

PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 19

January, 1965

Number 1

ASSOCIATION ACTIVITIES

Coast Geological Society

The monthly meeting of the Coast Geological Society was held at the Jet Room in Ventura on December 8th.

Mr. John G. Vedder with the U.S.G.S. at Menlo Park was the evening's guest speaker. His subject was the "Biostratigraphy of the Southeastern Caliente Range, California". This very interesting talk was given in the form of a progress report on this area of continental Cenozoic deposition. Stress was laid on the general geology and the presentation of faunal succession. The lecture was arranged around a number of Kodachrome slides and detailed sections of the area. Of particular interest was the stratigraphic diagrams of Miocene and Pliocene rocks in the Eastern Caliente Range which used as a datum a series of absolute time line basalts known as the Main and Triple Basalts. Mappable units and faunal change were used as a base for inferred time lines. The most significant of Mr. Vedder's slides was his Faunal Division and Correlation in the Caliente Range which presented the correlation of Forams, Mollusks, and Mammals in the area. This slide was also hung on the absolute basalt time lines. Unfortunately, the Basalts are altered too badly for dating by isotopes. Mr. Vedder also covered the stratigraphic ranges of selected species in the Cuyama Valley area. He pointed out that use of fossils in the Miocene of this area should be based upon faunal groups rather than upon individuals as has been the practice in the past. Many fossils were shown to have a much greater range than was previously believed. Mr. Vedder suggested that the Cuyama Valley be set up as a standard for California molluscan faunas because of the relatively complete sections exposed in this area. The talk was well organized and was greatly enjoyed by all.

STANFORD UNIVERSITY NEWS

Richard H. Jahns will become dean of the School of Earth Sciences on July 1, 1965. Dr. Jahns is well known as a geologist and an administrator, and confidently may be expected to continue the high standard of leadership provided by Charles Park, Jr.

Jahns' career has touched many facets of geology. He is known for work on pegmatite deposits, in structural and engineering geology, glacial geology, igneous and metamorphic petrology, and regional geology of Southern California. A native of Los Angeles, he received B.S. and Ph.D. degrees from California Institute of Technology, and an M.S. degree from Northwestern. Prior to 1946 he was associated with the United States Geological Survey. From 1946 to 1960 he was on the teaching staff at Cal Tech. In 1960 he was appointed chairman of the

Division of Earth Sciences at Pennsylvania State University and in 1962 he became dean of the College of Mineral Industries at Penn State. He has worked actively with the American Geological Institute's Geostudy program, which has conducted a long-range investigation of undergraduate education in geology in America.

He is the author and coauthor of 11 monographs and major reports published by the U.S.G.S., New Mexico Bureau of Mines and Mineral Resources, Arizona Bureau of Mines, California Division of Mines, and Economic Geology Publishing Company. He was the editor of, and contributor to, the monograph on the geology of Southern California, published as Bulletin 170 of the California Division of Mines. He is coauthor of a textbook on petrology which is in final stages of preparation. He is assistant editor of Economic Geology, and an associate editor of American Mineralogist. In all he is author or coauthor of 80 scientific papers and economic reports published in scientific journals.

Charles F. Park, Jr., will conclude 15 years as Dean of the School of Earth Sciences in June, 1965. He will continue active service at Stanford as Donald Steel Professor of Geology, a chair he has held since 1961. Dean Park's administration has been marked by many changes. Notables include expansion of the faculty, completion of new geophysics and petroleum engineering buildings, establishment of an Earth Sciences building fund which currently contains in excess of a half million dollars, and growth of the Earth Sciences endowment from approximately \$225,000 to \$2,800,000 during his tenure as dean.

Stanford Summer Geology

Nineteen students accompanied Professor William Dickinson on the Stanford Geological Survey. Professor Paul Reitan joined the group for the second half of the field session, which dealt with igneous and metamorphic geology. Additional instruction was provided by National Science Foundation Fellows Richard Ojakangas, Peter Stauffer, Donald Lowe and Roger Ashley. Camp, for the first half of the session, was established in mid-June at Pine Mountain Inn on Highway 33 between Ojai and Maricopa, California. Here the work included mapping of (1) major local facies changes in the Coldwater, Vaqueros, and Monterey Formations toward the headwater of Sespe Creek, (2) study of pattern of fan-like current direction indicators provided by pebble imbrication in conglomerates in the lower Sespe Formation, (3) investigation of possible commercial gypsum and phosphate deposits in the Santa Margarita Formation on the south slopes of Pine Mountain, and (4) examination of facies of the Matilija Sandstone on the north side of Pine Mountain, where about 10 miles of left lateral strike-slip movement on the Big Pine Fault has been proposed by Tom Dibblee, '36.

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— PACIFIC PETROLEUM GEOLOGIST —

Published monthly by the PACIFIC SECTION
American Association of Petroleum Geologists
Address communications to the Pacific Petroleum
Geologist, P.O. Box 17486, Foy Station, Los Angeles 17 Calif.

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Next Deadline - January 28, 1965

Camp for the second half was established in mid-July at Topaz Lake on U.S. 395 south of Carson City, Nevada. Working at elevations of 5,000 to 10,000 feet around Antelope Valley, the survey traced metamorphosed Mesozoic formations in the Pine Nut Range, dealing with the granitic plutons that cut the formations and with Tertiary volcanic rocks that overlie the older rocks. Discovery of high-level gravels and erratics in the northern Sweetwater Range late in the season provides evidence for future geomorphological interpretations.

Two mechanical innovations were introduced: (1) The first is a device constructed by students Pete Stauffer and Dick Ojakangas for rapid, accurate azimuth measurements of directional current lineations. This device is used to measure the angle in the plane of bedding between the strike and the lineation; (2) The second is a portable 12-inch rock saw driven by a small, noisy gasoline motor, and a field rock staining kit that together permit semiquantitative petrographic evaluations to be made in the field. Using techniques developed by Technician Ruperto Laniz, it is possible to differentially stain K-feldspar and plagioclase without affecting quartz. This may be done easily under camp conditions using a small number of previously prepared solutions and reagents. On sawed surfaces, K-feldspar stains yellow, plagioclase turns a shade of pink that is governed largely by its lime content, and quartz stays colorless. The textural details are faithfully displayed to the extent that even granophyric intergrowths can be examined with a hand lens.

Professor C. D. Campbell, petrologist, is in Europe this academic year on sabbatical leave. He is studying some of the areas which first led to the formulation of basic concepts in the physical sciences. The course in Optical Mineralogy is being taught by Edward M. Taylor in Dr. Campbell's absence. Mr. Taylor taught last year at Oregon State University.

Professor W. Frank Scott assumed the post of Assistant to the Graduate Dean last summer, and he will now spend one-fourth time in the Geology Department, teaching advanced courses in stratigraphy and working with graduate students.

Donald L. Baars, University of Colorado, has been appointed Assistant Professor effective September 1965. He will teach the undergraduate paleontology and stratigraphy courses formerly taught by Dr. Scott, and he will also teach and do research work in sedimentary petrology and sedimentation.

During the 1964-65 school year Dr. Edward Jests has held a one-year appointment to teach a physical geology course usually taught by Dr. Campbell. Dr. Jests was formerly at the University of Hawaii.

Dr. Yvonne Herman Rosenberg, who recently was granted the Ph.D. degree from the University of Paris, has been appointed Collaborator in Geology and will continue her work on the paleontology of recent deep-sea sediments.

The department was host to Arthur W. Green, Jr., Visiting Lecturer in Geophysics of the A.G.U., in December. Mr. Green gave three lectures on recent advances in geophysics. Early in 1965 the department will sponsor several lectures by a visiting scientist under the program of the American Geological Institute.

Enrollment of majors in geology has continued to increase during the year. We now have 60 major students, 23 of whom are doing graduate work. Space is at a premium, and fortunately the department has been allotted additional room, effective in the spring of 1966. We will then occupy the entire building which we now share with another department.

SERVICE COMPANIES ASSURE SUCCESS OF DINNER DANCE

Twenty-six service companies assured the success of the Annual Holiday Dinner Dance by sponsoring a cocktail party to open the gala affair held in the Regency Room of the Sheraton-West Hotel on December 12. Seventy-two couples attended the semi-formal affair and imbibed the holiday cheer provided by:

B. J. Service, Inc.	Rayflex Exploration Co.
Baker Oil Tools, Inc.	Schlumberger Well Surveying Corp.
Borst and Giddens	United Geophysical Corp.
Brown Drilling Co.	Vacuum Tank Service
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McCullough Tool Co.	
Pacific Log Exchange	
Rapid Blue Print Co.	

FROM THE PRESIDENT

John Kilkenny, chairman of the nominating committee for 1965-66 officers of the Pacific Section, has announced the following nominees:

For President	Gordon Bell, Pete Gester
Vice-President	John Elliott, George Feister
Secretary	Lou Canut, Otto Hackel
Treasurer	John Forman, Jack Nair

It has been the policy of past nominating committees to select candidates that have been active and are interested in association affairs. The new slate is no exception to this, and we thank the committee for their excellent selections. You may have noted that two of the candidates reside in Bakersfield. We do not feel that the residence locality should be an issue. All of our activities will continue normally in the event one or both Bakersfield candidates are elected.

Our constitution provides for additional candidates, as follows " The slate of candidates shall be announced in the Pacific Petroleum Geologist at least one month prior to the election. Additional nominations may be made by a written petition of twenty-five or more members of the Pacific Section in good standing, received by the Secretary within two weeks following the publication of the nominating committee slate of candidates."

PUBLICATIONS AVAILABLE
PACIFIC SECTION - A.A.P.G.

Cross Sections (Price, \$2.00 each, includes mailing and handling charge.)

No. A.A.P.G. Sections

- 1 Sacramento Valley - South (2 sheets) 1951
North side of Sacramento Valley through Rio Vista, Thornton and Lodi Gas Fields, including Mt. Diablo-South Sacramento Correlation Chart.
- 4 Salinas Valley (1 sheet) 1952
San Antonio River northerly to San Andreas Fault through San Ardo Field.
- 6 Sacramento Valley - North (2 sheets) 1954
A. From T 23 N, R 1 W through T 16 N, R 1 E and
B. Correlation Chart
- 7 Ventura Basin - Central (1 sheet) 1956
From Santa Ynez Fault north of Ojai to Western Santa Monica Mts., through Ventura Ave. and West Montalvo Oil Fields.
8. San Joaquin Valley - South (1 sheet) 1957
From San Andreas Fault to Sierra Nevada Foothills, passing through Belgian Anticline, McKittrick, Elk Hills, Coles Levee, Fruitvale, Kern River and Round Mountain Fields.
- 9 Central San Joaquin Valley (1 sheet) 1957
From San Andreas Fault to Sierra Nevada Foothills, and passing through Coalinga, Guajarral Hills and Riverdale.
- 10N Central San Joaquin Valley (1 sheet) 1958
From Rio Vista to Riverdale through Rio Vista, McDonald Island, Tracy, Chowchilla, Gill Ranch, Raisin City, Helm and Riverdale Fields.

- 10S Central San Joaquin Valley (1 sheet) 1958
From Riverdale to Tejon Ranch through Riverdale, Trico, Wasco, Rio Bravo, Greeley, Strand, Ten Section, Paloma, Wheeler Ridge, Grapevine and Tejon Ranch Fields.
 - 11 West Side San Joaquin Valley (1 sheet) 1959
From Coalinga to Midway-Sunset and across San Andreas Fault to southeast Cuyama Valley.
 - 12 Santa Maria Basin (1 sheet) 1959
From Lompoc to Nipomo Hills through Lompoc, Orcutt and Santa Maria Valley Fields.
 - 13 Sacramento Valley - North-South (1 sheet) 1960
From Redbluff to Rio Vista through Beehive Bend and River Island.
 - 14 Los Angeles Basin (1 sheet) 1962
Beverly Hills to Newport.
- No. San Andreas Fault Cross-Sections
(Cross-sections prepared along the entire length of the San Andreas fault in Southern California).
- 1 East-West, Pacific Ocean to Gulf of the Farallones
 - 2 East-West, Gulf of the Farallones to Bielwaski Mt.
 - 3 East-West, Bielwaski Mt. to Hollister
 - 4 East-West, Hollister to Bitterwater Valley
 - 5 East-West, Bitterwater Valley to Parkfield
 - 6 East-West, Parkfield to Soda Lake
 - 7 East-West, Soda Lake to Santiago Creek
 - 8 East-West, Santiago Creek to Sawmill Mt.
 - 9 East-West, Sawmill Mt. to Valyermo
 - 10) East-West, Valyermo to Mexican Border
 - 11)
 - 12)
 - 13 Longitudinal Cross-Sections, Pacific Ocean to Mexican Border

Guidebook - Los Angeles and Ventura Regions (Price \$2 includes mailing and handling charge).

204 pp., maps, cross sections, stratigraphic charts and road logs supplementing the 1952 Guidebook includes excellent summaries of fields developed since that time.

Membership Directory (Price, \$5, includes mailing and handling charge). 1960-61 Membership Directory contains names, addresses, phone numbers and pictures of Pacific Coast Geologists.

All material may be purchased from:

Mr. Harry Stuvelling, Jr.
Comet Reproduction Service
11515 E. Washington Blvd.
Whittier, California

And San Andreas Fault Cross Sections may be purchased from:

Price Blueprint & Supply Co.
1600 G Street
Bakersfield, California

Checks for the Cross Sections, Guidebooks and Membership Directories should be made payable to the Pacific Section, A.A.P.G. and must be sent with the order when ordering by mail.

ANNOUNCEMENT

THE CORDILLERAN SECTION of the Geological Society of America will meet April 15-17 at Fresno State College, Fresno, California. Hosts will be the Department of Geology and the Geology Club.

Registration will be in McLane Hall on Thursday, April 15, and Friday morning, April 16. A registration fee of \$3.00 (\$1.00 for students) is charged for those who attend the scientific sessions and field trips.

S.E.P.M. SPECIAL PUBLICATION NO. 11

PALYNOLOGY IN OIL EXPLORATION

A Symposium presented at the Thirty-Sixth Annual Meeting of the Society of Economic Paleontologists and Mineralogists, at San Francisco, California, March, 1962. Papers arranged in two parts:

Palynology -- Principles
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Edited by: Aureal T. Cross -
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16 articles, 212 pages, 6.75 x 9.5 inches

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PERSONAL ITEMS

Jerry Knowles (pronounced "Kah-no'-lays", where he is headed) will soon be looking over South America from a perch high in the Colombian Andes. Jerry has recently been transferred from Richfield's L.A. office to Bogota to open a regional exploration office. He will be keeping an eye on all of Latin America for Richfield. He and his Colombian wife, Isabel, expect to depart sometime in January. Jerry received quite a surprise by selling his home in Palos Verdes only ten days after putting it on the market. But he was really astounded when the buyer offered to purchase about 90 percent of his furniture, too. Isabel, needless to say, is quite excited about returning to her home town after an absence of 6 years. Jerry's parting words were these: "I should like to thank all of the news contacts who have helped me with the personals column in the PPG during my tenure and to wish my successor, Walt Scott, Richfield, Long Beach, luck in his new job." Walt says that "all the news that's fit to print" (and some that isn't) can make these pages by being 'phoned to him at GARfield 3-7921.

Signal's L.A. geophysical department has been increased by two. Ed Beal has been transferred in from London, and Joe Elliot has recently arrived from Houston.

The Henriksens - Don, Marilyn, baby-daughter Lisa Anne, and poodle Maurice, were in Long Beach just before the holidays. Don has been keeping an eye on things in Europe for Richfield. He was being transferred from Paris to London, but the London airport was fogged in. So Don and his family decided to visit the Jack Nisbets in Long Beach and then spend the holidays with Marilyn's family in Palo Alto while waiting for the weather to clear.

Not all holiday travel is so speedy, however. Neil Carroll, of Texaco, was not buying swim fins for a Christmas present--he was just getting ready for the trip to his parents' home. They live in Seattle.

Speaking of Texaco, the boys in the Long Beach office were treated to a real thrill just before Christmas - a close look at genuine 34 gravity crude coming right out of the ground. In fact, it was such a close look that they had to wade through it to get to their office. Bill Bower was just about to call out the lease hounds when a repair crew showed up to fix the leak in the pipe line. Art Cohn and Frank Goodban were heard muttering for the rest of the day, "So, that's what it looks like!"

Russ Simonson, Marathon, did some of his Christmas shopping in Kingston, Jamaica. On the way, he stopped off at the G.S.A. convention in Miami, where he ran into Stan Wissler and John Hazzard of Union, and John Crowell of UCLA. Russ reports that prices of bottled goods in Kingston are quite competitive. In spite of 85 cents a pound for drayage and those guys in blue suits at the Miami airport, he made it back with 4 gallons. He didn't specify how much of that was in original containers and how much he carried internally.

"Ike" Holaston retired from Tidewater on Dec. 31, 1964 after 42 years of faithful service. During this period, he did not miss a single day's work due to accident or illness! We would say he's in good shape to enjoy his retirement years. Ike and Marge have settled down in their new hilltop home at 129 Oak Knoll Drive, Santa Cruz, California.

Dr. Gordon Oakeshott received the Best Paper Award for the 1963-64 period from the San Joaquin Geological Society. The abstract of his informative paper entitled "The San Andreas Fault: Predominant Lateral or Vertical Displacement" appeared in the December issue of the P.P.G.

Tom O'Neill, Ward Abbott and Jerry Elkins of Shell, Bakersfield, have been beating the bushy mountains while quail hunting. They report that the birds are costing them about \$5.00 each.

NURSERY NEWS

John Szatai, of Signal, and his wife, Edith, announce the birth of a daughter, Anna Maria, in Dusseldorf, Germany, on September 26th. Anna Maria's fighting weight, as delivered, was reported at 7-1/2 lbs

Jack and Bonnie Pigg, Texaco, Bakersfield, a son, John Trent, arrived on December 6, 1964, weighed in at 6 lbs., 14 oz.

CALENDAR

- January 4, 1965 - Monday Evening, 7:30 p.m., Bakersfield College, Science & Engineering Bldg., Rm 56. Biostratigraphic Seminar, "Occurrence & Significance of Marine Vertebrates at Sharktooth Hill" -Mr. Edward Mitchell, U.C.L.A.
- January 7, 1965 - Thursday Noon, Rodger Young Auditorium, Los Angeles. "Why Do We Still Have Mountains?" Dr. John S. Shelton, Chief Scientific Consultant of the A.G.I.-E.B.F.
- January 12, 1965 - Tuesday Evening, 6:30 p.m., El Tejon Hotel. San Joaquin Geological Society "Geology of Water Taxation in Kern County", Bill Horsely, Director of Water Resources, Bakersfield City.
- January 12, 1965 - Robert Yeats, Shell Geologist, will be the speaker at the monthly meeting of the Coast Geologic Society held in the Jet Room at 1994 Thompson Blvd. in Ventura. His topic will be "A Pliocene Seaknoll at South Mountain in the Ventura Basin, California". Dinner will be at 7:30 p.m.
- February 9, 1965 -Dr. T. L. Bailey of Ventura will give a talk to the Coast Geologic Society at its monthly meeting on the relationship between Engineering Geology and the Construction and Real Estate Businesses. Place to be announced.

STANFORD UNIVERSITY

- January 11, 1965 - Delineation of "Strat" Traps by Reconstruction of Paleodepositional Environments, by Dr. Daniel A. Busch Consulting Geologist, Tulsa, Okla. Rm. 320 Geology Bldg., 4:00 p.m.
- January 18, 1965 - The Geology of Antarctica, by Dr. Laurence M. Gould, Professor of Geology, University of Arizona, Tucson. Rm. 320 Geology Bldg., 4:00 p.m.
- January 19, 1965 - Exploring Antarctica - Frontier of International Science, by Dr. Laurence M. Gould, Professor of Geology, University of Arizona, Tucson. Dinkelspiel Auditorium, 7:45 p.m. (Tuesday Eve. Series Lecture).
- January 25, 1965 - The Hydroelectric Project as a Challenge to the Engineering Geologist, by Dr. Howard A. Coombs, Chairman, Department of Geology, University of Washington, Seattle. Rm. 320 Geology Bldg., 4:00 p.m.

- February 1, 1965 - Foraminifera, A Key to Marine Environments, by Dr. Orville L. Bandy, Professor of Geology, University of Southern California, Los Angeles. Room 320 Geology Bldg., 4:00 p.m.
- February 8, 1965 - Records of Crustal Movements in Southern Nevada, by Dr. Chester R. Longwell, Research Associate, Department of Geology, Stanford University, Room 320 Geology Bldg., 4:00 p.m.

BIBLIOGRAPHY OF RECENT PUBLICATIONS

U. S. GEOLOGICAL SURVEY

- Professional Paper 438: Structural geology and volcanism of Owens Valley region, Calif. --A geophysical study, by L. C. Pakiser, M. F. Kane & W. H. Jackson. \$2.75
- Professional Paper 440-K: Data of geochemistry, sixth edition, Michael Fleischer, technical editor ---Volcanic emanations, by D. E. White & G. A. Waring. (Reprinted 1964) \$.30
- Professional Paper 440-T: Data of geochemistry, sixth edition, Michael Fleischer, technical editor ---Nondetrital siliceous sediments, by E. R. Cressman. (Reprinted 1964) \$.25
- Professional Paper 440-Y: Data of geochemistry, sixth edition, Michael Fleischer, technical editor ---Marine evaporites, by F. H. Stewart. (Reprinted 1964) \$.40
- Professional Paper 501-A: Geological Survey Research 1964, Chapter A \$2.75
- Water Supply Paper 1740: Compilation of records of surface waters of Alaska, Oct. 1950 to Sept. 1960 \$1.00
- Water Supply Paper 1779-Y: A brief geologic and hydrologic reconnaissance of the Furnace Creek Wash area, Death Valley National Monument, Calif., by M. A. Pistrang and Fred Kunkel. \$.70
- Geophysical Abstracts 215: December 1964, by J. W. Clark, D. B. Vitaliano, V. S. Neuschel and others \$.35
- Circular 495: Phreatophyte research in the Western States, March 1959 to July 1964, by T. W. Robinson, 31 pages Free
- MAPS:
- GO 345: Geology of the Prospect Peak quadrangle, Calif., by G. A. Macdonald, \$1.00
- I-394: Geology of the Mt Hayes D-4 quadrangle, Alaska, by T. L. Pewe and G. W. Holmes \$1.50
- I-426: Geologic map of the Lucerne Valley quadrangle, San Bernardino County, Calif., by T. W. Dibblee, Jr. \$.75

I-430: Geologic map of the Rodman Mountains quadrangle, San Bernardino County, Calif., by T. W. Dibblee, Jr. \$.75

MF-281: Preliminary geologic map of the Merced Peak quadrangle, Calif., by D. L. Peck. \$.50

OPEN FILED REPORTS (Inspection only):

Geologic map of the southwest quarter of the White Mountain Peak quadrangle, Mono County, Calif., by Michael F. Sheridan & Dwight F. Crowder. (1 map, scale 1:24,000).

Geologic map of the northwest quarter of the White Mountain Peak quadrangle, Mono County, Calif., by Michael F. Sheridan & Dwight F. Crowder. (1 map, scale 1:24,000).

TEI-856: Geologic map and sections of the Ammonia Tanks quadrangle, Nye County, Nevada, by E. N. Hinrichs, R. D. Krushensky, S. J. Luft, R. D. Brown, and F. S. Simons. (1 map, scale 1:24,000).

OREGON DEPARTMENT OF GEOLOGY & MINERAL INDUSTRIES
THE ORE-BIN, vol. 26, no. 11, November 1964 -

Oil leasing on the Outer Continental Shelf adjacent to Oregon and Washington, by V. C. Newton, Jr. and C. J. Newhouse.

CALIFORNIA DIVISION OF MINES AND GEOLOGY MINERAL INFORMATION SERVICE, vol. 17, no. 12, December 1964 -

Needles sheet of the Calif. Geologic map, (scale 1:250,000) \$1.50

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 75, no. 10, October 1964 -

Cenozoic stratigraphy and structure of the southern Egan Range, Nevada, by Harold E. Kellogg.

Upper Middle Cambrian stratigraphy of western Utah, by Richard A. Robinson.

Pre-Cenozoic history of Suplee-Izee district, Oregon
Implications for geosynclinal theory, by William R. Dickinson & Laurence W. Vigrass.

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 75, no. 11, November 1964 -

Phosphorus in granitic rocks of North America, by Andrew B. Vistelius & Vernon J. Hurst.

Cornucopia stock Wallowa Mountains, northeastern Oregon: Field relationships, by William H. Taubeneck.

Submarine canyons and Sagami trough, east-central Honshu, Japan, by Francis P. Shepard, Hiroshi Niino, and Theodore K. Chamberlain.

Geology of the Islas Revillagigedo, Mexico, 4.
Geology and petrography of Isla Roca Partida, by Adrian F. Richards.

Late Pleistocene history of Western Anacapa Island, California, by Jere H. Lipps.

THE JOURNAL OF GEOLOGY, vol. 72, no. 6, November 1964 -

Experimental deformation and recrystallization of quartz, by Neville L. Carter, John M. Christie, and David T. Griggs.

Experimental evidence of basal slip in quartz, by J. M. Christie, D. T. Griggs, and N. L. Carter.

Textural evidence for deposition of many western North Atlantic deep-sea sands by ocean-bottom currents rather than turbidity currents, by John F. Hubert.

Pleistocene glaciation of the northern Sierra Nevada, north of Lake Tahoe, California, by Peter W. Birkeland.

THE AMERICAN MINERALOGIST, vol. 49, no's 11-12, November-December 1964 -

Recovery of coesite and stishovite from Coconino Sandstone of Meteor Crater, Arizona, by J. J. Fahey.

Accessory minerals in some granitic rocks in California and Nevada as a function of calcium content, by Donald E. Lee and F. C. W. Dodge.

Magnesium vermiculite from the Twin Sisters Mountains Washington, by Henri E. Gaudette.

U. S. BUREAU OF MINES (For sale by the Government Printing Office, Washington, D. C.) -

Information Circular IC 8240: Selected list of Bureau of Mines publications on petroleum & natural gas, 1910-62, compiled by V. Vern Hutchinson \$.50

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PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 19

February, 1965

Number 2

ASSOCIATION ACTIVITIES

A.A.P.G., S.E.G., S.E.P.M. Annual Convention

The Pacific Section of the American Association of Petroleum Geologists, together with the Society of Exploration Geophysicists and the Society of Economic Paleontologists and Mineralogists, will hold their fortieth Annual Meeting at the Bakersfield Civic Auditorium in Bakersfield, California, April 1-3, 1965.

The technical program will include over 60 papers dealing with the Convention theme, "The Coordinated Search for Oil and Gas in Highly Explored Areas". A number of papers will point up recent developments of interest in the oil and gas producing areas of California. The meeting will close with a field trip and geophysical demonstration on the southeast edge of the San Joaquin Valley Saturday morning.

In addition to the outstanding technical program, activities include the joint AAPG-SEG-SEPM Annual Luncheon on Thursday with Mr. S. W. Totten of Standard Oil Company of California as the speaker. A cocktail party will be held on Thursday afternoon and the SEPM dinner on Thursday evening. The college luncheons and a general buffet lunch will be on Friday and a dinner-dance is planned for Friday evening.

Ladies activities for both days are being planned by the Petroleum Wives Association and include a tour of the Standard Oil Refinery on Thursday afternoon and a luncheon and fashion show Friday afternoon. A Hospitality Room will also be available for the ladies.

Tentative programs will be sent to the membership through the mails and, therefore, will not be duplicated in the P.P.G.

San Joaquin Geological Society

About 50 people attended the regular meeting of the San Joaquin Geological Society on January 4, 1965. Mr. Wm. Horsley presented a highly informative paper entitled "The Geology of Water Taxation in Kern Co."

The officers of the Society are very pleased with the good attendance. Let's keep it a lively organization.

ABSTRACT:

Kern County is the "type locality" for agricultural contracts with the State of California for water from the "California State Water Project" (the Feather River Project). The legislative act which created the Kern County Water Agency and the provisions of the Kern County prototype agricultural water contract plus policy decisions of the Kern County Water Agency combine to create a unique precedent-setting provision for taxation to support the costs of an imported agricultural water supply.

It is the intended policy of the Kern County Water Agency to execute contracts with its agricultural Member Units (water districts) with the provision that the member unit contractor repay 85 percent of the water facility costs; and assessments through zones of benefit on all values, including petroleum minerals,

will support 15 percent of the costs.

Zone of Benefit #1 has been defined as the San Joaquin Valley portion of Kern County overlying the main ground water basin, plus areas along the margin which utilize or might utilize water exported from the ground water basin.

Thus, the majority of the oilfields in Kern County are included in the primary zone of benefit. Assessments levied pursuant to the applicable section of the Kern County Water Agency Act must be in accordance with benefit and reflect the degree of benefit to which a zone or zones may be affected. The "benefit" to be measured pursuant to the "zone of benefit" provision is the benefit to the underground water supply.

The Kern County Water Agency and the Kern County Board of Supervisors must review annually the zone or zones of benefit and the assessment rate for each zone. This will require the annual measurement of the main San Joaquin Valley ground water basin and the sub-basins within. The measurements must account for degrees of benefit within various zones. Thus a demand is created for knowledge of geologic conditions affecting the movement of ground waters within the main San Joaquin Valley ground water basin.

Geologists are the proper persons to investigate the problem, provide the geologic knowledge and measure the ground water basin and the effects upon it caused by the importation of state water. Ground water geology becomes an extremely important and controversial subject when it comes to levying assessments dependent upon measured differences of degrees of groundwater benefit to several geographic areas. When exploration budgets are reduced in the San Joaquin Valley, petroleum companies might consider the diversion of some of their geological staff to the preparation of argument to be presented at the annual review of the zones of benefit.

With the increase in water legislation and the multiplication of water projects, opportunities are expanding for the petroleum geologist to be of service to his employer, to his community and to himself.

Coast Geological Society

The monthly meeting of the Coast Geological Society was held at the Jet Room in Ventura on January 12th.

The speaker for the evening was Dr. Robert S. Yeats of Shell who presented an excellent paper on "A Pliocene Seaknoll at South Mountain in the Ventura Basin, California". Dr. Yeats also presented this talk to the Los Angeles forum in October 1964, and we refer you to the abstract of the talk in the October 1964 issue of the P.P.G.

Dr. Tom Bailey's talk to the Coast Geologic Society scheduled for February 9, 1964 has been rescheduled for March. Dr. Bailey is to undergo surgery on Feb. 1st. Dr. Winterer has kindly consented to move up his talk on Submarine Geology from a Diving Saucer for the February meeting.

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

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— PACIFIC PETROLEUM GEOLOGIST —

Published monthly by the PACIFIC SECTION
American Association of Petroleum Geologists
Address communications to the Pacific Petroleum
Geologist, P.O. Box 17486, Foy Station, Los Angeles 17 Calif.

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Next Deadline - February 25, 1965

ALASKA GEOLOGICAL SOCIETY

To an audience of over 70 persons at the January meeting of the Alaska Geological Society, Art Piper, District Producing Superintendent for Pan American Petroleum Corporation, gave a talk and slide show of Pan American's Cook Inlet operations.

Slated for the Society's February meeting is a showing of the U.S. Navy films covering their drilling operation on the North Slope. The film will be shown at a dinner meeting February 11, 1965 at the Harbor House, with no-host cocktails at 6:30 p.m. and dinner at 7:00 p.m.

On tap for the March 11 noon meeting is a talk on Cook Inlet regional geology by Lum Lovely.

Logging Symposium

The Sixth International Well Logging Symposium of the International Society of Professional Well Log Analysts will be held May 4-7, 1965, in Dallas, Texas. Approximately 30 scientific papers covering all phases of formation evaluation will be given. Symposium headquarters and all Technical meetings and exhibits will be located in the Dallas Sheraton Hotel.

The brochure listing the papers and authors will be available soon and may be obtained at the following address:

Franklin Wheeler
Vice President - Publicity S.P.W.L.A.
Skelly Oil Company
P. O. Box 1650
Tulsa, Oklahoma 74102

FROM THE PRESIDENT

The object of Pacific Section, as stated in our Constitution, is in part "to provide for discussion of subjects and problems coming within the scope of the profession." The executive committee recognizes a need to help supply funds for distinguished lecturers and to help pay for mailing costs or other local society needs. Also, it is recognized that another objective of Pacific Section's Executive Committee is to exercise fiscal responsibility over the members' funds.

As indicated in my letter published in the December, 1964, issue of the Pacific Petroleum Geologist, your Executive Committee has formulated a policy for what it considers a fair distribution of Pacific Section funds to distant members in the various cities where meetings are held, and also a method of announcing to the societies each year the amount they may expect. It is hoped that the solution to these two problems will fill a need by both society and executive committees.

The fairest method of distribution of funds seemed to be that based upon the number of members benefiting by such a distribution, and at the same time to give those societies with small membership enough funds to be meaningful. By this method any increase in society membership would be accompanied by additional funds from Pacific Section.

The plan adopted would operate as follows:

1. The geologic societies presently located in cities where meetings are held, i.e., Anchorage, Seattle, Sacramento, San Francisco, Bakersfield, and Ventura will receive as a distribution of Pacific Section funds two dollars (\$2.00) per member per year with a minimum of one hundred dollars (\$100), whichever is the greater.
2. For this purpose a member of a geologic society is one who has paid his current dues to Pacific Section.
3. The money to be distributed to each society will remain with Pacific Section and be credited to the society. The account will be closed at the conclusion of each annual meeting and a new account started. Funds will not be carried over from year to year. The use of funds made available herein are to be used to promote the objectives of the Pacific Section.
4. Should one or more geological societies be formed in the same city, or very closely located towns, the Executive Committee may, at its option, disperse funds in a manner best suited to all the membership in that area.
5. Any society may, periodically, request the number of members on record for their group by writing to the Pacific Section Membership Secretary.
6. It will be recommended to the incoming officers that within thirty days after assuming office, the president shall notify the president of each of the societies the amount of funds to which that society is entitled based upon their membership or because of any other outstanding financial condition, with a statement of why the amount is more or less than the preceding year.

Under this plan the amount of money allotted to most societies is equal to or greater than the average amount they have received over the past six years. In addition, the plan fosters the incentive of acquiring new members and the renewal of old memberships. The Pacific Section is now in the process of contacting

all National A.A.P.G. members who reside on the Pacific Coast who are not members of Pacific Section. A favorable response has already been obtained. It is hoped that this project will be carried on by the newly elected officers in April.

Registration - Conversation with Bob Paschall, Pacific Section legislation adviser, just prior to the Newsletter deadline, reveals that William Montgomery, consultant to the Senate Committee which held hearings on the proposed Senate Bill 1349, may recommend to the committee that a bill be introduced to register all California geologists without regard to specialty. According to Bob, Mr. Montgomery may propose the formation of a board of registered geologists whose duty will be to certify geologists for specialized work. The recommended legislation would be of different nature than Senate Bill 1349. Bob will follow up on this and keep us informed.

. Spence Fine

Geology at the University of California, Davis

Geology was first taught on the Davis Campus of the University of California in 1925 by a faculty member at Berkeley as an elementary service course for the students in Agriculture, which arrangement continued until 1952 when the College of Letters and Science was organized. In the Fall of 1953 Dr. Charles G. Higgins who was then commuting from Berkeley to give the elementary course moved to Davis to start the Geology Department. In that year he offered elementary physical and historical geology, mineralogy and petrology.

