the world’s largest known single gas field, which is estimated at around 210 trillion cubic feet of gas.

We have to find more giant fields, of both oil and gas, in order to make much of a dent on our energy supply problems as we now perceive them. We have to find gas fields that have trillions of cubic feet of gas, and we have to find oil fields that have billions of barrels of oil.

To put this into proper perspective, Russia has three or four oil fields that have more than 10 billion barrels of reserves. Most of the oil fields of that size are in the Middle East, while the remainder of the entire free world has three — only three. One of these is at Prudhoe Bay on Alaska’s North Slope, while the other two are in Venezuela and Indonesia.

In 1974, I estimated that there were 443 trillion cubic feet of gas in the U.S. yet to be discovered. The U.S. Geological Survey is now estimating 484 trillion cubic feet yet to be discovered. A major oil company published a number earlier this year of 526 trillion cubic feet available for discovery. How good are these estimates of undiscovered recoverable hydro-carbon resources? Although surprisingly consistent, they are probably poor, because these numbers are really unknowable.

There’s no way for us to ever know what these amounts really are because we’ll quit exploring at some point. In 20 years or so, exploration will taper off because the cost will have become so high in relation to the results. Only about two-thirds of what is estimated to be in the ground will actually be found, and perhaps one-third will remain undiscovered in fields undrilled.

Estimates of recoverable but undiscovered resources in the past have never been even close to being accurate. For example, regularly since 1925 someone has predicted that the United States was about to run out of oil, and we have consistently proved such estimates to be wrong. Let’s hope that all the estimates now being made will be proved to be just as low compared to actual undiscovered resources.

But that we have an energy problem is obvious, yet this in no way means that there isn’t enough oil and gas yet to be found for exploration to be worthwhile. (continued on page 9)
It appears that at long last Congress is beginning to come around a little bit and there’s some hope that the people in Washington are beginning to see the problem in its true perspective. They need to encourage our energy companies to find as much oil and gas in the United States as they possibly can.

Government has been very remiss, however, in doing much about establishing an energy policy. Whatever energy policy is finally devised in Washington, it should be one that thoroughly contemplates and understands the trade-offs I mentioned initially between life quality, population, energy utilization, and environmental degradation.

We need an energy policy that takes as much pressure as possible off demand, that emphasizes conservation as well as supply. We clearly must be more efficient and more effective in the way we use energy. There simply isn’t enough energy in the world to accommodate the population growth we’re going to experience and at the same time maintain our current life style. We have to tighten our belts somehow, and we have to be more careful with the energy we do have.

**CIRCUM PACIFIC ENERGY CONFERENCE**

The Circum-Pacific Council for Energy and Mineral Resources will present its second conference July 30-August 4, 1978 at the Hilton Hawaiian Village, Honolulu. This international conference is sponsored by The American Association of Petroleum Geologists, The Committee for Coordination of Joint Prospecting for Mineral Resources in Asia and Offshore Waters, The Pacific Science Association, The American Mining Congress, and the University of Hawaii and supported by about sixty geoscience societies around the world. Approximately 120 papers on petroleum, oil shale, tar sands, coal, geothermal energy, nuclear energy, minerals, ores, and groundwater will be offered by outstanding international scientists, economists, and statesmen. Pre- and post-Conference geological field trips similar to those in 1974 will be conducted on the islands of Kauai, Oahu, Maui, and Hawaii by experts from the University of Hawaii and the U.S. Geological Survey. A trip through the Halawa Water Tunnel will be available by courtesy of the Honolulu Board of Water Supply.

Although patterned after the very successful 1974 Conference, the program for the 1978 Conference has been expanded to include more and larger international educational exhibits, a special half-day seminar on environmental geology conducted by Thomas L. Wright, an evening public lecture on "Earthquakes and the Ring of Fire" by Barry Raleigh probably at a downtown location, and a pre-Conference workshop led by Robert E. Garrison.

Perhaps the largest addition will be the pre-Conference workshop, a product of the Circum-Pacific Council's Geoscience Training Committee. The subject will be subsurface methods in relation to basin analysis and resource appraisal. Basic concepts of sedimentation will be discussed but emphasis will be placed on use and interpretation of geophysical tools in boreholes to obtain data for analysis of structure and stratigraphy of basins in relation to its possible resources. The workshop will be designed primarily for those international students who do not commonly use these subsurface tools and methods; however, others desiring a refresher course in basic principles will be welcome. Registration probably will be limited to 100 persons. Pre-registration will be required and a special fee of about $25.00 each will be necessary to cover printing and mailing costs.

