



PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 24

January-February, 1970

Number 1-2

ASSOCIATION ACTIVITIES

PACIFIC SECTION CANDIDATE SLATE

The following Pacific Section members are the 1970-71 candidates for executive offices:

PRESIDENT -

JOHN F. CURRAN - Consultant, Santa Barbara
RICHARD L. HESTER - Marine Resources
Santa Monica

VICE PRESIDENT -

CARL HELMS - Std. Oil Co., Bakersfield
ARTHUR O. SPAULDING - Petroleum
Administrator, City of Los Angeles

SECRETARY -

DONALD E. HALLINGER - Pacific Light,
Service & Supply Co.
VINCENT F. SCURY - Brazos Oil & Gas,
Bakersfield

TREASURER -

WILLIAM A. ADENT - State Lands Division,
Long Beach
MARIE J. CLARK - Atlantic Richfield,
Long Beach

Remember when you receive your ballot only Pacific
Section AAPG members are eligible to vote.

EDWARD C. DAPPLES ELECTED PRESIDENT OF SEPM DONN GORSLINE EDITOR J.S.P.

Edward C. Dapples, Professor of Geology at Northwestern University, Evanston, Illinois, has been elected President of the Society of Economic Paleontologists and Mineralogists, an international organization with headquarters in Tulsa, Okla.

Other officers elected are Vice-President Gerald M. Friedman, Rensselaer Polytechnic Institute, Troy, New York; Secretary-Treasurer James A. Peterson, University of Montana, Missoula; Editors of the JOURNAL OF PALEONTOLOGY Raymond L. Ethington and Raymond E. Peck, University of Missouri, Columbia; and EDITOR of the JOURNAL OF SEDIMENTARY PETROLOGY DONN S. GORSLINE, UNIVERSITY OF SOUTHERN CALIFORNIA, LOS ANGELES. These officers, together with the incumbent Councilors Donald F. Toomey, Pan American Petroleum Corporation, Tulsa, Oklahoma, and Robert J. Dunham, Shell Development Company, Houston, Texas, and present President Lloyd C. Pray, University of Wisconsin, Madison, will comprise the nine-member Council of this over 3,000-member Society. They will assume office at the close of the 44th Annual Meeting which will be held in Calgary next June.

AWARDS TO USGS GEOLOGISTS

Director William T. Pecora of the USGS announced that awards for "superlative performance" have been made to Robert J. Lantz, Thane McCulloch and Keith Yenne for their work during the January 1969 "blow-out and resultant "oil spill" in the Santa Barbara Channel.

OFFICIAL RESULTS OF ELECTION LOS ANGELES BASIN GEOLOGICAL SOCIETY AFFILIATED, PACIFIC SECTION A.A.P.G.

OFFICERS, LOS ANGELES BASIN GEOLOGICAL SOCIETY:

PRESIDENT: John H. Marshall
SECRETARY-TREASURER: Orville D. Hart
VICE PRESIDENT & PROG. CHAIR.: Don H. Hallinger

DELEGATES TO THE NATIONAL A.A.P.G. "HOUSE OF DELEGATES" TERM JULY 1, 1970, TO JUNE 30, 1971

1. *Ted L. Bear
2. *Donn S. Gorsline
3. *William G. Gussow

ALTERNATES:

1. Rex J. Young
2. Orville L. Bandy
3. Lowell E. Redwine

TERM JULY 1, 1971, TO JUNE 30, 1972

1. *John Forman
2. *Thomas L. Wright
3. George Rudkin
4. Gerald H. Rickels

ALTERNATES:

1. John N. Terpening
2. Robert R. Knapp
3. Roy W. Turner
4. James B. Anderson

*Presently in office as A.A.P.G. representative

1970 OFFICERS SACRAMENTO PETROLEUM ASSOCIATION

Newly elected officers of the Sacramento Petroleum Association for 1970 are:

President: ROLAND J. BAIN
Registered Geologist
Petroleum Consultant
**Vice-
President:** KIRKWOOD S. PLATT
Atlas Chemical Industries
**Secretary-
Treasurer:** CHARLES LUNDGREN
Exploration Logging, Inc.

REGISTRATION OF GEOLOGISTS REVIEW

During the March AAPG Convention in Newport Beach M.K. Wilferd Peak will present a formal review of the REGISTRATION OF GEOLOGISTS IN CALIFORNIA BILL and the implications of this bill to practicing geologists. Mr. Peak would like the members to write him well in advance of the meeting with any specific questions or comments so he can prepare his paper to answer as many of them as possible. The members should write:

Mr. Wilferd W. Peak
8332 Willowdale Way
Fair Oaks, California 95628

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CHANGE OF ADDRESS. Subscription and membership inquiries should be addressed to:

Membership Secretary, Pacific Section AAPG
P.O. Box 17486, Foy Station
Los Angeles, California 90017

MATERIAL FOR PUBLICATION and requests for missed copies should be addressed to:

Peter J. Fischer, Department of Geology,
Whittier College, Whittier, California 90608

EDITORPeter J. Fischer
Assistant EditorKeith E. Green
Selected BibliographyLucy Birdsall

CORRESPONDENTS

AlaskaGene Tripp
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Membership SecretaryJudy Hughes

In our last issue we advertised a "new" P.P.G. We need YOUR help to make this a reality. We have had exactly one concrete offer to help — thanks to Bennie Troxel.

Articles or items of interest from the "Petroleum Industry" reached an all time low in late December and January. Hence our combined Jan.-Feb. issue. Please write or . . . ?

P.J.F.

BRUER APPOINTED NEW CHIEF CALIFORNIA DIVISION MINES AND GEOLOGY

On December 17, 1969, Director James G. Stearns of the California State Department of Conservation appointed Mr. Wesley G. Bruer as Chief, Division of Mines and Geology. Mr. Bruer will serve on a temporary authorization pending civil service examination procedures.

For the past year Mr. Bruer has held the position of program Development Officer in the Department of Conservation at Sacramento. Prior to that appointment he was a consulting petroleum geologist and served as manager of Richard S. Rheem and Co., Bakersfield. Mr. Bruer holds a bachelor's degree (1950) from Oregon State College, Corvallis, Oregon.

Bruer is a member of the American Association of Petroleum Geologists and served a term a few years ago as president of the San Joaquin Geological Society. Bruer and State Assemblyman William Ketchum were leaders in securing passage of the Registration of Geologists Act during the 1969 session of the Legislature.

BOB PATTERSON A TESTIMONIAL

by

Anthony E. L. Morris

Robert O. Patterson was a California geologist. He was born, trained academically, worked and, four and one-half years ago died here. These facts, not remarkable by themselves, become important because he was a special person.

Every geologist who has worked in California since 1945 probably met Bob at some stage of his career. The contact could have been only a cheerful work or thoughtful advice; it might have been on a job that you knew would be done carefully and competently.

He touched those he never met during his life and those new to the profession since his death through his selfless dedication of time to the advancement of the geological profession. During the chaotic formative years of legislation professional registration and through constant efforts to improve the effectiveness of well logging Bob worked to help all of us.

Viewed objectively Bob's life could be considered one of tragedy and hardship. He was orphaned very young, worked any and everywhere he could to completely finance his education. Bob paid for everything in the only coin he knew — hard, honest work.

Bob married Peggy after the war (met her on one of his first well-site jobs) and they were blessed first with Gary and later Linda. Bob always regarded his children as his greatest achievement and only monument. Four and one-half years ago when Bob died we thought this was the final tragedy, however, January 17th Peggy died after a brief but agonizing illness.

Untimely death wrecked his estate planning, Gary 19 and Linda 17, are by themselves now and need help. They don't think they do and have not asked but what do you think?

The Patterson Memorial Fund is intended to be as informal as possible. Its purpose is to give Gary and Linda the necessary help. It will be administered at no cost to the Fund and the Trustee would welcome any constructive ideas, scholarship information, service grants, employment opportunities and, of course, contributions.

Bob Patterson Memorial Fund
3114 Club Drive
Los Angeles 90064

RADLINSKI NEW USGS ASSOCIATE DIRECTOR

William A. Radlinski has been appointed Associate Director of the U.S. Geological Survey, Department of the Interior, it was announced today. The 48-year old research engineer succeeds Dr. Arthur A. Baker, who was the first appointee to the position of Associate Director, and who held the post for 13 years. Dr. Baker, recently retired, will continue to serve as a Special Assistant to the Director in an advisory capacity.

During his 20-year period of service with the USGS, Radlinski was assigned to the Survey's Topographic Division, mostly in a research and development capacity. He helped develop photogrammetric instruments and techniques, including the twin-photography systems, the ER-55 projector, and the orthophotoscope. He became the Survey's Associate Chief Topographic Engineer in 1968. In recognition of his contributions to the Antarctic mapping program, Mt. Radlinski, Antarctica, was named for him. He also holds the Department of the Interior's highest honor, it Distinguished Service Award.

CALENDAR

GEOLOGY FORUM-USC

Talks at noon in Stauffer Lecture Hall 102 each Tuesday.

- Feb. 10. Dr. Alex Baird, Pomona College
"Chemical Variation in Batholithic Rocks of Southern California"
- Feb. 17. Dr. Everett C. Olsen, UCLA
"Permian Paleocology and Evolution"
- Thurs. U.S.C. presents Mr. Jack Gallagher, the president
Feb. 19. of Dome Petroleum
"New North American Oil Policy, including Arctic Oil Potential"
- Feb. 24. Dr. Eli Silver, Scripps Institute of Oceanography
"Tectonics of the Mendocino Triple Junction"
- Mar. 3. Dr. Hans G. Lindenberg, Wissenschaftlicher
Assistant, Univ. of Bochum, Germany
"Phylogenetic versus Ecologic Interpretation of Morphological Trends in Fossil Benthic Foraminifera"
- Mar. 10. James S. Booth, Graduate Student, USC
"Sediments in Relation to Current Patterns in the Northern Channel Islands"

COASTAL SOCIETY

Coast Geological Society dinner meeting will be held on Tuesday, February 24, 1970 at the Jet Room, 1994 Thompson Blvd. in Ventura (Cocktails at 6 PM)

Dr. Preston Cloud, Jr. of the Department of Geological Sciences UCSB will speak on the "Primitive Earth and the Origin of the Earth-Moon System". Dr. Cloud is a principle investigator of the first moon rock samples.
Reservations: Call Tom Bjorlund (805) 648-2751

SEMINAR IN TECTONICS

Dr. Mason L. Hill will be giving a seminar in the tectonics of western North America at Whittier College. First meeting, Tuesday, February 19th, 7 p.m. (late registration until 21 February). Interested graduate students please contact Peter J. Fischer at the Geology Department, Whittier College or phone (213) 693-0771, ext. 265.

1972-PACIFIC SECTION

The Alaska Geological Society with the cooperation of Alaska Methodist University is sponsoring an Alaska Tectonics Symposium to be held February 23-25, 1970. Speakers and participants include: Michael Churkin, USGS; George Gryc, USGS; H. W. Menard, Scripps Institute of Oceanography; John D. Moody, Mobil Oil Corp.; Robert Stoneley, British Petroleum Exploration, Inc.; and J. Tuzo Wilson, University of Toronto.

Please make checks payable to the Alaska Geological Society and send with your name, address, and affiliation to: W. W. Barnwell, U.S. Geological Survey, 218 E Street, Anchorage, Alaska 99501. Registration fees are \$10 (\$3 for students).

Meetings will be held from 7:00 - 10:00 P.M. in Grant Hall, Alaska Methodist University, Anchorage, Alaska.

UNIVERSITY OF ALASKA

The University of Alaska is offering two graduate-level courses in geology at their South-central Regional Center in Anchorage.

"Clay and Shale Petrology" is being offered for the first time. "Frontiers of Geology 2" is a continuation of a course presented for the first time last year. It consists of weekly sessions to discuss recent concepts in geology and geophysics.

MICELLANEOUS

COASTAL HOLIDAY DINNER DANCE

Eighty members and guests attended the Coast Geological Dinner Dance held on Dec. 19th at the Ventura Women's Center. Le Roy Andrews provided tuneful music amid the traditional popping of the corks. Dick Haines, Chairman, wishes to acknowledge the following firms and consultants who generously contributed to success of the delightful affair:

Anderson and Nicholeris
Baroid Well Logging Services
Borst and Giddens Logging Service
Cook Testing Company
Core Laboratories, Inc.
Exploration Logging
Geological Exploration Inc.
Goudkoff and Hughes
Munger Information Service
Pacific Oil Well Logging Inc.
Peter Bawden Drilling Inc.
Schlumberger Offshore Services
Welex
Western Offshore Drilling

L.A. BASIN CHRISTMAS DANCE

During early December (1969) the annual AAPG-SEPM-SEG Holiday Dinner Dance proved to be a great success. Approximately one hundred Pacific Section members and wives gathered at the beautiful Dodger Stadium Club to dine, dance and visit with old and new friends.

Committee Chairman Ed Hall of Union Oil, aided by several of his fellow minutemen, put together the ingredients for this very enjoyable evening. The event was sponsored by the Los Angeles Basin Geological Society and backed by numerous service companies.

All members and guests attending extend their thanks to the following contributing companies:

Borst and Giddens
Burns Geological Exploration, Inc.
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General Oceanographics, Inc.
Geological Engineering Service, Inc.
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Petty Geophysical
Schlumberger
R. F. Smith Corporation
Tryad Service Corporation
United Geophysical
Welex

CONTINENTAL RIFT?

Rumor has it that our friend Jean Senteur de Boue is in the vicinity of Agadir, Morocco working on a startling new theory of sea floor spreading and continental drift. Struck by

— Cont'd. on Page 4

— Cont'd. from Page 2

the resemblance of the topography, climate, local flora, fauna and indigenous population with that of Southern California, he is attempting to rotate the continents to achieve a best possible fit between Southern Morocco and Southern California. To date, his only real difficulty is that the geology and rock types do not quite match. This is only a momentary problem and based upon the brilliance of his past performance, we can expect "proofs" of the new theory shortly.
(from Wm. Emerson, Malaysia, correspondent)

CHANNEL ISLANDS

Donald Weaver's GEOLOGY OF THE NORTHERN CHANNEL ISLANDS is available - price \$13.50 postpaid. This comprehensive publication should be on every Pacific Coast geologist's bookshelf. Order your copy from King Nash at Mobil (Santa Fe Springs) or Don Hallinger at Pacific Lighting (L.A.)

In a forthcoming issue Dr. R. S. Yeats of Ohio University will review this work for the PPG.

ALASKA PIPELINE ROUTE UNDER CLOSE GEOLOGICAL STUDY

Geological feasibility studies and core drilling are currently underway at critical portions of the proposed route for the pipeline.

A preliminary report by Dr. Arthur H. Lachenbruch, senior geophysicist with Interior's Geological Survey, concludes on the basis of computer studies that oil at high temperature in a buried pipeline can have significant effects on the security of the pipeline. His formal report is expected to be issued in a few weeks.

Dr. William T. Pecora, Director of the Geological Survey, has reported to the Secretary that placing a hot pipeline below the ground in Alaskan permafrost terrain faces problems which were not recognized when the pipeline was first proposed by the Trans Alaska Pipeline System (TAPS).

"Our studies now show it is imperative that extensive drill core samples are made in the critical soil areas so that safeguards can be designed into the engineering system," Dr. Pecora reported. "This is the only way we can be sure the pipeline can be protected from excessive thawing of the permafrost."

**PACIFIC PETROLEUM GEOLOGIST
PACIFIC SECTION, A.A.P.G.
P.O. BOX 17486, FOY STATION
LOS ANGELES, CALIFORNIA 90017**

NEW MEMBERS

K. A. Gorton
Mobil Oil Corp.
612 S. Flower St.
Los Angeles, Cal. 90054

Herbert Mann
Shell Oil Co.
P.O. Box 3397
Los Angeles, Cal. 90054

James W. Gourley
Std. Oil of Calif.
P.O. Box 606
La Habra, Cal. 90631

David A. Phoenix
331 Waverley Ave.
Menlo Park, Cal. 94025

F. D. Pruett
144 Cragmont Dr.
Walnut Creek, Cal. 94598

Charles T. Snyder
U.S.G.S.
345 Middlefield Rd.
Menlo Park, Cal. 94025

David A. Webster
U.S.G.S.
345 Middlefield Rd.

CHANGE OF ADDRESS

Lon D. Cartwright
4600 Ocean Dr.
Corpus Christi, Texas 78412

C. F. Guion
Humble Oil & Refg. Co.
P.O. Box 440
Anchorage, Alaska 99501

J.C. Threet
Shell Development (Australia)
Pty. Ltd.
155 William St.
Melbourne Vic. 3000
Australia

William T. Bradford
c/o Skelly Oil Co.
Calgary 1, Alberta
Canada

R. H. Angerer
P.O. Box 606
La Habra, Cal. 90631

A. C. Austin
7744 Federal Bldg.
300 No. Los Angeles St.
Los Angeles, Cal. 90012

Roy W. Turner
24448 Martha St.
Woodland Hills, Cal. 91364

W. C. Barnard, Jr.
Bar-Hil Enterprises
P.O. Box 98
Caliente, Cal. 93518

C. H. Ramsden
5062 Lakeview Ave., Apt. 25
Yorba Linda, Cal. 92686

John A. Kruppenbach
P.O. Box 5308
Inglewood, Cal. 90310

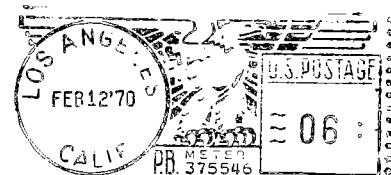
Hardy Barbarick
P.O. Box 1647
Bakersfield, Cal. 93301

John N. Thomson
3713 Barbara Ave.
Bakersfield, Cal. 93309

W. A. McCracken
259 Pettis Ave.
Mountain View, Cal. 94040

John G. Troster
82 Bellbrook Way
Atherton, Cal. 94025

R. Rothermel
P.O. Box N
Taft, Cal. 93268



FIRST CLASS

**RICHARD L. HESTER DA
1911 MONTECITO DR.
GLENDALE, CA 91208**



PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 24

March, 1970

Number 3

FLASH

SENATE BILL

No. 330

Introduced by Senator Song

February 9, 1970

REFERRED TO COMMITTEE ON BUSINESS AND PROFESSIONS

SEC. 50. Section 7801 of the Business and Professions Code is amended to read:

7801. "Board," as used in this chapter, means the State Board of Registration for Geologists *State Board of Registration for Professional Engineers*.

SEC. 51. Section 7810 of the Business and Professions Code is repealed.

7810. The State Board of Registration for Geologists is within the department and is subject to the jurisdiction of the department. The board shall consist of seven members appointed by the Governor, one of whom shall be a public member and six of whom shall be geologists.

SEC. 52. Section 7810 is added to the Business and Professions Code, to read:

7810. The State Board of Registration for Professional Engineers shall administer the provisions of this chapter.

SEC. 53. Section 7811 of the Business and Professions Code is repealed.

7811. Each member of the board shall be a citizen of the United States; shall be at least 30 years of age, and shall have been a resident of this state for at least five years immediately preceding his appointment. Each of the first appointed geologist members of the board shall have at least 12 years' active experience and shall be a qualified geologist; each subsequent geologist member of the board shall be a geologist registered under this chapter. The initial board shall include not less than two engineering geologists and two petroleum geologists.

SEC. 55. Section 7813 of the Business and Professions Code is repealed.

7813. The six geologist members of the board shall be appointed by administrative districts as follows:

(a) One member from each of Administrative Districts 1, 2, 3 and 4.

(b) Two members from Administrative District 5.

As each geologist member's term expires, his place shall be filled by the appointment of a registered geologist whose principal office for the practice of geology is in the same administrative district as the person in the expiring term.

The public members of the board may reside anywhere in the state.

7885. The board shall report each month to the State Controller the amount and source of all revenue received by it pursuant to this chapter and at the same time pay the entire amount thereof into the State Treasury for credit to the Geology Fund, which fund is hereby created *Professional Engineer's Fund*.

SEC. 71. Section 7886 of the Business and Professions Code is repealed.

7886. The money paid into the Geology Fund is continuously appropriated to the board to carry out the provisions of this chapter.

SEC. 72. Section 7886 is added to the Business and Professions Code, to read:

7886. The Geology Fund is hereby abolished. On the effective date of this section, the unencumbered balance of any funds in the Geology Fund shall be transferred on order of the State Controller, to a separate account in the Professional Engineer's Fund. The funds in such account shall be used to carry out the purposes of this chapter.

The Honorable Alfred Song, Senator
28th District
Room 2044
State Capitol
Sacramento, California 95814

Dear Senator Song:

S.B. 330 reorganizing the Department of Professional and Vocational Standards has been received. The following are comments pertinent to the Geologist's Board:

- (a) Increasing political recognition of the existence of geologic hazards as evidenced by enactment of local ordinances requiring geological reports and establishment of local qualifying boards to determine competence of geologists preparing such reports. Note that these boards were not combined with existing boards, but rather were established as distinct entities. (Counties of Los Angeles, Orange and Ventura and the City of Los Angeles.)
- (b) The named governmental entities supported the enactment into law, AB 600, and the establishment of the Board in its present form.
- (c) The same governmental entities have indicated intent to dissolve their qualifications boards in favor of the State Board and have also indicated that any weakening of the State Board would preclude such action.
- (d) At the time AB 600 became law, several other counties were in the process of enacting local ordinances but did not complete their actions because of the establishment of the Geologist Board in its present form. Should this Board be weakened in any way, there is no doubt that these counties would return to their former course as a protection to the public.
- (e) The Geologist Board is self-supporting and is paid for by the licensees only. There is no cost to the public at large.
- (f) The existence of the Board in its present form assures the public of uniform standards of competency throughout the State, as judged by men competent in the field of geology. The Baldwin Hills disaster in Los Angeles in 1963 cost five lives and millions of dollars worth of damage. A few years previous, a large landslide in the Palos Verdes Hills at Portuguese Bend created untold human suffering and property damage. The St. Francis Dam disaster in 1929 above Piru and Fillmore cost over 400 lives and millions of dollars in damages.
In each of these cases geologic advice which might have foretold the disasters was available, but was buried in the files of engineers who would not listen to the geologists who worked for them. Submerging the regulation of geologists beneath the Engineers Board will certainly set back recent strides towards eliminating this long existing problem at great detriment to the public of California.
- (g) Geology is a scientific discipline peculiar unto itself. It is not, as many people think, an engineering discipline

**EXECUTIVE COMMITTEE, PACIFIC SECTION
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Peter J. Fischer, Department of Geology,
Whittier College, Whittier, California 90608

EDITOR Peter J. Fischer
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CORRESPONDENTS

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Sacramento
San Francisco Charles M. Cross
San Joaquin Rod Nahama
Membership Secretary Judy Hughes

any more than it is a medical discipline. Only geologists are qualified fully to establish professional standards for other geologists, to administer and regulate the practice of geology, and to investigate, register, and discipline other geologists. To have others unknowledgeable in the field of geology perform these functions would be monumentally ineffective and would greatly jeopardize public safety.

(h) Pollution control is high on the list of items deemed in the public interest. Many pollution problems (particularly water) are geologically oriented. Regulation of geologists by geologists in this area will certainly serve the public interest more effectively.