The Department acquired a second member, Donald O. Emerson, in 1957, and thus in the following year was able to add four more courses to its offering. In 1959 the Regents designated the Davis campus a "general campus" of the University, which meant that departments in the College of Letters and Science were no longer regarded solely as "service departments" to the College of Agriculture. This change in policy, coupled with a further increase in course offerings made possible when micropaleontologist Emile A. Pessagno, Jr. joined the staff, allowed the Department to announce requirements for the B. A. degree in Geology in the 1959-60 General Catalogue. The first students to graduate in Geology on the Davis Campus did so in June, 1960.

In 1960 the Department outlined requirements for a B. S. degree in Geology--more stringent than the B. A. requirements and designed as preparation for graduate study--and both B. A. and B. S. programs have been offered ever since.

In the Fall of 1962 the staff was increased to four by the addition of Thomas W. Todd and at the same time Charles V. Guidotti was temporarily employed to replace Higgins who was on reassignment to a research project. In the Fall of 1962, also, the department instituted a Master's Degree program and moved into quarters specifically designed for its use in the new Physical Science Building. Until that time, staff offices, class rooms, and laboratories had been crowded into borrowed or temporary space, scattered over the campus. The move to new quarters, marked the beginning of a new period of expansion and growth that is still continuing. Guidotti's position was made permanent in 1963 and he became the fifth staff member.

Higgins was Chairman of the department from its inception in 1952 until 1961 when Emerson took over. In the Fall of 1963, by invitation of Chancellor Emil

Mrak, Cordell Durrell moved from U.C.L.A. to Davis and became Chairman of the department and its sixth member.

Dr. James W. Valentine joined the department in the Fall of 1964 as Associate Professor bringing the staff to its present size of seven.

A curriculum revision in 1963 brought the B. S. program up to current standards, but the department retains the A. B. program which is designed for those who do not wish to become professional geologists, and for secondary school teachers.

The backgrounds and interests of the staff members are highly varied:

Higgins, now Associate Professor, took his Ph. D. at U. C. Berkeley in 1950. His fields of interest are general geology and geomorphology, and recently he has been studying the origin of beach rock on the Coast of Greece.

Emerson, who will be Associate Professor next year, is a petrologist-mineralogist-geochemist, and is working mostly in plutonic rock problems in the Inyo Mountains. His Ph. D. was awarded by Penn State in 1959.

Assistant Professor Pessagno took his Ph. D. at Princeton in 1960. He is a micropaleontologist and is now finishing up a monograph on the pelagic foraminifera of the Cretaceous of the Gulf Coast and Mexico.

Tom Todd, also Assistant Professor, took his Ph. D. at the University of Texas in 1959. His principal interests are in sedimentation and sedimentary petrology, and especially of sandstones and carbonate rocks. He also has more than five years experience in petroleum geology.

Assistant Professor Guidotti is a Harvard Ph. D. whose principal work has been in the study of high grade metamorphic rocks in the State of Maine. His work there is nearing completion and he will soon move his research activities to the western part of the continent.

James Valentine, Associate Professor, has his Doctoral degree from U.C.L.A. in 1958. He joined us after teaching at the University of Missouri for six years. His field is invertebrate paleontology and stratigraphy and his special interest is in paleoecology of the Pleistocene and Recent deposits of the west coast.

Cord Durrell who is a petrologist and structural geologist took his Ph. D. at U. C. Berkeley in 1936, and was a member of the Geology Department at U. C. L. A. from 1938 to 1963 when he moved to Davis. He is continuing his work on the rocks and structures of the northern Sierra Nevada.

The department is presently crowded into a very small space, but relief will come within a year when we will expand to fill the third floor of the Physical Sciences Building. Recently, also, we have begun planning for a new building for Geology to be occupied in 1969. We are provided with an excellent array of the most modern equipment for both teaching and research and we plan to submit this Spring our request to give the doctoral degree. Our library holdings in Geology are not as good as we could wish for but they are improving rapidly. Meanwhile all offers of books or serials in geology will be gratefully accepted.

Our enrollment is small at present--17 undergraduates are majoring in geology, and there are 10 graduate students--but there will be more next year.

The course offering in geology is limited to basic subjects but courses in peripheral subjects such as oceanography, limnology, soil physics, soil chemistry, soil mechanics, hydraulics, water quality, and others are offered by other departments on the Davis Campus.

CLASSIFICATION COMMITTEE

The A.A.P.G. Classification Committee and the Conservation Committee have announced their new list of California fields and pools effective January 1, 1965. Copies may be obtained by contacting M. C. Barnard, Jr., Richfield Oil Corporation, 555 S. Flower Street, Los Angeles, or by phoning MADison 9-4111, Ext. 2312.

Members of the Classification Committee are:

M. C. Barnard, Jr. - Richfield Oil Corp.
Cliff Edmundson - Shell Oil Co.
J. R. Jackson, Jr. - Humble Oil & Refining Co.
Glenn Ware - Texaco, Inc.
Bernard Minch - Union Oil Co.
Hal Rader - Standard Oil Co.
D. E. Ritzuis - Division of Oil & Gas
Doug Traxler - Signal Oil & Gas Co.
W. R. Wardner, Jr. - Conservation Committee of Calif. Oil Producers
Milton Whitaker - Mobil Oil Co.

Sacramento Petroleum Association

The Sacramento Petroleum Association has elected the following officers for the 1965 term of office:

President: Bill Hathaway
E. L. Doheny, Operator
37 Country Club Centre
Sacramento, California

Vice-President: Clark Ditzler
Brazos Oil and Gas Company
1220 H Street, P. O. Box 1054
Sacramento, California

Sec.-Treasurer: Sarge T. Reynolds
1316 Jimeno Lane
P. O. Box 757
Woodland, California

The incoming officers will formally assume their duties at the regular S.P.A. luncheon on January 13, 1965.

Los Angeles Forum

Dr. Ken J. Hsu, University of California, Riverside, spoke before the Los Angeles Forum on January 18, 1965 at the Mobil Auditorium. The subject of the very interesting talk was "The Franciscan Group of California".

Abstract:

The Franciscan group is currently considered a Jurassic-Cretaceous unit, being an eugeosynclinal equivalent of the Knoxville-Paskenta-Horsetown sequence of the Great Valley. However, the stratigraphic relationship of the fossil-bearing rocks and the more typically Franciscan rocks is not everywhere clear. The Franciscan rocks must be considered Jurassic or older in places where they are overlain by Knoxville unconformably.

The structural style of the Franciscan rocks of the Santa Lucia Range is similar to that of the argille scagliose of the Apennines. The following features were observed in both:

Extensional Structures: Originally even-bedded sandstone (Franciscan) or limestone (argille scagliose) beds were extended so that they are now variable in thickness. Boudinages formed when these beds were completely disrupted by extension. Shear or extensional fractures are confined to the brittle deformed boudines, and are absent in the surrounding shaly matrix. These features are similar to those produced experimentally when layers of materials of different ductility were extended.

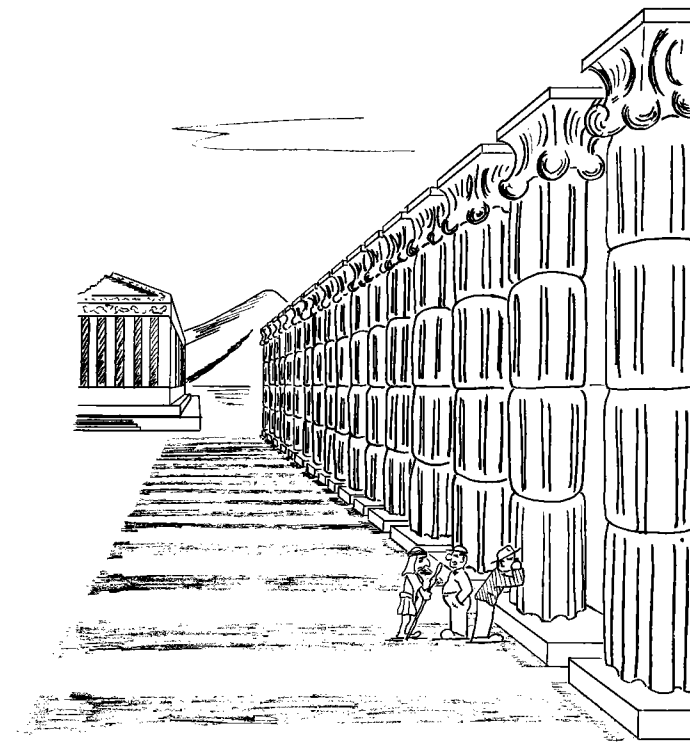
Compressional and Shearing Structures: The shaly rocks of both groups were ductily deformed by flowage. The shearing of the brittle rocks is indicated by the rotation of boudines. Bedding-plane shears and small-scale, low-angle thrusts are ubiquitous. Minor folds are present.

This combination of extensional and compressional longitudinal strains and shear strains in the direction of transport has been found in masses flowing under gravity, such as glaciers.

The Franciscan and the argille scagliose are also characterized by the occurrence of chaotic materials, commonly at the base of allochthonous units: Blocks of various lithology and different size are embedded in a sheared shaly matrix. Such chaotic materials, like glacial moraines, might represent detritus transported along the bottom of gravity-slid masses.

The argille scagliose have been interpreted as gravity-slid masses which were displaced many kilometers from their original depositional sites. I propose a similar tectonic interpretation for the Franciscan rocks of the Santa Lucia Range.

The new hypothesis for the structural history of the Southern and Central Ranges postulates that the Franciscan rocks were originally deposited at the site of the present western slope of the Sierra Nevada or the eastern side of the Great Valley. These rocks were displaced westward by overthrusting and/or gravity-sliding during late Jurassic, and probably again in middle Cretaceous. The Franciscan rocks of the Coast Ranges are thus allochthonous masses, occupying a similar tectonic position as the argille scagliose of the Apennines or the Wildflysch of the Swiss Alps.



IMPORTANT ANNOUNCEMENT

George Feister, announced in last month's P.P.G. as a candidate for Vice-President, has withdrawn because he is being transferred to Casper, Wyoming as Chief Geologist, Glacier Division.

In accordance with our constitution, a nomination has been made by written petition with twenty-five signatures, naming Eugene R. Orwig as a candidate for Vice-President of the Pacific Section.

Ballots will be mailed to the members in the near future.

PERSONAL ITEMS

RICK SHOEMAKER, Marathon, was transferred to Los Angeles after a 6-year stay in Anchorage. A departing gift from his co-workers was a very appropriate painting by Marv Mangus, Alaskan artist and oil geologist (Atlantic).

New addition to Pan American's geological staff in Anchorage is SID QUARRIER, Geologist (JG). Sid hales from West Hartford, Conn., and is a Trinity College graduate.

ED EAST, Union, is all smiles since he's heard he'll be going to the section meeting this spring.

Why was it that DICK LYON abstained from partaking of the oysters at the recent Stag?... (unofficial reports have it that given just one oyster Dick goes wild--and sometimes even animal).

GAR PESSEL and MILT NORTON, Richfield, Anchorage, have been helping local dog mushers get their teams in shape for the coming Fur Rendezvous. Hush, you muskies!

Most skiers are content with the 2500-foot vertical drop offered from Mount Alyeska's chair lift, but not GIL MULL Richfield, Anchorage. He climbs up another 1000 feet for a real run to the bottom.

By the time you read this, it will be almost too late to submit corrections and revisions for the supplemental directory to be distributed at the Bakersfield meeting. DOUG TRAXLER says "Get 'em in!"

Speaking of meetings, ERV SCHWADE, of Richfield, is presently pondering this paradox: a person who is known well enough to work on the national convention suddenly finds that no one knows him. Don't worry, ERV, your friends will stop avoiding you after all the work is done.

THOMAS EDWARDS has recently joined Signal's geological staff in L.A. Tom has been doing consulting work in the Huntington Beach area.

Two people from Shell's Seattle office have been transferred into L.A. They are JACK CHANEY, a geophysicist, and ART WELLER, who was district geologist in Seattle. Wonder if they've gotten dried out yet.

There is a rumor afoot that Pan-Am, which has tried to work the L.A. basin from Casper, has opened an office here. If so, it must be a shoe-string operation; the Bell Telephone system never heard of them.

DICK ANDERSON, who was associated with Aden Hughes for a number of years, is now warming a microscope at Richfield's lab in Long Beach.

NEAL HURLEY, geophysicist for Richfield's foreign department, has been pulled in to Los Angeles from the Long Beach office. Can't reach him for comment

on free-way traffic because he ended up in Sydney, Australia. We've known that the free-ways are poorly marked, but that's ridiculous! It will probably take him two or three weeks to find his way back.

JACK WOODWARD, who started with Mobil way back when it was Stan-Vac, is trying to adjust to life in Santa Fe Springs. Jack, who came here from the Phillipines, has spent nine years kicking around the world.

Pauley Petroleum has shoved a few people up the ladder. JIM ANDERSON, who was Chief Geologist, is now Vice-President in charge of exploration. DICK HESTER has taken over as Chief Geologist, and TONY MORRIS has become Vice-President and Manager of Middle-East Operations for Pauley Petroleum, International. Congratulations, gentlemen.

Speaking of TONY, he has just returned from Teheran. He attended a conference at which JEAN B. SENTEUR de BOUE announced a revolutionary new development for his world-famous oil-finding device, the "Debougermeter". The new device is designed to fit all standard "Debougermeters", which then become "Zoomatic Debougermeters". The improved model not only finds oil deposits, but also evaluates them. It was first used successfully in the recent Iranian offshore bidding, where it showed conclusively that even though the operators will lose \$0.05/bbl., they will make it up on volume.

Union Oil personnel have just finished a little game of musical chairs. It went like this: GEORGE FEISTER went to Casper to be Division Geologist of the Glacier Division; CHUCK CARY went from Bakersfield to Santa Fe Springs to be Assistant Southern District Geologist; DEAN LAUDENAN transferred from Orcutt to Bakersfield as Assistant Northern District Geologist; and JIM SCOTT went from Bakersfield to Orcutt.

BILL GUSSOW, of Union's Research Department, has just returned from the geological conference held in New Delhi, India. He is, however, a little vague about the proceedings, it seems that he missed most of them. His story is that he went on a field trip in the Himalayas and was snowed in. Tell us, Bill, is there really an Abominable Snowwoman?

From the looks of things, Humble is about to have lost circulation problems right in its L.A. office. During the past month, these people have move in: BRUCE HELSTROM, geophysicist from U.C.L.A.; ROBERT E. BLANKENSHIP, geologist from the U. of Oklahoma; WALTER C. DUKE, geologist from the U. of Colo.; WM. T. BISKAMP, geologist from Manahans, Texas, formerly in Eugene, Oregon; RICHARD L. WINCHELL, geophysicist from Oklahoma City; MORGAN COLE, geologist from Tyler, Texas; DONALD L. HICKS, geologist from Corpus Christi; EARL MADSEN, geologist from Chico, Calif.; and H. A. GARAAS, geologist from I-forget-where.

We all are aware that the profession isn't what it used to be, but now there is some question about geologists themselves. It seems that DON SIX of Texaco had a birthday last month, which, in itself, is not newsworthy. But where did he celebrate it? At the Pink Pussy Cat? Nope. At the Music Center! Oh, "Salome and the Seven Veils"? Wrong again! Gilbert and Sullivan, no less! But, Don, if you're going to absorb culture, you don't have to hide in the last row of the top-most balcony. And where did you get that monstrous pair of binoculars?

It was almost like old times at the Richfield Long Beach office last month--there was a core party. Only one neophyte paleontologist was seen sampling Recent coprolite deposits of Mus musculus. HOWARD STARK, who hosted the party, patiently explained the effect on E-logs of

such deposits. The Geology Department from U.C., Riverside, carted off the remains of the cores for its proposed core library. Anyone else looking for a painless way to dispose of cores might try calling F. W. DICKSON, chairman of the geology department at Riverside.

EVERETT RICHARDSON, District Geologist, Branch of Mineral Classification, informs us that on February 1 the U.S.G.S. Staff is moving into the new Federal Building in Bakersfield from the U.S.G.S. Camp near Taft.

ROGER MARTIN, a 1953 graduate of U.C.L.A. recently joined the Department of Water Resources as a Geologist working out of Palmdale. He has been a Geologist in New Zealand for several years.

ED LASKOWSKI, Standard's Entrepreneur and Spectrochemist, has taken an educational leave of absence for one or two semesters at U.C.L.A. and U.S.C.

BEN BUONGIORNO, Standard, has been transferred to the Northern Division, Oildale, from the Western Division, Sotex, Midland, Texas.

A paper of special interest on Water and Water Problems will be presented by Joseph Franzini at the Stanford Conference to be held at the Bakersfield Hacienda on March 13, 1965.

HAROLD SUDGEN, Tidewater's Coastal District's answer to the "French Underwater", was a recent sub sea visitor to Santa Cruz Island. Among items collected were 5 abalone, 6 lobsters, 3 sheepshead, 4 nudebranches, 32 underwater color slides, and 1 very pretty mermaid. Harold tells us the National Geographic will conduct an underwater search off Santa Cruz Island this summer for several Spanish Galleons which have been reported missing since the 16th century.

We understand that Texaco's DON HAGEN has just returned from Europe where he had a fun-packed skiing vacation. Welcome home, Don.

J. E. DRYDEN of Standard Oil will be transferred to Monahan, Texas, effective this spring. We understand that the boys at Standard have been heard singing "The Eyes of Texas" (while racing horny toads, and rolling tumble weeds down the hall) in an attempt to acclimate the new Texan.

We understand that F. DONALD DIDIER, after trying his hand for several years on insurance and real estate, has decided to return to his second love, geology. His first love, wife Jean, teaches school. Don can be consulted at 4276 De Paul, Ventura (805-642-2950).

On December 19th the Sacramento Petroleum Association held its first annual Christmas party. The affair was loudly acclaimed by all who attended and thanks are given to the planning of LEON WILLIAMS and for the generous support of the following companies: Cook Testing Co., Exploration Logging, Go-Western, Grover Collins Mud Co., Schlumberger, and Welox.

The family of ROLAND BAIN was selected as the Sacramento Union's "Christmas Family". With five children in the clan, we suspect that the Bain's Christmas was somewhat more hectic than that pictured in the paper.

Another native Texan returns home--GEORGE BROWN (Marathon) has been transferred to Houston.

Recently a "company executive" was celebrating a good well. After a tour of the Rio Vista pubs, the executive returned to Sacramento; his car, however remained in

Rio Vista. At this writing it is still not clear exactly how this situation came about.

DICK WILSON, Humble's district geologist in Bakersfield, has found a most informal way to get acquainted with his neighbors. That is retrieving the family cat from the neighbor's attic on cold, rainy mornings.

NURSERY NEWS

Conrad Maher and his German-born wife, Erika, were blessed with a baby girl named Karen Patricia on December 7th. Pretty good for a Minnesota farm boy who went to Germany just to sit on one "little-ole" well.

M. H. (BUD) Oakes, Union, Casper, and his wife Barbara announce the birth of their first daughter, Elizabeth Ann, December 26th--weighing 7 lbs., 2 ozs., and 20 inches long. Elizabeth Ann joins her two brothers, Jeffrey and Stephen in the Oakes household.

Ron Heck of Pauley Petroleum and his wife Shirley accepted delivery of a baby boy on January 20th--7 lbs. 1/2 oz., 20 inches long, named Gary Alexander. Gary's arrival was approved by brother Dean.

John & Gayle Smith are proud new parents of a baby girl weighing in at 8 pounds, 10 ounces, on January 28th. John is a geologist in Humble's Bakersfield office.

NEW ADDRESSES FOR MEMBERS LISTED IN CURRENT AAPG DIRECTORY

Richard R. Clawson
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Calgary, Alberta, Canada

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F. M. Peters
Post 14
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(Hanover) Germany

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Theodore P. Ellsworth
919 Americana Bldg.
Houston, Texas

Malcolm B. Greene
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CALENDAR

Geological Society of Sacramento

Tuesday, February 9, 1965 at 8:00 p.m. The speaker will be M. King Hubbert, and the topic, "Energy Resources and Their Significance in Human Affairs". The meeting will be held in the Public Works Bldg. (Basement Board Room), 1120 N. Street, Sacramento.

- Feb. 9, 1965 Tuesday evening, El Tejon Hotel, 6:30 p.m., San Joaquin Geological Society "General Summary of the Geology of the Sahara, Louis F. Villanueva and James I. Mercier, Tidewater Oil Co. This is Ladies Night and all wives and sweethearts are invited to attend.
- Feb. 15, 1965 Progress Report on a Mineralogical Study of Nevis, Leeward Islands - A Summary, by Dr. C. Osborne Hutton, Professor of Mineralogy, Department of Geology, Stanford University. Room 320 Geology Bldg., 4:00 p.m.
- Feb. 16, 1965 S.E.G. Society meeting, Stockdale Inn, 5321 Stockdale Highway, Bakersfield, Mr. E. V. McCollum, speaker--"Gravity Surveying in a Buried Granite Ridge Area" cocktails at 6:00, dinner at 7:00 \$3.50.
- Feb. 23, 1965 Metamorphic Features in Massive North American Sulphide Deposits, by Dr. J. O. Kalliokoski, Associate Professor of Geology, Princeton University, Princeton, New Jersey. Rm. 320 Geology Building, 4:00 p.m.
- March 1, 1965 Interbasin Movement of Ground Water in the Great Basin, by Dr. George B. Maxey, Research Professor of Hydrology Desert Research Institute, University of Nevada, Reno. Room 320 Geology Building, 4:00 p.m.
- March 1, 1965 Monday evening, 7:30 p.m., Bakersfield College, Science and Engineering Bldg. Room 56, "Boundaries of the Oligocene" Dr. Donald Weaver, University of Calif. Santa Barbara.
- March 9, 1965 Tuesday evening, 6:30 p.m., El Tejon Hotel, San Joaquin Geological Society "Law for Geologists", Walter L. Rowse, Intex Oil Company.
- March 16, 1965 Dr. J. E. White, "Seismic Waves Around Oil Wells", S. E. G. Society meeting, Gourmet 21, 710 Turxtun, Bakersfield, cocktails at 6:00, dinner at 7:00 \$3.75.
- March 22, 1965 Monday Evening, 7:00 p.m., Mobil Auditorium, Los Angeles. Geological Forum, Dr. Robert F. Dill, U. S. Navy Electronics Lab., San Diego, Title of talk to be announced. Informal dinner at Colombo's, 819 So. Figueroa at 5:30 p.m.

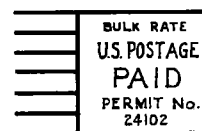
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Volume 19

Number 2

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NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

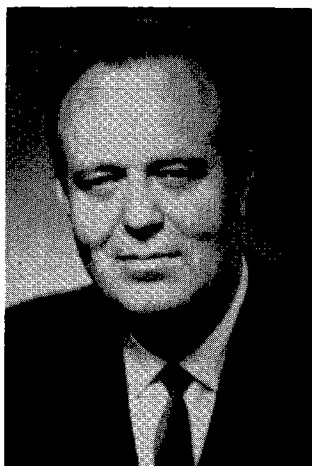
Volume 19

March, 1965

Number 3

ASSOCIATION ACTIVITIES

A.A.P.G. ELECTS NEW OFFICERS



Orlo E. Childs



A.A. Meyerhoff

Orlo E. Childs, President of the Colorado School of Mines, Golden, Colorado, will become the 49th President of the American Association of Petroleum Geologists on April 29, 1965, as announced today by Grover E. Murray, President of the Association. Serving with him on the 1965-66 Executive Committee of the organization will be: John M. Parker, Kirby Petroleum Co., Denver, Colorado, as Vice-President; as Past-President, Grover E. Murray, Vice-President and Dean of Academic Affairs of Louisiana State University, Baton Rouge; Incumbent George C. Hardin, Jr., Kerr-McGee Oil Industries, Inc., Oklahoma City, as Secretary-Treasurer; and Incumbent John C. Hazzard, Union Oil Co. of California, Los Angeles, as Editor.

The new slate of officers will assume the responsibilities of directing the 15,000 member organization at the close of the 50th annual meeting of the Association to be held at the Jung Hotel in New Orleans, La., April 26-29. This meeting will mark the beginning of the A.A.P.G.'s Semi-Centennial Celebration, "The First Fifty Years of Petroleum Geology".

A.A. Meyerhoff has accepted the position of Managing Editor of the BULLETIN of the American Association of Petroleum Geologists. Dr. Meyerhoff will succeed Joseph P. D. Hull who held the position for 39 years.

Meyerhoff graduated from Yale University in 1947 with a B. A. in geology. He attended the Graduate School of Geology at Harvard University and went on to Stanford University where he received his M. S. and Ph. D. in geology.

In 1948 he went to work as a geologist for the U. S. Geological Survey in Billings, Montana, and in 1952 joined the California Exploration Company. He worked in several Latin American countries. In 1956, he became Senior Geologist with the Cuba California Oil Company, Havana. Later he worked for the Chevron Oil Company and The California Oil Company throughout the southern United States.

Meyerhoff joined the A.A.P.G. in 1952. He is a Fellow of the American Association for the Advancement of Science and a member of the Society of Economic Paleontologists and Mineralogists, the Geological Society of America, the American Geophysical Union, Lafayette Geological Society, Sigma Xi, Phi Beta Kappa, and Cum Laude Society. He has worked on various committees of the American Geological Institute, among them the Professional Standards Committee and Translations Committee. He has also served as an abstractor for GeoScience Abstracts.

PACIFIC SECTION A.A.P.G.-S.E.P.M.-S.E.G.

Hosted by the San Joaquin Geological Society the Pacific Section of the American Association of Petroleum Geologists (A.A.P.G.) will hold its Fortieth Annual Convention in Bakersfield, April 1-3, 1965. The meetings will be held in conjunction with the Society of Economic Paleontologists and Mineralogists (S.E.P.M.) and the Society of Exploration Geophysicists (S.E.G.).

For the first time in the history of the Pacific Section, the meetings will take place outside of Los Angeles and will be staged in the new Bakersfield Civic Auditorium which is admirably suited for presenting programs such as this. All technical sessions will take place here, as will the luncheons, dinner-dance and ladies' activities.

Over 60 papers will be presented, in a well rounded and varied program under the general convention theme, "The Coordinated Search for Oil and Gas in Highly Explored Areas".

For the ladies a fine program has been arranged by the Bakersfield Association of Petroleum Wives which includes luncheons, a fashion show and a tour of the Standard Oil Company's Refinery. A hospitality room will also be available at the Auditorium, staffed by the Petroleum Wives, and the dinner-dance Friday evening promises to be a fitting climax to a grand series of pleasurable activities.

The field trip Saturday morning features underwater geophysical demonstrations. It is followed by a tour of the geology and oilfields of the southeast edge of the San Joaquin Valley. This brings to a close this memorable Fortieth Annual Meeting.

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Published monthly by the PACIFIC SECTION
American Association of Petroleum Geologists
Address communications to the Pacific Petroleum
Geologist, P.O. Box 17486, Fay Station, Los Angeles 17,
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Next Deadline - March 29, 1965

U.C.L.A. NEWS

During the past year (1963-64), the Department of Geology, U.C.L.A., has graduated the following: A. B. degree - 8, M. A. degree - 6, Ph. D. degree -- 8. The Ph. D. degrees were awarded to Briant L. Davis with a thesis entitled "High-pressure x-ray investigation of CaCO_3 -II and CaCO_3 -III at 25° C. and of the calcite-aragonite transition in the 300-500°C. temperature interval"; to Lawrence A. Frakes with a thesis entitled "Paleogeography of the Trimmers Rock Member of the Fort Littleton Formation (Devonian) in Southern and Eastern Pennsylvania"; to Edward C. Jestes with a thesis entitled "A stratigraphic study of some Eocene sandstones, northeastern Ventura Basin, California"; to John G. Johnson with a thesis entitled "Great Basin Lower Devonian Brachiopoda"; to William W. Lumsden, Jr. with a thesis entitled "Geology of the southern White Pine Range and the Northern Horse Range, Nye and White Pine Counties, Nevada"; to William R. Schmus with a thesis entitled "The geochronology of the Blind River - Bruce Mines Area, Ontario, Canada"; to Willard E. Sharp with a thesis entitled "The system $\text{CaO-CO}_2\text{-H}_2\text{O}$ in the two phase region calcite-aqueous solution and its application to the origin of quartz-calcite veins"; to Byron G. Weissberg with a thesis entitled "Geochemical and petrographic aspects of arsenic deposits".

New staff appointments include Dr. Stephen E. Calvert, sedimentology, Dr. Paul H. Ribbe, x-ray and optical crystallography and Dr. Ian Kaplan, biogeochemistry of recent sediments and isotope geochemistry of terrestrial rocks and of meteorites. Dr. Kaplan will arrive here for the spring semester.

Dr. J. C. Crowell entered his second year (of this era) as Chairman of the Department.

Dr. J. M. Christie received a Guggenheim Fellowship and is now on sabbatical leave in Canberra, Australia doing studies of deformation of rocks and minerals. Dr. N. Gary Lane is also on sabbatical leave and working on the paleoecology of the Crawfordsville (Indiana) Crinoid Beds, under support from an N. S. F. grant.

The remainder of the faculty including Drs. D. I. Axelrod, D. Carlisle, C. Nelson, W. Popenoe, W. W. Rubey, K. D. Watson, G. W. Wetherill, G. W. Ernst, C. A. Hall, H. Loeblich, G. Oertel, J. Rosenfeld, C. E. Corbato, R. L. Shreve will be in residence. Mr. Ted Bear will be in residence for the fall semester only.

Drs. J. C. Crowell and L. Frakes are investigating Permo-Carboniferous "tillites" in the Falkland Islands under sponsorship of N. S. F. Office of Antarctic Programs.

Dr. W. W. Rubey and D. I. Axelrod attended the International Geologic Congress in New Delhi.

The U. C. L. A. Geology Summer Field Camp was held for the fourth year near Pismo Beach. It was attended by eight students under the direction of Dr. C. A. Hall.

For the sixth summer the Department administered an N. S. F. Undergraduate Research Participation Program. Five students spent the summer in British Columbia in a continuation of investigation begun five years ago on the structural and geochemical relations in the western margin of the Coast Range batholith under the direction of Dr. D. Carlisle.

During the past year the new wing of the geology building was completed. The departmental office and the geology library are now housed in the new wing. We also have expanded research facilities of our x-ray laboratory and purchased an electron microprobe.

U.C.-Santa Barbara NEWS

The period 1963-65 saw the Department of Geology embark on a major program of developing graduate work to the Ph.D. level and of recruiting new faculty members to meet the marked increase of students. An additional important objective was to develop some of the new and modern fields in earth science that have stimulated revolutionary changes in certain parts of the geological sciences.

Three major appointments were made (A.C. Waters, G.R. Tilton, and C.A. Hopson) for the purpose of developing research in the overlapping areas of geochemistry, geochronology, petrology, and volcanology, including the application of isotope tracers, mass spectrometry, and x-ray fluorescence techniques to problems of the origin and differentiation of igneous and metamorphic rocks. An additional appointment - of an experimental geochemist interested in the hydrothermal syntheses of minerals - is pending and will complete the enlargement of the departments activities in this direction.

At the same time we have strengthened a second specialty - Cenozoic stratigraphy and paleontology - by the appointments of C. W. Rock and J. C. Clark. An additional appointment, in the field of sedimentary petrology, has been authorized. Previous to 1964, the department faculty consisted of R. W. Webb, R. M. Norris, R. V. Fisher, D. W. Weaver, and W. S. Wise. The new appointments will bring the number of faculty members to twelve. With this increase in size there have been corresponding increases in space occupied and in equipment.

A proposal for a Ph.D. program was written in January 1964, and authorized by the University to start with the academic year 1964-65. The first crop of graduate students, nine in number, is hard at work; they are about equally divided between "soft rock" and "hard rock" fields. Forty-seven undergraduates are registered for the autumn semester, 1964-65.

During this same period the Department started its own field camp on Santa Cruz Island, with Professor D. W. Weaver in charge.

Research projects under way by various faculty members and graduate students cover a wide variety of topics, and include studies in eastern Canada, Maryland, Washington, and Oregon as well as California. One faculty member is also engaged in a part of the field training of the astronauts.

AAPG PACIFIC SECTION
BUSINESS OPERATIONS REPORT FOR 1964

Income:

Annual Convention	\$1,574.41
Dues	2,941.96
Guidebook Sales	85.86
Mallory Project	284.81
Picnic	52.00
Fault Bibliography	500.00
Total Income	\$5,439.04

Expenditures:

Association Business	1,227.45
Alaska Geological Society	265.99
Coastal " "	65.00
Northwest " "	65.00
San Francisco " "	61.30
San Joaquin " " 8	448.47
Sacramento " "	65.00
Christmas Dance	252.14
Forums and Lunches	1,090.05
Newsletter	2,461.80
Total Expenditures	\$6,002.20

Net Business Operations' Loss, 1964 ==563.16

Inventories to be recovered from Sales

Directory	\$2,186.76
Cross Sections	3,092.64
Total	\$5,279.40

Cash Position December 31, 1964

Checking Account	\$ 390.10
Savings Account	898.04
Savings and Loan Account	9,173.97
	\$10,462.11

Net Worth

Inventories to Recover	\$ 5,279.40
Cash	<u>\$10,462.11</u>

Net Worth Dec. 31, 1964 \$15,741.51

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All AAPG Pacific Section Publications as advertised in the January, 1965 issue of the P.P.G. will now be available only through the Pacific Section business address.

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As in the past, San Andreas Fault Cross Sections and Directories may also be purchased from:

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Checks for all orders should be made payable to the Pacific Section A.A.P.G. and must be sent with the order. Quoted prices for publications include mailing and handling charges.

Sacramento

The talk on "Energy Resources" by Dr. M. King Hubbert was enthusiastically received by 100 people attending the Geological Society meeting on February 9, 1965. Dr. Hubbert's facts and conclusions are available in "Report 1000-D", National Academy of Sciences, Washington, D. C. This information should be widely disseminated for all to study.

The Geological Society of Sacramento field trip will be held sometime in the first part of June, 1965. The trip will be lead by Dr. Durrell into the Portola area east of Oroville. More information later.

The Geological Society of Sacramento speaker for March will be Asst. Prof. Chuck Higgins of the University of California at Davis. He will speak on the Geology of Greece at the dinner meeting.

ALASKA GEOLOGICAL SOCIETY

At the February dinner meeting of the Alaska Geological Society, members and guests were treated to a showing of the Navy's colored films covering their drilling and development operations of NPR 4 on the North Slope in the early fifties. A total of 5 reels were shown and provided a long but nevertheless pleasant evening.

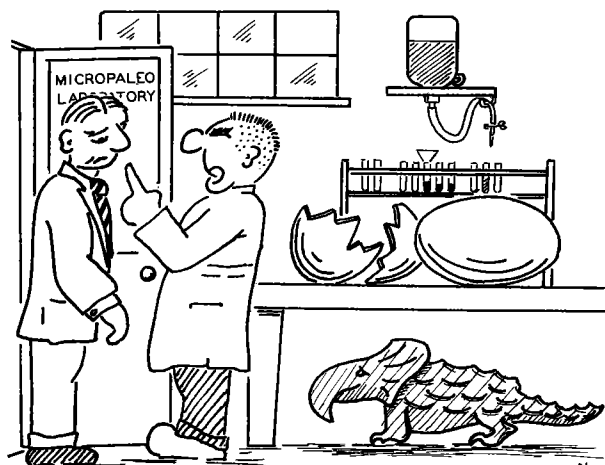
At the noon meeting on Thursday, March 11, Lum Lovely, independent, will give a paper on Cook Inlet regional geology.

On tap for the April 15 meeting is Leo Sarella of the U.S.G.S. who will give a talk on the comparisons of coal versus oil and gas as a source of energy.

NURSERY NEWS

George Brown (Marathon) became a father again on January 4, 1965, when his wife, Joyce, gave birth to a 6 lb. 4 oz. boy rock hound.

