## PACIFIC PETROLEUM GEOLOGIST

### NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 22

January, 1968

Number 1

#### ASSOCIATION ACTIVITIES

P.P.G. COMES OF AGE By Martin Van Couvering

When the current editors of the Pacific Petroleum Geologist noted that this publication was in its 21st year, they decided to commemorate that fact, and asked me to provide a little story about the beginnings of the newsletter. Here it is:

The reason for the existence of the Pacific Petroleum Geologist is that the problem of communication plagues any association embracing hundreds of individuals, even if they are all in one place. When they are dispersed all along the Pacific Coast, as are the members of the Pacific Section of AAPG. the problem is intensified. It is natural for geologists to wish to communicate with each other and exchange ideas. Because of the great distances involved in regional meetings, local groups have found it desirable to form local geological societies. Still such meetings do not wholly satisfy their needs. For many years, the Pacific Section has had annual meetings, in order to provide a forum for exchange of ideas between geologists whose work separates them by great distances. (There are also monthly lunches attended mostly by residents of the Los Angeles area.)

By the beginning of 1947, it had become apparent that it would be desirable to have formal communication more often than once a year. Also, quite a number of geologists were unable to attend the annual meetings, for one reason or another. The obvious solution was a monthly newsletter, which would reach every member of the Pacific Section, including some who were engaged outside of California, and even in foreign countries. It is easy to understand how welcome a newsletter is to these widely dispersed members. So the Pacific Petroleum Geologist came into being in January, 1947, just 21 years ago.

An editorial staff was created, as follows:

Editor-Manager Calendar Activities Personal Items Selected Bibliography Printing and Circulation San Joaquin Representative Herman W. Weddle

Loyde H. Metzner Richard S. Ballantyne, Jr. John E. Kilkenny Peter H. Gardett Robert T. White Hugh W. McClellan

Like all young things, the newsletter has been growing and maturing ever since. Now it is an integral and essential part of Pacific Section activities. Up to the time of writing, all of the original editorial staff have survived except Hugh McClellan.

The first issue carried the program for the January 27th meeting of the Geological Forum, which was addressed by Charles Rankin, Ernest K. Parks, Robin Willis and Leo H. Moir, and Harry R. Turver.

Under "Personal Items", there was an announcement that Standard Oil Company of California had recently organized an exploration department, headed by George Cunningham as Manager; Owen J. Haynes, Assistant Chief Geologist; R. G. Reese, Special Assistant to the Chief Geologist; A. J. Solari, Superintendent of Exploration for the Bay District; G. L. Knox, for the Northern Division (Bakersfield) and W. P. Winham for the Southern Division (Los Angeles). Three of these eight are no longer with us--Cunningham. Kew and Reese.

As a partial frame of reference for the first issue of the newsletter, it may be helpful to quote the following from Volume 32, Number 2, of Summary of Operations -- California Oil Fields:

During 1946, 1809 wells were reported to the State Oil and Gas Supervisor as ready to drill as compared with 2132 wells in 1945. A few oil discoveries were made. one of which appears to be of major importance, located in the Alondra Park area of Los Angeles County. A new deep zone was discovered in the Wilmington field which caused considerable activity and added materially to the daily production of both oil and gas from this field. The productive limits of a number of fields were extended, principally Elwood, Trico Gas, and West Newport. Three new gas areas were discovered in the Sacramento Valley, one in the Winters area of Solano County, one in the Dunnigan Hills area of Yolo County, and one in the Durham area of Butte County.

The Foregoing list of discoveries is not very impressive, so a study was made of the preceding nine years -- with the opposite effect. The list of discoveries was so long as to be burdensome and, therefore, has been omitted. The fact that so many of them were trivial gives additional justification for the omission.

However, the ten-year period did produce a few big ones. Rio Bravo was discovered in 1937, Newhall-Potrero in 1937, North Coles Levee in 1938, Coalinga Nose in 1938, Coalinga N.E. in 1939, and Paloma in 1942. San Ardo was discovered in 1947, the first

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#### PACIFIC PETROLEUM GEOLOGIST

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year of publication of PPG. The ten years preceding the birth of this publication saw the discovery of most of the first important gas fields -- Beehive Bend in 1938, Vernalis in 1941, Thornton in 1943, Suisum Bay in 1944, and Maine Prairie in 1945. The biggest one of all, Rio Vista, was discovered in 1936.

At the beginning of 1947, AAPG had 579 members in California, seven in Oregon, 16 in Washington, one in Nevada, one in Alaska, and five in British Columbia. By way of comparison: In March, 1967, there were 1406 in California, 30 in Oregon, 57 in Washington, 27 in Nevada, 73 in Alaska, 33 in British Columbia and seven in Hawaii.

As the foregoing statistics will suggest, most of the readers of the present article were not practicing petroleum geology 21 years ago, but those who were doing so proved to be a hardy lot. A comparison of the AAPG rosters of 1947 and 1967 shows that about a hundred members gave the same addresses in those two directories, twenty years apart. Such a comparison, while interesting, does not tell the whole story because of the well-known fact that geologists move. A good many familiar names appeared in different places in the two rosters.

An effort to find a roster of Pacific Section members for 1946 or 1947 has been unsuccessful; so we don't know how many members there were then. At present, there are 1146.

At least 60 of the names appearing in the  $19^{14}$ 7 AAPG roster are missing from more recent ones because their owners have passed away. Almost all of their names are familiar to those of us who were around in  $19^{14}$ 7. Probably the list is incomplete because not all of the names on the  $19^{14}$ 7 roster were known to the writer. If any reader knows of other Pacific Coast members of AAPG who have passed away since the beginning of  $19^{14}$ 7, please let me know so that names may be published in a subsequent issue of the Pacific Petroleum Geologist.

#### PACIFIC COAST MEMBERS OF AAPG WHO HAVE DIED SINCE 1946

Harold K. Armstrong, Roy M. Barnes, Edmund J. Bartosh, Max Birkhauser, E. M. Butterworth, John P. Buwalda, Robert W. Clark, Walker S. Clute, Grant W. Corby, Roy E. Collom, Walter J. Crown, George M. Cunningham, Quay S. Diven, Joseph E. Eaton, Louis H. Evans, R. N. Ferguson, Glen B. Gariepy, Wilfrid H. Gcis, George C. Gester, Stephen H. Gester, Silas L. Gillan, Paul P. Goudkoff, Beno Gutenberg, Stanley C. Herold, Robert L. Hewitt, Joseph S. Hollister, Clifton W. Johnson, William S. W. Kew, Vernon L. King, William D. Kleinpell, Andrew C. Lawson, A. I. Kevorsen, George D. Louderback, Benjamin C. Lupton, Hugh W. McClellan, Edward L. McDowd, Roy G. Mead, Fred A. Menken, Robert B. Moran, Earl B. Noble, Clarence B. Osborne, W. Van Holst Pellekaan, William C. Putnam, Harold E. Rader, Richard G. Reese, Lowell W. Saunders, Hubert G. Schenck, Richard W. Sherman, Joshua L. Soske, Everett R. Stanley, Max Steineke, Irvine E. Stewart, Chester Stock, Harry P. Stolz, Lester C. Uren, Edwin V. Van Amringe, Lawrence VanderLeck, Dwight G. Vedder, Carroll M. Wagner, and Charles E. Weaver,

Most of our readers will recognize the fact that the foregoing list includes the names of many distinguished geologists. George C. Gester, A. I. Levorsen, and Earl B. Noble were Past-Presidents of National AAPG. Those who had served as Vice-Presidents of AAPG included George C. Gester, Robert W. Clark and Roy M. Barnes. A. I. Levorsen and Max Steineke were recipients of the Sidney Powers Memorial Medal.

The Caltech faculty suffered heavy losses during this period. They included John P. Buwalda, Beno Gutenberg and Chester Stock. Other distinguished educators who passed away were Stanley C. Herold, Andrew C. Lawson, George D. Louderback, William C. Putnam, Hubert G. Schenck, Lester C. Uren, Edwin V. Van Amringe, and Charles E. Weaver.

Standard Oil Company was another heavy loser, in the persons of E. M. Butterworth, George M. Cunningham, George C. Gester, Stephen H. Gester, William S. W. Kew, Harold A. Rader, and Max Steineke.

On this commemorative note, we end our brief review of things as they were 21 years ago. We mustn't spend too much time looking back; there are too many interesting and important things ahead. But we mustn't altogether ignore our past either. Laying the foundations of PPG was a lot of fun for those who participated. We hope the readers have enjoyed it as much.

(Editor's Note: With this issue the Pacific Petroleum Geologist is 21 years old.)

#### REGISTRATION OF GEOLOGISTS STATE OF CALIFORNIA

The San Joaquin Geological Society realizes the need for statewide registration of all qualified geologists under a Board of Geologists. However, the Society did not approve of SB 1493 in its final form which would have registered all geologists under the existing Board of Civil and Professional Engineers.

This Society realizes that further attempts to pass a registration bill will be made during the forthcoming legislative year. With this in mind the Executive Committee of the San Joaquin Geological Society appointed a five man Legislative Committee to recommend to this Society what position it should take regarding future legislative attempts at registration. The Committee's report of October 2, 1967 was read to the members of the San Joaquin Geological Society attending the October 10, 1967 meeting with the recommendation of the Executive Committee that the report of the Legislative Committee were unanimously approved by the 112 members in attendance. It was further recommended and approved that other geological societies in California be advised of our stand.

The Legislative Committee's recommendations follows.

#### Recommendations:

The San Joaquin Geological Society's Legislative Committee recommends to the Society's Executive Committee and membership that the Society support the registration of geologists under legislation similar to Senate Bill Number 1493 as amended July 13, 1967. (Later amendments were made to S.B. No. 1493 placing the registration of geologists under the Board of Civil and Professional Engineers and these amendments caused the bill to be defeated). The Society should actively support a bill similar to the July 13, 1967 amended S.B. No. 1493; taking every opportunity, collectively and individually, to communicate with every Senator and Assemblyman about the necessity of passing such a bill, and the public need of having a board of geologists to govern the registration and conduct of all branches of the geologic profession.

The San Joaquin Geological Society should take the lead and solicit the support of the other geological societies in the State in passing such a

The Legislative Committee recommends that the San Joaquin Geological Society's Executive Committee inform the California Section of American Institute of Professional Geologists' Executive Committee, in no uncertain words, that the San Joaquin Geological Society will oppose with vigor and resist with all its resources the registration of all geologists under the Board of Civil and Profession Engineers.

The Committee feels that the San Joaquin Geological Society should invite as many State Legislators as possible to the Society meetings. When the Legislators are unable to attend the regular Society meetings, a few members of the Society should make it a point to meet with them.

The Legislative Committee believes that such a bill can be passed, but to obtain passage of the bill will take a commitment from every member of the San Joaquin Geological Society.

> G. M. Pittman Legislative Committee Chairman

#### LOS ANGELES BASIN GEOLOGICAL SOCIETY

The problem of providing a mechanism for Los Angeles area representation and the local distribution of a proper share of Pacific Section dues has been resolved. On November 16, 1967, the Executive Committee affiliated the L. A. Basin Geological Society with the Pacific Section A.A.P.G. For the present, a chairman, five area representatives and a financial advisor will function as the basic organizational structure. Members appointed by acclamation are as follows:

Chairman:

Doug Traxler 482-0772 Signal Oil & Gas Box 17126, Foy Station Los Angeles, 90017

#### Representatives:

Downtown

Russ Simonson

626-1167

Consultant

811 West 7th Street Los Angeles 90017

East Basin

Al Escalante

945-1221

Union Oil Company

9645 S. Santa Fe Springs Road Santa Fe Springs 90670

Pasadena.

Frank Parker Consultant

682-1079

712 Fairoaks Blvd. South Pasadena 91030

South Basin

Bruce Barron Oilwell Research 1539 West 16th Long Beach 90813 436-4254

West Los Angeles Rex Smith

879-2700

Humble Oil & Refining Co. 1800 Avenue of the Stars

Los Angeles 90067

#### Financial Advisor:

Rod Colvin 941-8751 Mobil Oil Corp. 10737 S. Shoemaker Road Santa Fe Springs 90670

There are 662 active A.A.P.G. members, 3 life members and 4 honorary members residing in the Los Angeles area and environs. The first Tuesday of each month has been selected as a regular meeting night (to avoid S.J.G.S. second Tuesday and C.G.S. third Tuesday).

Any and all comments, suggestions for speakers of potential meeting places will be investigated by your representatives. Feel free to convey your ideas to any of them.

## CROWELL TO PRESENT STRUCTURAL GEOLOGY COURSE IN LOS ANGELES AND BAKERSFIELD

Under the auspices of the A.A.P.G.'s Continuing Education Program, Dr. John C. Crowell will present a twelve-hour lecture course on new theories, concepts, and applied techniques in surface and subsurface structural geology in Bakersfield and Los Angeles this winter. Dr. Crowell is well known to the oil fraternity in California. Now teaching at U. C. Santa Barbara, he was for many years a mainstay of the UCIA Geology Department. His publications have included papers on lateral faulting, fault nomenclature, and turbidite deposition.

The Bakersfield lectures will be held on Wednesday and Thursday evenings, January 17, 18, 24, and 25, from 7 to 10 P.M., at Bakersfield College. A fee of \$10 will be charged. Further information may be obtained from Bob Votaw (Standard) at 399-1741.

Dr. Crowell's lectures will be presented in Los Angeles on Wednesday and Thursday evenings, February 28 and 29 and March 6 and 7 from 4:30 to 9:00 P.M. (including a dinner break) at the Mobil Auditorium; the fee will be \$10. A further announcement will appear in the February P.P.G.

Another Continuing Education course has been tentatively scheduled for Los Angeles in May. Dr. Tj. H. van Andel of Scripps will present a series on recent sediments and their depositional environment -- if he is not totally occupied with the Deep Sea Drilling Program. Details will be carried in a later issue.

#### FUELS SYMPOSIUM IN SOONER STATE

The American Association of Petroleum Geologists will take a long and hard look at the increasing competition among fuels to power the world's economy in the next quarter-century or more, when the world wide earth sciences organization sponsors a top-level fuels symposium on the first day of its 53rd annual Convention in Oklahoma City, April 22-25, 1968.

T. P. Woodward, Humble, Oklahoma City, fuels symposium chairman, stated that "The theme and scope of this symposium is aptly capsuled in the title of the lead-off paper, 'Interfuel Competition in Future Energy Markets, 'to be delivered by Dr. Richard J. Gonzales, Houston, petroleum geology consultant."

"The purpose of this timely symposium, "Mr. Woodward said, "is to acquaint, in detail, the 15,000 members of our petroleum-oriented Association with the outlook for petroleum and natural gas as they relate to total fuel requirements of the future in North America. Future demand and supply, obviously, will affect exploration efforts and, just as obviously, will have a pronounced effect on every petroleum geologist's career."

Aspects of the competing fuels to be discussed during the symposium will include reserves forecasts, demand forecasts, production growth trends, undiscovered reserve forecasts, competitive situation, competitive advantages, future market position, new exploration and production techniques, research and development, replacement costs and opportunities for the professional geologist.

#### BAKERSFIELD COLLEGE NEWS

The enrollment and course offerings of the Geology department have been increasing during the past 15 years. Courses offered include Introduction to Geology, Physical and Historical Geology, Mineralogy, Petrology, Geology of California, and Petroleum Geology. New courses to be introduced in the future includes Geology of the Western U. S. and Paleontology.

As part of the school's expansion program, Introduction to Geology will be taught in the new lecture hall to be completed in 1968. Closed circuit television and new audio-visual techniques will bring the concepts of Geology to a class of several hundred.

#### Faculty News

John Zimmerman (Stanford) has taught Geology at Bakersfield College since 1950. He worked with Kaiser Corporation as a Geologist prior to teaching at Bakersfield College. For many years John has taught the Lion's share of Summer school classes. When not teaching he consults for the mining industry.

Ken Lautenschlager (Ph.D. Ohio State) joined the faculty in 1958. A former member of the Petroleum industry, Ken spends his summers conducting classes in field geology in Utah for Ohio State University.

Ed Karp (USC) worked as a petroleum geologist for 15 years before joining the department in 1966. His summers have been occupied with graduate work at Washington State University. Ed remains active in the oil patch and is Editor of the forthcoming Pacific Section Guidebook of the West Side San Joaquin Valley.

Ed Laskowski (Ph.D. UCIA) is the newest member of the Geology Department. Much of Ed's petroleum experience is in geological research. His spare time will be devoted to soil studies of Southern California.

#### THOMAS W. DIBBLEE, JR., RECEIVES AWARD

Tom Dibblee's many associates and friends in the petroleum industry will be pleased to know that he is to receive the Distinguished Service Award--the highest recognition of the U. S. Department of the Interior. The ceremony occurs in Washington, D.C., on December 12, and includes a gold medal presentation by Secretary Udall.

Others who know Tom only by his reputation as an extraordinarily good field geologist may be interested to know that since leaving Richfield in 1952 he has been mapping the rest of the State for the U. S. Geological Survey.

#### PERSONAL ITEMS

Dr. Frank S. Hudson died in San Francisco on November 28, 1967. Frank was an early member of AAPG and one of the founders of the Pacific Section. He was 77 years old.

Ian Campbell, State Geologist, of the California Division of Mines and Geology in San Francisco, was elected President of the Geological Society of America at its 80th annual meeting in New Orleans. Dr. Campbell has also, as a result of recent legislation, become Secretary of the California Geothermal Resources Board.

Don D. Dhonau, Humble, Los Angeles District Geophysicist, recently announced he will leave Los Angeles about February 1 for a new assignment. Don will be Chief Geophysicist for Esso Exploration in Singapore.

#### NEW ADDRESSES:

The Geological Society of America Colorado Building, Post Office Box 1719 Boulder, Colorado 80302 Phone: (303) 447-2020

Paul H. Dudley, Jr. Humble Oil & Refining Company Post Office Box 2180 Houston, Texas 77001

## BIBLIOGRAPHY OF RECENT PUBLICATIONS

#### CALIFORNIA DIVISION OF MINES AND GEOLOGY

Salton Sea Sheet, Geologic Atlas of Calif. in envelope with explanatory data sheet. Compiled by Charles W. Jennings. \$1.50

Santa Rosa Sheet, Geologic Atlas of Calif. (Reprint) \$1.50

San Luis Obispo Sheet, Geologic Atlas of Calif. (Reprint) \$1.50

Ukiah Sheet, Geologic Atlas of Calif. (Reprint) \$1.50

Bouguer Gravity Map of Calif., Santa Cruz Sheet. Compiled by Charles C. Bishop & Rodger H. Chapman \$2.00

Bulletin 187: Quartzite in California, by William E. Ver Planck, et al. \$2.75

#### U. S. GEOLOGICAL SURVEY

Professional Paper 515: Paleotectonic investigations of the Permian System in the United States, by E. D McKee, S. S. Oriel, and others \$4.00

Professional Paper 562-B: Flume experiments on the transport of a coarse sand, by G. P. Williams 30c

Professional Paper 593-A: Permian Tethyan fusulinids from California, by R. C. Douglass 40¢

Bulletin 1241-C: Stratigraphy of the Keku Islets and neighboring parts of Kuiu and Kupreanof Islands, southeastern Alaska by L. J. P. Muffler \$1.00

Water Supply Paper 1851: Surface-water hydrology of California coastal basins between San Francisco Bay and Eel River, by S. E. Rantz and T. H. Thompson 75¢

Geophysical Abstracts 249, October 1967 35¢

Abstracts of North American Geology September 1967 45c

Publications of the Geological Survey 1966 Free

#### Maps

GQ-618: Geologic map of the Condrey Mountain quadrangle, and parts of the Seiad Valley and Horn-brook quadrangles, Calif., by P. E. Hotz \$1.00

GQ-654: Geologic map of the Soldier Pass quadrangle, California and Nevada by E. H. McKee and C. A. Nelson \$1.00

GQ-656: Geologic map of the Winnemucca quadrangle,
Pershing and Humboldt Counties, Neevada, by
James Gilluly \$1.00

- I-493: Reconnaissance geologic map of the east half of the Crescent quadrangle, Lake, Deschutes and Crook Counties, Oregon, by G. W. Walker, N. V. Peterson, and R. C. Greene \$1.00
- National Atlas of the U. S., Sheet 126: Productive aguifers and withdrawals from wells, \$1.50

#### U. S. GEOLOGICAL SURVEY

#### OPEN FILED REPORT (Inspection only)

- Geologic framework and petroleum potential of the Atlantic Coastal Plain and Continental Shelf, by John C. Maher.
- Rapid estimation of induced and remanent magnetization of rock samples, Nevada Test Site, by C. E. Jahren and G.D.Bath. 29 pages 3 figs. 9 tables.
- Preliminary geologic section from Pahute Mesa Nev. Test Site, to Enterprise, Utah by P.J.Barosh. ' 37 p., 2 pl., 1 fig.
- Aeromagnetic map of the Aurora, Powell Mountain and Huntoon Valley quadrangles, and part of the Trench Canyon quadrangle, Nevada-California, by U.S.G.S. 1 map.
- Aeromagnetic map of the Benton and Davis Mountain quadrangles and parts of the White Mountain Pk. and Mount Barcroft quadrangles, Nevada-Calif. by U.S.G.S. 1 map.
- Aeromagnetic map of the Bridgeport quadrangle and parts of the Fales Hot Springs and Bodie quadrangles, California-Nevada, by U.S.G.S. 1 map.
- Aeromagnetic map of the Coaldale quadrangle, Nev. by U.S.G.S. 1 map.
- Aeromagnetic map of the Glass Mountain and Cowtrack Mountain quadrangles, California-Nevada, by U.S.G.S. 1 map.

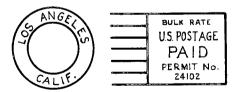
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Volume

Number

Return Requested

- Aeromagnetic map of the Goldfield quadrangle and part of the Cactus Peak quadrangle, Nevada, by U.S.G.S. 1 map.
- Aeromagnetic map of the Mina quadrangle, Nevada, by U.S.G.S. 1 map.
- Aeromagnetic map of the Rhyolite Ridge, Silver Pk. Piper Pk, and Lida Wash quadrangles, Nevada-California, by U.S.G.S. 1 map.
- Aeromagnetic map of the San Antonio Ranch, Baxter Spring, Lone Mountain and Tonopah quadrangles and part of the Antelope Spring quadrangle, Nev. by U.S.G.S. 1 map.
- Aeromagnetic map of part of the Fallen Leaf Lake quadrangle California, by U.S.G.S. 1 map.
- Aeromagnetic map of the Freel Peak and Mount Siegel quadrangles and parts of the Markleeville and Topaz Lake quadrangle, Nevada by U.S.G.S. 1 map
- Aeromagnetic map of the Goldyke quadrangle, Nev. by U. S. G. S. 1 sheet
- Aeromagnetic map of the Luning quadrangle, Nevada, by U.S.G.S. 1 sheet
- Aeromagnetic map of the Round Mountain quadrangle and part of the Belmont quadrangle, Nevada, by U.S.G.S. 1 sheet
- Aeromagnetic map of the Schurz, Gillis Canyon, Mount Grant, and Hawthorne quadrangles, Nev., by U.S.G.S. 1 sheet
- Aeromagnetic map of the Wellington Yerington Desert Creek Peak, and Pine Grove Hills quadrangles: Nevada-California, by U.S.G.S. 1 sheet.
- ARIZONA GEOLOGICAL SOCIETY (Box 4489, University Station Tucson, Arizona, 85717)
  - The Arizona Highway Geologic Map, scale 1:1,000,000; 28" x 36" \$2.75 (tube)



HICHARD L. HESTER DA PAULEY PETROLEUM INC. 10000 SANTA MONICA BLVD. LOS ANGELES, CAL 90067

## PACIFIC PETROLEUM GEOLOGIST

# NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 22

February, 1968

Number 2

#### ASSOCIATION ACTIVITIES

## STRUCTURAL GEOLOGY LECTURES SCHEDULED FOR LOS ANGELES

Reservations are now being taken for the lecture series on structural geology which will be presented in Los Angeles by Dr. John C. Crowell on February 28 and 29 and March 6 and 7. The twelve-hour course, a part of the AAPG's Continuing Education Program, will be given at Mobil Auditorium (612 South Flower Street) on consecutive Wednesday and Thursday evenings. The first meeting will be from 4:30 to 6:30 P.M.; the remaining three will be from 4:30-6:15 and 7:30 to 9:00 P.M. A fee of \$10 will be charged; checks (payable to Pacific Section A.A.P.G.) should be mailed to T. L. Wright, P. O. Box 606, La Habra, California, 90633. Advance payment will reserve a syllabus and reading list for the initial lecture.

The Continuing Education Program is aimed at bringing the practicing geologist up to date on recent concepts and methods applicable to his work. Dr. Crowell's course, entitled "Some Structural Concepts for Petroleum Geologists," will discuss such topics as: stages in any structural study; geometry, kinematics, dynamics, and genetics in structural geology; physics of deformation; nature of geologic materials; folds and folding; faults and faulting; thrust faults; strike-slip faults; relations between deformation and deposition; continental fragmentation and drift; ocean-floor spreading; and fields of research in tectonics today.

John Crowell, currently Professor of Geology at U. C. Santa Barbara, is a longtime member of the Southern California geological fraternity. Those who have become acquainted with him on recent field trips might be surprised at the length of his career: B.S. (Geology) University of Texas, 1939; M.S. (Oceanographic Meteorology) U.C.L.A., 1946; and Ph.D. (Geology) U.C.L.A., 1947; two years as a field geologist for Shell at Ventura; World War II service forecasting sea and surf conditions for amphibious landings; twenty years on the faculty at U.C.L.A.; and, post-doctoral research in Austria and Scotland.

#### PACIFIC SECTION DIRECTORY

Pete Cardett, ramrod of the revised directory, reports some very curious happenings in his communication with fellow geologists. The replies to date provide data deemed pertinent in speculating on the mental processes and capabilities of Petroleum Geologists.

Numerous "exploration personnel" have found it impossible to explore the other side of the enclosed

Directory Clipping. If one saw the wrong name, wrong photo, wrong wife, etc., all one had to do was turn the clipping over and "discover" the correct information.

Several company envelopes have been returned with no identification--just a note "No change". Six envelopes containing new photos but no money arrived and six envelopes with money and no photos were received. Since this is a non-profit organization-we thank you all.

The value of the directory is directly related to the completeness of it's contents which can only be correctly accomplished with cooperation from all of you.

The Directory Index will be divided as follows:

Oil & Gas Operators, Service Organizations, Consultants, State and Federal Agencies, and Universities.

Pete says he will try his best to have the directory available for purchase at the Convention in Bakersfield in March.

#### NOMINEES ANNOUNCED

The Nominating Committee presents the potential candidates for office in the Pacific Section AAPG for the 1968-69 year.

President Louis J. Simon, Texaco, Inc.
Jack D. Nair, Phillips Petroleum Corp.

Vice-President Rodney G. Colvin, Mobil Oil Co. Wm. F. Edmondson, Consultant

Secretary Dan E. Duggan, Humble Oil & Refining
Co.

John N. Terpenning, General Computing Service

Treasurer Willis R. (Sam) Brown, Buttes Gas & Oil Co.

James M. Tasker, Standard Oil Co. of Calif.

Robert R. Knapp Chairman, Nominating Committee

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James M. Saunders

President Vice President Secretary Treasurer Past President Editor

San Joaquin Delegate Northern Calif. Delegate Coastal Delegate

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San Joaquin
Membership Secretary

Dick Atchison Harold Eugden Carroll L. Hoyt

Lowell Garrison Gordon Oakeshott Ernie Espenschied Pat Metcalf

#### OKLAHOMA AAPG CONVENTION

The American Association of Petroleum Geologists will take a long and hard look at the increasing competition among fuels to power the world's economy in the next quarter-century or more, when the world-wide earth sciences organization sponsors a top-level fuels symposium on the first day of its 53rd annual Convention in Oklahoma City, April 22-25, 1968.

Edwin P. Kerr, Jr., Mobil Oil Corp., Oklahoma City, general chairman of the Convention, declared that "The petroleum industry must improve its knowledge of our country's diverse energy resources so it can contribute effectively to the expanding energy needs of the nation--and, indeed, of the world."

T. P. Woodward, Humble Oil & Refining Co., Oklahoma City, fuels symposium chairman, added that "The theme and scope of this symposium is aptly capsuled in the title of the lead-off paper, 'Interfuel Competition in Future Energy Markets,' to be delivered by Dr. Richard J. Gonzales, Houston, petroleum geology consultant."

Aspects of the competing fuels to be discussed during the symposium will include reserves forecasts, demand forecasts, production growth trends, undiscovered reserve forecasts, competitive situation, competitive advantages, future market position, new exploration and production techniques, research and development, replacement costs and opportunities for the professional geologist.

#### NORTHERN CALIFORNIA GEOLOGICAL SOCIETY

News from the Northern California Geological Society is the election of new officers for 1968. These are:

President:

Joseph K. Morford Dow Chemical Company

Vice-President:

J. David (Red) Cerkel

Consultant

Secretary-Treasurer: Gladys P. Louke

Consultant

#### COAST GEOLOGICAL SOCIETY

The annual Coast Geol. Society Champagne Dinner Dance held Dec. 8 in Ventura was a resounding success. The 108 guests didn't run out of the bubbly to the 1 A.M. closing.

#### LIST OF CONTRIBUTORS

Borst & Giddens Logging Service Caldrill, Inc. Case Laboratories Cook Testing Co. Core Laboratories, Inc. Geological Engineering Services, Inc. Geological Exploration, Inc. Geolograph Service Corp. Goudkoff and Hughes McCullough Tool Co. Pacific Oil Logging Services, Inc. Petrolog P.G.A.C. Sealand Directional Drilling Co. Schlumberger Welex Western Offshore Drilling & Exploration Co. Exploration Logging Co.

<u>Harold Sugden</u>, Getty Oil, tied the knot in time for Christmas and spent the holidays with his new wife Carol in Carmel taking pictures of the conglomerates on Point Lobos.

Andy Jurasin, Continental, after looking at the report written for Santa Barbara County on the offshore oil situation, hoped that Ojai independent <a href="Pete Hall">Pete Hall</a> and others were paid by the pound.

New to the Texaco office in Ventura are <u>Fletcher</u>
<u>McGutcheon</u> from Casper and <u>Glen Sorensen</u> from Billings.
Welcome to the garden spot of the oil industry, gentlemen.

<u>Mancy and Don Hagen</u>, Texaco, spent Christmas week in Seattle and Don says he didn't ski. Well, it is dangerous with a hangover.

#### SAN JOAQUIN GEOLOGICAL SOCIETY

#### Calendar

February 13

Tuesday evening-6:30 P.M. Dinner Meeting, Social hour 5:30 P.M., Amercan Legion Hall. "Geology of Rice Creek Gas Field, Sacramento Area" by Robert Hindle, Sunray Dx Co.

March

No meeting scheduled - CONVENTION

#### **Activities**

Despite the rush of the Holiday Season the December meeting of the S.J. Geol. Society was well attended by the usual contingent of genteel earth scientists. The featured attraction was "Exploration in Metropolitan Los Angeles" by Eugene "Bud" Reid - Occidental Petroleum Corp. Judging by the comments from those attending it was an interesting and well received program. Thanks Bud!

The "flu bug" almost raised some havoc at the January meeting of the San Joaquin Geological Society. A large crowd of geologists, etc., from Bakersfield and Los Angeles were disappointed to learn that Newell Hunnicut had to cancel his talk because of a bout with flu. The disappointment was short lived however since Rufus Cook (Standard) did some magnificent pinch hitting with his talk on the geology and petroleum operations in Iran. No question about it the talk was most interesting and everyone appreciated Ruf's willingness to fill in at the last minute.

The attendance at the San Joaquin Geological Society sponsored AAPG Continuing Education Series "Structural Geology" was particularly good this time with over 125 geologist and geophysicist attending. Dr. John Crowell did the honors as visiting lecturer.

#### NEW STANFORD DIRECTORY PUBLISHED

The Associates of the School of Earth Sciences of Stanford University (621 South Hope Street, Los Angeles, California, 90017) announce the publication of the 1968 Edition of their DIRECTORY OF STANFORD EARTH SCIENTISTS, the 26th Edition of this work. The new Directory is a hardbound book of 272 pages which lists not only the names and current business and home addresses of all past Stanford Graduates in the field of the Earth Sciences, but also a summation of their careers in the industry. This unique feature gives the backgrounds of the men listed, with their present affiliation, and also notes those available for consulting work. Those seeking men for employment, as well as men qualified for specific consulting jobs will find this feature of extreme importance. Copies are available to the general public from the address given above for \$5, including postage. California purchasers add 5% state sales tax.

#### IN MEMORIAM

Frank B. Carter, Consultant, passed away on January 16, 1968, after a lengthy illness. Frank had retired after many years with Mobil Oil Co. He was a former President of the Pacific Section AAPG, Petroleum Club member, and a Toastmaster par excellence. He will surely be missed by his many friends.

The many friends and former students of <u>Dr</u>.

<u>Joseph J. Graham</u> will be saddened to learn of his untimely death, Nov. 15, 1967 in Palo Alto, California. At the time of his death Dr. Graham was associate executive head of the Stanford University Department of Geology and Professor of Micropaleontology. He was a member of the Stanford faculty for nineteen years and the author of numerous papers on Micropaleontology. At the time of his death he was 58 years old.

#### PERSONAL ITEMS

The Standard Oil Interdistrict (So. Division) Gulf League was won by the Exploration (La Habra) Team in 1967. A close race was run but a fantastic putt (90 feet) by Ray Perry (Captain of the Team) on the 18th hole at the Los Robles Course in December gave the victory. Other team members included John Jacobson, Bob Lindblom, Stan Jeppesen, and Walter Gresch. Six teams participated during the year with over 30 golfers playing.

<u>Billy K. Reed</u>, Standard-La Habra, has been transferred to the SOTEX office in Oklahoma City. Billy is a native of Oklahoma and graduated from O.U. He will be missed by his many friends in So. Calif. after an 11 year stay in this area.

Robert McCollom has resigned from Standard (La Habra) to join Dames & Moore, Engineers, in New York City. He will be in their oceanographic department.

Apparently <u>Jim Herblin</u> (Getty Oil) isn¹t finding his new surroundings in New Orleans so absorbing that he forgets about Bakersfield. Seems like once a month Jim calls back to the office in Bakersfield just to make sure things are still moving ahead.