No other state has a board licensing geologists. Those states licensing "geological engineers" do so under their engineering boards, because geological engineers are engineers with only a smattering of a knowledge of geology. The relationship of a geological engineer (or any engineer, in fact) to a geologist is comparable to that of a psychologist to a brain surgeon. Both know something about the human mind and body, but the scope and degree of knowledge is obviously quite different.

California will not be able to have reciprocity with other states until they develop similar geologist registration laws to ours. Geologists could never be registered as geologic engineers under the Board of Engineers because they do not have the proper education or experience requirements in the engineering profession. Geologists are not engineers and engineers are not geologists.

Mail your letters to Senator Song with copies to other members of B & P listed in next column.

*Senator ALFRED H. SONG, Democrat, District 28
2337 S. Garfield
Monterey Park, 91754

Senator MILTON MARKS, Republican, District 9
Room 2045
State Building
350 McAllister St.
San Francisco, 94102

*Senator ALFRED E. ALQUIST, Democrat, District 13
777 North 1st St.
San Jose, 95112

Senator ANTHONY BEILENSEN, Democrat, District 26
1122 S. Robertson Blvd.
Suite 14
Los Angeles, 90035

*Senator GORDON COLOGNE, Republican, District 36
P.O. Drawer 1270
Indio, 92201

*Senator WILLIAM COOMBS, Republican, District 20
223 South Riverside Ave.
Rialto, 92376

Senator ALAN SHORT, Democrat, District 6
2626 N. California St.
Stockton, 95204

*Senator LAWRENCE E. WALSH, Democrat, District 30
6055 East Washington Blvd.
Suite 629
Commerce, 90022

*Senator JAMES E. WHETMORE, Republican, District 35
13163 Brookhurst
Garden Grove, 92640

**Senators who have remained on the Committee during the recent change in chairman.*

BERNIER, SHIRLEY & ASSOCIATES

Legislative Services & Public Relations

JANUARY 26, 1970

SACRAMENTO LEGISLATIVE REPORT

1970 SESSION BEGINS

The State Senate started the 1970 legislative year outwardly serene while the Assembly became involved in partisan debates immediately after the session got underway. While the Assembly traditionally is the more partisan body, partisanship is expected to be even more in evidence since the Assembly Democratic leader, Jess Unruh, is a gubernatorial candidate this year.

Any partisan legislation in either the Assembly or Senate is expected to have difficult going since the division on both houses is so close. The 80 member Assembly is split 41 Republicans and 39 Democrats, and the Senate lineup is 21 Republicans and 19 Democrats.

Assemblyman Robert T. Monagan (R-Tracy) was re-elected Speaker but only after the Democrats forced the Republicans to round up every GOP Assemblyman. The final vote was 41 for Monagan and 39 for Assemblyman Vincent Thomas (D-San Pedro). Again serving in the posts of Assembly Speaker Pro Tempore and Assembly Majority Floor Leader are Charles Conrad (R-Sherman Oaks), and Craig Biddle (R-Riverside).

The Democrats named Unruh to continue as Minority Leader, and George Zenovich (D-Fresno) as Assembly Democratic caucus chairman.

On the Senate side, Howard Way (R-Exeter) was unanimously re-elected President Pro Tempore. The Republicans and Democrats named as their respective caucus chairmen, Clark L. Bradley (R-San Jose), and Mervyn M. Dymally (D-Los Angeles). The Senate Democrats selected George Moscone (D-San Francisco) as Minority Leader.

POLLUTION CONTROL The pollution control bandwagon is rolling in Sacramento and just about everyone is trying to climb aboard.

Dozens of pollution control bills already have been introduced during the first days of the 1970 State legislative session. The total is expected to reach several hundred before the session ends with the bulk of this legislation concerned with air pollution.

In order to expedite the flow of this legislation, Assembly Speaker Monagan (R-Tracy) has named a "select committee" to set up guidelines for handling the flow of pollution bills. Serving on the committee are Assemblymen John Briggs (R-Orange County), William Ketchum (R-San Luis Obispo County), Peter Schabarum (R-Los Angeles County), Pete Wilson (R-San Diego), John Foran (D-San Francisco), John Knox (D-Contra Costa County), Carley Porter (D-Los Angeles County) and Gordon Duffy (R-Tulare County).

LEGISLATIVE OUTLOOK The close division of both houses and the fact this is an election year prompts most capitol observers to feel there will be a limited amount of controversial legislation approved this session. Major tax changes and budget items require a two-thirds vote. However, in the field of environmental control and consumer protection this should be a big year. If partisanship can be temporarily set aside, there undoubtedly will be enacted this year the strongest pollution control legislation in the history of California.

GEOLOGY BOARD The Governor's Reorganization Plan #2 was presented to the Little Hoover Commission without any reference to abolition of the Geology Board. In preliminary drafts of this plan, there was a clause calling for elimination of the Board. However, because of pressures from various sources, it was removed before the plan was officially presented to the Commission. Such reorganization plans are pursuant to legislation enacted in 1967. Under this legislation, the Governor can reorganize the executive branch of government by executive decree unless his plan is rejected by the Legislature.

It is important to note that such reorganization plans cannot be amended by the Legislature, and if the Legislature fails to take action, they automatically become law. Since such plans cannot be modified by the Legislature, it is essential that any changes in reorganization programs must be brought forward before they are presented to the Legislature.

On January 17, Reorganization Plan #2 was presented to the Little Hoover Commission by Leighton Hatch, Director of the Department of Professional and Vocational Standards. Several Commission members questioned Hatch as to why abolition of the Geology Board was not included in the plan. Hatch said that he, as well as other members of the Administration, favored elimination of the Board, but because of "pressures" brought to bear, it was decided not to pursue that matter at this time. There was some discussion by certain Commission members that they themselves might sponsor legislation to abolish the Board. This matter probably will be discussed further at the Commission's next meeting.

ADDITIONAL PUBLIC MEMBERS Under the Governor's Reorganization Plan to be submitted to the Legislature, a number of licensing and registration boards, including the Geology Board, would have one of their licensee members replaced by a public member. It is asserted that the additional public member on the boards would result in "greater objectivity" in the regulatory process.

MERGER LEGISLATION Legislation presently is being drafted by the Legislative Counsel which would merge the Geology Board with the Engineering Board. Under this proposed legislation, there would only be two geologist members on the re-constituted Board. This legislation would be introduced by Senator Alfred Song, formerly chairman of the Senate Business and Professions Committee, and now the committee vice-chairman. The committee's new chairman is Senator Alfred Alquist (D-San Jose). Since he has just taken over as committee chairman, his views on this matter are still unknown. Senator Alquist is a strong conservationist and has taken hard stands on the anti-pollution issues.

Presently, Senator Song is attempting to persuade the entire Senate Business and Professions Committee to co-author his merger legislation. If he is successful in having this legislation become a committee bill, it would almost guarantee passage

through the Senate. At the same time, the Administration personnel who favored the original reorganization plan to abolish the Geology Board are expected to lend their support to Song's proposal. It may be some time before the final form of Song's legislation is known.

LEGISLATION INTRODUCED The following bill is of particular interest to the geology profession.

AB-100 (Warren) - Increases to two the public members on all State boards and agencies.

1970 OFFICERS

SACRAMENTO PETROLEUM ASSOCIATION

Newly elected officers of the Sacramento Petroleum Association for 1970 are:

President:	ROLAND J. BAIN Registered Geologist Petroleum Consultant
Vice-President:	KIRKWOOD S. PLATT Atlas Chemical Industries
Secretary-Treasurer:	CHARLES LUNDGREN Exploration Logging, Inc.

REGISTRATION OF GEOLOGISTS REVIEW

During the March AAPG Convention in Newport Beach M.K. Wilferd Peak will present a formal review of the Registration of Geologists in California Bill and the implications of this bill to practicing geologists. Mr. Peak would like the members to write him well in advance of the meeting with any specific questions or comments so he can prepare his paper to answer as many of them as possible. The members should write:

MR. WILFERD W. PEAK
8332 Willowdale Way
Fair Oaks, California 95628

PERSONAL ITEMS

Continental has added James Brown and Robert Haynie to their geological staff in Anchorage. Both are from Midland.

Standard in Anchorage has a new District Geologist for their Northwest District. Bill Crain, from New Orleans, replaces Joe Schweitzer who is going to Bakersfield.

Bob Rose, geologist from Casper, and Chuck Bitgood, geologist from Midland, are recent arrivals in Anchorage for Union. Pat Hoffman, geophysicist, is leaving the Great Land for Bakersfield in the Great Valley.

Lack of snow is causing painful posterior bruises on snow-mobilers in the cold country. Dick Atchison, Murathon, has been promising to put his part-Indian ancestry to use performing a snow dance. Ernie Lian, who is something less than a snow bunny, threatens to counter with a rain dance to melt the white stuff.

Byron Magbee has joined ARCO's geological staff in Anchorage. He is from Long Beach.

Phillips has transferred two geologists to Alaska: Bill Evans from Denver and Don Prince from Santa Barbara.

John H. Marshall has been transferred to Anchorage after serving one month as President of Los Angeles Basin Geological Society.

Harold 'Diz' Deane is the new Senior Development Engineer in the Standard Oil Inglewood Production Office. Darrell Gallear has been transferred to Santa Barbara in a similar position. Diz's 90 mile/day commute is limiting his football coaching efforts.

Jim Payne, Standard-Midland Texas, has been replaced as President of the (SJV SGGH) San Joaquin Valley Society of Geophysical Golfers, by Henry Engman, Standard Oil. Henry, the new Division Geophysicist is from Canada and is in the process of verifying his handicap to U.S.G.A. standards.

PACIFIC SECTION STATUS

The Pacific Section, AAPG has been admirably fulfilling its primary objective, namely the provision for "the discussion of subjects and problems coming within the scope of the professions....". Over the past decade we have printed one or two guidebooks each year, we have published five cross sections outlining the stratigraphy in various California Basins and we either supported or published eleven miscellaneous papers including the most recent Weaver report on the "Geology of the Channel Islands". Financial support to the local societies has made possible monthly meetings in specific cities where "grass roots communications" can function at its best. Recently the responsibility of the Continuing Education and Distinguished Lecture Program has been delegated to the local societies.

As I have discussed in previous newsletters, we can not maintain the primary objectives of the association without adequate financing. It is apparent from the adjoining chart "The Pacific Section 10 year Financial History", our gradual increase in cost of performing Pacific Section objectives. In my opinion, this cost increase is due to the inflationary forces we are experiencing. To "balance the budget" this fiscal year, we have reduced the number of newsletters to ten (\$700.00 annual savings), we have obtained permission from the Lloyd Corporation for space to store publications (\$1200.00 annual savings) and we have delayed the revision of the Membership Directory for one year. Additional retrenchment of activities will adversely effect the primary mission of our association. It is necessary that we increase our income just to stay abreast of the cost spiral. Therefore, at the annual business meeting Friday afternoon, Marcy 20 at the Newporter Inn, a motion to establish the Pacific Section dues for 1970-1971 at five dollars (\$5.00) will be presented. This is in accordance with Article V, Section 1 of our Constitution. (The Pacific Section Constitution is reprinted elsewhere in the P.P.G.). It is imperative that all members concerned about our financial future discuss the motion and exercise their vote at the business meeting.

DOUG TRAXLER

February 17, 1970

The HONORABLE RICHARD M. NIXON
President of the United States
The White House
1600 Pennsylvania Avenue
Washington, D. C. 20500

Dear Mr. President:

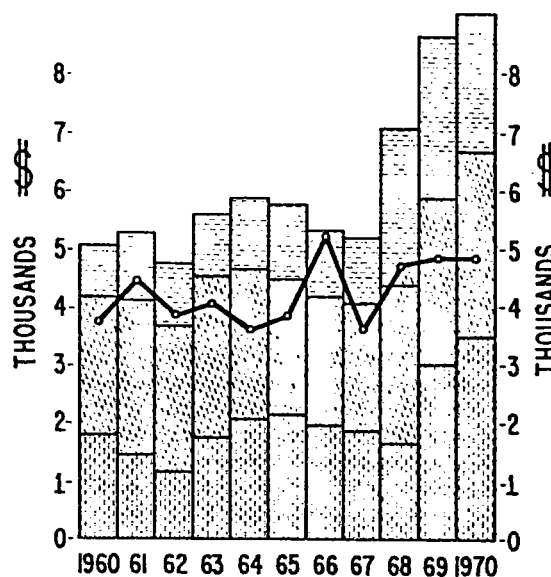
The membership of Pacific Section, American Association of Petroleum Geologists is opposed to any government action that will bring about a rapid reduction in domestic oil production rates. In fact, we are applying our professional knowledge to increase domestic production in order to supply the increasing energy requirements of the United States.

Recent newspaper articles state that your Task Force on Oil Import Controls has recommended the abolishment of controls on the importation of foreign oil. This in turn would permit the entry of large quantities of foreign oil and force a reduction in the price of domestic crude oil.

The consequences to the domestic petroleum industry of only a ten percent price reduction in oil would be severe to say the least. First, it would cripple domestic production by making marginal wells uneconomical and forcing the early abandonment of thousands of stripper wells. In addition, the abandonment of these wells would terminate any chance for the recovery, by secondary methods, of some portion of the large volumes of oil left in the ground. Second, it would place many small inland refiners in a short crude oil supply position and permit the coastal refiners access to large volumes of cheap foreign oil. Third, due to the lower crude oil price structure it would reduce the overall domestic exploration effort. New discoveries much needed to replace the consumed reserves would be curtailed.

By creating a decrease in domestic crude supplies, the United States would become dependent upon a foreign oil source. At that time we can predict with confidence a sharp

PACIFIC SECTION TEN YEAR FINANCIAL HISTORY



NOTES:

1. 1970 Expenditures and Income Estimated
2. Deficits Made Up From Convention & Publication Fund

EXPENDITURES:

- Association Business
- Newsletters
- Affiliated Societies

INCOME:



increase in the price of oil. Ignoring the security ramifications of being dependent upon foreign oil, the balance of payments problem of paying for the foreign oil and the disruption of a large segment of the domestic oil industry, who would pay for the proposed policy changes? You and I! It will, by necessity, be included in the price of the consumed petroleum products.

In conclusion, we urge that you support a forward looking policy that will increase our Nation's domestic exploration effort so that geologists will be able to meet the future petroleum requirements of our Nation.

Very truly yours,

J. D. TRAXLER
President, Pacific Section
AAPG

DISTINGUISHED LECTURE

Los Angeles Basin Geological Society will present Mr. James O. Lewis, AAPG Distinguished Lecturer, on March 12, 1970 12 Noon at the Rodger Young Auditorium. Mr. Lewis will discuss "Practical Computer Usage for Sub-surface Geologists".

ATTENDANCE AT ALASKA NORTH SLOPE SEMINAR

The North Slope Seminar sponsored by the Pacific Section, AAPG and the Northern California Geological Society, Feb. 1-3, 1970, at Palo Alto, California, had a paid attendance of 678 persons. This included not only geologists and geophysicists, but also oceanographers, engineers, stock analysts, and conservationists. The geographical distribution of attendees covers 22 states, Washington, D. C., and five foreign countries. The largest contingents came from northern California (180), southern California (170), Texas (88), Canada (59), Alaska (52), Colorado (43), Oklahoma (21), New York (13), and Washington, D.C. (10).

PROGRAM SUMMARY

PACIFIC SECTION A.A.P.G. - S.E.P.M. - S.E.G. 1970 ANNUAL MEETING
NEWPORTER INN, NEWPORT BEACH, CALIFORNIA

WEDNESDAY EVENING: OLD MEXICO ICE BREAKER, 7:00 - 9:00 P.M.

THURSDAY, MARCH 19, 1970
JOINT SESSIONS - MONTE CARLO ROOM

9:00 KEYNOTE ADDRESS - KENNETH H. CRANDALL, PRESIDENT, A.A.P.G.

9:30 DEPOSITIONAL HISTORY OF NORTHERN ALASKA - BROSGE and TAILLEUR

10:00 GEOLOGIC DATA PROCESSING - AN EFFECTIVE EXPLORATION TOOL - WALKER

10:30 ENVIRONMENTAL IMPACT OF PETROLEUM WASTE - McKEE

11:15 CALIFORNIA GEOLOGIC REGISTRATION - WHERE DO YOU FIT? - PEAK

JOINT LUNCHEON - CAROUSEL ROOM

SPEAKER: DR. LLOYD C. PRAY, PRESIDENT, S.E.P.M.

JOINT SESSION - MONTE CARLO ROOM

S.E.G. - PALMER ROOM

2:00 GEOPHYSICS AND THE FUTURE OIL
POTENTIAL - MILTON B. DOBRIN,
PRESIDENT, S.E.G.

2:30 COMPUTER SIMULATION OF MARINE
SEDIMENTATION - HARBAUGH

3:30 STRATIGRAPHY AND SEDIMENTATION OF
JOIDES HOLES OFF THE CALIFORNIA
COAST - WESER

4:00 DIAPIRS AND DIAPIRIC-LIKE STRUCTURES,
SOUTHEASTERN BERING SEA - SCHOLL

3:30 MULTICHANNEL FILTERING -
LINDSETH

NO HOST COCKTAIL HOUR - CAROUSEL ROOM - 6:30 - 8:00

FRIDAY, MARCH 20, 1970

A.A.P.G. - MONTE CARLO ROOM

S.E.P.M. - PALMER ROOM

S.E.G. - CAROUSEL ROOM

8:45 Economic Advantages of Subsea Production Methods - Walker	8:45 Fossil Diatoms and Silicoflagellates - studied with the Scanning Electron Microscope - Wornardt, Jr.	8:30 Huygus Migration Program - Twombly
9:30 Statistical Analysis of Calcsilites from the Bird Spring Group, Mountain Springs, Nev. - McDougall and Osborne	9:10 Occurrences of Silicoflagellates from Central North Pacific Cores - Ling	9:00 Limitation of the Reflection Seismic Method: Lessons From Computer Simulations - Taner
10:00 Beach Sand Transport Along the Santa Barbara Channel Coast - Kolpack	9:35 Benthic Foraminiferal Trends in the Pacific-Antarctic Basin - Theyer	10:00 New Dimensions: Amplitude and Frequency Mapping - Lindseth
10:30 Interactive Computer Graphics and the Fault Problem - Peikert	10:00 Pleistocene-Holocene Boundary in the Southwestern Indian Ocean - Vincent	11:00 Automigration of Seismic Data - Lindsey
11:00 California Digital Mapping Project - Chambers	10:25 Late Quaternary Biostratigraphy of Cores from Beneath the California Current - Morin	
11:30 Sediment Dispersion in the Northern Channel Island Passages - Booth	10:50 A Preliminary Reevaluation of the Late Miocene Biostratigraphy of California - Pierce	
	11:15 Foraminifera and Rugose Coral Zones of the Mississippian-Pennsylvanian Lisburne Group, Brooks Range, Arctic Alaska - Armstrong	

12:00 COLLEGE LUNCHEONS (See Ticket for Room Assignment)

2:00 Lunar Regolith at Tranquility Base - Shoemaker	2:00 Tertiary Climatic Change in the San Joaquin Basin, California: Evidence from Shallow-Water Mollusks - Addicott	1:30 Semblance and Other Coherency Measures for Multichannel Data - Neidell
2:45 Building and Using a Computerized Well Course File in an Offshore, Geologically Complex Field - Ehrling, Thomas, Sweeney, Vontiehl	2:25 Cyclicity in Upper Tertiary Basin Margin Deposits of the California Coast Ranges - Stanton, Jr.	2:30 Detailed Geophysical Study of the Northwest Norton Basin, Bering Sea Shelf, Alaska - Greene
3:15 Geothermal Exploration in Imperial Valley - Meidav and Rex	2:50 Supratidal Dolostones: An Overemphasis on their Significance in the Geologic Record? - Zenger	3:00 Multichannel Mapping Techniques - Lindseth
3:45 Sedimentology of Southeast Pacific Ocean Deep-Sea Cores - Manera	3:15 Geomorphology and Sedimentary Character of the Redondo Submarine Fan - Haner	
4:15 Pacific Section Business Meeting	3:40 The Magnetic Grain Fabric of Sedimentary Rocks - Iorwerth	
4:30 S.S. Manhattan Film - Humble Oil and Refining Company	4:05 Paleocurrent and Basin Analysis of the Late Cretaceous "Chico" Formation, Simi Hills, Calif. - Rodine and Colburn	
	4:30 Biostratigraphy of Leg 5, JOIDES Holes, Off the California Coast - Milo	

CHAMPAGNE DINNER DANCE, CAROUSEL ROOM - 7:00 P.M. to 1:00 A.M.
 SATURDAY: FIELD TRIP. BUSES LEAVE FRONT PARKING LOT AT 8:00 A.M.

CONSTITUTION

PACIFIC SECTION OF THE AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Adopted September 1924
Last Amended February 1966

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

Sec. 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.

Sec. 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

Sec. 1 A member, in any classification, of The American Association of Petroleum Geologists in good standing shall be eligible for membership in this Section.

Sec. 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.

Sec. 3 Other persons not members of The American Association of Petroleum Geologists who are in the activities of this Section, may subscribe to the publication of the Section "Pacific Petroleum Geologist" 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

Sec. 1 The officers of this section shall be a President, a Vice-President, a Secretary and a Treasurer. The duties of

these officers shall be those customary for their respective offices. They shall assume these duties at the Pacific Section Meeting next following their election as hereinafter provided. Their term of office shall be for one year 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 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.

Sec. 2 There shall be an Executive Committee consisting of the President, Vice President, Secretary, Treasurer, Retiring President, Editor of the Pacific Petroleum Geologist 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

Sec. 1 The Executive Committee shall 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.

Sec. 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

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

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

ARTICLE VII

Elections

Sec. 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 months prior to the Business Meeting 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 select two (2) candidates for each of the following offices: (1) President, (2) Vice-President, (3) Secretary, and (4) Treasurer. The slate of candidates shall be announced in the Pacific Petroleum Geologist at least five weeks

prior to the election. Additional nominations may be made by written petition of twenty-five or more members of the Pacific Section in good standing, received by the Secretary within two 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 weeks prior to this date.

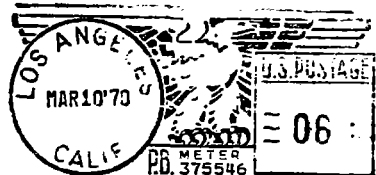
Sec. 2 In matters pertaining solely to the business of this Section, all active members of the Section may vote. In matters pertaining to the official business and the selection of business representatives or other officers of The American Association of Petroleum Geologists only active members of the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

Sec. 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 or more members in good standing. A two-thirds majority of the ballots returned within three weeks following mailing to the membership shall be required to pass any amendment.

PACIFIC-PETROLEUM GEOLOGIST
PACIFIC SECTION, A.A.P.G.
P.O. BOX 17486, FOY STATION
LOS ANGELES, CALIFORNIA 90017

FIRST CLASS

J. D. BRAXLER DA-AM
15510 FRIENDS ST.
PACIFIC PALISADES, CAL
90272





PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 24

April, 1970

Number 4

ASSOCIATION ACTIVITIES

PACIFIC SECTION'S NEW OFFICERS

JOHN F. CURRAN, Santa Barbara, Calif., consultant, has been elected president of the Pacific Section of the American Association of Petroleum Geologists (AAPG). He succeeds **J. D. TRAXLER**, Signal Oil & Gas, Los Angeles. Other new officers are: **ARTHUR SPAULDING**, petroleum administrator, Los Angeles, vice-president; **VINCENT F. SCURY**, Texaco Inc.'s Bakersfield office, secretary; and **MARIE J. CLARK**, Atlantic Richfield's Long Beach office, treasurer.