Louie Fitzhugh (Texaco) came home from a housewarming on January 15, 1965, just in time to take his wife to the hospital for the delivery of his son, James Douglas.



YOU TELL THAT IDIOT FENWICK, IF IT ISN'T A MICROFOSSIL, DON'T SEND IT IN!

PERSONAL ITEMS

The strangest story of the month comes out of Mobil's Santa Fe Springs office. It seems that Chuck Cline and Bob Wagner were out doing a little field work when they came across a specimen of wild life rarely seen in California these days. It was so rare that Chuck decided to stalk it and take its picture. At the crucial moment, the animal turned and charged, much to Bob's amusement and Chuck's consternation. That's all right, Chuck; damned few geologists are still around who can claim they've been chased by a real, live, American buffalo--especially one named "Ole George".

It's a sure bet that Chuck was making better time than Walt Scott, Richfield, was on the Harbor Freeway last month. The cop claimed Walt was obstructing traffic. Walt's story is that his old TR-3 was being held back by the suction from a truck following him. Visiting hours at the county jail will be announced after the trial next month.

Jack Cheney, Senior Geophysicist for Shell, has been transferred from Seattle to L.A.

Art Huey, lately of Signal's L.A. office, is on his way to Tunisia and other parts of North Africa for an indefinite stay. In some obscure manner and for some obscure reason, Art is reported to have gotten himself elected a Fellow of the Geological Society of London. Do you suppose he got a little confused and thought he was becoming one of the "fellahs"?

Judging from the washed-out appearance of Gar Pessel and Gil Mull, visiting firemen from Richfield's Anchorage office, life in the frozen North is quite trying. In fact, we suspect that's what they're washed-out from--"trying", since the Fur Rendezvous wound up just before they headed South. Both Gil and Gar, who are in Long Beach to find out where they are (stratigraphically) on the North Slope, are honorary members of a well-known Alaskan Indian Tribe..

CAMSOC (California Miscellaneous Society) held its last irregular meeting at Noriega's in Bakersfield. The anonymous members, chairmanned by Doug Traxler, Signal, tabled a motion by Senteur de Boue to hold the next meeting at Wild Rose Station.

Don Bruce, Skelly (Anchorage), reports that there are now a total of 9 certified members of the American Institute of Professional Geologists (AIPG) in Anchorage. Three additional applications are pending.

Bill Fackler, Phillips (Anchorage), recently was on a 2-week visit to his company's main office in Bartlesville, Oklahoma.

Sinclair's Old Salty Bill Barnwell (Anchorage) has been casting hopeful glances at the ice-clogged Inlet these days. Seems he just can't wait to get his cabin cruiser launched.

But, say! the biggest news in Alaska is that Ernie Bush, Sinclair (Anchorage), is back in the car trading business again. He just bought another car. This time it's a Volkswagen. Let's see, Ernie, that makes about eleven since Santa Maria, doesn't it?

Phil Persons is now the A.A.P.G. correspondent, replacing G. C. Ware of Texaco. Mr. Persons can be reached at E. L. Doheny, Operator, 136 El Camino, Beverly Hills, California.

R. Stanley Beck, Paleontological Consultant, invites all paleoelectric correlators to attend his presentation at the S.E.P.M. sessions of the convention.

Bruce Robinson has been transferred to the Paradise community of Toowoomba, New South Wales, Australia, as Kern County Land Company's geologist.

Cutler Webster recently resigned from Tidewater Oil Co. and is now associated with Ferguson and Bosworth.

Jim Mercier has resigned from Tidewater Oil Co. and retired to the Kern River Golf Course. Evidently the practice he is getting on the golf course has already paid off; he recently made a hole-in-one.

A usually reliable source reports a last minute addition to the Pacific Section Convention program. A highly interesting paper entitled "Underground Storage and Recent Earth Tremor near the French-Swiss Border" will be presented by Jean B. Senteur de Boue. Don't miss it!

John Carson, geophysicist with Standard, has been transferred to Anchorage from the Seattle office.

Darrell Helmuth, Standard geologist is being sent to Seattle for "temporary assignment".

Tom Wilson has been promoted to Alaska Area Exploration Supervisor for Marathon Oil. Congratulations, Tom.

The L.A. office of Standard Oil saw a few personnel changes last month. Bob McCollom and John Spangler were transferred into the Los Angeles Basin from Seattle, while Dean Johnson has been sent north to replace them. (That may not be quite right, but Dean, at least, should tell it that way.) From the other direction, Midland, has arrived Gene Bottoms, who has been transferred from Standard of Texas to Standard of California. Bob Lindblom is in L.A. on a six-month temporary assignment. Bob is down from Bakersfield and is reportedly a little concerned about maintaining his Bakersfield "contacts" during the interim. Don't worry, Bob, just remember the words of that great philosopher, Senteur De Boue: "A core in the hand is worth two down the hole".

Dick Meyer has joined Union's staff at Santa Fe Springs. Dick was formerly with Sinclair in Casper.

Louis Simon, Texaco, has just returned from a month's skiing vacation in Austria and Switzerland. He was accompanied by his wife and family.

Russ Simonson of Marathon recently attended a week's management course at that company's headquarters in Findlay, Ohio. Russ says that this jet travel doesn't allow a person much time to adjust from a cold 20 in Chicago to a hot 80 in L.A. Just wait until he is transferred back there in June or July! There won't be time to adjust from a cool 80 in L.A. to a hot 95 in Findlay, either.

Bill Rascher, of Richfield's Long Beach office, gets our vote for bravest man of the month. Even though his wife, Joan, is expecting their fifth child momentarily, Bill has sold the roof from over her head. The Raschers had planned to move to the Fashion Hills section of Santa Ana, but changed their minds after advertising their house for one day. That was all it took for an eager buyer to show up, so now they're out looking again.

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Bob Hacker, Treasurer, A.A.P.G. Pacific Section, has resigned from Lloyd Corp. as of February 1 to join the ranks of Consultants. Bob will remain with Lloyd Corp. on a retainer basis and may be contacted either at the Lloyd Corp. offices or at his new business office at 8321 Beverly Blvd., Los Angeles, Tel. 653-1751 P.S. The Treasurer's Report for 1964-65 is reprinted in this month's P.P.G.

George Rudkin and George Brown (Marathon) will get a chance to try out a new climate when Marathon closes its Sacramento office in March or April and moves to Bakersfield.

Joe Bogard (Schlumberger) has been assigned to Sacramento. He graduated from Missouri School of Mines and Metallurgy in 1964. Welcome to you, Joe, your wife Louise, and daughter, Cynthia.

Mr. Burt Amundson, formerly with Standard Oil, has been instructing in Geology at Sacramento City College for the past 2-1/2 years. He welcomes all persons interested in taking Geology courses, either night or day school, to inquire about this expanding Junior College.

Bruce Brooks (Consultant) and John Evers (Evers' Drafting Service) both know now that Bruce's car is not equipped to shift into reverse at 40 mph. The garage mechanic didn't have to say a word.

Chuck Breitsprecher (Texaco) is the latest to be P.P.G. Correspondent. He graduated from the University of Washington in 1962 and moved to Sacramento that same year.

Milt Zeni, District Geologist, Standard, Oildale, spent a few hours visiting Disneyland to get some ideas for displays for the Spring Budget Meeting. He also visited the Technicolor Studios to be sure the colors he used would not clash.

Mort Polugar found it difficult to stay on his diet at the recent Standard Oil Company Paleontology Conference in La Habra. He discovered a new drink called the "Santa Margarita", Tequila and lime juice in a sand covered glass. Ole!

S. B. Reber (Standard, Oildale) has been appointed District Geologist for the Northern District. He replaces Dick Darrow who is currently on a special assignment traveling to various district offices of the Corporation.

Bill Davidson (Standard, Northern Division) has joined the commuters on the Bakersfield-Taft safari.

Gil Horning, ex-hotel proprietor, has re-joined Standard Oil's Geological Staff in Oildale. His family will soon join him in Bakersfield from Santa Rosa.

CALENDAR

March 12, 1965 - Dinner Meeting, 6:30 PM
Geological Society of Sacramento.
Geology in Greece by Dr. Charles G. Higgins. For details contact Mr. Burt Amundson, 2321 2nd Ave., Sacramento, California.

Bakersfield College, 7:30 p.m., Room 56, Science and Engineering Building.

April 5, 1965 - Dr. Joseph Graham,
Stanford University
"Fossil Man"

May 3, 1965 - Dr. G. Dallas Hanna,
Academy of Sciences, San Francisco
"Biological Aspects of Alaskan
Earthquake of 1964"

U.S.C. Tuesday Noon Meetings, Building GB, Room 102,
827 West 37th Street

March 16, 1965- Mr. Bennie W. Troxel, Sr. Geologist
Calif. Div. of Mines & Geology
"Programs of the Division of Mines
and Geology" -D. Sherman

March 23, 1965- Dr. William C. Gussow
Sr. Research Assoc., Union Oil Co.
"Mountain Building" -F. Wright

March 30, 1965- Mr. Harold D. Palmer, Grad. Student
"Offshore Island Geology in
Southern California by Helicopter"
-D. Kersey

April 6, 1965 - Mr. James W. Vernon
Ph.D. Candidate in Geology
"Sediment Transport on the Inner
Shelf of Catalina Island"
-L. Hoyt

BIBLIOGRAPHY OF RECENT PUBLICATIONS

U. S. GEOLOGICAL SURVEY

Professional Paper 416: Geology and ore deposits of the Bragoon quadrangle, Cochise County, Arizona, by: J. R. Cooper and L. T. Silver \$4.25

Professional Paper 434-E: A correlation procedure of augmenting hydrologic data, by N. C. Matalas and Barbara Jacobs \$.15

Professional Paper 437-A: Alluvial fans and near-surface subsidence in western Fresno County, California, by W. B. Bull \$1.50

Professional Paper 449: Geology of the central and northern parts of the Western Cascade Range in Oregon, by D. L. Peck, A. B. Griggs, H. G. Schlicker, F. G. Wells and H. M. Dole \$1.25

Professional Paper 458-B: Rocks, structure, and geologic history of Steamboat Springs thermal area, Washoe County, Nevada, by D. E. White, G. A. Thompson and C. H. Sandberg \$2.50

Professional Paper 461: Geology of the Klondyke quadrangle, Graham and Pinal Counties, Arizona, by F. S. Simons \$2.25

Bulletin 1180-C: Middle and Lower Ordovician formations in southernmost Nevada and adjacent California, by R. J. Ross, Jr., with a section on Paleotectonic significance of Ordovician sections south of the Las Vegas shear zone, by R. J. Ross, Jr., and C. R. Longwell \$.65

Water Supply Paper 1945: Quality of surface waters of the United States, 1962 Parts 9-14: Colorado River Basin to Pacific slope basins in Oregon and lower Columbia River basin. \$2.25

Geophysical Abstracts 216: January 1965, by J. W. Clarke, D. B. Vitaliano, V. S. Neuschel and others \$.35

Oil and gas fields of the United States, exclusive of Alaska and Hawaii, by S. D. Vlissides and B. A. Quirin (data as of October 1963) \$2.00

GQ-350: Geologic map of the Big Maria Mountains NE quadrangle, Riverside County, Calif., and Yuma County, Arizona, by Warren Hamilton \$1.00

Map I-427: Geologic map of the Ord Mountains quadrangle San Bernardino County Calif., by T. W. Dibblee, Jr. 75¢

Water Supply Paper 1669-Z: Selected techniques in water resources investigations, compiled by G. N. Mesnier and K. T. Iseri \$.30

Water Supply Paper 1779-S: Evaluation of hydrogeology and hydrogeochemistry of Truckee Meadows area, Washoe County, Nevada, by Philip Cohen and O. J. Loeltz. \$1.25

Water Supply Paper 1809-S: Galleries and their use for development of shallow ground-water supplies, with special reference to Alaska, by A. J. Feulner \$.15

Geophysical abstracts 213: October 1964, by J. W. Clarke, D. B. Vitaliano, V. S. Neuschel, and others \$.35

Bulletin 1178: Stratigraphy and petrography of the Pybus-Gambier area, Admiralty Island, Alaska, by R. A. Loney. \$1.50

Bulletin 1194-E: Upper Miocene and Pliocene marine stratigraphy in southern Salinas Valley, Calif., by D. L. Durham and W. O. Addicott \$.10

Bulletin 1194-G: Mesozoic formations in the Vekol Mountains, Papago Indian Reservation, Arizona, by L. A. Heindl. \$.10

Geological Survey Topographic Instructions. Chapter 5B1 (Areas of quadrangles; Chapter 5B2 (Instructions and tables for polyconic projections) \$.70

MAPS

GP-468: Complete Bouguer gravity map of the northern part of the San Francisco Bay area, and its geologic interpretation, by W. G. Clement \$.50

GP 481: Aeromagnetic map of the Albany-Newport area, Oregon, and its geologic interpretation, by R. W. Bromery. \$.50

Map I-412: Geologic map and sections of the Deep Creek area, Stevens and Pend Oreille Counties, Wash., by R. G. Yates \$1.00

Map I-431: Geologic map of the San Geronio Mountain quadrangle, San Bernardino and Riverside Counties, Calif., by T. W. Dibblee, Jr. \$.75

Bouguer gravity anomaly map of the United States (Exclusive of Alaska and Hawaii) by the American Geophysical Union's Special Committee for the Geophysical and Geological Study of the Continents, G. Woollard, Chairman, and the U. S. Geological Survey, H. R. Joesting, Coordinator. Scale 1:2,500,000 \$.75

Open Filed Reports (Inspection only)

Aeromagnetic map of parts of the Mt. Rose and the Virginia City quadrangles, Ormsby, Storey, and Washoe Counties, Nevada, by W. J. Dempsey and J. L. Vargo. 1 map and explanation, scale 1:62,500

Southwest Oregon gravity data, by H. Richard Blank, Jr. 1 p. 63 computer print-out sheets, 1 map, scale 1:250,000.

Correlation of coal beds in Squaw Basin and part of Eden Ridge, T 33 S, R 11 W W. M., Southwestern Oregon, by Russell G. Wayland.

GEOLOGICAL SOCIETY OF AMERICA: BULLETIN

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GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 75, no. 8, August 1964

Paleomagnetic results from Precambrian sedimentary rocks in the western United States, by S. K. Runcorn

Regional gravity survey of the northern Great Salt Lake Desert and adjacent areas in Utah, Nevada and Idaho, by Kenneth L. Cook, Mark O. Halverson, J. C. Stepp and Joseph W. Berg, Jr.

Potassium-Argon dates of three Pleistocene Interglacial basalt flows from the Sierra Nevada, California, by G. Brent Dalrymple

OIL AND GAS JOURNAL, vol. 62, no. 40, October 5, 1964
California is still coming up with big discoveries, by Frank J. Gardner

OIL AND GAS JOURNAL, vol. 62, no. 41, October 12, 1964
Oregon-Washington sale sets stage for lots of wildcatting.

OIL AND GAS JOURNAL, vol. 63, no. 5, Feb. 1, 1965
Shell plans test off Oregon

OIL AND GAS JOURNAL, vol. 63, no. 6, Feb. 8, 1965
New drilling likely for Los Angeles
Who finds those oil fields? by Frank J. Gardner

OIL AND GAS JOURNAL, vol. 63, no. 7, Feb. 15, 1965
1965's prime need--bold geology
Six sites are selected for Mohole project

OIL AND GAS JOURNAL, vol. 63, no. 8, Feb. 22, 1965
Nevada strike stirs industry
Denver basin drilling action keeps edging northward.

GEOLOGICAL SOCIETY OF AMERICA Bulletin, vol. 75, no. 12
December, 1964: Pre-Tertiary orogenic and plutonic
intrusive activity in central and northeastern Oregon,
by T. P. Thayer and C. E. Brown.

THE JOURNAL OF GEOLOGY, vol. 73, no. 1, January, 1965
The geomorphic and paleoclimatic significance of
alluvial deposits in southern Arizona, by Mark A.
Melton.

Composition of interstitial waters of modern sediments,
by Raymond Siever, Kevin C. Beck, and Robert
A. Berner.

Remanent magnetization of spilite and diabase in
the Franciscan Formation, Western Marin County,
California, by C. S. Gromme and H. J. Gluskoter.

Sedimentation to the lee of small underwater sand
waves: an experimental study, by J. R. L. Allen.

Journal of Sedimentary Petrology, vol. 34, no. 4,
December 1964

Transformation of weight frequency and number frequency
data in size distribution studies of clastic sediments,
by Basanta K. Sahu.

Grain size representation by CM Patterns as a geologic
tool, by R. Passega.

Journal of Geophysical Research, vol. 69, no. 24,
December 15, 1964

Ground-coupled air waves from the Great Alaskan Earthquake,
by William L. Donn and Eric S. Pementier.

CALIFORNIA DIVISION OF MINES AND GEOLOGY (Ferry Bldg.,
San Francisco)

Bulletin 183: Franciscan and related rocks and
their significance in the geology of western California,
by Edgar H. Bailey, William P. Irwin, and David
L. Jones \$3.00+
tax .12

List of available publications, January 1965
"List of mines on plate 1, San Diego County" NO Charge
This list is available on request to any owner of
County Report 3. (San Diego County.)

CALIFORNIA DEPARTMENT OF WATER RESOURCES

Bulletin No. 122: San Diego County Flood Hazard
Investigation

WASHINGTON DIVISION OF MINES AND GEOLOGY (335 General
Adm. Bldg., Olympia)

Information Circular No. 41: Origin of Cascade
landscapes, by J. Hoover Mackin and Allen S. Cary
\$.50

WASHINGTON DIVISION OF WATER RESOURCES (335 General
Adm. Bldg., Olympia)

Water-Supply Bulletin No. 23: Miscellaneous
stream-flow measurements in the State of Washington,
1890 to January, 1961.

BOOKS:

Atlas and glossary of primary sedimentary structures,
by F. J. Pettijohn and Paul Edwin Potter. 370 pages.
1964 - \$14.75
(Obtainable through Springer-Verlag New York, Inc.,
175 Fifth Ave., N.Y.)

Alaska Geological Society Guidebook Anchorage and
Matanuska Valley Area, October, 1964. \$2.20 -postpaid.
Available from Tom Wilson, Marathon Oil Company,
259 West Fireweed Lane, Anchorage, Alaska.

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Number 3

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PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 19

April, 1965

Number 4

ASSOCIATION ACTIVITIES

THE AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Executive Committee Meeting, A.A.P.G., Austin, Texas, January 27 and 28, 1965.

New Officers: Orlo E. Childs, President-Elect; John M. Parker, Vice President-Elect; George C. Hardin, re-elected Secretary-Treasurer; John C. Hazzard, re-elected Editor.

Association Finances: 1. The executive committee adopted a permanent long-range financial policy which was worked out over a period of months by Sec-Treasurer Hardin and the members of the Finance Committee, of which Gail F. Moulton is Chairman. Look for its publication in an early issue of the BULLETIN.

2. During the year 1964, the Association managed to effect economies which allowed a reasonable operating surplus. This reflects the close operating control of the Association's program as currently constituted, since 1964 was the first full year under revised budgeting procedures.

3. It should be borne in mind that the Association's program was not expanded during 1964 and that an expansion of operation and services to the members cannot be carried on without an increase in income.

Semi-Centennial Celebration: Chairman Merrill Haas, of the Semi-Centennial Celebration Committee, reported in considerable detail on the work of his committee for the Semi-Centennial Convention to be held in St. Louis in 1966. It is the consensus of the Executive Committee, in which it is hoped all District Representatives will concur, that the Association and the Distinguished Lecture Committee will undertake to place speakers before non-geological groups and service organization groups from various parts of the country. It is contemplated that the local societies would arrange for speaking platforms in their respective cities and/or district and would support these meetings with their attendance.

An ambitious program is under way which includes securing a very high-level, key-note speaker for the 1966 convention.

Geologic Aspects of Oil and Gas Reserves: A report was received from the special committee authorized at the Toronto meeting to study and report on the geologic aspects of oil and gas reserves and the position that the Association should take with respect to the making of a contribution to the A.P.I. reserve estimates. This committee, under the Chairmanship of Willis G. Meyer, after a thorough canvas of qualified geologists, recommended that the Association should not attempt to accelerate the participation of geologists in this program.

Constitutional Review: A special committee has been studying in great detail the Constitution and Bylaws of the Association. This committee consisted of: George V. Cohee, Chairman, Ben H. Parker, William C. Krumbein, William R. Moran, and Mason L. Hill. The Committee's first report is at hand and is being studied by the Ex-

ecutive Committee. When the Executive Committee has reached an accord on the revised document, copies of it will be forwarded to District Representatives for their study and discussion in the local groups.

Professional Standards Committee: Chairman Jack Taylor, of the Professional Standards Committee, reported on the progress of the preparation of certification procedures. His report had been studied previously by the Executive Committee and is now being prepared in its final form. There have been many inquiries about when application for certification might be obtained and, as District Representatives, you have undoubtedly had similar inquiries. As soon as forms are available, you will be notified and notice will be published in the BULLETIN. The A.A.P.G. District Representatives will have an important role in the matter of certification.

New Society Affiliations: The Executive Committee also approved the affiliation of two additional local societies whose petitions were at hand. They are the Pittsburgh Geological Society and the Geological Society of Washington (D.C.).

Visits to Local Societies: Many local societies have been visited by Headquarters' personnel during the past few months. Those of you who have been visited will recall the representative of the Association was attempting to find out what the Association could do for the local groups, and your comments and requests were invited. It is worth pointing out that ten of the items on the Executive Committee agenda dealt directly with requests and suggestions from District Representatives and Presidents of local societies.

Group Life Insurance Plan: After two months, there have been over 300 applications submitted for participation in the Association's Group Life Insurance Plan. You should be advised and should take occasion to inform the members in your District that the Charter Enrollment Period of this program closes on March 1, 1965.

AIPG picks Denver for Annual Meeting

The American Institute of Professional Geologists will hold its second annual meeting in Denver on October 8th and 9th. Site of the meeting will be the Brown Palace Hotel. The two-day program will include a number of prominent speakers, and will deal in large part with problems that face the geological profession and their solutions. The general sessions will be open to all who have an interest in geology as a profession. Dr. Jay G. Marks of Humble Oil & Refining Company is general chairman of the meeting.

The selection of Denver for its annual meeting by the Professional Geologists comes on top of the recent election of Colorado residents Dr. Orlo E. Childs and John M. Parker as president and vice-president, respectively, of the American Association of Petroleum Geologists. Together with the current influx of oil companies, each with its staff of geologists, these events seem to be making Denver the nucleus of the geological world.

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Next Deadline - April 28, 1965

PETROLEUM GEOLOGISTS SEEK COMMEMORATIVE STAMP

The American Association of Petroleum Geologists will be celebrating its 50th birthday in 1966. The organization has grown to be the largest geological organization in the world with a membership of 15,000. The Semi-centennial Commemorative Meeting will be held in St. Louis in the spring of that year, and the organization has requested Postmaster General John A. Gronowski to issue a stamp in recognition of its long and productive history.

The Association was formed as the Southwest Federation of Geology, and the name was changed in 1917 to The American Association of Petroleum Geologists. The organization was formed for the purpose of aiding in the exploration for and development of oil and natural gas reserves at a time when the expanding industrial complex of the United States sorely needed large supplies of fuel and energy. Since its founding, the members of the Association have played a leading role in the development of oil and gas throughout the world and today its membership is spread around the world in more than 80 countries. The fact that the oil and gas reserves of the United States are now greater than ever before in the history of our nation is a testimonial to the A.A.P.G. and its membership.

It was largely from the ranks of A.A.P.G. members who had been trained in the practical understanding of sea and landscapes that the military geological units of both World Wars were developed. The great assistance of these special corps in the successful landings of World War II's Southwest Pacific Campaign is an established fact. Because the members of the Association have contributed materially during the past half century toward the general economic advancement in the natural energy industry and to the security of the United States, it is believed that A.A.P.G. deserves national recognition by the issuance of a Commemorative Stamp.

The stated objectives of the Association are, "to advance the science of geology, especially as it relates to petroleum and natural gas; to promote the development of the technology of petroleum and natural gas and to encourage improvements in the methods of exploring for and exploiting these substances; to foster the spirit of scientific research throughout its membership; and to disseminate facts relating to the geology and technology of petroleum and natural gas."

A.A.P.G. Semi-Centennial Celebration

In connection with the Association's Semi-Centennial Celebration, it has been our intention to have "The First Fifty Years" of petroleum geology brought to the attention of the public with the issuance of a Commemorative Stamp. Securing such an issue is a task that is made frustratingly difficult since there are literally hundreds of requests each year and only fifteen Commemorative Stamps are issued.

It is a now-or-never situation and, on the request of the Chairman of the Semi-Centennial Celebration Committee, the District Representatives and Local Society Presidents are asked to write to their United States Senators and United States Representatives in Congress advising them of the Association's Semi-Centennial year in 1966. We have been advised on reliable authority that the President of the United States will issue the following Proclamation in which the year 1966 will be designated the Semi-Centennial Year of Petroleum Geology.

Proclamation

The skill, resourcefulness and imagination of the petroleum geologist have played a major role in creating the highest living standards for mankind in all history. From his endeavors, ample reserves of petroleum were discovered to supply our country's needs in the two world wars which saved democracy. Furthermore, his efforts have provided the energy for our nation to become the most powerful in the world. This energy now fuels the rockets which pierce outer space and assure our leadership among nations.

Petroleum geology still offers unprecedented opportunities to the youth of this nation to make secure a free society and provide all mankind with even greater benefits from his environment.

Accordingly, it is appropriate to salute the petroleum geologist and his professional organization and recognize the first fifty years of his scientific achievements for the benefit of mankind by designating 1966 as the Official Semi-Centennial Year of The American Association of Petroleum Geologists.

Clay Minerals Conferences

The 14th North American Clay Minerals Conference is being held in conjunction with the 2nd Meeting of the Clay Minerals Society on the University of California Berkeley campus, August 23-26, 1965. A 4-day program is planned, including 3 days of technical sessions and 1 day of field trips. Fred R. Kelley, geologist, California Division of Mines and Geology, Ferry Building, San Francisco, is chairman of field trip arrangements. General arrangements are in charge of James K. Mitchell, Department of Civil Engineering, University of California Berkeley.

Judging from past Clay Minerals Conferences, petroleum geologists would find much of interest and application to their field in these meetings.

Alaska Methodist University News

The U. S. Coast and Geodetic Survey has recently installed a seismograph station on the AMU Campus located in Anchorage. It is one of four permanent stations in Alaska. The other three stations are at Pt. Barrow, College and Sitka. Dr. Ross Schaff, Head of the Department of Geology, is liaison officer for the facility and a member of the Alaska Geological Society. All Ross needs now is another "8.5 jolt" to try out his new seismograph. On second thought he will probably settle for a little less.

Alaska Geological Society

AGS members turned out in force to hear Lum Lovely's talk entitled "Will Success Spoil The Giant Hunter?" at the regular monthly noon luncheon, March 11th. Lum kept the crowd engrossed on economics for much of his talk, then launched into his ideas for regional correlations in the Cook Inlet and where to find all those hidden giants. The members became noticeably more alert at this point. Lum is an independent Geologist in Anchorage, having resided here since the late 1950's.

Abstract:

Oil and gas discoveries in the Tertiary Basin of Cook Inlet Alaska, have been spectacular, and geological indicators point to billions of barrels of undiscovered reserves which lie in wait for the drill. The geologist will not get his prospect drilled simply by resting on the laurels of past discoveries and favorable geology, however. First he must convince his management, or investor, that exploration for oil in the Cook Inlet Tertiary Basin is economically feasible.

It is a widely publicized and well-known fact that exploration costs in Alaska are high. It is not yet generally recognized by the oil industry, however, that unit replacement costs of reserves in the Cook Inlet Tertiary Basin are lower, on an average, than in most other oil provinces in North America, and that the return on the exploration dollar is much greater.

To date, 409 million bbls. of oil reserves have been proved in Cook Inlet Tertiary sediments. Discovery costs for these reserves amount to \$138 million. At the rate of 26¢ per bbl., a sum of \$52 million will be required to develop and lift 200 million bbls. in the Swanson River Oil Field. At 50¢ per bbl., an outlay of \$105 million will be required to develop and lift the 209 million bbls. of oil remaining in other parts of the basin. Total discovery, development, and production costs for all 409 million bbls. of reserves in Cook Inlet Tertiary Basin sediments, therefore, eventually will amount to \$295 million, for a unit replacement cost of 72¢ per bbl. This compares with \$1.62 for Canada, \$1.84 for California, and \$2.56 for the United States as a whole.

Net return on the exploration dollar, after deducting the basic 12-1/2 percent basic royalty, amounts to \$2.80 in Cook Inlet. This is 6.4 times better than the average for Canada, 9.7 times better than California, and 26 times better than the average for all the United States combined. This tremendous profit potential for exploration in Cook Inlet is possible, because a better than average unit price is being paid for a crude oil which has a much lower than average unit cost.

Replacement costs of the integrated oil company in other oil provinces of North America, obviously, are being subsidized to a great extent by earnings from other segments of the industry, such as refining and marketing. The Independent Operator apparently gets his exploration money from new and different sources for most of his ventures. Exploration in the Cook Inlet

Tertiary Basin of Alaska has demonstrated that it can pay its own way, however, with a comfortable profit left over.

Unit finding costs for gas are also small in Cook Inlet, when compared to other parts of the United States and Canada. Maximum profit potential will not be realized, however, until local and Oriental markets are more fully developed.

The following table summarized comparative figures for Cook Inlet, California, the United States, and Canada:

	Cook Inlet	Calif.	U. S.	Canada
Avg. price/bbl. crude	\$3.04	\$2.46	\$2.95	\$2.33
Avg. cost/bbl. to discover, devel. & lift	.72	1.84	2.56	1.62
Gross profit/bbl. crude	2.32	.62	.39	.71
Net prof. after deduct. 12-1/2 percent basis royalty	2.00	.54	.34	.71 (?)
Net profit-to-cost ratio per bbl.	2.8 - 1	.29 - 1	.13 - 1	.44 - 1
Net return per invest. (exploration) dollar	\$2.80	.29¢	13¢	44¢

The above figures are derived mostly from published sources, but partly from reasonable estimates which have been made where data either is generalized or missing. They are preliminary in nature, and subject to revision. They are close enough for the purpose at hand in pointing out the profit potential of exploration in the Tertiary Basin of Cook Inlet, however, and to lay the groundwork for more detailed analysis by other geologists.

Conclusion: In order to compete successfully for the exploration dollar, the geologist working in Cook Inlet must start thinking and communicating more in terms of economics. He must begin spreading the "gospel" about the tremendous profit potential the basin offers the oil hunter.

Costs are high, but profits are higher. High costs are handled successfully by oil companies presently operating in Cook Inlet, however, by pooling their exploration budgets and by operating jointly. This is a good example for others to follow, who would like to get in on the profits, but who haven't got the budgets to handle exploration costs alone.

Pacific Section Spring Picnic

Old Timers will be happy to hear that the Spring Picnic will be held back at the old Pico Canyon location this year. Golfing is being arranged at the Elkins Golf Course. Jack Woods will do the cooking and there will probably be a field trip. Details will be released later, but keep June 4th open for this yearly event.

Dean H. Sheldon

Dean H. Sheldon, consulting petroleum engineer of South Pasadena, California, died February 22nd in a Covina, California hospital. He was 56 years of age. Formerly with Union Oil Company of California and R. E. Havenstrite, Operator, he had been a consultant since 1946.

Coast Geological Society

The monthly meeting of the Coast Geological Society was held at the Jet Room in Ventura on February 9th, 1965.

The evening's guest speaker was Dr. E. L. Winterer of Scripps Institute of Oceanography at La Jolla. Dr. Winterer gave an intriguing talk on Submarine Geology from a Diving Saucer. The talk was based on recent work done by Dr. Winterer and fellow researchers at the Scripps Institute and by United States Navy investigators. The talk was highlighted by an excellent selection of 16 mm slides and outstanding movies taken from inside the diving saucer while submerged over or in submarine features such as the shelf, slope, and submarine trenches along the California and Mexican coast.

The workings of the Saucer itself, and its unusual capabilities were discussed, however special emphasis was placed on the observed, and sampled rock types which were exposed on the slopes, and in the trenches. Also, of interest was the characteristics of the sea floor at various depths. Abundant marine life was observed in the vicinity of rock outcrops while very little life was noted on the barren "Deserts" of sand.

It was evident that considerable material is being moved down the trenches and slopes, but considerable debate upon the method of movement is still in the offering.

The March 9th meeting was also held at the Jet Room in Ventura.

Mr. John Warne was the evening's guest speaker. Mr. Warne is now completing his Doctorate at U.C.L.A. and presented an excellent talk on the Paleogeological aspects of the Mugu Lagoon. The possible conversion of Mugu Lagoon to a state park and marina has lately been a very controversial subject and made Mr. Warne's talk quite timely.

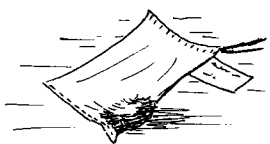
Mr. Warne covered the environmental factors controlling vegetation, animal life and lithologic distributions. He hopes to be able to correlate these factors and resultant faunal and sedimentary structures with fossil lagoons, but he points out the extreme difficulties involved in lagoonal studies. The major difficulty in seeing recognizable sequences in lagoon development is the thorough redistribution of material by an active, abundant pelecypod and gastropod population. Ability to use fossil assemblages suspected to represent a lagoonal environment is dependent to a great extent upon the recognition of comensal groupings.

HINTS FOR THE FIELD GEOLOGISTHOW TO TELL TIME BY SAMPLE BAG:

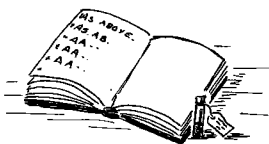
7:30 AM



11:15 AM



4:10 PM



5:22 PM

Gulf Coast Publications

The following publications are available from the Shreveport Geological Society, Box 750, Shreveport, La.

PUBLICATIONS:FIELD TRIP GUIDE BOOKS

Interior Salt Domes and Tertiary Stratigraphy of North Louisiana 20th Trip, 147 pp. (1960) \$5.00

Cretaceous of Southwest Arkansas and Southeast Oklahoma, 21st Trip, with Selected Field Papers in South Arkansas and North Louisiana, 89 pp. (1961) \$3.50

REFERENCE REPORTS ON OIL & GAS FIELDS AND REGIONAL GEOLOGY OF NORTH LOUISIANA, SOUTH ARKANSAS, MISSISSIPPI AND ALABAMA.