Occidental Pet. recently announced some promotions and organizational changes. <u>Dick Vaughn-Vice-President</u> has been named Manager of Oxy's foreign exploration, <u>Bob Teitsworth</u>, Vice President has been named Manager of Oxy's domestic exploration. Bob Critchlow is Assistant Manager of foreign exploration and a vice president of Oxy Libya, <u>Stan Eschner</u> is Assistant Manager of domestic exploration, <u>Dick Vaughn</u> is Executive Vice President of Oxy Libya while <u>Jim Blom</u> is Vice President and Resident Manager of Oxy Libya.

Harold Koska recently arrived in Bakersfield from Australia. Harold is paleontologist for Standard.

Some long faces at Standard recently - seems like those long-lived rumors about closing the Seattle Exploration office have finally come true. Sometime next year the Alaska district, currently headquartered in Washington-Oregon-Nevada District will be moving to Oildale.

<u>Dick Meyer</u>, a development Geologist at Union's office in Santa Fe Springs, is being transferred to Olney, Illinois, where he will do development work in the Illinois Basin. Good Luck, Dick.

Alfonso M. Escalante (Union) is being transferred from Santa Fe Springs to Union's International Division in downtown L. A. Alfonso may move to a post in Latin America sometime in 1968.

Edwin C. Robinson currently with Union's International Division in L. A., is being transferred to Lima, Peru, where he will serve as Resident Geologist for the Santiago Basin. Watch out for the "Rebs" Ed.

On Dec. 18, eighty-five guests who attended a party at the Athletic Club in L. A., paid tribute to Douglas Crawford, who after 39 years of distinguished service with Union Oil Co. is retiring to other pursuits.

Doug was imbued with the "Spirit of '76" at an early age. Back in 1928 at the age of 16 he started his career as Paleo. Associate in Union's lab at Dominquez. Among Doug's many accomplishments was the perfection of Nomograph method of rapidly calculating dipmeter results (Pre-Computer). Doug's friends refer to this as "Doug's Dandy Dipmeter Device".

Retirement for Doug means little change of paceonly a change of emphasis. Coming up soon is a trip to Europe, to be followed later by other travels. In between he will study mathematics and securities investing. Both are long time hobbies.

Happy retirement Doug!

The latest casualty in the Anchorage banana belt was Ernie Lian, Marathon Oil Company, who fell on the ice during the second December break-up and broke his ankle. To those that received Ernie's earlier advice on non-skid shoes--forget it.

To Santa Claus, St. Valentine, the tooth fairy, or any loaded leprechaun: Please bring John Sweet, Atlantic Richfield Company, and Al Sisson, Union Oil Company, snow machines so they can switch, not fight.

Charlie Steors, Getty Oil, is a recent addition to the geological complement in Bakersfield. Charlie was formerly working in the Persian Gulf. Jim Herblein has packed his bags and moved from Bakersfield to New Orleans.

<u>Joe Dunwoody</u>, formerly with Getty, has joined the ranks of the consultants. Joe's new address is 1624 "F" Street, Bakersfield, Calif. 93301, ph. 324-9329.

We understand that  $\underline{Frank\ Minchall}$  has been somewhat laid up as a result of falling out of a Christmas tree.

<u>Bus and Helen Ivanhoe</u> send best wishes to all their friends and report that they have been touring Turkey while working in Ankara. They plan to return to California in February.

#### CHANGE OF ADDRESS

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Leon J. Earnest P.O. Box 5237 Bakersfield, Calif. 93308

# BIBLIOGRAPHY OF RECENT PUBLICATIONS

U. S. GEOLOGICAL SURVEY

Professional Paper 557: Geology of the Connors Pass quadrangle Schell Creek Range, east-central Nevada, by Harald Drewes. \$1.75

Professional Paper 593-D: Zoogeographic evidence for late Tertiary lateral slip on the San Andreas fault, California, by W. O. Addicott 20c

Bulletin 1252-D: Phosphate deposits, by V. E. McKelvey. 15¢

- U. S. GEOLOGICAL SURVEY MAPS:
  - GQ 612: Geologic map of the Waucoba Wash quadrangle, Inyo County Calif. by D. C. Ross \$1.00
  - GQ 647: Geologic map of the Lucerne quadrangle, Chelan County Washington, by F. W. Cater and T. L. Wright. \$1.00
  - GQ 666: Geologic map of the Imlay quadrangle; Pershing County Nevada, by N. J. Silberling and R. E. Wallace. \$1.00
  - GQ 697: Geologic map and sections of the Ely quadrangle, by A. L. Brokaw. \$1.00
  - I-506: Generalized geologic map of the Inyo Mountains Region, Calif., compiled by D. C. Ross.
    \$1.00
  - I-516: Geologic map of the Joshua Tree quadrangle San Bernardino and Riverside Counties, Calif., by T. W. Dibblee, Jr. 75¢
  - I-517: Geologic map of the Morongo Valley quadrangle, San Bernardino and Riverside Counties, Calif., by T. W. Dibblee, Jr. 75c

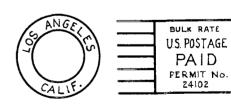
- U. S. BUREAU OF MINES
  (Purchase from Government Printing
  Office, Washington D.C. 20402)
  - Information Circular IC 8340:
    Selenium and Tellurium. A materials survey, by Arnold M. Lansche, with a chapter on resources, by David F. Davidson. 56 pp. 13 figs. 60¢
  - Information Circular IC 8352: Heavy curde oil. Resource, reserve, and potential production in the United States, by Petroleum Staff, Mineral Resources Office. 45c
- GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 78, no. 8, August 1967
  - Limitations on right-lateral, strike-slip displacement Death Valley and Furnace Creek fault zones, California, by Lauren A. Wright and Bennie W. Troxel.
  - Provenance and paleocurrents of the Paso Robles Formation, California, by Jon S. Galehouse.
  - Speculations on the origin of the Algodones dunes, California, by Floyd W. McCoy, Jr. Warren J. Nokleberg, and Robert M. Norris.
  - Geochemistry of hornblende alteration in Pliocene red beds, Baja California, Mexico by T. R. Walker, R. H. Ribbe, and R. M. Honea.

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

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## PACIFIC PETROLEUM GEOLOGIST

# NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 22

March, 1968

Number 3

#### ASSOCIATION ACTIVITIES

#### L.A. BASIN SOCIETY MEETING

Sixty-eight geologists attended the meeting on Feb. 20 at the Long Beach Petroleum Club and heard an excellent lecture by Dr. Francis G. Stehli entitled "Paleoecological Reconstruction of Depositional Environments". Dr. Stehli is a member of the AAPG Distinguished Lecture Tour. His talk was well-received and was the subject of much discussion both immediately following his lecture and several days following.

#### Lecture Abstract

#### Francis G. Stehli

Organisms are extremely sensitive to many parameters of the physical environment and their fossil remains may thus be used in the interpretation of ancient environments. Effective use of paleoecology depends on first determining what environmental parameters are of interest, second developing a model, based on recent examples which can be tested on the fossil record and third, testing the model on the fossil record. Following this procedure several methods for determining the depth of water in which deposition took place are considered. Though further testing is required each of these procedures appears to offer promise for environmental reconstruction and for petroleum exploration. Additional techniques which consider the distribution of ocean currents across the continental shelves are also examined and appear to offer possibilities for the interpretation of ancient submarine topography which may be of significance in exploration.

Climatic conditions strongly effect the distribution of certain stratigraphic traps, particularly such carbonate traps as reefs. Exploration for these traps is fruitless if climatic conditions at a particular time and place were such as to preclude their development. Determination of past climatic zones is, however, difficult if not impossible until the positions of the major continental masses in the past can be determined. Paleoecology with its ability to reconstruct depositional environment is in a strong position to examine both the question of continental drift and the question of polar wandering.

A model which permits such an examination is developed and tested on the fossil record of the Permian. The test suggests that neither continental drift across latitude, nor polar wandering is likely and that both the rotational poles and the latitudinal position continents have probably remained unchanged at least since the Permian. If this is true then the limits of tropical-subtropical conditions have

varied widely through time controlling, as they varied, the area of the globe suitable for reef development and, in fact, for extensive carbonate development.

A modification of the model used to test the hypotheses of continental drift and polar wandering shows promise for reconstructing the pattern of surface oceanic currents. These currents are closely related to reef development which extends further both to the north and south on the east side of the continents than on the west because of these. The same technique suggests a possible means of learning more of the fundamental courses of glaciation if applied to glacial and interglacial patterns of oceanic circulation.

#### THE FOUNDING OF THE PACIFIC SECTION

The founding of the Pacific Section is interesting, not only because it is our section, but also because that was the first step in the wise plan of the Association to provide means of keeping in touch with the wide-spreading roots of the profession.

The idea of a local Society of A.A.P.G. members had its origin in the San Francisco Bay area. Early in 1924, Earl Caylord brought word to Los Angeles that he had discussed the subject with Roy Collom, who was then our regional director, J. A. Taff and the Gester brothers. Earl enlisted the services of Frank Hudson to promote the idea in Southern California. Meetings of local members at Los Angeles and San Francisco, in June, resulted in the appointment of Roy Collom, Howell Gester, Rolph McCollom, Bob Moran, Dan Nolan and J. A. Taff to a committee to prepare by-laws for a California Association of A.A.P.G. members, designed to become a local section of the National Society, and to make arrangements for a technical and business meeting at Los Angeles in the fall.

During this meeting, held September 26 and 27, 1924, the members in business session, with Frank Hudson temporary chairman, formed the Pacific Society of Petroleum Geologists and elected Howell Gester Chairman and Roy Morse Secretary-Treasurer. The technical papers covered a great variety of subjects, from California through Alaska to China, and from well spacing through geology to oilfield waters. The maximum attendance at the technical sessions was 130, and 101 were at the dinner. The registration list shows 49 A.A.P.G. members and 60 guests. The names of the latter make particularly interesting reading, as the majority have since become members and many proved to be very active members.

#### EXECUTIVE COMMITTEE, PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Ted I. Bear Richard L. Hester Hal Fothergill Glen W. Specht Robert R. Knapp Dan E. Duggan Jack Kappeler Gordon B. Oakeshott James M. Saunders

EDITOR

Pracident Vice President Secretary Treasurer Past President Editor San Joaquin Delegate Northern Calif. Delegate

Dan E. Duggan

Bill T. Bradford

Coastal Delegate

#### ASSOCIATED SOCIETIES

Sacramento Petroleum Association Northwest Geological Society Alaska Geological Society

#### PACIFIC PETROLEUM GEOLOGIST

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Early in 1925 a petition that the Pacific Society be constituted a regional section of A.A.P.G. was directed to the national organization. This petition was accepted at the National Convention at Wichita, March 26, 1925, and the Pacific Section became the first chartered section of A.A.P.G.

#### PACIFIC SECTION CONVENTION

#### FIELD TRIP AND GUIDEBOOK

The last day of the 43rd Annual Meeting of the Pacific Sections AAPG, SEPM and SEG, March 28-30, 1968, will feature an excellent field trip to the west side of the southern San Joaquin Valley. The trip, by comfortable buses , will begin and end in Bakersfield. The primary purpose will be to examine in outcrop the reservoir and source rocks which have contributed to the prolific oil fields from Lost Hills on the north to Midway-Sunset on the south.

The nearly complete Tertiery section exposed at Carneros, Chico Martinez and Zemorra Creeks will be visited including a 3/4 mile walk down Zemorra Creek just before lunch. The rocks from Upper Eccene to Middle Miocene can be examined in detail and samples collected. For those who danced to the wee hours the night before, the busses will be available to bypass the walk.

After lunch the Upper Miocene section will be traversed and several of the oil fields will be visited, although no stops are planned. On the latter portion of the trip stops will be made in the Buena Vista Hills to view the evidence of an active reverse fault, and to visit the site of the California aqueduct pumping station. If time permits, an area of manmade subsidence along the route of the aqueduct will be visited.

A half-day field trip visiting areas exhibiting evidence of recent tectonism will also be held.

The field trip guide will be a part of a 135 page guidebook which will be a necessity for any geologist working on the west side of the southern San Joaquin Valley. Strip maps at a scale of 1" = 4000' have been prepared along the entire route. Included on these maps are the route, mileage points and regional surface geology, all superimposed on half-toned topography. In addition to a regional surface map of the Temblor Range at a scale of 1:125,000, a detailed map of the Carneros-Chico Martinez area at a scale of 1" = 2000' will be printed in the guidebook.

Three alternate routes have been provided for those wishing to spend additional time studying west side geology at their convenience. These include a visit to the Lost Hills Field and the adjacent gypsite deposits and two trips to Upper Miocene sand outcrops west of the Midway-Sunset Oil Field. Road logs, strip maps and detailed surface maps are also included for these areas.

The following table of contents illustrates the abundance of data on west side geology and related subjects which will be available under one

#### GENERAL PAPERS:

- 1. When the West Side Boomed by William Rintoul - An historical account.
- 2. An Introduction to the Flora and Vegetation of the West Side by Ernest Twisselman - A delightfully written paper with many line drawings.

3. Selected Bibliography of the West Side by James Maytum.

#### PETROLEUM PAPERS:

- 4. The Habitat of Oil on the West Side by David Callaway.
- 5. Oil Field Waters in the Southwest San Joaquin Valley by James Weddle --A time-saving necessity for geologists and engineers.
- 6. Stratigraphy of the West Side by Charles Foss and Robert Blaisdell The only complete account of the west side stratigraphy in print under one cover. This one article is worth the price of the guidebook.
- 7. A review of the Elk Hills Field by R. J. Lantz.
- 8. Some Solutions to Logging Problems on the West Side by Armour Kane.
- Penetration Chart by T. L. Fyock A graphical compilation of deepest
  penetration by depth and formation,
  producing horizons, cumulative
  production, oil gravity, type of trap,
  number of producing wells and
  discovery date for all west side
  fields.
- 10. West Side Oil Fields by
  R. J. Young et al Thirty
  pages depicting the subsurface
  structure and stratigraphy of the
  13 largest west side fields.

#### PALEONTOLOGY:

- 11. The McKittrick Tar Pits by C. C. Church.
- 12. Pullenia Moorei-Rotalia Becki:
  (Pseudosaucesian) Biofacies of
  the Lower Mohnian by C. H. Rudel An excellent correlation tool for
  west side geologists.

#### NON-PETROLEUM:

- 13. Soil-Chemical Analysis and Appraisal of the Lost Hills Area by E. Laskowski.
- 14. Two Late Pleistocene Radiocarbon Dates near Buttonwillow by J. C. Manning.
- 15. Sandstone Dikes in the McDonald Shale along Chico Martinez Creek by Gary Peterson.
- 16. Slippage on the Buena Vista Thrust Fault by Robert Nason et al.

Those ordering the Guidebook prior to the Convention can purchase it for \$8.00 per copy as a pre-publication offer. Should printing costs be more than anticipated the price will be increased

on sales during and after the Convention. For those planning to attend the Convention, their pre-paid copy will be available at the publications table, others will be mailed with an additional charge of 50¢ for handling and postage.

Please fill out and send the attached form along with your check to:

E. C. Tripp c/o Texaco, Inc. P. O. Box 2168 Bekersfield, Calif. 93303

It would also be appreciated if those planning to attend either field trip, would so indicate in the space provided. Costs are estimated at \$6.00 for the all day trip which includes transportation and lunch. Do not send money for the field trip, only for the Guidebook. Pre-publication orders for the Guidebook will be accepted until March 27, 1968.

-	Enclosed is \$8.00 each for 1968 Guidebook which I will Bakersfield, March 28 or 29,	pick up in	the
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1968 Guidebook - Pre-Publication Order

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 I plan	to	attend	the	all	day	West	Side	Field
 Trip.								

I plan to attend the half-day field trip.

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#### OKLAHOMA CITY CONVENTION NEWS

Approximately 70 scholarly papers on a wide variety of petroleum geology subjects will be presented at the technical sessions of the 53rd annual meeting of the A.A.P.G., scheduled April 22 - 25, according to Edwin P. Kerr, Jr., Convention General Chairman.

C. B. Branan, Jr., A.A.P.G. Technical Program Chairman stated "The general thesis underlying the collection of papers by authors from many parts of the world is that rocks know no political boundaries and so our scientific efforts should not be sullied by artifical barriers."

Mr. Branan disclosed the general contents of some of the papers as follows:

"Panhandle-Hugoton Field, The First 50 Years" by Iloyd Pippin, Phillips Petroleum Co., Amarillo, Texas. This field is one of the largest stratigraphic traps in the world. It has produced over two billion barrels of oil and has one of the world's largest accumulations of natural gas.

#### Page 4

"Golden Lane Fields of Mexico" by Eduardo J. Guzman, Petroleos Mexicanos, Mexico City. The Golden Lane fields produce from a giant Cretaceous reef. One well, Cerro Azul No. 7, produced 110,000,000 barrels. Mr. Guzman is Vice-President of A.A.P.G. and was program chairman of the Seventh World Petroleum Congress in Mexico City last year.

"The Pennsylvanian-Permian Horseshoe Atoll, West Texas" by E. L. Vest, Jr., Standard Oil Co. of Texas, Midland. This atoll, one of the world's most famous fields, created the great Scurry County boom of the 1950's. Discovery of this field's type of trap changed American geological concepts.

"Geometry of the Devonian Swan Hills Reef Complex, Alberta, Canada" by C. R. Hemphill and Frank Szabo, Home Oil Co., Ltd., Calgary and R. I. Smith, Atlantic Refining Co., Calgary. Swan Hills and Redwater are prolific Devonian reefs and some of the highest lease prices ever paid in North America have been paid in the recently discovered Rainbow Lake area.

"Yates Oil Field, Pecos County, Texas" by G. R. Schoonmaker and D. H. Craig, Marathon Oil Co., Findlay, Ohio. One of the oldest and largest fields in West Texas, Yates still has flowing wells. Caves filled with oil were discovered here.

"Geology and Exploration of Sicily and Adjacent Areas" by Joseph Vercellino and Fabrizio Rigo, consulting geologists, Rome, Italy. Sicily is unique because several giant fields occur in the immediate vicinity of the world-famous volcano, Mount Etna, and the large Gagliano gas field is practically on its slopes.

"Petroleum Geology of the Healdton Field, Carter County, Oklahoma" by Jack W. Latham, Sinclair Oil and Gas Co., Ardmore, Oklahoma. This is one of the oldest giant fields in Oklahoma. Sinclair's unexpected discovery of up to 400 feet of oil pay kicked off a statewide Arbuckle boom a few years ago.

"The Anatomy of a Giant: Oklahoma City Field" by Lloyd E. Gatewood, consulting geologist, Oklahoma City. Oklahoma's capital is one of the world's most colorful oil fields because it is developed in the heart of one of America's great Cities.

"The Geology of the Woodbine Formation in the East Texas Oil Field and Related Areas" by James S. Hudnall, Hudnall & Pirtle, Tyler, Texas. East Texas is one of the world's largest stratigraphic traps, containing a conservatively estimated reserve of five billion barrels. It was discovered by accident by Dad Joyner.

#### CALIFORNIA STATE COLLEGE AT LONG BEACH

#### GEOLOGY DEPARTMENT NEWS

The Department has added a new degree, the B.S. in Earth Science. The curriculum for this degree is designed for students who want to teach Earch Science in high school, and for others who want to acquire a basic knowledge of the earth sciences without necessarily going through the rigorous B.S. sequence in geology. The curriculum

covers a broad field of basic earth sciences: geology, mateorology, astronomy, oceanography, climatology.

Rosie Grannell (Ph.D. pending, U. C. Riverside)
has joined the staff as geophysicist. This completes
the spectrum of coverage in the main fields of the
geological sciences at Cal. State long Beach.

John Dennis has been granted sabbatical leave for 1968 - 69 to study the regional tectonic setting of the Ries and Steinheim cryptoexploxion structures in Southern Germany, in a cooperative project with the Mineralogical-Petrographic Institute of the University of Heidelberg.

Bert Conrey has returned from sabbatical leave. He has investigated sedimentation in lagoonal environments in central California.

Paul Fritts is finishing his Ph.D. dissertation for the University of Colorado on the "Turonian Coccolithophorids of Colorado and Wyoming", using the electron microscope.

#### PACIFIC SECTION DIRECTORY

At this writing we remain optimistic about having the new Directory available for sale at the Bakersfield Convention.

The following comments regarding costs and problems of compilation may help the membership in general to understand some of the entries and/or omissions.

Approximately 1450 members of Pacific Sections of AAPG-SEPM-SEG received questionaires if no foul-up existed within the mailing lists. In working with the mailing lists versus the current directory there were many notable omissions - probably due to procrastination on the part of the individual in the matter of payment of dues. Cooperation from those receiving the mailing has been gratifying -over 900 replys. Major cost factor is for the stripping of photos and the verityping.

In line with instructions to keep costs to a minimum a new format (but using the same binder) has been devised whereby more pictures and data appear on each page. This in turn - plus incidental saving in verityping time - resulted in the need for use of various abbreviations in the following areas:

Membership designations will be A,P,G, and S rather than AAPG, SEPM, SEG and S as in the past.

University and degree data has been condensed. The University of California at Berkeley is designated U.C.B. and the Ph.D. who has advised that he obtained a "BA Geology '48 San Fernando Valley College, MS'52 Montana School of Mines, Ph.D. °58 The University of Puget Sound" may be shocked or even possibly confused by the hieroglyphics that are intended to designate his accomplishments.

Job titles too, in some cases, run into short descriptive paragraphs. The geologists who was "kicked upstairs" to be "Coordinator of Planning and Research for Special non-related Geologic Process - International" - will find some of the lighter fractions distilled off in his listing.

Company names have been stripped to retain only those essentials considered necessary for proper identification for instance "mpany of California, Western Operations Incorporated" has been omitted to save space and time without confusing the reader as to the Big Fellow's identity.

Many new photos of varying sizes have arrived and hopefully will be depicted together with proper identifying data. There seems to be a trend on the part of the "mature" member to provide "likenesses" created at the time of graduation from high school and in the case of at least one member it seems obvious that we have received the picture of his son or even perhaps his grandson.

We know that each of you will want to have, for your very own, a copy of this remakable compilation of fact and fiction. See you at the convention.

Peter H. Gardett

#### PACIFIC SECTION CHRISTMAS DANCE

Should it be discontinued? Is the price unreasonable? Is it usually held in an inconvenient place?

The Pacific Section Executive Committee is seeking the answers to these and other questions pertaining to the Annual Christmas dance. The attendance at these affairs has been somewhat disappointing. In particular very few of the younger members have attended these functions. It is our purpose to inquire as to the reasons for this. If there are objections to the place, the time of year (i.e., we could have a Halloween dance, etc.), the price, etc. then we can effect changes, however, if there is simply no longer sufficient interest in this type of affair we wish to learn this also.

Therefore, we solicit comments from you the membership (particularly those within the Los Angeles basin) as to how we can best improve this annual activity.

Please send your suggestions and/or criticisms to:

Gerry Rickels Union Oil Co. of California P. O. Box 7600 Los Angeles, California 90054

### GEOLOGISTS REGISTRATION BILL INTRODUCED IN CALIFORNIA STATE ASSEMBLY

Assembly Bill 600, a bill to register geologists under a new board, was introduced in the State Legislative by Assemblyman William M. Ketchum on February 19, 1968. It may go to committee, presumably the Government Organization Committee, as early as March 20. The bill, which would supplant many local ordinances, is supported by the Pacific Section of AAPG, the California Section of AIPG, the San Joaquin Geological Society, the Coast Geological Society and the Association of Engineering Geologists. Other geological groups are expected to rally to its support.

Important features of A.B. 600, which is essentially the Senate-amended version of S.B. 1493 of 1967, are that geologists who work for companies or partnerships are not required to register. The State Board of Registration for Geologists will consist of six geologists and one layman, the bienniel renewal fee will be between \$30 and \$80, and certification may be required by any specialty group but must be provided for engineering geologists. Examinations and disciplinary actions are administered by the Board.

To the geologists, probably the most important feature is the opportunity for all geological disciplines to be registered under a board of geologists. Undesirable fractionation of the profession is thus avoided. To the public, this bill offers the best opportunity for protection in the fields of geologic hazards and construction on dubious terrain because it enlists experts in all disciplines of geology.

The Legislative Committee of the Pacific Section AAPG consists of Henry H. Neel (Chairman, Los Angeles), Wesley G. Bruer, (Bakersfield) Charles M. Cross (Palo Alto), and Lowell E. Redwine (Los Angeles), The Legislative Committee of the California Section of AIPG under Chairman Jay G. Marks (Los Angeles) is spearheading active support of the bill. Proposed action includes personal or written contact with every one of California's 120 legislators. The cooperation of every reader of the Pacific Petroleum Geologist is hereby requested. Visit and write your State Senator or Assemblyman! But speak only in support of the bill. If you have objections or criticisms, please discuss them first with your local Legislative Committeeman (or with almost any member of the American Institute of Professional Geologists). Only if the Geological Profession puts up a show of unity will it have a chance to get the bill passed.

#### 1968 - A BANNER YEAR FOR OIL DEVELOPMENT

The President of the American Association of Petroleum Geologists forecast today that 1968 is expected to show a definite upswing in the development of more domestic crude oil and natural gas reserves.

"The persistently widening gap between domestic discoveries and increasing comsumption has long been in a serious state" said J. Ben Carsey, A.A.P.G. head, and Houston, Texas consultant.
"Both majors and independents are expected to expand their domestic exploration efforts during the months ahead."

Mr. Carsey emphasized that closer cooperation between geologists and geophysicists will increase the efficiency of exploration efforts as will the accelerated use of computers for studying more and better data.

"The current program to reduce foreign investments by U.S. Oil Companies should result in diverting more money into domestic exploration budgets," said Mr. Carsey.

The A.A.P.G. head pointed out that petroleum geologists will have to continue to broaden their outlook not only in better understanding of the economics of the oil industry, but in imporving their own scientific capabilities for seeking out methods of finding and utilizing forms of energy other than oil and gas.

#### THE NORTH SEA - A PROSPEROUS VENTURE

"North Sea exploration may well offer our Free World allies of Western Europe gigantic transfusions of low-cost energy that could decrease dependency on oil and gas from areas such as the Middle East."

A.A.P.G. President, J. Ben Carsey said that geologists best informed on North Sea prospects discuss reserves potentials there in trillions of cubic feet of natural gas. He said that energy exploration is the key to basic economics, and in many cases makes the difference between freedom or slavery.

"It is my conviction that the North Sea exploration effort may exert a tremendous effect on the economic future of the Free World and catapult it into a golden era of economic prosperity," he stated.

At the same time he called on the major Oil Companies and independent producing Companies in this country to cooperate more closely in their expanding domestic exploration efforts.

"Major companies should not only drill more wells but should contribute more heavily toward exploration by independents," Mr. Carsey continued. "Contributions toward wells drilled by others can be considered as 'seed money' so to speak, in that the number of exploratory wells affecting a company's leaseholdings can be increased materially at a fraction of the total cost of the wells."

He pointed out that the majors and independents have "just about run out of anything to really disagree about." He said there is more mutual concern over working together to strengthen the whole industry and in keeping the nation's reserves and its production up for the benefit of the entire Free World.

#### RUSSIANS SAY DOGS SNIFF OUT DEPOSITS

Russian geologists have successfully trained dogs to sniff out ore deposits, says the publication, Chemical Week. One dog, it reports, found a sulfide ore deposit 10 to 12 feet thick under seven feet of earth.

And in Finland, where such work was first done, a dog is said to have found 1,330 ore containing rocks where a man could find only 270.

#### WASHINGTON, D.C.

In a desperate attempt to beat the Russians in a race to global ore deposits, the Federal Government has directed the Department of Interior to replace all geologists of the USGS with dogs. Current meetings are being held on an executive level to determine if the Director and his Ad Staff should be retained or whether quicker results could be obtained through an "All Dog Sniff-from-the-Top Policy".

It has been reported that Drew Pearson's man, listening from crawl space under the old USGS building in Washington, D.C. heard a Bureau of

the Budget man suggest that the new Canine Ore Corps be headed up by "Lassie" at a suggested daily dish offering of 100 lbs. of guaranteed all-meat mix.

Realizing that dogs will cost more than geologists, some Congressmen are said to be organizing a fox hunt to finance the new organization by tax savings from a tally-ho effort to eliminate the oil depletion allowance. Applicants for the job of Master of the Hounds are said to be: For the current job - Jack Christianson, unemployed San Francisco football coach; after November 1968 - Richard Nixon; beginning 1985 - Jimmy Hoffa.

(This interesting news item was submitted by Ottman F. Kotick of Los Altos Hills).

#### PERSONAL ITEMS

<u>Dan Tudor</u> has rejoined Standard in their L.A. Geophysical section after taking educational leave at the University of Indiana.

In February, <u>Bob Plumb</u> and <u>Rod Colvin</u> were Guests of Honor at a party feting their Twentieth Anniversary with Mobil. Gifts presented to Geologist Colvin, and said to be symbolic of past, present and future included a gallon jug of saltwater, a miniature electrically-operated hand auger, and a monogrammed straight jacket. Geophysicist Plumb received an autographed hard hat. Colvin was singled out for additional honors in having his name selected for a new unit of oil production, to be expressed as C/D or Colvins per Day. The permanent standard for this measurement, a temperature-compensated platinum thimble, is being sent to archives in Washington D.C.

Gene Hill, Mobil Geologist, is being sent to various places east and west on a six month training program to learn geophysics. Communist plot?

<u>Allen Strohl</u> joins Mobil as a geological trainee in the interim between his January graduation from San Fernando Valley State, and grad school enrollment next September.

Dennis and Nancy Weeden (Signal Oil) were the proud parents of a  $9\frac{1}{2}$  lb. son, Joseph Alvin, on Dec. 13.

<u>Jim Moore</u> has joined Union' staff at Santa Fe Springs. to work as Development Geologists in the L.A. Basin. Jim was formerly with Shell.

Glen Campbell, L.A. Basin scout for Standard Oil, has resigned to accept a position as Engineer with the D.O.G. in Bakersfield. Glen's replacement is Ray Johnson who was transferred from scouting duties in Seattle.

Hollis Record, Geological Technician with Standard Oil in Ventura, has resigned to accept a teaching position in Mugginsville, California (For those who don't know their geography - this is a suburb of Fort Jones, California - one of the larger cities in the Yreka Metropolitan area!)

Two new additions to Standard's subsurface staff in L.A. are <u>Harry King</u> and <u>Bill Kardos</u>. Both are transferees from Sotex.

Jim Harms has resigned from Union Oil to accept a position as Director of the Department of Petroleum & Mines for the Trinidad Government. Jim will direct operations sponsored by the United Nations Development Program. Address: 19 Keate St.; Port of Spain, Trinidad, West Indies.

John Etter, formerly with Tenneco in Houston, has recently joined Cities Service's Paleontological staff in L.A.

Roy P. McLaughlin - mining engineer and geologist, has written a book which is purported to be not only a narrative of a man and his accomplishments, but also a portrait of California in earlier days. It was published by Exposition Press, Inc. and is titled "THE TENDERFOOT COMES WEST". The jacket claims it to be an essential volume for every Californian's library. Mr. McLaughlin has held the position of State Oil & Gas Supervisor of California, and General Manager of the Dominguez Oilfield Company and now resides in South Pasadena.

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Howard E. Stark 2695 Bayshore Ventura, Calif.

Pat Ames 124 North Crimea Ventura, Calif.

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Professional Paper 352-I: Rates of slope degradation as determined from botanical evidence, White Mountains, Calif., by V. C. LaMarche, Jr. 75¢

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Sheet 70: Tectonic features, Compiled by P. B. King. \$1.50

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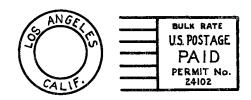
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NEVADA BUREAU OF MINES (Reno, Nevada)

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## PACIFIC PETROLEUM GEOLOGIST

# NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 22

April 1968

Number 4

#### ASSOCIATION ACTIVITIES

OUR NATIONAL CONSTITUTION
By Tom Baldwin

Do We wish Representative or Corporate Rule? For four years a national committee has studied the AAPG constitution. The committee, re-appointed each year by the national President was responsible to the Executive office and has never been in a position to report to the members of AAPG or their representatives. The Constitutional Committee has now been discharged and the former members are finally free to report their individual opinions and experiences to the membership at large. This report reflects my personal opinions.

Are Constitutions important?
Remember that by Amendments to the constitution of the Pacific Section in 1960 - by later evolutionary changes and finally by a new constitution in 1966 it became possible to include as equally represented our members

possible to include as equally represented our members outside the Los Angeles area and to hold conventions in such places as Bakersfield; with officers representing the San Joaquin and Coastal areas. Have these results met with approval? They reflect thoughtful changes in our local constitution.

our local constitution.

Similar thoughtful evaluation of our national constitution might result in a vastly improved AAPG  $_{\circ}$ 

Question: Why do we need a new constitution?

Answer: Because we already have one! The present Constitution and By-Laws (in many ways unsatisfactory), have been amended annually until they hardly resemble the original understanding between the founding members. Originally AAPG was a very small group located largely in the Mid-Continent. It was possible to govern the organization by a "Town Hall" set up. At early annual meetings a substantial portion of the members met, debated issues, and decided causes in person. Now we have a membership of about 15,000, scattered all over the globe. Our annual business meetings are attended by about 1% of the membership and the resultant decisions are not at all representative of the will of the members. Our financial posture has required greater efficiency and as a result many overlapping and conflicting amendments have been enacted, none of which solve the basic problem. Our present constitution has been outmoded by our growth.

Problem: We need a more efficient government for AAPG.

Possible Answers: 1. Corporate Organization. A majority of our members are corporate employees and are familiar with corporate efficiencies. A similar set-up has been suggested for AAPG with Directors elected on a 2 or 3 year basis and empowered to appoint an executive committee of able men, who would then have broad powers to govern our society without interference by the membership. This set-up is the basis of successful Ameri-

can industry and it works! But is it the desirable way of organizing professional scientists? Is there any alternative? Traditionally AAPG has been an equalitarian society where the most junior member is an equal with his corporate superiors in discussion of society affairs. We have placed the dignity of our profession far ahead of corporate success.

We live within the corporate framework all of our working days - must we also govern our professional society with the same rigidity?

2. Representative government. This suggested alternative (approved after long study by all members of the constitutional committee) would require a constitution similar in many ways to that of the United States.