GEOLOGY BOARD – SONG'S SB-330

Senator Alfred Song introduced legislation which is of crucial importance to the Geology profession. SB-330 is a reorganization plan for the Department of Professional and Vocational Standards. It differs in many respects from the Governor's Reorganization Plan Number 2, as SB-330 provides for the merger of the Geology Board with the Engineering Board. Our P.R. representatives have delayed reporting full details as to the progress of SB-330 because very delicate negotiations have occurred behind the scenes with members of Senator Song's staff, the staff of the Senate Business and Professions committee, and representatives of the Administration who are concerned with Reorganization Plan Number 2. However, the negotiations have been successful and Senator Song has agreed to eliminate from SB-330 all references to the Geology Board and to any proposed merger of the Geology Board and the Engineering Board.

Amendments to this effect are being drafted in Legislative Counsel and the bill will be so revised prior to any hearing by the Senate Business and Professions Committee, which will be the initial policy committee to consider SB-330. Thanks to all AAPG members for their patience while these negotiations were in progress and in particular to those Geologists who responded individually.

NEW LEGISLATION INTRODUCED

AB-100 (Warren) State Agencies – adds one public member to each State Board (including the Geology Board) to be appointed by the Governor and to serve under the same terms and conditions as the other members. Referred to Assembly Government Administration Committee, no hearing date set.

AB-150 (MacGillivray et al) Oil and Gas Leases – would prohibit oil or gas leases in the Santa Barbara Channel. Referred to Assembly Natural Resources and Conservation Committee, approved in committee, and referred to Assembly Ways and Means Committee, set for hearing March 31.

AB-213 (MacGillivray et al) Geothermal Energy – specifies new standards for the protection of the public in the exploration and development of geothermal resources. Requires the State Oil and Gas Supervisor to enforce such regulations. Approved by the Assembly Committee on Natural Resources and Conservation, approved by the Ways and Means Committee, passed Assembly, referred to Senate Natural Resources and Wildlife Committee, no hearing date set.

SB-294 (Rodda) Subdivision Conditions – requires subdivision soil condition reports include the findings and opinions of a registered Geologist qualified in **Engineering Geology**. Referred

to Senate Committee on Local Government, set for hearing March 31.

AB-324 (Ketchum) Geology – extends the period for registering as a Geologist under the Geology Act until June 30, 1970. Approved by Assembly Commerce and Public Utilities Committee, passed Assembly, referred to Senate Business and Professions Committee, no hearing date set.

AB-393 (Unruh and Sieroty) Public Resources Oil and Gas – would prohibit any present or future oil or gas drilling in the Santa Barbara Channel. Approved by Assembly Committee on Natural Resources and Conservation, referred to Assembly Ways and Means Committee, no hearing date set.

AWARDS FOR THE 1970 JOINT ANNUAL MEETING

The Best Paper Award Committee for the 1970 Joint Annual Meeting (George H. Rudkin, Chairman) has announced three awards: The Levorsen Memorial Award, The Best Pacific Section Paper and the "Sweepstakes" award.

The A.I. Levorsen Memorial Award went to Dr. John W. Harbaugh, Dept. of Geology Stanford University for his "Computer Simulation of Marine Sedimentation." This award is presented at regional and sectional meetings to the best paper of the convention judged on creative thinking, organization, delivery, visual aids, with special emphasis on creative thinking toward new ideas in petroleum exploration. The Levorsen Memorial is under the sponsorship of the National AAPG.

The best Pacific Section A.A.P.G. paper award (\$25.00) went to Mr. Theodore W. Ehrling and his co-authors at Signal Oil and Gas Co. Los Angeles for "Building and Using a Computerized Well Course File in an Offshore, Geologically Complex Field." This paper particularly suited the meeting's theme of "West Coast Exploration in the Computer Age."

Because of its special popularity, Dr. Eugene M. Shoemaker's (CIT, Pasadena) "The Lunar Regolith at Tranquillity Base" was awarded special "Sweepstakes" recognition. His presentation scored extremely high in all categories judged.

This year's convention was attended by some "650 paid registrants." A special vote of thanks to General Chairman John K. Cassell and his staff is in order.

NEW EARTH SCIENCE STAFF – BAKERSFIELD STATE

Dr. John R. Coash, dean of the school of natural sciences and mathematics at California State College, Bakersfield, announced the appointment of the staff of the college's department of earth sciences.

DR. DANIEL J. JONES will serve as a **professor of geology and chairman of the department**. The staff will include Dr. Edward Laskowski, associate professor of geology; Dr. John C. Manning, professor of geology; and Dr. William H. Wake, associate professor of geography.

"The curriculum in earth sciences at the college, while providing a broad background suitable to today's interest in the environment as a whole, will also serve those students seeking options in specific fields such as geology, geography, hydrology, paleontology and soils," Dean Coash said.

EXECUTIVE COMMITTEE, PACIFIC SECTION AMERICAN ASSOC. OF PETROLEUM GEOLOGISTS

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Robert N. Hacker	Vice President
James M. Saunders	Secretary
John W. Bedford	Treasurer
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Frederic R. Kelley	N. Calif. Delegate
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Vern C. Jones	Sacramento Delegate
Chas. G. Mull	Alaska Delegate

PACIFIC PETROLEUM GEOLOGIST

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CHANGE OF ADDRESS. Subscription and membership inquiries should be addressed to:

Membership Secretary, Pacific Section AAPG
P.O. Box 17486, Foy Station
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MATERIAL FOR PUBLICATION and requests for missed copies should be addressed to:

Peter J. Fischer, Department of Geology,
Whittier College, Whittier, California 90608

EDITOR	Peter J. Fischer
Assistant Editor	Keith E. Green
Science Editor	Bennie W. Troxel
Selected Bibliography	Lucy Birdsall

CORRESPONDENTS

Alaska	Gene Tripp
Coast	Thomas K. Bjorkland
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San Joaquin	Rod Nahama
Membership Secretary	Judy Hughes

CALENDAR

PANEL ON S.B. CHANNEL - L.A. HARBOR

Dr. James Slosson, Professor of Geology at Los Angeles Valley College, will moderate a panel discussion on the topic, "Petroleum Geology - Los Angeles Harbor and Santa Barbara Channel". The panel will be composed of:

Dr. Donald Weaver, Professor of Geology
University of California at Santa Barbara

J. Tim Terry
Board of Directors of GOO

Robert R. Knapp, Geologist
Standard Oil Company

Arthur O. Spalding, Petroleum Administrator
City of Los Angeles

The program will begin at 7:30 p.m. on April 30th in the Field House of Valley College, which is located on Ethel Ave. between Burbank Blvd. and Oxnard St. in Van Nuys. It will be open to the public at no charge.

WELL LOGGING SYMPOSIUM

California oil men will be interested in the eleventh annual Well Logging Symposium to be held at the International Hotel in Los Angeles, May 3 - May 6, 1970. This will be the first of these symposiums held in California. Theme of the symposium will be "Well Logging in Exploration".

Keynote speaker will be Mr. John E. Walstrom of the Standard Oil Company of California. Mr. Walstrom is well known to the industry and was a pioneer in well logging in California.

A number of the papers to be presented deal with the problems of log analysis of shaly sands. This is very appropriate for a conference held in California where the shaly sand problem is of major importance.

Registration for the 1970 Symposium will begin at 2:00 p.m. Sunday, May 3. Technical sessions will begin at 9:00 a.m. on Monday and continue until noon Wednesday. Special events are planned for the members' wives who are in attendance. The annual business meeting and luncheon will be held at noon Monday, and the annual awards banquet will be held Tuesday evening. The banquet program will feature the well known entertainer, Mr. Ray Stanish.

Costs are to be: \$15.00 (members or non-members) for registration only; and \$20.00 (members) and \$25.00 (non-members) for registration and the published symposium of the papers presented at the meeting.

CARBONATE FIELD TRIP

Dr. Robert N. Ginsburg of the School of Marine and Atmospheric Sciences, University of Miami, will lead a carbonate facies field trip to the Bahamas and Florida Keys during the week of 29 May - 6 June, 1970. For further details contact Dr. Ginsburg in Miami.

NORTHERN CALIFORNIA - SPRING FIELD TRIP

A members, wives, and guests field trip along the northern trace of the San Andreas fault will be held on May 16th. Leaders for the trip are Allan J. Galloway (Calif. Ac. Sci.) and Robert D. Brown, Jr. (USGS). The route will follow the fault from Menlo Park to Stinson Beach and the Pt. Reyes National Seashore by bus. Lunch will be a picnic stop (BYO) at historic Drake Beach with wine provided. After lunch visits to the spectacular Paleocene-Mesozoic outcrops at the Pt. Reyes Lighthouse, the pillow lavas at Nicasio Dam, and the French Cheese Factory are on the agenda. Dinner will be at Tiberon at the dock overlooking San Francisco Bay.

Cost: \$12.00 per person for transportation, wine, and dinner - a bargain! Only 43 seats are available according to the Field Trip Chairman, Robert D. Carter (USGS, 345 Middlefield Road, Menlo Park, CA 94025). Early reservations are suggested. Contact Bob at the USGS for further details.

SPRING PICNIC

Charles Lee of Conoco reports that the **SPRING PICNIC** will be held at Elkins Ranch Golf Course in Fillmore on Friday June 5, 1970.

GEOLOGY FORUM - USC

Lectures are scheduled for noon each Tuesday in the Stauffer Stauffer Lecture Hall (102).

- April 28 Dr. Richard O'Connell, California Institute of Tech.
"Phase Change in the Upper Mantle"
- May 5 Dr. Robert P. Sharp, California Institute of Technology
"Mars Geology from Mariner Flights"
- May 12 Edith Vincent, Graduate Student, USC
"Foraminiferal Evidence for Late Quaternary Paleocceanographic Variations in the Mozambique Channel"

GEOLOGY SPEAKERS FORUM - CAL STATE, L.A.

Talks are scheduled for 4:00 P.M. Mondays in room 268 of the Science Building. Parking is available in Lot E next to the Science Building.

- April 20 Dr. Clifford A. Hopson, University of California, Santa Barbara
"Emplacement of Plutons - Cascade Mountains, Washington"
- May 11 Dr. Dale Jackson, U. S. G. S., Menlo Park
"Xenoliths in Hawaiian Basalts"
- May 18 Dr. Robert Rex, University of California, Riverside
"Deep Sea Drilling Project in the Atlantic"

For additional information call:

Dr. Perry Ehlig, Chairman, Geology Department, 224-3388

As emphasized by Dr. Jack E. McKee of Caltech in his talk, concerning pollution, which was presented at the Newport meetings last month, oil pollution is a problem, but NOT an overwhelming one. However editorials, cartoons, and the guest speakers at the local women's clubs are presenting a black picture indeed. Here are some dissident views, which we in or near the oil industry should be prepared to answer. These statements were posted at San Jose State College (anonymously).

SANTA BARBARA CHANNEL OIL OPERATIONS - FACTS AND FALLACIES

1) FALLACY:

The nation is in dire need of oil, therefore it must be drained from the reserves in the Santa Barbara Channel.

FACTS:

- (a) An adequate supply of oil can be obtained by encouraging a higher rate of production from existing landwells.
- (b) Instituting programs for recovery of oil from shale deposits.
- (c) Liberalizing oil import quotas which are presently subsidizing marginal U.S. oil production; net cost to every family of 4 in U.S. is \$100 per year.

2) FALLACY:

The oil companies have paid for leases in the Channel, therefore there is nothing the government can do to rescind the leases legally, or without incurring a tremendous expense.

FACTS:

- (a) Terms in the leases include provision against pollution. The government could terminate the leases due to abrogation by the oil companies of this provision.
- (b) Leases could be exchanged for use of Elk Hills Naval reserves and the Channel's oil deposits held in "escrow" as recommended in the Second Report of the President's Panel on Oil Spills.
- (c) Cost to taxpayers at present is \$5 billion per year with present quota system. Refunding lease costs and liberalizing quotas means a one time repayment to oil companies of \$800 million. (\$800 million ONCE versus \$5 billion EVERY YEAR.)

3) FALLACY:

Platforms, rigs, barges, and other oil operations are NOT hazards to navigation, to pleasure craft, and to commercial fishing fleets.

FACTS:

- (a) Unlit buoys and underwater obstructions have already damaged pleasure craft.
- (b) "While industry has been compelled to remove damaged structures from drilling sites, components which have settled elsewhere for the most part remain. The large pieces of debris are in fact menaces to surface navigation. Vessels have been damaged and sunk in collisions with drilling installations." ("Oil Pollution", a Report to the President by the Secretary of the Interior and the Secretary of Transportation, February 1968).

4) FALLACY:

Remedial drilling and pumping is necessary to reduce pressure causing the present seep from fissures in the ocean floor.

FACTS:

- (a) Although production has doubled since July, the amount of oil from the leak has NOT diminished. Operations are not relieving pressure.

5) FALLACY:

Technological advances have made Channel oil operations fool-proof. When a pipeline ruptured in December cessation of operations to repair the pipe caused increased seepage from the ocean floor leak due to pressure build-up. The pipe break was caused by abnormal pressure from oil in the wells.

FACTS:

- (a) Oil from the wells is transported ashore through pipelines on the sea floor. The oil is driven by PRESSURE PRODUCED BY PUMPS ON THE PLATFORMS. If pressure in the pipelines drops it indicates a leak or break and automatic devices are supposed to stop operations. During the December 1969 pipe break and spill safety devices did not work. By the time the leak was detected 50 square mile slick covered the Channel. When the leak was finally detected, an estimated 36 hours after occurrence, the pipeline was shut off and pumping from wells stopped.
- (b) Local observation from aircraft and boats does not support either the "timing" statements by the oil companies nor the allegation that the massive oil slick resulted from "over-pressure" seepage.
- (c) "Such operations may produce pollution of the offshore waters from blowouts of the wells, dumping of oil-based drilling muds and oil-soaked cuttings, and losses of oil in production, storage, and transportation. A pollution threat is also posed by the pipelines laid on the ocean floor from the offshore platforms to storage facilities. These lines are subject to rupture by storms and the dragging of ships' anchors." ("Oil Pollution", a Report to the President by the Secretary of the Interior, and the Secretary of Transportation, February 1968).

6) FALLACY:

The major pollution of sea and beaches is caused by natural seepage from Coal Oil Point which has been going on from time immemorial.

FACTS:

- (a) The usual flow from seeps off Coal Oil Point is out to sea. It occasionally comes ashore on Goleta Beach and Hope Ranch Beach, but never as far down as Santa Barbara's public beaches.
- (b) If natural seepage were the problem as is claimed, then Santa Barbara could never have become the tourist attraction it has been over the years, nor developed its beach and sea oriented economy.

A timely panel discussion at Valley State on May 30th will undoubtedly prove worthwhile. (See Calendar - Ed.)

PERSONAL ITEMS

RON BARTLEY, formerly of Shell Oil Co. is now living in Ashland (Southern) Oregon and engaged in consulting.

KEN COHICK of Shell Oil Co. has retired effective March 31st after 33 years of service to the "Pecten".

BUS and HELEN IVANHOE have returned to California after spending the past year in Libya, Europe and Mexico. They say they are experiencing "the cultural shock of the super markets and freeways."

MIKE MOUND formerly of Chevron is now consulting in Costa Mesa.

BIBLIOGRAPHY OF RECENT PUBLICATIONS

NORTH SLOPE REFERENCES

A bibliography entitled "Geological literature on the North Slope of Alaska" by J.C. Maher and W.M. Trollman was released for sale at the recent successful North Slope Seminar sponsored by the Pacific Section, A.A.P.G., and the Northern California Geological Society in Palo Alto. It contains approximately 1,300 references with a simple index and a serials list. Approximately 100 copies remain for sale by mail at \$5.00 a copy (25% discount to A.A.P.G. members) from the American Association of Petroleum Geologists, P.O. Box 979, Tulsa, Okla. 74101.

CHANGE OF ADDRESS

HERBERT DEE ADAMS
153 El Monte
Ventura, Cal. 93003

JOHN R. BEACH
P.O. Box 1165
Bakersfield, Cal. 93302

RICHARD L. BEH
Cities Service Oil Co.
223 Thousand Oaks Blvd.
Thousand Oaks, Cal. 91360

RONALD C. BARTLEY
1192 Beswick Way
Ashland, Oregon 97520

W. STANLEY KNOUSE
General Delivery
Glide, Oregon 97443

EDWARD H. OGIER
1200 Ray P. Oden Bldg.
Shreveport, Louisiana 71101

W. W. WELCH, JR.
Box 7-839
Anchorage, Alaska 99501

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2748 Mendoza Dr.
Costa Mesa, Cal. 92626

JOHN S. SHELTON
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DON J. HALL
McCullough Services
P.O. Box 58726
Los Angeles, Cal. 90058

OTTO HACKEL
Route 1, Box 564-A
Bakersfield, Cal. 93308

L. F. IVANHOE
3828 Bryn Mawr Dr.
Bakersfield, Cal. 93305

JAMES R. COX
2011 - 18th St., #12
Bakersfield, Cal. 93301

DONALD R. EDMONSTON
6501 Mt. Shasta Dr.
Bakersfield, Cal. 93309

HARRY FEDER
2920 - H. Street
Bakersfield, Cal. 93301

GEORGE W. HUNTER
6408 Friant Dr.
Bakersfield, Cal. 93309

HENRY WALROND
Suite 4, Norris Oil Co. Bldg.
924 Truxton Ave.
Bakersfield, Cal. 93301

W.G. Calkins
P.O. Box 5278
Oildale, Cal. 93308

JOHN STEWART KELLEY
489 April Way
Los Gatos, Cal. 95030

K. H. CRANDALL
209 Crocker Ave.
Piedmont, Cal. 94610

WARREN A. CEBELL
1503 S. Bunbury Dr.
Whittier, Cal. 90601

RICHARD H. DAWSON
Cities Service Oil Co.
223 Thousand Oaks Blvd.
Thousand Oaks, Cal. 91360

J. E. DRYDEN
Std. Oil Co. of Cal.
P.O. Box 151
Huntington Beach, Cal. 92648

A. E. EHM
Cities Service Oil Co.
223 Thousand Oaks Blvd.
Thousand Oaks, Cal. 91360

JOSEPH ELO, JR.
Cities Service Oil Co.
223 Thousand Oaks Blvd.
Thousand Oaks, Cal. 91360

DONALD W. HAGEN
Texaco Expl. Co.
P.O. Box 3333
Calgary, Alberta
Canada

AUGUST J. KELLER
Cities Service Oil Co.
223 Thousand Oaks Blvd.
Thousand Oaks, Cal. 91360

JACK B. MILLS
1218 Willowgreen Ct.
Westlake Village, Cal. 91360

VINCENT F. SCURY
Dow Chemical-Brazos Div.
P.O. Box 2186
Bakersfield, Cal. 93303

JAMES L. STEIDLEY
Cities Service Oil Co.
223 Thousand Oaks Blvd.
Thousand Oaks, Cal. 91360

RICHARD D. STEWART
Union International Oil Div.
P.O. Box 7600
Los Angeles, Cal. 90054

JERRY WILSON
P.O. Box 3357
Ventura, Cal. 93002

REX J. YOUNG
Cities Service Oil Co.
223 Thousand Oaks Blvd.
Thousand Oaks, Cal. 91360

NEW MEMBERS

STANLEY C. BOICOURT
1834 Chevy Chase Way
Bakersfield, Cal. 93306

DEWEY BUSHAW
Humble Oil & Refg. Co.
1800 Ave. of the Stars
Los Angeles, Cal. 90067

DAVID R. BUTLER
2757 Firethorne Ave.
Fullerton, Cal. 92631

RICHARD S. DREESSEN, JR.
Amerada-Hess Pet. Corp.
550 So. Flower St.
Los Angeles, Cal. 90017

DON FIFE
Div. Mines & Geology
17341 Irvine Blvd. #207
Tustin, Cal. 92680

WILLIAM H. HAWKINS
Box 17126, Foy Stn.
Los Angeles, Cal. 90017

J. H. HAFENBRACK
Humble Oil & Refg. Co.
1800 Ave. of the Stars
Los Angeles, Cal. 90067

COURTNEY F. ISSELHARDT
7348 So. Milton Ave., #15
Whittier, Cal. 90602

MRS. HERDIS MCFARLAND
1606 Broadway
Alameda, Cal. 94501

PAUL E. MCGOVNEY
Box 399
Twain Harte, Cal. 95383

CLARKSON P. MOSELEY
Box 17126, Foy Stn.
Los Angeles, Cal. 90017

TOR H. NILSEN
U.S.G.S.
345 Middlefield Rd.
Menlo Park, Cal. 94025

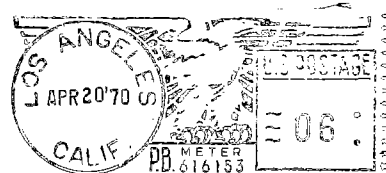
LEW G. SCHROEDER
Std. Oil Co. of Cal.
P.O. Box 606

RALPH E. SMITH
U.S. Geol. Survey
345 Middlefield Rd.
Menlo Park, Cal. 94025

PACIFIC PETROLEUM GEOLOGIST
PACIFIC SECTION, A.A.P.G.
P.O. BOX 17486, FOY STATION
LOS ANGELES, CALIFORNIA 90017

FIRST CLASS

RICHARD L. HESTER DA
1911 MONTECITO DR.
GLENDALE, CA 91208





PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 24

May-June, 1970

Number 5

ASSOCIATION ACTIVITIES

SACRAMENTO LEGISLATIVE REPORT A.I.P.G., CALIFORNIA SECTION

BILL INTRODUCTIONS

The deadline for the unlimited introduction of bills by legislators has passed. It will now require a two-thirds vote of approval before any more legislation of any nature can be introduced in either house of the legislature. It will be several days before all the bills that have thus far been introduced are in print and assigned to the appropriate committee for hearing.

There are currently 4,529 bills and resolutions pending before the legislature. This represents a significant increase of 20% over the same period during the 1969 legislative session. Of this total there were 2,839 Assembly bills and resolutions and 1,690 Senate bills and resolutions.

GEOLOGY BOARD

SB-330 (Song) was amended in the Senate on April 6, 1970 to remove all of the objections of the A.I.P.G. As we reported in our previous bulletins, this measure originally intended to merge the Geology Board with the Engineering Board under the reorganization of the Department of Professional and Vocational Standards.

These amendments would not have been made without the help of the letters written by members of the A.I.P.G. and A.A.P.G. Our thanks and commendations go out to all of you who participated in this successful endeavor.

SB-330 is still in the Senate Business and Professions Committee and will not be set for hearing until either the later part of this month or the early part of June. The Governor's Reorganization Plan Number 2 is still in Rules and has not as yet been assigned to a committee. Undoubtedly it will be assigned to the Senate Business and Professions Committee.