Vol. II, 205 pp. (1947)	\$7.00
Vol. III, No. 1, 42 pp. (1951)	\$2.00
Vol. III, No. 2, 108 pp. (1953)	\$5.00
Vol. IV, 204 pp. (1958)	\$5.00
Vol. V, 202 pp. (1963)	\$7.00

OTHER PUBLICATIONS

Geologic Map of Louisiana (blue line print), Scale: 1" - 8 miles (1946) . . . \$5.00

Structural and stratigraphic cross sections of north Louisiana and South Arkansas (set of 8) with index map and geologic map of pre-Upper Cretaceous surface . \$3.00

Compilation of Producing Formations by Fields covering NE Tex., N. La., S. Ark., Miss. and Ala. (1951) . \$1.00

Upper Gulf Coast Correlation Chart . . . \$1.00

Penetration Charts and Reservoir Data Summary of Oil and Gas Fields in South Arkansas and North Louisiana, 11 sheets (1953) \$4.00

Set of nine (9) maps and one cross-section depicting the "Regional Stratigraphic Analysis of the Cotton Valley Group of the Upper Gulf Coastal Plain" (1954) . . \$6.00

Oil and Gas Producing Zones in the Wilcox (Eocene) of Central Louisiana, 23 pp. (1961) . . \$3.00

Photo Directory of Shreveport Geological Society 1960-1961 . . . \$3.00

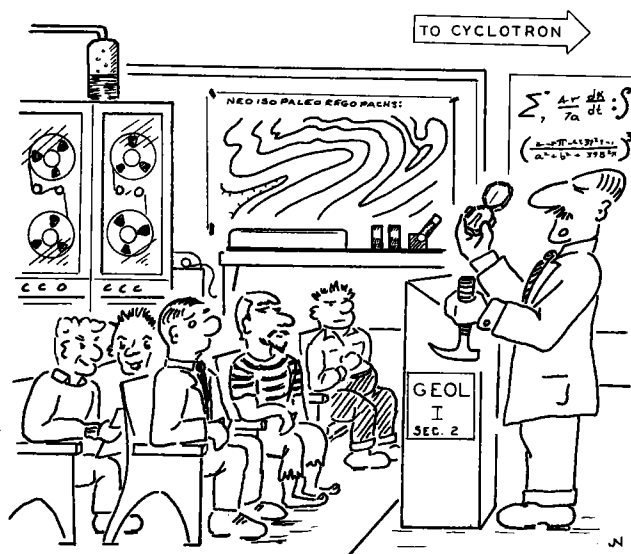
Photo Directory of Shreveport Geological Society 1961-1962 . . . \$3.00

New Pacific Section Officers

The following are the Pacific Section officers for the 1965-1966 term:

President	Peter W. Gester
Vice-President	Eugene R. Orwig
Secretary	Otto Hackel
Treasurer	Jack D. Nair

A full report of the Spring Convention, including new officers, etc. will be featured in next month's issue of the P.P.G.



ANOTHER INSTRUMENT USED BY THE EARLY WORKERS WAS THE BRUNTING COMPASS. THESE ARCHAIC TOOLS ARE SELDOM NEEDED TODAY.

PERSONAL ITEMS

DON BRUCE of Skelly Oil, as President of the Anchorage Petroleum Club, was invited on KLM's inaugural flight between Anchorage and Amsterdam during the latter part of March. We expect a full report, Don, --but not on how to grow tulips.

It's official now, DARRELL HELMUTH, Standard geologist, has a permanent transfer to Seattle with his first assignment at Newport, Oregon as "Acting Lead Development Geologist for Offshore". With a job description like that, Darrell, how can you miss! However, to keep Al Scouler's staff rounded out in Standard's new Anchorage office, Don McGee and family are being transferred from LaHabra.

Other new or expected new arrivals to the far north include ERNIE LIAN with Marathon, BILL PENTELLA with Atlantic and VERN VIGOREN with Phillips. All are geologists and they hail from Bakersfield, Denver and Amarillo respectively. Welcome to Alaska, fellas.

In a recent exposure to Southern California golf courses, BOB LINDBLOM, Standard, playing with BOB ERICKSON DICK MEDITZ AND JOHN JACOBSON, "enjoyed the pasture lands and flood plains of the Fullerton Muni links. Recent rains necessitated removal of shoes and socks in wading across 2 fairways. Scuba equipment was not available and Bob Erickson had a difficult time finding golf balls in the torrent from what was called a "temporary" run-off.

ED WELGE, Standard, has become an honorary member of the Ball Club in Santa Monica. Ed reports "we haven't been raided yet".

JOHN TUCKER, Standard, finally did it! A hole-in-one on the 2nd hole at the Kern River Course. John has been playing golf longer than anyone in the Company and says that this is his 1st hole-in-one with steel shafted clubs. His golfing feats with wooden shafted clubs in the days of Jones & Vardon are a secret. John has invited all his golfing friends to a drink on his account in person at the "19th Hole" Club in Clinton, Iowa.

RALPH RUDEEN of Shell Oil, a recent transfer into the Ventura area, has again received a new assignment. He has now been transferred to the Marine Division; however, this will probably not involve an actual move of his family and newly purchased home in Ventura - Phew! I guess Ralph will enjoy getting back his "sea legs". We understand his home away from home is to be the Bluewater offshore rig.

We're glad to see KIT CARSON, Ventura Paleontological Consultant and specialist in things Miocene, back on his feet and looking so well after his recent operation. Guess he was just having some of the "bugs" ironed out. And what's all this talk about your "plumbing", Kit?

DON DIDIER, most recent of the coastal geologists to throw his hat into the consulting ring, was seen trying desperately to gain access to the local Marine Recruiting Office. It happened after one of the regular Thursday luncheons of the Coast Geological Society. Were any disturbing remarks directed your way at the lunch, Don?

We're happy to report that TOM BAILEY is recovering nicely after a rather lengthy confinement in the hospital. Tom went in for a hernia operation and ended up getting more than he bargained for. Perhaps you should have told them, Tom, that you were strictly a geologist and they could save their "bugs" for someone specializing in "virusology".

JOHN BULLINGTON, Coastal Scout for Tidewater, soon will be saying "auf Wiedersehen" to his son, Phil, who will be touring Europe this summer as part of the Santa Paula High School group participating in the "Experiment in International Living" program. Phil will live one month with a family in Sweden and then tour the continent with a group of ten fellow (?) students (chaperoned, of course).

HAROLD SUGDEN, beagle-eyed geologist for Tidewater in Ventura, noted that the State flag was being flown upside down in front of the City Hall (of all places). A quick phone call to the local newspaper resulted in a feature story with accompanying photographic evidence and also got the bear off his back. No explanation was forthcoming from City Hall, other than "the City has not yet surrendered".

IKE HOLSTON, recent Tidewater retirant, has been busy drilling test holes on his Santa Cruz property. "Septic" No. 1 was abandoned at shallow depth in Tsm-ss and we understand "Septic" No. 2 was completed. After spending 35 years in the semi-arid Los Angeles basin, Ike reports a seasonable rainfall of 48 inches as of March 15, 1965.

JAMES TASKER, Standard, has finally thawed out from his Alaskan tour and can be seen on Fullerton's tennis courts and golf course on alternate Saturdays. His vicious "draw" is present and Jim continues to see only the left side of the course.

JOHN JACOBSON, Standard, has decided to really pursue the dimpled white ball with earnest by purchasing a new set of First Flight irons and woods. Good luck, Jake!

BILL BURKE, new Division Geophysicist for Shell in Seattle, has returned to the cool, damp Northwest after a 1-1/2 year stint in Los Angeles, and he is glad to be back.

The Sacramento Petroleum Association's annual barbecue will be held in the middle of June, 1965. The exact date will be set shortly.

MAHLON KIRK, Shell Seattle, gave a talk on "Fossils in the Petroleum Industry" before the local chapter of the Desk and Derrick Club. We are pleased to report that Mahlon is a big drawing card, for all 16 members were present.

LEE HEATON and PEDER GRIMSTAD, Shell, Seattle, ardent athletes, have been running 6 to 8 miles a day at the "Y" --getting ready for the Olympic tryouts, fellas?

VERN JONES (Exploration Logging) was presented with the Sacramento Petroleum Association's "Best Speech of the Year" award for his talk on the "North Sea Exploration". His company is expanding also. CHARLIE LUNDGREN and RON ACKLEY are both in Australia on business trips. (Surfing is very good this time of year over there).

The Geological Society of Sacramento will meet on April 13, 1965, in the new Resources Building. The speaker will be MR. JAMES BRIGHT from Asbestos Corp., (Exploration Ltd.). His subject will be "Asbestos in California".

ROLAND BAIN, Consultant Geologist, has been named District A.A.P.G. representative for 1965-66. Bob Pascall presented a talk on "Oil Property Evaluation" at the March 16th A.P.I. meeting in Woodland, California.

LEON WILLIAMS (Schlumberger) recently purchased an economy car for his personal use. You guessed it, - a Jaguar XKE.

Here is a final note. A recent speaker at the Sacramento Petroleum Association luncheon informed us how we can all retire in 5 years. Don't look for any early retirements, though, as it took a capital outlay for the stock market of \$250/month for that 5-year period.

STAN WISSLER, one of the "Grand Old Men" of micropaleontology, has retired from Union Oil Co. after 40 years, 2 months, and 4 days of service. Stan started to work for Union on January 1, 1925, after receiving an M.A. degree from Columbia University in 1923. One of the first men to receive academic training in micropaleontology, Stan organized the department for Union and spent a total of about 24 years connected with it. For 2 years he was Chief Geologist for the Pacific Coast Dist. He has been in charge of Special Exploration (all areas not organized into Districts) since 1951. Stan was honored at a farewell dinner held at the Petroleum Club on March 30th.

BOB ORWIG, of Mobil, was sent north to Alaska just in time to miss the Bakersfield convention. Wonder if that was just pure happenstance?

Correction of an item that appeared in last month's Newsletter is in order: It seems that the permanency of BOB LINDBLOM's transfer to Standard's Southern Div. is questioned only by Bob himself. As far as Standard is concerned, the girls in Bakersfield will just have to suffer.

Standard is not completely heartless, however. Although depriving the girls of Bakersfield of Bob, it is going to provide the girls of Ventura and Santa Barbara with ART GILBERT, La Habra's most eligible bachelor. Art has been transferred to Ventura just in time for the Bikini-watching season.

The Long Beach Luncheon Club was dealt a near-fatal blow when BRUCE BARRON Oilwell Research Corp., was transferred to Dallas. Bruce is the new Manager of the Dallas office, which serves all of Texas and Oklahoma.

The City of Long Beach has reorganized its petroleum department. The oil business for the City no longer comes under the Harbor Department; it is now handled by a new Department of Oil Properties, with LEONARD BROCH as its director. JOHN TRUEX is the only person left with the title of "Geologist"; everyone else is now an engineer. DENNIS ALLEN, Subsidence Control Engineer, claims the reorganization beats most company shuffles; at least, no heads rolled.

Some of our more suspicious members are still pondering the ramifications of an event that happened at a luncheon meeting last month. BOB HACKER, trusted treasurer of this organization, was embarrassed by the disclosure that he was exchanging \$2.75 lunch tickets and \$1.25 cash for \$5.00 bills. Anyone can make an honest mistake, but, Bob, such poor timing--just when you left Lloyd to open your own office.

Richfield Oil Corporation's annual Golf Tournament will be held at the Buena Vista Golf Course on April 10. This is a company-wide tournament with the Exploration Department well represented.

Occidental Petroleum Co. is in the process of expanding the Bakersfield Office Bldg. to accommodate a central accounting office.

ROBERT (Buddy) ORTALDA, son of ROBERT, SR. (Standard of Oildale) filled in a questionnaire at school and listed his father's age as 39 and his mother's age as 33, just to make them feel good. There is no reported change in his allowance.

LOU CHRISTIAN of Mobil, overseas, was in Bakersfield on March 25. Mobil has discontinued activities in the Philippines, and Lou is on vacation awaiting reassignment.

GEORGE WEBB, Standard, Oildale, has been sampling most of the eating places from San Francisco to Los Angeles recently. His food capacity is enormous.

MAX B. PAYNE has joined Texfel Co. as Chief Geologist, effective April 1, in Los Angeles. Geology's gain most certainly will be Used Car Sales loss here in Bakersfield.

Standard's Bakersfield office takes umbrage to last month's statement that BOB LINDBLOM is on temporary assignment in Los Angeles. They thought they had traded him on a slightly used golf trophy. Never mind, BOB, you have been awarded visiting privileges every other week-end.

JIM BENSLEY, Gulf, Bakersfield, is now West Coast District Geologist with District headquarters in Bakersfield. Gulf's Los Angeles Division office has been discontinued. GORDON BELL is still in Los Angeles at the former area office. DON GILKISON, formerly Div. Exploration Advisor has been transferred to Roswell, New Mexico from the Gulf office in Los Angeles.

JOHN L. STOOPS, Tidewater, Bakersfield, was transferred from New Orleans on March 22, and will assume duties as District Geologist.

GEORGE BROWN, Marathon, bought a home in Houston where he has been transferred from Sacramento.

DICK SKELTON of Findley, Ohio, transfers to Los Angeles to become Manager of Exploration for Marathon.

RAY ARNETT, Richfield's Public Relations Representative, was recently elected President of the Greater Bakersfield Chamber of Commerce along with his many other varied duties.

JIM MERCIER has taken a temporary assignment with the Getty Interests in the Neutral Zone. En route, he will visit New Orleans at Tidewater's Geophysical Offices, he has an appointment with J. Paul Getty in London, and he has a date with a movie queen in Rome. He may also visit the Vatican. The Tidewater Group in Bakersfield failed to retrieve the resignation gift they had presented to Jim.

NURSERY NEWS

Robert and Connie Stoddard (Standard, Oildale), their third son, David Robert, born March 2, 1965, 8 lb., 4 oz.

John and Betty Eke, (Texaco, Bakersfield), a son, Norman Sean, March 24, 1965.

Gerald and Pat Weber (Union, Bakersfield), their second child, Karen Susan, early March.

CALENDAR

- May 3, 1965 Monday evening, 7:30 p.m., Bakersfield College, Science and Engineering Bldg., Rm 56, Biostratigraphic Seminar "Diatomites", Dr. G. Dallas Hanna, Academy of Sciences, San Francisco.
- May 7, 1965 Friday evening, 6:30 p.m., El Tejon Hotel, San Joaquin Geological Society, "Geology of Nevada, an Exploration Frontier", Dr. John C. Osmond, Consulting Geologist, Salt Lake City, Utah. Distinguished lecturer.
- May 18, 1965 Tuesday evening, 6:30 p.m., Athenaeum, Calif., Inst. Technology. Branner Club "Magnificent Gamble", Frank A. Morgan, Consulting Geologist, Los Angeles.

U.S.C. NOON MEETINGS

Tuesday noon's, Building GB, Rm 102, 857 West 37th St., (Adjoining Geology "A") -

- | | | | |
|----------|--|--|--|
| April 20 | Mr. Adonis B. Esmilla, Grad. Student, Geology - "Economic Geology of Philippine Islands", M. Wade. | George H. Feister
Union Oil Co. of Calif.
254 North Center Street
Casper, Wyoming 82601 | David C. Pontius
Jadehorst 49
The Hague
Netherlands |
| April 27 | Mr. Donald Roberts, Partner, Dames & Moore, "Engineering Properties of Soils in the Arid Environment", A. Weismeyer. | Robert N. Hacker
8321 Beverly Blvd.
Los Angeles 48, Calif. | Quentin R. Query
Great Basins Petroleum Co.
1011 Gateway West
Century City
Los Angeles, Calif. 90067 |
| May 4 | Mr. Charles M. Curtis, Grad. Student, Geology - "Sediments of Laguna Salada, Baja California, Mexico", G. Ledingham. | Jackson H. Hammond
3939 Olive Avenue
Long Beach 7, Calif. | Everett E. Richardson
800 Truxtun Ave., Rm 309
Bakersfield, Calif. |
| May 11 | Miss Barbara E. Hackett, Grad. Student, Geology - "Geology in Land of Cambria and the Country of the Ordovices and Silures", R. Leidy. | Leo J. Herrera, Jr.
PO Box 716
No. Hollywood, Calif. | Bruce Robinson, Jr.
PO Box 496
Toowoomba, Queensland
Australia |
| May 18 | Mr. W. Thomas Rothwell, Regional Paleontologist, Richfield Oil Corp., "Ostracode Ecology", W. Frerichs. | J. E. Holzman
3347 Industrial Court
San Diego, California | Marlene Shuford
PO Box 3883
Anaheim, Calif. 92803 |

U.C.L.A. GEOLOGICAL SOCIETY

Thursday Afternoon Meetings, 3:00 p.m., Chemistry-Geology Lecture Hall 2276:

- | | |
|----------|--|
| April 22 | Dr. Warren B. Hamilton, U.S.G.S., Denver, Colorado, "The Permian Record and Continental Drift". |
| April 29 | Dr. Joseph R. Curray, Assoc. Research Geologist, Scripps Institute of Oceanography, "Structure of the Continental Terrace Off Central California". |

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- | | |
|--|--|
| Edmund J. Bartosh
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Farmington, New Mex. 87401 |
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Dept. of Paleontology
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Santa Fe Springs, Calif. | Ralph A. McGoey
1121 Tam O'Shanter Dr.
Bakersfield, Calif. 93309 |
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Los Angeles, Calif. 90054 |
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Jadehorst 49
The Hague
Netherlands |
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PACIFIC PETROLEUM GEOLOGIST
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LOS ANGELES 17. CALIFORNIA

Volume 19

Number 4

Return Requested



Richard L. Hester
Pauley Petroleum, Inc.
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Los Angeles, Calif. 90067

DA

PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 19

May, 1965

Number 5

ASSOCIATION ACTIVITIES



1965-66 OFFICERS - A.A.P.G. PACIFIC SECTION

Left to right: President Pete Gester, Standard; Secretary Otto Hackel, Buttes Gas and Oil Company; Treasurer Jack Nair, Phillips. Not pictured: Vice-President Bob Orwig, Mobil.



RETIRING OFFICERS - A.A.P.G. PACIFIC SECTION

Left to right: President Spence Fine, Richfield; Vice-President Gordon Bell, Gulf; Secretary John Elliot, Humble; Treasurer Bob Hacker, Lloyd Corporation.

BAKERSFIELD CONVENTION DRAWS LARGE ATTENDANCE

The Fortieth Annual Pacific Section Joint Convention of the AAPG, SEG, and SEPM was held in the Bakersfield Civic Auditorium on April 1st and 2nd, 1965. This was the first time in the history of the Pacific Section that the meetings were held outside of Los Angeles. The Bakersfield Civic Auditorium proved to be an excellent site for the entire program.

Attendance at the Convention in Bakersfield was up 30 per cent over the past few years with 784 paid registrations including 753 regular and 31 student registrations. 75.6 per cent registered for the AAPG, 15.5 per cent for the SEG, and 8.9 per cent for the SEPM. These percentages account for those who registered in more than one society.

Sixty technical papers were given under the general convention theme, "The Coordinated Search for Oil and Gas in Highly Explored Areas." The Program Committee, with W. F. Edmondson as Chairman, is to be congratulated on the choice of such a timely series of informative papers which carried out the theme of the Convention.

Retiring President, Spence Fine, officiated at the Joint Luncheon on Thursday, April 1. Norman C. Smith, Executive Director at national AAPG headquarters in Tulsa, commented on Association affairs. Honorary life memberships were presented to Dr. A. O. Woodford by Mason Hill, and to Harry R. Johnson by Al Gregersen.

Mr. S. W. Totten, Vice-President of Standard Oil Company of California, Western Operations, Inc., was the featured speaker. His talk entitled "The Roles of Creativity, Faith and Trust in Oil Exploration" presented many thoughts on the search for oil in highly explored areas. "... the prime vehicle of successful exploration is easily identified - namely, a good, sound idea. I prefer to call this creativity," Mr. Totten says. "Adherence to scientific principles is fundamental; however, successful oil exploration lies in the hands of creative geologists, not of routine data-gatherers." "Unconformities, reef buildups, sand channels, sand bars, buried folds and buried faults, and correct interpretation of large complex structures are responsible for nearly all the oil found today in highly explored areas. Mapping these subtle variations within the earth's crust calls for extreme patience, detailed efforts, much data, and a great deal of faith in your science." "In the normal basis of wildcat drilling and excluding errors of measurement and recording, I believe the total distinction between a dry hole and a producer lies in the degree of optimism incorporated in the prospect interpretation," Totten stated. "He emphasized that management must create a favorable environment for geologists working within an organization in order to insure success."

Mr. John E. Kilkenny and Mr. John H. van Amringe received the AAPG Best Paper Award for their outstanding contribution entitled

EXECUTIVE COMMITTEE, PACIFIC SECTION
AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

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Eugene R. Orwig	Vice-President
Otto Hackel	Secretary
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PACIFIC PETROLEUM GEOLOGIST

Published monthly by the PACIFIC SECTION
American Association of Petroleum Geologists
Address communications to the Pacific Petroleum
Geologist, P.O. Box 17486, Fay Station, Los Angeles 17,
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Next Deadline - May 25, 1965

"Exploring the Asphalt Jungle." The paper was presented by Kilkenny. Best Paper Award for the SEPM went to Mr. K. D. Berry for his original contribution, "New Foraminiferal Zonation, Upper Mesozoic, Sacramento Valley, California." Papers were judged on the basis of context, originality of work and presentation.

Finally, our wholehearted thanks go to P. W. Gester and all of his committees for a most successful convention, technically, socially and financially. Mr. Gester noted at the Thursday luncheon that his father, Mr. S. H. Gester, was Chairman of the first Pacific Section Convention of the AAPG.

Following the Convention, a field trip through the southeastern San Joaquin Valley was held on Saturday, April 3, 1965. This was the first geological field trip ever held in the United States having a complete demonstration of geophysical field methods and equipment. Unfortunately, those guests from other parts of the Pacific Coast Section brought along some of their liquid sunshine, so more than half of the trip was cancelled due to heavy dew. Perhaps the weather was requested by La Coste & Romberg for their underwater gravity meter demonstration.

The arrangements committee with David Martin, Occidental Petroleum Corporation, as Chairman, did an excellent job. Catering for the Joint Luncheon on Thursday and for the College Alumni Luncheons on Friday was superbly handled.

For the first time in years, the Annual SEPM Dinner held on Thursday evening was completely sold out. Whether this was due to intense interest in Dr. Matland's paper "A Critical Look at Turbidities" or some other reason is conjectural. Bakersfield's night clubs have few burlesque shows.

A special "Thank You" goes to Mrs. R. E. Kropschot and her committee for Women's Activities. An educational trip through the Bakersfield Standard Oil Refinery was attended by 38 ladies. The hat style luncheon at the Stockdale Country Club was also well attended. Mrs. Kropschot and her committee from Bakersfield Petroleum Wives Association offered hospitality to all the out-of-town visiting ladies.

A total of 20 exhibitors had displays. A Steam Generator, which was of special interest to the Convention attendants, was exhibited and demonstrated outside the Auditorium by R. R. Olivetti and Assoc. A demonstration of vacuum recovery of drill cuttings by reverse circulation of air was given by Chaffin Drilling Co., Inc. on the field trip held on April 3.

Mr. Tom Fitzgerald and his entertainment committee did an excellent job of providing relaxation. Approximately 900 people attended the Thursday evening cocktail party. 200 couples enjoyed the Dinner Dance on Friday evening, a fitting climax for the Convention.

MALIBU REACTOR SITE INSPECTED

A group of Southern California petroleum geologists spent a pleasant spring Saturday last March 13th viewing the geology of the Corral Canyon nuclear reactor site and environs under the guidance of Frank Morgan, Rod Cross, and Professor Barclay Kamb of Cal Tech. Following the geological tour, the group enjoyed a box lunch and heard presentations on the geological and legal aspects of the controversy. Some of those present included Hal Lian, Doug Traxler, Russ Simonson, John Kilkenny, Tom Wright, Frank Getz, John Crowell, Lee Silver, Bill Kennett and Otto Hackel.

Geologists and local residents have objected to the Los Angeles Department of Water and Power's proposed site on the basis that it is located on the Malibu Coast fault, a large displacement regional shear zone. As a result of these objections, the Atomic Energy Commission in late March directed the Department of Water and Power to dig an investigation trench 25 feet deep and the full length of the reactor foundation so that the geological conditions could be properly evaluated. It is hoped that this trench may be studied on a later field trip.

FROM THE PRESIDENT

Your Pacific Section Executive Committee for the 1965-1966 year has agreed on desirable programs and targets for the coming year. Some of these are certainly not new ideas, yet we are hopeful of establishing further progress in their direction.

First: Increase the membership in the Pacific Section of AAPG and provide for closer affiliation of the half-dozen Geological Societies in the Pacific Coastal area.

Second: Provide means, by constitutional amendment if necessary, whereby some or all of these Societies have a more meaningful voice in the Executive Committee of the Pacific Section.

Third: Assure a greater participation by the membership at large in making major organizational changes through use of mail ballots.

Fourth: Improve the procedures for nomination of new officers.

Fifth: Continue the recently established policies of the past Executive Committee regarding distribution of Pacific Section funds to the various local Geological Societies for the purpose of securing Distinguished Lecturers and assisting in the dissemination of geological knowledge.

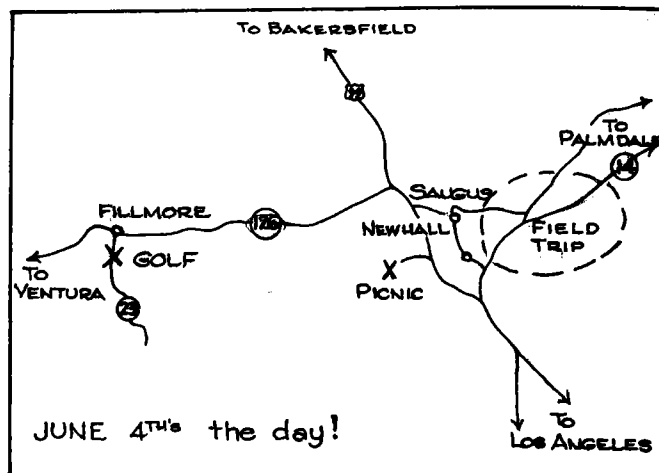
In addition, your Executive Committee recommends support of the goals and activities of the American Institute of Professional Geologists. You will probably recall the discussions last year regarding Senate Bill 1349 dealing with the registration of geologists. Through the activities of AIPG, the San Joaquin Geological Society and many, many others who gave of their valuable time, SB-1349 was withdrawn. Now a new bill, SB-871, designed to register geologists, has been introduced into the State Senate. (See excerpts elsewhere in this issue of P.P.G.) Although this bill is an improvement over SB-1349, your Executive Committee does not believe that it fulfills the requirements of the geologic profession nor does it adequately protect the health and welfare of the public.

Mr. A. O. Spaulding, President, California Section AIPG, states that AIPG intends to prepare an entirely new bill to serve the profession and the public. We have studied Senate Bill 871 and believe it would be easier and more effective to introduce a new bill than it would be to amend SB-871. Therefore, your Executive Committee strongly recommends your study and perusal of SB-871 and, if you concur in our views of the inadequacies and deficiencies of SB-871, we strongly commend each of you to write your congressman and/or members of the committee on Business and Professions.

Now, on a lighter note, it is a pleasure to report that our 1965 Convention in Bakersfield was highly successful with registration up 30 per cent over the past several years. Congratulations are in order for the San Joaquin Geological Society hosts.

In line with our attempt to broaden Pacific Section interest and participation, the 1966 Convention will be held in Long Beach on March 24-26; the Convention theme will be "Offshore Oil." General Chairman of the 1966 Convention is Bill Emerson.

Finally, but not least, don't forget the annual Spring Picnic to be held June 4, 1965, at Standard Oil Company's Pico Canyon picnic grounds. The facilities are vastly improved since a decade ago and we assure you a delightful outing. ————— Peter J. Gester



SPRING PICNIC, FIELD TRIP, GOLF TOURNEY
SET FOR JUNE 4

The Pacific Section Spring Picnic will be held Friday, June 4, 1965, at the Standard Oil Company Pico Canyon picnic grounds near Newhall. H. E. Nagle - Standard Oil, Ventura - is general chairman. A steak barbecue prepared by Jack Wood will highlight the picnic this year. A field trip and golf tournament will precede the barbecue festivities.

This year a field trip is being planned in the Soledad Canyon-Placerita Canyon area. Bob Hindle of Sunray D-X is chairman of the committee now preparing the tour of this interesting geological area. Details of the field trip, assembly point, and luncheon plans will be found on the return card mailed out to all members.

The golf tournament this year will be held at the Elkins Ranch Golf Course south of Fillmore. We can report that the course is in fine condition and offers quite a challenge for both the occasional and more addicted golfer. Bob Lindblom of Standard Oil is golf chairman. His address is Box 606, La Habra, California (OWen 1-2251). The golfing fee this year is \$3.50, which includes green fees and prize money. Send your golfing reservation and foursome, if you have one formed, to Bob. Please send your fee at the same time to assure a reservation -- first come, first served.

Individual return card announcements have been mailed to Pacific Section members. Please return them as soon as possible to permit finalizing of plans.

COAST GEOLOGICAL SOCIETY

The monthly meeting and the annual spring thaw and ladies night of the Coast Geological Society was held at the Harbor Restaurant in Santa Barbara on Tuesday, April 13, 1965.

The evening's guest speaker was Mr. J. W. Bedford of Texaco, Inc. His subject was the great Alaskan earthquake and its after effects. The main emphasis of Mr. Bedford's talk was on the structural damage to buildings and on the geological studies that followed the earthquake, with their resultant application to the rebuilding in Anchorage. Mr. Bedford's talk was well illustrated with 35mm slides which showed the terrible effects of this "Good Friday" quake.

PROPOSED REGISTRATION OF CALIFORNIA GEOLOGISTS

Senate Bill 871: Excerpts and Comments

This bill, introduced on March 29 by State Senators Short and Rodda, is officially summarized as follows: "Creates a State Board of Registration for Geologists composed of seven members appointed by the Governor for four-year terms. Vests in the board the power to register and regulate geologists as defined in the act." Significant paragraphs in the bill include:

"7802. 'Geology,' as used in this chapter, refers to the application of geologic data, techniques, and principles to the study of naturally occurring rock, soil materials, and ground water for the purpose of assuring that geologic factors affecting the planning, design, construction, operation, and maintenance of civil engineering works and the conservation of ground water resources are recognized, adequately interpreted, and utilized."

"7803. 'Geologist,' as used in this chapter, refers to a person who practices geology."

"7804. Only a person registered under the provisions of this chapter shall be entitled to take and use the title 'geologist.'"

"7821. The board may, by regulation, provide for the division of the certification of registration into different specialties, including, but not limited to, engineering, hydraulics, or petroleum, and may issue certificates limited to one or more of the specialties in which the applicant demonstrates proficiency."

"7830. It is unlawful for anyone other than a geologist registered under this chapter to stamp or seal any plans, specifications, plats, reports, or other documents with the seal or stamp of a geologist, or to in any manner use the title 'geologist' unless registered hereunder."

"7832. Any person practices geology and is subject to the provisions of this chapter when he professes to be an (sic) geologist or is in responsible charge of geology work."

Applicants for registration must have the following qualifications: 1) good moral character; 2) a degree in geology, or the equivalent academic work; 3) at least seven years of professional experience (with some credit allowed for university study); and 4) successfully pass an examination. There is no "Grandfather Clause" in this bill. Registration will require a filing fee of \$25 to \$40, is renewed every other year, and will cost \$4 to \$8 annually. Qualified out-of-state geologists not registered in California would be permitted to practice in the state for not more than 120 consecutive days each year, upon successful application to the board.

NEWSLETTER EDITOR NAMED

Tom Wright (Standard, La Habra) has been appointed Editor of the Pacific Petroleum Geologist. He replaces Louis Canut (E. B. Hall, Wilmington). Assistant Editors are Don Hall (Union Research, Brea) and Ken Decker (Richfield Research, Anaheim).

Correspondence should be addressed c/o P. O. Box 606, La Habra, California 90633.

GEOLOGISTS' REGISTRATION, THE A.I.P.G., AND THE A.E.G.

Officers of the American Institute of Professional Geologists and the Association of Engineering Geologists have recently held informal meetings for the purpose of discussing Senate Bill 871, which proposes to register geologists. The officers were in joint but unofficial agreement that SB-871 is an inadequate solution to the problem of registration. Since those meetings, the A.I.P.G. has circularized its members, recommending that they read SB-871 and then write their State senator or assemblyman a brief summation of their individual objections to the bill. The A.E.G. has not yet made any official move in this regard.

Both A.I.P.G. and A.E.G. will be represented at the hearings in Sacramento on SB-871. It appears that the two organizations may act in concert, in opposing the bill in its present form.

It is now too late for further new legislation to be introduced at this session. The best political word is that no bill of any kind is assured of passage if it is the object of organized opposition. Senate Bill 871 might be a candidate for passage in an amended form, but that presupposes early agreement on many unresolved issues between A.I.P.G. and A.E.G.

Robert H. Paschall
Legislative Representative
A.A.P.G. and A.I.P.G.

EXTRA TERRESTRIAL GEOLOGIST TO SPEAK
AT JUNE MEETING

Dr. Jack Green, Research Geologist for Space and Information Systems Division of North American Aviation, will be featured speaker at the regular monthly luncheon meeting in Rodger Young Auditorium on Thursday, June 3rd. The title of Dr. Green's talk is "Exploration of the Moon," a very meaty subject on which he is eminently qualified to speak and which should be of interest to all geologists.

As the leading proponent of the volcanic and conventional tectonic school for the formation of major lunar surface features, Dr. Green will illustrate this concept with slides of analogs of terrestrial features versus lunar features photographed by the recent Ranger moon shots. In addition, Dr. Green will discuss the application of logging tools developed by the petroleum industry to lunar exploration and some results of his research on exploitation of possible lunar surface materials.

For those who have not had the pleasure of hearing Dr. Green, a speaker of international note, this will afford a rare opportunity to learn about a rapidly expanding phase of our science. Those outside the Los Angeles area wishing to attend may write for reservations to E. R. Orwig, 612 South Flower Street, Los Angeles, California 90054.

A. O. WOODFORD
HONORARY LIFE MEMBER

Dr. Alfred O. Woodford of Pomona College, born February 27, 1890, in Upland, California, received his B.A. degree from Pomona in 1913 and a Ph.D. in geology from the University of California in 1923. Woody's name is inseparably linked with the Geology Department at Pomona, where he served as an instructor in chemistry during 1916-17 and in chemistry and geology during 1918-19, an assistant professor of geology from 1920 through 1923, an associate professor from 1923 through 1927, and as professor of geology until 1933 when he became emeritus. During the years 1936 through 1938, he was a visiting professor at Stanford, and he was associated with the U.S. Geological Survey from 1943 to 1960. Dr. Woodford is a Fellow of the Geological Society of America (serving as its Second Vice-President in 1949) and the Mineralogical Society, a member of the AAPG and the American Association of Geology Teachers (serving as its Vice-President in 1961), and the 1955 recipient of the Neil Miner Teaching Award.

No Southern California geologist could be unfamiliar with the work of A. O. Woodford, for his imprint on our knowledge and literature is everywhere: the Catalina schist and the San Onofre breccia, the San Bernardino Mountains, Baja California, the pre-Tertiary diastrophism and plutonism of Southern California and Baja California, the Crestmore Quarry and its minerals, the Puente and San Jose Hills, the Los Angeles Basin, the Monterey submarine canyon, and strike-slip faulting in Southern California. Geologists everywhere have benefited from such works as his basic text in geology, co-authored with James Gilluly and Aaron Waters, and his recent essay on correlation by fossils which appeared in "The Fabric of Geology." His publications, as well as his students, testify to the magnitude of Dr. Woodford's contribution to our science.

HARRY R. JOHNSON
HONORARY LIFE MEMBER

Harry Roland Johnson was born in Washington, D.C., on August 1, 1880, of pioneer stock. His boyhood attraction to the U.S. Geological Survey offices led to a friendship with Waldemar Lindgren and to various temporary jobs with the U.S.G.S. between 1898 and 1903. He attended Stanford University in the days of David Starr Jordan, J. C. Branner and James Perrin Smith and was graduated rather unceremoniously by the earthquake of April 18, 1906. Following his graduation, he joined the U.S. Geological Survey and worked in the McKittrick-Sunset district, the Carrizo Plain and the Santa Monica Mountains under the direction of Ralph Arnold. He also mapped the water resources of the Antelope Valley before resigning in 1910 to enter consulting practice. Most of his publications date from this early period, though later phases of his career are recorded in articles on the Santa Susanna district, the San Gabriel Valley and the Marysville Buttes.