It would require a Council of Representatives (District Representatives) empowered to propose legislation, debate legislation, pass legislation, to ensure Executive actions compatible with that legislation, and to do these things throughout the year as needed. This concept calls for a new breed of District Representatives dedicated to doing a big job properly. I believe our membership is intelligent enough and dedicated enough to select representatives of the proper caliber.

The constitution proposed by the now abandoned constitutional committee provides for a Council of Representatives with broad legislative powers - including the power to amend the By-Laws (or recomend constitutional amendments) by mail ballot. This proposed change is not radical but it meets resistance because it would eliminate the present veto power carried by the Annual Business meeting. At present our representatives (or more usually their proxies) meet in the annual Business Committee Meeting, discuss the desires of their constitutents, pass new By-Laws or recommend new amendments - But all these acts must be approved by the Annual Business meeting. This meeting, commonly attended by only a handful of members, retains absolute power to reject the will of our representatives (and did so last year!). This Annual Business meeting may be attended by anyone, members or not. No method is provided for insuring that the attendants are entitled to vote. Voting is normally by voice with no check on qualification! In truth "Them who shouts the loudest" can run our society! It is the determined view of your (former) constitutional committee that the farce of the Annual Business meeting must be ended and legislative power placed firmly in the hands of our elected representatives assembled in council.

## EXECUTIVE COMMITTEE, PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

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#### PACIFIC PETROLEUM GEOLOGIST

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Executive Committee:

EDITOR

As our organization has grown our constitution has grown more cumbersome and the "Town Hall" concept of government has collapsed. Successive Executive Committees have necessarily had to rule increasingly by Executive action. This has meant an excessive work load on a limited group of men who serve a short period of time. (Much of the time spent in learning the ropes!)

Executive groups each year have pointed out the need of a larger committee with more continuity of experience. The proposed new constitution provides for a larger Executive Committee with a broader base of responsibility and longer terms for all except the President. In effect it increases executive powers in many ways - but insures the authority of our elected "DR's" to amend, control and supervise the Constitution and the By-Laws.

What is a constitution?

Your (former) committee took the viewpoint that a constitution for a professional Society is a framework for internal government - a pledged agreement entered into voluntarily by all members. It is not a body of law. (Let's not make a federal case of this!) It must be so written as to be understood by non-legal members. It is an agreement (in our case between geologists) not intended for interpretation by lawyers. The relationship of AAPG to law is outside of our constitution. We must, of course, abide by and support Federal and State laws, the laws of local communities and particularly the laws of Colorado (where we are incorporated). But within this framework of law our constitution exists as a compact between the members - an agreement to which all members including elected representatives and executive officers are pledged in ethical understanding. How shall we insure this pledge?

Constitutional Committee:

As a member of the (former) constitutional committee I forcefully recomend that a permanent constitutional committee be created by the District Representatives empowered to recomend to the DR's, the Executive committee and all other committees the probable constitutionality and effect of contemplated actions. This is not a Supreme Court - but rather a body of men experienced with our constitution, responsible to that body which considers amendments in our constitution and required to investigate and advise upon constitutional conflicts.

This is the frame work of our proposed new constitution:

An enlarged executive
An integrated legislative body
An experienced committee to watch-dog the
constitution

Can we hope to see such a constitution enacted? Friends, it won't be easy! The present draft of the proposed constitution lies with the executive committee and has been "Referred to our lawyers" for a legal opinion. It will probably never appear again unless the members take action to force it out for discussion. The members still have some strength under our existing constitution and can exert it. Three methods are suggested:

- 1. At the Business Committee meeting in Oklahoma City the Representatives should insist on discussing as "old Business" the two proposed amendments of 1967 (those cancelling the "Veto power" of the Annual meeting on matters of constitutional amendments and By Laws). They should once more pass these amendments and fight for them in the following annual Business Meeting.
- 2. At the Business Committee meeting the "DR's" could vote to table discussion of any further society Business until the new constitution is presented for their discussion (no new amendments, proposed by the Executive, to be passed, desirable or not, until the Executive submits the new constitution).

3. Ten or more DR's could by a signed petition place on the floor for discussion a whole new constitution (substantially the one recommended by the former Constitutional Committee) by considering it as a series of Amendments to each existing constitutional clause, one at a time.

But Will the Annual Business Meeting Approve?
Only if the DR's attend that meeting en masse - only if they request a roll call vote on any issue that is rejected - only if they require checking on the Active membership of each attendant who wishes to vote!

In fact only if our membership and our District Representatives are sufficiently interested in Representative Government for AAPG to work for it and vote for it!

My Recommendation:

The Business Committee should table discussion of any new AAPG Constitutional Amendments or changes in By-Laws until the entire new constitution has been referred to them for discussion.

Good luck!

#### CONTINUING EDUCATION PROGRAM - LOS ANGELES

(Crowell Draws 138; Van Andel Due in May)

One hundred and thirty-eight geologists registered for Dr. John C. Crowell's Continuing Education lecture series on structural geology, presented last month in Los Angeles. Those attending came from points as distant as Ventura, Newhall, and Orange County. Company affiliations were: Standard - 36; Mobil - 22; Union - 14; Shell - 6; Sunray and Atlantic Richfield - 5 each; Getty - 4; Humble and General Exploration - 3 each; Texaco, Pauley, Amerada and Cities Service - 2 each; Signal, McCullough and Conoco - 1 each. Also, there were 12 consultants, 3 from public agencies and two from local colleges.

The A.A.P.G.'s Continuing Education Program is not intended to upgrade the knowledge of specialists. is supposed to assist geologists in staving off technical obsolescence by bringing them up to date on the current status of specific aspects of their profession. Dr. Crowell's lectures succeeded admirably in this, touching on all aspects of structural geology and introducing new data and concepts which have appeared in the last ten or fifteen years. Following a brief, unbiased presentation of each author's material, Crowell made his own candid evaluation. With the extensive reading list provided, the course served as a comprehensive introduction to recent advances in structural geology. The lectures were illustrated with many excellent slides, including a great number of Crowell's own Kodachromes from various parts of the world. Audience reaction was highly favorable and attendance remained high despite two changes in meeting place, plus a torrential rainstorm.

Dr. Tj. A. van Andel of Scripps will present the next Los Angeles offering of the Continuing Education Program on May 8, 9, 15 and 16. Dr. van Andel's lectures are entitled "Facies Types and Facies Distribution of Continental Margins," and are designed to permit an extrapolation of modern oceanographic observations to the interpretation of ancient deposits. The topics to be covered include a wide variety of modern depositional basins differing in degree of stability and sediment supply (Gulf of Mexico, Gulf of California) and a number of modern carbonate basins (Timor Sea, Bahamas, Persian Gulf). These present-day models will be compared to ancient sedimentary basins. Van Andel has worked extensively with deep-water ("turbidite") sediments of the Gulf of California and the continental borderland of Southern California, and his presentation of these data will be especially useful for local geologists.

The systematic study of recent sediments and the depositional environments has been the focus of Jerry van Andel's career for the past twenty years. He has the B.Sc., MSc., and Ph.D (1950) in geology from the University of Groningen, Netherlands. His doctoral thesis was entitled "Provenance, Transport and Deposition of Rhine Sediments." For the next six years, he was employed as a sedimentologist by Shell. During this period his work on the Orinoco Delta/Gulf of Paria was published as "Recent Sediments of the Gulf of Paria" with H. Postma. Since 1957, van Andel has been a research geologist at Scripps, where his continuing work on sedimentation has been marked by close cooperation with the oil industry. He was editor and contributor for "Recent Sediments, Northwestern Gulf of Mexico" (1960) and "Marine Geology of the Gulf of California" (1964), assisted by A.P.I. Project 51 and published by the A.A.P.G. Having investigated deltas and high-relief basin, Jerry turned to platform carbonate deposition and has recently completed a study of the Sahul Shelf, between Australia and New Guinea. On June 1, 1968, he will move to Oregon State University as Professor of Marine Geology and Sedimentology; the Astoria fan may be a future object of his affections. Currently, he is serving as Science Advisor for the Deep Sea Drilling Project.

Dr. van Andel's course will be presented as four 3-hour lectures at the Mobil Auditorium (612 South Flower Street) on consecutive Wednesday and Thursday afternoons, May 8, 9, 15 and 16, from 3 to 6 P.M. A fee of \$10.00 will be charged for the 12-hour course; checks (payable to Pacific Section A.A.P.G.), should be mailed to T. L. Wright, P. O. Box 606, La Habra, California 90633. Advance payment will reserve a place and outline for the initial lecture.

#### PACIFIC SECTION NEWS

This year's fall field trip is planned for late September or early October and will be handled by Chairman John Forman of Mobil. Theme will be on Santa Barbara Channel with field (boat) trip to involve the islands and a Bar-B-Q on Santa Cruz Tahitian Village.

1969 Convention General Chairman will be Pat Fazio. Theme will probably by "California Offshore".

The Pico Canyon Spring picnic has been set for Friday, May 24, and the Golf tourney will be held at the Valencia Golf Course. Vince Scurry of Texaco has agreed to be the Golf Chairman. The spring field trip is expected to involve the new road cuts along the unopened new Ridge Route -trip guide has not yet been selected.

Harold Sullwold accepted California editorship for A.A.P.G. of the Volume on "Case Histories of Stratigraphic Oil and Gas Fields". Norman P. Jokerst of Standard Oil will be the geophysical editor for California.

The A.A.P.G. Classification Committee and the Conversation Committee have announced their new lists of "California Oil Field and Pool Names" and "California Gas Fields and Pools" effective January 1, 1968. Copies may be obtained by contacting M. C. Barnard, Jr., Atlantic Richfield Co., 5900 Cherry Avenue, Long Beach, 90805, or by telephoning 423-7921.

#### ALASKA GEOLOGICAL SOCIETY

#### SYMPOSIUM ON ALASKA TECTONICS

The Alaska Geological Society's Symposium on Alaska Tectonics was held on the evenings of February 19-21 on the campus of the Alaska Methodist University, Anchorage, Alaska. One hundred and forty-nine registrants heard excellent and engaging lectures on the subject. Leading off the first evening was Dr. S. Warren Carey, University of Tasmapia, internationally known for his tectonic approach to continental drift and for his oroclinal concept.

The following evening two lectures were presented. The first was by Dr. C. L. Sainsbury of the Alaska Branch of the U. S. Geological Survey, followed by Mr. Irwin L. Tailleur also of the Alaska Branch. These two lecturers reflected a great many years of Alaskan field work. The structural features of their respective map areas were related in a most competent manner to concepts of Alaska's global setting. The last night's lecture was given by Dr. C. A. Burk of the Mobil Oil Corporation, New York, N. Y., and reflected his comprehensive study on the tectonics of the Alaska Peninsula. Several new observations on this feature were presented by Dr. Burk and the importance of Alaska Peninsula structure was made obvious.

The final event of the evening was a discussion panel consisting of the lecturers and moderated by George C. Gryc, Chief, Alaskan Geology Branch, U.S.G.S. A lively discussion followed and the audience not only expressed great interest in the speakers' comments, but also directly and actively contributed.

#### NOTICE TO PETROLEUM CLUB MEMBERS:

You no longer have to bring your own bar stool to the Anchorage Petroleum Club. The remodeling and expansion has been completed, and was christened duly in champagne at a blast Saturday night, March 9, that could be seen (and probably heard) from the Chugaches to Susitna . . .

### SAN JOAQUIN GEOLOGICAL SOCIETY Calendar

- April No meeting scheduled.
- May 14 Dinner Meeting 6:30 P.M. American Legion Hall - Social Hour? - 5:30 P.M. - Topic ?Lunar Geology? - (title unannounced) -Mr. Harold Masursky - USGS, Chief Astrogeologic Division, Menlo Park.
- June 4 Dinner Meeting 6:30 P.M. American Legion Hall - Social Hour 5:30 P.M. - Topic "Lasers as they pertain to Industry" Mr. Pipenburg, Pacific Telephone - San Jose.

#### Recent Activities

The March meeting of the San Joaquin Geological Society saw a record crowd to hear about the joys and sorrows of geothermal exploration. Mr. Newell Hunnicutt did a fine job of expanding our horizons by means of his talk on "A Drillers View of Geothermal Exploration" many thanks Newell for a most informative talk on a subject heretofore poorly understood by most of us.

#### COAST GEOLOGICAL SOCIETY

Howard Stark, formerly Atlantic Richfield, is now consulting from his residence at 2695 Bayshore Avenue, Ventura, 93003, phone (805) 642-2922. Welcome to the garden spot, Howard, and good luck.

The big question in Ventura these days is who is going to move in? If any geologists are in Ventura on Thursdays, call Getty Oil Company (643-2154) and ask one of the geologists where the Coast Geological luncheon is meeting. The C.G.S. lunches at five different restaurants which makes us the oldest floating lunch group in town. The Santa Barbara group meets on Tuesdays at noon at Prips Restaurant, 210 West Carrillo in Santa Barbara.

No reservations are required for either lunch.

#### RAND GEOSCIENCE ORIENTED RESEARCH \*

The scope of research at the RAND Corporation ranges from basic scientific studies on such things as the micro-physical processes in the metamorphosis of atmospheric cloud particles to tackling practical problems such as evaluating the effectiveness of airpower in Southeast Asia. Some studies are internally initiated under a broadly defined contract allowing staff members considerable latitude in the choice of research topics; others are direct reponses to specific client requests.

The Corporation consists of eleven technical departments: Aero-Astronautics, Cost Analysis, Computer Sciences, Economics, Electronics, Geophysics & Astronomy, Logistics, Mathematics, Physics, Social Science, and System Sciences. However, the disciplines of the research staff and the nature of their activities are not neatly categorized according to

department. For example: A geophysicist in the Aero-Astronautics Department may work on deployment modes for ICBM's, or, an engineer in the Department of Geophysics & Astronomy may investigate basic phenomena of corneal biophysics.

Personnel working on earth science and related topics constitute a small per cent of the total number of about 530 professional research staff. Some general areas of endeavor that they undertake are geomagnetism, underground nuclear testing and nuclear detonation effects, basing technology, the earth's gravity field, oceanic circulation, weather modification, regional and global climatic analyses, structure and dynamics of atmospheres, and planetary astronomy and geophysics. The type of research that a scientist can expect to do at RAND depends to some degree upon the motivations of individual staff members and upon the nature of prevailing national security issues.

#### Deane Oberste-Lehn

\*Any views expressed in this article are those of the writer, Deane Oberste-Lehn. They should not be interpreted as reflecting the views of The RAND Corporation or the official opinion of policy of any of its governmental or private research sponsors.

#### BRANNER CLUB MEETING

The spring meeting of Branner Club will be held at 6:30 on Tuesday evening, April 23, at the Freeman Union Building, Occidental College, 1600 Campus Rd., Los Angeles. The speaker will be William Morris, who will discuss Dinosaurs from Baja California.

UNIVERSITY OF SOUTHERN CALIFORNIA
DEPARTMENT OF GEOLOGICAL SCIENCES
TUESDAY NOON LECTURE SERIES
SPRING SEMESTER 1968

April 16 Radiolarians and PaleoOceanographic Interpretations

Radiolarians and PaleoOceanographic Interpretations

Tant Prof. of
Biology-Geol.

Biology-Geol.
San Fernando Valley State College

April 30 Control of Atmospheric Oxygen by the Sulfur Cycle; S34-S32 Measurement of Gypsum and Annydrite

Dr. Ian Kaplan Assoc. Prof. of Geology, UCLA

May 7 Origin, Nature and Distribution of Tektites

Dr. Frank J.
Centolanzi, Ames
Research Cr.
NASA, Moffet
Field Sunnyvale,
Calif.

May 21 Marine Geology of Santa Cruz Basin Mr. Peter Barnes Ph.D. Candidate in Geology, USC

### PACIFIC SECTION HONORARY LIFE MEMBERS

#### E. ROBERT ATWILL

Edward Robert Atwill was born in Carthage, Missouri in 1902. He was the son of an Episcopal minister. At an early age the family moved to California and Bob attended Pasadena grammar and high schools. In 1925 he graduated from Stanford and went to work for the Union Oil Company in 1926. Bob worked in the Santa Paula and Bakersfield offices from 1926 to 1949 and was District Geologist at the time of the Rio Bravo discovery in 1937. In 1949 he was transferred to the Rocky Mountain area as Exploration Manager. From 1950 to 1960 Bob was Manager of Operations for Union in their Midland, Texas office. Due to illness, Atwill retired in 1961.

Bob is probably best known in California for his paper naming and defining the Oligocene Tumey formation in the Arroyo Ciervo area north of Coalinga. He has a keen interest in the scientific projects and problems of other geologists and was always willing to give aid and assistence, especially to younger men. The discovery of the Sansinena oilfield in the Los Angeles Basin by Union Oil Company was due to a large extent to Bob's imaginative interpretation of the complicated geology of the Whittier fault zone.

Atwill was Secretary-Treasurer of the Pacific Coast Section of A.A.P.G. in 1942 and President in 1946. Bob and his wife Stella, live in Pasadena and have three sucessful sons. Bob Jr. has been working in Midland, Texas as a geologist for the Shell Oil Company for the past 10 years. Douglas is a commercial artist in Richmond, Virginia and James is a lawyer in Corpus Christi, Texas.

#### ELMER FRED DAVIS

Elmer Fred Davis was born in Hyde, Colorado, September 12, 1887. The family moved to Houston, Texas where Fred attended elementary and secondary schools. In 1910 he received a B.S. degree from the University of California College of Mines. From 1912 to 1919 he was an instructor in mineralogy and geology. He received his Ph.D. in Geology in 1917 and published his famous papers on the Franciscan Formation as a result of his thesis work.

In 1919 Fred was employed by the Shell Oil Company as the first geologist in its western operations. From 1919 to 1948 he had an outstanding career with Shell. He was Chief Geologist from 1919 to 1928. He was Vice President and Chief Geologist from 1929 to 1940. From 1940 to 1945 he was Vice President in charge of the western area for Production, Geology, and Land. From 1945 until retirement in 1948 he was Vice President and Chief Consulting Geologist for Shell organizations for the entire North American Continent. At the time of his retirement in 1948 Mr. S. Belither, Shell President, said that many fields, representing a substantial portion of Shell's oil and gas reserves were discovered on properties acquired under Fred's guidance. These would include reserves in Long Beach, Dominguez, Inglewood, Ventura Avenue, Ten Section, Canal and many more California fields as well as a number in the Rocky Mountains. The Ten Section Field was the first California field to be located entirely by the seismograph.

From 1948 to the present time Fred has been a Petroleum Consultant located in Los Angeles. Since 1954 he has been a director of the Home Oil Company of Canada. Dr. and Mrs. Davis live in Los Angeles and have one married daughter. Fred is one of the oldest members of A.A.P.G. having joined in 1921.

#### ROBERT M. KLEINPELL

Robert M. Kleinpell, (Ph.D., Stanford University), (after experience with several oil companies and adventures in various parts of the world) is presently Professor of Paleontology at the University of California. He lives in Oakland with his wife Dariel. The best known of Bob's many scientific contributions is of course the "Miocene Stratigraphy of California" published in 1938. It is difficult to remember the utter confusion and disorganization that prevailed in West Coast stratigraphy prior to the publication of this monumental work. Bob faced the challenge of redundent, overlapping, inclusive and exclusive terminology, and of ill defined or undefined type formations. He made extensive collections along measured sections in many parts of the state. He recorded his observations accurately, describing regional relationships and local detail. He was thoughtful of his public and prepared his work for maximum utility to paleontologists, geologists and "Oil Men". He emphasized the importance of distinguishing lithostratigraphy and biostratigraphy (and later toured as an AAPG distinguished lecturer on this subject). His "Miocene Stratigraphy" is among the greatest of one-man contributions to geology and still provides the principle available framework for understanding and discussing the most important (and most complex) portion of the sedimentary section in this state.

Bob's pioneer work in the Phillipines was interrupted by the Japanese. Bob and Dariel spent the war years in San Tomas Prison and have added Spanish comments to their conversation ever since.

Geologic discussions with this very active man often involve facets of literature, art, history and philosophy; and are intellectual experiences long remembered by fortunate hundreds of his students and fellow geologists.

This year we recognize a fact: Robert M. Kleinpell is a most Honorary Member of the Pacific Section, AAPG.

## GEOLOGISTS REGISTRATION BILL DUE FOR ASSEMBLY COMMITTEE HEARING

Assembly Bill 600, a bill to register geologists, is scheduled to be heard by the Assembly Committee on Governmental Efficiency and Economy on Wednesday, March 27. The Pacific Section of AAPG will be represented at the hearing, where it will appear in support of the bill. The American Institute of Professional Geologists, California Section, will also have a representative who is expected to speak in favor of the bill. Results of the hearing will be divulged at the Pacific Section Convention in Bakersfield, March 28 - 29.

If the bill is approved by the GE&E Committee, its continued support will be necessary to ensure its further progress.

#### A.A.P.G. HEADQUARTERS NEWS

REPORT OF EXECUTIVE COMMITTEE MEETING MARCH 1 and 2. 1968

#### Headquarters Advisory Committee

This Committee submitted an excellent report for the Association's near-term and long-term financial planning. To implement its findings, the Committee made the following recommendations:

- A formula should be devised to raise to levels which will cover the cost of publishing the BULLETIN and the cost of operations.
- Each publication of the Assocation should be planned for optimum cash flow; that is, to tie up a minimum amount of cash for a minimum period of time, compatible with the overall Assocation cash situation.
- Some activities of the Assocation should be planned and administered to develop revenue which can be applied to other Association activities.

The Executive Committee is in favor of implementing the recommendations of the Headquarters Advisory Committee and will take immediate steps on recommendations 2 and 3 above. Recommendation 1, a change in dues, requires the approval of the membership. The Executive Committee realizes that in order to maintain a high level of total overall operations, the Association must receive more revenue and it recommends that, effective July 1, 1968, the annual dues for active members be \$22. No changes are recommended for the dues of junior, student, and associate members. This item, changing the dues, is being placed on the agenda for the April 22, 1968, meeting of the Business Committee in Oklahoma City.

#### District Boundaries

The Executive Committee decided to make no changes at this time in district boundaries and the method of electing District Representatives.

#### Certification

An addition to the certification application and annual renewal form was approved, as recommended by the Houston District Representatives, to provide a permanent disclaimer which will relieve the Association and its officials in the event certification is withdrawn for cause.

"I hereby agree that Certification by the American Association of Petroleum Geologists shall be granted or refused at the sole discretion of the Executive Committee and I further agree that, in the event Certification is not granted to me, or if granted and I am later censured, suspended, expelled, or subjected to any disciplinary action by the Executive Committee, I will make no claims against the Association, its Executive Committee, Professional Division, Certification Board or any individual member."

## OUR RESPONSIBILITY IN PUBLIC AFFAIRS Michel T. Halbouty

We live today in volatile world. The many worldwide and domestic problems which drastically affect our lives are political. These problems, whether they be small or large, will be resolved by politicians who are either controlled by the people such as in our democracy or those dictated by totalitarian rulers.

In this country, we are the government. Ours is the people's government based on the freedom of the individual. Our way of life will exist only as long as the people participate in political action which in turn, insures that our government at all levels will perform its role efficiently and effectively for the welfare of the people.

Political events that shape our lives just don't accidentally occur. They are maneuvered and regulated by those who make it a point to participate in political action.

Consequently, there are many political events that occur from time to time that must leave us all with a sense of dismay that such "things" can happen- and we begin to wonder how did these events ever begin and why weren't they "nipped-in-the-bud" before it was too late? As individuals we complain of the results but in the final analysis we can only blame ourselves because we have participated too little in proper public affairs.

We let the "other fellow" do the thinking for us--and this other fellow usually belongs to a group which has been organized for the sole purpose of gaining a selfish objective.

The selfish-interest groups are assassins without guns--they poison unlearned minds, connive to obtain their selfish purposes, and slowly but surely by propaganda and demagogic procedures, they achieve the assassin's results by strangling and killing what is right and those of us who know better and think differently have done very little at all to instigate counter measures.

What are our responsibilities in public affairs? What about the role of the professional societies and associations in public affairs? What should the professional engineers, the geologists, the geophysicists, the attorneys, accountants, landmen, scouts—all these professionals and a host of others—do to help this industry of ours and, in turn, help their state—help their nation—and above all, help and protect the public?

The answer lies in one basic philosophy: That is, to participate more in public affairs and to stand up and proudly be counted!

The public is entitled to the views of those who have been educated and trained in the professions in all fields in which they have a specialized knowledge. It is necessary for professional men and women to participate in all areas and levels of politics, from the precinct to the national conventions.

We have created a destructive vacuum by our almost ivory tower attitude toward public affairs. That vacuum has been filled by ward heelers, special interest groups, the so-called minority groups, political hacks and others who have their own particular interests as opposed to the public interest, in mind.

Occasionally professional men do step out and express themselves, but they usually wait so long that it takes a crash program of public relations or participation to forestall a disaster that has been gathering for years right under their noses.

It is especially important for professional men to be active in public affairs in a democracy such as ours. It is easy to understand that a professional man would not be bothered with taking the time and money and work to engage in public affairs in a monarchy. The king and his ministers take care of all that sort of thing in such countries.

It would be suicidal, probably, for a professional man, unless he were part of the governing clique, to participate in public affairs in a dictatorship. That would be an unwelcome expression of a non-existent freedom. His reward would probably be an extended vacation to some kind of Siberia, if not a one-way ticket to the shooting wall or a gas chamber.

But in America, it is the duty of the professional man, to participate in government. It is my opinion that the more educated a person is and the more highly trained he is, the more the obligation to participate. In this way he can accomplish two things. He can offer leadership and he can provide an example.

Before closing I would like to remind you that about 2400 years ago Pericles told the citizens of Athens--and I quote--"An Athenian citizen does not neglect the state because he takes care of his own household. We alone regard a man who takes no interest in public affairs, not as a harmless, but as a useless character."

And I would also like to point out, that under Pericles, Athens rose to her highest glory. Indeed, that period of history has never been equaled in many respects before or since. Yet, it is of importance to note that when Athens began to ignore this basic philosophy, she was destroyed by Sparta--which mind you-- was a Communist police state!

So, don't ever underestimate your or your organization's influence in public affairs. It is your duty and obligation to speak out whenever you think the welfare of your industry and the public is at stake. You will then be doing a service to your company, your community, your state and your nation. You will also preserve your future and assure yourself the security of being a part of healthy growing industries and a stronger government.

#### PERSONAL ITEMS

Former Bakersfield earth scientist - <u>Jim Blum</u> (vicepresident Oxy-Libya) returned recently for a short visit. Also Oxy has hired <u>Conrad Maher</u> (formerly Mobil) to serve abroad.

Webfoots <u>Darell Helmuth</u> and <u>Bill Lewis</u> (Standard) have returned to the gardenspot of the San Joaquin after several years in Seattle, Welcome Back!

Al Martini formerly Division Exploration Superintendent (Standard is now Vice President Exploration Standard (W.O.I.)

Some recent changes at Getty (Bakersfield) include:

Jack Kappeler to District Exploration Geologist (Western Division)

<u>John Stoops</u> to District Exploitation Geologist (San Joaquin)

<u>Jim Saunders</u> to District Exploitation Geologist (Coastal District)

Under a new system of professional titles recently adopted by the Western Division Exploration Department of Humble Oil & Refining Co., the following promotions have been made: Henry E. (Hank) Repp and Hubert Y. (Hugh) Crouse have been promoted to Senior Professional Geologists; and Willard N. (Swede) Larsen has been promoted to Professional Geologist. Congratulations men.

Intex Oil Company has changed its name to Tesoro Petroleum Corporation with offices located in Bakersfield.

The private library of the late <u>Dr. Arville Irving Levorsen</u> has been donated by the <u>Levorsen family</u> to the Tulsa City-County Library System. A formal dedication was held at the Tulsa Central Library on March 4, 1968. Mrs. A. I. Levorsen cut the ribbon and opened a month long display of significant items from the collection.

Dr. Levorsen was one of the nation's most noted earth scientists, and his personal working library is an extensive and comprehensive geological collection. At the Tulsa Library items in the collection will be designated by a handsome book plate, designed by James K. Levorsen, and housed in the technical collection in the Business and Technology Department.

#### CHANGE OF ADDRESS

W. D. Fritz Mobil Oil Corporation 150 East 42nd Street NAD - Exploration & Producing Dept. New York, N. Y. 10017

Mr. John H. Wents, Jr. Getty Oil Company P. O. Box 54050 Los Angeles, California 90054

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PAULEY PETROLEUM INC. 10000 SANTA MONICA BLVD. LOS ANGELES, CAL 90067

## PACIFIC PETROLEUM GEOLOGIST

# NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 22

May 1968

Number 5

#### ASSOCIATION ACTIVITIES

1968 CONVENTION BIG SUCCESS!

The 43rd Annual Meeting of Pacific Sections AAPG - SEG - SEPM was held in the Bakersfield Civic Auditorium, March 27-30. By all accounts this was one of the most successful conventions held on the coast in recent years. Registration hit a record 1086 people, not including many guests of the association. New events to the convention included a pre-convention "Alaska Night" ice-breaker party which attracted over 1000 people who dined on barbecued Alaskan moose, king crab and salmon plus large quantities of complimentary drinks. Guests to the convention included Governor and Mrs. Walter Hickel of Alaska, Senator and Mrs. Carl Brady, Commissioner and Mrs. Tom Kelly, California State Assemblymen Bill Ketchum and Kent Stacy, Mayor and Mrs. Russ Karlen, plus many local and state businessmen and educators.

Governor Hickel was the keynote speaker at the Joint Luncheon and received a standing ovation from a large audience of nearly 500 people. The subject of his speech followed the theme of the convention, "Exploration Frontiers".

The technical program was highlighted by a Geothermal Resources Symposium, one of the first symposiums held in this field anywhere, and also a selection of papers on Alaska exploration and California tectonics. Winner of the A. I. Levorsen Best Paper Award went to David W. Scholl, et. al. for their paper "New Petroleum Prospects Shallow and Deep Bering Sea".

Two field trips were held on March 30 at the conclusion of the convention and attracted 253 people. A full day trip took place in the west side of the southern San Joaquin Valley and a half day trip took in active tectonism and near-surface subsidence in the southern San Joaquin Valley. The Guidebook published for the field trips, "Geology and Oilfields, Westside Southern San Joaquin Valley" was enthusiastically received by everyone and was nearly sold out. A second printing is already in progress. If anyone desires a copy of this book please contact San Brown at Buttes Oil & Gas in Bakersfield.

A. B. 600

#### Background

On March 27, 1968, Assembly Bill 600, a bill to create a Board of Registration for Geologists, was heard by the Assembly Committee on Governmental Efficiency and Economy. The verdict of the hearing was a continuance until April 17, 1968. The events leading up to this decision constitute a fascinating bit of geological legislative history.

At the time of the writing of our first legislative bulletin, about February 21st, no group had spoken out in opposition to AB 600. On February 23d the Los Angeles Section of the Association of Engineering Geologists, in a letter from their Legi-slative Committee Chairman, stated nine provisos that they demanded we satisfy before they would support AB 600. The letter says, in part, "We will actively campaign for Assembly Bill 600 if the following provisos are added to the bill and so specified that they cannot be removed prior to signing by the Governor. Without guarantee of these provisos we will be forced to actively oppose AB 600." To summarize these provisos briefly, they would have spelled out in the law much detail regarding engineering geologists and, in our opinion, made the bill completely unacceptable to us and to the Legislature, thus ensuring its death. We assume that the engineering geologists of Los Angeles were aware that AIPG could not guarantee passage of a bill through the legislature. Only the legislators themselves have control over legislation. The evidence seemed to indicate that the Los Angeles group really did not want state regulation of geologists. At the same time, they were preparing to introduce an AEG-sponsored bill which would have placed the engineering geologists under the Engineer Act. It had been often stated that two opposing bills about geologists would automatically cause the legislators to kill both, and we can only assume that this substantiates our theory that their main objective was to kill AB 600-

## EXECUTIVE COMMITTEE, PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

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Jack Kappeler Gordon B. Oakeshott James M. Saunders San Joaquin Delegate Northern Calif. Delegate Coastal Delegate

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Sacramento Petroleum Association Northwest Geological Society Alaska Geological Society

#### PACIFIC PETROLEUM GEOLOGIST

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The 15-man California Section AIPG Legislative Committee was nearly unanimous in opposing the February 23d proposals of the Los Angeles group, which were then rebutted. Unofficial voices of AEG retracted many of the demands but promptly presented

others. Through the well-reasoned efforts of Henry H. Neel, Chairman of the Legislative Committee for the Pacific Section of AAPG, these demands were side-tracked and the voices of the Los Angeles group became rather quiet. Until the morning of March 27 it was believed that no opposition to AB 600 would appear at the hearing.

In an (hopefully) unrelated effort to kill AB 600, four fraudulent telegrams had been sent to the members of the GE & E Committee. This group of telegrams, dated March 14th to 16th, purported to be from organizations or persons that eventually proved to be fictitious. At the same time the entire legislature as well as Governor Reagan received copies of a fraudulent document entitled "Joint Resolution of the Geological Society of America and Society of Economic Geologists." This three-page missive, presenting nearly every imaginable argument against AB 600 (most of them based on false statements), bore the typed signatures of eight persons, none of whom appears on the membership lists of either GSA or SEG. Dr. Ian Campbell, President of GSA, was advised of this document and was prompt in unmasking its deceit. By March 27 the falsity of two of the telegrams and the "Joint Resolution" had been disclosed.

The hearing was to take place at 3:45 in the afternoon. Two hours before its opening another group of telegrams was delivered to Assemblyman Ketchum. Copies of these had been received by the members of the GE & E Committee. This group of telegrams was so patently fraudulent that Assemblyman Ketchum was thoroughly aroused. They purperted to come from CPG Dr. Gordon B. Oakeshott of the Division of Mines and Geology, the President of the Coast Geological Society (signed with a fictitious name), the Santa Barbara County Board of Supervisors, and other sources. At our suggestion, Assemblyman Ketchum immediately verified the falsity of most of these messages.

About one hour before hearing time word was received that the Legislative Committee Chairman of the Los Angeles Section of AEG and an attorney representing the Consulting Engineering Geologists of Los Angeles were due to appear and present formal opposition to AB 600.