CURRENT STATUS OF BILLS PREVIOUSLY REPORTED

Bills which have not had any change since our last bulletin are not reported here.

SB-161 (Lagomarsino) Oil and Gas Conservation - Passed Senate, set for hearing May 13 in the Assembly Natural Resources and Conservation committee.

SB-294 (Rodda) Subdivision Conditions - Held in the Senate Local Government Committee.

AB-150 (MacGillivray et al) Oil and Gas Leases - Passed Assembly Natural Resources and Conservation Committee and Assembly Ways and Means Committee, amended on third reading, still pending on Assembly Floor.

AB-213 (MacGillivray et al) Geothermal Energy - Passed Assembly and Senate, awaiting Governor's action.

AB-324 (Ketchum) Geology, Extends Geologist Registration Period - Passed Assembly and Senate, signed into law by the Governor.

AB-393 (Unruh and Sieroty) Public Resources, Oil and Gas - Passed Assembly Natural Resources and Conservation Committee, set for hearing in Assembly Ways and Means May 19.

LEGISLATION INTRODUCED

SB-660 (Moscone) Natural Resources. Authorizes and provides for proceedings for preservation and protection of environment from destruction, pollution, or irreparable impairment. Set for May 12 in the Senate Judiciary Committee.

SB-966 (Deukmejian) Oil and Gas Leases. Establishes procedure for partition of rights and interests of persons negotiating oil and gas leases which restrict with or interfere with surface rights. Set for hearing in the Senate Judiciary Committee May 19.

SB-1139 (Song) Licentiatees. Requires licentiatees post sign with statement that customer complaints may be submitted to licensing authority and with address of such authority. Makes noncompliance grounds for suspension or revocation of license. Referred to Senate Committee on Business and Professions, no hearing date set.

AB-447 (Ketchum) Geology. Makes various changes in the Geology Act, including, among others, providing for the issuance of specialty seals, providing for a registration fee and renewal fee for specialty geologist, eliminating the minimum fees due under the act and making various technical changes. Passed Assembly Committee on Commerce and Public Utilities, no hearing scheduled in Assembly Ways and Means Committee.

AB-1272 (Badham) Professional Engineers. Prohibits a partnership, firm or corporation name from including the name of a geologist who is not registered under the Geologist Act as well as prohibiting the inclusion of the name of a person who is not registered in a branch of professional engineering or as an architect. Referred to Assembly Commerce and Public Utilities, no hearing scheduled.

AB-2002 (Bill Greene) Conflict of interest. Prohibits officer or employee of executive branch agency which licenses or regulates business activity from accepting employment with a business licensed or regulated for a period of two years after termination of employment with the public agency. Referred to the Assembly Governmental Organization Committee, no hearing scheduled.

AB-2253 (Sieroty et al) Public Members. Revises the membership of various boards in the Department of Professional and Vocational Standards by adding public members in sufficient numbers so that they and not the licensee members are in the majority. Referred to the Assembly Commerce and Public Utilities Committee, no hearing scheduled.

1970 A.A.P.G. NATIONAL CONVENTION GROUP FLIGHT

Plans are being formulated for an A.A.P.G. Group flight from Los Angeles International to Calgary, Saturday morning, June 20, 1970. Western Airlines; Round-trip - \$149.20. Please contact Gretchen May, Western Airlines - (213) 277-3093 or write P.O. Box 92005, Los Angeles, California 90009 for reservation particulars.

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CHANGE OF ADDRESS. Subscription and membership inquiries should be addressed to:

Membership Secretary, Pacific Section AAPG
P.O. Box 17486, Foy Station
Los Angeles, California 90017

MATERIAL FOR PUBLICATION and requests for missed copies should be addressed to:

Peter J. Fischer, Department of Geology,
Whittier College, Whittier, California 90608

EDITOR	Peter J. Fischer
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CALENDAR

UCLA TO OFFER SHORT COURSE IN OFFSHORE PETROLEUM

A one-week course in offshore petroleum exploration and development will be given August 31-September 4 by UCLA Engineering and Science Extension. The course is a survey of the offshore from a geological, geophysical, engineering, and economic viewpoint, and will emphasize new developments.

Principal instructor is Robert S. Yeats, Associate Professor of Geology, Ohio University, formerly with Shell in Los Angeles. Guest lecturers will include Donn Gorsline, University of Southern California (geological exploration on sea floor), M. B. Dobrin, United Geophysical Corporation (offshore geophysics), R. C. Crooke, Global Marine (offshore drilling), and C. J. Lakey, Mobil Oil (offshore production engineering and economics). The course includes a one-day field trip to visit a platform in the Santa Barbara Channel, and examine representative geological structures and reservoirs on the southern California coast.

The course is designed for individuals with a general technical background at the bachelors degree level, particularly engineers, scientists, or managers concerned with offshore petroleum problems.

Further information is available from G. S. Bond, UCLA Extension, 6115 Math Sciences Building, Los Angeles, California 90024.

LOS ANGELES BASIN GEOLOGICAL SOCIETY

The monthly Bar-B-Que was held on April 15, 1970 at the Standard Oil Company's Northam Station in La Mirada. As usual, an evening of good food and fellowship prevailed with 74 in attendance. Mobil Oil Company Exploration hosted the evening, topped by the paper of Dr. Jack Green, Douglas Advanced Research Laboratories, Huntington Beach.

ACOUSTICAL HOLOGRAPHY AS A GEOLOGICAL TOOL

by Jack Green

Douglas Advanced Research Laboratories
Huntington Beach, California 92647

The scale of geological structures varies within wide limits and depending on the resource sought, the closer the range, the finer the resolution. The problem is to trade off what is "holographically" worthwhile at what scale against conventional methods of detection. The areas of interest for holographic analysis involve five fields (petroleum geology, mining geology, marine geology, engineering geology including hydrology, and volcanology).

In oil geology the detection of folds, domes, anticlines, fracture reservoirs and stratigraphic traps may be possible using acoustical holography. Emphasis should be concentrated on the interpretation of fold ratios which appear to have specific values in oil provinces. Mining geology, in a way, is similar to oil geology as far as holographic methods are concerned, because of the need to detect voids. And if not voids, the need to identify zones of lower density. In marine geology, subsea holographic sensors suspended a given distance below oceanographic exploration vessels would permit a much finer degree of resolution of seafloor structures in three dimensions than present day conventional surface acoustic techniques. In engineering geology, the "best" use of holographic methods may be realized, if only in the area of damsite analysis. Finally, acoustical holography as applied to volcanology has practical applications in geothermal field analyses. Fracture reservoirs and their geometry can be projected in three dimensions. For prediction of volcanic eruptions, an acoustical holographic system to monitor the inflation-deflation characteristics of near-surface magma chambers (as at Kilauea) would supplement the tiltmeters and seismometers already in use.

The detection and analysis of voids including fractures is a prime application of acoustical holography because of the maximum density contrast between rock and air (or water). The second prime application is the detection and analysis of lesser density contrasts (rock-melt; anhydrite-gypsum, ore-breccia, etc.) A short range look is best for enhancing these lesser density contrasts. In these cases, acoustical holography will work best at shallow depths of detection. Finally, the view angle for certain applications can be the most significant. In holography, it is often all how you look at it.

BIBLIOGRAPHIC SKETCH OF DR. JACK GREEN

EDUCATION: 1950 BS in Geology from Virginia Polytechnic Institute

1953 Ph.D in Geology from Columbia University

EXPERIENCE:

7 years with Chevron Research

7 years with North American Aviation

Since 1965 with Douglas Advanced Research Lab.

Has been and still is active in lunar and Martian geology.

U.S.G.S. CLOSES ELK HILLS OFFICE

The USGS field office which has been maintained on Naval Petroleum Reserve No. 1 at Elk Hills for several years has been moved to Menlo Park. Robert J. Lantz, geologist in charge at Elk Hills, describes the move as a consolidation of professional and administrative personnel with other members of the project stationed at the USGS Pacific Coast Center. Lantz and geologist William M. Berryman will join the project headquarters at 830 Menlo Avenue, Menlo Park.

OFFICERS ELECTED

TULSA, April 12 — William H. Curry, Jr., an independent geologist from Casper, Wyo., has been elected 1970-71 President of the American Association of Petroleum Geologists, incumbent President Kenneth H. Crandall announced today.

Mr. Curry will assume the office July 1.

For the first time, AAPG members also chose a President-elect who will assume the office on July 1, 1971. He is Dr. Sherman A. Wengerd, Professor of Geology at the University of New Mexico and Geological Consultant.

John M. Browning, Vice-Chairman of the Board of Tenneco Oil & Minerals, Ltd., Calgary, Alberta, Canada, was elected Vice President.

James R. Jackson, Jr., District Exploration Manager for Humble Oil & Refining Company, Houston, was elected Secretary.

Dr. Peter T. Flawn, Director of the Bureau of Economic Geology at Austin, Texas, and Professor of Geological Sciences at the University of Texas, was elected to a two-year term as Treasurer.

Dr. John D. Haun, Professor of Geology at Colorado School of Mines, Golden, and consultant with Barlow and Haun, Inc., was elected without opposition to his fourth one-year term as Editor of the AAPG Bulletin.

TULSA, Okla. — James O. Lewis, a consulting geologist from Houston, has been elected President of the Professional Division of The American Association of Petroleum Geologists. AAPG President Kenneth H. Crandall announced.

He succeeds Dr. George R. Gibson of Medland, Texas.

John Sistrunk, a Dallas consultant, is the new Vice President and Bernold M. Hanson, a Midland, Tex., consultant, is Secretary-Treasurer.

The new officers' terms begin July 1.

NEW OFFICERS S.E.P.M.

New officers for the Pacific Section of S.E.P.M. will take office July 1, 1970. They are:

King Nash, President, Mobil Oil Company, 10737 So. Shoemaker, Santa Fe Springs, California.

Jim Taylor, Vice President, Shell Oil Company, 196 So. First Street, Ventura, California.

Jim Ingle, Secretary, Department of Geology, Stanford University, Stanford, California.

Roderick McLeunan, Treasurer, 9645 So. Santa Fe Springs Road, Santa Fe Springs, California.

GEORGE C. MATSON AWARD

TULSA, Okla. — Dr. Arthur A. Meyerhoff, publications manager of The American Association of Petroleum Geologists, is the 1970 recipient of the George C. Matson Award. The award is made annually by the AAPG to honor the best technical paper presented at the previous year's AAPG convention.

Dr. Meyerhoff's paper, "Continental Shelf Positions During Geologic Times," was given in April, 1969, in Dallas. He will receive the award at the AAPG convention in Calgary, Alberta, Canada, this June.

In making the announcement, the awards committee stressed it does not either endorse or deny the validity of the arguments presented in the paper. But, "at a time when most public statements are in support of the idea of continental drift, Dr. Meyerhoff has done the profession a distinct service by so effectively arguing the contrary view and in so doing providing perspective to the whole discussion."

Dr. Meyerhoff, 41, is currently a Director of the Association of Earth Science Editors, which he previously served as president, and is president-elect of the Tulsa Science Foundation.

The George C. Matson Award has been given annually since 1957.

HONORARY MEMBERS OF THE AAPG

TULSA, Okla. — Five faithful servants of geology, including three former Presidents of The American Association of Petroleum Geologists, have been named honorary members of the AAPG, President Kenneth H. Crandall announced.

They are Dr. Orlo E. Childs, president of the Colorado School of Mines, Golden, Colo.; Dr. Frank B. Conselman, director of the International Center for Arid & Semi-Arid Land Studies at Texas Tech University, Lubbock, Texas; Dr. Robert E. King, president of Resources Exploration International, Ltd., New York; John E. "Brick" Elliott, retired independent petroleum geologist; and Dr. Grover E. Murray, president of Texas Tech University, Lubbock. The awards will be presented at the AAPG's 1970 annual meeting in Calgary, Alberta, Canada, in June.

The AAPG constitution established honorary memberships that may be conferred by the Association on "persons who have contributed distinguished service to the cause of petroleum geology."

EXAMINATION COMMITTEE

The California State Board of Registration has selected an Examination Committee consisting of Dr. Orville L. Bandy, Mr. Ted L. Bear, Mr. Otto Hackel, Dr. Blakemore E. Thomas and Mr. Ernest M. Weber. The Committee met for the first time, April 13, in Los Angeles and began the planning for the examinations that will be given all geologists that wish to become registered in California after the "grandfathering" is complete.

The first examination is planned for October 9 and 10, 1970, therefore it is important that the Examination Committee secures the material necessary to prepare the examination. It is tentatively planned to hold the registration examination on the first day 9-12 and 2-5 and follow this the next day with the certification examination.

We are contacting all the Universities and Colleges in California and requesting the committee questions to be used in the examination. We now visualize the morning session to be a multiple choice examination and the afternoon session will consist of map and geological problems. This is your chance to get your questions on the examination. Each school should have some representation on the examination. Would you kindly poll your department and forward to us all the questions that you feel would be important for this type of examination. We hope to exhaust all sources of material.

The registration examination questions should consist of problems and multiple choice questions derived from the basic geologic courses. Let's confine these to Physical Geology, Historical Geology, Mineralogy, Petrology, Field Geology and Structural Geology. Please submit your questions and problems as soon as possible. Our next meeting is May 13, but send them in after this date if you find it impossible to make it before.

Remember that this is your opportunity to have your representative questions on the examination. It consists of work right now, but we are certain that your students will appreciate your efforts.

EXAMINATION COMMITTEE

NORTHERN CALIFORNIA GEOLOGICAL SOCIETY FIELD TRIP

Society members and their wives, 50 in all, spent the hottest day of the year, May 16, on a cool trip to Pt. Reyes. Field trip leaders Alan Galloway and Robert D. Brown, Jr., traced the 1906 break of the San Andreas fault and described the geology of the Pt. Reyes peninsula. John Ritter, U.S.G.S., told of some of the results of his sedimentation study of the Stinson Beach-Bolinas Lagoon area.

Between the cool brews provided by Ken Crandall and the natural air conditioning at Pt. Reyes lighthouse, the group managed to survive the heat and finally reached the oasis of THE DOCK at Tiburon at the end of the trip.

REVIEW OF A NEW PUBLICATION GEOLOGY OF THE NORTHERN CHANNEL ISLANDS

by Donald W. Weaver

Special Publication, Pacific Sections, AAPG; SEPM (1969). 200 p., plus geologic maps of Santa Cruz, Santa Rosa, and San Miguel Islands. \$13.50, including maps.

This volume is a collection of papers by Dr. Weaver and his associates, mostly at the University of California, Santa Barbara, organized by Weaver "to present the subject matter - from oldest to youngest, followed by a discussion of the geophysics and structure, and finally with the paleogeographic implications and conclusions as to the historical geology of the area." Although Weaver is listed as the author, he is in part an editor; in addition to contributions on stratigraphy and paleontology by Weaver and his students, there is a paper on gravity of the Channel Islands by J. D. Rietman and J. K. Aldrich and a discussion of San Miguel beachrock by D. L. Johnson. The geologic mapping is principally the result of UCSB summer field camps in geology in 1964 and 1965, masters theses by D. P. Doerner, F. A. Avila, S. R. Bereskin, L. N. Edwards, and G. L. Meyer, and subsequent mapping by Weaver and others.

The timeliness of the volume cannot be questioned. Industry interest in California is now expanding from the Santa Barbara Channel southward to the basins beyond the Channel Islands. And yet, until the appearance of this paper, few areas in California were more poorly known geologically than the Channel Islands.

The maps and cross-sections are well-prepared and, where checked by the reviewer and others, appear to be reasonably accurate. The stratigraphic sections and faunal lists are clearly located on the maps, permitting their direct use as basic data in paleogeographic studies.

The many proofreading errors are an annoyance but not a hinderance to use. More troublesome is the fact that the figures are not numbered, yet figure numbers are used in the text (a single exception is the San Miguel beachrock paper by Johnson). Also, none of the three wells on Santa Cruz Island is located on the map, although all three are discussed extensively.

Errors in editing abound and in some cases result in serious contradictions and in interpretation not supported by the basic data. Several of these are identified below.

1. Weaver has published the descriptions of Santa Cruz Island basement rocks from the Ph. D. thesis of W. W. Rand (1933), a much-needed service because of the difficulty of access to this thesis. Weaver reports a radiometric age of 145 ± 5 m.y. of the Willows Diorite determined by Mobil Oil Corporation. However, on p. 119, Weaver bases his discussion on the assumption that the Alamos Tonalite, not the Willows Diorite, is dated at 145 m.y. The Alamos Tonalite intrudes the Santa Cruz Island Schist and is locally metamorphosed to sericite schist, whereas the Willows Diorite is relatively unmetamorphosed. Weaver then concludes that the age of the intrusion is comparable to that in the Sierra Nevada, whereas the 145 m.y. Willows Diorite is actually much older than the plutonic rocks of the Peninsular Ranges, the Salinian block, and much of the Sierra Nevada. The plutonic rocks and the Santa Cruz Island Schist may bear more resemblance to rocks of the Klamath Mountains than any rocks of the Coast Ranges farther south, a major problem in California tectonics unrecognized by Weaver apparently because of the editing error.

2. On page 45, Weaver and Doerner note that the "entire Eocene sequence on San Nicolas Island, with its gross rhythmic graded nature of conglomerates, sandstones, and shales as well as numerous small scale graded beds -- is inferred to be almost entirely of turbidite origin." But on p. 120, Weaver concludes that the depositional mechanism for these beds "involved a sequence of mass flows -- The sediments have many of the mass flow characteristics such as thick ungraded beds with sharp margins, 'rip ups,' dish structures --". In the latter conclusion, Weaver cites the pioneer work by P. Stauffer (1967) in the Santa Ynez Range, but does not cite W. R. Merschat's published abstract on Santa Cruz Island (AAPG Bull., vol. 53, p. 461) and M. R. Cole's field data on San Nicolas Island pointed out to Weaver during the summer of 1969. Apparently the flow regime

interpretation was changed in the wrap-up paper, but not in the paper presenting the basic information.

3. Detailed paleocurrent and paleoslope data on Miocene rocks, including Catalina Schist-bearing formations such as the San Onofre Breccia, are reported on Santa Cruz Island by Bereskin and Edwards and on Santa Rosa by Avila and Weaver. These data indicate a southwest-facing paleoslope. Yet on p. 121-122, Weaver concludes that "the shedding of the (Catalina Schist) debris toward the north extended along a Miocene shore line that reached from north of Carrington Point, on Santa Rosa Island, eastward toward Point Dume along the Santa Monica coast line," etc. This northward paleoslope is based on subsurface data mentioned on p. 96 from an unnamed and unlocated offshore well north of Santa Cruz Island and enables Weaver to cling to the old view that the Catalina clasts in the islands came from the south, despite the outcrop data.

Discussions of the major throughgoing faults is confusing as to the age of faulting, the amount of strike-slip, and the correlation of faults. On page 115, Weaver refers to a "Santa Monica-Santa Rosa Island fault" and a "Malibu-Santa Rosa fault system," leaving the impression that the Santa Rosa Island fault, the Santa Cruz Island fault, and the Santa Monica (or Malibu Coast) fault are one and the same. However, on p. 9, Weaver questions the correlation of the Santa Rosa Island and Santa Cruz Island faults, and in the plate entitled "Structural Setting," the two faults are clearly not the same. On the plate, the Malibu Coast fault splits into three strands, one of which is the Santa Cruz Island fault but none of which could be the Santa Rosa Island fault unless the southern-most strand is offset 16 miles right-laterally by a fault in Santa Cruz submarine canyon.

Clearly, the identification of individual faults in this region is ambiguous based on present knowledge. But on p. 115, the "Santa Monica-Santa Rosa Island fault" is said to have possibly as much as a ten mile offset," based apparently on the discussion by Rietman and Aldrich (p. 110) of the left-lateral offset of a Bouguer gravity high across the Channel Islands and the offset of a distinctive facies of a Miocene volcanic unit "a few miles" left laterally across the Santa Rosa Island fault (p. 117). Using Fig. A of Rietman and Aldrich (p. 109), the fault along which the gravity high is offset is the southernmost strand of the Malibu Coast fault of the "Structural Setting" plate. The ten mile offset is based on the assumption that this strand is the offset continuation of the Santa Rosa Island fault together with the assumption that the gravity highs were once continuous across this southern strand. Neither assumption is demonstrated by the evidence presented. Furthermore, the Santa Rosa Island fault shows left-lateral offset of stream drainage (Anderson and others, 1949) and "offset of the major physiographic outline of the island" (Weaver, p. 117), implying Quaternary movement. The 16-mile right lateral fault in Santa Cruz Canyon offsets this Quaternary fault and therefore must be very recent!

On p. 118, a photo showing an offset fence line in Santa Cruz Island is presented as evidence of Recent fault movement. The fence offset was field-checked by Ron Teissere of UCSB who found no evidence of Recent movement (R. F. Yerkes, personal commun.).

Perhaps the major criticism of the volume, and in particular the chapter on "Paleogeographic implications and geologic history" is in Weaver's failure to cite previous work relevant to the area under discussion. In addition to the sedimentology studies of Merschat and Cole discussed above, Weaver fails to mention the Poway Conglomerate clast studies of A. O. Woodford, R. H. Merriam, Gordon Gastil, and their students. The Eocene conglomerate clasts of the islands are of Poway type, as Woodford and others have pointed out for San Miguel and San Nicolas Islands. Their data on possible terranes for these clasts might have influenced Doerner's interpretation on p. 18 that the Santa Cruz Island basement terrane contributed to these conglomerates, and Weaver's conclusion on p. 120 that the source area for the Eocene sediments on Santa Cruz Island was a short distance to the northeast. The discussions on paleogeography do not consider the possibility that a palinspastic restoration of various Transverse Range blocks taking into account strike-slip and/or rift-slip displacement may be necessary prior to describing original basin configurations. A rather large body of literature on this subject, including the landmark Hill and Dibblee 1954 paper, was not consulted in Weaver's synthesis.

The volume claims to be a regional study because of the inclusion of a structural map and cross sections (p. 116 and pocket) of the Santa Barbara Channel. Yet no reference is made to the U.S.C. studies on the Santa Barbara Basin (J. Hulsemann and K. O. Emery), San Miguel Gap (F. F. Wright), the igneous bodies west of San Miguel Island (Harold Palmer), Santa Cruz Basin (Robert Gaal), and Santa Monica Basin (Donn Gorsline). These papers present valuable data relevant to Miocene-Quaternary geologic history and should have been considered in the discussion on p. 123-124. Alternatively, the Channel cross-sections and map and the discussion about oil and gas seeps near Santa Barbara, because they do not pertain to the Channel Islands, could have been published separately.

One of the most interesting papers in the volume is by D. L. Johnson on San Miguel beachrock. Johnson describes Quaternary beach materials which have become carbonate-cemented by sub-aerial diagenesis as a result of relative lowering of sea level. Beachrock may be forming today from carbonate-saturated groundwater. The intriguing feature of Johnson's paper is the description of the conversion of a transgressive sand to sandstone prior to burial. The beachrock formation process may be important in the formation of shallow marine transgressive sandstones such as the Vaqueros of the Santa Barbara coast and the "Schist-conglomerate" of the Los Angeles basin. Beachrock is rather common in tropical regions (West Indies, Mediterranean, Indian Ocean, etc.); Johnson's paper includes several references to studies elsewhere in the world. This problem deserves more study by petroleum geologists.