As a consulting geologist in the Osage country, Harry R. Johnson participated in the initial discussions, in 1915, which led to the

organization of the AAPG, and he is listed among the founders. Other affiliations include membership in the American Institute of Mining Engineers, the Geological Society of America, the Le Conte Club, and the Branner Club. Harry was president of the Pacific Section, AAPG, in 1937.

Harry R. Johnson maintained an active consulting practice, chiefly in California, but ranging throughout North America until he retired in 1948, "to make way," as Homer Steiny would put it "for us younger men." His interest in oil exploration and in Association activities, however, is unflagging.

NORTHERN CALIFORNIA GEOLOGICAL SOCIETY NEWS

Around the margins of San Francisco Bay, various tracts of marshland and tideland have been reclaimed by filling over the past decades, and the newly created land used for many purposes. Proposals for fill projects continue to be made, but of late an increasing opposition to many of these projects is developing. It is argued that a long-range view must be taken, and concern is being expressed over the effects of continued filling on such items as water quality, pollution, fish and wildlife resources, recreation, mineral resources, climate, and the aesthetics of exchanging a wide expanse of open water for flat lands occupied by residential subdivisions and industrial tracts.

Related to the latter, one of the causes for concern is the well documented fact that during earthquakes, structures built on natural alluvium or artificially filled land often suffer greater damage in general than similar structures built upon bedrock sites. This relationship was brought into public focus last November by its presentation in testimony given before a State Legislative Commission by two Bay Area geologists acting as private citizens.

Some members of the Northern California Geological Society have proposed that the Society as a group of professional geologists go on record to affirm the principle that filled land is especially susceptible to excessive movement during earthquakes, often causing severe damage to structures. They feel that it is in the public interest for this problem to be publicized and thoroughly discussed. In this way, planning and policy determining public agencies at various levels of government concerned with land use will be more aware of geologic factors that may be involved, and any hazardous conditions that may be highlighted may be weighed in order to arrive at sound decisions on matters affecting the well-being and safety of the public.

After discussion of this proposal, President Bill Effinger appointed a special committee on geologic and earthquake hazards consisting of Elmo W. Adams, Chairman, George Gates, Gordon Oakeshott, John McCall, Kenneth Wilson, Jack Baker, and Roger Alexander, to consider the problem and recommend what action the Northern California Geological Society might take. This committee has submitted its report, which is now being circulated to the NCGS membership for approval or comment.

It is hoped that other geological organizations will join the effort to widen the recognition of geologic hazards in general, with the end result of better protection of the public from disasters arising out of geologic causes.

LOS ANGELES LUNCHEON MEETING

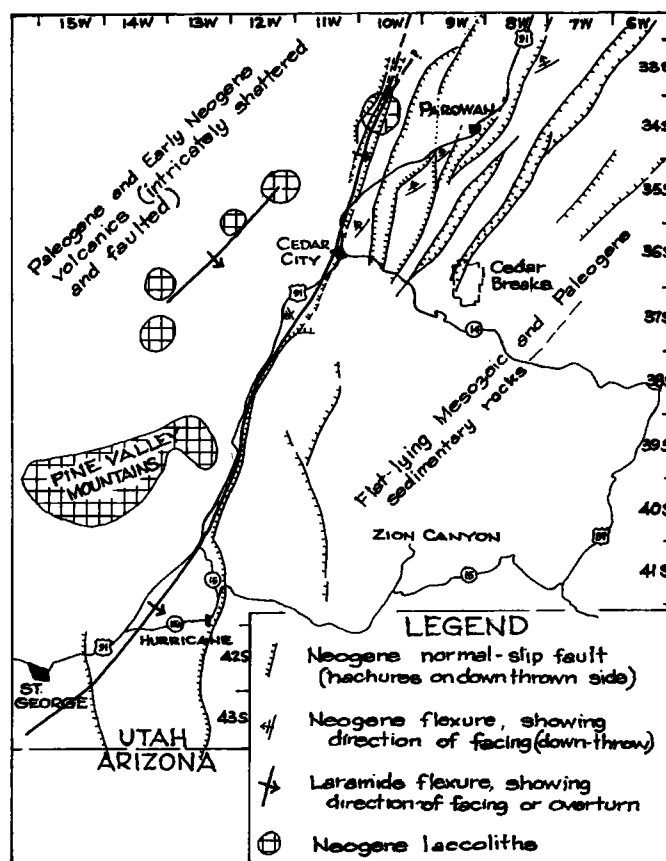
"Composite Structure of the Colorado Plateau Margin In Southwestern Utah"

Dr. Richard L. Threet, San Diego State College, gave an excellent and very well illustrated talk at Rodger Young Auditorium April 15 on the regional geology and structural relationships of the Cedar City-St. George area. Geologists vacationing through this area can observe these geological features as they travel U.S. Highway 91; additional details may be found in the 1963 Guidebook to the Twelfth Annual Field Conference of the Intermountain Association of Petroleum Geologists.

ABSTRACT

U.S. Highway 91, from St. George, Utah, to Cedar City and beyond, traverses a part of the transition zone between the Colorado Plateau and the Basin-Range province. The colorful stratigraphic units are typical of the Colorado Plateau: Mississippian Redwall and Bluepoint limestones; Pennsylvanian Callville limestone; Permian Pakoon limestone, Coconino sandstone and Kaibab limestone; Triassic Moenkopi formation, Shinarump grit, Chinle shale and Moenave formation; Jurassic Kayenta mudstone, Navajo sandstone, Carmel limestone, Entrada sandstone and siltstone, Curtis limestone and gypsum, and Winsor sandstone and shale; Cretaceous Dakota(?) sandstone, Tropic shale, Straight Cliffs sandstone, Wahweap sandstone and Kaiparowits sandstone and conglomerate; Paleocene/Eocene Claron conglomerates and limestones; Oligocene/Miocene pyroclastics and andesite flows; and quaternary basalts. The Cenozoic volcanics provide useful structural markers: tuff compaction features show bedding in outcrops and well cores, and the Quaternary lava flows permit the discrimination of Recent from older fault offset.

The often-drilled, but unproductive Virgin anticline, a prominent feature in the St. George-Harrisburg area, merges with the Hurricane fault near Anderson Junction. Northward, the components of these two structures can be distinguished through careful field mapping. The Laramide Virgin (or Kanarra) fold, an eastward-facing overturned monocline or anticline, was formed along the site of the Colorado Plateau margin. The fold was truncated by late Cretaceous and early Tertiary erosion, then was buried by a few thousand feet of Pink Cliffs Claron ("Wasatch") sediments and mid-Tertiary volcanic rocks. Only the east flank and toe at the flexure have been exposed again during Neogene time, in the westward-facing Hurricane Cliffs fault scarp, between Toquerville and Cedar City, Utah.



At Cedar City, the flank of the Laramide flexure was unfolded and bent abruptly westward, as it was crossed obliquely by a north-westward-facing Neogene monocline, which accompanied an echelon splintering of the Hurricane fault zone. Removal of the effects of Neogene warping or oblique unfolding, by stereographic projection, permits visualization of the older structure and its probable relationship to segments of similar folds exposed elsewhere near the western margin of the Colorado Plateau.

The reversal of sense of displacement, between Laramide and Neogene structures, is common along the Colorado Plateau margin, but the oblique unfolding in southwestern Utah is sufficiently unusual to deserve special consideration in study of the regional tectonics. The local obliquity of unfolding, during collapse of the Basin-Range province, probably reflects control by sets of structural trends in the Precambrian basement rocks of the region.

The Hurricane fault, which forms the western margin of the Markagunt Plateau south of Cedar City, can be traced northward across U.S. Highway 91 and into the desert ranges west of Parowan. In this area, the plateau margin east of Highway 91 is marked by a monoclinial flexure cut obliquely by north-trending normal faults.

REMEMBER THE SPRING PICNIC
FRIDAY, JUNE 4th

U.S. GEOLOGICAL SURVEY OFFICES
TO MOVE TO NEW FEDERAL BUILDING

At the end of May, 1965, the U.S. Geological Survey offices will be relocated in the new Federal Building, 300 North Los Angeles Street.

Branch of Oil and Gas Operations
will be in Room 7744 Phone: 688-2846

Branch of Mineral Classification
will be in Room 7744 Phone: 688-2846

Public Inquiries Office
will be in Room 7638 Phone: 688-2850

The U.S. Bureau of Land Management, Outer Continental Shelf Office, is also relocating in the new Federal Building.

PERSONAL ITEMS

PETE GESTER, Standard, Oildale, has reacted to his new post as Pacific Section President by fleeing to Spain. Pete and Betty shipped out of San Pedro on April 28th for a leisurely cruise via the Panama Canal to England. They will visit ED WELLBAUM (ex-Kern Oil in Bakersfield) in London and then fly on to Spain. Plans call for a return flight via Paris at the end of May.

BUS IVANHOE is on a consulting job in Nigeria and says the beer is good and the water is not -- so he is forced to drink beer!

This is to acknowledge receipt of two small wooden pancakes from ART NELSON (ex-Shell, Bakersfield) who is now managing the new Sambo's Pancakes in Visalia. After doing a land office business with Shell all those years, Art reports that his new product is selling like hotcakes.

JACK BARR, geologist turned computer-tutor, Standard, San Francisco, has shocked his entire circle of friends and acquaintances by announcing his impending marriage after decades of emphatic bachelorhood. Whither now, those quiet evenings with hi-fi and martini pitcher?

The slicers and hookers in Standard's La Habra office teed off April 24th for their 5th (and last?) annual Exploration-Land Golf Tournament at Los Serranos Country Club in Chino. Thirty-one started, but one seasoned athlete popped his back on the first tee and went home, not knowing how lucky he was. The mercury rose, the smog rolled in, until the scene at the 10th hole resembled Bataan as the victims sprawled on the grass and compared cardiac symptoms. Youth and vigor triumphed, however, as the survivors marched through the twilight to the 19th hole bravely whistling Colonel Bogey's March. Low gross winners in flights were: BOB LINDBLOM (75), and among the amateurs, WALT GRESCH (92) and BOB KNAPP (103). Low net winners in flights were JOHN CASSELL (73), JIM TASKER (74) and HARRY NAGLE (70). The annual putting trophy was won by BOB LINDBLOM. BILL GOLD won a special litter-bug award (a fractured 3-iron). Co-chairmen and oxygen purveyors were WALT GRESCH and JOHN CASSELL.

Poignant scenes on the post-convention field trip in Bakersfield: the hasty caucuses at the foot of the hill at Stop 2, trying to decide, "Are a few lousy turritellas worth the climb?" the bemused expressions around the Vibroseis truck as the onlookers were vibrated as promised; the rainy retreat to Arvin with turnoffs, landmarks, and the White Wolf fault all lost in the mist; the lunch-line's worried expressions changing to smiles as they got inside and found that there was still some vacant floor to sit down on; the long-way-round through Mojave, and snow on the Joshua trees, after the Ridge Route closed.

WM. H. PARK, Associate Oil and Gas Engineer, with the State Division of Oil and Gas, was elected to the Bakersfield City Council in a run-off election for Ward 3. Bill took office on April 26.

JAMES WEDDLE of the State Division of Oil and Gas has been transferred from Bakersfield to the Taft Office.

OTTO HACKEL has been named Manager of Exploration for Buttes Gas and Oil, effective May 1, 1965.

MIKE CRUSON has joined Standard Oil's Exploration Department in Oildale. Mike graduated from Colorado School of Mines in February, 1965.

On a recent field trip in Southern California, Shell exploited a new commodity. DAVE "TYPHOID HARRY" SHOEMAKER infected most of Southern California, including the Pink Pussycat, with Asian Flu. U.S. - Mexican relations may be a bit strained when our southern neighbors discover that their epidemic in Tijuana and Mexicali (no scheduled stops) was imported from the U.S.

Certain members of Shell's crew, including a very recent victim, T. R. O'NEILL, are hopeful that Dave will enjoy his new assignment - at this writing no other office will accept him. However, it is rumored it will be a place much warmer than Bakersfield.

LEE MCFARLAND, recently with Gulf Oil, formerly with Universal Consolidated, joined the Geological Staff at Occidental in March, 1965.

STAN CARLSON, Richfield, Bakersfield, spent a week's Easter Vacation polishing his golf game for the coming A.P.I. tournament.

News from the Pacific Northwest has been delayed by the April 29th Seattle earthquake. Early reports are that DOUG HASTINGS, Standard, lost a chimney and several offices gained a few cracks. Other quirks of nature in the form of (un?)seasonal storms have delayed the spudding of Oregon's first offshore well.

JOHN THOMAS has joined Humble (Bakersfield) as a Paleontologist. He recently received his Masters Degree from the University of Missouri at Rolla, Missouri.

NURSERY NEWS

CECILIA and JOE ARNDT, (Richfield, Bakersfield) their first child, a son, April 22nd.

BRUCE A. BLACK (Shell, Ventura) was visited by the stork on April 12th as forecast. Leigh Helen is the name of this new female addition to the family. Congratulations Dad -- you sure know how to call your shots.

CALENDAR

- May 18, 1965 Tuesday noon, U.S.C., Building GB, Room 102, 857 West 37th Street (adjoining Geology "A"): Mr. W. Thomas Rothwell, Regional Paleontologist, Richfield, "Ostracode Ecology."
- May 18, 1965 Tuesday evening, 6:30 P.M., Athenaeum, CALIFORNIA INSTITUTE OF TECHNOLOGY. Braner Club: "Magnificent Gamble," color film of search for oil in Australia, Frank A. Morgan, Consulting Geologist, Los Angeles.
- June 3, 1965 Thursday noon, Rodger Young Auditorium, 963 West Washington Boulevard, LOS ANGELES: Jack Green, North American Aviation, "Exploration of the Moon."
- June 4, 1965 AAPG Spring Picnic, Golf Tournament and Field Trip. See detailed story elsewhere in this issue.
- June 25, 1965 Friday, Sacramento Petroleum Association annual barbecue, Yolo Flyers Club, west of WOODLAND, California.

PACIFIC PETROLEUM GEOLOGIST
PACIFIC SECTION. A.A.P.G.
P.O. BOX 17486. FOY STATION
LOS ANGELES 17. CALIFORNIA

Volume 19

Number 5

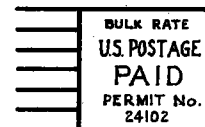
Return Requested

CHANGE OF ADDRESS FOR MEMBERS NOT LISTED IN CURRENT DIRECTORY:

- | | |
|--|---|
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Pomona, Calif. 91767 | Gary E. Melickian
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Anaheim, Calif. |
| Dale H. Duley
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Morocco | Arthur E. Nelson
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| William N. Booth
Royal Stardust Apts. #1
Las Flores & West P Sts.
Brawley, Calif. | John H. Silcox
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| O. W. Fauntleroy
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- | | |
|---|---|
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| Robert R. Smith
335 NE 192 Street
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1008 West 6th Street
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Richard L. Hester
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DA

PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 19

June, 1965

Number 6

ASSOCIATION ACTIVITIES



E. HAROLD RADER
In Memoriam

The fine sense of humor, the solid judgment and the marvelous ability to carry on in spite of great adversity in Hal Rader will always be remembered by his many friends and associates. He passed away on the morning of May 24, after a lengthy, though not entirely confining, illness. Memorial services were held on May 26 at the First Methodist Church in Whittier.

Harold Rader was born in Kent, Washington, on December 6, 1911. Graduating in 1934 from Washington State University into the depths of the depression, he started work as truck-driver for Standard Oil in the Kettleman Hills oil field. The year 1942 saw his transfer into wholly geological endeavors and soon thereafter, he became the Los Angeles Scout for Standard. In 1951, he was named Division Development Geologist for Standard's Southern Division, including the Los Angeles, Ventura, and Santa Maria basins, and he held this position until his death, although illness had restricted his activities in recent months. During most of the past two decades, Hal's was the voice of Standard Oil among Los Angeles wildcatters.

Hal Rader has always been a great worker for the American Association of Petroleum Geologists, and served as president of the Pacific Section during 1954. Other offices have included Secretary-Treasurer, National District Representative, and Nomenclature and Classification committeeman. He has served on the West Coast Subcommittee on Statistics of Exploratory Drilling since 1944, and has been chairman of that committee for the past nine years. At the time of his death, he was President of the Branner Club.

Hal is survived by his wife, Phyllis; his daughter, Mrs. Beverly Black of San Jose; his son, Norman; and two grandchildren.

-Homer Steiny



1965-66 OFFICERS - SEPM PACIFIC SECTION

Left to right: President Alvin A. Almgren, Union; Vice-President Richard L. Brooks, Richfield; Secretary Mort Polugar, Standard; Treasurer Rex E. Olson, Humble.

1966 CONVENTION SET FOR LONG BEACH

With "Offshore Oil" as its theme, General Chairman William D. Emerson, Humble, has announced that the 1966 Pacific Section AAPG-SEG-SEPM Convention will be held at the Long Beach Municipal Auditorium on March 24-26. This appropriate waterfront location will provide a ringside seat for THUMS East Wilmington activity, and will enable exhibitors to bring marine exploration equipment of any size within a few steps of the convention sessions. It is anticipated that field trips will include a harbor cruise past drilling operations at East Wilmington, Belmont and Surfside, and a tour of adjacent oil fields from Huntington Beach to Signal Hill, Dominguez, Torrance and Wilmington.

Those assisting Emerson in convention preparations include: Associate General Chairman Howard Stark, Richfield; Program Chairman Frank W. Bell, Shell; Exhibits Chairman A. Louis Canut, E. B. Hall & Co.; Entertainment Chairman John M. Nisbet, Richfield; Publicity Chairman Bruce M. Barron, Oilwell Research; Arrangements Chairman Dennis R. Allen, Long Beach Department of Oil Properties; Printing Chairman Patrick C. Haley, Humble; Program Editor Edward F. Sabatka, Humble; Projection Chairman Conrad Maher, Mobil, and SEPM Representative Richard L. Brooks, Richfield.

- URGENT -

LATEST NEWS ON REGISTRATION
OF GEOLOGISTS ON PAGES 4 - 6.

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PACIFIC PETROLEUM GEOLOGIST

Published monthly by the PACIFIC SECTION
American Association of Petroleum Geologists
Address communications to the Pacific Petroleum
Geologist, P.O. Box 17486, Foy Station, Los Angeles,
California 90017

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NEXT DEADLINE- JUNE 25

FIELD TRIP PLANS, NATIONAL AAPG MEETING
LOS ANGELES, APRIL, 1967

To date, the Field Trip Committee consists of B. W. Troxel, Chairman; G. B. Cleveland and R. P. Blanc, Vice-Chairmen. Two 2 - 2-1/2-day post-meeting trips are in the planning stages. One will be a 2-1/2-day trip by bus through Owens Valley, White-Inyo Mountains, Last Chance Range, and Death Valley. Principal stress will be on structural features and Cambrian-Pre-Cambrian stratigraphy. The other will be a 2-day trip to one of the islands, probably Santa Catalina. One day will be spent reviewing the island geology, the other will be spent observing various techniques for gathering ocean floor data from oceanographic vessels.

Several 1/2 to full-day trips are anticipated on the Sunday preceding the convention. These trips will be to local points of current interest.

Volunteers and suggestions are needed for pre-meeting trips, editors, field trip leaders, special equipment, etc. Please submit them to B. W. Troxel, California Division of Mines and Geology, Rm. 1065, 107 S. Broadway, Los Angeles 90012.

LOS ANGELES LUNCHEON MEETING

"The Geology of Nevada - An Exploration Frontier"

Under the auspices of the AAPG Distinguished Lecture Series, Dr. John C. Osmond, consulting geologist, Salt Lake City, presented an excellent review of the geologic evolution and oil possibilities of Nevada at the Rodger Young Auditorium on May 6th.

Abstract

The Eagle Springs oil field, in east central Nevada, was discovered in 1954, and remains the only oil field in the State. The nearest oil or gas production is over 200 miles to the east in Utah, and over 300 miles to the southwest in California. Useful information is available from less than 50 wells which have been drilled in the State. Geologic evaluations are based primarily on outcrops in the mountains.

Is there only one accumulation of oil in this large area? Why have the other wells been unsuccessful? What are the prospects for future exploration? As aids in formulating opinions on these questions, this paper outlines the geologic history of the region and reviews the ideas which have been presented on the major geologic problems.

During Paleozoic time, Nevada was part of the Cordilleran geosyncline. The eastern part was in the miogeosynclinal belt, and the western part was in the eugeosynclinal belt. Petroleum exploration has been concentrated in the eastern part of the State where Paleozoic sedimentation and tectonics were similar to those which created accumulations of oil and gas elsewhere in North America. In Mississippian time, a northerly trending orogenic belt rose in the middle of the State separating the two parts of the geosyncline.

In Mesozoic time, western Nevada was the site of deposition of thick marine and volcanic deposits. The eastern part of the State received little or no deposition.

Cretaceous and Tertiary times were critical in the creation of new traps for hydrocarbons and the relocation or destruction of earlier ones. During this period, the area was subjected to one or more phases of regional uplift, overthrusting, intrusion, normal faulting, vulcanism, mountain building, erosion and sedimentation ranging from thick conglomerates to lacustrine oil shale.

Full reconstruction of the sequence of these events is made difficult because much is still unknown. Many facets of this history are covered solely by divergent working hypotheses. This is the challenge to geologists, to fill in more of the basic geologic data, formulate new geologic interpretations and test the old ones to lead to the discovery of new oil and gas fields.

LONG BEACH GEOLOGISTS' LUNCHEONS

Informal luncheon meetings of geologists in the Long Beach area are going full swing, the first Wednesday of each month, 12 noon, at the Long Beach Elks Club, 4101 East Willow, Long Beach. Drop in and join your friends.

SACRAMENTO GEOLOGICAL SOCIETY

The Geologic Society of Sacramento held its last meeting of the year on 11 May 1965. Dr. Donn Gorsline presented a revolutionary concept about inner shelf sand distribution and methods of study. A new group of officers was elected for 1965-66. They are:

President, Burt Amundson
Sacramento City College
Freeport Boulevard
Sacramento, California

Vice-President, Wallace Fuqua
Calif. Dept. of Water Resources
9th and O Streets
Sacramento, California

Secretary, Sargent T. Reynolds (Consultant)
1316 Jimeno Lane
P.O. Box 737
Woodland, California

Treasurer, James Evans
Calif. Dept. of Mines & Geology
Resources Building
9th and O Streets
Sacramento, California

ROCKY MOUNTAIN MEET SET FOR BILLINGS

The Fifteenth Annual Meeting of the Rocky Mountain Section, A.A.P.G., will be held September 26-29 in Billings, Montana. Convention headquarters will be at the Northern Hotel with registration beginning Sunday and continuing through Monday. Exhibits will be on display at the hotel. Technical sessions will be held in the Fox Theater two blocks from convention headquarters.

This year's theme is "The Truth about Typical Rocky Mountain Oil Traps." The purpose of the convention is to expose the true trapping mechanisms of some of the prominent producing areas in the Rocky Mountain Region. Tomorrow's oil will be found in obscure traps created by stratigraphic, fluid, temperature and other subtle anomalies. Careful examination of today's producing areas will point the way to tomorrow's success. The technical program of the 1965 convention will consist of approximately 34 papers emphasizing the petroleum aspect of geology in an effort to stimulate geologic thought that will result in future discoveries.

A full program of entertainment for registrants and wives has been arranged. Women's program includes a style show, sherry party and luncheon.

CALIFORNIA DESIGNATES OFFICIAL STATE
ROCK AND MINERAL

Recent legislation has designated native gold as California's official State mineral and serpentine the official State rock. Gold was chosen for its historic and economic significance, while serpentine was selected because of its widespread occurrence. It is of indirect economic importance as the host rock for asbestos, chromite, magnesite and cinnabar and as a problem for engineering geologists.

SACRAMENTO FIELD TRIP SET

Field Trip: Geological Society of Sacramento,
1965 Annual Field Trip, June 19-20.

La Porte to the Summit of the Grizzly Mountains,
Plumas County, California.

This field trip will cover the change from "Sierra Nevada Geology" to "Basin and Range Geology."

Leader: Professor Cordell Durrell of the University of California, Davis.

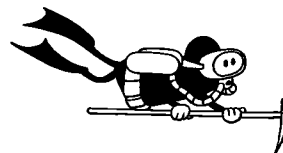
For information write Secretary, Geol. Soc. of Sacramento, c/o Dept. of Geology, University of California at Davis.

LOUISIANA OIL FIELD VOLUME PUBLISHED

The Lafayette Geological Society has published a new field study book titled "Typical Oil and Gas Fields in Southwest Louisiana." This book contains 32 field studies, each with a discussion that includes discovery data, geology and production information. Each study also has at least one structure map, one cross section, a type log and some have isopach maps.

In addition to the field studies, the book has a discussion of the general geology of Southwestern Louisiana, a structure map and a fault trace map of the area. An index map showing the location of the fields studied and a chart showing the relative stratigraphic positions of the producing zones are also included.

The publication sells for \$12.00 and is available from the Lafayette Geological Society, P.O. Box 51896 OCS, Lafayette, Louisiana.



HOW DO I DO IT?

LOOK IT UP IN THE MEMBERSHIP DIRECTORY

The 1964 Membership Directory contains names, addresses, phone numbers and pictures of Pacific Coast Geologists, Geophysicists and Paleontologists. (Price \$5.00)

New pages and revisions are now available to bring your 1964 Directory up to date. (Price \$2.50)

Both Directory and 1965 revision (price \$6.50). All prices include mailing costs. Send checks payable to: Pacific Section AAPG, P.O. Box 17486, Los Angeles, California 90017.

Doug Traxler
Directory Chairman

SUMMARY OF LEGISLATIVE DEVELOPMENTS ON SENATE BILL 871

In the last issue of the P.P.G., Peter W. Gester indicated that your Executive Committee was opposed to Senate Bill 871. In the past month there have been a number of developments concerning this bill, which was originally introduced March 29 by Senator Alan Short, Chairman of the Senate Business and Commerce Committee on his own initiative. During the month of April, this Committee was the recipient of many letters opposing the bill in its initial form. This opposition came not only from AAPG and AIPG members, but from Engineering Geologists and Civil Engineers, each group for somewhat different reasons.

On April 30, Wm. Montgomery, Staff Consultant for the Senate Business and Commerce Committee, invited representatives of all interested organizations to meet with him for a preliminary discussion of the bill. Representing our interests was Bob Paschall, official AIPG legislative representative and recently appointed AAPG legislative representative by President Pete Gester. From these discussions, which took place over a two-day period, it became evident that it might be possible to amend Senate Bill 871 to satisfy all parties and in particular to eliminate the major objectionable features from the AAPG standpoint. As a result of this meeting, a legislative committee appointed by AIPG California Section President A. O. Spaulding, and composed of people with both AIPG and AAPG affiliations, drafted up amendments to the bill.

An AIPG Executive Committee meeting was held May 6 to decide upon a stand at the next Senate Committee hearing. At this meeting, a basic decision was made to try and amend SB 871. It was felt that complete opposition to the bill would be detrimental to the best interests of all geologists, would result in fractionation of the profession and the enactment of legislation registering the engineering geologists with the present engineering board and unduly restricting petroleum geologists. As a result, amendments were proposed and approved by representatives of the Coast, Los Angeles, San Joaquin Valley, Northern California and Sacramento areas, each an AAPG, as well as AIPG member.

On May 18, 1965, the Senate Business and Commerce Committee, Chairmanned by Senator Alan Short, held a hearing at which supporters and opponents of SB 871 were heard. The AIPG, represented by California Section President A. O. Spaulding, presented the amendments which had been approved at the May 6 meeting. These amendments have corrected many of the inequities of the original bill and are summarized as follows:

- (1) Geology is properly defined.
- (2) A Grandfather clause permitting all geologists with three full years of verified professional experience to register without taking an examination.
- (3) Prohibits the use of the title "Registered Geologist" but not "Geologist."
- (4) Exempts the teaching of geology.
- (5) Exempts geologists employed by oil companies, providing that a company has one registered supervisory geologist.
- (6) Provides for a penalty for anyone not exempt practicing geology for others, unless he is a "Registered Geologist."

Not completely satisfied with these amendments, the AAPG Executive Committee appointed a Provisional Registration Committee consisting of John E. Kilkenny, Chairman, T. A. Baldwin and E. A. Hall. This committee recommended further amendments clarifying some of the AIPG amendments and with one basic difference, the restriction of only the title "Registered Geologist" and not the "practice of geology." These amendments were also presented at the May 18 hearing.

Both the AIPG and AAPG went on record with the Senate Committee as favoring a chartering system of licensing over the present bill.

Representatives of the California Council of Civil Engineers and Land Surveyors proposed an amendment that would license geologists under the Civil and Professional Engineering Board instead of a Geologists Board.

On May 25, the Senate Business and Commerce Committee approved the amendments proposed by the AIPG and some proposed by the AAPG. However, the "practice of geology for others" is restricted to registered geologists. The amendment by the Civil Engineering group to have a geologist on the Engineering Board was not approved, and the bill currently provides for a geological board with six geologists and one public member. A recommendation to pass the bill was made to the Senate.

Your AAPG and AIPG representatives have worked hard to amend SB 871 so that it is fair and equitable for all geologists. Every attempt is being made to keep all of our members informed of our actions and the progress of this bill.

The bill is now (May 29) in the hands of the Senate Finance Committee. If approved here, it will go progressively, if approved, to the floor of the Senate, then to an Assembly Committee on Governmental Efficiency and Economy, and finally the floor of the Assembly. All of these steps are programmed for the next three weeks before the adjournment of the legislature.

Another bill affecting geologists, Assembly Bill 2680, introduced by Assemblyman Warren of Los Angeles, extends the coverage of the Board of Registration for Civil and Professional Engineers to include such other engineering disciplines as are approved by the Board, and prohibits the use of the title "engineer" along or with qualifying language, except by a registered civil or professional engineer. The existing Engineers' Board could thus, by its own administrative action, extend registration to engineering geologists. This open-end Bill might even be construed to cover "geologists" and, thus, is unacceptable in its present form. The Association of Engineering Geologists executive board voted 9 to 4 in favor of SB 871 over AB 2680.

Your AIPG committee has drafted an amendment exempting all earth scientists from the terms of this bill and will present them to the Assembly Committee at the time of the hearing.

In summary, the policy of your AIPG committee is to exempt all geologists from Assembly Bill 2680 and support the passage of Senate Bill 871 in its present form.

John Kilkenny - Art Spaulding

EXCERPTS FROM SENATE BILL 871 AS AMENDED

Section 1. This chapter is enacted in order to introduce qualifying criteria in a presently unregulated professional field. Such action recommends itself through benefits to the safety, health, and welfare of the people of California. These benefits are in the fields of geology as related to engineering, ground water, mineral exploration and exploitation, the further development of the science of geology, and other geologic matters of concern to the people of the state.

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

7802. "Geology," as used in this chapter, refers to that science, including applied science, which treats of the earth in general; investigation of the earth's crust and the consolidated rocks and unconsolidated materials which compose it; and the applied science of utilizing knowledge of the properties of the earth and its constituent rocks, minerals, gases, and liquids for the benefit of mankind.

7803. "Geologist," as used in this chapter, refers to a person who practices geology.

7804. Only a person registered under the provisions of this chapter shall be entitled to take and use the title "registered geologist."

7821. The board may, by regulation, provide for the division of the certification of registration into different specialties, including, but not limited to, petroleum, mining, and ground water, and may issue certificates limited to one or more of the specialties in which the applicant demonstrates proficiency. The board shall provide such a certificate for those qualified in engineering geology.

Article 3. Scope of Regulation

7830. It is unlawful for anyone other than a geologist registered under this chapter to stamp or seal any plans, specifications, plats, reports, or other documents with the seal or stamp of a registered geologist, or to in any manner use the title "registered geologist" unless registered hereunder.

7832. Any person, except as in this chapter specifically exempted, who shall practice or offer to practice geology for others in this state is subject to the provisions of this chapter.

7832.1 This chapter does not prohibit one or more geologists from practicing through the medium of a sole proprietorship, partnership, or corporation. In a partnership or corporation whose primary activity consists of geological services, at least one partner or officer shall be a registered geologist.

7832.2 This chapter does not prevent or prohibit an individual, firm, company, association or corporation whose principal business is other than the practice of geology from employing a geologist to perform professional services in geology incidental to the conduct of their business.

7833. All geologic plans, specifications, reports or documents shall be prepared by a registered geologist or by a subordinate employee under his direction. In addition, they shall be signed by him or stamped with his seal, either of which shall indicate his responsibility for them.

7835. A subordinate to a geologist registered under this chapter, insofar as he acts solely in such capacity, is exempt from registration under the provisions of this chapter. This exemption, however, does not permit any such subordinate to practice geology, for others in his own right or to use the title "registered geologist."

7836. A civil engineer empowered to practice civil engineering in this state, and a petroleum engineer registered in this state, under provisions of Chapter 7 (commencing with Section 6700) of Division 3 of this code insofar as they practice civil engineering in its various branches or petroleum engineering, respectively, are exempt from registration under the provisions of this chapter.

Article 4. Registration

7840. An application for registration as a geologist or certificate as a geologist-in-training shall be made to the board on a form prescribed by it and shall be accompanied by the application fee fixed by this chapter.

7841. An applicant for registration as a geologist shall have all the following qualifications:

- (a) Be of good moral character.
- (b) Meet one of the following educational requirements fulfilled at a school or university whose geological curricula meet criteria established by rules of the board:
 - (1) Graduation with a major in geology.
 - (2) Completion of sufficient courses in the geological sciences to qualify for a geology major in that school or university.
 - (3) Completion of 30 semester units in geological science courses leading to a major in geology, of which at least 24 units are in the third or fourth year, or graduate courses.
- (c) Have at least seven years of professional geological work which shall include either a minimum of three years of professional geological work under the supervision of a registered geologists or a registered civil or petroleum engineer, except that prior to January 1, 1967, professional geological work shall qualify under this subdivision if it is under the supervision of a qualified geologist or a registered civil or petroleum engineer, or a minimum of five years' experience in responsible charge of geological work.

Each year of undergraduate study in the geological sciences shall count as one-half year of training up to a maximum of two years, and each year of graduate study or research counts as a year of training.

Teaching in the geological sciences at college level shall be credited year for year toward meeting the requirement in this category, provided that the total

teaching experience includes six semester units of third or fourth year or graduate courses.

The ability of the applicant shall have been demonstrated by his having performed the work in a responsible position. The adequacy of the supervision and experience shall be determined by the board.

(d) Successfully pass an examination.

("Grandfathers Clause")

7843. The board shall waive the examination requirement for registration as a geologist for one who complies with the following:

(a) Who makes written application to the board under this section not later than one year following the effective date of this chapter.

(b) Who has at least three full years of professional work in the field of geology under the supervision of a qualified geologist or a registered civil or petroleum engineer, or who has been in responsible charge of work. The ability of the applicant shall have been demonstrated by his having performed the work in a responsible position. The adequacy of the experience shall be determined by the board.

(c) Who complies with the provisions of subdivisions (a) and (b) of, and paragraph (1) of subdivision (c), of, Section 7841.

Article 5. Disciplinary Proceedings

7860. The board may receive and investigate complaints against registered geologists, and make findings thereon.

By a majority vote, the board may reprove, privately or publicly, or may suspend for a period not to exceed two years, or may revoke the certificate of any geologist registered hereunder:

(a) Who has been convicted of a felony, arising from or in connection with the practice of geology, or of a crime involving moral turpitude, in which case the certified record of conviction shall be conclusive evidence thereof.

(b) Who has not a good character.

(c) Who has been found guilty by the board of any deceit, misrepresentation, violation of contract, fraud or incompetency in his practice.

(d) Who has been found guilty of any fraud or deceit in obtaining his certificate or violation of any provision of this chapter.