The stage was set, and shortly after 5:00 p.m. the actors duly took their places and played their roles. The nine-man GE & E Committee had dwindled to seven men. (The positive vote of five or more members is needed for a "do pass" recommendation.) Assemblyman Ketchum began his presentation in favor of AB 600 by revealing and verbally castigating the fraudulent documents and their author(s). Having disqualified the documents , he introduced AIPG Committeemen Marks and Bain to field any questions that the GE & E Committee members might put.

Questions were put and answered to the best of our abilities. The opposition then came forward to state flatly that they were opposed to AB 600. Their principle argument was that AB 600 would not provide the public with as thorough "protection" as existing ordinances in the County and City of Los Angeles now provide. Their argument was answered by pointing out that the proposed Board of Geologists would make the rules and regulations necessary to give the public the needed protection, and that this was better legislation than writing definitions and fields of action into the law. Faced by internecine feuding among geologists, by the reversal of position by the engineering geologists who had first requested registration, and with the unsavory taste of fraud still in their mouths, the puzzled Committee rather kindly granted a continuance to the case.

The geological profession now must have a poor image in the opinion of the legislators. Unless we can better it promptly, AB 600 and any future geological legislation is apt to receive little consideration. Accordingly, the California Section of AIPG, backed by offers of financial support from GSA, the San Joaquin Geological Society, members of the Pacific Section of AAPG, AEG (National), and the Coast Geological Society, on April 5th retained the services of a well-known detective agency to attempt to track down the author or authors of the fraudulent documents and telegrams.

With respect to the stand of the Los Angeles Section of AEG, that existing local ordinances afford better protection to the public than a Board of Geologists would, we quote three passages from the Los Angeles County Engineering Geologist Qualifications Board Instructions to Applicants:

Authority: ... All geological reports regarding residentila development submitted to Los Angeles County... must be signed by an Engineering Geologist approved by the Board.

Minimum Requirements for Applicants:
(1) Degree in geology or equivalent as evaluated by the Board.

(2) Three years of responsible work ...

#### Examination for Certification:

Applicants fulfilling minimum requirements must pass an oral examination by the Board.

And from Los Angeles County Ordinance No. 4099, Article XXXI, Engineering Geologist Qualifications Board, Section 464:

"The Qualifications Board shall also serve as a Board of Review to provide for interpretation of data, opinions, conclusions or any one or more thereof included in and adequacy of geological reports."

Need we say more?

Resolutions and letters of support for AB 600 form an imposing stack on Assemblyman Ketchum's desk. Virtually every message of opposition has been proved spurious except for the formal statement of opposition by the Los Angeles Section of AEG. Because of the overwhelming evidence of support by members of the profession and a number of resolutions by local governments, Assemblyman Ketchum has agreed not to withdraw AB 600, --at least not until we geologists have had a chance to clear our name and make a more favorable impression on the members of the legislature. The tremendous efforts put forth by certain geologists, and particularly by members of AIPG, have at least won for us recognition by one member of the Assembly! AIPG members have dedicated hundreds of manhours of effort, the California Section treasury has offered support of our efforts to its limit, and still the job is not done. A paid lobbyist (fee: about \$2500) and 2500 members to lend strength to our voice instead of 250 would probably give us a good chance for victory.

The fight will continue as long as AB 600 is alive. The next battle will be the continued hearing before the GE & E Committee. The opposition has stated that it will again be present.

Jay G. Marks

#### Registration Bill Passes First Test

Assembly Bill 600 was passed by the Assembly Committee on Governmental Efficiency and Economy at a continued hearing on April 17th. It must face the Assembly Ways and Means Committee about May 1st. In the interim an attempt to reach agreement with the organized opposition will be made. The arrangement by which AB 600 was voted out of committee was hammered out in an hour-long conference in Assemblyman Ketchum's office immediately prior to the hearing. Representatives of AAPG, AIPG, AEG (national), and the California Division of Mines and Geology agrued for passage of the bill in its present form, while representatives of the Los Angeles Section of AEG and the Consulting Engineering Geologists argued for drastic amendment. These arguments should be settled before the bill goes to the Ways and Means Committee. A meeting of the opposing forces has been scheduled for April 25th, and there the fate of AB 600 will again be on the block.

#### SPRING PICNIC DATE CHANGED

The date for the spring picnic, golf tournament, and field trip has been changed to Friday, June 7th. Details will reach all members soon, in the form of invitation/announcement cards.

#### DIRECTORY CHANGES AND ADDITIONS

For a member who may find an error, or wish to report a change in his directory listing, please send to the Editor of Pacific Petroleum Geologist the correct information and this will be published in the next issue under this heading. Your friends and clients they may enter this new or corrected information in his copy of the directory.

#### CHANGES AND CORRECTIONS NOTED TO DATE

#### Change Telephone Number to:

Ted L. Bear (213) 481-0839 Phillip S. Kistler (213) 481-0839 Lee R. Newfarmer (714) 453-4412 Blakemore E. Thomas (714) 286-6394

#### Change Address to:

O. K. Fuller P. O. Box 2180, Houston, Texas Wayne H. Hoylman 417 S. Hill St., Los Angeles

The new completely revised filler for the directory may be ordered from San Brown, 3132 - 18th Street, Bakersfield, California. Cost of the new filler is \$3.00. It fits your old loose leaf binder as started in 1964. A new binder, if desired, is also available at a cost of \$2.00.

It is also anticipated that these new fillers and binders will be available for purchase at the Los Angeles and Bakersfield Barbeque Meetings.

#### GEOLOGICAL SOCIETY OF SACRAMENTO

The Geological Society of Sacramento will hold its annual field trip the weekend of June 15 and 16. This year's theme will be the geology of the Lake Tahoe basin. Guide books will be available.

As in the past few years, transportation will be by bus; Sacramento serving as the meeting and termination point.

Arrangements are now being made to accommedate those attending the field trip at a motel in the south Lake Tahoe area. In order to have an indication of the number of people intending to attend, it is requested that a deposit of six dollars (\$6) be submitted to the following address by May 15:

Mrs. Beverly Howard Geological Society of Sacramento Department of Geology University of California Davis, California The Sacramento Petroleum Association will held its annual gelf tournament and banquet in conjunction with the Geological Society of Sacramento field trip. The tournament will be held on Friday, June 14, at the Sunset Oaks Country Club, located east of Sacramento (Sunset-Whitney Ranch; Rocklin, Calif.)

Additional details regarding both of the above functions will be released at a later date.

# EXPLORATION AND DEVELOPMENT WITHIN THE RICE CREEK AREA

The following abstract is of a talk given by Robert J. Hindle at the L. A. Basin Society evening meeting on March 5th at La Mirada.

The history and exploratory activities from its concept in 1936 through the present was detailed in a chronological order covering the activities of various operators in the area adjacent, thus, leading to the detailed discussion of the exploratory techniques and appraach that brought about the drilling of Sunray DX Oil Company, operator, "George S. Reid" #1, the Rice Creek discovery well.

The key wells adjacent to the present boundaries of the Rice Creek Field were set forth and compared to demonstrate the structural and stratigraphic relationship between the structure, the depositional pattern and present Rice Creek production.

The stratigraphy of the area presents many challenges insefar as interpretation is concerned, and conversely it's this complexity which gives the area such a high potential. No less than four different age zones are productive within a three mile radius of the Rice Creek Field.

This, with the depositional pattern and the varying thickness of the sand units from well to well, presents a stratigraphic-structural problem connected to Cretaceous sand deposition in relationship to the pre-Tertiary structure.

The summary of the systematic development, noting procedures, methods, and parameters, concluded with a resume of production of the Rice Creek Field.

All data was described with the intent of setting forth an example of an exploratory program for Cretaceous gas in the Sacramento Valley, indicating the problems, success, and exonomic parameters as evolved from the Rice Creek Gas Field (Tehama County, California).

#### L. A. BASIN GEOLOGICAL SOCIETY

Dr. George V. Chilingar discussed the relation of compaction of fine-grained sediments to the "Origin, Migration, and Accumulation of Petroleum." Outlined are the primary thoughts he presented at UCLA on April 2, 1968.

#### Introduction

In studies of rocks and minerals one has always to consider the action of water. This is so because water is (1) the main agent during physical and chemical weathering, (2) the transporter and carrier of matter in ionic, colloidal and the particulate state, and (3) the environment of life processes. Furthermore, water makes up two-thirds of all living matter and is essential in balancing the structure of a great number of sedimentary minerals. Namely, life and most sediments would not exist on earth, without water being available.

As long as only rocks from surface environments were available for hydro-geochemical studies, no conclusive information was available regarding the nature of fossil waters syngenetically entrapped in ancient sediments. The original water, that had "survived" compaction and diagenesis, has been gradually replaced by atmospheric and biogenic gases or meteoric water at the time the sediments were uplifted or became exposed to the earth surface by tectonic activities or erosional processes, respectively. As a result of petroleum exploration, however, geochemists how have access to some of these interstitial solutions, and there is no longer a physical limitation on geochemical studies of deeply buried waters.

From the data so far obtained, one can infer that there are porous sediments even at depths of several thousand meters. The pore spaces are occupied by waters rich in electrolytes and occasionally by natural gases and petroleum. The question therefore arises: Where do the brines ultimately come from?

In geosynclines, where the rate of deposition is quite rapid, large quantities of waters are continuously extracted from the hydrosphere during sedimentation. Most of the buried water thereby occupies the pere spaces of sediments. Recent muds, for example, may contain up to about 80% water by volume; but upon compaction of the strata, the connate waters, as they are often termed, will be gradually expelled to the next environs. The speed at which the water is released from theoriginal bed rock not only depends on overburden pressure, but is also a function of mineral composition, texture, and structure of the sediment.

It has to be emphasized, however, that all the deeply buried waters so far available for geochemical studies are derived from highly permeable sediments such as sandstones and certain carbonates. Thus, there is a lack of knowledge concerning the geochemistry of waters present in shales. But with the recent advances in pressure and dilution techniques for extraction of waters from clay minerals and shales, hydrogeochemical data which are being accumulated now throw considerable light on the chemical make-up of waters in less permeable rock materials.

#### Role of Water in Petroleum Formation

The possible effect of subterranean waters on the formation of petroleum deposits is of considerable importance. It is generally agreed upon that water is the principal vehicle by which hydrocarbons and related substances are transported. Considerable disagreement, however, exists as to the state in which hydrocarbons are actually migrating.

The degree of hydrocarbon solubility in water is different for various hydrocarbons. As a general rule, increase in molecular weight will decrease the solubility of hydrocarbons in aqueous solutions; and increase in salt concentration will increase their solubility. Marine-derived formation waters are known to produce salinities up to 30% as a result of ion-filtration by charged-net clay membranes. The solubility of free hydrocarbons and allied substances will naturally be affected by these processes. An oil-droplet formation may be the consequence of chemical changes occurring during the migration of the formation water through the strata. It is also conceivable that during the transition from shales to more porous sediments (i.e., sandstones and lime-stones), or vice versa, formation waters release most of their hydrocarbons. There is no reason to assume that other organic constituents dissolved or emulsified in connate waters will not be affected by the outlined filtration processes. Perhaps kerogen-type material may be released when the solubility product of humic acids is exceeded. As a result, the organic matter content in sediments will increase.

DEADLINE FOR NEXT ISSUE MAY 20th

YOU CAN SEE THE HOPS IN THIS BREW

Many a man has lifted a mug of ale to his lips--and faced a gogle-eyed frog staring at him through the liquor.

That is the theme of the collection of frog mugs owned by Glen W. Ledingham, General Manager of the Nigerian Gulf Oil Company, with headquarters at Lagos. Mr. Ledingham formerly was in the Gulf Eastern Company's Production & Exploration Department in London.

The light-hearted habit of dropping frogs, and sometimes toads, into other peoples' ale began hundreds of years ago. Samuel Pepys mentions it in his diary of 1666. The English beer, ales and cider of that day were much darker than modern liquors; and the victim of the practical joke was unable to see the frog until it seemed about to hop into his face.

Somewhere along the way, an enterprising potter realized that you cannot always get a frog when you need one and decided to cast mugs with built-in earthenware frogs and toads. The mugs often were similar outwardly to ordinary mugs to enable the prankster to lull his victim's suspicion. Sometimes the shock value was heightened by casting hollow frogs which squirted a stream of liquor into the drinker's face.

As time went by, the frog mugs were used less and less by pranksters and became a popular, inexpensive gift.

As a rule, the frogs were cast as though clambering up the near side of the mug when it was held in the right hand, but sometimes the decorations were more elaborate.

Mr. Ledingham began collecting frog mugs in 1959, after Mrs. Ledingham gave him one as a joke. Then they began seeking them out at antique markets; and today the Ledingham collection includes some 70 mugs, the oldest cast around 1785 and the most recent around 1890. Most of them came from the north of England, and their prices ranged from 10 shillings (\$1.40) to 25 pounds (\$70) or more. A gallon mug is ornamented with three frogs, an 1832 quart mug with seven; some of the mugs contain snakes and salamanders.

"At first we did not drink from the mugs," Mr. Ledingham said, "but we soon decided that was stupid; so now they are used both by our guests and ourselves when the occasion arises. Several guests have indeed been surprised to find a frog in the bottom or on the side; and we have very nearly, but not quite, lost one or two for this reason."

The verse printed inside one of the mugs hints that indeed some of them have been lost in this way. It reads:

"Tho' malt and venom seem united, Don't break my pot, nor be affrighted."

#### PERSONAL ITEMS

Art Gilbert and Bob Lindblom, Standard-La Habra, won low net and low gross honors respectively at the annual Standard Southern Division Invitational spring golf tourney at the Rancho Bernardo Country Club, held April 6th. Gilbert shot a net 68 and Lindblom a 76.

Captain Greg Calkins of the Standard-La Habra bowling team has had difficult times bringing the team from the lower division of the league. With only 3 weeks left, 14th out of 20 seems the lot. However, he is rallying a softball team for the summer months and things are on a winning note, especially after the 17-2 defeat of the Mobil team from Santa Fe Springs.

Stan Conrad, Sr. Geologist with Atlantic-Richfield in Long Beach, has been transferred to Dallas as Sr. Staff Geologist.

Tom H. Neel, Atlantic-Richfield Geologist, departed Los Angeles April 15th for assignment in Dallas as Planning Coordinator of the Forward Planning Group.

Conrad Maher, along with wife Erika and their two children departed Bakersfield last month to take a new assignment in Libya with Occidental Petroleum. Conrad's address is: Occidental Petroleum of Libya, Inc., P. O. Box 2134, Tripoli, Libya, N. Africa.

H. Wayne Hoylman, Independent Consultant, recently returned, tanned and smiling from a 3 month assignment in Nigeria. Wayne supervised an aeromagnetic survey on a concession held by Great Basins Petroleum.

Standard of California's La Habra
E & P Research Facility, previously part of
Chevron Research, has been reorganized as
a separate subsidiary, Chevron Oilfield
Research Company. R. F. Faull, San Francisco,
is President. La Habra management includes
Dr. M. Allen Riley, Executive Vice President,
John E. Mc Call, Vice President for Exploration and John H. Spotts, Manager, Geological
Division.

Larry Funkhauser has been named Corporate Vice President for Standard of California in San Francisco. Replacing him as Vice President for Exploration, Western Operations is Al Martini.

"Convention Tales" - Seems our good citizen <u>Joe Ernst</u>, a recent Texaco transferee to New Orleans, wrote a letter to erstwhile friends in L. A. soliciting aid in forming a "send Ernst to the Bakersfield Convention Fund" Committee. Campaign efforts among the general public by said friends raised 50 cents. Contributions by former acquaintances brought the total to 56 cents. Net of a 25 cent Ernst I. O. U. which turned up in Ed Hudson's wallet, the committee remitted a certified check for 31 cents. P. S., Joe didn't show!

Play Ball! The newly organized Mobil Exploration Softball Club, captained by pitcher John "Bull" Forman, made a gallant, but less than spectacular entry into the La Habra "Low and Slow" Softball League last month when they scored 1 run vs. 17 for Cal Standard's boys. However, spirits ran a bit higher after the Mobilmen won a 16 to 15 victory in a thriller with

Dick Vivian (Humble) has been transferred back to California from Midland, Texas, as the Division Chief Scout. This is the forth time Dick has been transferred back into California over a period of eighteen years. Dick hopes to be able to stay a while this trip and would like to hear from all his old friends. He will be at 1800 Avenue of the Stars in Century City. Phone 879-2700.

Bill Pottorf (Humble) and his wife Diane are happy parents. Trevor Sutton, blond and blue-eyed, has been charming them for six weeks now and is out to break all records.

# BIBLIOGRAPHY OF RECENT PUBLICATIONS

#### U. S. GEOLOGICAL SURVEY

- Professional Paper 458-C: Hydrology, activity, and heat flow of the Steamboat Springs thermal system, Washoe County, Nev., by D. E. White \$1.25
- Professional Paper 478: Geology of the Coeur d' Alene district, Shoshone County, Idaho, by W. S. Hobbs, A. B. Griggs, R. E. Wallace, and A. B. Campbell, (reprinted 1968) \$5.75

- Professional Paper 559-B Cambrian trilobites of east-central Alaska, by A. R. Palmer. \$2.00
- Bulletin 1242-F: Geochemical cycle of selected trace elements in the tin-tungsten-beryllium district, western Seward Peninsula, Alaska--A reconnaissance study, by C. L. Sainsbury, J. C. Hamilton, and Claude Huffman, Jr. 75¢
- Circular 551: Water-temperatures in the lower Columbia River, by A. M. Moore, 45 p. Free.
- Circular 560: U. S. Geological Survey heavy metals program progress report, 1966 and 1967, by the U. S. Geological Survey. 24 pages. Free.
- Map GQ 668: Geologic map of the Brandenburg Mountain quadrangle, Pinal County, Ariz., by M. H. Krieger. \$1.00
- Map GQ 669: Geology map of the Holy Joe Peak quadrangle, Pinal County, Ariz., by M. H. Krieger \$1.00
- Map GQ 670: Geologic map of the Lookout Mountain quadrangle, Pinal County, Ariz., by M. H. Krieger. \$1.00
- Map I-523: Geologic map of the H;oper Bay quadrangle Alaska, by J. M. Hoare and W. H. Condon. \$1.00
- Geologic map index of Alaska, 5th Edition compiled, by E. H° Cobb and D. L. Kennedy. 60¢

#### U. S. GEOLOGICAL SURVEY

#### OPEN FILED REPORTS (Inspection only)

- Map showing recently active breaks along the San Andreas and related faults between the northern Gabilan Range and Cholame Valley, Calif., by Robert D. Brown, Jr. (Scale 1:62,500)
- Map showing recently active breaks along the San Andreas and related faults between Tejon Pass and Cajon Pass, California, by Donald C. Ross. (Scale 1:24,000)
- Map showing recently active breaks along the San Andreas and related faults between Cholame Valley and Tejon Pass, California, by J. G. Vedder and Robert E. Wallace. (Scale 1:24,000)
- Platinum deposits of Alaska, by John B. Mertie, Jr. 65 pages, 2 black-and-white plates, 6 tables.
- Availability of palynological material from Naval Petroleum Reserve No. 4, IV: North Simpson Test Well No. 1, by Richard A. Scott. 2 pages.
- Availability of palynological material from Naval Petroleum Reserve No. 4, V: Oumalik Test Well No. 1, by Richard A. Scott. 2 pages.

#### CALIFORNIA DIVISION OF MINES AND GEOLOGY

Bulletin 188: Geology of the Fremont Peak and Opal Mountain quadrangles, California, by Thomas W. Dibblee, Jr. \$4.50

AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS BULLETIN Vol. 52, no. 1, January 1968

Stratigraphy and paleoenvironments of Cretaceous rocks, Mitchell Quadrangle, Oregon, by W. D. Wilkinson and K. F. Oles.

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The President's Page. Who should own the ocean bottoms?

World occurrence of petroleum in Pre-Silurian rocks, by LeRoy E. Becker and John B. Patton

AMERICAN JOURNAL OF SCIENCE, vol. 266, no. 3, March 1968

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A large fossil sand shark of the Genus ODONTASPIS from Oregon, by Shelton P. Applegate

The Portland, Earthquake of January 27, 1968, by Donald F. Heinrichs and Leonard J. Pietrafesa.

PETROLEUM ENGINEER, vol. 40, no. 3, March 1968

Offshore Oil and Cook Inlet (Part 2) by J. E. Kastrop

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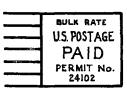
How dual-level aeromagnetic surveys aid interpretation, by Dr. W. P. Jenny.

Why some waterfloods fail, by Ralph W. Jackson

Underground drill sites proposed for offshore use.

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





MARK KOVINICK DA PAULEY PETROLEUM 10000 SANTA MONICA BLYD LOS ANGELES, CAL 90067

# PACIFIC PETROLEUM GEOLOGIST

## NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

22 Volume

June 1968

Number 6

## ASSOCIATION ACTIVITIES

#### L. A. BASIN GEOLOGICAL SOCIETY

The monthly barbecue was held May 7 at Northern Station, La Mirada, with 76 in attendance. Bob Crowder, Associate Petroleum Engineer, California Division of Oil & Gas, discussed the Cheviot Hills oil field. Bob's paper will be published in a forthcoming issue of the D.O.G. summary of operations.

Company hosts for the event were Texaco and Atlantic-Richfield. Good food and fellowship was had by all thanks to co-chairmen Bill Hughs and John Wiese and their committees.

Doug Traxler, Chairman of the L. A. Basin Geol. Society anticipates that the monthly programs will continue through the summer months with meetings scheduled the first Tuesday of each month.

#### ELECTION RESULTS

Following are the new officers for the 1968-69 term of the Pacific Section AAPG.

President

Louis J. Simon, Texaco, Inc.

Vice-President

Rodney G. Colvin, Mobil Oil Corp.

Secretary

John N. Terpenning, General Computing

Service

Treasurer

Willis R. (Sam) Brown, Buttes Oil

& Gas Co.

Sergeant-at-arms

Jean B. Senteur de Boue, Consultant

District Representatives 1968-70

Andrew G. Alpha Rodney G. Colvin Joseph LeConte James C. Taylor

SAN JOAQUIN GEOLOGICAL SOCIETY

### Activities

The speaker at the May meeting of the San Joaquin Geological Society was Dr. Keith Howard, U.S.G.S. - Astrogeologic Division - Menlo Park. Dr. Keith's talk on "Lunar Geology" was interesting and very well received. Judging by his photographs and analyses, the moon is probably not made of green cheese - seems like the geologic similarities between the moon and earth are far more numerous than many of us had suspected. Many thanks for an interesting and informative talk.

The slate of nominees for the 1968-69 years are:

President

Joe Dunwoody-Consultant

Vince Scury-Texaco, Inc.

Vice-President

Jim Parkinson-Standard Oil of

Calif.

Bob Saunders-Union Oil of Cal.

Secretary

Rod Nahama-Consultant

Jim Weddle-D.O.G.

Treasurer

Bill Elliot-Standard Oil of Cal.

Ed Joujon Roche-Consultant

District Representative Mort Polugar-Standard Oil of Cal.

John Thompson-Consultant

## Personals

Mel Fischer formerly Texaco has resigned to join Oxy-Libyaseems like quite a few Bakersfield people are going to an even hotter place.

On the cooler side of things some of the Standard people in Bakersfield are going to Anchorage. The new sour doughs are Bob Ortalda, promoted to Division Geologist-Pacific Northwest Division, Jim Kistler recently promoted to Sr. Exploration Geologist, and Don Orlopp.

The San Joaquin Geological Society will certainly miss the many valuable contributions of Bob Ortalda. Best wishes Bob and thanks for all you have done for the Society.

Some recent promotions at Standard, under the Professional. Specialist program are:

> Doug Howell-Sr. Exploration Geophysicist Don Lewis-Exploration Geologist

## GEOLOGISTS'REGISTRATION BILL

As of May 22nd, Assembly Bill 600 has been read in the Assembly and should be up for vote within a few days. It is temporarily held in abeyance pending a letter of authorization for a bill that requires an appropriation. For the first time no serious difficulty in obtaining passage of the bill by the Legislature is anticipated, and hopes for its eventual success are high.

## EXECUTIVE COMMITTEE, PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Ted L. Bear Richard L. Hester Hal Fothergill Glen W. Specht Robert R. Knapp Dan E. Duggan President Vice President Secretary Treasurer Past President Editor

Jack Kappeler Gordon B. Oakeshott James M. Saunders

San Joaquin Delegate Northern Calif. Delegate Coastal Delegate

#### ASSOCIATED SOCIETIES

Sacramento Petroleum Association Northwest Geological Society Alaska Geological Society

#### PACIFIC PETROLEUM GEOLOGIST

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The bill was passed by the Assembly Ways and Means Committee without a dissenting vote on May 15, 1968. The way had been smoothed by a meeting held in San Francisco on April 25th, at which the former opposition was persuaded to support the bill after the adoption of several amendments dealing with specialties in general and engineering geologists in particular. The slightly amended bill was then approved by the Assembly Governmental Efficiency and Economy Committee before being sent to the Ways and Means Committee.

If all goes well, AB 600 will be passed by the Assembly soon after May 22nd, then go to its first Senate committee early in June. After its approval there it will go to the Senate Finance Committee, then to the floor of the Senate for vote. If not amended (in which case it would go back to the Assembly for approval) it will be sent to the Governor for his signature.

#### AN APOLOGY

The May issue of this newsletter carried an article by me on Assembly Bill 600 in which I described the severe amendments proposed by the Los Angeles Section of the Association of Engineering Geologists as being presumably aimed at killing the bill. Their Legislative Chairman has steadfastly maintained that this is not so, -that their only aim was to strengthen the bill so as to provide adequate protection to the public which the engineering geologists serve. This is certainly a valid viewpoint and one for which I failed to give appropriate credit. Acceptance of compromise amendments by the Los Angeles Section of AEG in the April 25th meeting and subsequent support of the amended bill indicate that they were, after all, amenable to having State regulation. To those members of the Los Angeles Section of AEG who held this view and to their Legislative Chairman I offer my apologies for misinterpreting their actions.

> Jay G. Marks Chairman, Legislative Committee California Section, American Institute of Professional Geologists.

### SLICK PROMOTION OR NOT?

The following letter is published with the express permission of its authors.

Mr. Dean A. McGee Chairman, AAPG Foundation Kerr-McGee Corporation Kerr-McGee Building Oklahoma City, Oklahoma 73102

Dear Sir:

The undersigned members of the AAPG are returning their copies of the AAPG Foundation brochure recently sent to us with the desire that such an extravagant form of solicitation be re-used if possible.

Although the sarcasm of the above paragraph may not be appropriate we feel it is our duty to convey our displeasure when money is spent in this manner. According to a very rough estimate from a reliable printing firm in our city, this brochure cost about \$5000, assuming 15,000 copies were printed. We are sure some of the worhwhile projects outlined by the Foundation could have better used the money.

According to the report presented to the San Joaquin Geological Society by our representative who was present at the business meeting held in conjunction with the National Convention in Oklahoma City, the Association's financial problems are in part due to mismanagement of funds by previous officers. In view of the proposed dues increase by the present officers to alleviate these problems this type of spending is at best untimely.

By copy of this letter we are informing Mr. Hamm and Mr. Davis of our feelings as well as the members of the Executive Committee of AAPG.

Very truly yours,

Eugene C. Tripp Frank Alexander John W. Bedford Tad L. Fyock James R. Maytum Jack B. Mills Ivan Scherb Vincent F. Scury

James R. Huber

## CONVENTION HIGHLIGHTS

Oklahoma City was designated the 1968 Convention City in 1963. At this time Dewey Bartlett, geologist, probably had not the faintest notion of ever being the state chief executive. As circumstances happened this geologist became the Honorable Dewey Bartlett, Governor of Oklahoma, with his term of office conveniently coinciding with our convention date. Governor Bartlett cooperated in every possible way to make our meeting a success. He spoke before the joint session and Mrs. Bartlett turned their home over to the ladies for a social event.

Dean A. McGee, Chairman of the Board of Kerr-McGee Corporation, was our Keynote Speaker. He told us that we should look beyond petroleum and explore for all of the energy fuels, and in the years ahead, the petroleum geologist will become just as vitally essential to the discovery and economic exploitation of these additional energy sources as he has been to the oil and gas business. He also threw us a challenge to broaden our thinking and accept all geologists into our ranks. We were honored to have such a person speak to us. It was also fitting that the AAPG bestowed an honorary membership on Dean McGee at this meeting.

Our Fuels Symposium on Monday was new and intersting. For the first time our troops were exposed to information and predictions that usually stay in the Board Rooms of our large corporations.

Cary Croneis did a masterful job as master of ceremonies at the Awards Luncheon. I heard people attending for the first time say they thought it one of the convention highlights and would always make it a point to attend in the future.

Another milestone was the Oklahoma State Legislature Resolution commending the  $\ensuremath{\mathsf{AAPG}}$  .

Mushrooming demands for energy in the United States and throughout the Free World will create strong pressures for additional petroleum exploration and will increase sharply the competition of other fuels in the energy market. This was the overriding theme that permeated the 53rd annual meeting of the American Association of Petroleum Geologists which met in Oklahoma City jointly with the Society of Economic Paleontologists and Mineralogists in its 42nd annual meeting.

The convention opened on Monday (April 22) with a day-long symposium which studied the outlook for the supply of energy fuels in the decades ahead.

Dr. Richard J. Gonzalez, a prominent Houston economic consultant, predicted that oil's market will continue to increase, but it will show a steady decline in the percentage of total energy consumption as nuclear energy, coal and shale oil grow during the next decade.

It was reported that industry estimates indicate petroleum will provide three-quarters of the energy. Yet, it was stated again and again that both oil and gas are being discovered at rates slower than consumption. The most serious depletion of known reserves is in natural gas.

John L. Loftis, Jr., of Humble Oil and Refining Co., Houston, predicted that by 1985 the United States will have only a six-year supply of gas left, and the producing fields will not be able to deliver gas at the rate demanded by consumers. At present there is a small surplus of natural gas reserves, but if present trends of supply and demand continue, we will soon be dipping into this surplus and by 1985 we will have only 80 percent of the gas we will then need, he warned.

G. H. Galloway, executive vice president of Pan American Petroleum Corp., Tulsa, said the outlook for oil was a little better. Costs have been rising faster than prices, but he explained that new technology and production more nearly at capacity levels will help keep costs down so that conventional petroleum can continue to hold most of its markets against the rising competition from nuclear electric power and the prospects of liquid fuels from coal and oil shale.

Spokesmen for other fuels were very optimistic. It was predicted that by 1980 gasoline from coal will be competitive in price with gasoline from crude oil and will have 10 percent of the motor fuel market. An oil shale authority said that government policies are holding back early development of this synthetic fuel source, but he forecast that private industry will take a greater interest and will have shale oil on the market within 10 years.

The outlook for uranium is also bright. Use of nuclear fuels to generate electricity is increasing dramatically, according to George C. Hardin, Jr., vice president of Kerr-McGee Corporation, Okalhoma City, And, consumption of electrical energy is increasing at about double the rate for all energy.

J. Ben Carsey, president of the AAPG, in his presidential address said a new constitution and by-laws for AAPG are being prepared and will possible include provisions for membership in AAPG by qualified geologists trained in the search for other earth fuels. The proposal will be taken up at the next annual meeting in Dallas.

Theme of the meeting was "Geology of the Giants." Some 70 technical papers were presented in AAPG meetings describing the giant oil fields around the world which contain a third of the earth's known reserves of both oil and gas. More than 80 papers were read in SEPM research and technical meetings.

The highest award of AAPG--the Sidney Powers Memorial Medal--was given to Maurice Ewing, Higgins professor of geology at Columbia University and director of the Lamont Geological Observatory.

Displaying the optimism and pragmatism of the geologists and voicing the opinion of most, Michel T. Halbouty, immediate past AAPG president, in introducing the theme of the convention said:

"I firmly believe that, in this country alone, there are many more gaint fields to be found but it is evident that we must change our exploration methods and re-orient our thinking to the uncommentional accumulations which surely must have occurred in traps other than structural. We must find these unconventional giants in the United States."

The Closest we came to having a tornado interrupt our activities was Friday evening when the Ouachita Mt. Field trip was gathering at Ft. Smith, Arkansas The small town of Greenwood, Arkansas, 19 miles southeast of Ft. Smith was destroyed, and small tornado dipped down Monday evening in Midwest City, 5 miles from downtown Oklahoma City.

The attendance did not set records, but one can say that it was quite respectable. The registered men totalled 2,560 with 747 wives registering, for a grand total of 3,307.

The Oklahoma City Civic Center Music Hall served us well for our technical sessions. The exhibit area was close but removed from the technical sessions, and it was a spacious, pleasant meeting area. It has been a long time since the association has enjoyed as nice a room as the main auditorium of the Music Hall. This room seats 3,400 in very comfotable seats, with near perfect acoustics. An estimated 2,000 attended the joint session on Tuesday morning. All sessions were well attended in all rooms. The technical program was enjoyed by all petroleum geologists as reflected by the attendance at the last paper on the last day.

Our field trips were unique in that all three were able to be overnight at one of Oklahoma's beautiful state lodges. The Fountainhead and Arrowhead lodges on Lake Eufaula in eastern Oklahoma were used for the preconvention trips and the Lake Murray lodge in southern Oklahoma was used on the Arbuckle Mountain trip. Two hundred fifty three rock hounds enjoyed these fine facilities as well as the superb surface geology which our state has to offer.

Our golden giant that stands eighteen feet high is a powerful and fitting symbol of petroleum geologists throughout the world and will long be remembered.

To those who came to Oklahoma City, we enjoyed having you; to those who were unable to come, we say with pride that you missed an outstanding meeting.

#### HEADQUARTERS NEWS

Frank B. Conselman, an Abilene, Texas, consulting geologist, has been elected president of the American Association of Petroleum Geologists. Balloting for four national offices of the scientific-professional society has been conducted over the past few months and results were announced by the AAPG executive committee. New officers will begin their terms in office on July 1.

Elected vice president was John E. Kilkenny, geological coordinator, Union Oil Company of California, Los Angeles. James M. Forgotson, Jr., research group supervisor, Pan American Petroleum Corp., Tulsa, was elected secretary-treasurer of the association. John D. Haun, professor of geology, Colorado School of Mines, and a consultant for Barlow and Haun, Inc., was unopposed for AAPG editor, and was re-elected to that position.

J. Ben Carsey, a Houston consultant, the current president of AAPG, will serve on the executive committee as immediate past president, along with the newly elected officers.