In summary, the Weaver volume does, for the most part, an excellent job presenting the surface geology, biostratigraphy, and paleoecology of the three large Channel Islands, and it is certainly now the standard reference work on the area. The interpretations are, unfortunately, diminished in value because of the author's limited references to the literature. Fortunately, the data are presented in such a way that the reader may do his own interpretation, which speaks well for the paper as a reference work. The questions raised about Weaver's handling of the data could not have been raised unless the data had first been published. The material presented here will add important insight to the tectonic syntheses about coastal California that are proliferating at the present time. The Pacific Sections of AAPG and SEPM are to be commended for their sponsorship and financial support of this publication.

ROBERT S. YEATS
Athens, Ohio

PERSONALS

RUFUS E. COOK has joined the Roy M. Huffington Inc. Oil Co. of Houston Texas, after 20 years as a geologist with Standard of Calif. He served in Iran with Standard from 1957 to 1965 and is now serving Huffington as a geologist in Pelanebang, Sumatra for two years.

Pacific Section SEPM Best Paper Award to AUGUSTUS K. ARMSTRONG of USGS, Menlo Park, California for: Foraminifera and Rugose Coral Zones of the Mississippian-Pennsylvanian Lisburne Group, Brooks Range, Arctic Alaska.

SAGE OIL COMPANY, INC. is pleased to announce their new Executive Office at 3243 Wilshire Boulevard, Los Angeles, California 90005.

SPA members got a real surprise when Art Hawley appeared at a weekly Wednesday luncheon at Scheidel's. Art's future endeavors are uncertain at this time. He is sure, though, that he isn't going back to Nigeria where he has been working for Great Basins the past 3 years. It's odd that the war there ended shortly after Art's departure.

THANK YOU

The Executive Committee wishes to express their thanks to WELEX for transporting the old AAPG Publications from Bakersfield to Ventura recently. Contact Don Hallinger, Pacific Lighting Supply for our list of available publications.

BIBLIOGRAPHY OF RECENT PUBLICATIONS

- PROFESSIONAL PAPER 543-I: Tectonics of the March 27, 1964, Alaska earthquake, by George Plafker \$2.50
- PROFESSIONAL PAPER 623: Chronology of emplacement of Mesozoic batholithic complexes in California and western Nevada, by J. F. Evernden and R. W. Kistler \$1.25
- PROFESSIONAL PAPER 624: Geology and coal resources of the Cumberland, Hobart, and Maple Valley quadrangles, King County, Washington, by J. D. Vine \$2.00
- PROFESSIONAL PAPER 643-A: Species of *Aquilapollenites* and *Fibulapollis* from two Upper Cretaceous localities in Alaska, by B. D. Tschudy \$1.00
- PROFESSIONAL PAPER 643-B: Nonmarine ostracodes of Early Cretaceous age from Pine Valley quadrangle, Nevada, by I. G. Sohn 35¢
- PROFESSIONAL PAPER 643-D: Some Jurassic ammonites from central Saudi Arabia, by R. W. Imlay 55¢
- PROFESSIONAL PAPER 643-F: Two new pollen genera (Late Cretaceous and Paleocene) with possible affinity to the Illiciaceae, by R. H. Tschudy 50¢
- PROFESSIONAL PAPER 647-A: Structural and stratigraphic significance of the *Buchia* zones in the Colyear Springs - Paskenta area, Calif., by D. L. Jones, E. H. Bailey and R. W. Imlay 55¢
- PROFESSIONAL PAPER 648: Vegetation of Amchitka Island, Aleutian Islands, Alaska, by H. T. Shacklette and others \$1.00
- BULLETIN 1271-F: Geologic interpretation of reconnaissance aeromagnetic survey of northwestern Alaska, by W. P. Brosge, E. E. Brabb, and E. R. King \$3.25
- BULLETIN 1288: Surficial geology of Mount Rainier National Park, Wash., by D. R. Crandell \$1.25
- MAPS:
- GQ 820: Geologic map of the Unionville quadrangle, Pershing County, Nev., by R. E. Wallace, D. B. Tatlock, N. J. Silberling, W. P. Irwin \$1.00
- GQ 821: Geologic map of the Buffalo Mountain quadrangle, Pershing and Churchill Counties, Nev., by R. E. Wallace, N. J. Silberling, W. P. Irwin and D. B. Tatlock \$1.00
- GP 680: Aeromagnetic map of parts of the Kramer and Boron quadrangles, southeastern Calif. 50¢
- OPEN FILED REPORTS (Inspection only)
- Bedrock-surface map of central San Francisco Bay by Paul R. Carlson and David S. McCulloch. 1 sheet, scale approx. 4" equal 1 mile.
- Preliminary geologic map of the Point Dume quadrangle, Los Angeles County, Calif., by R. H. Campbell, B. A. Backerby, R. F. Yerkes, J. E. Schoellhamer, P. W. Birkeland, and G. M. Wentworth. 1 map (scale 1:12,000), explanation, sections (3 sheets)
- Geologic map of Lander County, Nevada, by John H. Stewart and Edwin H. McKee. 1 map, explanation (3 sheets)
- Analysis of Shublik Formation rocks from Mt. Michelson quadrangle, Alaska, by Robert L. Dettmerman. 4 sheets (1 cover sheet, 1 strat. section, 1 graph, 1 table.)
- Bering Sea, seismic reflection profiles, 1969, by David W. Scholl and Michael S. Marlow (1 navigation chart; 17 seismic profiles.)

AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS
BULLETIN, vol. 54, no. 2, February 1970

Mississippian dolomites from Lisburne Group, Killik River, Mount Bupton Region, Brooks Range, Alaska, by Augustus K. Armstrong

Sub-La Jolla Unconformity in vicinity of San Diego California, by Gary L. Peterson and Charles E. Nordstrom

Paleozoic stratigraphy of Toiyabe Range, Southern Lander County, Nevada, by Robert H. Washburn

AMERICAN ASSOCIATION OF PETROLEUM GEOLOGIST
BULLETIN, vol. 54, no. 3, March 1970

Comparison of hydrocarbon distributions in crude oils and shales from Moonie Field, Queensland, Australia, by R. T. Mathews, B. J. Burns, and R. B. Johns

Geology of Central Grant Range, Nevada, by Jack H. Hyde and Gerald W. Hutterer

JOURNAL OF SEDIMENTARY PETROLOGY, vol. 40, no. 1,
March 1970

Mineralogy and geochemistry of continental shelf sediments off the Washington-Oregon Coast, by Stan M. White

JOURNAL OF SEDIMENTARY PETROLOGY, vol. 39, no. 4
December 1969

Preliminary evaluation of a core scintillation counter for bulk density measurement in marine sediment cores, by Chester Brier, Robert Bennin and Peter A. Rona

Sediments and sedimentary structures of the Astoria Submarine Canyon-fan system, Northeast Pacific, by Paul R. Carlson and C. Hans Nelson

Microstructure of unconsolidated and consolidated marine sediments, by F. A. Bowles, W. R. Bryant, and Charles Wallin

ENGINEERING MINING JOURNAL, vol. 171, no. 1,
January 1970

Mini-earthquakes . . . The noise can help map buried faults, by W. H. Westphal and A. L. Lange

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PACIFIC SECTION, A.A.P.G.
P.O. BOX 17486, FOY STATION
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Bonita, Cal. 92002

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PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

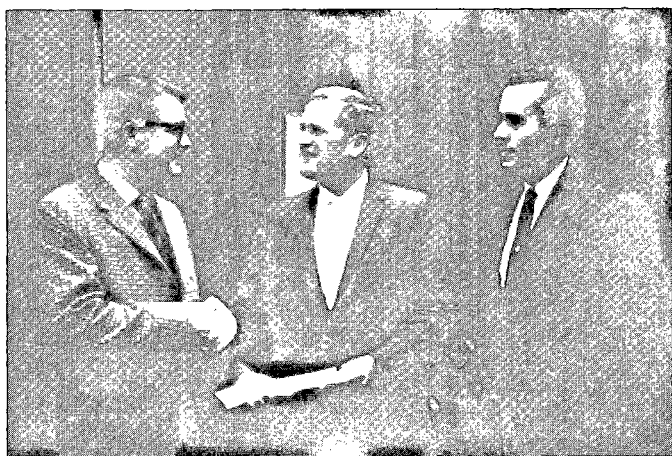
Volume 24

September-October, 1970

Number 6

ASSOCIATION ACTIVITIES

REGISTRATION NO. 1



Mr. Wesley G. "Wes" Bruer (left), a Pacific Section A.A.P.G. member received the Number 1 Certificate for California Registered Geologist from Assemblyman William M. Ketchum (center). Mr. Wilfred W. Peak (right) is President of the State Board of Registration for Geologists.

Mr. Bruer is Chief Geologist for California, a member of Pacific Section A.A.P.G. and National A.A.P.G., a charter member of A.I.P.G. and was very active in writing the Geologists Act.

Assemblyman Ketchum of Paso Robles and representative of the 29th Assembly District sponsored the Geologists Act through the State Legislature. The Act became effective July 1, 1970. It is now illegal to sign a geologic report in California unless you are a Registered Geologist.

NEW LEGISLATION INTRODUCED

AB 1587 (McCARTHY) Oil Depletion Allowance. Limits deduction for depletion of oil and gas wells to give times the adjusted cost of the taxpayer's interest in such property. Under submission in Assembly Revenue and Taxation.

AB 1600 (BRATHWAITE) Discrimination. Makes every person licensed under the Business and Professions Code subject to disciplinary action if he refuses to perform his licensed activity because of race, color, religion, ancestry, or national origin. Approved by Assembly Commerce and Public Utilities. Held in Assembly Ways and Means.

AB 1664 (BAGLEY) Tideland Grants. Suspends for one year the effectiveness of provision requiring State Lands Commission to survey a plat and a metes and bounds description of various tidelands granted by legislative enactment within two years following effective date of the act. Under submission in Assembly Natural Resources and Conservation.

AB 2464 (SIEBOTH AND WARREN) Oil and Gas: Sanctuary. Prescribes limitation on the leasing, cooperative development, or operation of tide and submerged lands for the conduct of any oil and gas development or extraction within certain areas of Los Angeles County. Received an amend and do pass recommendation from Assembly Natural Resources and Conservation. Approved by Assembly Ways and Means. Passed by Assembly 6/27. Approved by Senate Governmental Organization. Set in Senate Finance for 8/18.

SB 949 (LAGOMARSINO) Protection of Ocean Resources. Requires Resources Agency to contract for study of oil leaks in Santa Barbara Channel, as specified. Approved by Senate Natural Resources and Wildlife and by Senate Finance. Passed by Senate July 27. Received an amend and do pass recommendation from Assembly Natural Resources and Conservation. Approved by Assembly Ways and Means, awaits vote on Assembly Floor.

SAN JOAQUIN OFFICERS



San Joaquin Geological Society has elected new officers for term 1970-71.

Left to right, back row: Leon J. Earnest, treasurer; John A. Carver, Pacific Section Representative; Bruce Robinson, Jr., secretary.

Front row: George H. Webb, president; Harry R. Feder, Vice president.

PATTERSON MEMORIAL FUND

The progress of the BOB PATTERSON Memorial Fund as of June 22nd has been good, but additional contributions are requested. Maria Morris reports a total balance of \$585.00.

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MEMBERSHIP SECRETARY, Pacific Section AAPG
P.O. Box 17486, Foy Station
Los Angeles, California 90017

MATERIAL FOR PUBLICATION and requests for missed copies should be addressed to:

PETER J. FISCHER, Department of Geology
Whittier College, Whittier, California 90608

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CALENDAR

NOTE: Please submit your calendar items as far in advance as possible for early publication and notification.—Editor.

ANNUAL CHRISTMAS DINNER DANCE

TIME: Friday Evening, November 21st.

PLACE: Princess Louise on the main channel in San Pedro Harbor.

— BAJA — 1970 SEPM & AAPG FIELD TRIP

The 1970 field trip of Pacific Sections of the Society of Economic Paleontologists and Mineralogists and the American Association of Petroleum Geologists will review the Pacific slope geology of northern Baja California and adjacent Alta California. Participants will meet in Ensenada (Baja Calif.) Friday evening, November 6th. A Saturday guided field trip, by chartered bus, will include points of interest south of Ensenada, including highly fossiliferous Upper Cretaceous and Lower Cretaceous sections representative of diverse marine settings and processes. (The dinner meeting is scheduled in Ensenada for Saturday night.) The field trip guidebook will include road logs and geological information for the three highways leading from Ensenada northward to San Diego. It is hoped that at least some of the points of interest along these routes can be manned by geologists familiar with the local problems to guide participants returning northward independently on Sunday.

Persons not members of the Pacific Section of AAPG, of SEG, or SEPM, please write to Allison for pre-registration forms (immediately) which will be required for field trip participation.

Ned Allison, Dept. Geology
San Diego State College
San Diego, Calif. 92115

NOON LECTURE SERIES — USC

All lectures are given in Room 100, Science Lecture Hall immediately east of the Geology "barracks" and offices.

- October 6 Mr. Frank Hess, Dept. of Geol. Sci. - USC
"Rare Earth Element content of Red Sea Geothermal Deposits"
- October 13 Dr. Edwin C. Allison, Geology Department, San Diego State College - "Paleontological Investigations in the Mid Pacific"
- October 20 Dr. Gordon Oakeshott, Calif. Div. of Mines & Geology, Sacramento, California - "Recent Faulting in California"
- October 27 Dr. George C. Hausner, Dept. of Civil Engineering, Calif. Inst. of Technology - "Effects of Earthquakes on Man-made Structures"
- November 3 Dr. James I. Drever, Scripps Institution of Oceanography, La Jolla, Calif. - "Magnesium Removal From Sea Water by Diagenesis in a Reducing Environment"

SEISMIC INTERPRETATION TECHNIQUES

S.E.G. Symposium, October 20th & 21st

LOCATION: Casa Royale, 251 S. Union Ave., Bakersfield, California 93307.

Emphasis will be placed upon California Geology and Seismic data with latest techniques in both processing and Interpretation.

REGISTRATION: 9:00 A.M., Tuesday, October 20th.

Topics during Tuesdays sessions will include dip effects on velocity determinations, migration stack, diffraction theory, vibroseis and lithologic interpretation, among others.

Luncheon speaker, Dr. N. Terrance Edgar. "Deep Sea Drilling, a New Approach to Marine Research".

No-host cocktail hour at 6:00 p.m. at poolside.

Topics for Wednesday, October 21 include automatic picking and migration and application of modern processing and interpretation techniques to California data.

ADVANCED REGISTRATION contact or write to Mr. T.S. McGehee, treasurer, Pacific S.E.G., Arco, P.O. Box 147, Bakersfield, California 93302.

Registration Fee: \$ 7.00.

THE SECOND INTERNATIONAL SYMPOSIUM ON ARCTIC GEOLOGY

SPONSORS: Pacific Sections AAPG, SEG, SEPM

DATES: February 1—4, 1971

PLACE: Hilton Hotel, San Francisco

★ ★ ★ ★ ★

1970 PACIFIC SECTION PICNIC - A "SMASH"

The 1970 Pacific Section AAPG Picnic, Field Trip and Golf Tournament was held at the Elkins Golf Course last June 5, 1970. 308 delicious steak dinners were served. 80 people stood amazed at San Miguelito amphitheater on the field trip and 149 golfers toured the links.

Bob Lindblom and Lane Howell tied for first place in the Golf Tournament with gross scores of 76.

The influence of several landman and petroleum engineer guests was much in evidence in the prodigious quantity of alcoholic beverage consumed. The count was 2373 cans of beer not including that served on the field trip.

There are several individuals who served at busy behind-the-scenes tasks other than the Chairmen of the three events

— Cont'd on back page

Pacific Section, A.A.P.G. & Affiliated Societies

GUIDEBOOKS

- GB 5. Geol. of Southeastern San Joaquin Valley, California-Kern River to Grapevine Canyon (AAPG) 1965. \$ 4.00
- GB 8. A Tour of the Coastal Oil Fields of Los Angeles Basin in and Adjacent to San Pedro Bay, California (AAPG-SEG-SEPM) 1966. \$ 3.50
- 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 10. Gabilan Range and Adjacent San Andreas Fault (AAPG-SEPM) 1967. \$10.00
- GB 11. The Guidebook to the Geology and Oilfields of the Westside San Joaquin Valley (AAPG-SEPM) 1968. \$10.00
- GB 12. Geol. of the North Channel Islands and Southern California 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 15. Field Trip Guide to Santa Rosa Island (AAPG-SEPM) 1968. \$ 1.00
- GB 16. Field Trip Guide to the Fillmore Areas (AAPG) 1969. (Sespe Creek) \$ 6.00
- 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

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) 1959. \$ 1.75
- GB 3-A. Spring Field Trip, Panoche Hills (SEPM) 1960. \$ 1.75
- GB 3-B. Spring Field Trip, Geol. and 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 and 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 the Temblor Mountains to Antelope Valley Southern California (AAPG-SEPM-SJGS) 1964. \$ 3.50
- GB 4-A. Guidebook to Western Santa Ynez Mountains (CGS-SEPM) 1965. \$ 3.00
- GB 4-B. Guidebook to Placerita Area (AAPG) 1965. \$ 3.00
- GB 8-A. Spring Field Trip, Santa Suzanna Mountains (AAPG) 1966. \$ 1.50
- 1967 Convention Field Trips
- GB 9-B. Pliocene Seaknoll, South Mountain, Ventura County \$ 2.25
- GB 9-D. Steam Injection-Wilmington Oil Field \$.50
- GB 9-E. Whittier Oil Field, Northeast Los Angeles Basin \$.75
- GB 9-G. Central Santa Monica Mountains Stratigraphy and Structure \$ 1.25
- GB 9-H. Structural Complexities, Eastern Ventura Basin \$ 2.00
- GB 9-I. 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 (\$2.00 each)

- CS 6. Sacramento Valley-North (2 sheets) 1954. From T23N/R1W thru T16N/R1E.
- CS 7. Ventura Basin-Central (1 sheet) 1956. From T5N/R23W to T1S/R21W.
- CS 8. San Joaquin Valley-South (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 10. San Joaquin Valley-Central (1 sheet) 1958. From T4N/R3E to T18S/R20E.
- CS 10. San Joaquin Valley-Central (1 sheet) 1958. 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-North-South (1 sheet) 1960. From T29N/R2W to T3N/R2E.
- CS 14. Los Angeles 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-Northern San Joaquin (1 sheet) 1967. From T3S/R10E thru T8N/R1E.
- CS 17. San Joaquin Valley Kingsburg-Tejon Hills (1 sheet) 1969. From T16S/R26E thru T11N/R18W.

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(SA 1-10 \$6.00) (SA 1-11 \$9.00)

- SA 1. Pacific Ocean to Gulf of Farallones \$ 2.00
- SA 2. Gulf of the Farallones to Bielski Mountain \$ 2.00
- SA 3. Bielski Mt. to Hollister \$ 2.00
- SA 4. Hollister to Bitterwater Valley \$ 2.00
- SA 5. Bitterwater Valley to Parkfield \$ 2.00
- SA 6. Parkfield to Soda Lake \$ 2.00
- SA 7. Soda Lake to Santiago Creek \$ 2.00
- SA 8. Santiago Creek to Sawmill Mt. \$ 2.00
- SA 9. Sawmill Mt. to Valyermo \$ 2.00
- SA 10. Valyermo to Mexican Border \$ 2.00
- SA 11. San Andreas Composite Cross Section Summary of SA 1 thru SA 10 on one section \$ 3.00

MISCELLANEOUS PAPERS

- MP 1. San Andreas Fault Bibliography (AAPG) 1962. \$ 2.00
- MP 3. Selected Papers Presented to the San Joaquin Geol. Society Vol.2, 1964. \$ 2.25
- MP 4. Selected Papers Presented to the San Joaquin Geol. Society Vol. 3, 1965. \$ 2.25
- MP 8. A Symposium of Papers Presented at the 40th Pacific Section AAPG Convention (AAPG) 1965. \$ 3.00
- MP 11. Proceedings of North Slope Seminar (AAPG) 1970, Palo Alto, California \$10.00

DIRECTORY

- D 1. Directory Binder \$ 2.00
- D 2. 1968 Directory \$ 2.50

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 8-A 9-B 9-D 9-E 9-G 9-H 9-I 9-J 9-K 9-L
 CS 6 7 8 9 10N 10S 11 12 13 14 15 16 17
 SA 1 2 3 4 5 6 7 8 9 10 11
 MP 1 3 4 8 11
 D 1 2

Name _____
 Address _____

8/5/70

Checks Payable to: Publications Committee, Pacific Section AAPG
 c/o Donald E. Hallinger, 720 West Eighth St., Los Angeles, Calif. 90017

that I would like to acknowledge. Art Bull from Union Oil Co. prepared an elaborate contributors acknowledgement plaque using the donors trademarks. A lot of effort was required. Hugh Platt with Phillips, Jack Cooper with Conoco and Buzz Welch with Sun Oil Company sold barbeque tickets, field trip tickets and guidebooks. Don Padick, Pacific Well Logging, although mortally wounded, manned the breach at the golf table for hours. As a football player, he's a fine ticket salesman. Lane Howell, Tenneco and Pat Ames, Conoco aided in scoring the tournament. Without their aid Charley Elliott wouldn't be through yet. It paid off for Lane since he won half of first place. He slipped up somewhere.

The function would not have been possible, at the nominal fee, without the generosity of 40 contributors (listed below) who granted \$1,067.50 toward the function.

PACIFIC SECTION 1970 A.A.P.G. SPRING PICNIC

CONTRIBUTORS:

Peter Bawden Drilling Co., Borst and Giddens Logging

Service, Burns Geological Exploration Inc., Byron Jackson Inc., California Production Service, Core Laboratories Inc., Deep Oil Technology Incorporated, Dresser Atlas, Dresser Magcobar, Drilling Control Corp., Elkins Ranch Company, Exploration Logging Inc., General Oceanographics, Inc., Geologic Engineering Service, Inc., Geophysical Service Inc., Global Directional Services, Grover Collins Inc., Hoven & Co. Inc., IMC Drilling Mud, Julian Well Logging Service, Mercury-Christensen Co., Munger Oil Information Service, Inc., O'Meara and Rogers Construction Corp., Pacific Log Exchange, Inc., Petty Geophysical, Reese Sales Co., Republic Supply Co. of California, Rotor-Aids Inc., Schlumberger Well Services (plus Offshore) Shaffer Tool Works, R. F. Smith Corp., Sperry-Sun Well Surveying Co., Thompson Drilling Company, United Directional Services, United Geophysical Co., Vetco Offshore Industries, Inc., Welex, Western Geophysical Co. of America, Western Offshore Drilling Exploration Co.

OUR THANKS TO ONE AND ALL!

PERSONAL ITEMS

JOE LE CONTE - Arco's foremost sea-sampler did just that this summer in the Gulf of Alaska, when it wasn't blowing too hard.

RAY PEARSON, ex-Arco district geologist, has opened an office in Long Beach for Tiger Oil Company.