**JOHN C. MAHER, USGS**

435 Middlefield Road
Menlo Park, CA 94025

**Sacramento**

1976—Great, Super, Active! Those are words which describe the feelings for the majority of us in the petroleum industry in the Sacramento Valley during 1976. The last six months proved to be very active, both in the tempo of exploratory drilling and variety of meetings and discussions which members and guests attended. The Sacramento Petroleum Association had a record year in both membership and attendance of the weekly luncheon meeting. I haven’t seen Don Pinnell, S.P.A. Secretary-Treasurer, so related since taking office two years ago.

Mr. C. John Miller was the distinguished guest speaker at the Veterans Memorial Building in Rio Vista. Following a period of “attitude adjustment” approximately one hundred members were treated to a fantastic New York steak dinner prepared by its own A.P.I. gourmet chefs. Speaker for the evening was Mr. M. G. “Marty” Melford, Chief Deputy Supervisor, Division of Oil and Gas, Sacramento. Mr. Melford’s talk was entitled, “Update—Division Happenings and Legislation” and was an extremely informative and timely discussion of the recent changes in the Division regarding...
SACRAMENTO . . .
(from page 9)

ing personnel and legislation recently passed as part of the Public Resources Code relating to oil, gas, and geothermal wells to be implemented during 1977. Some of the specific areas of legislation discussed were indemnity bonds, oil and gas well testing, well records, geothermal resources study and gas storage well assessment. Mr. Mefferd also mentioned some of the items currently under consideration for future state policy, such as the proposed federal regulations concerning State Underground Injection Control Programs. The talk was well received by everyone, and certainly much needed with the changes in legislation occurring within the last year.

The S.P.A. has been quite active over the last six months, and there is every indication to expect that it will continue over into the new year. Membership has increased by 50% over 1975, and because of this, it may become necessary to look for more room to hold the weekly luncheon. Some of the members are even forced to remain in the cocktail lounge because of lack of seating. Along with the usual business portion of the luncheon, there have also been a number of short, informative talks given by members on a variety of subjects related to the petroleum industry. Some of the subjects covered to date are circulating systems and drilling mud; well logging, casing and cementing, mud logging, and lease acquisition. A number of other subjects will be covered during 1977 to update and refresh all of us in areas of the petroleum industry where we aren't directly concerned.

Roland J. Bain's "Summary of Exploration Activity in the Sacramento Valley for 1976" is in the process of being completed and will be available in mid-January. Roland compiles the drilling data at the end of each year and presents it in a short 4-5 page report on behalf of the S.P.A. An announcement will be made in the P.P.C. NEWSLETTER when the report is available and where to write for a copy.

Finally, at least for this year, the Voyager Inn at Davis was the site for a "Gas Patch" Christmas party on December 10 hosted by BJ Hughes, Inc.; Calada Materials; Go International; Lyons, Inc., and Midway Fishing Tool Co. The party was a super event, and will make the transition into the new year a little easier.

TERRY PLUMB

STATE BOARD OF REGISTRATION

Mr. William Park, a consulting geologist in Bakersfield, was elected President of the State Board of Registration for Geologists and Geophysicists at the August 4 meeting. Dr. Charles F. Richter was elected Vice President. Mr. Park replaced Ted Bear as President and Dr. Richter replaced John Curran as Vice President.

Three vacancies exist on the board because the terms of three members expired on June 1, 1975. Appointments to the board were not made and Ted Bear, John Curran and Wilferd Peak served for one additional year.

The State Board of Registration for Geologists and Geophysicists has scheduled a geology and geophysics examination for May 20, 1977, and the engineering geology examination for May 21, 1977. New applications must be received by February 20, 1977. Applicants who are retaking the examination must submit their applications by March 20. Examinations will also be given for geology and geophysics on November 18, 1977, and for engineering geology on November 19, 1977.

If you have any questions regarding the examinations, please contact the Board office at 1020 N Street, Room 421, Sacramento, California 95814, telephone (916) 445-1920.

A group of Geologists are trying to set up a fishing and rock viewing trip to the La Paz area of Baja California in May of 1977. The schedule would include three days of ocean fishing and two days of travel by air from Los Angeles — for a very low cost of about $300 (inclusive). To get this rate, we need 40 people. If interested call or write me as soon as possible — bookings are often made a year in advance. An excellent description of the area (Buena Vista) may be found in the book "Sea of Cortez" by Ray Cannon. The big game fishing can be phenomenal!

JACK SIMMONS
415-283-3307
eves.
3 Corte Amigos
Moraga, CA 94556