Conselman has been a member of AAPG for 33 years. A native of New York City, he received both a B.S. and M.S. degree in geology from New York University. He did graduate work at Columbia and Harvard Universities and earned his Ph.D. degree from the University of Missouri in 1934.

He has been employed as a geologist for New York University, University of Missouri, Missouri Geological Survey, Gulf Oil Corp., Great Lakes Carbon Corp. and American Trading and Production Corp. prior to becoming a consultant. He also served as a visiting lecturer at the University of Texas. He has authored several scientific geological papers. Conselman served on numerous AAPG committees and in 1960-61 served as vice-president.

Kilkenny, a native of Salinas, California, was graduated from the University of California with an A.B. degree in geology. Following graduation, he worked for the Texas Company and has since been employed as a geologist for Superior Oil Company, Olson's Scouting Service, Pure Oil Company and Chanslor-Canfield Midway Oil Company prior to joining Union. He has published several papers, dealing primarily with geology in the California area. Kilkenny has been an AAPG member for 28 years and has served on many of the association's committees.

## COAST GEOLOGIC SOCIETY

At the C.G.S. dinner meeting, May 21, 1968 the following new officers were elected:

President - Don Hagen - Texaco, Ventura Vice Pres. - Al Hanson - Gretty, Ventura Secretary - Marv Keller - Continental, Ventura Treasurer - Pete Wygle - D.O.G., Santa Paula

The new Coast Section AAPG representative is D. E. Ritizius of the D.O.G. in Santa Paula

The speaker was Dr. Robert O. Norris, chairman of the department of geology University of California at Santa Barbara. His subject was shore erosion and sand migration. He showed a series of slides of contemporary cliff erosion in the Santa Barbara area that represented six to nine inches of cliff retreat per year. The formation of longshore currents by wave action and the movement of sand were the main points of discussion. Harbor filling, rapid loss or accreation of beach, and the fallibility of records and maps of the sea shore in Southern California were discussed at length.

## NEW RESERVES AND MORE GEOLOGISTS NEEDED

A senior statesman of the petroleum industry warned today that the industry is facing a difficult, but attainable, challenge in the next two decades to find new petroleum reserves to meet expected demands by 1990.

Morgan J. Davis, a Houston petroleum consultant, said:

"I believe there is a good chance that we can find four billion barrels of petroleum liquids per year in North America during the next 23 years provided we maintain an economic system which will furnish the incentives for increased exploration and drilling and provided both industry's managers and the universities who will train our oil finders adopt more farsighted policies than have sometimes been followed in the past."

He said in 1966 the United States and Canada had production of 3.8 billion barrels and we can expect annual North American production to rise to seven billion barrels by 1990 provided offshore imports remain at about current levels.

Considering the vast, unexplored areas of continental shelves and land areas of the United States including Alaska, large areas of Canada and the Arctic Islands, finding four billion barrels seems to be a sizeable, but certainly not impossible task, Mr. Davis declared. "In North America, our required finding task is so great that it must be approached by exploration forces adequate in number, with superlative training and with every technological exploration aid that we now have or that can be brought forth during the two decades," he stressed.

Mr. Davis pointed out that at this moment a shortage of well-trained petroleum geologists with advanced degrees exists and it does not appear that there will be any early change in this situation. Despite the situation, he explained, some geologists and geology faculty members are telling students that there will be a drastic curtailment of petroleum exploration within the next 25 years. He added that some industry people are hinting to aspiring young geologists that computers and other electronic devices and the many other instruments available, or potentially available, will reduce the number of geologists required in the future.

"I deplore this discouraging counsel sometimes being offered potential geologists, both by industry and academicians, because I believe these ideas are erroneous and shortsighted and because I am concerned over the probably shortage of petroleum geologists for the future," he stated. Mr. Davis said that he is contiuing to advise many young people to cast their lot with petroleum industry because he believes it is a stable, basic industry which will continue to grow and create exciting opportunities for young scientists.

"At no time, however, have I failed to remind them that the petroleum industry of the '80's and later will only faintly resemble our present industry and that its technology will far surpass that of 1968," he emphasized.

#### IN MEMORIAM

Donald N. Blount, Research Scientist, Union Research Center, Brea, California, was killed in an automobile accident in Mexico while conducting a field conference for Union Gil Company of California on May 6, 1968. Don joined Union when he completed his Ph.D. at L.S.U. in 1967 and was engaged in carbonate research. He was a graduate of the University of Texas - B.S., M.A., 1961-62, and had worked for Mobil Oil Co. in Midland, Texas, for 2 years as a Junior Exploration Geologist. He is survived by his wife, Nancy, and two daughters.

## PERSONAL ITEMS

Standard (La Habra) Exploration and Land annual Spring Golf Classic was held May 11 at the Fallbrook Country Club. John Jacobson was the chairman. Low net winner was Tom "my HDCP used to be 20" Newbill with 61. Low gross winners were Bob Lindblom (75) and Dick Jennings (91). The twilight to midnight putting tourney was won by Greg Calkins and a new golfer on the spring California tour from Texas, Bill Kardas. Twenty four men played plus scorekeeping by two pretty Standard girls - Sue Nash and Judy Loveless.

"Chuck" Cary (Union) after spending some 19 years here on the Pacific Coast as a paleontologist and geologist, has been transferred to Roswell, N. M. as Dist. Expl. Supt. His replacement at Santa Fe Springs is Harry Lee who will take over the post of District Exploration Geologist. Harry has been with Union ten years and comes here from Durango Colorado, when he was assigned as Expl. Geologist.

Marcus Steadman has recently been transferred to Santa Fe Springs from Union's Gulf Div. in New Orleans. Marc will work as a Development Geologist in the L. A. Basir

Another new arrival at Santa Fe Springs is Union's <u>Bruc</u>
<u>E. Ellison</u>. Bruce just completed his Master's Degree
at Oregon State and will be assigned as a geological
trainee.

## Page 6

Bradford C. Jones, Chief Paleontologist for Union at Dominquez has retired after 34 years, to enjoy the fruits of his labors. We wish you a happy retirement Brad.

Union also announces they are moving their Paleo. Lab. from Dominquez to Santa Fe Springs. The move will be completed by May 27. In charge of the new lab will be Rodrick McClennan who has been promoted to Division Paleontologist. Rod will be assisted by Fran Blake, Jim Eke, and Dave Ford. Their new phone no. is 945-1221.

At Texaco, <u>Hans Ashauer</u>, Manager of Exploration for the L. A. Division and a California resident for more than 20 years, has been transferred to Denver, Colo., as Chief Geologist, Exploration West.

<u>Harry Quinn</u>, geologist for Texaco's Anchorage Dist., was presented by his wife Janet with a baby girl on May 7.

At a recent Mobil business meeting, those wearing AAPG lapel buttons were overwhelmed by a most enjoyable happening. The emblem seems to have caught the avid attention of the topless belles of the strip and a very special "bump and grind session" ensued. The moral - wear you emblem proudly there may be many unexpected rewards. (Editor's note: We hear that the have-nots almost tore the lapels off their brothers' jackets in order to avail themselves of the fringe benefits. Place your orders for emblems early.)

The Mobil Stags are headed for the mountains again... their annual "fishing trip" to the Sierras May 24,25, and 26. The Secretaries have prepared for their heros return by stacking up on an ample supply of aspirin.

John Forman wasoffered the chance to voice a rebuttal to last month's article on his Mobil "Powerhouse" baseball team. But at the moment he thinks it prudent to remain mute.

<u>Dr. Philip A. Chenoweth</u>, research associate in geology at the Sinclair Oil and Gas Research Center, Tulsa, has resigned to begin his own geology consulting business. Dr. Chenoweth has leased offices in Tulsa's Shell Building.

Dr. Chenoweth is the author of more than 35 authoritative articles and technical papers on geology and related fields. He is listed in several Who's Who publications and is current Editor for the Tulsa Geological Society. His work in oil and mineral exploration has taken him to 46 states, Canada, the middle East and the Bahama Islands.

L. F. Ivanhoe has joined the Marine Systems Dept. of the System Development Corp., Santa Monica, as part of a special group making a "comprehensive study on a national data program for the marine environment" for the Office of the President of the United States.

Veteran oil editor and writer Henry D. Ralph has joined Public Relations International, Ltd., as a consultant. Mr. Ralph retired from the Oil and Gas Journal as chief editorial writer on April 1 after 32 years with the Journal in Washington, D. C., and Tulsa.

Shell Oil Co. (Team Captain Phil Ryall) took the Bakersfield City League Volleyball Champioship on May 9 for the second year in succession and the team was undefeated in all their league games. They were challenged by third-place Occidental (Team Captain John Carver) to a post-season contest for beer and the humiliated champs bought the suds.

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#### U. S. GEOLOGICAL SURVEY

- Professional Paper 388-B: Bedrock geology of the Lake Tapps quadrangle, Pierce County, Wash., by L. M. Gard, Jr. \$1.25
- .Professional Paper 571: Paleogene biostratigraphy of nonmarine rocks in King County, Wash., by J. A. Wolfe,
- Professional Paper 593-B: Recent gastropod boreholes and Ordovician cylindrical borings, by M. R. Carciker and E. L. Yochelson 45¢
- Bulletin 1221-A: Rockfalls and avalanches from Little Tahoma Peak on Mount Rainier, Wash., by D. R. Crandell and R. K. Fahnestock
- Bulletin 1254-E: Schists of the central Alaska Range, by Clyde WahrMaftig
- Water Supply Paper 1858: Use of water by riparian vegetation, Cottonwood Wakh, Ariz., by J. E. Bowie and William Kam, with a section on Vegetation, by F. A. Branson and R. S. Aro 75c
- Geophysical Abstracts 255, April 1968 45c
- Abstracts of North American Geology, March 1968 45¢
- U. S. BUREAU OF MINES (Government Printing Office, Washington, D.C., 20402)
  - Bulletin 642: Qualitative and quantitative aspects of crude oil composition, by Harold M. Smith. 125 pp., 65 figs. \$1.00

WESTERN OIL REPORTER, vol. 25, no. 4, April 1968

Offshore California in oil spotlight.

- GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 79, no.2 February 1968
  - A gravity survey of the Chukchi Sea region, and its bearing on westward extension of structures in Northern Alaska, by Ned A. Ostenso.
- PETROLEUM ENGINEER, INTERNATIONAL, vol. 40, no. 2 February 1968
  - Offshore Oil and Cook Inlet. (Part 1) by J. E. Kas trop.
  - Offshore environment complicates drilling, by Petroleum Engineer Staff.
- GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 79, no. 1, January 1968
- A tale of ten plutons, by Konrad B. Krauskopf.
- Giant desiccation polygons of Great Basin playas, by James T. Neal, Arthur M. Langer, and Paul F. Kerr.
- Mean velocities and boulder transport during Tahoeage floods of the Truckee River, Calif.-Nevada, by Peter W. Birkeland
- K-Ar age of lava dam in Grand Canyon, by Edwin D. McKee, W. Kenneth Hamblin and Paul E. Damon.

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# PACIFIC PETROLEUM GEOLOGIST

# NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 22

July 1968

Number 7

## ASSOCIATION ACTIVITIES

SPRING FIELD TRIP

The Pacific Coast annual spring field trip was held on Friday, June 7, 1968, in the area between Castaic and Wheeler Ridge. The theme of the trip was the geology of the area of the State of California Water Project Crossing of the Tehachapi Mountains, including the San Andreas and Garlock Faults. The field trip leaders were from the Department of Water Resources, being Messrs A. Arnold, R. Bisio, G. Hanegan, V. Voloshin, and K. Zerneke, who gave the group much of the results of their geologic investigations that span the last decade in association with their working on the tunnels and dams.

There were approximately 127 who attended this event on chartered Greyhound buses that were well equipped. Each bus had an assigned leader for the entire trip in addition to the comments contained in the guide book. The trip commenced at 9:00 a.m. at the Castaic Dam site, traveling through the dam construction area, proceeding on to the surge tank at the Angeles Tunnel. Our lunch stop was made at the intersection of the tunnel system with the Garlock Fault, where we enjoyed a fried chicken box lunch with beverages. The trip continued to wind its way through the tunnel system crossing the Tehachapi Mountains with another stop at the point where the water being brought up from the San Joaquin Valley discharge lines enters into the north portal of tunnel Number One. A thrilling ride down the north slope of the Tehachapi Mountains terminated in our stopping at the pumping plant to view the geology associated with the contact of the sediments upon the basement at the pumping plant site. Time only permitted a brief resume of some mighty fine work by some mighty fine geologists, and we thank them for adding to our knowledge of the area.

## SPRING GOLF TOURNAMENT

The golf tournament held in conjunction with the annual AAPG Picnic on the Elkins Ranch near Fillmore was a resounding success. 122 sunburned, enthusiastic golfers survived a "full 18" despite numerous in-flight refuelings.

Layne Howell won the Frank Yule Memorial Trophy with a low gross of 76. In the same foursome, as a guest, Layne's son won low score and a \$20 gift certificate with a fine 73. Other winners under the Calloway handicap system were: flight #2 - Tony Morris, flight #3 - Bill Bauer (low net 64).

## SPRING PICNIC

The 1968 Spring Picnic was held June 7, 1968, at Elkins Ranch Golf Course, Fillmore, California. It was attended by 281 geologists who consumed 231 steaks and 50 lobsters. Between the picnic, the Golf Tournament, and the Field Trip, members managed to down 2124 cans of beverages. This works out to 7.5 cans per man which, while not a record, should allay the minds of those who feared that the large attendance might downgrade the quality of this annual affair.

A feature of the afternoon was hot buttered corn, served as an hors D'oeuvre. Accurate records were not kept; maximum individual consumption reported was 8 ears, by an individual who also held the dripped-butter record.

## L. A. BASIN GEOLOGICAL SOCIETY SUMMER PROGRAM

2 July- Bar-B-Q - Northam Station

Richard J. Proctor, Geologist for the Metropolitan Water District of Southern California will discuss the "Glendora Tunnel Exposure of the Sierra Madre Thrust—Basement and Petroliferous Puente Overriding Terrace Gravels".

6 August- Bar-B-Q - Montebello Field Trip

Don Hallinger, Pacific Lighting, has arranged for a tour through the Montebello Gas Storage area with an explanation of the engineering and geological problems recently encountered.

## EXECUTIVE COMMITTEE, PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

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### PACIFIC PETROLEUM GEOLOGIST

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## GEOLOGISTS' REGISTRATION BILL

On June 12th Assembly Bill 600 was passed by the Assembly. It has now been scheduled for hearing on June 25th before the Senate Committee on Business and Professions. If approved there it will go to the Senate Finance Committee, and then to the full Senate for vote. If not amended in the Senate (in which case it would be sent back to the Assembly for concurrence) it will be sent to the Governor for his signature.

Before passage by the Assembly the bill was amended to include three public persons on the proposed Board of Geologists. The Board will thus consist of nine persons, of whom six will be Geologists.

Legislative Committee California Section, AIPG

## SLICK PROMOTION OR NOT? : A RESPONSE

Last month we printed a letter written by several members of the San Joaquin Geological Society to Mr. Dean A. McGee, Chairman, AAPG Foundation. The following is a response penned by Mr. J. Ben Carsey, Sr., past-President of AAPG.

### Gentlemen:

A copy of your letter of May 20th addressed to Mr. Dean A. McGee, Chairman of the AAPG Foundation, regarding the quality of the Foundation Brochure, has been received.

You are correct in concluding that some money could have been saved by printing a less formal brochure on cheaper paper, however since the Foundation is extremely important to all of us, I think the format which was used is justified. A brochure of excellent quality is more apt to attract substantial contributions than a less expensive one. The Trustees hope to build up a very sizeable fund in the Foundation. This could go a long way toward solving many of our financial problems.

The Association has been very fortunate indeed to have men of the stature of Dean McGee, Dow Hamm and Morgan Davis assume the responsibility of establishing the Foundation and undertaking the burdensome chore of attempting to raise funds for the Association. Dean McGee is the Chief Executive of a great company and the other two men have just retired from similar positions with their respective organizations. I think we should all be very grateful to them for the time and energy they will spend in our behalf. With a copy of this letter, I, personally and on behalf of the Executive Committee of the Association, am taking the liberty of assuring these men that you people were sincere in your criticism and that you did not intend to affront them in any way.

Your alertness to the situation is commendable; however, I want to assure you that we are making a vigorous effort to keep spending down. Our financial problems are not due to what the term "mismanagement of funds", as used in your letter, could imply. As we all know, the Association publishes a number of special volumes, maps, etc. Commitments for such publications must be made far in advance of actual printing. Several of these publications, including the Gas Volume which was approved about eight years ago, have been completed and printed this year. The printing costs alone on the Gas Volume is \$67,000.00. Printing costs of all volumes and maps for the three year period beginning in 1967 are now estimated at \$311,000.00. Income from the sale of publications during this period is estimated at \$200,000.00. We have taken steps to improve our control over outstanding commitments in an effort to prevent a recurrence of excessive printing costs in one year for which prior funding has not been provided. For your further information, all elected Officers and the Chairman of the Business Committee pay their own expenses including travel, telephone, etc. None of these expenses are paid by AAPG.

Your interest in the Association is both commendable and deeply appreciated.

### GEOTHERMAL SURVEY

The American Association of Petroleum Geologists has initiated an exciting and ambitious project—the Geothermal Survey of North America. It hopes that other national and local organizations and many individual geologists, geophysicists, and engineers will join in this survey so as to insure its success.

Temperatures at depth within the earth have been determined more or less accurately at many places, but these data are widely scattered in company files and elsewhere. The first step in the Survey is to collect selected temperature data. There are two kinds: (1) temperatures observed in wells drilled by the petroleum industry; (2) all other observations; e.g., those from water wells and mines. The unattainable optimum is to have one such observation near the center of each township; that is, one at each point of a 6-mile grid covering North America and its continental shelves.

With these data at hand, the second step in the Survey is to calculate a "mean" geothermal gradient at each grid point. Such a gradient is temperature difference divided by depth. The third step is to contour these data. Each contour will represent a line of equal gradient on the earth's surface. (Cf. Levorsen, "Geology of Petroleum", 2d edition, fig. 9-18, p. 419.)

To gather the data from E-logs and other sources in the petroleum industry the Survey must enlist the help of many geologists. It needs a District Chairman in each of the 33 GSNA Districts, which coincide in area and number with the 33 CSD Districts (see AAPG Bull. v. 51/6 (June 1967), pt. 2, p. 1000). Thus on the Pacific coast, GSNA District 29 coincides with CSD District 29 West Coast. The District Chairman will receive the data from geologists and will transmit them to the Project Director. Probably the Chairman will assign one data gatherer to each heavily drilled county. This geologist will spend two or three hours a week selecting and recording on a one-page form the temperature and depth for each 6-mile grid-point. A set of written instructions explains the procedure fully.

Interested parties may contact Mr. Ronald K. DeFord, Chairman, Geothermal Survey of North America, at the University of Texas, Austin, Texas.

## OKLAHOMA COOP

Talks by AAPG President-elect Dr. Frank B. Conselman and Oklahoma Governor Dewey F. Bartlett highlighted the orientation meeting of the first Cooperative Oklahoma Opportunity Program providing summer employment for outstanding geology students.

Twenty-seven students from 15 universities throughout the country will receive on-the-job training with 14 oil companies either based in Oklahoma or having major divisions in the Sooner State. The day-long orientation meeting marked the beginning of the program which is sponsored by AAPG with the support of Governor Bartlett.

COOP was initiated by AAPG to help assure a continuing source of highly qualified geologists for the petroleum industry. The program this summer is a pilot program and the results will determine whether or not it will be offered in future years in cooperation with other states.

Frank O. Bennett, a Tulsa consulting geologist, is chairman of COOP. He said that strong interest in the program has been indicated by the oil companies, universities and students since its inception.

The orientation meeting emphasized AAPG's role in sustaining a high level of exploration activity in the petroleum industry. During a panel discussion in the afternoon, the students heard authorities describe various geological career opportunities including company exploration, research, computer applications, independent consulting and non-petroleum fuel exploration.

Panel speakers were: William R. Walton, Pan-American Corp., Tulsa, research: Wilbur McMurtry, independent geologist, Oklahoma City, consulting; T. P. Woodward, Humble Oil and Refining Company, Oklahoma City, domestic and foreigh exploration and management; George Hardin, Jr., Kerr-McGee Corporation, Oklahoma City, non-petroleum fuel exploration; and James Forgotson, Pan American Petroleum Corp., Tulsa, computer applications.

During the morning session AAPG Executive Director Norman C. Smith described the activities of the association and the benefits of membership in the world's largest geological society. Governor Bartlett, a long-time member of AAPG, whose support helped get the program under way, welcomed the participating students to Oklahoma and explained some of the activities in pollution control of interest to geologists and his plan to establish an exploration data processing center for world-wide geological data in Oklahoma.

## OFFSHORE TECHNOLOGY CONFERENCE

The Executive Committee approved a proposal from the Society of Petroleum Engineers that AAPG accept joint sponsorship of the Offshore Technology Conference to be held in Houston in May, 1969. Philip Oetking has accepted appointment as the AAPG representative to the 'Program Committee. From time to time you will be receiving information regarding the development on this important conference.

## PERSONAL ITEMS

- Bruce D. Brooks, Capitol Oil Corp., Sacramento, writes that we failed to include his name in our new Pacific Section "new completely revised" directory filler.

  Did we inadvertently miss anyone else?
- Philip E. Persons has moved his consulting office to 225 Santa Monica Blvd., Suite 505, Santa Monica.
- Tenneco, Inc. is moving out of the garden spot of Ventura and re-locating in Bakersfield. Were they getting too much of a good thing?
- Don and Nancy Hagen, Texaco, are vacationing in Norway and promoting good will among our Scandinavian compadres.

- Pete Weigle, formerly Standard scout in La Habra, has returned to Ventura Co. as an engineer for the Division of Oil and Gas. How does it feel, Pete, to work for a non-profit organization?
- Bob Barringer, noted mountain climber and photographer with Continental in Ventura, joined the Ventura County Camera Club two weeks before the club's summer recess and was an instant success by walking off with two of the best prizes in a recent competition.
- Coast Geological Society still boasts of having the largest geological luncheon meeting group in the west. They currently, however, are shut down for the summer and will resume activity in September.
- Gulf, Sunray, and Humble all now have offices in Ventura, but as yet there are no geologists located in the garden spot.
- Kit Carson, consultant paleontologist, has recently been released from the hospital and is resting at home. He surely would appreciate any calls from his many friends.
- Richard Lounes is the latest addition to the geologists' roster in Ventura. Richard is the Ventura County Geologist, a newly formed post.
- John Curran, consultant in Santa Barbara, is now actively engaged with 7 Cities Oil Co. Was it black gold at the 7 Cities of Cibola?

Don Hartman, recent graduate from Oregon State College, has joined the geological staff at La Habra. The newest member of Standard's Paleo staff at La Habra is Dave McGee. Before coming to L.A., Dave spent 1 yr. in the Dominican Republic with the Peace Corps following his graduation from San Diego State.

Max Hembree, (Standard) staff geologist, is now
well on the road to recovery, following a heart
attack in May. The boys at the office say ,
"hurry back Max."

<u>Bill Smith</u>, (Std.) Division Paleontologist at the La Habra Lab. has accepted a transfer to Dharan where he will serve as Chief Paleontologist for Aramco.

Harry King, (Standard) is reportedly "living like a King" while attending a 2 weeks conference on Formation Evaluation in Banff, Alberts, Canada. (P.S. He's on expenses).

L. Bogue Hunt III, (Mobil) Sr. Explor. Geol. at Santa Fe Springs, may leave about July 1 for Medan, Indonesia, for an assignment as Geological Supervisor for the Middle East and Indonesian Affairs (Affairs???) Dept. The question surrounding his departure relates somehow to whether he will pass the Course in Indonesian Languages he is now taking.

Jim Vernon and his associates at General Oceanographics were highly pleased with the results of a "shake-down" dive in their new geological Submarine "NEKTON", last July 18 - 19 near Catalina Island. This newest addition to the undersea geologists "bag of tricks" was successfully test dived to a depth of 715 ft. Further plans include test dives to about 1000 ft. John Forman and John Terpening report that their ride as passengers on a dive to 100 feet left them completely unshaken but they will not be available on the date scheduled for the 1000 foot dive, (wherever that will be). Volunteers anyone?

Wedding Bells rang June 22nd for Dave Barry, Paleontologist (Atlantic-Richfield-Long Beach) and his June Bride, Ramona Smith. The happy couple are reportedly honeymooning at Grand Canyon where Dave will spend his spare time studying structural configurations.

Craig White has joined Union's Exploration Dept. at Santa Fe Springs as a geologist trainee. Craig received his B.S. at Redlands and his M.S. at the University of Nevada. Welcome to the fraternity Craig.

Bill Hughes (Texaco) has just returned from a vacation trip to Indiana. Bill reports that "one night tent stands" can be made almost bearable as long as the "Jim Beam" holds out. Bill's main problem was blowing up four air mattresses each night.

## NEW MEMBERS

H. R. Chantler Geological Department THUMS Long Beach Co. P. O. Box 2900 Long Beach, Calif. 90801

Bob S. DuBose Humble Oil & Refg. 1800 Avenue of the Stars Los Angeles, Calif. 90067

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William Spencer Mitchell P. O. Box 67 Santa Paula, Calif. 93060

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Robert Nason 390 Main Street, Rm. 7021 San Francisco, Calif. 94105

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D. N. Helmuth Box 5278 Oildale, Calif. 93309

John N. Thomson 1022 California Avenue Bakersfield, Calif. 93301

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Oregon and California, by R. W. Imlay 65¢

Abstracts of North American Geology, April 1968 45¢

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Circular 565: Cassiterite in gold placers at Humboldt Creek, Serpentine-Kougarok area, Seward Peninsula, Alaska, by C. L. Sainsbury, Reuben Kachadoorian, Thomas E. Smith, and William C. Todd. Free

Circular 566: Tertiary gold-bearing channel gravel in northern Nevada County, California, by Donald W. Peterson, Warren E. Yeend, Howard W. Oliver and Robert E. Mattick Free

#### MAPS:

GQ-728: Geologic map of the Shuteye Peak quadrangle, Sierra Nevada, Calif., by N. K. Huber. \$1.00

U. S. GEOLOGICAL SURVEY
OPEN FILED REPORTS, (Inspection only)

Land-surface tilting near Wheeler Ridge, southern San Joaquin Valley, California, by F. S. Riley. 82 pages, 14 figs.

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

CALIFORNIA DIVISION OF MINES AND GEOLOGY

Bulletin 189: Minerals of California. Centennial volumes (1866-1966), by Joseph Murdoch and Robert Wallace Webb. \$5.00

OPEN FILED REPORT (copies available only through Sam Francisco Office in Ferry Building)

Geology of the Elysian Park-Repetto Hills area, Los Angeles County, Calif., by Donald L. Lamar. 75 pp. 4 charts, 13 figs. 16 photos, 3 plates.

THE ORE BIN, vol. 30, no. 5, May 1968

Evidence for possible placer accumulations on the Southern Oregon Continental Shelf, by L. D. Kulm D. F. Heinrichs, R. M. Buehrig, and D. M. Chambers.

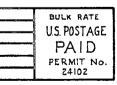
OIL AND GAS JOURNAL, vol. 66, no. 15, April 8, 1968

In Pacific Northwest Washington may veer off dry road, by John C. McCaslin

OIL AND GAS JOURNAL, vol. 66, no. 20 May13, 1968

Bass Strait (Australia) oil now over 1 billion bbl.





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# PACIFIC PETROLEUM GEOLOGIST

# NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 22

August, September, 1968

Number 8-9

## ASSOCIATION ACTIVITIES

## REGISTRATION BILL APPROVED

Assembly Bill 600 providing for the registration and regulation of geologists in California, was signed into law by Governor Reagan on August 1, 1968.

The full text of the bill, AB600, may be obtained for 5¢ per copy from the Legislative Bill Room, State Capitol, Sacramento, Calif. 95814. The major features of the bill are listed below:

- 1. It creates a Board consisting of six geologists and one public person who will be appointed by the Governor.
- 2. Most geologists who offer their services to the public must register, but those employed by organizations who principal business is not geology (e.g., oil production, teaching, etc.) need not.
- 3. One qualification for registration is seven years of "professional geological work," of which up to two years may be undergraduate study.
- 4. The "grandfather clause" is effective until one year after the "effective date" of the Act (now estimated to be early in November, 1968), and geologists with 14 years or more of professional geological work may apply for registration at any time without need of taking an examination.
- 5. Engineering geologists may be certified in their specialty.
- 6. Registration will be for two-year periods, after which renewal is necessary.
- 7. The application fee will be between \$25 and \$40.
- 8. The registration fee for the two-year period will be between \$30 and \$80.

The "effective date" of the act is to be 60 days after adjournment of the Legislature's veto session which will take place in September. The AIPG, as well as this Newsletter will publicize the registration procedures when they become available.

### THIS MAY BE YOUR LAST ISSUE !!!!

Members who are delinquent in payment of their dues may soon be dropped from the mailing list.

If in doubt as to your status, please contact Miss Barbara Tetard, Membership Secretary, Pacific Section, AAPG, PO Box 17486, Foy Station, Los Angeles, California 90017, or call 629-4111 in Los Angeles.

## EXECUTIVE COMMITTEE MEETING

A report of the AAPG Executive Committee meeting on July 1 and 2, 1968 prepared by John A. Taylor, chairman of the Business Committee, indicates that finances and the lack thereof is still one of our paramount problems. The following measures have been taken to alleviate at least a portion of this problem:

- 1. Following completion of Geological Highway Map No. 3 Pacific Southwest Region, the map project will be suspended unless funds are obtained from outside sources.
- 2. Special Publication prices will be raised to bring them in line with those of other scientific organizations. Order now to take advantage of present prices!
- 3. A new schedule of rates for the Distinguished Lecture program has been set as follows:

Societies with 300 or more members \$100.00 Societies with less than 300 members 75.00

- 4. The Continuing Education program fee is set at \$1.00 per registrant and a flat fee of \$100.00 to be charged in foreign areas (excluding Canada)
- 5. The present practice of giving 25 free reprints to BULLETIN authors will be stopped and authors will be allowed to purchase up to 100 reprints of their own papers at cost.

## EXECUTIVE COMMITTEE, PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

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San Joaquin Delegate Northern Calif. Delegate Coastal Delegate Los Angeles Delegate Sacramento Delegate

#### ASSOCIATED SOCIETIES

Northwest Geological Society Alaska Geological Society

#### PACIFIC PETROLEUM GEOLOGIST

Published monthly by the Pacific Section American Association of Petroleum Geologists Changes 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: Bruce A. Black, Shell Oil Co., 1008 W. 6th St., Los Angeles, Calif. 90017

Orders for Pacific Section publications and prior years' issues of the PPG should be addressed to: Pacific Section Publications, 3132 18th Street, Bakersfield, Calif. 93306

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## DELINQUENTS

President of the Pacific Section, Louis J. Simon, has asked us to announce that the unduly large segment of geologists now delinquent in their Pacific Section dues will shortly recieve a notice to that effect. As the publishing expenses of the Pacific Petroleum Geologist consume the major portion of the money so collected the mailing list will soon be altered to truly reflect the membership. As of November 2, the circulation of the Pacific Petroleum Geologist will be restricted to dues paying members only.

#### NOON LUNCHEON MEETING

Rod Colvin, vice-president, announces there will be a noon luncheon meeting of the Pacific Section at the Rodger Young Auditorium, 936 West Washington Blvd., Los Angeles, on Thursday October 17. This is being called as a general business meeting and to review a number of constitutional changes. Also to be reviewed will be the implications of the recently passed AB600

Rod is planning to reestablish the noon luncheon on a quarterly basis rather than monthly. These meetings will be in addition to the regular monthly meetings of the Los Angeles Basin Geological Society.

Reading between our own lines we suspect that these luncheon meetings will probably concern themselves with matter of more grave import than those generally encountered at the monthly barbeques.

## FALL FIELD TRIP

John Forman, leader of the AAPG-SEPM Fall Field Trip, is presently on vacation and un - available for details. However, the trip will take place in the middle of October and, unless John has a change of heart, it will involve an extended boat trip among several drilling platforms and, hopefully, include a landing at one of the Channel Islands. There has been no mention of scuba gear so, presumably, the entire trip will be conducted on or near the surface.

## ANNOUNCEMENT

O. W. "Buzz" Fauntleroy, formerly Vice President and Manager for Tri Oil and Gas Company in Los Angeles, announces sale earlier this year of Tri Oil and Gas Company to Sundance Oil Company, Denver, Colorado.

Mr. Fauntleroy is now Vice President and Regional Manager for Cayman Corporation, 27608 Silver Spur Road, Palos Verdes Peninsula, California.

Mr. Dale L. Hankins has entered the petroleum consulting field in July of this year after nearly seven years of service with Standard Oil Company of California. He plans to provide a complete range of petroleum engineering services. Mr. Hankins office is located in his home at 2814 Parkway in Bakersfield.

## NURSERY NEWS

The many friends of Bob (R. R.) and Louise Smith (Shell, Marine Exploration Division) will be happy to know that as of August 21 they are the very proud parents of Katherine Louise, weight 7 lbs. 5 oz. Bob is taking a week of vacation to make sure that she is properly cared for.

Brick and Elaine Robinson announce the arrival of a daughter, Lara Louise. Lara was born May 6, 1968 and weighed 7 lbs. 4 oz.

## STATE BOARD OF GEOLOGISTS TO BE ACTIVATED

Assembly Bill 600, the Geologist Act, has become law. Its effective date will be in early November. Governor Reagan will, before the effective date of the Act, make appointments to the initial Board of Geologists created by this law

Assemblyman Ketchum requested the AIPG serve as a gathering point for recommendations of candidates for the Board. In turn, the AIPG requested the Pacific Section of the AAPG and its associated societies make recommendations to be forwarded to Assemblyman Ketchum through the AIPG.

A meeting of the Pacific Section and its associated societies' representatives was held to select the panel of prospective candidates. Sections 7812 and 7813 of the Act impose geographic restrictions and numbers of representatives to be selected from each district. It is customary to provide the Governor with three names for each of the six administrative posts. These districts and the corresponding candidates nominated are listed below:

District I - Northern California - includes all the northern 1/3 of State down to the southern boundary of Sacramento and San Joaquin Counties and excluding the counties listed in District II (1 representative).