STAN CONRAD, ex-Arco district geologist in Midland has left the dust of Midland for the rare air of Denver and joined Gryusberg and Associates.

WALT RECORD, V-P of Iricon Agency, was here from London long enough to give lovely daughter Terry away in marriage.

Rod Crosses' many friends wish him a speedy recovery from quite a bout with pneumonia.

W.W. (BILL) RAND and bride have left Santa Barbara for residence in the Bay area. Congratulations Bill.

SPENCE FINE, ex-Arco Sydney, Australia has opened an office for Texfel Pacific Corp. in Singapore. Most recent visitor was Tom Rothwell, ex-Arco Paleontologist now consultant. ED GRIBI has been working out of Singapore for Gulf and Western.

WAYNE and NANCIE ELLIOTT are off to Europe for six weeks. They returned from a trip to Mexico not too long ago. Wayne "retired" from Arco in June. He now is a consulting paleontologist when he isn't on the golf course or travelling.

LES BROCKETT, District Geologist North Slope for Arco and family vacationed "out" in Hawaii and California.

WALTER WINFREY, Division Exploration Manager in Bakersfield for Shell has left California for a similar assignment in the lush verdant Midland area.

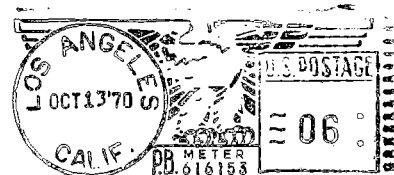
JIM JACKSON, Area Manager for Shell in Los Angeles is currently operating from Houston, Texas. However, Jim now "owns" most of the western U.S. rather than just the Pacific coast.

HAL CLIFFORD, DON COLLINS and CONRAD HOWARD, all from Shell's "deceased" Bakersfield office are now happily working in Shell's downtown Los Angeles office.

**PACIFIC PETROLEUM GEOLOGIST
PACIFIC SECTION, A.A.P.G.
P.O. BOX 17486, FOY STATION
LOS ANGELES, CALIFORNIA 90017**

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**RICHARD L. HESTER DA
1911 MONTECITO DR.
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PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION
AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 24

NOVEMBER, 1970

Number 7

SECOND INTERNATIONAL SYMPOSIUM ON ARCTIC GEOLOGY - San Francisco, California

FEBRUARY 1-4, 1971

SAN FRANCISCO HILTON HOTEL

HOUSE OF DELEGATES OF THE AAPG

The House of Delegates is a newly created legislative group elected from each of the geological societies which are affiliated with the AAPG. The House was created July 1 this year under a new constitution and by-laws of the Association.

Elected chairman of the House of Delegates is Dr. George R. Gibson of Midland, Texas, an independent geological consultant. "This gives the AAPG membership a new, top-level voice in the governing affairs of the Association," Dr. Gibson said. As chairman, he is a voting member of the AAPG Executive Committee and presents the legislation passed on by the delegates.

The House of Delegates will hold its first official meeting in conjunction with the AAPG 56th annual convention in Houston, Texas, March 29-31. The AAPG has 15,000 members and is the world's largest professional geological association.

PACIFIC SECTION DELEGATES

ALASKA GEOLOGICAL SOCIETY: Charles E. Kirschner, Anchorage, Alaska; Marvin D. Mangus, Anchorage, Alaska.

COAST GEOLOGICAL SOCIETY: Richard B. Haines, Ventura, California; James C. Taylor, Ventura, California.

LOS ANGELES BASIN GEOLOGICAL SOCIETY: Ted L. Bear, Recording Secretary, Los Angeles, California; John A. Forman, Los Angeles, Calif.; Donn S. Gorsline, Los Angeles, Calif.; William C. Gussow, Fullerton, Calif.; Gerald H. Rickels, Los Angeles, Calif.; George H. Rudkin, Los Angeles, Calif.; Thomas L. Wright, Fullerton, Calif.

NORTHERN CALIFORNIA GEOLOGICAL SOCIETY: Edward C. Doell, San Francisco, Calif.; John C. Maher, Menlo Park, Calif.; Gordon B. Oakeshott, Sacramento, Calif.

SACRAMENTO PETROLEUM ASSOCIATION: Charles H. Breitsprecher, Sacramento, Calif.

SAN JOAQUIN GEOLOGICAL SOCIETY: Robert C. Blaisdell, Oildale, Calif.; Leon J. Earnest, Oildale, Calif.

The Second International Symposium on Arctic Geology will be held in San Francisco on February 1-4, 1971. This important and timely meeting is being sponsored by the Pacific Section of AAPG, SEG and SEPM and hosted by the Northern California Geologic Society.

The symposium will be held at the downtown San Francisco Hilton Hotel and will have for its theme "THE INTEGRATION OF THE REGIONAL GEOLOGY OF THE ARCTIC PROVINCES." Important papers encompassing geology, biostratigraphy, geophysics, engineering geology and economics will be presented by numerous prominent international authorities. Coverage of the arctic regions of the Soviet Union, Alaska, Canada, Greenland, Iceland and the Scandinavian countries will be included in this program.

Papers concerning regional geologic relationships will be presented during each of the morning sessions of this four-day conference. There will be no schedule conflicts, and auditorium facilities at the hotel will allow ample seating for everyone attending. In the afternoon sessions, Special Topics dealing with exploration, biostratigraphy, geophysics, geologic engineering and economics will be discussed. The SEG will hold separate afternoon sessions on February 3rd and 4th.

Two field trips in the Bay Area are being tentatively organized, the details of these will be announced later.

A "no-host" Ice Breaker cocktail party will be held on Sunday night from 7:00-9:00 P.M. on the Ballroom level of the Hilton Hotel. There will be a ladies' hospitality room open throughout the four-day period.

Modern and sophisticated scientific equipment will be on display by industry exhibitors on the Ballroom level.

Since this symposium is one of the most important functions ever sponsored by the Pacific Section of the AAPG, SEG and SEPM, it is being held in lieu of the regular Spring Convention. There will be no Pacific Section business meeting; however, the Annual Awards Luncheon will be held, as will the traditional President's Cocktail Party. A pre-convention "Flyer" and hotel reservation forms will be mailed very soon to members of the AAPG, SEG and SEPM.

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PACIFIC PETROLEUM GEOLOGIST

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MATERIAL FOR PUBLICATION and requests for missed copies should be addressed to:

PETER J. FISCHER, Department of Geology
Whittier College, Whittier, California 90608

EDITOR PETER J. FISCHER
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December issue deadline: November 20th

PACIFIC SECTION BUDGET AND FINANCE COMMITTEE

The Pacific Section Executive Committee has established a Budget and Finance Committee composed of several past Section Treasurers and the present Treasurer and Publications Chairman to provide continuity of Section financial procedures, recommend the annual budget, and periodically review Section financial operations. Committee members are J. W. Bedford, W. R. Brown, Marie Clark, D. E. Hallinger, and T. L. Wright (Chairman). The Committee met on July 23, and its report was accepted by the Executive Committee on July 29. A summary of that report follows:

- 1) Pacific Section finances involve three distinct categories - Section operations, publications, and the annual convention - and the accounts for these should be maintained separately. Transfers between funds will require approval of the Executive Committee.

The Publications Fund has already been established and is functioning smoothly; it will handle Directory financing and sales. Financial aspects of each proposed publication should be reviewed by a Publications Committee which would include the Section Treasurer.

The Pacific Section's share (\$3,690) of the 1970 Convention surplus should be placed in a separate savings account as a reserve and drawing account for future conventions.

The existing checking and savings accounts provide the Operating Fund from which routine Section operations are paid.

- 2) The proposed 1970-71 Pacific Section budget for operations is:

Income

Dues	\$6,600
Interest	300
Mallory Account	225
	\$7,125

Expenditures

Association Business*	\$2,160
Newsletter (10-issue)	2,200
Distribution to Local Societies	2,600
	\$6,960

Anticipated Surplus \$ 165

(*All-Section mailings and ballots, Membership Secretary, insurance, legislative representative, stationery, telephone, etc.)

- 3) The Treasurer will notify each local society of its annual allocation (based on its area's Section membership on January 1) and, quarterly, its unexpended balance.

BANDY SEPM PRESIDENT

ORVILLE L. BANDY, Chairman and Professor of Geological Sciences at the University of Southern California, Los Angeles, has been elected President of the Society of Economic Paleontologists and Mineralogists.

ORVILLE BANDY was born in Linden, Iowa, on March 31, 1917. He received B.S. and M.S. degrees from Oregon State University, and in 1948 a Ph. D. from Indiana University. From 1948 to the present he has taught at the University of Southern California, advancing from assistant professor to professor and chairman of the geology department.

Dr. Bandy has published extensively in the fields of micropaleontology, paleoecology, and foraminiferal ecology. He has been an active member of the SEPM since 1946, and has served as a member of the nominating committee and the publications committee. Additionally, he has served two three-year terms on the Society's Research Committee acting as Chairman for the year 1966-1967. In this capacity he prepared and was responsible for the Research Symposium entitled, "Radiometric dating and paleontological correlation," which was presented at the Los Angeles, 1967, Annual Meeting of the SEPM. He was one of the SEPM Councilors in 1963-1964 and served as Vice-President of the Society for the 1969-1970 term.

SLATE OF OFFICERS FOR 1971 FOR THE LOS ANGELES BASIN GEOLOGICAL SOCIETY

The offices of President and Vice President - Program Chairman: Orville Hart of Standard Oil and Fletcher McCutcheon of Texaco.

Highest vote count will be President, runner up Vice President.

For Treasurer: Bob Wagner of Mobil Oil and Bill Wendall of Union Oil.

For Secretary: Ed Berg of Humble Oil and Jim Schroeder of Standard Oil.

Nominations for Delegates to the National AAPG "House of Delegates" are: Lowell Redwine of Union Oil, Orville Bandy of U.S.C. and Dave Shoemaker of Shell.

The three alternates are Don Sutton of Standard, Jim Maytum of Texaco and Howard Kinzey of Shell.

Ballots will be mailed to all L.A. Basin Society members during the month of November.

CALENDAR

Deadline for the DECEMBER issue will be November 20th.

(NOTE: Please submit your Calendar Items as far in advance as possible. For early publication and notification a projected schedule would be desirable.—Ed.)

The next meeting of the Los Angeles Basin Geological Society will be Wednesday, November 18, 1970 at the Standard Northam Station, La Mirada. DIRECTIONS: Take Santa Ana Freeway to Valley View, North to Alondra, East 3/4 mile to park. Social hour is until 6:30 P.M. (free beer) and dinner at 7:00 P.M. - \$4.00. The program consists of a presentation by Dr. Floyd Sabins of Chevron Research Company on "Remote Sensing" and reservations may be made by calling Orville Hart, Standard Oil Company, 691-2251, Ext. 293 before 10:00 A.M., November 12, 1970.

SOUTHERN CALIFORNIA - BAJA TECTONICS - AT WHITTIER COLLEGE - November 9, 8 PM

Dr. Robert S. Yeats will discuss the tectonic evolution of the Southern California - Baja region in Room 102 of the Stauffer Science Center Monday evening, November 9th at 8 P.M. The public is invited. (The Science Center is located on Earham Drive just east of Painter in Whittier.)

NOON LECTURE SERIES - USC

All lectures are given in Room 100, Science Lecture Hall immediately east of the Geology "barracks" and offices.

NOVEMBER 10

Dr. David Cummings, Dept. of Geology, Occidental College - Lunar Stratigraphy: Principles and Problems

NOVEMBER 17

Prof. James A. Edinger, Dept. of Meteorology, UCLA - Vertical oxidant distribution over the Los Angeles Basin - Studies on Air Pollution

NOVEMBER 24

Dr. John D. Bukry, USGS., La Jolla - Calcareous Nannoplankton and the Deep Sea Drilling Project

DECEMBER 1

Dr. Lorence Collins, Dept. of Geology, San Fernando State College - Metasomatic Origin of Magnetite Deposits in New York and New Jersey

DECEMBER 3 (Thursday)

Dr. Tanya Atwater, Dept. of Geophysics, Stanford University - Random Topics in Plate Tectonics

DECEMBER 8

Dr. John Suppe, Dept. of Geology, UCLA - Franciscan Tectonics

ANNUAL CHRISTMAS DINNER DANCE

The Los Angeles Basin Geological Society Annual Holiday Dinner Dance will be held on SATURDAY, NOVEMBER 21, 1970. (NOTE: Corrected Date)

PLACE: Aboard the S.S. Princess Louise, Berth 236, Terminal Island

Cocktails: 7:30 P.M., Donated by Service Companies

Dinner: 8:30 P.M., Brochette of Beef

Dancing: 9:30 P.M. - 1:00 P.M. - To the Music of the "Tunetimers"

Price: \$18.00 per Couple

Tickets: Contact Mr. J. S. Isom, c/o Humble Oil & Refining Company, 1800 Avenue of the Stars, Los Angeles, California 90067
Phone: 879-2700

Group Reservations: For groups of 10, table reservations are available.

Although mailed invitations will be sent only to Los Angeles Basin Geological Society and SEG members, we sincerely invite all AAPG, SEG and SEPM members, wives and friends to attend. The beautiful harbor atmosphere for this occasion should be stimulating and exciting to all. Let's come and make it a successful event.

PERSONAL ITEMS

- WANTED: CONTRIBUTORS!!! -

DISASTER RELIEF NEEDED

A fellow member and consulting geologist, located in Malibu, lost all his maps, records, logs, files, books, (25 years of work) etc. in the recent fire. If you have any duplicate maps, pubs., books, logs, etc. that are taking up needed filing space - here's your chance to help another and yourself as well. All contributions gratefully received. Please ship collect to: FREDERICK L. STEAD, 23901 Malibu Knolls Rd., Malibu, Ca. 90265.

HARD TO TOP DEPARTMENT -

The new firm of Hazzard, Morris & Associates, petroleum and mineral consultants, represents a combined total of 100 years experience in our profession!!! A mighty enviable record. The three partners (John C. Hazzard, A. E. L. "Tony" Morris and Stanley G. Wissler) most definitely qualify as world travelers since all three have spent a good portion of their "company" years working (?) in almost every part of the world. The address for the firm is Suite 515 Petroleum Building, 714 West Olympic Boulevard, Los Angeles, Calif. 90015 and the phone number is 749-5309.

JOHN KOCH, Socal, Anchorage, in early October married ex-ARCO exploration secretary Rita Watton at Lincoln, Nebraska. Family prospects are brighter and more rewarding than others, he reports.

ANNUAL CHRISTMAS DANCE

Time: Saturday Evening, Nov. 21st
- Note Correction - Ed.

PACIFIC SECTION MEMBERS OF PRINCIPAL STANDING AND SPECIAL COMMITTEES OF THE AAPG

ALASKA

ANCHORAGE: Richard E. Church, Stratigraphic Correlations Committee; William C. Penttila, Boy Scout Committee.

COLLEGE: Frederick F. Wright, Marine Geology Committee.

CALIFORNIA

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LA HABRA: Donald Asquith, Field Trip Research & Coordination Committee; Robert R. Knapp, Committee on Statistics of Drilling; John E. McCall, Research Committee.

LA JOLLA: Joseph R. Curray, Marine Geology Committee; Elizabeth Lee Gealy, Marine Geology Committee; Leo R. Newfarmer, Research Committee.

LONG BEACH: Stanley G. Wissler, Chairman, AAPG Commissioners on the American Commission on Stratigraphic Nomenclature.

LOS ANGELES: Ray A. Burke, Industrial Advisory Committee; Rollin Eckis, Industrial Advisory Committee; Donn Gorsline, Research Committee; John R. McMillan, Industrial Advisory Committee; Anthony E. L. Morris, Publication Committee; Arthur O. Spaulding, Environmental Geology Committee.

MENLO PARK: Gene A. Rusnak, Marine Geology Committee; Irvin L. Tailleir, Stratigraphic Correlations Committee; Holly C. Wagner, Stratigraphic Correlations Committee.

PIEDMONT: J. Donald Weir, AAPG Representatives to American Geological Institute House of Representatives.

SACRAMENTO: Gordon Oakeshott, Chairman, Distinguished Lecture Committee.

SAN FRANCISCO: Ian Campbell, Continuing Education Committee and Committee on the Preservation of Samples and Cores; Lawrence W. Funkhouser, Industrial Advisory Committee; Peter W. Gester, Industrial Advisory Committee.

SAN MARINO: A. Theodore Lee, Committee on the Preservation of Samples and Cores.

SANTA BARBARA: Laurence Brundall, Research Committee; Donald W. Weaver, Environmental Geology Committee.

SARATOGA: R. Maurice Tripp, Chairman, Boy Scout Committee.

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STUDIO CITY: John C. Hazzard, Chairman, AAPG Representatives to the American Geological Institute House of Representatives.

TARZANA: Andrew G. Alpha, Academic Advisory Committee.

VAN NUYS: Robert R. Knapp, Membership Committee and Stratigraphic Correlations Committee.

WHITTIER: John E. Sherborne, Academic Advisory Committee.

GORDON OAKESHOTT APPOINTMENT

The Joint Committee on Seismic Safety of the California Legislature announced this week that Gordon B. Oakeshott has accepted appointment as Vice Chairman of the Committee's Advisory Group on Engineering Considerations and Earthquake Sciences. He is presently serving as the group's Acting Chairman in the absence of Karl V. Steinbrugge.

Gordon B. Oakeshott is Deputy Chief of the Calif. State Division of Mines and Geology and has been with the Division since 1948. A Phi Beta Kappa from the University of California at Berkeley, Dr. Oakeshott is a member and past officer of several professional societies. He has written over fifty significant papers on the California geological environment and is the author of a recently published book, CALIFORNIA'S CHANGING LANDSCAPES -- A GUIDE TO THE GEOLOGY OF THE STATE.

The 74 Advisory Group members to the Joint Committee were picked from California's leading experts in fields concerned with seismic effects. The Joint Committee, chaired by State Senator Alfred E. Alquist (San Jose) and Vice Chairman Assemblyman James A. Hayes (Long Beach), has the task of organizing existing information on earthquake hazards and recommending methods to improve disaster and recovery operations.

LETTERS TO THE EDITOR

Dear Editor:

On a recent oceanographic trip to Greece and the adjacent portions of the Mediterranean Sea, I retrieved a marble tablet from 68 fathoms of water off the island of Zakynthos. On it was inscribed the following proof that not only $1 = 1$, but that $2 = 1$ also:

$$\begin{aligned}x &= y \\x^2 &= xy \\x^2 - y^2 &= xy - y^2 \\(x + y)(x - y) &= y(x - y) \\2y &= y \\2 &= 1\end{aligned}$$

It seems incredible, but these ancients appear to have proved us wrong all these years. What do you think?

Fraternally,

/s/

Jean B. Senteur de Boue
Ingenieur Geologue
Member Charteur, PacSec AAPG

One's first thought may be that Monsieur de Boue returned too rapidly from the 68 fathoms; however, such facetious thoughts must be quelled as careful examination of the mathematics by those conversant with the "new math" indicates the ancients to be correct. Any additional comment will be appreciated, but please reply in the exemplary scientific precedent established.

THE SECOND INTERNATIONAL SYMPOSIUM ON ARCTIC GEOLOGY

SPONSORS: Pacific Sections AAPG, SEG, SEPM

DATES: February 1-4, 1971

PLACE: Hilton Hotel, San Francisco

COLLEGE CORNER

During the next nine months the PPG will attempt to give equal billing to the "geology" departments of Pacific Coast colleges and universities. We are soliciting contributions from all Pacific Coast geology departments. Send your department's "news release" to the editor — on a first come, first published basis.

U.S.C. — DEPARTMENT OF GEOLOGICAL SCIENCES

Last year the Association of American Universities — the most esteemed organization of academic institutions — elected U.S.C. to membership. Of the 1,647 four-year educational institutions in the United States, only 46 are members of the Association of American Universities. Included are such institutions as Harvard, Yale, Columbia, California, Berkeley, University of Chicago, Stanford and Princeton.

During the past two years the department has nearly doubled its number of faculty. Although the "new" building has not materialized (yet) a completely renovated 1st floor and basement of the "old Science Hall" will soon house the former "Barracks-staff" and the departmental offices.

Currently the teaching load is 3 courses per year, leaving the staff more research time. Due to student demand, Dr. Harold Sullwold is offering an evening course in petroleum geology at SC this semester.

A share of the University's \$400,000 Sea Grant is funding marine research this year by Drs. Bandy, Gorsline, and Kolpak.

ORVILLE L. BANDY — Chairman:

In addition to his duties as Chairman of the Department, Orville and his associates are continuing their studies of foraminiferans as indices of environments, of the relationships between the paleomagnetic scale and microfossil zones generally.

JAMES L. BISCHOFF:

Jim has just completed his first year with the department and is presenting courses in Geochemistry, a Geochemistry Seminar and the Introductory Oceanography course. His research interests are concerned with the Red Sea Geothermal system and the Geochemistry of the Mid-Atlantic Ridge.

GREGORY A. DAVIS:

Much of the research time has been devoted to continued study of thrust faulting in the eastern Mojave block with the development of a new synthesis of Mesozoic orogenesis in the southern cordilleran orogen of California.

THOMAS L. HENYEE:

At the beginning of last year Tom obtained two National Science Foundation grants, one for geophysical work in the Continental Borderland region of southern California and the other a joint project with Donn Gorsline, for geophysical and sedimentological studies in Lake Tahoe.

RICHARD KU:

Dick joined the department in September 1969, coming to U.S.C. from Woods Hole Oceanographic Institution. Since then he has been teaching a course on Chemical Oceanography and setting up a radioactive age-dating laboratory.

Dick is a panel member of the Geochemical Ocean Section Studies (GEOSECS, or as it is more familiarly known, GEOSEX) project initiated in 1969. His current research interest is the geochemistry and diagenesis of mid-ocean ridge sediments, in cooperation with Jim Bischoff, and trace element distribution in seawater and particulate matter.

RICHARD O. STONE:

Dick continues to teach Geomorphology, Pleistocene and Deserts, several undergraduate non-major courses, and is involved in a number of research projects. The largest of the research studies involves examination of subaerial and subaqueous ripple marks for the Office of Naval Research. Dick is now heading the National A.G.I. Education Committee, which is a monumental task in itself. Dick was also our S.C. correspondent for this preliminary effort to bring industry and the colleges more closely together.

LEON TA-LIANG TENG:

Working together, Leon and Tom Henyey, will install the first modern seismological station on the U.S.C. campus. Such a station will be very important in monitoring local earthquakes in the Los Angeles Basin area where earthquake hazards are well-known.

Preparatory work has been undertaken on the geophysical truck, a generous gift to the Department from Western Geophysical Company through Mr. Tom Slavin and Mr. Pres Prestine. This truck, mounted with complete electronic equipment for 24-channel seismic recording, magnetic tape recording and playback, is a beautiful piece of equipment. It is to be used in the Applied Geophysics course.

DR. AND MRS. THOMAS CLEMENTS:

Dr. Thomas Clements and his associates have had jobs dealing with the entire geological spectrum, ranging from mining and mineral investigations to engineering geology for Universal Motion Picture Studios.