(e) Who aids or abets any person in the violation of any provisions of this chapter.

(f) Who violates any provision of this chapter.

Article 6. Offenses Against the Chapter

7872. Every person is guilty of a misdemeanor and for each offense of which he is convicted is punishable by a fine of not more than five hundred dollars (\$500) or by imprisonment not to exceed three months, or by both fine and imprisonment:

(a) Who, unless he is exempt from registration under this chapter, practices or offers to practice geology for others in this state according to the provisions of this chapter without legal authorization.

(b) Who presents or attempts to file as his own the certificate of registration of another.

(c) Who gives false evidence of any kind to the board, or to any member thereof, in obtaining a certificate of registration.

(d) Who impersonates or uses the seal of any other practitioner.

(e) Who uses an expired or revoked certificate of registration.

(f) Who shall represent himself as, or use the title of, registered geologist, or any other title whereby such person could be considered as practicing or offering to practice geology for other, unless he is qualified by registration as a geologist under this chapter.

(g) Who manages, or conducts as manager, proprietor, or agent, any place of business from which geologic work is solicited, performed or practiced for others, unless such work is supervised or performed by a registered geologist.

(h) Who violates any provision of this chapter.

Article 7. Revenue

7887. The amount of the fees prescribed by this chapter shall be fixed by the board in accordance with the following schedule:

(a) The fee for filing each application for registration as a geologist at not less than twenty-five dollars (\$25) and not more than forty dollars (\$40) and for each application for certification as geologist-in-training at not less than fifteen dollars (\$15) and not more than twenty-five dollars (\$25).

(e) The renewal fee for a geologist shall be fixed by the board at not more than forty dollars (\$40) and not less than fifteen dollars (\$15). (Each renewal for a 2-year period)

LOS ANGELES GEOLOGICAL FORUM

Professors Tj. H. van Andel and E. H. Winterer of Scripps Institution of Oceanography compared recent sedimentation in the Gulf of California with the Miocene sediments of southern California at a Forum meeting May 24th at the Mobil Auditorium. Dr. van Andel, editor of the recently-published AAPG symposium, "Marine Geology of the Gulf of California", described recent marine sediments of the Gulf; an abstract of his talk appears below. Dr. Winterer drew a comparison with the Upper Mohnian sediments of the San Joaquin Valley - the Stevens sand, Chanac formation, and equivalents - using isopach, lithofacies and paleogeographic maps. He also described the several amplitudes of layering visible in Modelo diatomites and drew inferences as to their possible origins based on the Gulf of California studies. These talks, and the extended discussion which followed them, suggest that the Tertiary basins of California and the modern Gulf to the south have many significant features in common.

ABSTRACT

The Gulf of California

The Gulf of California is an almost landlocked sea communicating with the Pacific Ocean only through a narrow entrance at the southeastern end. The Gulf consists of a series of basins, decreasing in depth from the southeast (2,000 fathoms) to the northwest central part (500 fathoms). The basins are separated by sills, but are not stagnant. The northern Gulf is almost entirely very shallow and covered with sandy deposits, while the central and southern parts contain silty clays and diatomaceous oozes. Predominant winds from the north in the winter and spring, and from southerly directions in the summer cause upwelling of nutrient-rich water along both margins of the Gulf. The products of the resulting plankton blooms, mainly diatoms, form a large part of the sediments of the central Gulf and the western slope. On the eastern side, a number of fairly large but seasonal rivers bring an abundant supply of fine-grained sediment that dilutes the biogenous material. The seasonal variations in supply of terrigenous sediments result in alternating deposition of thin laminae of dark clayey material, and light laminae of diatomaceous ooze. These laminae are preserved in slope deposits where the low oxygen content of the water between 200 and 800 fathoms prevents benthonic animal activity. In the deep basins, the water is oxygenated, and burrowing by animals rapidly destroys the laminations. The silica for the formation of diatomites is supplied by inflowing water from the Pacific and not by volcanic activity. Turbidites occur, but are thin and not widespread.

T. H. van Andel

PERSONAL ITEMS

Plaques for outstanding papers at the Pacific Section, SEG convention in Bakersfield will be awarded to the following: DR. LUCIEN LaCOSTE, MR. ARTHUR L. INGALLS, MR. K. D. BERRY and MR. W. HARRY MAYNE. Congratulations!

RAY KNIGHT, formerly with Franco-Western, is now with Mobil at Santa Fe Springs. Because of his transfer to Santa Fe Springs, Ray has resigned as Secretary of the San Joaquin Geological Society. MR. HARRY CAMPBELL, formerly President of Franco-Western, has been appointed Assistant to the Vice-President with Mobil Oil Company.

The Richfield Exploration Department held its annual Geological Conference and Field Trip May 20-22 in the Lone Pine Area. DON ROSS, USGS, led the field trip assisted by TOM ROTHWELL. The group visited the Alabama Hills area on Saturday, May 22. Plenty of snake bite medicine was available in case of emergencies. In spite of aches and pains, a very successful trip is reported.

ROD COLVIN, Mobil, WES BRUER, consultant, DAVE MARTIN, Occidental, have spent much time and energy in relation to legislation for registration of geologists at Sacramento. A hearty thank you to these men and others who have worked hard on behalf of the profession.

GEORGE HARLOW, Humble, Bakersfield, has a favorite pastime of visiting the local junk shops during the noon hour. At first it was thought that he just wanted some fresh air, but after looking at some of the articles he has purchased lately, everyone has begun to wonder what junk shop would sell such odd pieces.

DAVE MASTERMAN is becoming an art critic for the Humble office in Bakersfield. It seems he buys outstanding(?) art works from young unknown artists, but when he takes them home, his wife won't let him hang them in the house.

JOHN SMITH is recovering from a bout with valley fever. His doctor says he should return to the Bakersfield Humble office in a week or two.

A special award for outstanding leadership was presented to CHET RUDEL, Standard at Bakersfield, on May 26th at the Junior Achievement annual banquet.

JOSEPH JENSEN, Chairman of the Board of Directors of the Metropolitan Water District of Southern California and an AAPG member since 1922, has been honored recently by advancement to the Legion of Honor of the American Institute of Mining, Metallurgical and Petroleum Engineers. He has also been extended a resolution of appreciation by the boards of directors of the Upper San Gabriel Valley, Central Basin, and West Basin water associations for his exceptional contributions in the field of public water supply.

Personal Notes: Sarge T. Reynolds has been promoted in the National Guard. He is now addressed as Sergeant Sargent.

ROBERT P. PHILLIPS has retired from Schlumberger after 27 years in the Los Angeles Basin area office.

Trying to keep track of Union's BILL MORAN is difficult these days. Bill, who is now running Union's Minerals Exploration Co., attended the 8th Commonwealth Mining Congress in Australia and was lost in the out-back down-under for about 6 weeks. He returned via Honduras and Mexico, spent a week in Los Angeles writing a speech, and then took off for New York where he addressed a Chase Manhattan Bank symposium on Australia with a paper entitled "The Significance of the Moonie Oil Field and other Recent Developments in Australia." He was heard complaining that he was not able to get to New Orleans! What's the matter, Bill? Can't you get out of the oil business?

BRUCE M. BARRON, Oilwell Research, Inc., has been transferred back to Long Beach from Dallas, although frequent trips back to the Mid-Continent keep his Stetson in use.

G. RAY ARNETT, Richfield, Bakersfield, has been elected director of Region 12 (California, Nevada and Hawaii) of the National Wildlife Federation. Ray has long been active in wild life and is also director of county and state organizations.

BOB LEVORSEN and ED PARKER, Standard, are swapping chairs (and climates). Bob has been selling off his sailboat collection preparatory to moving to Anchorage, while Ed will arrive in La Habra in time to open the smog season.

JOHN LEVORSEN, Richfield, is a new transfer to Anchorage from Midland. John arrived in the middle of a typical West Texas dust storm - his air conditioner will follow shortly.

GILL MULL of Richfield took his vacation early this year prior to his annual trek to the North Slope. He was reportedly getting in shape by climbing Mt. McKinley - on skis yet, with a group of local Alpinists.

Speaking of annual treks, we notice CARROLL HOYT with Mobil is back in the north country for the drilling and field season. Watch out for those brown bears, Carroll.

The Alaskan contingent to the recent Pacific Section convention were entertained during the off hours at the Club Hacienda by a former sourdough who was attempting the latest dance steps with a "talented" young miss. Apparently our friend was checking out some of the theories on fluid motion involving mass movement presented in his paper at the convention.

JAMES E. (JIM) GROOM, Union, is flying high. He has just soloed, and he has been promoted to Area Geophysicist for the Northern District, Pacific Coast Division.

Union Oil employees inform us that they are such a hard working group that to date they are having difficulty in assembling a team of golfers for the annual Union-Standard Golf Tournament in Bakersfield. Letters have been sent to Nicklaus and Palmer, but no reply has been received.

BOB HOFFMAN and family are leaving for Europe on June 20 for a family gathering. His wife's grandparents are celebrating their 60th wedding anniversary in Italy.

The Annual Bakersfield Standard Beer Bust and Games was held on May 15th. BOB ORTALDA won low net with a new very gentle putt he has developed. KEITH BERRY needed help from a new partner, BEN BUONGIORNO, to keep his title in the horse shoe doubles, and RAY HICKS finally took the Singles Championship from MONTY MONTGOMERY. DICK KENDALL easily won the beer drinking title. The East, with "MINNESOTA FATS" LINDBLOM pitching, was soundly defeated by the West in the softball game.

DAVE CALLAWAY is now geologist with Argosy Oil Company, effective May 15, 1965. The office address is 1716 Oak Street, Bakersfield.

SEG officers for the coming year are: President, JUDSON B. HUGHES, JR., United Geophysical; Vice-Presidents, N. P. JOKERST, Northern Area, Standard Oil Co. of California, DOUG BARMAN, Southern Area, Texaco; Secretary, BYRON R. ANDERSON, Mobil Oil Co., Los Angeles; Editor, JACK M. PROFFITT, Geophysical Services, Inc.

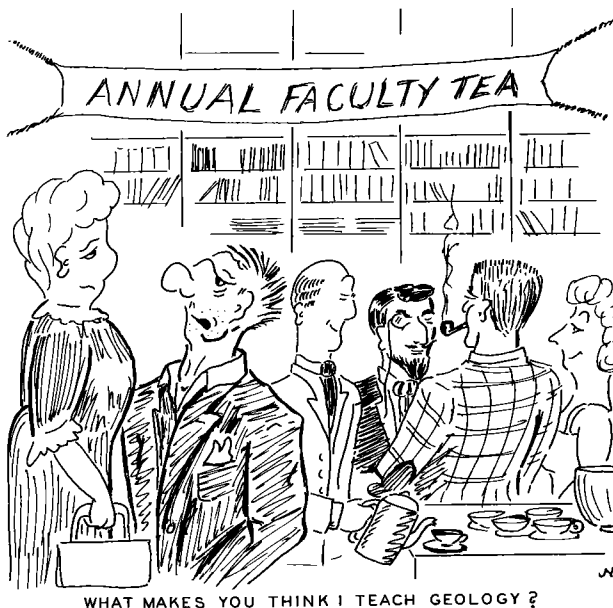
A.A.P.G. NAMES COMMITTEE HEADS

Pacific Section members whose appointments to major Association posts were announced at the recent convention in New Orleans include:

MASON L. HILL, Richfield, Los Angeles, Chairman of the A.A.P.G. Nominating Committee,

STANLEY G. WISSLER, Union Oil, Los Angeles, Chairman of the A.A.P.G. Commissioners to the American Commission on Stratigraphic Nomenclature; and

JAMES R. JACKSON, Jr., Humble, Los Angeles, Chairman of the A.A.P.G. Distinguished Lecturer Committee.



BIBLIOGRAPHY OF RECENT PUBLICATIONS

U. S. GEOLOGICAL SURVEY

Professional Paper 417-E: Natural water loss and recoverable water in mountain basins of southern California, by J. R. Crippen. 25¢

Professional Paper 501-D: Geological Survey Research 1964, Chapter D. \$2.50

Bulletin 1169: Geology of the Curlew quadrangle, Ferry County, Washington, by R. L. Parker & J. A. Calkins. \$2.00

Bulletin 1179: Geology of the Frenchie Creek quadrangle, north-central Nevada, by L. J. P. Muffler \$1.00

Bulletin 1181-L: Geology of the Ash Meadows quadrangle, Nevada-California, by C. S. Denny and Harald Drewes. 30¢

Bulletin 1194-A: Changes in stratigraphic nomenclature by the U.S. Geological Survey, 1963, by G. V. Cohee and W. S. West. 20¢

Bulletin 1194-O: Stratigraphy and chronology of later interglacial and early Vashon glacial time in the Seattle area, Washington, by D. R. Mullineaux, H. H. Waldron and Meyer Rubin. 10¢

Bulletin 1203-A: Measurement of the remnant magnetization of igneous rocks, by R. R. Doell and Allan Cox. 20¢

Geophysical Abstracts, 1964: Index to numbers 204-215, by J. W. Clarke, D. B. Vitaliano, V. S. Neuschel, and others. 75¢

Geophysical Abstracts 218: March 1965, by J. W. Clarke, D. B. Vitaliano, V. S. Neuschel and others.

MAPS:

GQ 374: Geology of the Montesano quadrangle, Wash., by H. D. Gower and M. H. Pease, Jr. \$1.00

MR 43: Barite in the United States, exclusive of Alaska and Hawaii, by D. A. Brobst. 75¢

OPEN FILED REPORTS: (inspection only)

Geologic map and structure sections of the Ogotoruk Creek area and vicinity, Alaska, by Russell H. Campbell, 1 map (scale, 2" = 1 mi.).

Geochemical reconnaissance of stream sediments in the Iliamna quadrangle, Alaska, by R. L. Detterman and B. L. Reed. 1 table, 1 map (scale 1:500,000)

Astrogeologic Studies, Annual Progress Report, 7/1/63 to 7/1/64. 450 p., 9 maps, 25 figs. (Parts A, B, C, and Supplement.)

TEI-859: Geologic map and sections of the Thirsty Canyon SE quadrangle, Nye County, Nevada, by P. W. Lipman, W. D. Quinlivan, W. J. Carr, and R. E. Anderson. 1 map, explanation, 2 cross-sections. Scale, 1:24,000.

Gravity data and Bouguer-gravity map for western Wash., by David J. Stuart. 7 p., 46 gravity sheets, 1 map.

Geologic map of the Hesperia 15-minute quadrangle, San Bernardino County, California, by T. W. Dibblee, Jr. 1 map, scale 1:62,500

Geologic map of the Cajon 7-1/2' quadrangle, San Bernardino County, California, by T. W. Dibblee, Jr. 1 map, scale 1:24,000

Approximate trace of the main surface rupture in the San Andreas fault zone between Pacifica and Saratoga, California, formed during the earthquake of April 18, 1906, by Julius Schlocker, E. H. Pampeyan, and M. G. Bonilla. 1 map, scale 1" = 1 mile.

JOURNAL OF SEDIMENTARY PETROLOGY, vol. 34, no. 4, December 1964

Early Diagenesis and lithification in carbonate sediments, by Gerald M. Friedman.

SCIENCE, vol. 147, no. 3654, 8 January 1965

Water for North America, by Philip H. Abelson

Herbert Hoover, Engineer, by Frederick E. Terman.

SCIENCE, vol. 147, no. 3656, 22 January 1965

Explosion seismology, by E. W. Carpenter

Ancient oyster shells on the Atlantic Continental Shelf, by A. S. Merrill, K. O. Emery, and M. Rubin.

SCIENCE, vol. 147, no. 3657, 29 January 1965

Sulfur: Role in genesis of petroleum, by A. G. Douglas and B. J. Mair.

Lead isotopes in gasoline and aerosols of Los Angeles Basin, California by T. J. Chow and M. S. Johnstone.

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 76, no. 2, February 1965

Speculations on the earth's thermal history, by Francis Birch.

Isotopic ages of minerals from granitic rocks of the central Sierra Nevada and Inyo mountains, California, by R. W. Kistler, P. C. Bateman, and W. W. Brannock.

Structural geology of the Specter Range quadrangle, Nevada, and its regional significance, by B. C. Burchfiel.

Lower and Middle Ordovician stratigraphy in the Hot Creek and Monitor ranges, Central Nevada, by James D. Lowell.

JOURNAL OF GEOPHYSICAL RESEARCH, vol. 70, no. 4, February 15, 1965

Calculation of the shock wave from an underground nuclear explosion in granite, by Theodore R. Butkovich.

The minimum strength of the earth, by Michele Caputo.

Determination of source parameters by amplitude equalization of seismic waves. 2. Release of tectonic strain by underground nuclear explosions and mechanisms of earthquakes, by M. Nafi Toksoz, David G. Harkrider, and Ari Ben-Menahem.

JOURNAL OF GEOPHYSICAL RESEARCH, vol. 70, no. 2, January 15, 1965

Crustal structure of the Mid-Ocean Ridges, 1, Seismic refraction measurements, by Xavier Le Pichon, R. E. Houtz, Charles L. Drake, and John E. Nafe.

Crustal structure of the Mid-Ocean Ridges, 2, Computed model from gravity and seismic refraction data, by Manik Talwani, Xavier Le Pichon, and Maurice Ewing.

Geological structure of the Aleutian Trench southwest of Kodiak Island, by G. Peter, D. Elvers, and M. Yellin.

Heat-flow measurements in the East Pacific Ocean, by Marcus G. Langseth, Paul J. Grim, and Maurice Ewing.

ECONOMIC GEOLOGY, vol. 59, no. 6, September-October, 1964

Exploration for phosphorite in Turkey--A case history, by R. P. Sheldon.

WORLD OIL, vol. 160, no. 1, January 1965

Laser yields important breakthrough in seismic data analysis.

Geophysical case histories aid North Sea exploration, by Rudolph G. Wuerker.

WORLD OIL, vol. 160, no. 2, February 1965

Brackish and glacial strata likely oil source beds, by L. F. Ivanhoe.

Logistics of geophysical operations in Alaska, by J. A. Riendl.

Israel may have many Jurassic oil accumulations.

OIL AND GAS JOURNAL, vol. 63, no. 9, March 1, 1965

Queensland looks with pride at oil, gas accomplishments.

Aussies overcome logistics for way-out wildcat.

OIL AND GAS JOURNAL, vol. 63, no. 10, March 8, 1965

Los Angeles drilling brings no civic hostility, by Arthur O. Spaulding

Will new Canadian frontier open this year, by John C. McCaslin.

OIL AND GAS JOURNAL, vol. 63, no. 11, March 15, 1965

Wildcat to test Los Angeles Harbor west of Wilmington

Much is at stake in Australian waters, by John C. McCaslin

New tests to probe offshore Peru area.

OIL AND GAS JOURNAL, vol. 63, no. 12, March 22, 1965

Gidgealpa gas strike looks better each day.

Check sand-condition pattern in looking for downdip Wilcox.

BOOKS

Approaches to Paleocology, edited by John Imbrie and Norman Newell. Wiley, New York, 1964. 440 pgs. \$12.50

Marine geology of the Gulf of California. A symposium (Memoir No. 3) Tjeerd H. van Andel and George G. Shor, Jr. Eds. American Assoc. of Petroleum Geologists, Tulsa, Okla., 1964, 408 pp. illus. Charts. \$12.50

Biogeochemical methods of prospecting. Dmitril Petrovich Malyuga. Translated from the Russian edition (Moscow, 1963). Consultants Bureau, N.Y. 1964, 205 pp., illus. \$27.50

PACIFIC PETROLEUM GEOLOGIST
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Volume 19

Number 6

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CALIFORNIA DIVISION OF MINES AND GEOLOGY

Map Sheet 3: Mt. Boardman, Santa Clara and Stanislaus Counties, Calif., by Marshall E. Maddock, 1964 \$1.50

Bulletin 183: Franciscan and related rocks and their significance in the geology of western California, by Edgar H. Bailey, William P. Irwin, and David L. Jones. \$3.00

OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
(Portland, Oregon)

Bulletin 35: Geology of the Dallas and Valsetz Quadrangles, Oregon, by Ewart M. Baldwin. (Rev.) 1965 \$3.00

NURSERY NEWS

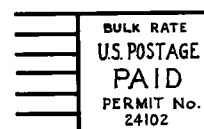
Mr. & Mrs. JOHN N. THOMSON, Consultant, son, Hugh Allan, 8 lb. 6 oz., born on April 1. John says the birth date was very appropriate for the father who is in his 36th year.

Born to JOE & KITTY JOHNSON, Consultant, a son, Joseph Campion on February 8, 1965.

CALENDAR

June 19-20, 1965 Field Trip, Geological Society of Sacramento. See detailed story elsewhere in this issue.

June 25, 1965 Friday, Sacramento Petroleum Association annual barbecue, Yolo Flyers Club, west of WOODLAND, California.



PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 19

July, 1965

Number 7

ASSOCIATION ACTIVITIES

GESTER ANNOUNCES TRANSFER: ORWIG NAMED PRESIDENT

From the (ex-) President

With very deep regret, I must report to the membership of the Pacific Section AAPG that I have been transferred to New Orleans effective July 1, 1965.

At our Pacific Section Executive Committee meeting of June 4, the Executive Committee unanimously appointed Eugene R. Orwig, Jr., President; Otto Hackel, Vice President; David C. Callaway (previously San Joaquin Representative), Secretary. Jack D. Nair will continue as Treasurer.

At the close of our Executive Committee meeting on June 16, my resignation became effective and the above listed officers assumed their new duties. At this June 16th meeting, a careful review was made of our previously expressed objectives regarding increased participation through affiliated geological societies, increased membership and the various aspects of professional registration.

I am most confident that your present Executive Committee will continue to strive for these objectives, to represent each of you, and to strengthen the Pacific Section AAPG. It has been a great honor to have represented the Pacific Section, even for such a short period, and I appreciate the support you have given me.

PETER W. GESTER

AAPG SPRING FIELD TRIP PLACERITA AREA

Eighty some-odd geologists gathered at Placerita Park on Friday morning, June 4, for the annual AAPG Spring Field Trip. Field trip Chairman Robert J. Hindle, Sunray DX Oil Company, Newhall, did a masterful job in organizing this trip on rather short notice. Helping Bob were field trip leaders Robert Morrison, Richfield Oil Corporation; Dr. Perry Ehlig, Los Angeles State College; and Dr. Gordon Oakeshott, California State Division of Mines & Geology. Also contributing to the Field Trip Guide Book was F.J. Karmelich, Petroleum Engineer with Sunset International Petroleum Corporation. Our thanks also to Dr. John Crowell, U.C.L.A.; Dr. James Slosson, L.A. Valley College; John Todhunter, Sunray DX Oil Company, and Roy Turner and Andy Vidos, Consultants, Ventura, for their help and contributions in the planning of this field trip.

The field trip started at Placerita Park and meandered 33 miles through the Soledad-Vasquez Rocks Area of the Soledad Basin. There are a few guide books left which may be obtained by sending \$1.00 to Mr. J.H. Durrie, Tidewater Oil Company, P.O. Box 811, Ventura, California 93003.

REGISTRATION

Report of the Provisional Registration Committee

To The President, Pacific Section, AAPG:

At your request I attended the California State Assembly Ways and Means Committee hearing on Senate Bill 871, held Thursday, June 17, 1965, at the Capitol Building in Sacramento as representative of the Pacific Section AAPG Executive Committee. At this hearing Senator Alan Short, author of SB-871, presented the bill to the committee.

Previously, on June 12, two amendments were made to the bill. One amendment, authored by the Department of Vocational Standards and backed by the Governor, provided for a Director of the Geologists' Board of Registration who would have considerable authority. The other amendment by the Assembly Committee on Governmental Efficiency and Finance raised the initial registration fee from the range of \$25 to \$40 to the range of \$80 to \$110 and the renewal fee from (\$15 to \$25) to (\$50 to \$80). As per your instructions, I was prepared to oppose these amendments.

In addition to myself, the geological profession was represented by three others: Robert Paschall, AIPG and AAPG legislative representative; Rodney Colvin, San Joaquin Valley Geological Society; and Robert Bean, Association of Engineering Geologists.

At the start of Senator Short's presentation, there was evident an air of hostility by the Assembly Committee. Three Assemblymen made statements opposing the bill, one on the basis of a letter from a college professor, a second on the basis of Tom Baldwin's petition against the bill signed by 103 geologists, and a third by an Assemblyman who is also a Registered Engineer. Numerous telegrams had been sent to the other members of the committee opposing the latest amendments and contacts had been made by oil company lobbyists. Although we had no opportunity to speak, the committee chairman was aware that the four of us in the audience were opposed to the amendments.

At the conclusion of Senator Short's presentation, the chairman, Burt Henson, immediately moved that the bill be "taken under submission" which meant that it would not be voted on by the Assembly and was therefore dead for this session.

The next consideration by the Legislature of any bill to register geologists will be at the 1967 session at the earliest.

One of the unfortunate parts of the events of the past three months was the inability to keep our AAPG members posted on the progress of the bill due to almost daily changes and new developments as the bill was passed from committee to committee. Although many of

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PACIFIC PETROLEUM GEOLOGIST

Published monthly by the PACIFIC SECTION
American Association of Petroleum Geologists
Address communications to the Pacific Petroleum
Geologist, P.O. Box 17486, Foy Station, Los Angeles,
California 90017

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NEXT DEADLINE- JULY 28

those in close touch felt that the amendments of May 19 made the bill satisfactory, there was always doubt in my mind if the majority of AAPG members would view it the same way. The San Joaquin Geological Society, whose committee played a large part in drafting the bill, strongly supported it. Most of the opposition came from geologists in the Los Angeles area, who comprise over half the AAPG membership. I think it is safe to say that many of the AAPG members and most of the geologists outside the AAPG and AEG were and probably still are unaware of what was going on.

I strongly recommend that a questionnaire be submitted to the AAPG members and a poll taken to determine what our membership would support in the way of legislation. Such a questionnaire should include:

1. Do we want any form of registration? Is it inevitable?
2. If registration is inevitable, would another bill like 871 with the amendments of May 19 but minus the amendments of June 12 be satisfactory?
3. How much in the way of annual fees would we be willing to pay?
4. Would we consider registration under the Engineers with autonomous status if it would substantially reduce the fees?
5. Should we hold out for a chartering system which is now being drafted by Warren Beebe and his AIPG National Legislative Committee?
6. Should we go ahead with State registration and then work for chartering in conjunction with the Engineers who have already made such a suggestion?
7. Should we allow the Engineering Geologists to register with the Engineers and not register other geologists?

John E. Kilkenny

A forthcoming issue of the Pacific Petroleum Geologist will be devoted to the subject of registration of geologists and will include a history of the registration issue in California, arguments pro and con, and a questionnaire. Various individuals who have been active participants in past discussions will be invited to contribute, others who wish to submit arguments or proposals should contact T.L. Wright, (P.O. Box 606, La Habra) for further details. It is our intention to provide a full and fair exchange of opinions.

LEWIS M. MORRIS MEMORIAL FUND

Friends of Lewis M. Morris, who died last year, have established a fund in his memory with the Geology Department, UCLA, to aid needy geology students. Students with any kind of financial emergency need only explain their straits to the departmental graduate adviser, the departmental business manager, or the president of the UCLA Geological Society in order to get a rapid and unred-tape-encumbered advance. Graceful repayment schedules will be worked out in each case without interest.

Any former friends of Lew who wish to add to the fund, may send their contributions to Mr. George Lapins, Geology Department, UCLA.

COAST GEOLOGICAL SOCIETY

The June dinner meeting of the Coast Geological Society was held on the 8th at the Jet Room in Ventura. The evening was enjoyed by all, and the excellent top sirloin was followed by an outstanding discussion on Engineering Geology by Dr. Tom Bailey. Mr. Bailey's talk covered such controversial subjects as the Corral Canyon Atomic Reactor Site, and the Matilija Dam. The main point of Mr. Bailey's talk was the urgent need for better geologic reports - written by geologists - on proposed industrial projects, with particular emphasis on public safety and engineering feasibility. Mr. Bailey also stressed the need for keeping these reports out of the hands of prejudiced interests and getting them to the competent authorities which make the ultimate decisions.

NEW OFFICER NAMED FOR SAN JOAQUIN GEOLOGICAL SOCIETY

WAYNE D. ESTILL, Intex, is the new Secretary of the San Joaquin Geological Society, replacing Ray Knight, Mobil, recently transferred to Los Angeles.

ANNUAL SPRING PICNIC

Congratulations to General Chairman HARRY NAGLE, Standard Oil Company, Ventura, and Barbeque Chairman JACK WOOD, consultant, Ventura, for putting on a highly successful barbeque Friday, June 4 at the Standard Oil Company Picnic Grounds in Pico Canyon.

The mention of Pico Canyon started the cogs turning and called for a little research into the back files of the PPG newsletter to find that the last Spring Picnic held there was twelve years ago on June 5, 1953. In the July, 1954 newsletter, we quote from the Annual Spring Picnic write-up as follows: "Although many of us through the years have come to think of Pico Canyon as synonymous with the annual picnic, we realize that tradition must often give way to progress." Please draw your own conclusions. For seven years, 1954 through 1960, the Spring Picnic was held at Britt Park near Piru. In 1961 it was moved to the Shell Club House in Ventura and from 1962 through 1964 the picnic was held at Bob Symond's Sunset Farms. So much for reminiscing.

Meanwhile, back at the camp ground, one could not help but feel there was something big in the air when he ran into affable "Three dollars, please" KIT CARSON at the gate. Once past this obstacle it was all your'n with plenty of free beer for the 265 in attendance.

Messrs. Nagle and Wood extend a big vote of thanks to all the willing workers who helped make this barbeque a success and special thanks to the following service companies whose generous contributions made the event possible:

BAROID
BLOOM AIRCUSHION CORP.
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ANNUAL GOLF TOURNAMENT

The annual Golf Tournament held in conjunction with the Spring Picnic was played on the Elkins Ranch course in Fillmore on June 4th. Over 90 golfers participated. Bob Lindblom, Standard, was the

Chairman of the event. Low gross winners in the three flights were Bill Johnson, Bill Stiles, and Lou Villanueva. Low net winners were Jim Taylor, Jim Burness, and Jerry Fletcher. The Fourth Annual Frank Yule Memorial Trophy, awarded to the Pacific Section member shooting the low gross score, was won by Bill Edmund. Previous winners of the trophy are Bob Lindblom, in 1962 and 1963, and Tom Woodward in 1964.

The lakes and adjoining orange groves were popular visiting spots for stray golf balls and except for an occasional outburst of temper, the players had a good time.

LOS ANGELES LUNCHEON MEETING

Dr. Jack Green, Research Geologist for North American Aviation's Space and Information Systems Division, spoke on "Exploration of the Moon", at the Rodger Young Auditorium on June 3rd. Dr. Green showed many slides of recent Ranger moon photographs and comparable terrestrial features of volcanic origin, and reviewed the evidence regarding volcanic vs. meteoritic impact origin of lunar features. He then explained how this seemingly academic controversy is of great importance in establishing a lunar base.

ABSTRACT

The application of geology, and its sister sciences geophysics and geochemistry, to lunar basing is fivefold. First, a knowledge and interpretation of terrain features will enable their utilization for protection and concealment. The lunar surface according to one school is dominantly volcanic; according to another, dominantly impact (from meteorites). Volcanic landforms offer more terrain advantages than do impacted landforms. Lava tubes or caves may be man's first natural installation site if volcanism is the correct model of the lunar surface.

Second, optimum use of surface rocks for insulation materials, building stones, and water content will be implemented by geological mapping and evaluation. Meteoritic rocks offer fewer advantages than volcanic rocks in providing for these needs. For example, the basaltic rock froths found in volcanic terrains may serve not only as insulation but conceivably as a source of atmospheric gases which could possibly be obtained by simple mechanical crushing. Non-tholeiitic basalts may also be melted and cast into pipes and other structural units useful in lunar basing. Also, the water content of volcanic rocks, approximately 1%, is ten times greater than most meteorites. Some volcanic glasses have some 5% by weight of water or one gallon of water per cubic foot of rock. These lithologies should be sought out, if present at all, on the lunar surface.

Thirdly, the mineralogy of a volcanic terrain may provide critical lunar base elements such as sulfur or ice. Sulfur would be of technological importance as a waterless cement or sealant, wire insulation and as structural components when briquetted with volcanic ash. Such briquettes when mixed with 15% sulfur undergo compressional failure at 350 kg/cm² or 5,000 psi (which would support a mass of 30,000 earth pounds on the moon). Ice is needed for survival and for the manufacture of rocket fuel. The vapor pressures of both of these volcanic products at -150°C (-238°F), the minimum temperature on the moon, admit of the possibility of their persistence over geologic time in eternally shadowed zones on the lunar surface. Meteorites offer iron and nickel as easily obtained by-products.

PERSONAL ITEMS

Fourth, subsurface heat and power, whatever the degree available, may be more expediently provided in a volcanic terrain. Volcanic thermal sources on the moon may arise from local concentrations of radioactive surface rocks, potentially active or once active fumarolic zones, and ray systems and their intersections. This assumes that the ray systems are fracture patterns which are internal in origin. Fractures in volcanic areas on earth are commonly warmer than their surroundings as exemplified by many of the fracture systems near Lake Myvatn in Iceland. There, hot water circulates within fractures. Certain fractures in the Great Rift at Craters of the Moon National Monument exhibit radioactive anomalies at least twice background which is presumably due to radon leakage. Chondrites and other meteorite types offer almost no prospects as radioactive heat sources.

Fifth, the geo-scientist may be able to prescribe the optimum tools specific for the exploration needs of the first men on the moon. For example, the density logger would be specific for the detection of surface rock froths; the neutron-neutron logger for the detection of water (or ice); and the neutron-gamma deuterium-tritium accelerator logger for chlorine, sulfur, and other elements of high neutron capture cross section.

From the standpoint of survival, a volcanic terrain offers more opportunities in basing than an impacted terrain. Therefore, a caldera-type crater is suggested as a possible base site on the moon. A polar caldera would offer eternal sunlight for ecological and power uses. However, a polar site would probably be unsatisfactory to the astronomer or engineer who might prefer an equatorial base site. Possibly post-mare calderas may be more suitable than highland calderas because of their more recent origin. Their relatively recent origin would possibly increase the likelihood of more mineralization and subsurface heat.

The meaning of lunar exploration, however, should not be relegated just to maintaining a lunar base. It should provide the means for man's survival for understanding many natural phenomena. He may learn of the early history of the earth's crust by studying the lunar crust, or even the composition of pre-life seawater that could conceivably exist on the moon. The technological fallout to be gained from vacuum welding or Plasmatron research on the moon is insignificant compared to an enlarged perspective of the universe. Does a planet or satellite accrete, radioactively heat up, and defluidize manifesting surface volcanism, or does meteoritic impact represent the prevailing generally operative cosmological process?

FIELD TRIP SET FOR SOUTH-CENTRAL UTAH

The Intermountain Association of Petroleum Geologists and the Utah Geological Society jointly have announced their forthcoming 1965 Field Conference, to be held on September 17 and 18 in South-Central Utah, under the general theme of "Resources for Power." The Conference will focus attention on the power potential of coal, oil, and water resources of South-Central Utah. A guidebook of pertinent papers will be published for the Conference under the direction of the Utah Geological Society, and authorities will lecture at points of interest throughout the field trip. The two-day trip will be interesting to geologists in all fields of endeavor. Complete details on the Field Conference will be provided in a later issue.

DENNIS WEDEN is the first arrival in Bakersfield's Texaco office from the now defunct Sacramento office. Other personnel are expected in Bakersfield shortly, if and when they sell their homes in Sacramento.