Nominations: Ian Campbell

Gordon Oakeshott Charles Parks

District II - Bay Area - includes all of the Tollowing counties: Marin, Sonoma, Napa, Solano, Contra Costa, Alameda, San Mateo, San Francisco, and Santa Cruz (1 representative).

Will Peak Nominations:

Roland Bain Lowell Garrison

District III - San Joaquin Valley Area - includes the San Joaquin Valley from south boundary line of Sacramento and San Joaquin Counties southward to include Kern County. The western boundary is roughly the San Andreas Fault and this district extends eastward to the state line including Mono and Inyo Counties (1 representative).

Nominations: Eugene Reid

James O'Neill

William Edmonson

District IV - Coastal Area - includes the following counties: San Benito, Monterey, San Luis Obispo, Santa Barbara, and Ventura (1 representative).

Nominations: Don Weaver

Peter Hall

James Saunders

District V - Southern California Area - includes the following counties: Los Angeles, San Bernardino, Orange, Riverside, San Diego, and Imperial (2 representatives).

Nominations: Martin Van Couvering

Robert Knapp Frank Parker Glen Brown Thomas Clements

A prospective member of the Board of Geologists needs to be outstanding in our profession and, also, with either an independent income or with permission from his employer for time off to serve on this Board. There is no pay other than traveling expense and per-diam' while serving.

## VARIETY OF SHORT COURSES SET BY UNIVERSITY OF CALIFORNIA EXTENSION

Petroleum geology, perception and learning, and fracture mechanics are among the topics of University of California Extension engineering short courses set for September in UCLA's Boelter Hall.

All course meet Monday through Friday, 8:15 AM to 5:00 PM

"Offshore Petroleum Exploration and Development" is set for September 16 to 20, in Room 4442 Boelter Hall at UCLA. Intended for federal, state and local government personnel, engineers and physical scientists interested in petroleum resources of the sea and equipment needed to develop these resources, the course will be an introduction to offshore geology and paleoecology, petroleum geochemistry and offshore engineering systems in geo-physical prospecting, drilling and production. Instructing will be Robert S. Yeats, associate professor of geology, Ohio University at Athens.

Biological and mathematical foundations will be emphasized in "Foundations of Perception and Learning," offered engineers and scientists, September 16 to 27 in Room 4251. Topics for discussion will include the anatomy, physiology and biochemistry of learning and sensory systems. Other lectures will cover statistical decision theory of detection and recognition, perceptual storage and coding, pattern recongnition, speech perception, psycho-linguistics, conditioning and learning, mathematical learning theory and stimulus-response theory of finite automata.

"Safe-Life Design Practices," offering practices," offering practical applications of fracture mechanics engineering, is scheduled Monday through Friday: September 23 to 27 in Room 4442. Of special interest to designers, structural test engineers, reliability engineers and materials engineers, the course will demonstrate principles of metallic structures design for maximum efficiency and reliability on the basis of material behavior and intended mission.

Instructors, from the metallurgy branch of Douglas Missile and Space Systems Division, McDonnell-Douglas Corporation in Santa Monica, are Richard A. Rawe, chief, metallurgical development section, materials research and production methods department, and David E. Schwab, materials research and development engineer.

Further information is available from P.O. Box 24902, Engineering and Physical Sciences Extension, University of California, Los Angeles, California 90024, or telephone 478-9711 or 272-8911, extension 7277 or 3121.

NOTE: The University is converting to the CENTREX telephone system. The above numbers will be in service during the conversion and an operator will give you the new CENTREX number.

## PERSONAL ITEMS

Brick Robinson with Shell in Ventura has been transferred to Houston, Texas.

Joe Dixon, after many years as a geologist for Shell in Alaska, Oregon, Washington, and California, has quit to teach at Saranac Lake State College in New York. He was looking forward to the mountain air after his sojourn in Smogland.

Max Greene, Shell Marine Exploration Division, is being transferred to Farmington. After many years (since 1955) of working up and down the Pacific Coast he is looking forward to new rock-hunting grounds.

Harold Sugden, who has spent many years in Ventura for Getty Oil Co., has been transferred to Bakersfield. All his friends and associates here wish him well on his new assignment.

Bill Osborn has resigned as Division Geologist for Continental Oil Co. in Ventura to form an offshore services company located in the same city.

A number of geologists attending the 23rd International Geological Congress in Prague found that their trip included a few more events than scheduled. Among the west coast geologists attending were; Tom Baldwin, Orville Bandy, Ian Campbell, Greg Davis, Don Gorsline, John Hazard, John Kilkenny Gary Melickia, Frank Morgan and Helen Tuttle. We understand that they are all safely out of harms way by this time. Local program chairman may find a gold mine here for the coming winter season.



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(State of Oregon, Dept. of Geology and Mineral Industries)

The golden years of Eastern Oregon, by Miles F. Potter and Harold McCall.

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Tectonic erosion in the Roberts Mountains, Nev., by Edward L. Winterer

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Publications of the Geological Survey, 1967. Free.

Professional Paper 582-A: Methods for predicting dispersion coefficients in natural streams, with applications to lower reaches of the Green and Duwamish Rivers, Washington, by H. B. Fischer

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Bulletin 1254-I: Correlation of Permian and Penn sylvanian sections between the Egan Range and Spring Mountains, Nev., by P. J. Barosh. 10c

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45c

Circulars 561: An atomic-absorption method for the determination of gold in large samples of geologic materials, by G. H. VanSickle and H. W. Lakin. 4 pages. Free.

Circular 562: Utilization of humus-rich forest soil (mull) in geochemical exploration for gold, by G. C. Curtin, H. W. Lakin, G. J. Neuerburg, and A. E. Hubert. 11 pages Free

#### U. S. GEOLOGICAL SURVEY: CONTINUED

- Circular 563: Favorable areas for prospecting adjacent to the Roberts Mountains thrust in southern Lander County, Nev., by J. H. Stewart & E. H. McKee. 13 pages Free
- Circular 564: Occurrences of gold and other metals in the Upper Chulitna district, Alaska, by C. C. Hawley and A. L. Clark. 21 pages. Free
- Circular 565: Cassiterite in gold placers at Humboldt Creek, Serpentine-Kougarok area, Seward Peninsula, Alaska, by C. L. Sainsbury, Reuben Kachadoorian, T. E. Smith, & W. C. Todd. Free.
- Circular 566: Tertiary gold-bearing channel gravel in northern Nevada County, Calif., by D. W. Peterson, W. E. Yeend, H. W. Oliver and R. E. Mattick, 22 pages. Free.
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  Mountain area, Elko County, Nevada, by K. B. Ketner and others.
  Free.
- Circular 589: Distribution of gold, silver and other metals near Gold Acres and Tenabo, Lander County Nevada, by Chester T. Wrucke, Theodore J. Armbrustmacher & Thomas D. Hessin. 19 p. Free.
- Map I-540: Reconnaissance geologic map of the Eagle Rock quadrangle, Crook County, Oregon, by A. C. Waters and R. H. Vaughan 75¢
- Map I-546: (LAC-78): Geologic map of the Theophilus quadrangle of the Moon, by D. J. Milton. \$1.00
- Map I-548: (LAC-59): Geologic map of the Mare Vaporum quadrangle of the Moon, by D. E. Wilhelms. \$1.00

## OPEN FILED REPORTS (Inspection only)

- Preliminary geologic map of the Sahuarita quadrangle, Pima County, Arizona, by Harald Drewes. 1 sheet.
- Results of stream sediment sampling in parts of the southern Alaska Range, by Bruce L. Reed and Raymond L. Elliott. 18 p. text, 29 fgs.
- Reconnaissance geology, mineral occurrences and geochemical anomalies of the Yentna district Alaska, by A. L. Clark and C. C. Hawley. 86 pages.
- OIL AND GAS JOURNAL, vol. 66, nos. 24, 25, and 26,
  - Future hydrocarbon provinces of the Gulf of Mexico-Caribbean Region, by A. A. Meyerhoff.
  - Caribbean Region, by A. A. Meyerhoff.

    Part 1: Explored areas still hold future hydrocarbon potential
    - Part 2: Triassic-Early Late Jurassic hold economic importance.
    - Part 3: Late Jurassic brings abrupt changes.

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## Page 6

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# PACIFIC PETROLEUM GEOLOGIST

## NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 22

October, 1968

Number 10

## ASSOCIATION ACTIVITIES



AAPG - SEPM PACIFIC SECTION OFFICERS 1968-1969

Left to Right: John Terpening-Sec., AAPG
A. D. Warren-Pres., SEPM

T. L. Bear-Past Pres., AAPG

L. J. Simon-Pres., AAPG W. R. Brown-Treas., AAPG

R. G. Colvin-V. Pres., AAPG

## FALL FIELD TRIP

The Pacific Section A.A.P.G.-S.E.P.M. Annual Fall Field Trip will be held on Saturday, October 19, 1968 as a marine excursion in the Santa Barbara Channel. Points of interest include a "pass-by" of several platforms, a near-shore tour of the stratigraphic sections exposed along the south coast of Santa Rosa Island (bring your binoculars) and, through the courtesy of Mr. Al Vail of Vail and Vickers, a landing on the south side of Santa Rosa Island. Crew boats are being donated by Western Offshore Drilling, Tidewater Marine and General Transfer Companies respectively. A qualified guide will be aboard each boat. Cost for the trip, including lunch and guidebook will be \$4.00. Due to the anticipated rough water and limited facilities, only "sea-farin'", "strong-bellied" male geologists are invited to participate with total capacity limited to 110 persons. Tickets will only be sold on a "first come-first serve" basis at the door of the Dinner Meeting.

The trip will be preceded by an excellent program the evening before, Friday, October 18 at the Mirimar Hotel, Montecito. Dinner will be \$4.25 served at 7:30 p.m. with the bar opening at 6:30 p.m. Speakers and topics are as follows:

- 1. Tom Redin, Union Oil "The Rincon Anticline and Highlights of Developments on Parcel 402". (15 minutes)
- 2. Jim Vernon, General Oceanographics "An Arcer Profile Across the Santa Barbara Channel". (10 minutes)
- 3. A. C. Garner, Humble "Deep Water Drilling on Parcel 389". (10 minutes)
- 4. K. B. Hall, Consultant "Slide Views and General Geology of Santa Rosa Island". (10 Minutes)
- 5. Lloyd Edwards, UCSB "Miocene Stratigraphy and Directional Features of Southwest Santa Cruz Island". (10 minutes)
- 6. Don Weaver, USCB "A Review of the Stratigraphy of the Channel Islands". (20 minutes)

Committee Chairman for the trip is John Forman, Mobil Oil, assisted by K. B. Hall, Don Weaver, Bill Kennett (Phillips) and Tom Redin.

In view of the current interest in the Santa Barbara Channel and the forthcoming exploration from the Channel Islands to the Mexican border, you cannot afford to miss this trip and evening program.

## ACKNOWLEDGEMENTS

For services rendered, our profession is indebted to the many geologists who served on legislative committees during the past years including S. B. 1349, S. B. 871 and finally A. B. 600. Those in the AAPG who deserve a special "thank you" include Wesley G. Bruer, Robert A. Paschall, Jay G. Marks, Arthur O. Spaulding, Henry H. Neel, Martin Van Couvering, Roland J. Bain, Vernon C. Jones, Gordon B. Oakshott, Peter W. Gester, Ian Campbell, John E. Kilkenny, Elmo W. Adams, R. J. Ortalda, and Robert R. Knapp.

## EXECUTIVE COMMITTEE, PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

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Sacramento Delegate

### PACIFIC PETROLEUM GEOLOGIST

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Rod Nehema Barbara Tetard

NOTICE: NEXT DEADLINE - OCTOBER 20, 1968

NOTICE: Our humble apologies! Our Miss Barbara Tetard's Membership Secretary, correct phone number is 482-7600. Please call her at this Los Angeles number if you are in doubt as to your membership status. As of November 2nd, the circulation of the Pacific Petroleum Geologist will be restricted to dues paying members only.

Minutes of Pac. Sec. AAPG Executive Committee Meeting September 10, 1968

Treasurer's Report

The current checking account balance is \$5337.47; this is in addition to the savings account. Notices will be sent within 30 days to delinquent members. In an effort to increase the total membership, the National and Local rosters are being cross-checked.

Vice President's Report

The noon luncheon meetings are being revived - the first will be on October 17, at Roger Young.

<u>District representatives</u> are invited to future Ex-Com meetings.

National Vice President's Report

As a follow-up to discussion of the "expensive" brochure sent by National, it was reported that a grant of \$30,000 has been received to complete the Highway Mapping Program.

President's Report

For the requirements of AB600, a list of prospective board members has been compiled and submitted to the Governor's office. The details of this will be in the next issue of the Pacific Section Newsletter.

The Pacific Section will host the 1973 National Convention. It was unanimously agreed that San Francisco, recommended by National, is unsatisfactory. Further study will be made for an alternate site.

The idea of a joint regional meeting with the Rocky Mountain Section was proposed and unanimously approved. The President will appoint a committee to recommend a time and place.

Dr. Weaver, UCSB, proposed a joint publication on the Channel Islands. He would act as editor and asks for Financial support from the Pacific Section. Several reservations were advanced: (1) A possible conflict with the AAPG - National Petroleum Council publication (in progress) covering the same area; (2) Need for publication prior to the Spring Convention; (3) Unknown costs; and, (4) Need for publication releases from several sources. Another presentation by Weaver will be made at the next Ex-Com meeting discussing these points.

Fall Field Trip

All is set for October 18th & 19th. A technical session in the evening of the 18th; a boat trip by several drilling rigs in the Santa Barbara Channel and landing at Santa Rosa Island.

## NURSERY NEWS





I can't understand it - - - I know they weren't
all well-sitting at Christmas time!!!!!!!

#### TOO CLOSE FOR COMFORT

Because of the closeness to many members of our profession, we are reproducing below the dramatic telegram received by the A.A.P.G. headquarters immediately after the Russian invasion of Czechoslovakia. This telegram was sent by Dr. Lewis Cline, head of the Geology Department, University of Wisconsin.

CLASS OF SERVICE

This is a fast message
unless its deferred character is indicated by the
proper symbol.

## WESTERN UNION TELEGRAM

SYMBOLS

DL = Day Letter

NL = Night Letter

LT = International
Letter Telegram

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FRANKFORT GERMANY SATURDAY AUGUST 24 PRECONFERENCE FIELD TRIPS
OF 23RD INTERNATIONAL GEOLOGICAL CONGRESS WELL ORGANIZED ALTHOUGH
ATTENDANCE NOT AS HIGH AS EXPECTED CONGRESS OFF TO GOOD START
WITH ASSEMBLY MONDAY AND SCIENTFIC SESSIONS TUESDAY RUSSIAN
BLITZKRIEG 11:00 PM TUESDAY FOLLOWED BY

AIRBOURN AND TROOPS AND LARGE FANKS ABOUT 1800 AM WEDNESDAY TANKS AND TRUCKS ENTERED VACLAVSKE SQUARE ABOUT 4830 AM SHOT UP THE NEARBY NATIONAL MUSEUM WITH MACHINE QUNS AND TANKS AT 4830 NO CZECH ARMY RESISTANCE BUT STUDENTS DAMAGED PERHAPS 5 STALIN TANKS WITH MOLOTOV COCKTAILS PERHAPS 20 STUDENT

AND PHOTOGRAPHERS KILLED MANY WOUNDED SESSIONS CONTINUED WEDNESDAY FOR GEOLOGISTS HOUSED ON LEFT BANK OF VLTAVA RIVER AT 10:30 PM THOSE OF US HOUSED IN EUROPA AND NEARBY HOTELS HAD BOX SEATS OVER THE ORCHESTRA PIT AS MACHINE GUAS RAKED BUILDING HOUSING BEA AIRLINES IMMEDIATELY ACROSS STREET TANKS ARE NOW LINED UP LIKE AUTOS IN A MADISON WISCONSIN PARKING RAMP MANY LODGING IN CENTER OF CITY CROSSED RIVER TO ATTEND DWINDLING SESSIONS ON THURSDAY ON FRIDAY SPECIAL TRAINS LEFT PRAGUE FOR WEST GERMANY AT 8830 10810 11830 ( I RPT FROM WEST GERMANY ) WEST GERMANY AT 8:30 10:10 AND 11:30 AT 1:00 PM MORGAN DAVIS ALAN BENNISON CAREY CRONEIS FRANK MORGAN ORLO CHILDS AND PERHAPS 200 OR 300 OTHER AMERICAN AND CANADIAN GEOLOGISTS ARRIVED AT FRANKFORT PRESUMABLY MOST GEOLOGISTS ARE KOW OUT THE HOSPITALITY OF THE CZECHS WILL LONG BE REMEMBERED SO WILL BE REMEMBER THEIR COURAGE AND LONGING FOR SELF DETERMINATION LEWIS CLINE

24 23 11:00 1:00 AM 4:30 4:30 5 20 10:30 PM 8:30 10:10 11:30 8:30 10:10 11:30 1:00 PM 200 300.

While we normally attempt to avoid comments of a political nature, your Editor believes the above is a stark and vivid commentary on the "other way" of government. As professional men and leaders in our communities, it is our responsibility to recognize the importance of such international incidents and to ensure that we must never have to face the same. It points out again the necessity for a high degree of professional excellence by the members of a free

society in order to maintain that freedom.

This is particularly true for the professional man. As members of a skilled and dedicated profession, we cannot but be appalled by such a display of complete disregard for the basic human rights of existence without fear. We join Dr. Cline in his salute to the many Czechs who long for self-determination.

#### PACIFIC SECTION MEMBERS AT PRAGUE

Following is a list of Pacific Section members who were in Prague attending the International Geological Congress at the time of the Russian invasion:

Tom Baldwin, Humble Oil Orville Bandy, U.S.C. George Chillinger, U.S.C. John Kilkenny, Union Oil John Dennis, Cal State, L.B. Harold Lian, Union Oil Wyatt Durham, U.C. Berkeley Frank Morgan, Consultant Donn Gorsline, U.S.C. Bill Gussow, Union Oil

John Hazzard, Humble Oil Leo Herrera, R. Cabeen Helen Tuttle, Consultant Stan Wissler, Retired

As far as is known, all were able to get out of Czechoslovakia safely and will no doubt have some harrowing tales to tell of their experiences during the Russian invasion and occupation. We extend our appreciation to John Kilkenny of Union Oil for his help in compiling this list

## ACTIVITIES

## BRANNER CLUB MEETING

The Branner Club will have a steak dinner meeting at 6:45 P.M. Wednesday October the 16th at Occidental College. The speaker for the evening will be Dr. Floyd Sabins of Chevron Oil Research Co. who will talk on Remote Sensing for the Earth Sciences. For reservations call Lucy Birdsall at 688-2850.

The annual AAPG-SEPM-SEG Pacific Section convention will be held at the International Hotel, Sepulveda at Century (next to Los Angeles International Airport) March 26 thru 28, 1969. The theme: Western States -Offshore. The following program chairmen would like to receive papers and abstracts. Papers of interest to Pacific Section members that do not cover offshore matters are also requested.

### AAPG

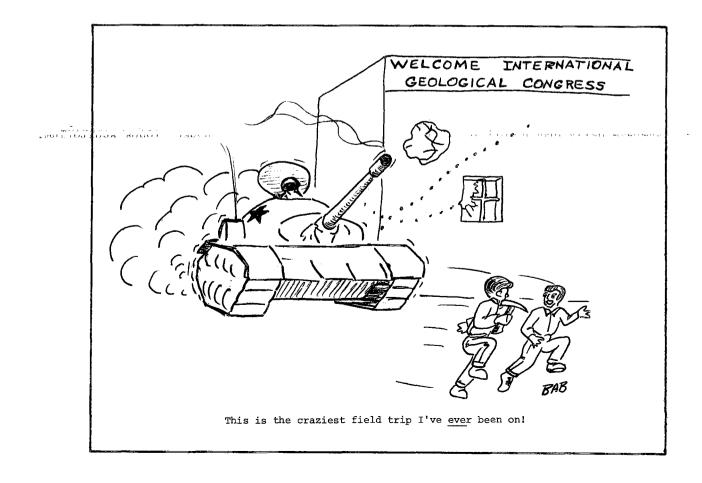
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SAN JOAQUIN GEOLOGICAL SOCIETY MEETING Sept. 10, 1968

Mr. Thomas E. Kelly, Commissioner of the State Department of Natural Resources, Alaska, spoke before the Sept. 10 meeting of the San Joaquin Geological Society on some aspects of the oil industry in Alaska.

While Mr. Kelly spoke optimistically of the future of Alaska and its oil industry, he warned of the danger of complacency, indications of which, even now, are being generated by the apparent magnitude of the Prudhoe Bay discovery. The two successful wildcat wells, seven miles apart, albeit good producers, do not in his opinion, create an oil province such as the Gulf Coast, Middle East, Ventura Basin or Alberta-Elk Point Basin in Canada.

The Cook Inlet area, in spite of its numerous oil and gas fields, has had its share of misfortunes, as witsness the possible economic failures of two production platforms with an estimated overall cost of some 30 to 35 million dollars apiece. That industry cannot help but consider such risks when planning expenditures is evidenced by the apparent slow down of wildcat activity as shown by the dropping rig count. There are only three mobile offshore rigs in Cook Inlet this season as compared to sixteen in 1966.

On the brighter side, Mr. Kelly brought out the following reasons for optimism in oil and gas developments.

- 1. In Cook Inlet Basin, 5 major oil fields and 16 gas fields produce 200,000 barrels and 230,000,000 cu. ft. of gas per day. Known oil reserves are about 1 billion barrels and proven gas reserves are 3.3 trillion cu. ft.
- 2. Approximately 10,600,000 acres of onshore and offshore lands or 2.% of the state are under lease. Less than 100,000 acres, or about .02% of the total area has been proven productive.
- 3. Average daily production of crude oil per well is in excess of 1500 B/D. Alaska is 8th in daily production and 7th in recoverable reserves of all the states.
- 4. Prudhoe Bay could well boost Alaska to one of the top five producing states in the next 4 years.
- 5. Related industrial development such as petro-chemical and liquified natural gass complexes may ultimately mean more to the state in many ways than crude oil or gas production.

Mr. Kelly believes that the growing dependency of the state of Alaska on income from the oil industry, over 30% of the \$124,000,000 budget for the fiscal year 1969, should be taken as a warning sign. To combat this dependency, the state has taken steps to promote a broad economy based on all of Alaska's resources, i.e. timber, mining, fisheries, and agriculture, as well as oil. The pace of this program must be stepped up.

In line with the orderly development of Alaska's resources, Mr. Kelly deplored "the seemingly endless corporate organizational yo-yo that establishes an Alaskan based operation, then closes offices, moves personnel south, only to reconsider and move back." This lament is all too familiar to many in the oil industry.

## DELINQUENTS

The response of the many delinquent members to our threat to drop them from the mailing list has been most gratifying. While the Saturday Evening Post may be financially able to pick and choose its subscribers, our Newsletter assuredly cannot. Our existence and, not at all incidentally, that of the Pacific Section itself, depends upon an adequate supply of dues paying members.

Our Membership Secretary, Miss Barbara Tetard, will be happy to clarify any doubts you may have as to your membership status. Her address is:

Miss Barbara Tetard
Membership Secretary,
Pacific Section, A.A.P.G.
P. O. Box 17486
Los Angeles, California 90017
Phone: HU 2-7600
(Note new phone number)

## CALENDAR

Oct. 11-12, 1968 - A.I.P.G. Fifth Annual Meeting, Hotel Mark Hopkins, San Francisco.

Oct. 17, 1968 - Pacific Section, AAPG
Quarterly Business Meeting and Noon Luncheon,
Rodger Young Auditorium.
John E. Kilkenny, Nat.'l
Vice-Pres. will discuss
the proposed Nat.'l AAPG
Constitutional changes.
Henry H. Neel, Pacific
Section Legislative Chair-

man will review A.B. 600.

Oct. 18-19, 1968 - Pacific Section, AAPG SEPM Fall Field Trip to
Santa Barbara Channel
and Santa Rosa Island.
Dinner and Technical
Session Friday Evening,
MiraMar Hotel, Montecito,
with all day boat trip
Saturday.

Nov. 15, 1968 - Pacific Section, S.E.G.

Velocity Seminar, Los
Robles Inn, Thousand
Oaks. Eight papers to be
presented beginning at
10:00 A.M. Registration
Fee \$10.00 includes lunch
and dinner reservations.

# CONTINUING EDUCATION PROGRAM - LOS ANGELES Reservoir Engineering and Economics for Geologists

Mr. Frank W. Cole, Dallas petroleum engineering consultant, will present a 12-hour lecture series entitled "Reservoir Engineering and Petroleum Economics for Geologists" in Los Angeles on October 28, 29, and 30, under the auspices of the A.A.P.G.'s Continuing Education Committee. The lectures will be given in the Mobil Auditorium, 612 South Flower Street, from 4:00 P.M. to 9:15 P.M., with a 6:00 to 7:15 P.M. dinner break. A fee of \$15.00 will be charged; checks (payable to Pacific Section A.A.P.G.) should be mailed to Mr. T.L. Wright, P.O. Box 606, La Habra, California 90633. Advance payment will reserve a copy of the complete lecture notes.

This lecture series was enthusiastically received by the members of the San Joaquin Geological Society last winter. The speaker, Frank W. Cole, has a B.S. and M.S. in Petroleum Engineering from the University of Oklahoma, was employed as a petroleum engineer by Humble Oil from 1949 to 1955, and served as Associated Professor of Petroleum Engineering at the University of Oklahoma from 1955 to 1962. He is the author of three books on petroleum engineering and has co-authored two others; his publications also include numerous papers. Currently he is owner of Frank W. Cole Engineering in Dallas.

This short course is aimed at the petroleum geologist and presents those aspects of petroleum engineering which are pertinent to oil exploration and the geological evaluation of new or established oil fields. Topics to be discussed include: the nature of oil and gas; driving forces in oil reservoirs; estimating initial oil in place and oil recovery; improving oil recovery; gas reservoirs; and economics. Participants will receive a comprehensive 33-page lecture outline which includes numerous diagrams and graphs. From all reports, the lectures promise to be lively and quite informative.

## OCEANIC INSTRUMENTATION FOCUS OF UCLA EXTENSION COURSE

The engineering problems of extracting transmitting and processing information from the ocean as required for research and operational needs will be presented in a UCLA Extension short course on "Oceanic Instrumentation and Communication," on October 21 to November 1, 8:15 a.m. to 5 p.m., in Room 5704 Boelter Hall at UCLA.

The course is designed for engineers, scientists and technical personnel in industry and government desiring more familiarity with equipment design, installation and operation in the ocean environment, as well as management personnel of organizations planning to diversify to ocean enterprises.

Topics for discussion will include concepts and criteria of information acquisition from the ocean, sampling techniques and devices, information systems considerations, signal conditioning, measurement and sampling applications, access to the ocean via various methods and expendable instrumentation.

Instructing will by Roy D. Gaul, research oceanographer for Westinghouse Ocean Research Laboratory, and James M. Snodgrass, head of special development group at Scripps Institution of Oceanography, University of California at San Diego.

Further information is available by writing P. O. Box 24902, Engineering and Physical Sciences Entension, University of California, Los Angeles, California 90024 or telephone 825-1295.

#### COMMITTEE CHAIRMAN

A.A.P.G. Pacific Section President, Louis J. Simon, announces the following committee chairman appointments for the ensuing year.

## Best Papers Award

Glenn C. Ware Texaco Inc. 1215 E. San Antonio Dr. Long Beach, Calif. 90807

## Honorary Life Awards

Russ Simonson 811 West 7th - Suite 1106 Los Angeles, Calif. 90017 626-1167

#### Christmas Dance

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## Continuing Education

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## San Andreas Fault Cross Section

Max B. Payne Texfel Petr. Co. 10889 Wilshire Blvd. Los Angeles, Calif. 90024

## Boy Scouts

Robert W. Wagner Mobil Oil Corp. 10737 Shoemaker Road Santa Fe Springs, Calif. 90670

## 1969 Pacific Section Convention-General Chairman

Patrick J. Fazio McCulloch Oil Corp. 6151 W. Century Blvd. Los Angeles, Calif. 90045

## Distinguished Lectures

Doug Traxler Signal Oil & Gas 1010 Wilshire Blvd. Los Angeles, Calif. 90017 482-0722

### Convention Site

Robert R. Knapp Standard Oil Co. P. O. Box 606 La Habra, Calif.

## Membership Secretary

Miss Barbara Tetard P. O. Box 17486, Foy Station Los Angeles, Calif. 90017 Phone: HU 2-7600

## PERSONAL ITEMS

The exodus of summer employees at Mobil, Santa Fe Springs, includes Lloyd Edwards, Allen Strohl and Dave Howell, UCSB; Michael Mickey and E. Reed Wicander, San Diego State; and Don McKeel, Oregon State. Don is on his way to Norfolk, Va. to accept a commission in the U. S. Coast and Geodetic Survey.

A post-season challenge match between Mobil's dark-horse entry in Standard's summer softball league and the Standard Exploration team on Friday, Sept. 13, ended in a near stand-off, the game going to Standard 23-19 (after a grueling pitcher's duel) and Mobil reportedly carrying away the honors at post-game festivities 2 kegs to 1. Pitching rivals John Forman and Greg Calkins are rumored to have starred in and early morning "sing out and spotlight party" Saturday, though complete details are understandably lacking. League standings? Well....next year.

Roger Hubbell has moved to Ventura from Houston to become Division Geologist for Conoco's West Coast Division.

Jim Wafer, formerly with Conoco in Ventura, is now associate with Exploration ServicesCompany in Ventura.

Harry Brown, who was formerly with Union and also a consultant, is now with Exploration Services Company in Ventura.

On August 28, 1968, Sacramento Petroleum Association had a Father-Son luncheon at which Art S. Hawley presented a talk and slides on Nigeria, Africa. Mr. Hawley has been associated with Great Basins Petroleum in Nigeria for the past 1-1/2 years, and had returned for a short visit.

Tom Brady, formerly with Atlantic Richfield for 11 years, has recently joined the Occidental staff in Bakersfield.

Dave Day has terminated employment with Tenneco.

Jim Huber, Texaco, will be transferred to Billings, where he will assume the duties of District Geologist.

Brick Robinson, Shell, Ventura, will soon be moving to Houston to accept an assignment in Shell Development's Production & Research lab.

Sig Snelson has replaced Norm McIver as head of the Shell Development Research group in Ventura. Norm has been transferred to an operational assignment in New Orleans.

Jack Conniff, Shell paleontologist, has been assigned to the Shell Research group in Ventura.

Murray Nadler has been confined in the Mt. Zion Hospital, San Francisco, for these last few weeks. Cards and letters would certainly be appreciated by Murray!

Dana Grannel, senior geologist for Atlantic Richfield, has been transferred to Bakersfield from Houston.

Archer Waren, senior geologist for Atlantic Richfield, had a rather interesting vacation on a dude ranch in Wyoming. Let's have the "bear" facts, Archer; weren't you robbing the bear cradle?

Quentin Query, formerly a consultant geologist in Bakersfield, has moved to Calgary and is working with Canadian Stratigraphic Services, Ltd.

Bob Morrison, Dave Martin, and Jim Mercer, all from Occidental, are in Peru. They keep telling everyone that they are "on the job". Strange equipment these boys took with them - cha cha records and bongo drums?

Bob Votaw, Standard, has resigned in order to continue his studies for advanced degrees. Good luck, Bob!

Max Greene will NOT be going to Farmington, as reported last issue; he will just have to hunt harder for new rock-hound fields in this area.

Standard Oil Company has moved its office in Sacramento into a beautiful new building, and we understand that they have had an open house - but as yet we can find no one who has received notice of the change of address or was present at the open house. Maybe Hubert Mee, Land Dept. Sacramento could provide us with some information concerning this move!

J. S. (Tiny) Merriam has moved from Sacrament to San Jose, Calif. Will try to provide you with new address and telephone number next month.

Bruce Brooks, Capitol Oil Corp., would like to announce that anyone in the Sacramento area having news items they wish to have published in the PPG to send such information to him at PO Box 6265, Sacramento 95860.

Pat Wright, Scout, resigned from Superior to start his own company, which is called Petroleum Data Systems. His office is located at 2018 17th St., Bakersfield; telephone 324-6387. His company will actively provide services in relation to securing maximum, timely, and accurate information on California oil and gas industries operations.

Signal Oil & Gas Co. has moved its office to 3091 Fair Oaks Blvd., Sacramento, Calif. 95825; phone 482-6457.

Friends of U. S. ("Army") Armstrong, Shell paleontologist, Ventura, were saddened to hear of the loss of his son Ralph, 21, following a recent operation. An honor student at Cal Poly, San Luis Obispo, and the outstanding electronic engineering student in his sophomore and junior years, he was to enter Cal Tech, Pasadena, this fall. Memorial donations may be made to Ventura County Council, Boy Scouts of America, or to the American Diabetes Association.

# BIBLIOGRAPHY OF RECENT PUBLICATIONS

#### U. S. GEOLOGICAL SURVEY

- Professional Paper 486-F: Studies of consumptive use of water by phreatophytes and hydrophytes near Yuma, Ariz., by C. C. McDonald and G. H. Hughes.
- Professional Paper 545-C: Effects of the earthquake of March 27, 1964, on the Alaska highway system, by Reuben Kachadoorian 65¢
- Professional Paper 590: A descriptive catalog of selected aerial photographs of geologic features in the United States, by C. S. Denny, C. R. Warren, D. H. Dow, and W. J. Dale. \$2.25
- Professional Paper 597: Distribution and genesis of authigenic silicate minerals in tuffs of Pleistocene Lake Tecopa, Inyo County, Calif., by R. A. Sheppard and A. J. Gude 3d. 40¢
- Professional Paper 599-C: Structural geology of the Henbury meteorite craters, Northern Territory, Australia, by D. J. Milton \$1.00
- Bulletin 1249: Geology of the Johnson River area, Alaska, by G. W. Holmes and H. L. Foster 75¢
- Bulletin 1259: Thermodynamic properties of minerals and related substances at 298.15°K (25.0°C) and one atmospere (1.013 bars) pressure and at high temperatures, by R. A. Robie and D. R. Waldbaum \$1.25
- Circular 548: Reports and maps of the Geological Survey released only in the open files, 1967, by B. A. Weld, M. S. Griffin, and G. W. Brett Free
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- MINERAL INFORMATION SERVICE, vol. 21, no. 9, September 1968
  - California fluorspar, by E. A. Elevatorski
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## CALIFORNIA DIVISION OF MINES AND GEOLOGY

Bulletin 189: Minerals of California (Centennial volume 1866-1966) by Joseph Murdoch, and Robert Wallace Webb, with sections by Ian Campbell and Eleanor M. Learned \$5.00

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The nuclear energy impact on the Pacific Coast, by J. D. Worthington.