Tom is also the project geologist at the archeological site in the Calico Mountains near Barstow. This work was started under the auspices of the National Geographic Society and is now supervised and supported by the San Bernardino County Museum, the Leakey Foundation and the University of Pennsylvania. The dig has received considerable publicity since it also has the services of Dr. Louis S. B. Leakey of South Africa, famed archeologist and anthropologist.

BIBLIOGRAPHY OF RECENT PUBLICATIONS

The new Proceedings of the Geological Seminar on the North Slope, a volume of 212 pages of text and illustrations, is now available from the Pacific Section, AAPG, Publications Committee. The price is \$10 and orders should be sent to Donald E. Hallinger, Chairman, Publications Committee, 720 West Eighth Street, Los Angeles, California 90017.

This volume contains the complete papers presented at the North Slope Seminar in February, 1970 in Palo Alto, California, plus all illustrations used at the Seminar and all discussions held after each presentation.

AMERICAN JOURNAL OF SCIENCE, vol. 269, no. 1, June 1970

Morphometric analysis of pediments and associated landforms in the western Mojave Desert, Calif., by Ronald U. Cooke

BOOKS

- SCIENTISTS IN CONFLICT: The beginnings of the oil industry in California, by Gerald T. White. 272 pls., maps. San Marino, California 1968
(The Huntington Library) \$8.00
- STRATIGRAPHIC LEXICON OF VENEZUELA. Second Edition Order from: Direccion de Geologia, Ministerio de Minas e Hidrocarburos, Centro Simon Bolivar, Torre, Norte, Piso 19, Caracas, Venezuela \$13.50
(Checks should be for: Banco Central de Venezuela)
- GEOPHYSICAL WELL LOGGING (volume 1), by Hubert Guyod and Lemay E. Shane.
(5611 South Rice Avenue, Houston, Texas 77036)
256 pages \$9.50

U.S. GEOLOGICAL SURVEY

- Professional Paper 696: Ground Water in Permafrost Regions of Alaska by John R. Williams \$1.00
- Professional Paper 655-A: Objectives, methods, and environment--Gila River Phreatophyte Project Graham County, Ariz., by R. C. Culler and others .45¢
- Professional Paper 545-D: Effects of the earthquake of March 27, 1964, on the Alaska Railroad, by D. S. McCulloch and M. G. Bonilla \$3.50
- Professional Paper 599-E: A photoelectric-photographic study of the normal albedo of the Moon, by H. A. Phon and R. L. Wildey, accompanied by an albedo map of the Moon, by H. A. Pohn, R. L. Wildey, and G. E. Sutton \$1.00
- Professional Paper 620: Upper Precambrian and lower Cambrian strata in the southern Great Basin, California and Nevada, by J. H. Stewart \$3.00
- Bulletin 1294-A: Changes in stratigraphic nomenclature by the U.S. Geological Survey, 1968, by G. V. Cohee, R. G. Bates and W. B. Wright, with sections by numerous authors .35¢
- Bulletin 1312-I: Distribution of placer gold in the Sixes River, southeastern Oregon--A preliminary report, by Sam Boggs, Jr., and E. M. Baldwin .25¢
- Bulletin 1312-M: Geochemical and geologic reconnaissance of a part of the Fortymile area, Alaska, by H. L. Foster and S. H. B. Clark
- Bulletin 1284: Paleozoic stratigraphy in the northwest coastal area of Prince of Wales Island, southeastern Alaska, by G. D. Eberlein and Michael Churkin, Jr. .65¢
- Bulletin 1285: Geology of the Sycamore Flat and Paraiso Springs quadrangles, Monterey County, Calif., by D. L. Durham \$2.00
- Bulletin 1319-A: Mineral resources of the Agua Tibia primitive area, California, by W. P. Irwin and R. C. Greene (USGS) and by H. K. Thurber (USBM) .65¢

MAPS

- I-568: Reconnaissance geologic map of the east half of the Bend quadrangle, Crook, Wheeler, Jefferson, Wasco and Deschutes Counties, Ore., by D. A. Swanson \$1.00
- I-573: Geologic map of the Charley River quadrangle, east-central Alaska, by E. E. Brabb and Michael Churkin, Jr. \$1.00
- I-578: Geologic map of the Wheeler Peak and Garrison quadrangles, Nevada and Utah, by D. H. Whitebread \$1.00

- Apollo 6 photomaps of the west-east corridor from the Pacific Ocean to northern Louisiana \$1.50
- GQ 859: Geologic map of the Jiggs quadrangle, Elko County, Nevada, by Ronald Willden and R. W. Kistler \$1.00
- GP 354: Aeromagnetic map of parts of the Ugashik and Karluk quadrangles, Alaska, by G. E. Andreasen, W. J. Demytsey, J. L. Vargo, and others. (1963). Reprinted 1970 .50¢
- Map I-583: Geologic map of Washington, by A. E. Weiss-enborn. 1969. (Reprinted 1970) .25¢
- Map I-593: Reconnaissance geologic map of the Tanacross quadrangle, Alaska, by H. L. Foster \$1.00

CALIFORNIA DIVISION OF MINES AND GEOLOGY

- Map Sheet 12: Geology of the southeast quarter Trinity Lake quadrangle, Trinity County, Calif. by Philip A. Lydon and Ira E. Klein \$1.50
- Map Sheet 13: Geology of the Richardson Springs quadrangle, Butte and Tehama Counties, Calif. by John L. Burnett, Robert S. Ford, and Ralph G. Scott \$1.50
- LOS ANGELES: Geologic Map of California
Scale 1:250,000 \$1.50

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol.

- 81, no. 8, August 1970
- Origin and history of abyssal hills in the northeast Pacific Ocean, by Bruce P. Luyendyk
- Metamorphosed and nonmetamorphosed Paleozoic rocks in the Wood Hills and Pequop Mountains, Northeast Nevada, by Charles H. Thorman
- Coincidence of high sea level with cold climate and low sea level with warm climate: evidence from carbonate rocks, by G. M. Friedman and J. E. Sanders
- SEDIMENTARY PETROLOGY, vol. 40, no. 2, June 1970
- Mineralogy and distribution of clay size sediment in Glacier Bay, Alaska, by N. R. O'Brien and D. C. Burrell
- Annual suspended sediment supplied to the California Continental Borderland by the Southern California watershed, by K. S. Rodolfo
- Evolution of interstitial waters in Recent Alaskan Marine sediments, by G. D. Sharma
- THE AMERICAN CITY MAGAZINE, June 1970
- How the geologist can help your city, by C. Arnold Richards

AMERICAN ASSOCIATION OF PETROLEUM

- GEOLOGISTS (Box 979, Tulsa, Oklahoma 74101)
- Memoir 5: Sourcebook for Petroleum Geology.
Semicentennial Commemorative Volume
Part 1: Genesis of petroleum, compiled by Robert H. Dott, Sr.
Part 2: Secondary migration and accumulation of petroleum, compiled by Robert H. Dott, Sr., and Merrill J. Reynolds

SOCIETY OF ECONOMIC PALEONTOLOGISTS AND MINERALOGISTS (Box 979, Tulsa, Okla., 74101)

- SEPM Special Publication No. 14: Depositional environments in carbonate rocks, edited by Gerald Friedman. 209 pages \$9.00
- SEPM Special Publications No. 13: Dolomitization and limestone diagenesis, edited by Lloyd Pray and Raymond Murray. 180 pages \$5.50

- GEOLOGICAL SOCIETY OF AMERICA** (P.O. Box 1719,
Boulder, Colorado 80302)
- Geologic map of South America. Coordinated by Alberto
Ribeiro Lamego and sponsored by the Commission for
the Geological Map of the World, International Geolo-
gical Congress. Scale 1:5,000,000 \$8.00
- Tectonic map of Mexico. Compiled by Zoltan de Cseran.
Bathymetry compiled by Bruce C. Heezen
Scale 1:2,500,000 \$6.50
- Tectonic map of the Alaska Peninsula and adjacent
areas, by C. A. Burk
Scale 1:1,000,000 \$3.25

- DIRECTORATE GENERAL OF MINERAL RESOURCES,
SAUDI ARABIA** (for sale by the Directorate General of
Mineral Resources, P. O. 345, Jiddah)
- Mineral resources research, 1967-68. \$3.00
- Bulletin No. 4: Geology of the Jabal Samran and Jabal
Farasan Regions, by Karl Nebert \$3.00

FUTURE PROVINCES OF NORTH AMERICA

A grant of \$45,000 was accepted with appreciation from the National Petroleum Council in support of the publication of a volume on the future oil and gas potential of the United States. The project was initiated in 1969 by the National Petroleum Council at the request of the Interior Department, and was initially designed as an updating of AAPG publication Future Provinces of North America. The study actually developed into a compilation of fundamental geological information regarding the principal basins of the United States, together with quantitative estimates of the ultimate production of oil and gas. This 2,200-page volume, undoubtedly one of the most comprehensive texts ever to be published on the subject, will consist of 72 papers by 119 authors. The papers are now being edited and set in type, and the volume will be ready for distribution early in 1971.

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2920 - H Street, Suite Y
Bakersfield, Cal. 93301

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Los Angeles, Cal. 90054

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2204-A Via Mariposa East
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LLOYD DAUGHERTY
430 So. Mariposa, #7
Los Angeles, Cal. 90005

CHARLES H. ELLIOTT
1901 Ave. of the Stars
Suite 675
Los Angeles, Cal. 90067

A. C. GOODE
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Bakersfield, Cal. 93302

WAYNE N. HILL
1554 Warwick
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DAVID A. HINERMAN
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MISS GWEN JENSEN
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223 Thousand Oaks Blvd.
Thousand Oaks, Cal. 91360

RAHE JUNGE
Humble Oil & Refg. Co.
1800 Ave. of the Stars
Los Angeles, Cal. 90067

ADELBERT J. KOLLER
Div. of Oil & Gas
830 No. La Brea Ave.
Inglewood, Cal. 90302

JAMES A. LIPSEY
Humble Oil & Refg. Co.
1800 Ave. of the Stars
Los Angeles, Cal. 90067

BRUCE A. MACPHERSON
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No. Hollywood, Cal. 91603

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10800 Esther Ave.
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F. E. MINSHALL
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2391 Calle Alucema
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W. R. SCHEIDECKER
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Bakersfield, Cal. 93302

ALFRED E. SEIDEL
2907 Crest Drive
Manhattan Beach, Cal. 90260

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1333 Gough St. #12A
San Francisco, Cal. 94109

W. W. SOLTER
Humble Oil & Refg. Co.
1800 Ave. of the Stars
Los Angeles, Cal. 90067

EDGAR L. TOMLINSON
Humble Oil & Refg. Co.
1800 Ave. of the Stars
Los Angeles, Cal. 90067

KEN WAINWRIGHT
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CHANGE OF ADDRESS

JOE ARNDT
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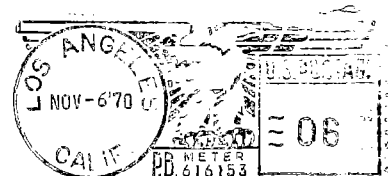
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Plattsburgh, N.Y. 12901
KNOXIE C. DELISE
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San Diego, Cal. 92109
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7881 Rosina St.
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PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Vol. 24

DECEMBER, 1970 - JANUARY, 1971

No. 8

IAN CAMPBELL HONORED

IAN CAMPBELL, recently retired State Geologist of California, became the second recipient of the Ben H. Parker Memorial Medal at the Seventh Annual Meeting of the American Institute of Professional Geologists.

The Ben H. Parker Memorial Medal, the highest award of the Institute, is given only to individuals who have contributed "outstanding service to the profession of geology". Dr. Campbell was the unanimous choice of the Institute for this honor.

2nd International Symposium on Arctic Geology, Feb. 1-4, 1971

A REMINDER: The Symposium is to be held this year in lieu of the regular Pacific Section Annual Convention-Ed.

As of December 10, 1970 Mr. Jim Higgins, Housing Chairman, reported that 544 rooms have been reserved for the Symposium and that reservations were arriving at the rate of 85 to 90 per week. Over 400 of the reservations are in the Hilton Hotel where 700 rooms had been set aside for this event.

For those persons, especially students, desiring less expensive accommodations, such accommodations will be available in the residence halls at San Francisco State College. The residence halls and the College are located adjacent to Lake Merced in southwestern San Francisco about six miles from the Hilton Hotel, site of the Symposium. Public transportation is available nearby on Nineteenth Street.

The cost for visiting students and faculty is \$3.00 per night and for others \$6.00 per night. Soap and towels are \$0.50 extra. Meals are available at the rates of \$1.00 breakfast, \$1.50 lunch and \$2.00 dinner. For reservations or further information, please contact:

Mr. Raymond Sullivan
Associate Dean, School of Natural Sciences
San Francisco State College
1600 Holloway Avenue
San Francisco, Calif. 94132

AAPG EXECUTIVE REPORT

In an effort to keep the membership better informed on the diversified activities of AAPG, President William H. Curry has instituted a new publication called the AAPG Executive Report. This four page "news-letter" will be edited by each AAPG president and distributed every three to four weeks to the AAPG Executive Committee, the Advisory Council, Past Officers, Delegates, Foundation Trustees, Committee Chairmen, Officers of Divisions, Officers of Sections and Presidents of affiliated local societies with the expectation that pertinent information will be passed on to the members. The following are excerpts from Vol. 1, No. 1:

PROFESSIONAL DIVISION DIRECTORY

Again, another publication long in the making . . . the Professional Division Directory containing photos and backgrounds on our 1,200 Certified Petroleum Geologists. LVO Corporation's Kraftbilt Products Division has underwritten the project with a \$20,000 budget, and the cost to members of the Division is \$3.00 each. This is to be published in January. If you are not a Certified member, and want a copy, better get your order in . . . \$25 each.

CURRENT BUDGET

In September, the Executive Committee approved an operating budget of \$810,000 for the fiscal year ending June 30, 1971. On the basis of \$840,000 estimated income, we hope to have a net operating surplus of about \$30,000. I can tell you this: there is no end to pressures to provide more and better services, and it is difficult to hold the line. For what we are trying to do for our membership, it costs \$65 per member to operate our business; \$22 of it coming from members' dues. Other sources are advertising, publications, and subscription sales, plus convention income. We're limping along when we should be running in many areas. As leaders, we must face up to this problem and solve it before the opportunities to to somebody else.

AGI SUPPORT

The Executive Committee approved doubling (from \$1 to \$2) our support of the American Geological Institute, in response to AGI's recent dues increase. This means AAPG will contribute \$20,848 instead of \$12,500 to AGI since our contribution is figured on the basis of 10,424 domestic active members of AAPG. We solicit AAPG leadership and membership feelings about this.

THREE NEW AWARDS

Soon to make their debut at AAPG National Convention are some brand new awards that will give recognition to outstanding people, and which, in turn, will bring new recognition of AAPG . . .

- *Distinguished service to AAPG
- *Meritorious contributions to the Association's program
- *Dedication to public service leadership
- *Contributions to human needs
- *Journalistic achievement for geology

ETHICS

The Executive Committee heard a report from our legal counsel that at least six members may be summoned before the Ethics and Discipline Committee of the Advisory Council. If alleged unethical conduct is proven, the members may be recommended for reprimand, suspension, or expulsion, depending on the seriousness of their ethics violations.

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MEMBERSHIP SECRETARY, Pacific Section AAPG
 P.O. Box 17486, Foy Station
 Los Angeles, California 90017

MATERIAL FOR PUBLICATION and requests for missed
copies should be addressed to:

PETER J. FISCHER, Department of Geology
 Whittier College, Whittier, California 90608

EDITOR PETER J. FISCHER
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Dear Editor:

Re: Senteur de Boue's Math Problem:

$$\begin{aligned}x &= y \\x^2 &= xy \\x^2 - y^2 &= xy - y^2 \\(x + y)(\cancel{x} - y) &= y(\cancel{x} - y) \\2y &= y \\2 &= 1\end{aligned}$$

Please be advised that steps 4-5 involve division by zero on both sides, a difficult although not impossible task. The result is 'undefined' (sometimes called by the name 'infinity' by beginners) and thus the last line of the problem should read:

Two times 'undefined' = one times 'undefined' which seems like a pretty reasonable statement to me.

The greeks probably had a word for it, too, but Senteur can figure that one out for himself.

Respectfully,
 Standard Oil's GE Time-sharer Computer
 Oildale, California

To: Pacific Petroleum Geologist

Re: Higher Mathematics

Proving 2 is equal to 1 provides us with considerable fun, however N. de Boue should return to Trona because his equations are 100% bologna! He would have to be a dedicated sot to forget you can't divide by nought!

A. Einstien, President
 Alaska-Sikiria Math Society

He must have been in calculus—Ed.

ABOUT ROCKS

(The following exposition on geology by the late Murray Pease, sometime Conservator, Metropolitan Museum of Art, was discovered among his papers, eventually finding its way into the records of meetings of the International Institute for the Preservation of Historic and Artistic Works—American Group. Courtesy of John Gettens, of the Freer Gallery, Washington.)

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

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

You have to sort of get used to geologists. At first they seem to have nothing but rocks in their heads, and when they talk about beds, they don't mean what you

LETTERS TO THE EDITOR

(A letter to John F. Curran, Pacific Section President)

Dear John,

One of the problems of the Pacific Section, A.A.P.G., is the general feeling of members outside of the Los Angeles area that they cannot be active in the affairs, policy decisions and operations of the Pacific Section. They are like corresponding members of some societies except that they pay full dues. I know that you are trying to change this and have made some progress.

One suggestion is offered in the matter of two-way communication. Why not have a page in the Pacific Petroleum Geologist devoted to opinions from the local societies on the purpose, policies, and operations as they effect the local societies? Or even a Letters-to-the-Editor page. How else can the opinions and suggestions of widely scattered members be known by other members? Writing to the officers is only a partial solution, particularly with the present geographic distribution of officers. Perhaps a request to each local society for a contribution for a certain month would help bring a sense of unity. We need to clearly define the purpose, functions, and relationships of the local societies and the Pacific Section.

John C. Maher, Geologist
 Branch of Organic Fuel &
 Chemical Resources

Our Letters-to-the-Editor section welcomes contributions, opinions and criticism(?). We would certainly welcome contributions from local societies and could handle these in a manner similar to the new College Corner section OR as "letters" if short. Just send us something!EDITOR

think. But underneath they are almost normal. When they go on field trips with their little hammers, they sit around the evening fire on their terminal moraines and sing just like anybody else, songs like "Lava Come Back to Me," "Shale be Cambrian 'Round the Mountain," "Fossil I Do When You Are Far Away?" "You'd Be So Gneiss To Come Home To," and "When the Chalk is on the Greensands I'll Come Huronian Back to You in My New Red Marl." When you meet a geologist, be nice to him; he may be somebody's mammal.

from John C. Maher

MEMBERSHIP CAMPAIGN UNDERWAY

An invitation to join the Pacific Section AAPG has been sent to various agencies throughout the Pacific Coast area. The letter was accompanied by membership applications and a sample page of the current Directory. Over 1000 applications were distributed to 165 offices. If you have a geological associate, friend or employee who is presently unaffiliated with the Pacific Section AAPG, contact your local Society officer, Delegate or AAPG member for a membership form and sign up a new member.

Membership applications may also be obtained from the following sources:

Miss Judy Hughes, Membership Secretary
Los Angeles Basin Geological Society:
G. H. Rickels, Union Oil Co., Los Angeles
San Joaquin Geological Society:
Bruce Robinson, Tenneco Inc., Bakersfield
Northern Calif. Geological Society:
John C. Maher, U.S.G.S., Menlo Park
Coast Geological Society:
R. B. Haines, Continental Oil Co., Ventura
R. G. Colvin, Membership Chairman, Mobil Oil Corp.,
Los Angeles

Over 400 present members have not paid the current dues, so if you received such notice, return your fee and application promptly. Current mailings will cease to unpaid members after November 30, 1970.

NATIONAL AAPG ELECTION SLATE

Two major oil company executives who are veteran geologists have been nominated for the 1972-73 helm of The American Association of Petroleum Geologists.

AAPG's 15,000 members will cast their votes for J. Edgar Heston, president and chief operating officer of Cities Service Co., New York City, or James E. Wilson, vice president of exploration and production, Shell Oil Co., Denver, to serve as AAPG president-elect, starting July 1, 1971. The presidential term will begin one year later.

Nominees for AAPG 1971-72 vice president are Thomas D. Barber, general manager for Michel T. Halbouty, Houston, and John A. Taylor, a consulting geologist in Oklahoma City.

For secretary, Ted L. Bear, partner in Bear & Kistler, consulting geologists, Los Angeles, will face Edward E. Rue, consulting geologist, Mt. Vernon, Ill.

Dr. Frank E. Kottowski, senior geologist and assistant director, New Mexico State Bureau of Mines and Mineral Resources, Socorro, is unopposed as candidate for Editor.

At the conclusion of his presidential term on June 30, 1971, Mr. Curry will become chairman of the AAPG House of Delegates.

PRESIDENT-ELECT NOMINEES:

MR. HESTON is a native of Stillwater, Oklahoma, and a graduate of the University of Oklahoma with a B.S. in geology. He joined Cities Service in 1933 as a geologist and petroleum engineer. During World War II he was assistant director of production with the Petroleum Administration for War. From 1960 to 1968 he served as president of Cities Service Oil Company in Bartlesville and Tulsa. Two years ago he was named president of the parent company in New York, serving also as a director and member of the executive committee. He is currently a member of the AAPG industrial advisory committee.

MR. WILSON is a native of McKinney, Texas, and a graduate of Texas A & M with a B. S. in geological engineering. He joined Shell Oil in 1938 as a field geologist. From 1942-45 he served in the U. S. Army, and rejoined Shell in 1946. He has served as Shell's vice president for exploration and production in Houston, New Orleans, and Denver. In 1950-51 he served as a district AAPG representative.

VICE PRESIDENTIAL NOMINEES:

MR. BARBER is a native of Plainview, Texas and a graduate of Texas Christian University with B. A. and M. A. degrees in geology.

World War II - U. S. Navy. Pan American Petroleum - 1946-1959. Michel T. Halbouty - 1959 - present. AAPG since 1958. Member of industrial advisory committee.

MR TAYLOR is a native of Oklahoma City and a graduate of the University of Oklahoma with B. S. and M. S. degrees in geological engineering.

Shell, geologist - 1946-1948. Instructor, University of Oklahoma 1948-1949. Magnolia Petroleum Co. 1949-1965. District exploration manager Mobil 1960-1965. Consulting geologist 1965-present. AAPG since 1956 he has served in numerous capacities. Member of Board of Certification.

SECRETARY NOMINEES:

MR. BEAR is a native of Elsinore, California and a graduate of the University of California at Los Angeles with an A. B. in geology.

World War II - Navy veteran. Instructor UCLA - 1940-1941. Consulting geologist 1941-present. Bear and Kistler - 1957-present. Member State Board of Registration for geologists. AAPG since 1950 he has served in numerous capacities: Pacific Section president 1967-68. Secretary, House of Delegates.

MR. RUE was born in Harrisburg, Pennsylvania. He received his A.B. degree in geology from Berea College and an M. S. in geological engineering from the Colorado School of Mines.

World War II - Navy veteran. Magnolia Petroleum Corp - four years. Consulting geologist - present. AAPG active since 1954 in various capacities: AAPG representative - American Geological Institute house of representatives.