F. B. (HOP) CONGER has been named Chief Geologist of the Pacific Coast area for Shell in Los Angeles. JOHN BEALL replaces Conger in the Bakersfield office.

WARD ABBOTT, Shell, has been transferred from Bakersfield to Ventura.

REX OLSON, SEPM Treasurer, reports that various Guide Books of the Pacific Coast area are selling briskly.

CY BIRD, Humble, Bakersfield, is being transferred to the Producing Department. DON ROGERS replaces him in the Exploration Department.

R. S. Rheem, Operator, and D. & R. Oil Company announce the appointment of WES BRUER as General Manager of Oil and Gas operations effective May 15, 1965.

JIM MERCIER is a new Geophysicist with Occidental, effective June 21, 1965.

ED WELGE, formerly with Standard, La Habra, is a new member of the Division of Oil and Gas in Bakersfield, effective July 1.

After seven years in Standard's Oildale office, MILT ZENI decided to clean up his accumulation of debris. Under this mountain of outdated maps, sections, orange peels, etc., he found a new institutional green carpet and shiny mahogany furniture.

ERNIE LIAN transferred to Alaska for Marathon. Immediately after arriving, the Anchorage office burned down and Ernie totaled out his car. The boys in Bakersfield contend that he will do anything to get back to California.

On the last leg of the recent Placerita field trip, a carload of Standard's La Habra geologists, chauffeured by a particularly respectable individual who shall remain anonymous, had successively entered Highway 14, slowed down to examine the Sunshine Ranch formation, pulled onto the shoulder to scrutinize the San Gabriel fault, swung back into traffic and ogled the Saugus formation, and negotiated the turn-off to Placerita Canyon, was flagged down by the neighborhood Highway Patrolman. After the customary driver's license check, our uniformed friend inquired, "Are you one of those geologists, or some sort of a drunk?" On being assured of the former, he delivered a mild sermon on highway hazards, in lieu of a citation.

ERNEST K. PARKS, long time member of AAPG, and ever since leaving Standard Oil Co. of Calif. in 1938, a consulting petroleum engineer in California, mostly in Los Angeles, has moved to Ojai, California. Ernie and Jerry are making their permanent home there at 525 White Oak Circle looking forward to the day when retirement takes over, but meanwhile Ernie continues active in practice and in organizations; his most recent contribution being the AAPG obituary of beloved Richard (Dick) G. Reese, who passed away about a year ago in San Francisco.

DON FISSELL, Standard, La Habra, has been transferred to New Orleans, and his buddies (?) have generously provided him with Confederate flags and much bad advice. Don has two houses to sell here, the one he was just about to move into and the one he hadn't unloaded yet.

At a recent gathering at the Hong King Inn by the Coast Geological Society, SIEG HAMANN, Shell geologist and proud father of eight, was handed surreptitiously a fortune from a Chinese cookie which read "Your day will be made brighter if you curb your personal excesses." Quick thinking Sieg sent a fortune back to his tormenter which read, "You will get along better with your associates if you mind your own business."

Recent transfers in Shell Oil have somewhat dislocated two of our finest members. Last month JOHN BEAL was transferred to Bakersfield as District Geologist, and this month BOB YEATS has been transferred to the Marine Division in Los Angeles.

On a more temporary level BRUCE BLACK of Shell is going to Houston for three months of school starting in August and BRUCE MACOMBER of Shell Production Department will be assuming the job of Publicity Chairman for the Coast Society for the remainder of 1965 and for 1966.

Texaco Inc. will close its Sacramento District Geologic Office on 1 July 1965. JOE ERNST, District Geologist, has been transferred to Long Beach; WAYNE ECKERT, District Landman, to Los Angeles. The geologic staff has been transferred to the Bakersfield District Office which will now handle the Sacramento and San Joaquin Valleys.

The Sacramento Petroleum Association owes a great big thank you to VERN JONES (Exploration Logging) and BOB PASCHALL (State of Calif. Board of Equalization) for their outstanding efforts and reports on the "Registration of Geologists" bill before the State Legislature.

RON BELL, G.X., spent three weeks in Aspen, Colorado, skiing or "sheeing"? After the wild living in Buttonwillow this could be hard to take.

While towing a logging trailer to a well site near Santa Maria, BOB BURNS, G.X., took a wrong turn up a steep road to nowhere which proved to be more than his car could pull. Of course, the brakes would not hold on the upgrade, so out into the cold and windy night went wife Jeanne (fresh from the Beauty Shop) to claw out enough rocks to block the wheels. After they had converted the situation from disaster to mere distress, RON BELL came along in search of his lost sheep and effected the rescue.

NURSERY NEWS

GRACE and MARK DELISLE (Texaco, Sacramento), a son, Timothy Mark, May 26th.

MARILYN and CHUCK BREITSPRECHER (Texaco, Sacramento), a daughter, Erika Lynn, June 7th.

CORINNE and BOB KROPSCHOT, Standard, Oildale, their second son, Franklin M., weight 8 lb. 12 oz., on June 2. Bob withstood the pressure to name the new baby Stan, Pete or Otto.

JOAN and JOHN HARPER, (Standard, Oildale), a daughter, Susan Helene, 7 lbs., 11 oz., June 3rd.

BIBLIOGRAPHY OF RECENT PUBLICATIONS

U.S. GEOLOGICAL SURVEY

Publications of the Geological Survey 1963(71 pages)Free

Professional Paper 410: Stratigraphy and structure of part of the western Sierra Nevada metamorphic belt, California, by L. D. Clark. \$2.50

Professional Paper 452-C: Theoretical implications of underfit streams, by G. H. Dury. \$0.40

Professional Paper 455-G: Structural control of uranium-bearing vein deposits and districts in the conterminous United States, by F. W. Osterwald. \$0.30

Professional Paper 457: Geology and volcanic petrology of the Lava Mountains, San Bernardino County, California, by G. I. Smith. \$2.00

Professional Paper 459-A: Stratigraphy and structure of the Antler Peak quadrangle Humboldt and Lander Counties, Nevada, by R. J. Roberts. \$2.75

Professional Paper 462-G: Effects of water temperature on the discharge of bed material, by B. R. Colby and C. H. Scott. \$0.25

Professional Paper 466: Alluvial fans in the Death Valley region, California and Nevada, by C. S. Denny. \$2.00

Professional Paper 471: Geology of the San Manuel area, Pinal County, Arizona, by S. C. Creasey, with a section on ore deposits, by J. D. Pelletier and S. C. Creasey. \$2.00

Professional Paper 483-G: Evolution and distribution of the genus Mya, and Tertiary migration of Mollusca, by F. S. MacNeill. \$0.65

Professional Paper 489: Geology and ore deposits of the Metaline zinc-lead district, Pend Oreille County, Washington, by McC. G. Dings and D. H. Whitebread. \$4.50

Professional Paper 493: Trilobites of the Late Cambrian Pteroccephaliid bioterm in the Great Basin, United States, by A. R. Palmer. \$2.50

Professional Paper 503-B: Some western American Cenozoic gastropods of the genus Nassarius, by W. O. Addicott. \$0.35

Professional Paper 506-A: Use of analog models in the analysis of flood runoff, by John Shen. \$0.25

Professional Paper 525-B: Geological Survey Research 1965, Chapter B. \$1.75

Bulletin 1181-H: Geologic reconnaissance along the Alaska Highway, Delta River to Tok Junction, Alaska, by G. W. Holmes. \$0.75

Bulletin 1181-L: Geology of the Ash Meadows quadrangle, Nevada-California, by C. S. Denny and Harald Drewes. (Price was incorrectly given as 30¢ in USGS List 679.) \$1.00

Bulletin 1181-Q: Geology of the Jolon and Williams Hill quadrangles, Monterey County, California, by D. L. Durham. \$2.00

Bulletin 1181-R: Reconnaissance geology of Admiralty Island, Alaska, by E. H. Lathram, J. S. Pomeroy, H. C. Berg, and R. A. Loney. \$1.25

Bulletin 1211-A: Geologic reconnaissance of the West Creek damsite near Skagway, Alaska, by J. E. Callahan and R. G. Wayland. \$0.45

Bulletin 1193: Bibliography of reports resulting from U.S. Geological Survey participation in the United States Technical Assistance Program, by J.A. Heath. \$.25

Bibliography of North American Geology, 1950-1959, by R.R. King, E.S. Lord, M.C. Mead, V.M. Jussen, and G.D. Conant, 1965.
Part 1: Bibliography; Part 2: Index
\$10.75 per set of 4 volumes.

Bulletin 1201-F: Paleozoic stratigraphy of the southern part of the Mule Mountains, Arizona, by P.T. Hayes and E.R. Landis. \$.45

Water Supply Paper 1697: Geology and ground water of the Tualatin Valley, Oregon, by D. H. Hart and R. C. Newcomb. \$3.00

Water Supply Paper 1771: Geology and ground water in the central part of Apache County, Arizona, by J. P. Akers. \$2.00

Water Supply Paper 1793: Ground water in the East Portland Area, Oregon, by G.M. Hogenson and B.L. Foxworthy. \$1.00

Geophysical Abstracts 221: June 1965, by J.W. Clarke, D.B. Vitaliano, V.S. Neuschel, and others. \$.35

Geophysical Abstracts 219: April, 1965, by J. W. Clarke, D. B. Vitaliano, V. S. Neuschel, and others. \$0.35

Geophysical Abstracts 220: May, 1965, by J. W. Clarke, D. B. Vitaliano, V. S. Neuschel, and others. \$0.35

Circular 493: Magnitude and frequency of floods in Alaska south of the Yukon River, by V. K. Berwick, J. M. Childers, and M. A. Kuentzel. 15 pages. Free

A primer on water quality, by H. A. Swenson and H. L. Baldwin, 27 p. \$0.30

MAPS

GQ 405: Geologic map of the Renton quadrangle, King County, Washington, by D. R. Mullineaux. \$1.00

Map I-415: Map showing extent of glaciations in Alaska, compiled by the Alaska Glacial Map Committee of the U. S. Geological Survey (H. W. Coulter, D. M. Hopkins, T. N. V. Karlstrom, T. L. Pewe, Clyde Wahrhaftig, and J. R. Williams). Scale 1:2,500,000 \$1.00

Map I-448: Geologic and crustal cross section of the United States along the 37th parallel, a contribution to the upper mantle project, by Warren Hamilton and L. C. Pakiser. Scale 1:2,500,000 \$1.00

Map I-444: Preliminary geologic map of the McCarthy C-6 quadrangle, Alaska, by E. M. MacKevett, Jr. \$0.50

GQ 384: Geologic map of the Plutonium Valley quadrangle, Nye and Lincoln Counties, Nevada, by E. N. Hinrichs and E. J. McKay. \$1.00

GP 483: Natural gamma aeroradioactivity map of parts of the San Francisco area, California, by K.G. Books. \$.75

U.S. GEOLOGICAL SURVEY

OPEN FILED REPORTS (Inspection only)

Tertiary stratigraphy and paleobotany of the Cook Inlet region, Alaska, by Jack A. Wolfe, David M. Hopkins, and Estella B. Leopold. 77 pages. 5 figs., 6 tables.

Preliminary geologic map of northern Alaska, compiled by Ernest H. Lathram. 2 sheets (1 map, 1 explanation), (scale 1:1,000,000)

Geologic significance of Davis Seaknoll, Arguello Plateau, California, by Harold D. Palmer.

Geologic map of the Nebo and Yermo quadrangles, San Bernardino County, California, by T.H. McCulloh. 1 map, scale 1:24,000

Aeromagnetic map of Tombstone and vicinity, Cochise and Santa Cruz Counties, Arizona, by G.E. Andreasen, C.M. Mitchell, and N.S. Tyson 1 map and explanation (1 sheet), scale 1:125,000

Geologic map of the San Francisco South quadrangle, California, by M.G. Bonilla. 1 map, scale 1:20,000

A brief water-resources reconnaissance of Pala and Rincon Indian Reservations, San Diego County, California, by J.J. French and E.G. Pearson.

U. S. BUREAU OF MINES

Distribution Section 4800 Forbes Street, Pittsburgh, Penn.

Information Circular 8259: Petroleum coke on the West Coast of the United States: Its production, utilization, and role in the conservation of Petroleum, by William J. Kemnitzer and Curt D. Edgerton, Jr. Free

Information Circular 8263: Heavy crude oil reservoirs in the United States: A survey, by W.D. Dietzman, M. Carrales, Jr., and C.J. Irik Free

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 76, no. 3, March 1965

On the early history of the earth, by William L. Donn, Bertram D. Donn, and Wilbur G. Valentine.

Late Pleistocene stratigraphy and chronology in southwestern British Columbia and northwestern Washington, by J. E. Armstrong, Dwight R. Crandall, Donald J. Easterbrook and J. B. Noble.

Model for three-dimensional mineralogical variation in granitic plutons based on the Glen Alpine stock, Sierra Nevada, California, by E. W. Peikert.

Oligocene-Miocene boundary, by Paul Vella.

Depth of intrusion and age of the Rocky Hill stock, Tulare County, California, by G. W. Putman and J. T. Alfors.

Bathymetry of Adak Canyon, Aleutian Arc, Alaska, by Richard B. Perry and Haven Nichols.

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 76, no. 4, April 1965

Hydrothermal alteration along the Lisbon Valley fault zone, San Juan County, Utah, by Marian B. Jacobs and Paul F. Kerr.

Role of fluid pressure in mechanics of overthrust faulting: Discussion, by Gregory A. Davis.

Role of fluid pressure in mechanics of overthrust faulting: Reply, by William W. Rubey and M. King Hubbert.

JOURNAL OF GEOLOGY, vol. 73, no. 2, March 1965

Theory of erosion on soil-covered slopes, by W. E. H. Culling.

Sliding friction and overthrust faulting, by Donald Carlisle.

SCIENCE, vol. 147, no. 3660 February 19, 1965

Alaska Earthquake, 27 March 1964: Vertical extent of faulting and elastic strain energy release, by F. Press and D. Jackson.

SCIENCE, vol. 147, no. 3662, March 5, 1965

Quaternary correlations across Bering Strait, by D. M. Hopkins et al.

SCIENCE, vol. 147, no. 3663, March 12, 1965

Meteorites and the moon, by H. C. Urey.

Mazama and Glacier Peak volcanic ash layers: Relative ages, by R. Fryxell.

Suspended matter in deep ocean water, by M. Ewing and E. M. Thorndike.

Dolomitization of the Mid-Pacific Atolls, by R. A. Berner.

SCIENCE, vol. 148, no. 3667, April 9, 1965

Miocene mammals and Central American seaways, by F. C. Whitmore, Jr., and R. H. Stewart.

Cretaceous mammals from Montana, by R. E. Sloan and L. Van Valen.

SCIENCE, vol. 148, no. 3668, April 16, 1965

Alaskan glaciers: Recent observations in respect to the earthquake advance theory, by A. S. Post.

SCIENCE, vol. 148, no. 3666, April, 1965

The Continental Shelf (editorial)

Significance of the Gunflint (Precambrian) Microflora, by P. E. Cloud, Jr.

Silica: Role in the buffering of natural waters, by R. M. Garrels.

Precambrian graphitic compressions of possible biologic origin from Canada, by B. L. Stinchcomb, H. L. Levin, and D. J. Echols.

Hydrocarbons of biological origin in sediments about two billion years old, by J. Oro et al.

OIL AND GAS JOURNAL, vol. 63, no. 14, April 5, 1965

Stratigraphic study may be key to future oil finding, by Dr. Grover Murray.

Newest Los Angeles field now on production.

OIL AND GAS JOURNAL, vol. 63, no. 16, April 19, 1965

California play hits new oil under old, by Ted Armstrong.
First offshore Oregon test now drilling.

OIL AND GAS JOURNAL, vol. 63, no. 18, May 3, 1965

Southern California's century-old McKittrick field revives, by Ted Armstrong.

OIL AND GAS JOURNAL, vol. 63, no. 19, May 10, 1965

Study of grid pattern may aid search for oil, by R. O. Steinhoff.

What lures drillers to Wyoming?

WORLD OIL, vol. 160, no. 4, March 1965

How to apply fluid mechanics to exploration (part 1), by J. W. Roach.

First New Mexican reef detritus oil pools found down-dip from Abo trend, by John W. Runyan.

Active search under way in Australia's Amadeus Basin, by L. J. Logan.

CALIFORNIA OIL WORLD, First issue, March, 1965, vol. 58, no. 5

Urban drilling in Los Angeles, by Arthur O. Spaulding.

CALIFORNIA OIL WORLD, First issue, April, 1965, vol. 58, no. 7, April 15, 1965

Pacific Northwest: Offshore search begins, by Bill Rintoul.

BOOKS

The Earth beneath us, by Kirtley F. Mather. Random House, New York, 1964, 320 pp. Illus. \$15.00

Handbook of paleontological techniques, Bernhard Kummel and David Raup, Editors. Freeman, San Francisco, 1965. xii + 852 pp. \$18.00

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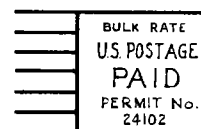
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Volume 19

Number 7

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PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 19

August, 1965

Number 8

ASSOCIATION ACTIVITIES

FROM THE PRESIDENT

It is with great pleasure and full awareness of the responsibility of the office that I accept the honor of being your President for the remaining term. Peter Gester had done a fine job in organizing and initiating a progressive program for this year, and my principal objective is to ensure that this program is carried out to the fullest.

Your present Executive Committee shares with me a strong feeling of optimism concerning the affairs of the Pacific Section, commensurate with the increasing tempo of activity by the oil industry on the Pacific Coast. We feel that the time is ripe to strengthen and unify the membership, to solicit greater participation particularly among younger members and to induce the same type of enthusiasm for the affairs of the Section that is so evident among the various committee chairmen and their committeemen.

We also feel the urgency of developing a strong, concrete policy on registration of geologists, be it self-regulating or government controlled. It appears we now have time to work out that policy with the participation and cooperation of the membership. Early this fall you will receive a special issue of the PPG in which the various aspects of registration will be discussed, both pro and con, in order that each of you will be as well informed as possible. Subsequently you will have the opportunity to express your views by means of a poll in the form of a questionnaire (the subject is too complex for a simple yes or no vote). We will then be in a position to formulate a policy based on the will of a knowledgeable majority.

Other affairs of the Pacific Section are moving along well, in spite of the usual summer absentees. The Annual Spring Convention plans are well under way, and it promises to be an exciting meeting in all respects. Most committee posts have been filled, including a few new ones, and I have found the eagerness to work for the Pacific Section among those contacted, most gratifying. A complete list of committee chairmen will be published in the next issue of the PPG.

Eugene R. Orwig, Jr.

WILL THIS BE YOUR LAST ISSUE?

The approximately 115 members who are delinquent in payment of their 1965 dues are being dropped this month from the mailing list.

If in doubt as to your status, please contact Pat Metcalf, Membership Secretary, P. O. Box 17846, Foy Station, Los Angeles, California 90017 - or, locally, by telephone at 629-4111.

LOS ANGELES PROGRAM COMMITTEE

A new committee, headed by Andy Alpha and ably assisted by John Forman, has been formed to program technical sessions, both luncheon and forum, in the Los Angeles area.

It is the purpose of the Program Committee to arrange timely, pertinent talks which involve principles of geology, descriptive data, oil and gas field papers and other matters of interest to our profession.

The following programs at the Rodger Young Auditorium at 12:00 Noon will attempt to cover this precept:

On September 9, 1965, Jack Russell, General Manager of THUMS will present a current review of the operations at the East Wilmington oil field.

October 7, 1965, Edwin C. Buffington will present the latest in "Exploration of the Continental Slope off San Clemente, California, by Diving Saucer".

November 4, 1965, Chuck Lakey of Mobil Oil Company will review the methods of evaluating a gas discovery and gas field.

The following programs have been arranged for the Forum Meetings:

The initial meeting will feature a talk on new regulations and procedures of the U.S.G.S., particularly on offshore operations, to be presented by D. W. Solanas, Regional Oil and Gas Supervisor, on September 20, 1965, in the Mobil Auditorium.

William M. Zarella will present his distinguished lecture "Significance of Hydrocarbon Disposition in Petroleum Exploration" on October 18, 1965, in the Mobil Auditorium.

Manuel Castro will discuss offshore exploration and petroleum possibilities in the Santa Barbara area on November 15, 1965, in the Mobil Auditorium.

Thane McCulloh will talk on some aspects of gravity and exploration on December 13, 1965, in the Union Auditorium.

ROCKY MOUNTAIN SECTION SETS CONVENTION FOR BILLINGS

The 15th Annual Meeting of the Rocky Mountain Section, A.A.P.G., will be held in Billings, Montana, from Monday, September 27th, through Wednesday, September 29th. Technical papers, following the theme, "The Truth about Typi-

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Published monthly by the PACIFIC SECTION
American Association of Petroleum Geologists
Address communications to the Pacific Petroleum
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NEXT DEADLINE - AUGUST 27

cal Rocky Mountain Oil Traps", will expose the true trapping mechanisms of some of the prominent producing areas in the Rocky Mountain region. Careful examination of today's producing areas will point the way to tomorrow's successes.

Fields or producing areas to be discussed include the Sanish pool (North Dakota), Lisbon Valley anticline (Utah), Aneth area (Utah), Dillinger Ranch field (Wyoming), northern Sweetgrass Arch (Montana), Salt Creek field (Wyoming), Patrick Draw field (Wyoming), Saber Bar (Colorado), Many Rocks-Gallup field (New Mexico), Cherokee Ridge (Wyoming and Colorado), Birch Creek Unit (Wyoming). Producing horizons to be discussed included the Kibbey formation (Montana), Winnepegosis formation (Saskatchewan), Nisku formation (Montana and North Dakota), Mission Canyon formation (North Dakota), Ratcliffe zone (Montana and North Dakota), Permo-Pennsylvanian (Wyoming), Lower Tyler (Montana), Inyan Kara group (Wyoming, Montana and South Dakota).

The keynote address, "The Obscure and Subtle Trap", was prepared by Dr. A. I. Levorsen before his untimely death on July 16, 1965, and will be delivered by Dr. Orlo E. Childs. Other distinguished speakers include Ira A. Cram, Vice-President of the Continental Oil Company, and Michel T. Halbouty, consultant and independent oil operator.

SEPM BEST PAPER-1965 BAKERSFIELD CONVENTION

The following abstract and correlation chart, presented at Bakersfield on April 11, 1965, provide a significant reference for geologists working in central and northern California:

**NEW FORAMINIFERAL ZONATION,
UPPER MESOZOIC,
SACRAMENTO VALLEY, CALIFORNIA**

Keith D. Berry
Standard Oil Company of California,
Western Operations, Inc.

Six new foraminiferal zones have been established in the upper Mesozoic of the Sacramento Valley, California, as the result of detailed micropaleontological work in conjunction with several reconnaissance field mapping projects. The letter designations I, J-1, J-2, K, L, and M are proposed for these microfaunal zones. These designations are a downward continuation of the Upper Cretaceous zones of Goudkoff, who established the A through H Zones in 1945. The rocks on which this new zonation is based range in age from lower Upper Cretaceous, Cenomanian Stage, through Upper Jurassic, Tithonian Stage. Micropaleontological work is essential for mapping of this thick clastic sequence, because of the gross lithologic similarity and the lenticular, disconnected, and time transgressive nature of the coarse clastic marker beds. This study covers a 150 mile section along the regional strike of the westside Sacramento Valley outcrop, and also extends into the Redding area on the northeast side of the valley.

EUROPEAN STAGE CLASSIFICATION	FORAMINIFERAL ZONATION Goudkoff, A-H Zones BERRY, J-M Zones	F.M. ANDERSON WESTSIDE TITHONOLITHOLOGY 1963	SOUTH AND CENTRAL SACRAMENTO VALLEY FORMS, ETC.	CHUBB CLASSIFICATION PHOTO DUND	NORTH END SACRAMENTO VALLEY AND AREA MURPHY, WOODS AND PETERSON	REDDING AREA POPPENO
UPPER CRETACEOUS	SENONIAN	CHICO SERIES	FORBES FM	GUINDA FM		
	CAMPANIAN	F-1 ZONE				
	SANTONIAN	F-2 ZONE				
	CONIACIAN	S-1 ZONE				
		S-2 ZONE				
	TURONIAN	H "a" BIOFACIES	VENADO FM	VENADO FM		
		H "b" BIOFACIES	CLARK VALLEY MUDSTONE	CLARK VALLEY MUDSTONE		
	CENOMANIAN	I ZONE	"ANTELOPE SHALE" (ITALIAFERRO)	JULIAN ROCKS FORMATION		
		PLECTINA SUBZONE	"SALT CREEK" CONGLOM			
	ALBIAN	J-1 ZONE				
		NEW GENUS SP. IN SUBZONE				
		EPISTOMINA SP. IN SUBZONE				
	APTIAN	J-2 ZONE				
	BARREMIAN	K ZONE				
	HAUTERIVIAN					
	VALANGINIAN	L ZONE				
	BERGIAN ?					
LOWER CRETACEOUS		SHASTA SERIES				
		HORSETOWN GROUP				
		PASSENTA GROUP				
JURASSIC	TITHONIAN OR PORTLANDIAN	M ZONE				

Over 600 species, many of them new, and approximately 100 genera, including some new, were checklisted or recorded on over 30 outcrop and well sections in the area. The new zones have been approximately correlated with the European stage classification. The I, J-1, and J-2 Zones range from Cenomanian to Aptian on the basis of both planktonic and benthonic Foraminifera; the K, L, and M Zones range from Barremian to Tithonian on the basis of cosmopolitan benthonic species. Correlations were also made between microfossil localities and northern California megafossil localities which have been equated to the European standard section.

Specific criteria for identification of the H Zone were not established by Goudkoff, but detailed study permits both identification and biofacies differentiation within it. The abundant and varied microfaunas of the "Middle" Cretaceous have made it possible to distinguish the I from the J Zones, separate the closely related J-1 and J-2, and divide the J-1 into three subzones. The K, L, and M Zones are more difficult to differentiate, because of the absence of planktonics and the predominance of many similar *Nodosariidae*. The M Zone can probably be subdivided, if more comprehensive work is done.

There is no faunal indication in the outcrop section of any unconformity between the Upper and Lower Cretaceous. Many species range through both Albian and Cenomanian sediments, without apparent interruption.

IAN CAMPBELL NAMED AASG PRESIDENT

At the 57th Annual Meeting of the Association of American State Geologists, held recently in San Francisco, Ian Campbell, State Geologist of California, was elected president for the coming year, to succeed Frank Foley, State Geologist of Kansas. Other newly-elected officers are John B. Patton, State Geologist of Indiana, president-elect; Robert O. Vernon, State Geologist of Florida, vice-president; Wm. C. Hayes, State Geologist of Missouri, was re-elected secretary-treasurer.

PERSONAL ITEMS

J. L. (Sumphole Pete) FISH, Standard at Oildale, found the only mud hole in the McKittrick area and spent four hours getting unstuck. And this happened before the July rain-storm!

RUFUS COOK, who has spent the past several years with the Iranian Consortium, is rejoining the Exploration Department for Standard at Oildale, effective September 1, 1965.

Several geologists in the Bakersfield area have been actively participating in the Junior Baseball Association program. FRED SMITH, Marathon, is coaching one team. His boys are fighting hard to escape the cellar, and, of course, Fred has had to postpone his vacation until late summer.

DON EDMONSTON, formerly geologist for Tidewater, Bakersfield, is now co-owner and Vice-President of Young's Transfer and Storage. He might be a good contact for future transferees on moving day.

CHUCK HEPPE is now a Geologist for Tidewater in Bakersfield. Chuck formerly worked for Superior in Casper, Wyoming.

DEAN LAUDEMAN, Tidewater, Bakersfield, came down with chicken pox in the middle of July. He exposed most of the staff before he stayed home. Could cause an epidemic.

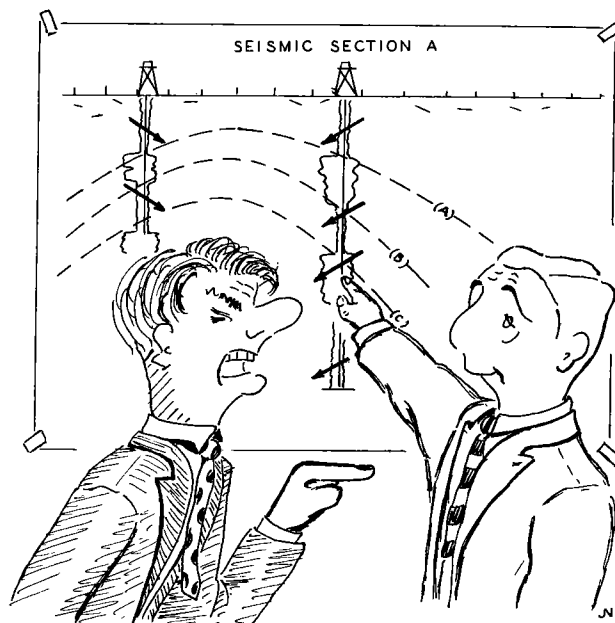
BOB WELLS, Richfield, Bakersfield, is about to take off on a two month business trip to Europe. He is fast becoming a world traveler, having just returned from Honolulu where he visited with his sons.

W. R. (Sam) BROWN has opened offices in Bakersfield for Buttes Gas and Oil at 3132 - 18th Street. Phone 327-2509.

When DAVE MASTERMAN came back from vacation, he told the Humble Bakersfield Office of discovering bright objects in the water on his claim in the Sierras--now let's see--was that gold or beer cans?

JOHN SMITH, Humble, Bakersfield, purchased a pickup truck a few months ago that seems to have an affinity for accidents. At Christmas time someone plowed into him at an intersection, then the other night someone hit his truck again but this time poor John doesn't know who the culprit was.

What some guys won't do to put their wives to work. CY BIRD, Humble, had so much junk around his home he got his wife, Yvonne, to open up a Trash and Treasures shop in East Bakersfield just to get rid of all the stuff.



YOU NIT-PICKING GEOLOGISTS ARE ALL ALIKE!

DEE MOLENAAR, Department of Natural Resources, Olympia, Washington, was on the recent mountain climbing expedition to Mt. Kennedy. We didn't see much of Dee in the article in the National Geographic, but that was because he took many of the pictures.

Old friends of JOHNNY CARTER, now with the New Orleans office of Shell, will be happy to hear that John is still very busy fishing and duck hunting, although in very different surroundings.

Effective August 1, the Northwest Division office of Shell is being relocated from Seattle, Washington to Los Angeles, California. The office talk these days generally centers around real estate matters, rather than oil talk. Among the first to sell his house was GUS ARMSTRONG, who left early in July for a new assignment in Farmington, New Mexico. Being a native of that state, Gus was overjoyed at returning to his old stomping grounds. Almost everyone else is going to Los Angeles, except for HANS FICHTER, who is going to Houston, and MAHLON KIRK, who is not going to L.A., but is not sure where. Mahlon, together with JIM MOORE, has been in the Northwest Division since its inception in 1953. Mahlon recently resigned his post as president of the School Board of the Shoreline School District; he has just won an award at the Bellevue Arts and Crafts Fair for his op art entry entitled "Seismic" - some hidden talent?

DAVE ENGSTROM and JOE SCHWEITZER are both recent additions to the Standard Seattle office from Ventura, California. Dave very nearly got an old Shell Oil house in Bellevue. Since reporting for work in Seattle Joe promptly dropped out of sight - without dominoes - anyone knowing his whereabouts please send back C.O.D.

H. L. (Diz) DEANE, (Standard, Bakersfield) has been transferred to Carpinteria as a Petroleum Engineer, after ten years in the Valley.

The Standard Oil (La Habra) golf team in the Southern California Inter-Industrial League finished in fourth place after ten weeks of play on the Green River course in Corona. Team members were BOB LINDBLOM, JOHN JACOBSON, STAN JEPPESEN, BOB COPELAND, and TOM MCCRODEN. The other teams in the league were in space industries in Orange County. The winner, Autonetics, obviously had the advantage in getting their balls in orbit higher, further and straighter.

Having completed seven years of service as Chief Geophysicist for Fairchild Aerial Surveys, Los Angeles, California, WILLIAM CROWE KELLOGG is returning to private geophysical consulting service through his firm, Kellogg Exploration Company. This decision was prompted by the recent acquisition of Fairchild Aerial Surveys by Litton Industries through its subsidiary Aero Service Corporation of Philadelphia. Kellogg Exploration Company will henceforth provide, in addition to its customary ground geophysical services, expert advice in planning, pricing, and interpretation of aerial magnetic surveys from its offices in Altadena, California.

ANTHONY E. L. (Tony) MORRIS has resigned as Vice-President of Pauley Petroleum International to engage in domestic and foreign petroleum consulting. He can be reached temporarily at 3114 Club Drive, L. A. 64. Phone 837-7458.

BIBLIOGRAPHY OF RECENT PUBLICATIONS

U. S. GEOLOGICAL SURVEY

Professional Paper 422-G: The distribution of branches in river networks, by E. V. Giusti and W. J. Schneider \$0.20

Professional Paper 459-B: Ore deposits of the Antler Peak quadrangle, Humboldt and Lander Counties, Nevada, by R. J. Roberts and D. C. Arnold \$7.00

Professional Paper 465: Tectonic and igneous geology of the northern Shoshone Range, Nevada, by James Gilluly and Olcott Gates, with sections on Gravity in Crescent Valley, by Donald Plouff and Economic Geology, by K. B. Ketner \$6.50

Professional Paper 504-A: Glacial reconnaissance of Sequoia National Park, Calif., by F. E. Matthes, prepared posthumously by Fritiof Fryxell from Matthes' notes and other sources \$1.25

Bulletin 1140-D: Comparison of distribution coefficients for strontium exchange from solutions containing one and two competing cations, by J. S. Wahlberg and R. S. Dewar \$0.15

Bulletin 1198-C: Bryophytes associated with mineral deposits and solutions in Alaska, by H. T. Shacklette \$0.15

Water Supply Paper 1594-C: Artificial recharge in Oregon and Washington, 1962, by Don Price, D. H. Hart, and B. L. Foxworthy \$1.00

Water Supply Paper 1649: Water for Oregon, by K. N. Phillips, R. C. Newcomb, H. A. Swenson and L. B. Laird \$0.60

Water Supply Paper 1790-B: Summary of floods in the United States during 1960, by J. O. Rostvedt, 1965 \$0.45

Geophysical Abstracts 222: July, 1965, by J. W. Clarke, D. B. Vitaliano, V. S. Neuschel, and others \$0.35

Circular 514: Index of surface-water records to December 31, 1963--Part 14. Pacific slope basins in Oregon and Lower Columbia River basin, by H. P. Eisenhuth. 28 p. (Supersedes Circular 394) Free

MAPS

GQ-366: Geologic map of the Mount Hayes D-3 quadrangle, Alaska, by G. W. Holmes and T. L. Pewe \$1.00

GQ-406: Geologic map of the Auburn quadrangle, King and Pierce Counties, Washington, by D. R. Mullineaux \$1.00

GQ-407: Geologic map of the Black Diamond quadrangle, King County, Washington, by D. R. Mullineaux \$1.00

OPEN FILED REPORTS (Inspection only)

Geologic map and cross-sections of the Nelchina area, south-central Alaska, by Arthur Grantz. 4 sheets, scale 1:63,360

Preliminary geologic map of the Arctic quadrangle, Alaska, by W. P. Brosge and H. N. Reiser. 1 sheet, including geologic map, scale 1:250,000, explanation, fossil list.

Geologic map of the San Francisco South quadrangle, California, by M. G. Bonilla. 1 map, scale 1:20,000

Aeromagnetic map of the Casa Grande area, Maricopa and Pinal Counties, Arizona, by C. M. Mitchell and G. L. Zandle. 1 map

Bouguer anomaly map and principal facts for gravity stations for the Central Arizona Project, by D. L. Peterson. 2 p., 57 data sheets, 5 maps.