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Dynamic diversion: Influence of longshore current-tidal flow interaction on chenier and barrier island plains, by Thomas W. Todd.

The Capricorn Reef complex, Great Barrier Reef, Australia, by W. R. Maiklem.

## BOOKS:

THE SALT DOMES. Gulf Region, United States and Mexico, by Michel T. Halbouty. Gulf Publishing Co., Houston, Texas. 424 p. \$23.50 (Reviewed by John C. Hazzard in GeoScience News, vol. 1, no. 6, July-August 1968)

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# PACIFIC PETROLEUM GEOLOGIST

# NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 22

November, 1968

Number 11

## ASSOCIATION ACTIVITIES

## LUNCHEON MEETING

The Pacific Section A.A.P.G. Luncheon Meeting was held October 17 in the Rodger Young Auditorium.

Mr. Henry H. Neel reviewed Assembly Bill 600.

Mr. John E. Kilkenny, Vice President, National A.A.P.G., gave a short report on the International Geologic Congress in Prague and the Russian invasion of Czechoslovakia. Following this, Mr. Kilkenny and William R. Moran reported on the progress to date toward the adoption of a new constitution. The drafting of a new constitution has been in progress for several years with Bill Moran chairing the Constitutional Advisory Committee.

Mr. Kilkenny was to attend a meeting of the A.A.P.G. Executive Committee over the coming weekend and hopefully expected to report some progress toward a new constitution on his return. (Mr. Kilkenny's report follows:)

#### New Constitution

The A.A.P.G. Executive Committee plans to submit a new constitution and by-laws to the A.A.P.G. Business Committee at the annual meeting to be held in April, 1969 at Dallas, Texas. If approved by the Business Committee it will then be presented to the membership for vote.

The new version will eliminate the objectionable features of the old constitution, abolishing the veto power of the annual business meeting and concentrating the legislative functions in a House of Delegates with a chairman selected by its own members and equivalent to the old Business Committee. It will also provide for a larger Executive Committee with a more equitable distribution of the work load of this body and a broader representation. A new advisory council is proposed which will be composed of 12 members, half appointees and half electees, whose main duty will be long-range planning.

The new document, revised as of October 19, embodies many of the recommendations of the recent Constitutional Advisory Committee, of which two of our Pacific Section legislative experts, Bill Moran (Chairman) and Tom Baldwin were members.

The proposed new document will be published in the January, 1969 issue of the A.A.P.G. Bulletin so that members will have a chance to become familiar with its provisions. In the next few months A.A.P.G. National officers will attend local Geological Society meetings to explain more of the details and to answer any questions.

## FALL FIELD TRIP

The Fall Dinner Meeting and Field Trip of the Pacific Section A.A.P.G.-S.E.P.M. was held on the weekend of October 18.

The dinner meeting at the Miramar Hotel in Montecito was attended by some 225 geologists. A capacity crowd of 117 people made the boat trip to Santa: Cruz Island favored by good weather and seas. The only incidents reported were several stowaways on the faster "Pike 10" upon reembarking on Santa Cruz Island and one cut hand on what was reported to be a beer bottle. Many thanks are due to John Forman for setting up the excursion and to the six tour guides: Lowell Redwine, Tom Redin, Pete Hall, Bob Herron, Don Weaver and Bill Kennett.

## A.A.P.G. CHRISTMAS DANCE

PLACE: Long Beach Elks' Club
DATE: December 6, 1968

TICKETS.

COCKTAILS: 7:30PM, donated by service companies DINNER: 8:30±, choice of two entrees (to be

selected).

DANCING: Till 1:00AM by Carrol Wax and his

"Play Anything Band".

DRESS: Semi-formal including shoes. PRICE: \$14.00 per couple (or less)

Bruce Baron % Oil Well Research, Inc. 1539 West 16th Street Long Beach, Calif. 90813

Phone: 436-4254

A.A.P.G., S.E.G., S.E.P.M. members, wives, friends, casual acquaintances and interested parties are invited.

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## PACIFIC PETROLEUM GEOLOGIST

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Orders for Pacific Section publications and prior years' issues of the PPG should be addressed to: Pacific Section Publications, 3132 18th Street, Bakersfield, California 93306

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NOTICE: NEXT DEADLINE NOVEMBER 20, 1968

Minutes of Pacific Section, A.A.P.G.

Executive Committee Meeting

October 9, 1968

Treasurer's Report. Mr. Brown reported that our current savings total is \$11,077.89. Total checking account is \$2,000 even. There are currently 200 delinquent members. The second notice to these members is presently being sent.

Vice President's Report.

A. Pictures of the officers have been sent to the National for inclusion in the Bulletin.

B. The first of the renewed noon luncheons will be spiced by reports on events of the Geologic Congress in Prague during the Russian invasion. Several interesting slides will be presented.

C. Requests have been sent to all affiliated societies for program schedules. These will be combined into a master list for inclusion into the PPG.

The President's Report.

The National AAPG has been officially notified that San Francisco is not a desirable place for the 1973 convention primarily due to lack of members to do the necessary work. It has been agreed with the National representatives that either Anaheim or Disneyland appear to be the most likely area.

A joint meeting with the Rocky Mountain Section was thoroughly discussed. It was generally agreed that the idea is poor. First there is no common area of interest and it is believed that the companies managements would not support a joint convention by allowing a sufficient number of employees to attend. It was also noted by several people that the Rocky Mountain Section is not interested in a joint meeting; however, Mr. Simon said that a committee had been appointed to further analyze the subject prior to the final decision.

John Curran who has accepted the responsibility of the membership drive made a brief presentation. His recommendation is to strive to get more members into the National AAPG first, and then to generate interest in the local sections. A project is underway to establish a list of geologists who are not members in the National or local sections but who reside in this area.

Bruce Brooks, representative from Sacramento, made a brief statement as to the lack of communications between Sacramento and either National or the local sections. It was suggested that a new representative by appointed for the Sacramento area.

Exhibit of Pacific Section publications: For \$15.00 we can display our local publications at the coming convention in Dallas. Sam Brown will prepare a display and make all the necessary arrangements.

Publications of a joint Channel Island paper by University of California at Santa Barbara and the Pacific Section of the AAPG: Micky McKnight of Johnson Testers was suggested as editor of this publication. A rough estimate of the total cost is approximately \$5000 - \$6000. After a thorough discussion of all the ramifications of this publication, including all contributors and needed releases from oil companys and landowners, a proposal was made to give financial support to a maximum of \$5500. This proposal received unanimous support. Dr. Weaver suggested that the SEPM be asked to participate and share in the publication.

## EXPLORATION GEOLOGISTS HAVE OPPORTUNITY TO DO BASIC RESEARCH

Geothermal Survey of North America Needs Workers

The A.A.P.G. Research Committee has initiated an exciting and ambitious project, the Geothermal Survey of North America (GSNA) to determine the varying rates of increase of sub-surface temperature under the North American continent and its continental shelves. The major goal of the GSNA is to publish a contour map of geothermal gradients which will provide a regional geothermal background for careful local studies of oil finding, maturation of hydrocarbons, preservation and destruction of porosity and permeability, drilling geothermal wells, choosing drilling muds, preparing logging and casing programs, and managing reservoir depletion. Finally, all this will add to our understanding of continental geology and geologic history.

The A.A.P.G. membership is in a unique position to help the Geothermal Survey. Exploration for oil, gas and other minerals has produced a wealth of data, as yet unassembled, about the heat flow from the interior of the earth. The 15,000 A.A.P.G. members have access to 800,000 measurements of bore-hole temperatures at depths up to 25,000 feet, in rocks ranging in age from Pre-Cambrian to Holocene, at locations from the Arctic Ocean to Yucatan. To be successful, the GSNA will have to have the assistance of many A.A.P.G. members who will obtain temperature data from well files. Here is how you can help:

California, Oregon, Washington and Alaska have been designated as G.S.N.A. District 29. The District Chairman is Dick Dondanville, Union Oil Company of California. He has tentatively divided the district into nine sub-districts:

- 1. Los Angeles Basin 2. Ventura Basin including Santa Barbara offshore
- 3. Santa Maria San Ardo
- 4. Southern San Joaquin Valley
- Northern San Joaquin Valley
- Southern Sacramento Valley
- 7. Northern Sacramento Valley 8. Oregon and Washington
- 9. Alaska

Dick needs enthusiastic geologists who have ready access to the available well information in these sub-districts. Geologists actively exploring these areas for major oil companies not only have access to the required data, but are also in the best position to judge the quality of the data and to efficiently gather the data. They are also in an excellent position to profit immediately from the results of their labor.

It is anticipated that each geologist will spend two to three hours a week selecting and recording temperature and

depths. The unattainable optimum is to have one data point near the center of each township; that is, one at each point of a 6-mile grid. Each geologist will be supplied with written instructions and abundant data-forms.

This is an opportunity to make a valuable contribution to a fundamental research project of continental scope. If you can help, or would like more information, please call Dick Dondanville in Santa Barbara at (805) 969-1214 (office) or (805) 969-0033 (home); or write to either Dick or John Kilkenny at Union Oil Company of California, P. O. Box 7600, Los Angeles, 90054.

Help is needed now! The more geologists per sub-district, the lighter the work will be for everybody.

## AAPG MAPS

Tulsa, Oklahoma, September 27th. -- The Claude Worthington Benedum Foundation of Pittsburgh, Pa., has made a grant of \$30,000 to the geological highway map program of The American Association of Petroleum Geologists, according to Dr. Frank B. Conselman, AAPG President.

The funds are to be used in support of the fourth AAPG map in a series of eleven, designed to cover the U.S.. Map number four will be published in 1969 and will cover the Mid-Atlantic region including West Virginia, Virginia, Maryland, Delaware, Tennessee, North and South Carolina, and the District of Columbia.

Seeking such grants in support of the program to publish the multicolor regional geological and highway maps has been an Association activity of Houston oilman Michel T. Halbouty, former AAPG President.

The educational map publishing activity was begun in 1965 as a part of the AAPG Semicentennial celebration. The maps published to date have received wide acceptance among geologists, educators, and the general public. Mid-Continent and Southern Rocky Mountain regional maps have already been published, and a Pacific Southwest regional map is now being printed.

Both Dr. Conselman and Mr. Halbouty expressed the appreciation of AAPG, world's largest geological organization, to oilman Paul Benedum, President of the Foundation, for the grant to aid the Association in its public education program on geology.

Dr. H. B. Renfro of Dallas is Chairman of the AAPG Geological Highway Map Production Committee.

Dr. Charles Mankin, Head of the Geology Department at the University of Oklahoma and Director of the Oklahoma Geological Survey, is Chairman of the AAPG committee for sale and distribution of the maps.

## CONTINUING EDUCATION PROGRAM - BAKERSFIELD

## Stratigraphic Geology - Sandstones

Mr. E. H. Rainwater, full-time consultant in stratigraphy for Tenneco Oil Company, will present a 12hour lecture series entitled "Stratigraphic Geology -Sandstones - Applied Subsurface Stratigraphy, Significance and Methods of Reconstructing Paleodepositional Environments" in Bakersfield on November 18, 19, 20, and 21, 1968, urder the auspices of the A.A.P.G.'s

continuing Education Committee, and sponsored by the San Joaquin Geological Society. The lectures will be held at Bakersfield College in room Forum-East from 7 - 10 P.M. A fee of \$10 will be charged; check (payable to San Joaquin Geological Society) should be MAILED TO Mr. J. E. Joujon-Roche, 3129-19th Street, Bakersfield 93301. Payment should be made by November 10, 1968.

It is purported that Mr. Rainwater's lectures on sandstones were enthusiastically received by members of the Houston Geological Society. The speaker has attended Mississippi State, Northwestern, and Indiana Universities. Mr. Rainwater has worked as a micropaleontologist, stratigrapher, and research geologist for Royal Dutch Shell, Caribbean Petroleum Company, Shell Oil Company, and Tenneco Oil Company. He has authored many publications, which deal mainly with stratigraphy and the habitat of oil and gas.

The objectives of this lecture series are to describe the characteristics of terrigenous clastic sediments in various marine, transitional, and continental environments, and discuss the criteria useful in identifying the environments of geologically ancient rocks. From all reports, the lectures should be quite informative.

Sedimentary Rock Deformation Related to Structure in the Basement Dr. John Prucha Distinguished Lecturer

Petroleum exploration and development in areas of deformed sedimentary rocks commonly must be concerned with the inter-relationships between sedimentary rock deformation and the structure of the basement. Concern with the changes in the nature and attitudes of structures with increasing depth, and increased emphasis on understanding regional structural styles, necessitate an understanding of expected basement behavior during deformation of the overlying sedimentary rocks.

The <u>basement</u> comprises those igneous and metamorphic rocks of the earth's drust which unconformably underlie the unmetamorphosed, dominatly sedimentary rocks of a given region. As defined here the term bears no connotation of specific age. Although for most of North America the basement is Precambrian, it is Mesozoic in parts of California and Paleozoic in parts of the New England Upland the Appalachian Piedmont.

The widespread occurrence in the basement of severely deformed metasedimentary rocks in association with igneous intrusives typically reveals a long and complex history of deformation under confining pressures ranging up to 5000-8000 bars and at temperatures commonly on the order of 300°-800°C. Thus the environment which originally produced the basement rocks was much different from that of the relatively low energy levels in which the overlying sedimentary rocks were deposited and subsequently deformed, and the resulting mechanical properties of basement-type rocks are very different from those of most sedimentary rocks.

It is clear that the interface between the basement and the overlying sedimentary rocks is a mechanical discontinuity as well as a stratigraphic and structural one. Especially in those regions where the basement was intimately involved in the deformation of the superjacent sedimentary rocks, a knowledge of the expected mechanical behavior of the basement is essential to understanding the regional structural framework and the changes in the nature and attitudes of local structures with increasing depth. Triaxial compression tests by a number of workers on typical basement rocks indicated that the

expected mode of failure of the basement in submetamorphic environments is principally fracturing and faulting. This is consonant with numerous field data from many structural provinces in North America and elsewhere.

Present understanding of sedimentary rock defor mation related to basement structures is best for regions of relatively thin sedimentary cover, such as in the foreland of the Rocky Mountains. Here the dominant structure of Laramian age is basement block faulting of diverse trends and great structural relief. Individual blocks are bounded by upthrust faults which commonly die out upward into monoclinal flexures in the overlying sedimentary rocks. Horizontal-compression structures on a wide range of scales may be formed even though differential vertical uplift characterizes the fundamental structural style. The deformation of the sedimentary rocks is demonstrably a direct result of differential movement of discrete fault blocks in the underlying basement. This style of deformation so well defined in the Rocky Mountains foreland is at lease partially developed in other structural provinces where differential vertical uplift of a rigid basement with a sedimentary rock cover has been recognized.

The roles of lithologic inhomogeneities and fabric anisotropies of the basement in controlling the locus and style of basement-related deformation of sedimentary rocks are complex and not well understood. Pertinent experimental work on the problem is very limited in amount and scope, and field date are often conflicting and inconsistent. The oft-cited "zone-of-weakness" concept of basement-related structures is deemed not to have real operational significance in our present state of knowledge, but it remains a promising field for continued study.

The above talk was presented to the L.A. Basin Geological Society September 26 at U.S.C. Prior to the meeting, the faculty and graduate students conducted a tour of the geology department. It is hoped that the extremely poor turnout for this fine program is not really representative of our interest in such events.

## UNIVERSITY ACTIVITIES

The 1968 UCIA summer field class (16 students), under the direction of professors C. Hall and G. Ernst, spent six weeks mapping Cenozoic and Mesozoic rocks south of Morro Bay in the California Coast Ranges. Geologic excursions also were taken to Lompoc, Coalinga, and the Yosemite region.

## Geology at Whittier College

The dedication of the new Stauffer Science Center last June marked a new era for the science departments at Whittier College. Sharing the building with Geology are the Biology, Chemistry, Mathematics, and Physics Departments. The new four story 100,000 square foot structure was built at a total cost of 3.4 million dollars. John C. Stauffer of Stauffer Chemical contributed the major portion of the construction costs.

Geology occupies some 10,000 square feet of space on the second floor of the building. Included in this area are labs for mineralogy, paleontology, petrology, physical geology, sedimentation, and x-ray. The new science library will house the department's bound sets of A.A.P.G., G.S.A., and U.S.G.S. publications as well as other periodicals and references.

Dr. F. Beach Leighton, Chairman, and Peter J. Fischer (formerly of Shell Oil Co.) are the current staff. It is planned to add another staff member in the near future—either a paleontologist or a petrologist—mineralogist. The department presently offers a B.A. degree in geology, but plans are underway to begin a Masters Program.

Funds are a constant problem for a small private college, and Whittier College is no exception. Currently, major equipment donations are less difficult to obtain that the smaller donations of either funds or equipment for day to day use. The department needs binocular and petrographic microscopes, brunton compasses, analytical balances, shaking machines and sieves, sample splitters, rock cutting and polishing equipment to list but a few items. A four wheel drive vehicle and back issues of publications are also needed.

If your company can fund equipment or donate used equipment please contact either Beach Leighton or Peter Fischer (phone 693-0771, ext. 265). The staff also invites you to visit the new building and in particular the Geology Department.

## UNIVERSITY OF SOUTHERN CALIFORNIA DEPARTMENT OF GEOLOGICAL SCIENCES NOON LECTURE SERIES - FALL SEMESTER, 1968

TOPIC

DATE

Sept. 24 (Tues.)	Departmental Orientation Dr. O.L. Bandy, Chairman Geol. Sciences, USC
Oct. 8 (Tues.)	Oceanography and Sedimentology of the Drake Passage, Antarctica Dr. R.L. Kolpack, Research Associate Geol. Sciences, USC
Oct. 22 (Tues.)	Earth Tides Dr. Stewart W. Smith Div. Geol. Sciences Calif. Inst. of Tech. Pasadena, California
Nov. 5 (Tues.)	Title to be announced Dr. C.R. Allen Div. Geol. Sciences Calif. Inst. of Tech. Pasadena, California
Nov. 19 (Tues.)	Ultrastructures of the Test of Bolivina Argentea Richard Stapleton Teaching Assist. Geol. Sciences, USC
Dec. 3 (Tues.)	The Development of the Pacific Coast - the Tidelands and Beyond Mr. R.B. Krueger, Nossaman, Waters, Scott, Krueger and Riordan and Company, Los Angeles, California
Dec. 10 (Tues.)	Precambrian Microorganisms and the Fossil Record of Photosynthesis Dr. William Schopf Department of Geology UCLA
Dec. 17 (Tues.)	Applications of Computer Simulation in the Geological Sciences Dr. G. Bonham-Carter Department of Geology Stanford University
Jan. 7 (Tues.)	Sand Transport in the Region of Shoaling Waves David O. Cook, Graduate Student Geol. Sciences, USC

Meetings are held Tuesday noon (except where indicated otherwise), SLH 200, East of the corner of 37th Street and Hoover Street. (Adjacent to Geology "A"). Chairmen - See Geol. Secy. for outline of duties.

## CALENDAR

- November 5, 1968 Stratigraphic Seminar, 7:30 P.M.,

  Bakersfield College, Rm. 56, Science
  and Engineering Bldg. "Foraminiferal
  Ecology of San Francisco Bay" 
  Dr. Robert Arnal, San Jose State
  College.
- November 6, 1968 Los Angeles Basin Geological Society
  Bar-B-Que and Meeting, La Mirada,
  Northam Station. "Geologist's
  Responsibilities in Corporate
  Exploration Work" Hank Wright,
  Western Oil & Gas. Bar-B-Que hosts,
  Shell Oil Co. Social Hour 'til 6:30.
  Dinner at 7:00 P.M.
- November 12, 1968- San Joaquin Geological Society
  Bar-B-Que and Meeting, American Legion
  Hall, 17th & "L" Streets, Bakersfield.
  "John Muir Trail" Dick Hester.
  Social Hour 5:30 P.M.
- November 15, 1968- Pacific Section S.E.G. Velocity
  Symposium of Ten Papers. Proud Bird
  Restaurant, 11022 Aviation Blvd.,
  Los Angeles, (Near L.A.Airport).
  Registration at 9:30 A.M. \$12.50
  includes luncheon and dinner and
  preprint of ten papers. Contact
  Mr. William C. Kellogg c/o Lockwood,
  Kessler and Bartlett, Inc.,
  1250 E. Green St., Pasadena, Calif.,
  91101.
- November 19, 1968- So. Calif. Well Logging Society.

  Long Beach Petroleum Club, Social
  Hour 6:00 P.M. Dinner 7:00 P.M.
- November 20, 1968- Coast Geological Society. Jet Room,
  1994 Thompson Blvd., Ventura. Dinner
  7:00 P.M. "West Coast Offshore-Onshore
  Structural Relationships" Mason L. Hill.
  Watch for Dinner Dance announcement in
  December and distinguished lecturer in
  January.
- November 27, 1968- Los Angeles Basin Geological Society
  Bar-B-Que and Meeting, Northam Station.
  Social Hour 5:30 P.M. Dinner 7:00 P.M.
- December 2, 1968 Stratigraphic Seminar, 7:30 P.M.,
  Bakersfield College, Rm. 56, Science
  and Engineering Bldg. "Stratigraphy
  Along the San Andreas Fault" Mr. Holly Wagner, U. S. G. S.,
  Menlo Park.
- December 6, 1968 Los Angeles Basin Geological Society Christmas Dance, Elks Club, Long Beach.
- December 10, 1968- San Joaquin Geological Society

  Bar-B-Que and Meeting, American Legion
  Hall, 17th & "L" Streets, Bakersfield.

  "Eye Witness Account of Czeck 1968

  Invasion by Russia" John Kilkenny.
  Social Hour 5:30 P.M.

## PERSONAL ITEMS

Mr. Deane Obevste-Lehn is on a leave of absence from the RAND Corporation, Santa Monica, to take graduate studies at Stanford University in geologic remote sensing. His address while in Stanford is, P.O. Box 4706, Stanford, California 94305.

Mr. Richard Steward of Union Oil Company has been transfered from Bangkok Thailand to Buenos Aires where he can be reached through Union Oil Company of Argentina, Cosilla de Correo 5396, Buenos Aries, Argentina.

Buzz Ivanhoe, consultant, is holding the fort for Occidental Petroleum's offshore operations in Peru. Buzz says, the seafood is excellent as are the Pislo Sours, and the Country Club Motel suite is an adequate loding. Lima is like a slightly less sophisticated Mexico City.

Mr. R. M. Sneider of Shell Oil Company has been promoted to Senior Staff Production Geologist and will instruct production geology at Shell's Technical Training Department in Houston, Texas.

# BIBLIOGRAPHY OF RECENT PUBLICATIONS

## U. S. GEOLOGICAL SURVEY

- Professional Paper 544-E: Seismic seiches from the March 1964 Alaska earthquake, by Arthur McGarr and R. C. Vorhis. \$1.00
- Professional Paper 593-G: New Upper Cretaceous Amphineura (Mollusca), by A. G. Smith, N. F. Sohl & E. L. Yochelson.
- Professional Paper 600-C: Geological Survey Research 1968, Chapter C \$2.25
- Professional Paper 607: The December 1965 eruption of Kilauea Volcano, Hawaii, by R. S. Fiske and R. Y. Koyanagi.
- Bulletin 1263: Bibliography of reports resulting from U. S. Geological Survey participation in the United States Technical Assistance Program, 1940-67, by J. A. Heath & N.B. Tabacchi 35¢
- Water Supply Paper 1586-H: Water-discharge determinations for the tidal reach of the Willamette River from Ross Island Bridge to Mile 10.3, Portland, Oregon, by G. R. Dempster, Jr. and G. A. Lutz.
- Water Supply Paper 1757-G: Regional geology and ground-water hydrology of the Sahil Susah area, Tunisia, by L. C. Dutcher & H. E. Thomas \$1.50
- Geophysical Abstracts 260, September 1968 45¢
- Circular 590: Potential for lode deposits in the Livengood gold placer district, east-central Alaska, by R. L. Foster. 18 pages Free
- Circular 591: Direct-current arc and alternatingcurrent spark emission spectrographic field methods for the semiquantitative analysis of geologic materials, by D. J. Grimes & A. P. Marranzino. 6 pages.
- Circular 592: Interpreting pan-concentrate analyses of stream sediments in geochemical exploration for gold, by R. P. Fischer & F. S. Fisher. Free.

#### Maps:

- GQ 726: Geologic map of the Camp Desert Rock quadrangle, Nye County, Nev., by E. N. Hinrich \$1.00
- GP 637: Aeromagnetic map of the Hot Creek Range region, south-central Nevada. 50¢
- HA 187: Water resources and surficial geology of the Homer area, south-central Alaska, by R. M. Waller, A. J. Feulner and D. A. Morris 75¢
- I-531-A: Transcontinental geophysical survey
  (35°-39°N) magnetic map from the coast of Calif
  to 133°W longitude, by R. K. Lattimore, B. G.
  Bassinger, and Omar DeWald
  50¢
- I-531-B: Transcontinental geophysical survey (35°-39°N) gravity and bathymetric map from the coast of California to 133°W longitude, by R. K. Lattimore, S. A. Bush, and P. A. Bush 50c
- I-532-C: Transcontinental geophysical survey (35°-39°N) geologic map from 112°W longitude to the coast of California, by J. E. Carlson and Ronald Willden \$1.00
- I-534-C: Transcontinental geophysical survey (35°-39°N) geologic map from 87° to 100° W longitude, by Ronald Willden and J. E. Carlson \$1.00
- I-534-D: Transcontinental geophysical survey (35°-39°N) seismic refraction profiles of the crust and upper mantle from 87° to 100° W longitude, by D. H. Warren 50¢
- I-535-B: Transcontinental geophysical survey (35°-39°N) Bouguer gravity map from 74° to 87° W longitude, compiled by the U.S. Air Force Aeronautical Chart & Information Center 50¢
- I-535-C: Transcontinental geophysical survey (35°-39°N) geologic map from the east coast of the U.S. to 87°W longtitude, by Ronald Willden \$1.00
- I-536: Transcontinentalgeophysical survey (35° 39°N) magnetic and bathymetric map from 63° to 74° W longitude, by Isidore Zietz, (U.S.G.S.) H. P. Stockard, (U.S. Naval Oceanographic Office) and J. R. Kirby (USGS)
- 1-532-D: Transcontinental geophysical survey (35°-39°N) Seismic refraction profiles of the crust and upper mantle from 112°W longitude to the coast of California, by D. H. Warren
- I-541: Reconnaissance geologic map of the Ochoco Reservoir quadrangle, Crook County, Oregon, by A. C. Waters and R. H. Vaughan 75¢
- I-543: Reconnaissance geologic map of the Lookout Mountain quadrangle, Crook and Wheeler Counties, Oregon, by C. M. Swinney, A. C. Waters and C. P. Miller 75¢
- I-532-A: Transcontinental geophysical Survey (35°-39°N) magnetic map from 112°W longitude to the coast of California, by Isidore Zietz and J. R Kirby 50¢
- I-532-B: Transcontinental geophysical survey (35°-39°N) Bouguer gravity map from 112° W longitude to the coast of California, compiled by the U. S. Air Force aeronautical chart and information center 50¢

# U. S. GEOLOGICAL SURVEY: CONTINUED

- Metallic mineral resources maps of the following quadrangles, Alaska, compiled by Edward H. Cobb: Skagway, Mount Fairweather, Juneau, Sitka, Sumdum, Port Alexander, Petersburg, Bradfield Canala, Craig, Ketchikan, Dixon.
- Preliminary geologic map of the southwestern part of the Mountain City quadrangle, Elko County, Nevada, by R. R. Coats. Map and explanation (2 sheets, scale 1:20,000)
- Geologic map and schematic cross section of the Circle Creek rhyolite lekolith, Elko County, Nev., by R. R. Coats. Map and explanation (1
- Geologic map of the Yucaipa quadrangle, San Bernardiono County, California, by T. W. Dibblee, Jr., Map and explanation (1 sheet, scale 1:

# OPEN FILED REPORTS: (Inspection only)

- Geochemical reconnaissance maps of granitic rocks Coleen and Table Mountain quadrangles, Alaska by W. R. Brosge and H. N. Reiser. 4 sheets, scale 1:250,000.
- Gold gradients and anomalies in the Pedro-Cleary Summit area, Fairbanks district, Alaska, by R. B. Forbes, H. D. Pilkington, and Daniel D. Hawkins. 49 p., 1 pl., 12 figs.
- Maps showing structure, overburden, and thickness for a rich oil-shale sequence in the Eocene Green River Formation, east-central Uinta Basin, Utah and Colorado, by W. B. Cashion. 4 maps (1 sheet), scale 1:250,000
- Aerial infrared surveys at The Geysers geothermal steam field, California, by R. M. Moxham. 25 p., 10 pl., 15 photos, 1 table.
- Geologic map of the Loomis quadrangle, Okanogan County, Washington, by Kenneth F. Fox, Jr. and C. Dean Rinehart. 1 map and explanation (2 sheets on scale 1:48,000)
- Geology and mineral deposits of Churchill County, Nevada, by Ronald Willden and Robert C. Speed. 123 p., 2 geol. maps (scale 1:250,000)

\$ 1.00

\$10,00

\$10,00

\$ 2.50

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

#### NEW ISSUES

- Geology of the Big Mountain Oil Field and the Nearby Area, including notes on the trip from Piru to Big Mountain (AAPG) 1967.
- GB 10. Gabilan Range and Adjacent San Andreas Fault (AAPG-SEPM) 1967.
- GB 11. The Guidebook to the Geology and Oilfields of the Westside San Joaquin Valley (AAPG-SEPM) 1968.
- Directory Pacific Section AAPC Membership (names, addresses, phone no's. and pictures) 1968. MP 9.
- MP 10. Directory Binder \$ 2.00 (same as 1964 binder) will call \$ 1.75

#### CROSS SECTIONS (\$2.00 each)

CS 6. Sacramento Valley-Nort: (2 sheets) 1954. From T23N/RIW thru T16N/RIE.

Page 7

\$ 3.50

\$ 2.00

\$ 2.00

- 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) N 1958. From T4N/R3E to T18S/R20E.
- CS 10. San Joaquin Valley-Central (1 sheet) S 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) From T29N/R2% 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.

#### GUIDEBOOKS

- GB 5. Geology 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 the Los Angeles Basin in and Adjacent to San Pedro Bay, California (AAPG-SEG-SEPM) 1966.

#### MISCELLANEOUS PAPERS

- MP 1. San Andreas Fault Bibliography (AAPG) \$ 2.00 1962.
- MP 3. Selected Papers Presented to the San Joaquin Geol. Soc. Vol. 2, 1964. \$ 2.25\*
- MP 4. Selected Papers Presented to the San Joaquin Geol. Soc. Vol. 3, 1965. \$ 2.25\*
- MP 8. A Symposium of Papers Presented at the 40th Pacific Section AAPG Convention (AAPG) 1965. \$ 3.00
- SAN ANDREAS FAULT-CROSS SECTIONS 1964 (SA 1-10 \$6.00) (SA 1-11 \$9.00) SA 1. Pacific Ocean to Gulf of Farallones. \$ 2.00
- 2. Gulf of the Farallones to Bielwaski \$ 2.00
- 3. Bielwaski Mt. to Hollister. \$ 2,00
- 4. Hollister to Bitterwater Valley. \$ 2.00

SA 5. Bitterwater Valley to Parkfield.

- SA of. Parkfield to Soda Lake. \$ 2.00
- SA 7. Soda Lake to Santiago Creek.
- SA 8. Santiago Creek to Sawmill Mt. \$ 2.00
- SA 9. Sawmill Mt. to Valvermo. \$ 2.00
- SA 10. Valyermo to Mexican Border, \$ 2.00
- SA 11. San Andreas Composite Cross Section  $\,$  \$ 3.00 Summary of SA 1 thru SA 10 on one section.

Please circle item(s) desired. NOTE: All prices 50¢ less for will call except those with asterisk

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### Page 8

- GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 79, no. 9, September 1968
- On the maintenance of anomalous fluid pressures:

  I: Thick sedimentary sequences, by J. D. Bredehoeft and B. B. Hanshaw.
- On the maintenance of anomalous fluid pressures:
  II: Source layer at depth, by B. B. Hanshaw and
  J. D. Bredehoeft.
- The formation of columnar joints in the Upper part of Kilauean Lava Lakes, Hawaii, by Dallas L. Peck and Takeshi Minakami.
- Age of first marine terrace near Santa Cruz, Calif., by William C. Bradley and Warren O. Addicott.
- GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 79, no. 10, October 1968
  - Carnallite-sylvite relationships in the Middle Devonian Prairie Evaporite Formation, Saskatchewan, by Norman C. Wardlaw
  - The petrology and structure of the El Pinal Tonalite Baja California, Mexico, by Wendell A. Duffield
- GEOLOGICAL SOCIETY OF AMERICA(P. O. Box 1719, Boulder, Colorado, 80302)
  - Memoir 104: Coastal dunes of California, by William S. Cooper. \$8.50
  - Special Paper 108 (Regional studies): The Blackhawk Landslide (Calif.), by Ronald L. Shreve. 1968 (Paperbound) \$3.75

- Special Paper 110 (Regional Studies): Biostratigraphic classification of the marine Triassic in North America, by N. J. Silberling and E. T. Tozer. 1968 (Paperbound) \$2.50
- Memoir 105: Type species of Paleozoic nuculoid bivalve genera, by A. Lee McAlester. 1968. (Clothbound) \$7.25
- FORTUNE, vol. 78, no. 7, October 1968
  - DeGolyer and MacNaughton: Their word is as good as oil, by Lawrence Lessing.
- AMERICAN JOURNAL OF SCIENCE, vol. 266, no. 8, October, 1968
  - Steady-state relationships on arid-region alluvial fans in closed basins, by Roger LeB. Hooke.
- THE JOURNAL OF GEOLOGY vol. 76, no. 5, September 1968
  - The scale of shore erosion, by Maurice L. Schwartz
  - Experimental studies of igneous rock series, Central Sierra Nevada Batholith, California, by A. J. Piwinskii.