CALENDAR

BAJA FIELD TRIP

The recent field trip to Baja California sponsored by the Pacific Section SEPM was a smashing success. It was a most unusual and enjoyable experience for all, including the wives and children who came along for the ride. But if you missed this trip, don't despair. There were so many people unable to make the first trip because of the great demand and limited accommodations, that a second run of the same field trip has been scheduled for the weekend of January 15-17, 1971. If you are interested in getting in on this next trip get your name and address on the list with the Secretary, Pacific Section SEPM:

Dr. James C. Ingle
Department of Geology
Stanford University
Palo Alto, California 94305

You will be contacted personally with preregistration details as soon as they have been worked out.

Whether or not you are able to make the trip you will want a copy of the very fine guidebook which is one of the very few comprehensive published works on Baja California and the adjacent area of Southern California. Extra guidebooks are available now through the Treasurer of Pacific Section SEPM:

Rod D. McLennan
Union Oil Company
9645 S. Santa Fe Springs Road
Santa Fe Springs, California 90670

The cost of extra guidebooks is \$4 each plus 26¢ postage. Make checks payable to Pacific Section SEPM.

SYM-PŌ'SI-UM

sym-pō'si-um, n.; pl. sym-pō'si-a (L., from Gr. symposion, a drinking party, from sympinein, to drink together; syn, together, and pinein, to drink)

1. A drinking party; a merry feast
2. A collection of articles on some important topic, in which several contributors express their views in succession; as a symposium on the Geology of the Arctic

FROM: Webster's new Twentieth Century Dictionary of the English Language

"You pays your registration fee, and you takes your choice"

SAN FRANCISCO FEBRUARY 1-4, 1971

SECOND INTERNATIONAL SYMPOSIUM ON ARCTIC GEOLOGY -

Sponsored by THE AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS, Tulsa Oklahoma, U.S.A.

Presented and Hosted by THE PACIFIC SECTIONS OF THE AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS, THE SOCIETY OF ECONOMIC PALEONTOLOGISTS & MINERALOGISTS, THE SOCIETY OF EXPLORATION GEOPHYSICISTS and THE NORTHERN CALIFORNIA GEOLOGICAL SOCIETY

February 1-4, 1971, HILTON HOTEL, San Francisco, California, U.S.A.

GEOLOGY SPEAKERS FORUM CALIFORNIA STATE COLLEGE, LOS ANGELES

Monday, Jan. 18 - Dr. Benjamin M. Page, Stanford Univ.
Oceanic Crust Remnant on Land Near San Luis Obispo, California

Monday, Jan. 25 - Dr. Robert Bereskin, Fresno State College
Aspects of Diagenesis in the Sultan Limestone (Devonian) S.E. Calif. & S. Nevada

Monday, Feb. 1 - Dr. John Crowell, University of California, Santa Barbara
Causes of Glaciation: History of Ice Ages on Earth

Monday, Feb. 8 - Dr. James Valentine, University of California, Davis
Plate Tectonics and the History of Life

Monday, Mar. 1 - Dr. G. Brent Dalrymple Branch of Regional Geophysics, U.S.G.S., Menlo Park

The Ar⁴⁰ - Ar³⁹ Technique: A Recent Advance in K/Ar Dating

The Speakers Forum meets in Physical Science, Room 273 at 4:00 p.m.

USC NOON LECTURE SERIES

Tuesday, Jan. 12 - Dr. Robert H. Osborne, Geological Sciences, USC
Analysis of Typical Cincinnati Sedimentation by use of a regular ergodic Markov chain

Tuesday, Jan. 19 - Dr. Donald Zenger, Department of Geology, Pomona College
Some aspects of Dolomitization

Lectures are given in Room 100, Science Lecture Hall (Adjacent to Geology Barracks)

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A NEW YEAR'S EDITORIAL:

HEARTBREAK OF THE "HANOI HILTON"

Presently, there are some 400 American servicemen known to be prisoners of war in Southeast Asia. In addition, nearly 1,000 U.S. men are missing in action. Regardless of your feelings concerning the war, the plight of these men transcends politics, philosophy and commands all of us to take a few minutes from our busy, luxury-filled lives, to assist these men and their families. 500 men have been missing or held prisoner for 2 years or more and over 200 have been prisoners of missing for 3½ years or longer. This is longer than any U.S. serviceman was held prisoner during World War II. One U.S. flier has been in the "Hanoi Hilton" for 7 years.

This tragedy is compounded by Hanoi's refusal to identify all those it holds prisoner, or to permit the free exchange of mail. (During the past 5 years, only about 100 prisoners have been allowed to write, and they are permitted less than 2 letters per year.) Imagine the heartbreak of wives and children who do not know whether hope still exists, or whether they must now begin new lives. All it would take to relieve the anxiety and sorrow would be for Hanoi to honor

the terms of the Geneva Convention it signed in 1957. Yet Hanoi refuses, and continues to use these men for its own propaganda and policy ends.

In the large "Hanoi Hilton" camp, prisoners are wakened between 5 and 6 a.m. by a gong, followed by a 30-minute Radio Hanoi propaganda broadcast. Later, the men are allowed to empty their toilet buckets. At 11 a.m., 17 to 19 hours after they last ate, they are fed a meal of pumpkin or squash, pork fat, a vegetable resembling wild onion tops and bread or rice. Then prisoners "nap" on their bare board bunks until 2 p.m. at which time a half-hour of Radio Hanoi is programed. Between 4 and 6 p.m. they get their second and last meal of the day. These men have nothing to do and yet they are more fortunate than those who are held indefinitely in footblocks and handcuffs, kept in solitary confinement for more than one year, hung from ceilings with ropes, burned with cigarettes, or paraded through streets and stoned while suffering from serious wounds.

Our government has tried diplomatically to relieve this suffering. Hanoi has not listened. Now the struggle is open, President Nixon declared last November 11th to be Prisoner of War Day. During this next week, will each of you write a letter to Paris? Also, if you can write to Hanoi and to those additional sources shown below to whom Hanoi will hopefully listen. ALSO, will you please solicit your employers, fellow employees, companies to whom you pay your bills, friends and acquaintances to join in this effort.

Your letters are important, because Hanoi IS sensitive to world opinion. In your letters, request the following:

1. Release of names of all prisoners.
2. Immediate release of sick and wounded prisoners.
3. Impartial inspections of POW facilities.
4. Proper treatment for all prisoners.
5. Regular flow of mail.
6. Release of ALL prisoners.

Your letters will help more than anything else. Send the original to the North Vietnamese in Paris (Xuan Thuy), with copies or separate letters to the others if possible. Write to:

Minister Xuan Thuy (20¢ - ½ ounce postage)
Delegation of the Democratic Republic of Vietnam
c/o Prisoner of War Campaign
Annapolis, Maryland 21412

His Excellency
Hubert de Besche
Embassy of Sweden
2249 R Street N.W.
Washington, D.C. 20008
The President
Democratic Republic of Vietnam
Hanoi, North Vietnam

His Excellency
Anatoly Dobrynin
Embassy of the USSR
1125 - 16th St., N.W.
Washington D.C. 90026

EDITOR'S NOTE: - This editorial has been adapted from the original written by an attorney friend for his church. Many concerned organizations are conducting an intensive campaign to free these prisoners - let's join in this "fight."

COLLEGE CORNER

U.S.C. - DEPARTMENT OF GEOLOGICAL SCIENCES

(To the "missing" faculty in Nov. our apologies—Ed.)

JAMES L. BISCHOFF:

The study of rare earths on lunar samples from Apollo 11 and 12 missions is completed and Jim has turned his major efforts to the problem of ocean resources in the Red Sea geothermal system. He is applying geochemical techniques to find similar deposits on the East Pacific Rise and in the Gulf of California. During the past year the neutron activation laboratory in Stauffer Hall of Science was set up and is in full operation.

GREGORY A. DAVIS:

Greg will be taking a one-semester leave from U.S.C. (starting in January) to serve as a visiting professor at the University of Washington.

WILLIAM H. EASTON:

W. H. Easton retired in November as President of the Paleontological Society, having finished one year in this office and another as President-Elect. He presided at the Council and Annual Meeting during the convention of the Society in Milwaukee in December. During the coming year he will be finishing business as Past-President which was started during his tenure. Council actions during his presidency were to raise the dues, start revision of the Constitution, investigate the professional goals and training of paleontologists, authorize a pamphlet on paleontology as a profession, a visiting lectureship and a catalog of type collections in North America.

DONN S. GORSLINE:

Donn Gorsline closed out his term as Editor of Marine Geology in December and then assumed the duties of Editor of the Journal of Sedimentary Petrology and also membership on the SEPM Council. In addition he served as a founding member and councillor of the American Quaternary Association and also served on the Nominations Committee.

In the lab and on the Valero a number of graduate students are working on research topics under Donn's guidance.

RON KOLPACK:

Ron has finished the marine geology-oceanography section of the soon to be published WOGA sponsored study of the Santa Barbara Oil slick. He and his staff are currently directing the vigorous USC sea grant program for geology.

RICHARD H. MERRIAM:

In addition to his hard rock and engineering geology courses, Dick is a Research Associate at the Los Angeles County Museum and a member of the Construction Materials Committee in the Engineering Geology Division of the Geological Society of America. His major research involves mapping of 8,700 square miles of northwest Sonora which is of particular interest owing to studies in the Gulf of California regarding the East Pacific Rise, transform faulting and strike slip faulting on the San Andreas System. A second project, in conjunction with the County Museum, is a study of the Cenozoic sediments in the Salton Trough.

ROBERT H. OSBORNE:

Under Bob's guidance Donald McDougall completed a first-rate petrographic study of the Bird Springs Group near Mountain Springs, Nevada for his master's thesis, which will be submitted for publication in the near future. A new IBM 360-65 computer system is now fully operational at the University Computer Center and time-sharing capabilities are under development.

The highpoint of this year for Bob and his wife was the birth of a second son, Todd Stuart, last February.

U.C.S. FACULTY ('AN ADDENDUM')

Donald Palmer received his Ph. D. from Princeton, 1968 and has been teaching mineralogy and graduate petrology. Recently he has been setting up a new program in economic geology. Recent research topics include the investigation of a new mineral from Mount Lassen with Dick Merriam, the study of conditions of metamorphism in the Mojave desert, and studies of rock diffusion in igneous processes.

USC MICROQUAKE STATION

Dr. Leon Teng received a grant to install a seismological station on the campus to record and measure weak earthquakes (of less than 2.5 magnitude). Earlier attempts to set up a micro-quake station near the downtown Los Angeles area have been unsuccessful because of the interference of traffic vibrations. Improved electronic equipment made the station practicable. Artificial vibrations, differing in frequency from those of earthquakes, can be eliminated from the recording. Eventually three or four of the microquake seismological stations will be installed in the Los Angeles Basin. Data from these very weak earthquakes will be used to learn more about earthquake hazards in the heavily populated Los Angeles area.

PACIFIC COAST GEOLOGY AT OHIO UNIVERSITY ATHENS, OHIO

Current activities of the Department of Geology in the Pacific Coast region include a summer field camp in White Pine County, Nevada, and student and faculty research in several areas. Research projects and their status are summarized below:

G. W. SMITH (faculty): Late Quaternary deglaciation in southern British Columbia (work in progress, Geological Survey of Canada).

R. S. YEATS (faculty): Oak Ridge and Newport-Inglewood fault studies, California (work in progress). Structural evolution of central and southern Ventura basin, California (work in progress). Offshore Islands, Magdalena Bay, Baja California Sur (work in progress with J. A. Forman and J. A. Minch). K-Ar ages, North Cascades plutons (in press, U.S.G.S., with Joan Engels). Tertiary geology of North Cascades between Darrington and Skykomish (manuscript in progress with J. A. Vance and M. Heath). Mt. Angeles quadrangle, Washington (in press, U.S.G.S., with R. W. Tabor and M. Sorenson).

M. R. COLE: Paleocurrent and basin analysis on San Nicolas Island, California. M. S. thesis, 1970 (open file, Calif. Division of Mines).

J. G. SEAY: The Geology of the Northern Piceance Creek basin, northwestern Colorado, M.S. thesis, 1970.

W. R. MERSCHAT: Paleocurrent study of Paleogene of Santa Cruz Island, Calif. (manuscript in progress).

R. KNAPP: Eocene paleocology, Tepetate Formation, Baja California Sur (work in progress).

R. M. PARSLEY: Cretaceous-Eocene paleocurrent study, San Miguel Island, Calif. (work in progress).

W. S. HUANG: Basement petrology, northeast Los Angeles basin, Calif. (manuscript in progress).

The Department has 8 faculty, some 60 undergraduate and 16 graduate majors, plus earth science and hydrogeology majors, who combine geology with education and civil engineering, respectively. There is a rather heavy emphasis on environmental geology; currently studies in acid mine drainage, landslides, and land management are in progress. Majors are urged to take geology plus some other field of interest, such as business, invertebrate zoology, civil engineering, chemistry, or physics. A sound background in basic sciences, mathematics, and field geology is required.

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HOLIDAY DINNER DANCE

The Annual Holiday Dinner Dance of the Los Angeles Basin Geological Society was held on the S. S. Princess Louise, November 21, 1970. One hundred and seventy-four people were in attendance to enjoy the festivities. The success of this year's occasion can be attributed to the following committee members and contributors:

Committee Chairmen

Arrangements — Bill Hunter, THUMS, Long Beach
Tickets — Jim Isom, Humble Oil & Refining Co.
Contributions — Bob Knapp, Standard Oil Company of California

Contributors (who generously donated cocktails and hors d'oeuvres)

Borst & Giddens Oil Well Logging Service, Inc.
Calada Materials
Comet Reproduction Service
Core Laboratories, Inc.
Dresser Industries
Dresser Magcobar
Drilling Control Corporation
Exploration Logging, Inc.
General Oceanographics
Geological Exploration, Inc.
Geologic Engineering Service
IMC
Mercury Christensen
Munger Oil Information Service (also donated publicity)
Offshore Navigation, Inc.
Pacific Towboat & Salvage Company
Reese Sales Company
R. F. Smith Corporation
Santa Fe Drilling Company
Schlumberger Offshore Services
United Directional Services
Western Offshore Drilling & Exploration Company

On behalf of the Society, under the guidance of Don Hallinger, we wish to thank all of those who contributed and participated.

PERSONAL ITEMS

MARY McNEIL wishes to advise all her friends and colleagues of her new assignment. She is Managing Director of Westwood Research, Inc.'s new Brazilian affiliate, which is offering services to both the Petroleum and Mining Industry in Brazil. In this part of the world they are also offering the Geophysical Services of Dames & Moore.

DAVE BERRY and DICK BROOKS are "transferring" to Arcos Anchorage office (from the Long Beach "Cherry Street Tomb")

B. BRICK ROBINSON writes that he has completed his assignment at Shell Development's Research lab in Houston and has been transferred to the production geology section of Shell's offshore division in New Orleans.

JIM E. SCOTT, Development Geologist with Union, has been transferred from Anchorage, Alaska to Ventura. Jim will be involved in the development of the Santa Barbara channel dos Cuadras field.

The office furniture of petroleum consultant RODMAN K. CROSS is to be disposed of immediately. This equipment can be seen at 3591 Long Beach Blvd, Long Beach by appointment. Call (213) GA 7-8228.

BOB LIMBLOM "NO LONGER AVAILABLE"

The social event of the season was the evening wedding of ARLENE WICK and ROBERT (Boom-Boom) LINDBLOM, Oct. 17, 1970, St. Josephs Church, Bakersfield. In a veil of white, the bride was both radiant and lovely, while the groom was dressed in honor of the occasion in a black tux over a formal powder blue Arnold Palmer sweater.

Honeymooning Sunday in Apple Valley (contrary to reports that the groom was seen on Huntington Beach Golf Course that day) they traveled to Mammoth to watch the snow fall and Tahoe to watch the chips fall. A large Keno win by the groom added zest to what might otherwise have been a routine weekend.

The young couple have returned to their new home in Belmont shore to await the patter of big and little feet (visitors of all ages).

L. A. BASIN GEOLOGICAL SOCIETY OFFICERS

The Los Angeles Basin Geological Society held its annual election of officers and delegates to National AAPG during the first week of December.

The new officers are as follows:

President Orville D. Hart
Vice President Fletcher McCutcheon
Treasurer Robert Wagner
Secretary Edgar L. Berg

Delegates to National AAPG: Alternate Delegates

Orville Bandy Donald Sutton
Lowell Redwine James Maytum
David Shoemaker Howard Kinzey

TRANSITION

DR. G DALLAS HANNA

Dr. G Dallas Hanna, for many years Curator of Geology at the California Academy of Sciences, San Francisco, Calif. and one of the earliest practicing micropaleontologists in the state, died of a brain hemorrhage Friday night, Nov. 20, 1970.

Dr. Hanna was paleontologist for the Associated Oil Co. (Later Tidewater Oil Co.), from 1923 to 1948. He was Vice President of the Society of Economic Paleontologists and Mineralogists in 1928-29 and President in 1932-33. He published numerous papers on Geology, Paleontology and Malacology but his greatest contribution was in the field of fossil Diatoms. For the past few years and up until the day of his death, he was working on a large diatom flora from a deep sea core from the south Atlantic Ocean.

On May 8th of this year he was awarded an honorary degree of Doctor of Sciences by the University of Alaska. In 1959 the University of Kansas, his alma mater, conferred on him the "Erasmus Haworth Distinguished Alumni Honors in Geology" and in 1967 the Calif. Academy of Sciences bestowed on him the Fellows' Medal, the most distinguished award of the Academy for Scientific achievement.

RODMAN K. CROSS

Rodman K. Cross passed away last November 30th. Contributions in memory of Rod may be made to the Pomona College Alumni fund, Claremont, Calif. 91711.

STATUS OF THE

BOB PATTERSON MEMORIAL FUND

W.B. Barker	\$ 15.00
Mr. & Mrs. Gerald Rickels	10.00
Morris Petroleum Inc.	25.00
Mr. Joe Parmenter	100.00
Pauley Petroleum	200.00
Pacific Oil Well Logging, Inc.	100.00
Mr. H. G. Dohlen	10.00
Mr. J. C. Creed	25.00
Mr. F. C. Porter	50.00
Mr. P. H. Gardett	15.00
Mr. Bob Ferguson	100.00
Mr. D. R. Lindsay	5.00
Mr. J. J. O'Brien	5.00
Mr. D. D. Bruce	50.00
Mr. S. A. Wengard	10.00
Mr. J. P. Webb	10.00
Mr. J. L. Fish	10.00
Anonymous	50.00
Mr. & Mrs. Al Kerr	10.00
Mr. & Mrs. Jim Anderson	25.00
Mr. J. Hazzard	10.00
Mr. & Mrs. J. D. Traxler	50.00
Mr. W. W. Porter II	100.00
Stuart Ross Smith	30.00

TOTAL \$625.01

(Three house trailer payments have been made from the fund)

NURSERY NEWS

A NEW BERRY

Dave and Romona Berry are the proud new parents of Lara Anne (7 lbs. of girl baby).

BIBLIOGRAPHY OF RECENT PUBLICATIONS

U.S. GEOLOGICAL SURVEY

- Professional Paper 700-C: Geological Survey Research
1970, Chapter C \$3.25
- Bulletin 1266: Bibliography of North American Geology,
1966 \$4.75
- Bulletin 1267: Bibliography of North American Geology,
1967 \$4.25
- Bulletin 1312-H: Geology, mineral deposits and geo-
chemical and radiometric anomalies, Serpentine Hot
Springs area, Seward Peninsula, Alaska, by C. L.
Sainsbury, Travis Hudson, Reuben Kachadoorian,
and Thomas Richards \$1.00
- Water Supply Paper 1972: The Lake Tahoe basin, Cali-
fornia-Nevada, by J. R. Crippen and B. R. Pavelka \$.40
- Circular 601E: Sediment problems in urban areas, by
H. P. Guy Free
- Circular 639: Preliminary report on the geologic events
associated with the May 31, 1970 Peru earthquake,
by G. E. Ericksen and George Plafker (USGS) and
J. F. Concha, (Lima, Peru) Free

OPEN FILED REPORTS (Inspection only)

- Geologic map of the Conconully quadrangle, Okanogan
County, Washington, by C. Dean Rinehart and
Kenneth F. Fox, Jr.
- Geologic map of the Oroville quadrangle, Okanogan
County, Washington, by Kenneth F. Fox, Jr.
- Preliminary geologic map of the central Santa Cruz
Mountains, California, compiled by Earl E. Brabb
(Map (scale 1:62,500) and explanation (total, 3
sheets.)
- Preliminary geologic and gravity maps of the Santa Cruz-
San Juan Bautista area, Santa Cruz, Santa Clara,
Monterey, and San Benito Counties, Calif. by Joseph
C. Clark. Maps, explanation (1 sheet) scale 1:125,000.

**PACIFIC PETROLEUM GEOLOGIST
PACIFIC SECTION, A.A.P.G.
P.O. BOX 17486, FOY STATION
LOS ANGELES, CALIFORNIA 90017**

FIRST CLASS

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol.
81, no. 9, Sept. 1970.

- The Uralides and the motion of the Russian and
Siberian Platforms, by Warren Hamilton.
- Serpentinite flows on Joaquin Ridge, Southern Coast
Ranges, California, by D. S. Cowan and C. F.
Mansfield.
- Seismic refraction study of crustal structure in the
Western United States, by Claus Prodehl.
- Thrust Paleozoic rocks in the Northern and Central
HD Range, Northeastern Nevada, by John Riva

GEOLOGICAL SOCIETY OF AMERICA BULLETIN,
vol. 81, no. 10, October 1970

- Earthquake recurrence intervals on the San Andreas
Fault, by Robert E. Wallace
- The Pliocene-Pleistocene boundary, Italy and Calif.
by O. L. Bandy and J. A. Wilcoxon

Sub-loess basalt topography in the Palouse Hills,
Southeastern Washington, by Don Ringe.

Magnetic reversals and sedimentation rates in the
Arctic Ocean, by David L. Clark.

A Middle Miocene age for the Rosarito Beach Forma-
tion in Northwestern Baja California, by J. A.
Minch, K. C. Schulte, and G. Hofman.

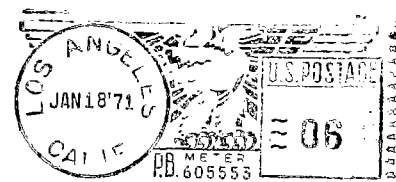
San Jacinto Fault zone in the Northern Imperial Valley,
California, by M. J. Bartholomew

WASHINGTON STATE DEPARTMENT OF NATURAL
RESOURCES (P.O. Box 168, Olympia, Washington 98501)

Bulletin No. 61: Lead-zinc deposits in the Kootenay
Arc, northeastern Washington and adjacent British
Columbia (various authors) \$2.00

OREGON DEPARTMENT OF GEOLOGY AND MINERAL
INDUSTRIES (1069 State Office Bldg., Portland, Oregon
97201)

Bulletin 67: Bibliography of the geology and mineral
resources of Oregon (Fourth Supplement),
compiled by Miriam Roberts \$2.00



**RICHARD L. HESTER DA
1911 MONTECITO DR.
GLENDALE, CA 91208**