# MEMBERSHIP APPLICATION

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# PACIFIC PETROLEUM GEOLOGIST

# NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 22

December, 1968

Number 12

# ASSOCIATION ACTIVITIES



#### FIRST INTERNATIONAL MEETING-AAPG

Tulsa, Oklahoma -- Final plans for the first international meeting of the American Association of Petroleum Geologists and the Institute of Petroleum, London, will be coordinated this week in the English capital when Michel T. Halbouty, Houston, past president of AAPG and general chairman of the American organizing committee, meets with members of the British organizing committee.

Accompanying Mr. Halbouty to London will be John D. Moody, senior vice-president of exploration and production of the Mobil Oil Company, New York, who is chairman of the American program subcommittee.

Theme of the historic international meeting, which will be held June 29 through July 2, 1969, at Brighton, England, is, "Exploration for Petroleum in Europe and North Africa."

Geologists from most of the countries of the world are expected to attend the meeting said to reflect the changing pattern of petroleum discoveries. Approximately 1,000 geologists from the United States will attend the meeting.

Technical papers covering the geology, geophysics and all types of exploration of countries in Europe and North Africa have already been scheduled for presentation. Others from the Middle East and the United States also will be scheduled.

Mr. Halbouty observed that "This meeting indicates a measure of AAPG's growing influence on an international scale. As a matter of fact", he pointed out," the meeting was conceived in response to the expressed needs of AAPG members abroad."

Field excursions are planned after the meeting covering major geological studies in England and on the Continent.

Ond Happy New Year!!

COURSE SET ON LEGAL CONSIDERATIONS AFFECTING OCEAN CENTERED SYSTEMS

Legal principles and institutions affecting decisions about using ocean resources will be discussed and appraised at a five day UCLA Extension engineering course, Monday through Friday, beginning December 9th, 8:30 AM to 4:30 PM, in Room 5704 Boelter Hall on the UCLA campus.

Intended for those engaged in, or planning for, the use and development of ocean resources, "Legal Considerations for Ocean Centered Industrial Systems" is of interest to management personnel engaged in oceanographic research, development and operations.

Among the topics for discussion are legal decisions relating to the ocean, state and federal laws on the continental shelf, the Continental Shelf Convention, the regime for exploitation of resources beyond the shelf and limits on data acquisition in the ocean.

Instructors will be Mr. W.T. Burke, professor of law, University of Washington, Seattle, and consultant to the Marine Sciences Council, and Mr. R.B. Krueger, partner, Nossaman, Waters, Scott, Krueger and Riordan, law firm, Los Angeles, and project director for a study conducted for the federal Public Land Law Review Commission on the Outer Continental Shelf Lands of the United States.

Further information is available by writing P.O. Box 24902, Engineering and Physical Sciences Extension, University of California, Los Angeles, California 90024, or telephone 825-3344 or 825-1295.

# COAST GEOLOGICAL SOCIETY ANNUAL DINNER DANCE

The Coast Geological Society annual dinner-dance will be held December 13, 1968, with Champagne Festivities at 7:00 P.M. and dinner at 8:00 P.M. The locale will be the Ventura Women's Center, 3451 Foothill Road, Ventura. Lifting and lively music will be furnished by Leroy Andrews Band until 1:00 A.M. Semi-Formal.

PRICE: Prime Rib - \$12.00 per couple Fish - 8.00 per couple

For reservations send check payable to Coast Geological Society in care of Chairman, Gordon J. Anderson, Texaco Inc., P.O. Box 3337, Ventura, Calif. 93003. (Phone 642-6781). Reservations should specify prime rib or fish dinners and should be in by December 10, 1968.

# EXECUTIVE COMMITTEE, PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

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Rodney G. Colvin
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#### PACIFIC PETROLEUM GEOLOGIST

Published monthly by the Pacific Section American Association of Petroleum Geologists.

Changes 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: William J. Hughs, Texaco, Inc., 1215 East San Antonio Drive, Long Beach, California.

Orders for Pacific Section publications and prior year's issues of the PPG should be addressed to: Pacific Section Publications, 3132 - 18th Street, Bakersfield, California 93306.

### EDITOR

Bruce A. Black

Assistant Editor

William J. Hughs Neil Carroll Peter J. Fischer Lucy Birdsall

Selected Bibliography

CORRESPONDENTS

Alaska Coast

Stewart Keesling

Los Angeles Northwest

Bruce Brooks

Sacramento San Francisco

San Joaquin Membership Secretary Rod Nahama Barbara Tetard

NOTICE: NEXT DEADLINE, DECEMBER 15, 1968

# GEOLOGY GRADUATE PROGRAM AT FRESNO STATE COLLEGE

The Trustees of the California State Colleges have recently approved a Master's degree program in geology at Fresno State College. The first graduate courses will be offered in the fall of 1969.

In addition to traditional geology courses, the eight-man staff at Fresno State will be able to offer advanced instruction in geochemistry, oceanographymarine geology, ground water hydrology, tectonics, and micropaleontology.

If interested in further information, please contact Jon Avent, Department of Geology.

#### EDITORS COMMENT

Upon transfer from the Pacific Coast Area, I wish to express my sincere appreciation to the Pacific Petroleum Geologist staff, and those members of the executive committee of the Pacific Section A.A.P.G. who have given So generously of their time and effort in preparing the P.P.G. while I was it's editor.

I regret having to leave you in "mid-year" and hope to again be with you in the not to distant future. I hope all members of the Pacific Section remember that the P.P.G. is only as good as they make it through support of the staff and contributions of local material.

Sincerely, Block
Bruce Black

#### EXECUTIVE COMMITTEE MEETING

A meeting of the A.A.P.G. Pacific Section Executive Committee was held in Bakersfield on November 12, 1968. Some of the highlights of the rather lengthy minutes are appended below.

- 1. National Vice President's Report. Mr. John Kilkenny reported that executives from the National A.A.P.G. are attempting to inform various societies in person about the new constitution of the A.A.P.G. It was suggested that a luncheon be arranged whereby the District Representatives on the Pacific Coast could attend a presentation by Mr. Frank Counselman, President of the National A.A.P.G., this luncheon to be held at the regional Pacific Section meeting in March.
- 2. The National A.A.P.G. is joining with the A.I.M.E. in a joint meeting in Houston to occur in May of 1969. A.A.P.G. has been requested to furnish one-half day of papers dealing with geological problems offshore.
- 3. A joint conference between A.A.P.G. and the British Petroleum Society is scheduled for the first week in July to be held in London. The theme of the conference is "European Exploration Activity" with interest focused on North Sea exploration.
- 4. Chairman's 1969 Convention Report. Mr. Mike Maxwell reported for Chairman Pat Fazio that the time schedule for the Pacific Section convention is going very well. The theme of the convention is "Offshore Western States". The date is March 26 29 at the International Hotel, Los Angeles Airport. An adequate supply of papers and exhibitors appears to be forthcoming.
- 5. National Convention 1973. Los Angeles will host the National A.A.P.G. convention at the Anaheim Convention Center scheduled for May 6 10, 1973
- 6. Committee Spring Field Trip
  Appointment. Mr. Mark Weidman, the Shell
  Oil Co., has agreed to be general chairman of the Annual Spring Field Trip.

#### 30 For Bruce Black

Bruce Black, editor and head cartoonist of the P.P.G. Newsletter has been transferred to Shell's office in Farmington, New Mexico. We hate to see him go, not only because he will be sorely missed as editor but also because we find ourselves somewhat resentful of his good fortune in moving to such a fine part of the country. This will be somewhat in the nature of a homecoming for Bruce, being a native of Albuquerque, New Mexico.

Bill Hughs will be taking over as editor and Neil Carroll will be joined by Pete Fisher of Whittier College as assistant editors.

Mr. Bruce Black, acting District Geologist for the Ventura District, Shell Oil Company, has a temporary assignment as Administrative Assistant to the Vice President of Exploration & Production in Los Angeles. After this assignment Mr. Black will be transfering to Farmington, New Mexico in January, 1969.

#### Conselman Speaks Before S.E.G.

Dr. Frank B. Conselman, President of the A.A.P.G., speaking before the Society of Exploration Geophysicists in Denver, urged members of the Society to join geologists in:

- (1) Finding more domestic oil and gas to satisfy increasing requirements until substitutes are developed.
- (2) Recognizing that oil and gas exploration in conventional onshore United States producing areas no longer commands the risk money it did.
- (3) Accepting that scientific procedure in exploration can be handled with success -- and more rapidly -- by computers than by people.
- (4) Joining together to effictively explain and document the validity of the statutory depletion tax provision, upon which the economic welfare of the industry depends.

Dr. Conselman set the stage for his brief but to-the-point address by observing that it would be a disservice to restrict his remarks to customary platitudes and expressions of mutual respect because "You have probably heard them all before... and there are one or two flies in the ointment that need to be removed, if possible, before this typed of salve is applied."

The A.A.P.G. president emphasized that a major reorientation program is now taking place in minerals exploration, with economic factors calling the tune.

"I am seriously concerned over the rate of erosion of our technical and operating personnel," said Dr. Conselman.
"The drilling industry has been hard hit, and in an emergency, we may not be able to expand development drilling as rapidly as was customary in the past."

He observed that oil and gas explorationists will soon have to "marshal all of our newfound technology, and make use of all our data retrieval facilities" to find domestic oil and gas fields previously passed over or neglected in explorationists' preoccupation with larger and more rewarding economic objectives.

In regard to apparent long-established rivalary between geologists and geophysicists, he said it has diminished but not disappeared.

"We have more to gain by working together," the geologist told the geophysicists, "than purely technical success. We have the additional potential of influencing by our testimony the economic climate in which we operate, instead of remaining passively subject to it. We must always remember that only with an appropriate economic incentive is any target, large or small, worth hunting."

Mildly taking issue with those who feel scientific and professional associations should remain aloof from government affairs participation, Dr. Conselman stated that only an exploration-oriented oilman can understand (and explain) the real justification of the depletion tax provision as it applies to oil and gas production. By geologists-geophysicists joining in overt support of the 27 1/2 per cent depletion tax provision, he said it is quite possible that even a larger depletion allowance can be justified.

"We are guilty of a major error in attempting to justify the depletion allowance solely on the basis of 'need' and 'incentive'," said Dr. Conselman. "Our spokesmen point out that we 'have' to have it, whereas the statistical fact of the matter is that we 'ought' to have it, not only on the basis of need, but as a matter of equity and realism.

"The only valid statistical basis for any statutory allowance, for whatever wasting asset, must be as a function of the replacement finding cost of that commodity. Finding cost is itself a derivative of the relative efficiency of our exploration methods, because costs vary inversely with the success of these techniques."

In concluding, Dr. Conselman noted briefly that oil and gas exploration people need to join other oilmen in industry councils "to help fight the common battle," geology and geophysics are more closely allied than either seems willing to admit, and the two professions "must join now in a common professional ethic as well as a professional technology."

#### AESE SECOND ANNUAL CONFERENCE NORMAN, OKLAHOMA, OCTOBER 14-15, 1968

The Association of Earth Science Editors held its second annual conference Monday and Tuesday, October 14 and 15, at the Oklahoma Center for Continuing Education on the University of Oklahoma campus, Norman. Chairman of the conference was William A. Oliver, Jr., of the U. S. Geological Survey, Wash. D. C., who is an editor of the Journal of Paleontology. Fifty editors and publishers from the United States and Canada attended, representing journals, state and federal surveys, institutions, and companies. The Oklahoma Geological Survey was host for the meeting.

Newly elected officers, whose terms began at the close of the conference, are: Chairman, A.A. Meyerhoff (formerly Vice-Chairman pro tem), American Association of Petroleum Geologists, Tulsa; Vice-Chairman, Thomas F. Rafter, Jr. (formerly Secretary-Treasurer pro tem), American Geological Institute, Washington, D.C.; and Secretary-Treasurer, William D. Rose, Kentucky Geological Survey, Lexington. William A. Oliver, Jr., Chairman pro tem for the preceding year, continues as a member of the Board of Directors.

The following Directors also took office at the close of the conference: George E. Becraft, U.S. Geological Survey, Washington, D.C.; Stuart E. Jenness, National Research Council of Canada, Ottawa, senior editor of the Canadian Journal of Earth Sciences; and Doris E. Zeller, Kansas State Geological Survey, Lawrence.

A panel discussion Monday morning dealt with problems concerning, and ways to combat, copyright infringement by uncontrolled photocopying of published material. Moderator of the panel was Howard A. Meyerhoff of the Committee to Investigate Copyright Problems. Panelists were William M. Passano, President, William and Wilkins Co.; A. F. Spilhaus, Jr., American Geophysical Union; and Carl H. Savit, Society of Exploration Geophysicists.

On Monday afternoon three concurrent discussion groups were held on (1) current editorial policies and practices, led by C. F. Burk, Jr., editor of the Bulletin of Canadian Petroleum Geology; (2) publication economics, led by R. V. Dietrich, editor of Economic Geology; and (3) a uniform style manual for earth science editors, led by Mary Hill of the California Division of Mines and Geology.

A second panel discussion, on Tuesday morning, reviewed procedure and problems in editing, and was moderated by Gerald M. Friedman, editor of the Journal of Sedimentary Petrology. Panelists were E. B. Eckel, Geological Society of America; W.D. Rose, Kentucky Geological Survey; and Melba W. Murray, Esso Production Research Co. Of particular interest to participants was an unconventional approach to article organization, introduced by Mrs. Murray, to promote a more logical and concise presentation and at the same time a clearer method of communication. (Mrs. Murray has written a paper on this subject which is being published in the November AAPG Bulletin).

At a business session the Association formally adopted a constitution and bylaws.

AAPG PRESIDENTIAL

NOMINEES REPRESENT

EAST, WEST COASTS

Both coasts are represented by the two nominees for the 1969-70 presidency of The American Association of Petroleum Geologists, the world's largest geological organization. Dr. Frank B. Conselman, president, announced the nominations today.

The nominees are:

Kenneth H. Crandall of Piedmont, Calif., vice-president and director of Standard Oil Co. of California and chairman of the board of Chevron Exploration Co. of San Francisco.

Mr. Crandall is a veteran of 44 years in the oil industry. He is former president of California Co. of New Orleans, a director of the Standard Oil Co. of Texas, and vice chairman of the California Standard Co. He became vice president of Standard of California in 1950 and a director in 1962. He was elected Chevron chairman in 1951. He is chairman this year of the AAPG's Industrial Advisory Committee. Last year, he was a member of the Nominating Committee, and in 1967 was an associate editor.

James S. Royds of New York, senior vice president of Continental Oil Co.

Mr. Royds joined Continental in 1939 as a geological and valuation engineer. He spent two years in Egypt as exploration manager Sahara Petroleum Corp., and rose through the Continental ranks to become vice president and manager for international exploration and production. He served as chairman of the Industrial and Academic Relations Committee of the AAPG.

Dr. Conselman also announced these nominations for other offices:

Dr. August Goldstein, Jr., of Tulsa, and Dr. Willis G. Meyer of Dallas, for the vice presidency. Dr. Goldstein is general manager of the Lubell Oil Co., and Dr. Meyer is a consulting geologist.

Dr. James M. Forgotson, Jr., of Denver, vice-president of Petroleum Information, Inc., for re-election without opposition as secretary-treasurer.

Dr. John D. Haun, professor of geology at Colorado School of Mines and consultant with Barlow and Haun, Inc.,



#### A.A.P.G. COMMITTEE MEMBERS

Dr. Frank B. Conselman, President of the A.A.P.G. has announced the appointment of the organization's committees for 1968-69. Those from the Pacific Section are listed below:

#### ALASKA

Anchorage -- Richard E. Church, Stratigraphic Correlations; Edwin H. East, Business.

#### CALIFORNIA

Bakersfield -- David C. Callaway, Business; William F. Edmondson, Membership; Robert Edward Horton, Business; Jean Edward Joujon-Roche, Business.

Brea -- E. W. Scott, Research, Student Summer Employment.

Camarillo -- Robert J. Hindle, Business.

LaJolla -- Leo J. Newfarmer, Research.

Long Beach -- A. Louis Canut, Business; Joseph LeConte, Business; Stanley J. Wissler, Stratigraphic Correlations.

Los Angeles -- Ted L. Bear, Continuing

Education; Eugene Borax, Business;
Ray Burke, Nominating, Industrial
Advisory, Research; Donn Gorsline,
Research; Robert N. Hacker, Business;
John C. Hazzard, Publication, Research;
Mason Hill, Medal Award; Anthony E. L.
Morris, Publication; Henry H. Neel,
Board of Certification; Eugene Robert
Orwig, Jr., Business; Howard C. Pyle,
Industrial Advisory.

Menlo Park -- Holly C. Wagner, Stratigraphic Correlation.

North Hollywood -- George H. Roth, Business.

Piedmont -- Kenneth H. Crandall, Industrial Advisory.

Placentia -- Rodney G. Colvin, Business.

San Francisco -- James W. Higgins, Business; Frederick R. Kelley, Business; Robert J. Levorsen, Industrial Advisory, Gordon Oakeshott, Distinguished Lecture; Dalton L. Pollard, Business.

San Marino -- A. Theodore Lee, Preservation of Samples and Cores.

Santa Monica -- Max B. Payne, Field Trip Research and Coordination.

Santa Paula -- Devaun E. Ritzius, Business.

Saratoga -- R. Maurice Tripp, chairman Boy Scout.

Stanford -- John W. Harbaugh, Research.

Tarzana -- Andrew G. Alpha, Business.

Van Nuys -- R. R. Knapp, Stratigraphic Coding Advisory.

Ventura -- John H. Durrie, Jr., Business.

#### WASHINGTON

Seattle -- Charles V. Fulmer, Business.

#### LE CONTE CLUB

The Le Conte Geological Club, the oldest active geological society in the Bay Area, has scheduled for its fall meeting to be held December 7, 1968 at the California Academy of Sciences in Golden Gate Park a program on:

SAN FRANCISCO BAY: Its Sedimentology,
Ecology, and Political Future
All geologists and others who are seriously interested in the geological sciences are eligible for membership and upon payment of \$2.00 dues per year shall be considered members. One order of business will be to consider a reduction in dues to \$1.00 per year.

Exhibits including the aquarium and the new mineral display will be open.

The fall meeting will be held in the Morrison Auditorium, California Academy of Sciences, Golden Gate Park, San Francisco, SATURDAY, DECEMBER 7, 1968, 2:00 P.M.

GEORGE PORTERFIELD (Hydrologist, U.S.G.S.): "Past and present sediment transport by streams tributary to the San Francisco Bay system".

R. B. KRONE (Associate Professor of Engineering and Chairman, Civil Engineering Department, University of California, Davis): "Sediment transport patterns in San Francisco Bay".

ANDREI SARNA (Department Geology & Geophysics, University of California, Berkeley): "Stratigraph and provinance of the Pleistocene sediments of San Francisco Bay".

J. A. APLIN (Marine Biologist, California Department of Fish and Game): "Sedimentation impact on ecology of the bay bottom".

A no host cocktail hour is scheduled for 6:00 to 7:00 P.M. in the buffet next to Morrison Auditorium. The dinner will be at 7:00 P.M. in the buffet.

Evening Speaker; <u>HAROLD GILLIAM</u> (San Francisco Chronicle): "San Francisco Bay and its future".

A tour of the U. S. Army Corps of Engineers Bay Model 2000 Bridgeway, Sausalito (north end of town) is scheduled for 10:00 A.M., December 7, 1968.

All interested parties are welcome.

STUDENTS ARE WELCOME AT ALL SESSIONS.

### NURSERY NEWS

CONGRATULATIONS to Mr. & Mrs. Alan Ratihn upon the arrival of their new baby daughter.

# NEW MUNGERS ATLAS

After three trips to South America and three years of compilation Mungers second world atlas is ready for distribution. "Petroleum Developments and Generalized Geology of Africa and Middle East" published in October, 1960 gained wide acceptance and acclaim from geologists and others in and out of the oil industry as a ready reference. That edition is now out of print.

The book is 12 X 19 inches, containing 120 map pages of 26 countries with 50 concessions and geological overlays, compiled by Phillip E. Persons consulting geologist. Material has been up dated.

Six distinctive patterns carried throughout the book distinguish Alluvium, Tertiary, Mesozoic, Paleozoic, Basement and Volcanic rocks. The maps are bound between waterproof covers by a spiral binding, thus allowing each page to lie flat.

This volume is offered for \$30.00 per copy plus 6% sales tax in California. Orders or inquiries will be welcome, write: Munger Oil Information Service, Inc., Attn: Mr. A.H. Munger, 9800 South Sepulveda - Suite 723, Los Angeles, California 90045.

# CALENDAR

- December 2, 1968 Stratigraphic Seminar, 7:30 P.M.,
  Bakersfield College, Rm. 56, Science
  and Engineering Bldg. "Stratigraphy
  Along the San Andreas Fault" Mr. Holly Wagner, U. S. G. S.,
  Menlo Park.
- December 6, 1968 AAPG-SEG-SEPM Pacific Sections Annual Holiday Dinner Dance, Long
  Beach Elks Club, Oak and Willow
  Rooms, 7:30 P.M. to 1:00 A.M.
  Semi-Formal. Carrol Wax Orchestra.
  \$14.00 per couple. Ticket reservations. Bruce Barron Oilwell Research,
  1539 W. 16th St., Long Beach, Calif.
  90813.
- December 10, 1968 San Joaquin Geological Society
  Bar-B-Que and Meeting, American Legion
  Hall, 17th & "L" Streets, Bakersfield.
  "Eye Witness Account of Czeck 1968
  Invasion by Russia" John Kilkenny.
  Social Hour 5:30 P.M.
- January 6, 1969 Stratigraphic Seminar 7:30 P.M.

  Bakersfield College, Rm. 56, Science
  and Engineering Bldg. "Deep Sea
  Drilling Project JOIDES", Dr. W. R.
  Riedel, Scripps Institute of
  Oceanography.
- January 16, 1969 Distinguished Lecture Tour. Rodger
  Young Auditorium. Lewis G. Weeks,
  "Oil Exploration in Australia, with
  Case History Lessons". (Hour indefinite
  at press time)
- February 3, 1969 Stratigraphic Seminar, 7:30 P.M.

  Bakersfield College, Rm. 56, Science
  and Engineering Bldg. "Computer
  Simulation in Sedimentology and
  Paleoecology", Dr. John W. Harbaugh,
  Stanford University.

#### BAKERSFIELD COLLEGE

Biostratigraphy Seminar 1968-69

Meetings will be held on the dates indicated at the Bakersfield College Campus from 7:30 to 9:30 p.m. in Room 56, Science and Engineering Building.

- 1. October 7, 1968 Dr. Robert H. Osborne University of Southern California,

  "Statistical Approach to Biostratigraphy"
- 2. November 5, 1968 Dr. Robert Arnal, San Jose State College, "Foraminiferal Ecology of San Francisco Bay"
- December 2, 1968 Mr. Holly Wagner, U.S.G.S., Menlo Park, "Statigraphy Along the San Andreas"
- 4. January 6, 1969 Dr. W. R. Riedal, Scripps Institute of Oceanography, "Deep Sea Drilling Project - JOIDES"
- 5. February 3, 1969 Dr. John W. Harbaugh, Stanford University, "Computer Simulation in Sedimentology and Paleoecology"
- 6. March 3, 1969 Mr. John W. Ruth, Standard Oil Company, La Habra, "Some California Siliceous Micro-fossils; Diatoms and Silico Flagellates"
- 7. April 7, 1969 Dr. Joseph T. Gregory,
  University of California, Berkeley,

  "European Studies of Fossil
  Vertebrates, Paleozoic Mesozoic Cenozoic Continental Stratigraphy and Vertebrate
  Chronology, History of Earth
  Sciences, etc."
- 8. May 5, 1969 Dr. Donn Gorsline, University of Southern California, "Sedimentation on the Continental Border Land"

#### Advisory Committee:

Edwin Stinemeyer, Chairman - Shell Oil Co.
A. A. Almgren Union Oil Company
Keith Berry Standard Oil Company
Robert C. Blaisdell Standard Oil Company
Clifford Church Paleo. Consultant
Robert Hickernell Atlantic Richfield Co.

#### Coordinating Instructor:

Kenneth Lautenschlager - Bakersfield College

# PERSONAL ITEMS

Buzz Ivanhoe, consulting geologist and geophysicist completed his report for the U.S.A. Marine Science Council data Management study in August and then spent a month in Peru supervising Occidental Petroleum's offshore seismic operations. He is now again abroad and expects to be in Libya for the next six months. His wife Helen is now making preparations tojoin him in Tripoli. Their address there will be: % OXY-Libya, P.O. Box 2134, Tripoli, Libya.

Dr. John C. Hazzard, former Senior Exploration Advisor International Division, retired from Union Oil Company on October 31, 1968. Dr. Hazzard can be reached at his residence, 3126 Oakdell Lane, Studio City, California 91604.

Mr. Sig Hamann, formerly with Shell in Ventura and more recently with International Petroleum Co., in Talara, Peru, writes that he is now with Corporacion Venezolana del Petroleo as Head of the Geology Department in Maracaibo. Sig left Talara last May, only shortly before the military junta took over Peru. He "escaped" to New York on the pretense of job-hunting and then to Europe where he vacationaed, visited his German relatives, and picked up his oldest son who has been at school in Berlin. Now back in Venezuela with the governmentowned oil company, he is charged with the development of all land not leased to private companies. The company now produces 15,000 BDO with a capacity for 40,000 BDO but no ready market. Sig would like to hear from his friends, particularly anyone interested in 25,000 BDO!

TRANSFERS: Mr. Frank Smith, a Standard development geologist has been transfered to Bakersfield from Anchorage. Mr. Bill Welch, a geophysicist with Standard has been transfered from Houston to Bakersfield. Mr. Jim Payne, also from Standard has been transfered to San Francisco.

The First Annual Standard Oil (La Habra) Producing Exploration Land Golf Classic was held on October 26th, at the Greentree Golf Club in Victorville. A beautiful sunny day in the desert greeted the golfers. Low gross (76) was shot by Bob Lindblom. Low net was shot by Jim Tasker with a carefully handicapped net 68. Over 30 golfers enjoyed the day. Grey Colkins again kept his record for getting his money's worth by shooting 169. Over 30 players participated in the first of this annual fall tournament.

The Standard Explorers Bowling Team (La Habra) is "struggling" to get out of the cellar in the mens Handicap Commercial League in La Habra. The effort is headed by anchor-man Bob McCrae, Gug Calkins, "Shess" Schessier, Jerry Ward and Bill Kardos.

Kit Carson is in the Ventura Rest Home 4904 Telegraph Road, Ventura, California, Room # 15; phone 805= 642-4101, and would appreciate a visit or a call from his many friends. He must be well along the road to recovery because reliable sources inform us that copies of Playboy Magazine were found interbedded in his stacks of Journal of Paleontology.

Apologies are in order to <u>Miss</u> Deane Oberste-Lehn, whose move to Stanford University was reported in last month's Personal Items column. This article referred to her as <u>Mr</u>. Deane Oberste-Lehn, an oversight which was quickly pointed out to us by a number of her friends. A check of the A.A.P.G. directory will quickly indicate the magnitude of our error---Deane is certainly a very fair member of the fair sex. Our apologies Deane!

## NEW MEMBERS

Ronald G. Bartley Shell Oil Company P. O. Box 999 Bakersfield, California 93302

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A. E. Ehm P. O. Box 993 Midland, Texas 79701

Frank A. Exum
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Marvin A. Keller 2666 E. 12th Street Casper, Wyoming 82601

Harry J. King 2930 So. Chantilly Springfield, Mo. 65804

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Jack S. Leach 6237 Alta Drive Las Vegas, Nevada 89107

Kay R. McCown 1311 N. Brand Blvd. Apt. 8 Glendale, California 91202

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Lyle W. Smith 805 Plymouth Road San Marino, California 91108

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Joseph J. Schweitzer Standard Oil Company P. O. Box 7839 Anchorage, Alaska 99501

A. C. Austin 3289 Zinnia Court Golden, Colorado 80401

# BIBLIOGRAPHY OF RECENT PUBLICATIONS

#### U. S. GEOLOGICAL SURVEY

- Professional Paper 422-L: River channel bars and dunes--Theory of kinematic waves, by W. B. Langbein and L. B. Leopold. 20c
- Professional Paper 422-M: Flood surge on the Rubicon River, California--Hydrology, hydraulics and boulder transport, by K. M. Scott & G. C. Gravlee Jr. 45c
- Professional Paper 515: Paleotectionic investigations of the Permian System in the United States, by E. D. McKee, S. S. Oriel and others (Reprinted) \$4.00
- Bulletin 1214-F: Determination of nitrates in saline minerals, by L. E. Reichen and J. J. Fahey 10¢
- Bulletin 1236: Geology of the Lake Peters area, Northeastern Brooks Range, Alaska, by B. L. Reed. \$1.75
- Bulletin 1258-C: A solid-inclusion borehole probe to determine three-dimensional stress changes at a point in a rock mass, by T. C. Nichols, Jr., J. F. Abel, Jr., and F. T. Lee.
- Bulletin 1274-C: New and revised stratigraphic names in the Santa Rita Mountains of southeastern Arizona, by Harald Drewes.
- Water Supply Paper 1696-F: Isotopic analysis of uranium in natural waters by alpha spectrometry, by K. W. Edwards 15¢
- Geophysical Abstracts 261, October 1968 45¢
- Abstracts of North America Geology, Sept. 1968 45¢
- Circular 593: Distribution of gold and some base metals in the Slana area, eastern Alaska Range, Alaska, by D. H. Richter & N. A. Matson, Jr. Free.

Circular 595: Geochemical and geophysical anomalies in the western part of the Sheep Creek Range, Lander County, Nev., by G. B. Gott and C. J. Zablocki Free

#### Maps:

- GQ 734: Geologic map of the Greenacres quadrangle Washington and Idaho, by P. L. Weis. \$1.00
- OM-10: Map showing thickness and general character of the Cretaceous deposits in the western interior of the U. S., by J. B. Reeside, Jr. (1944) Reprinted 1968 25c

#### OPEN FILED REPORTS (Inspection only)

- Preliminary structure map of the northern part of the Piceance Creek basin, Colorado, and Preliminary isopach map of the interval between the B-groove and orange marker of the Green River Formation, northern part of the Piceance Creek basin, Colo. by John R. Dyni. 2 maps, scale 1:125,000, electric and gamma ray-neutron logs, and explanatory note. (Denver and Salt Lake City Public Inquiries Offices.)
- U. S. BUREAU OF MINES (order from Government Printing Office, Washington, D. C. 20402)
  - Information Circular 8395: Analyses of natural
     gases, 1967, by B. J. Moore and R. D. Shrewsbury. \$1.75
  - A dictionary of mining, mineral, and related terms, compiled and edited by Paul W Thrush and Staff of Bureau of Mines. \$8.50
- GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 79, no. 11, November 1968
  - Authigenic marine phyllosilicates near Hawaii, by Ralph Moberly, Jr., Hubert S. Kimura, and Floyd W. McCoy, Jr.
  - Siliceous tuff clasts in the Upper Paleogene of Southern California, by A. O. Woodford, E. E. Welday, and Richard Merriam.
  - Geology and structure of the tip of Baja California by William R. Normark and Joseph R. Curray.
- OFFSHORE, vol. 28, no. 9, August 1968
  - Alaskan oil production at an all-time high
  - Texaco, Sunray strikes revive hopes off California.
  - Advanced diving systems solving depth problems offshore, by Hugh (Dan) Wilson.
- OCEAN INDUSTRY, vol. 3, no. 10, October 1968
  - Mining phosphorite from the sea--Part 2, by M. P. Overall.
  - Sealab III: Giant step toward occupation of the sea floor, by R. Adm. Philip D. Gallery, USN(ret.)
  - Midwater production capsule to work shallow oil sands.
  - The adventure of the "Challenger" begins, by Donald M. Taylor

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CALIFORNIA DIVISION OF OIL AND GAS SUMMARY OF OPERATIONS, CALIFORNIA OIL FIELDS, vol. 53, no. 2--Part 2, 1967.

Brea-Olinda Oil Field, by Verne F. Gaede, R. V. Rothermel and L. H. Axtell

Rio Vista Gas Field by Ernest Burroughs

Sisar Creek area, Ojai Oil Field, by William Spencer Mitchell

Northwest Lost Hills Oil Field, by John L. Hardoin

North, South and East areas of Rosedale Oil Field, by G. W. Beecroft.

Bouquet Canyon Oil Field, by J. L. Zulberti.

NEVADA BUREAU OF MINES (Reno, Nevada)

Report 18: Oil and gas developments in Nevada, 1953-1967, by John H. Schilling and Larry J. Garside \$1.50

THE ORE BIN, vol. 30, no. 8, August 1968 (State of Oregon, Dept. of Geology & Mineral Industries, Portland, 97201)

New horizons in the historical research: The geologists' frontier, by Kenneth L. Holmes.

Fireballs, meteorites, and meteor showers, by Erwin F. Lange.

THE ORE BIN, vol. 30, No. 9, September 1968

A preliminary investigation of the heavy mineral suites of the coastal rivers and beaches of Oregon and northern California, by L. D. Kulm, K. F. Scheidegger, J. V. Byrne, and J. J. Spigai. AMERICAN JOURNAL OF SCIENCE, vol. 266, no. 9, Nov. '68

Recent deformation at Buena Vista Hills, California, by J. H. Howard.

Tectonics of the Fitzroy Wrench Trough, Western Australia, by Jan G. Smith.

Flow direction in triclinic folded rocks, by Keith A. Howard.

OCEAN INDUSTRY, vol. 3, no. 9, Sept. 1968

Mineral potential of the submerged parts of the U. S., by V. E. McKelvey.

Ice and marine structures. Part 2--Sea ice properties, by Harold R. Peyton.

Mining phosphorite from the sea. Part 1: Market structure and geology, by M. P. Overall.

OCEAN INDUSTRY, vol. 3, no. 10, October 1968

Sealab III---Giant step toward occupation of the sea floor, by R. Adm. Philip D. Gallery, USN (ret.)

Midwater production capsule to work shallow oil sands,

The adventure of the "Challenger" begins, by Donald M. Taylor.

OCEAN INDUSTRY, vol. 3, no. 11, November 1968

Mining phosphorite from the sea--Part 3, by M. P. Overall.

Updating ocean bottom mineral activity.

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

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