CALIFORNIA DIVISION OF MINES AND GEOLOGY

Open Filed Reports (Inspection only)

Geology related to the safety of the Corral Canyon nuclear reactor site, Malibu, Los Angeles County, California, by George B. Cleveland and Bennie W. Troxel (36 pages; map on scale of 1" = 200 feet)

Cretaceous sections (three columnar sections and two measured sections - preliminary studies of the Cretaceous rocks in the outcrop along the west side of the northern San Joaquin Valley) prepared by Charles C. Bishop

CALIFORNIA DIVISION OF MINES AND GEOLOGY

Earthquake and geologic hazards conference \$1.00

- CALIFORNIA DEPARTMENT OF WATER RESOURCES
- Bulletin No. 116-2: Crustal strain and fault movement investigation. Faults and earthquake epicenters in California
- CALIFORNIA DIVISION OF OIL AND GAS
- Exploratory Wells Drilled Outside of Oil and Gas Fields in California To December 31, 1963.
320 pages. \$2.50
- ARIZONA BUREAU OF MINES, (Tucson, Arizona)
- Bulletin 174: Guidebook 1---Highways of Arizona. U.S. Highway 666, by Eldred D. Wilson \$0.50
- NEVADA BUREAU OF MINES, (Reno, Nevada)
- Bulletin 59: Geology and mineral deposits of Humboldt County, Nevada, by Ronald Willden \$4.00
- THE ORE BIN, Vol. 27, No. 6, June, 1965
- Preliminary data on compositional variations of Tertiary volcanic rocks in the central part of the Oregon Coast Range, by Parke D. Snively, Jr., Hollis C. Wagner, and Norman J. S. MacLeod
- WASHINGTON DIVISION OF MINES AND GEOLOGY
(Washington Department of Conservation, 335 General Administration Building, Olympia, Washington)
- Information Circular No. 42: Directory of Washington mining operations, 1964, by Wayne S. Moen and Gerald W. Thorsen Free
- WASHINGTON DIVISION OF WATER RESOURCES, (Olympia, Washington, 98502)
- Water Supply Bulletin No. 18: Water resources and geology of the Kitsap Peninsula and certain adjacent islands, by M. E. Garling, Dee Molenaar and others \$2.00
- GEOLOGICAL SOCIETY OF AMERICA BULLETIN, Vol. 76, No. 6, June, 1965
- Tectonics, bathymetry, and geomagnetism of the southern continental borderland west of Baja California, Mexico, by Dale C. Krause
- Potassium-argon age and paleomagnetism of the Bishop Tuff, California, by G. Brent Dalrymple, Allan Cox, and Richard R. Doell
- Lower Paleozoic wedge edges in south-central New Mexico: New control, by Vincent C. Kelley and James W. Furlow
- Submarine morphology of the Sahul Shelf, north-western Australia, by Tjeerd H. van Andel and John J. Veivers
- GEOLOGICAL SOCIETY OF AMERICA BULLETIN, Vol. 76, No. 5, May, 1965
- Eruption of Lassen Peak, Cascade Range, California, in 1915: Example of mixed magmas, by Gordon A. Macdonald and Takashi Katsura
- ECONOMIC GEOLOGY,
vol. 60, No. 3, May 1965
- Genesis of bedded phosphates, by M.I. Youssef
- ECONOMIC GEOLOGY,
vol. 60, No. 2, March-April, 1965.
- Salt deposits, the origin, metamorphism and deformation of evaporites by H. Borchert and R.O. Muir.
- The future of coal production in the Rocky Mountain region, by Paul Averitt
- AMERICAN JOURNAL OF SCIENCE,
vol. 263, No. 5, May 1965
- Glaucophane-schist facies metamorphism in the Black Butte area, Northern Coast Ranges, California, by Edward D. Ghent
- ENGINEERING AND MINING JOURNAL,
vol. 166, No. 5, May 1965
- The Continental Shelf
- Undersea mining. Where do we stand today?
- JOURNAL OF GEOPHYSICAL RESEARCH,
vol. 70, No. 8, April 15, 1965
- Deep resistivity measurements in the Pacific Northwest, by T. Cantwell, P. Nelson, J. Webb, and A.S. Orange
- WORLD OIL, Vol. 160, No. 6, May, 1965
- Facies analysis aids reef exploration and development, by J. E. Klován
- WORLD OIL, Vol. 160, No. 7, June, 1965
- Airborne laser profiler aids photogeologic work
- WORLD OIL, Vol. 161, No. 1, July, 1965
- Eastern Nevada is a gamble, but production is rising, by Robert C. Horton
- How to cut costs in exploratory drilling, by C. F. Green
- Strikes and politics hold down activity in Colombia, by Dr. J. E. Rassmuss
- CALIFORNIA OIL WORLD, Vol. 58, No. 11 (First Issue) June, 1965
- Land Subsidence--Why the State (California) is concerned, by Alfred R. Golze
- CALIFORNIA OIL WORLD,
first issue, February 1965, vol. 58, No. 3
- Late Developments in steam injection, by C.H. Keplinger
- OIL AND GAS JOURNAL, Vol. 63, No. 23, June 7, 1965
- Alaska's Kenai Peninsula has gas discovery
- New developments in Utah, Nevada, could increase play
- OIL AND GAS JOURNAL, Vol. 63, No. 24, June 14, 1965
- There's new life in the barren center of Australia, by Roger N. Planalp

OIL AND GAS JOURNAL, Vol. 63, No. 27, July 5, 1965

Geological Survey gathering data on earth's crust and mantle, by John C. McCaslin

OIL AND GAS JOURNAL, Vol. 63, No. 28, July 12, 1965

Nevada wildcatters bring new life to Great Basin

OIL AND GAS JOURNAL, Vol. 63, No. 29, July 19, 1965

Geophysical activity in the U. S. rose 5.7 per cent in 1964

Santa Susana: a growing California field that shouldn't be growing, by Ted A. Armstrong

NURSERY NEWS

TRINA and BILL GODSEY, Standard, Oildale, second child, first son, William Earl, arrived May 5, 1965.

CAROLYNE and BILL EDMONDSON, consultant, Bakersfield, second girl, Susan Jane, July 31st, weight 8 lb., 3 oz.

CALENDAR

September 9, 1965

Thursday noon, Rodger Young Auditorium, 963 West Washington Boulevard, LOS ANGELES: Jack Russell, General Manager, THUMS, "Current Operations in the East Wilmington field."

September 14, 1965

Tuesday evening, 6:30 p.m., El Tejon Hotel, San Joaquin Geological Society "Stratigraphy of the Montezuma Basin, Solano and Contra Costa Counties California," by Rod Nahama.

PACIFIC PETROLEUM GEOLOGIST
PACIFIC SECTION. A.A.P.G.
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PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 19

September, 1965

Number 9

ASSOCIATION ACTIVITIES

EFFORTS ON REGISTRATION BILL CITED

As reported in the July issue of the P.P.G., Senate Bill 871, by action of the State Assembly Ways & Means Committee, went down to defeat on June 18, 1965, after having been rushed thru by the Senate.

At this time it should be pointed out that several of our members gave unstintingly of their time and effort the past few months and deserve the thanks of the A.A.P.G. membership for the very fine job they have done on the registration problem.

Robert H. Paschall, our A.A.P.G. legislative representative in Sacramento, has done an outstanding job in acting as liaison agent with Senator Short, his staff, other legislators and legislative personnel, AEG and the engineering organizations, as well as following the progress of the bill through the Senate and the Assembly and in organizing and directing the geologists' efforts to amend the original bill and prevent undesirable amendments.

The difficult job of redrafting and amending the original SB-871 to a more acceptable form was primarily the work of Wes Bruer and his San Joaquin Geological Society Committee, composed of Rod Colvin, John Clare, Dave Martin and John Manning. Legal advice furnished by Henry F. Lippett II was very helpful in drafting the amendments.

Among others, Elmo Adams and Gordon Oakeshott of the Northern California Geological Society and Vern Jones of the Sacramento Petroleum Association contributed valuable time and efforts.

All of these men worked under the auspices of the California Section of the A.I.P.G., and President Art Spaulding and his A.I.P.G. officers are deserving of thanks for their coordinating efforts and effective representation of the A.A.P.G.'s interests.

PUBLICATION SALES AGENT CHANGED

Responsibility for the sale of Pacific Section publications, including directories and field trip guidebooks, has been assumed by W. R. "Sam" Brown, Buttes Gas and Oil Co., Bakersfield. Orders should be addressed to Jeannette Hayden, Buttes Gas and Oil Co., 3132 18th Street, Bakersfield - or by telephone at (805) 327-2509.

An order blank for Pacific Section publications will appear in a future issue of the PPG.

AAPG - SEPM FALL FIELD TRIP SET FOR SANTA YNEZ RANGE

The Pacific Coast Section AAPG-SEPM Coast Geological Society annual field trip for 1965 will be held October 15-16, beginning with a 6:00 PM dinner meeting at the Miramar Convention Center, Montecito (San Ysidro Road turnoff from Highway 101 east of Santa Barbara) and a field trip preview by Drs. Donald Weaver (stratigraphy) and T. W. Dibblee (structure). On October 16 the field trip will leave the Center at 8:00 AM, conducted by Drs. Weaver, Dibblee, and R. M. Kleinpell. The Eocene-Oligocene-Miocene stratigraphic section will be examined at Hollister Ranch, across Gaviota Pass, and Refugio Pass. There will be a barbecue at Dos Pueblos Ranch. Accommodations at the Miramar Convention Center may be reserved without deposit. Anticipated expenses are: dinner \$4.50, barbecue \$3.50, and guidebook \$1.00.

ALASKA GEOLOGICAL SOCIETY

At a dinner meeting held on May 13, Ernest Lathram, U.S.G.S., Menlo Park, discussed the structure and stratigraphy of the North Slope. He presented a number of ideas gained from working on a new geological map of the Arctic Slope of Alaska.

ABSTRACT

"Mid-Early Cretaceous intra-basin thrusting and gravity sliding, and Laramide thrusting, proposed locally, seem to have been widespread; the disposition of extensive thrust sheets transported along major thrust zones controls the present distribution of formations and facies throughout the Brooks Range and Southern Foothills.

Mid-Early Cretaceous thrusting has juxtaposed a Jurassic to Early Cretaceous eugeosynclinal facies, deposited in and south of the Brooks Range, and a coeval shale facies, deposited under and north of the Foothills Belt.

Non-outcropping Laramide detachment thrusts, marked by seismic discontinuities at depth, probably underlie the folds of the Southern Foothills; the thrusts may underlie and "daylight" along the faulted axes of asymmetrical anticlines in the Northern Foothills. These folds are the focus of past and current drilling.

The thrusting has displaced the entire Brooks Range northward toward the Barrow High and the Romanzof Mountains.

A special summer meeting was held on August 10 to hear George Plafker, USGS, Menlo Park, discuss the "Tectonics of the Good Friday Alaska Earthquake." Mr. Plafker has some excellent color slides of the earthquake displacement in the general Prince William Sound and coastal Alaska. In spite of being an off season meeting, the attendance was good.

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PACIFIC PETROLEUM GEOLOGIST

Published monthly by the PACIFIC SECTION
American Association of Petroleum Geologists
Address communications to the Pacific Petroleum
Geologist, P.O. Box 17486, Foy Station, Los Angeles,
California 90017

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NEXT DEADLINE - SEPTEMBER 16

ACCOUNT OF THE ADAMS EXPEDITION
TO
THE CAPE SIMPSON OIL REGION

By Harry A. Campbell
(Edited by Tom Baldwin)

(Harry A. Campbell was at the time of his death in 1950 the Chief Geologist of Jergins Oil Company. During his years of residence at Bakersfield, Harry earned the affectionate regard of all geologists in the Pacific Section. He also found oil - lots of it!

Producing properties at Edison, Belmont, Newport and Jacalitos were discovered or developed by Jergins under his leadership. In his final years he was largely responsible for the discovery of San Ardo.

These notes on an early expedition to Pt. Barrow and Cape Simpson, excerpts from his field book, are an interesting comparison to present Alaskan activities. Max Steineke, Harry's assistant on this trip, later gained fame as a leading figure in the development of the Persian Gulf oilfields. - T.A.B.)

The expedition left Nome Roadstead at 5:30 P.M. July 2, 1921 on the schooner Silver Wave. On board were the following men:

R. D. Adams	Chief
Alex (Scotty) Smith	Guide
Harry A. Campbell	Geologist
Max Steineke	Assistant Geologist
Percy Pond	Photographer

On the ship's crew were:

Jack Hammer	Captain
Gus Nelson	1st Mate
Gabe Johnson	Engineer
John Jacobson	Steward

Owing to sickness, Asa Baldwin, who was to be surveyor for the party, had to give up the trip. Consequently, the mapping and laying out of claims fell on Steineke and Campbell. At Wainwright, Gabe Johnson was made over into a "dry land sailor" and taken on the shore party.

After a stop at Teller on the 6th to take on fuel the trip was continued, Point Hope being reached at 10:30 P.M. on the 8th. Here it was necessary to ride out a heavy S.E. wind until noon on the 11th. A fast run was made to a point off Point Lay where ice was encountered. After waiting for calmer weather the ice was entered thru leads and 48 hours later Icy Cape was passed and open water found.

The passage around Icy Cape thru the ice on Blossom shoals was made in calm clear weather and all hands enjoyed some excellent walrus shooting. Many thousand walrus were seen; the ice being dotted with them to the horizon in all directions.

A short stop was made off the station at Icy Cape on the morning of the thirteenth, and that evening a point 22 miles below Wainwright was reached. Here the main ice pack was encountered and further progress temporarily held up.

A shore party consisting of Adams, Smith and Campbell was arranged on the 14th and these men walked up the coast to Wainwright arriving there at 7:30 P.M. They were heartily welcomed by Jim Allen and the Greggs for whom they carried mail from Pt. Hope.

Arrangements were made here for cutting across country to Dease Inlet so Smith, in charge of a umiak and several natives, returned to the Silver Wave immediately and on the 15th at 11:30 P.M. returned to Wainwright with all supplies necessary for the trip. With him came Pond and Steineke.

In the meantime Jim Allen's cooperation was obtained and a new skin boat was furnished the expedition. He also helped secure three reliable Eskimos as helpers and guide, for the country to be travelled was unknown to white men.

The securing of this native help took time so it was the 18th before everything was in order. Late on the 17th the Silver Wave had been worked up to within a few miles of Wainwright Inlet so several members of the party accompanied Jim Allen in his Evinrude-powered skin boat, for a visit with Captain Jack. With Jim Allen's help the channel into the Inlet was found and at 2:30 A.M. July 18th the Silver Wave was anchored - safe from the ice.

Two records were broken on the trip to Wainwright. The Silver Wave was the earliest arrival at the Point in seven years and the earliest ship in Wainwright that Jim Allen has record of. Credit is due Jack Hammer for the skillful way in which he worked his schooner from Icy Cape to Wainwright.

The party left Wainwright on July 18th at 6:45 P.M. in a rain storm. The complete outfit was carried in two boats - one a large umiak (christened the "Vamp" at Wainwright) and an eight foot skin boat purchased in Nome. The two were tracked up the coast thru open water near the beach, the three dogs owned by Smith doing the work.

Every effort was made to make fast time and it was here that the hard work began.

The south end of Peard Bay was reached on the 19th after a portage across Sandspit from Ocean to Bay. Here another native was hired with also an additional skin boat.

With a fair wind fast time was made up Peard Bay to the Malermio River (not shown on existing maps). The Malermio is not a river - at its mouth it gave promise of being one but one mile up-stream it had dwindled to a mere trickle.

However, no time was lost. Both boats were loaded and the trip continued. Eventually all equipment, including the large skin boat, was carried the ten miles between "Head of Navigation" on the Malermio to the lakes beyond. Here the extra native was released. One of these lakes lies at the highest elevation recorded on the trip, 120 feet, and marks the crest of water shed lying between Eastern Arctic drainage and the Western Arctic drainage. This divide lies slightly less than 11 miles from Peard Bay. The small creek draining eastward from the lakes soon grew into a fair sized river and from then on easy going was had. With all hands paddling and the three dogs pulling, runs of 40-50 miles a day were made.

Owing to the small fall, less than one foot per mile, the river is very meandering, so while those in the boat made fast time, Steineke was able to traverse and map the course and still keep up with the party.

Dease Inlet was reached at 11:00 A.M. July 28 and the Cape Simpson region on the 29th.

All work was completed and the party in Barrow on the 13th of August, the Silver Wave having picked them up at Tangent Point on the 12th.

Seepage of petroleum occurs on two of three conspicuous mounds on the otherwise flat and barren Cape Simpson. One seep lies within 400 yards of the shore about three miles NW of the Cape. The other lies about four miles SW of the Cape about two miles from the shore. The latter one is easily located because of the isolation of the hill and because of the cabin which has been built there. Anyone walking along the shore north of the Cape would see the other seepage.

The third hill (they are all about 100 feet above sea level) has no oil seepage on it. It is the most conspicuous of the three, however, for it is quite close to the shore and on its highest point are two Eskimo graves. This hill is also bare of any moss or tundra grasses and furnished the only rock exposures of geologic importance found during the trip.

The two seepages are of about the same size and have their source well up on the hillside and flow several hundred yards into nearby lakes. In flowing the oil has spread out and covers a large area.

The most peculiar thing about these seepages is the presence of varicolored oils all arising from the same source. These different colored oils also have different physical properties.

There are dark green rather light oils, heavy yellow greases and dark to black residuums similar to asphaltum.

Although these seepages do not indicate a large oil field in the Cape Simpson region they do indicate the presence of a large oil body somewhere in the Arctic Coastal Plain. Only intense geological work and test wells will locate the actual area of valuable land.

Although the main object of the expedition was to investigate the oil possibilities of the Cape Simpson-Smith Bay region, another work was accomplished that is quite worthwhile. A trip was made across country from Peard Bay to Dease Inlet and a river route mapped for the first time. It was found that boats of not more than two feet draught could run up this river from Dease Inlet to within 15 miles of Peard Bay. Deeper draught boats could make the trip should a better channel be found at the river mouth.

This river is shown on coast charts as the Inaru and as joining the Mead. This latter is not true. The river flows N.E. in the last few miles of its course to enter Dease Inlet 10 to 12 miles north of where shown on the charts.

PERSONAL ITEMS

The Annual Coast Geological Society barbecue was held July 31st at the Lagomarsino Ranch near Ojai. The bocci ball court was a continuous flurry of excitement throughout the afternoon, and there was intense scrutiny of rock outcrops in the vicinity of the swimming pool, bar, and barbecue pit. To the profound chagrin of most confirmed guzzlers, the whiskey raffle was won by two well-known teetotalers, Messrs. BOB HERRON and DICK HAINES. And PETE HALL was late.

At Shell Oil (Ventura): SIG HAMANN, "Mr. Saticoy" of the Ventura Production office for over 8 years, is leaving to become a production geologist in the Talara area with Esso's Peruvian affiliate, International Petroleum Co. Ltd., Talara, Peru. . . . RALPH RUDEEN is leaving the Marine Division for a job with the Washington State Highway Department at Olympia. . . . JOE DIXON happily passed out cigars to all and sundry on the occasion of the birth of his fourth child, a boy.

Avalon is still trying to put itself back together after being the focus of shore leave for Tidewater's (Ventura) HAROLD SUGDEN during his recent vacation sailing cruise.

At the Standard (La Habra) Producing Department's annual tourney, held at the San Clemente golf course on August 28th, BOB ERICKSON won enough golf balls to play at least four more rounds of golf (depending on locale, lakes, out-of-bounds, etc.) by winning 2nd low net honors. Bob's handicap for ocean courses is 25, giving him the low net score of 67.

WILLIAM H. LEROY, formerly with Reserve Oil and Gas Company in Bakersfield, has been transferred to their executive offices in Los Angeles.

The Southern California Inter-Industrial Golf League's end-of-season tournament was held August 21st at the Fallbrook Country Club (which, the players agreed, is one of the finest courses in Southern California). BOB LINDBLOM, Standard, La Habra, won 2nd low gross and his foursome won low best ball for the tournament with 70.

Miss Barbara Little became the bride of ROBERT (BOB) VOTAW, Standard, Bakersfield, on August 21, 1965 at Des Moines, Iowa. Barbara will continue teaching Math at Foothill High School in Bakersfield.

R. H. (DICK) HAMMES, a June graduate from the University of Wisconsin, has joined the Exploration Department of Standard at Oildale.

MILT ZENI, Standard, Bakersfield, stopped at his favorite package store for a bottle of spirits only to be informed that they had just sold all of his preferred brand to three fellows who were planning a fishing trip in the mountains.



L. D. OWENS, W. R. BARLOW and E. K. ESPENSCHIED of Standard at Oildale spent a weekend on a "fishing trip" in the High Sierras.

GORDON BELL of Gulf has transferred back to Bakersfield from the recently closed Los Angeles office. BILL ZAJIC has also been transferred to the Bakersfield office from Casper, Wyoming.

ROSS CRAIG, Pan American (Anchorage) has been transferred to Denver.

BILL VAN ALEN, formerly with Pan American (Anchorage) has resigned and has relocated in Seattle as a consultant. Good luck, Bill.

ED MEES, BP (Alaska), has been transferred to Palos Verdes. L. O. GAY replaces Ed in Alaska.

The Corps of Engineers is planning a man-made earthquake out on the Aleutian Chain this fall. . . . Hold on to your seats!

BOB ANDERSON (Richfield) is a new Alaskan geologist transferred from Los Angeles.

GAR PESSEL, (Richfield, Anchorage), is reported about to step off the deep end, and get married this fall.

We understand Richfield has established a monopoly on Anaktuvuk Eskimo masks.

BUS and HELEN IVANHOE are traveling behind the Iron Curtain. Bus reports from Moscow that for once Helen finds nothing to buy and that they are receiving a very filling diet of caviar, vodka, borsht, and baloney.

W. J. EDMUND'S employment as Manager of E. L. Doheny, Operator, Beverly Hills, California, is being terminated, effective August 31, after 14 years of service. During the time of his employment by E. L. Doheny, Mr. Edmund has been instrumental in the discovery of and has managed the development and operation of major gas properties in the Willows and West Thornton gas fields of Northern California. Mr. Edmund has not yet made any commitment as to his activities in the future.

DON GILKISON, Gulf, Roswell, New Mexico, recently visited his old friends at the Bakersfield office. He also visited his son who has just finished touring Europe as a member of the Bakersfield College Choir. The Choir won first prize at a Music Contest in London.

TOM O'NEILL, formerly Division Manager for Shell at Bakersfield, has been named Division Manager of the Marine Division. F. B. (HOP) CONGER has been named Division Manager replacing Tom at Bakersfield.

JIM BENSLEY, Gulf, served as Acting Production Manager for the Bakersfield District during the month of July.

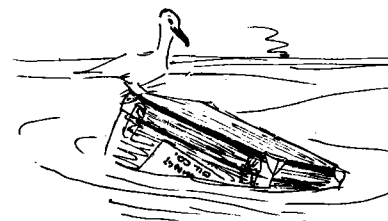
JOHN SMITH, Humble, Bakersfield, is being transferred to Alaska shortly. His transfer is just in time to miss the one day of summer.

HARLAN G. LANG, Geophysicist, Standard, has transferred from Anchorage to Bakersfield. JIM FOSTER has also transferred from Lafayette, La. to Bakersfield. Jim had to make an intercompany transfer to get to the Golden West.

DON LEWIS, Standard, Oildale, is now expected to apply his wholehearted attention to Geological Problems now that he has bought a "new" used car. He had to send his wife out of town before he could acquire the new vehicle.

Correction: DEAN LAUDEMAN has not changed companies. He is still with Union Oil Company, not Tidewater, and we hear he has recovered from the chicken pox without causing an epidemic.

H. E. HARRINGTON, Director of the Iranian Offshore Petroleum Company in Tehran, passes along this bit of advice to anyone transferring overseas and shipping household goods by sea: Be sure to read the fine print on the back of the Bill of Lading. Shipping lines accept less responsibility and have more alibis than a geologist with a dry hole on his cinch prospect.



NURSERY NEWS

MARY JO and DICK WILSON, Humble, Bakersfield, a son, John Fox, on August 14, 1965.

LEO FAY (Richfield, Anchorage) and wife are to be congratulated on the arrival of a new daughter. Veda worked for Richfield until Leo persuaded her not to.

BIBLIOGRAPHY OF RECENT PUBLICATIONS

U. S. GEOLOGICAL SURVEY

Professional Paper 399-A: Geology of Ishigaki-shima Ryūkyū-rettō, by H. L. Foster \$2.75

Bulletin 1140-C: Exchange adsorption of strontium on clay minerals, by J. S. Wahlberg, J. H. Baker, R. W. Vernon, and R. S. Dewar \$0.15

Bulletin 1181-A: Fluvial sediments--A summary of source, transportation, deposition, and measurement of sediment discharge, by B. R. Colby \$0.25

Bulletin 1198-D: Element content of bryophytes, by H. T. Shacklette \$0.45

Bulletin 1201-B: Quaternary geology of the Mount Chamberlin area, Brooks Range, Alaska, by G. W. Holmes and C. R. Lewis \$1.00

Water Supply Paper 1662-B: Specific yield--laboratory experiments showing the effect of time on column drainage, by R. C. Prill, A. L. Johnson, and D. A. Morris \$0.25

Water Supply Paper 1792: Ground water in permafrost regions--an annotated bibliography, by J. R. Williams \$1.25

Geophysical Abstracts 223: August 1965, by J. W. Clarke, D. B. Vitaliano, V. S. Neuschel, and others \$0.35

Circular 402: Water and the conservation movement, by L. B. Leopold, 1958. 12 pages (Reprinted 1965) Free

Circular 476: Lakes of the United States, by C. D. Bue, 1963. 22 pages (Reprinted 1965) Free

Circular 498: Reports and maps of the Geological Survey released only in the open files, 1964, by B. A. Weld, M. S. Griffin, and G. W. Brett. 1965. 16 pages. Free

MAPS:

GQ 387: Geologic map of the Skull Mountain quadrangle, Nye County, Nevada, by E. B. Ekren and K. A. Sargent. 1965 \$1.00

GQ 443: Geologic map of the Harvey Mountain quadrangle, Lassen County, Calif., by G. A. Macdonald. 1965 \$1.00

GP 511: Aeromagnetic map of the Cactus Spring quadrangle and part of the Goldfield quadrangle, Esmeralda and Nye Counties, Nevada, by P. W. Philbin and B. L. White, Jr. 1965 \$0.50

GP 515: Aeromagnetic map of the Quartzite Mountain quadrangle, Nye County, Nevada, by P. W. Philbin and B. L. White, Jr. \$0.50

GP 516: Aeromagnetic map of parts of the Kawich Peak and Reveille Peak quadrangles, Nye County, Nevada, by P. W. Philbin and B. L. White, Jr. \$0.50

GP 517: Aeromagnetic map of parts of the Cactus Peak and Stinking Spring quadrangles, Nye County, Nevada, by P. W. Philbin & B. L. White, Jr. \$0.50

GP 518: Aeromagnetic map of the Mellan quadrangle, Nye County, Nevada, by P. W. Philbin and B. L. White, Jr. \$0.50

GP 519: Aeromagnetic map of the Black Mountain quadrangle, Nye County, Nevada, by P. W. Philbin and B. L. White, Jr. \$0.50

GP 520: Aeromagnetic map of the Silent Canyon quadrangle, Nye County, Nevada, by P. W. Philbin and B. L. White, Jr. \$0.50

HA 199: Preliminary map of the conterminous United States showing depth to and quality of shallowest ground water containing more than 1,000 parts per million dissolved solids, by J. H. Feth and others \$1.25

MR - 44: Tin in the United States, exclusive of Alaska and Hawaii, by P. K. Killeen and W. L. Newman \$0.75

OM 217: Geologic map of the southeastern Caliente Range, San Luis Obispo County, California, by J. G. Vedder and C. A. Repenning \$0.50

U. S. BUREAU OF MINES (Superintendent of Documents, Government Printing Office, Washington, D. C.)

Preprint chapter "Petroleum and Natural Gas" from new 1965 Mineral Facts and Problems \$0.25

U. S. BUREAU OF MINES (Distribution Section, 4800 Forbes Street, Pittsburgh, Pennsylvania)

Report of Investigations 6641: Methods of analyzing oilfield waters: Cesium and Rubidium, by A. Genen Collins Free

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 76, No. 7, July 1965

Chemical characteristics of oceanic basalts and the upper mantle, by A. E. J. Engel, Celeste G. Engel, and R. G. Havens

Age determinations in the Precambrian of Arizona and Nevada, by G. J. Wasserburg and M. A. Lanphere

Metamorphic and structural history of "Colville Batholith" gneisses, north-central Washington, by James R. Snook

JOURNAL OF SEDIMENTARY PETROLOGY, vol. 35, No. 2, June 1965

Subaqueously-formed shrinkage cracks in clay, by J. F. Burst

Tables for the determination of sphericity and shape of rock particles, by Paul A. Catacosinos

Form and function of sedimentary particles, by N. C. Flemming

Heavy mineral evidence for source of some Permian quartzose sandstones, Colorado Plateau, by G. L. Scott

Implications of two Cretaceous mass-transport deposits, Sacramento Valley, California, by Gary L. Peterson

JOURNAL OF GEOLOGY, vol. 73, No. 4, July 1965

Eustatic and climatic history of the Adelaide area, South Australia, by W. T. Ward

Late Quaternary climates in Australia, by R. W. Galloway

The definition of "interglacial", by R. P. Suggate

Electron-excited luminescence as a petrologic tool, by J. V. Smith and R. C. Stenstrom

JOURNAL OF GEOPHYSICAL RESEARCH, vol. 70, No. 12, June 15, 1965

Wells near streams with semipervious beds, by Mahdi S. Hantush

New techniques of water sampling for Carbon 14 analysis, by James W. Crosby, III, and Roy M. Chatters

Crustal structure between Lake Mead, Nevada, and Mono Lake, California, by Lane R. Johnson

Rare-earth elements in ocean sediments, by Thomas R. Wildeman and Larry Haskin

Relationships between Uranium and Radium in coastal marine shells and their environment, by Richard L. Blanchard and Duke Oakes

JOURNAL OF GEOPHYSICAL RESEARCH, vol. 70, No. 14, July 15, 1965

Paleomagnetism of Late Cretaceous granitic plutons in the Sierra Nevada, California: Further results, by C. S. Gromme and R. T. Merrill

Paleomagnetism of Hawaiian lava flows, by Richard R. Doell and Allan Cox

An evaluation of the U^{234}/U^{238} method as a tool for dating pelagic sediments, by Teh-Lung Ku

Rare-earth distributions in some rocks and associated minerals of the batholith of Southern California, by David G. Towell, John W. Winchester, and Regina Volfovsky Spirn

SCIENCE, vol. 148, 3672, 14 May 1965

Anomalous erosional topography in Victoria Land, Antarctica, by Brian Mason

Paleontologic technique for defining ancient ocean currents, by R. Smoluchowski

SCIENCE, vol. 148, Number 3675, 4 June 1965

Data analysis and the frontiers of geophysics, by John W. Tukey

Aftershocks of the 4 February 1965 Rat Island Earthquake, by James N. Jordan, James F. Lander and Rudolph A. Black

SCIENCE, vol. 148, Number 3676, 11 June 1965

Radiocarbon age of a Nevada mummy, by Phil C. Orr and Rainer Berger

SCIENCE, vol. 148, Number 3677, 18 June 1965

Ocean-bottom topography: The divide between the Sohm and Hatteras Abyssal Plains, by Richard M. Pratt

SCIENCE, vol. 148, Number 3678, 25 June 1965

Tectonic deformation associated with the 1964 Alaska Earthquake, by George Plafker

Massive extinctions in biota at the end of Mesozoic time, by M. N. Bramlette

Carbonates: Association with organic matter in surface seawater, by Keith E. Chave

SCIENCE, vol. 148, Number 3679, 2 July 1965

Infrared spectra as a means of determining botanical sources of amber, by Jean H. Lengenheim and Curt W. Beck

SCIENCE, vol. 149, Number 3680, 9 July 1965

Mineralogy of particulate matter suspended in sea water, by Marion B. Jacobs and Maurice Ewing

SCIENCE, vol. 149, Number 3681, 16 July 1965

Clostridium botulinum Type F from marine sediments, by Melvin W. Eklund and Frank Poysky

Helium-Uranium ratios for Pleistocene and Tertiary fossil aragonites, by F. P. Fanale and O. A. Schaeffer

SCIENCE, vol. 146, Number 3651, 18 December 1964

Geology of the crust and mantle, Western United States, by G. A. Thompson and M. Talwani

Modern graywacke-type sands, by C. D. Hollister and B. C. Heezen

Marshes prograding in Oregon: Aerial photographs, by C. L. Johannessen

AMERICAN JOURNAL OF SCIENCE, vol. 263, No. 7, Summer 1965 September 20, 1965

Landform equations fitted to contour maps, by Frederic R. Troeh

Geology of West Texas pluvial lake carbonates, by C. C. Reeves, Jr. and W. T. Parry

STATE OF WASHINGTON, DIVISION OF WATER RESOURCES,

October 4, 1965

Water Supply Bulletin No. 21; Geology and ground-water resources of the Walla Walla River basin, Washington-Oregon, by R. C. Newcomb \$2.50

Water Supply Bulletin No. 24: Ground water in Washington. Its chemical and physical quality, by A. S. Van Denburgh and J. F. Santos \$3.00

ARIZONA BUREAU OF MINES

October 7, 1965

Bulletin 173, Bibliography of the Geology and mineral resources of Arizona, 1848-1964, by Richard T. Moore and Eldred D. Wilson \$3.00

LOS ANGELES, Monday evening, 7:00 p.m., Mobil Auditorium, Geological Forum, "New Regulations and Procedures of the U.S.G.S." (with emphasis on offshore operations), by D. W. Solanas, Regional Oil and Gas Supervisor, U.S.G.S.

BAKERSFIELD, Monday evening, 7:30 p.m., Bakersfield College, Science and Engineering Bldg. Room 56, Biostratigraphic Seminar, "New Foraminiferal Zonation, Upper Mesozoic, Sacramento Valley, California" by K. D. Berry, Standard Oil Company of California.

LOS ANGELES, Thursday noon, Rodger Young Auditorium, 963 West Washington Boulevard, "Exploration of the Continental Shelf off San Clemente, California, by Diving Saucer", by Edwin C. Buffington, U. S. Navy Electronics Laboratory, San Diego.

CALENDAR

October 19, 1965

September 14, 1965

BAKERSFIELD, Tuesday evening, 6:30 p.m., El Tejon Hotel, San Joaquin Geological Society, "Stratigraphy of the Montezuma Basin, Solano and Contra Costa Counties California," by Rod Nahama.

BAKERSFIELD, Tuesday evening, 6:30 p.m., El Tejon Hotel, San Joaquin Geological Society, "Significance of Hydrocarbon Disposition in Petroleum Exploration" by Wm. M. Zarella, Distinguished lecturer from Gulf Research and Development, Pittsburg, Pa.

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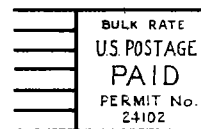
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PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 19

October, 1965

Number 10

ASSOCIATION ACTIVITIES

FIELD TRIP PLANS CHANGE

The AAPG-SEPM Coast Geological Society fall field trip on Saturday, October 16th will rendezvous at Gaviota State Beach at 8:30 a.m., instead of at the Miramar in Santa Barbara as previously announced.

The field trip will view the Eocene/Miocene stratigraphy of the Santa Barbara area under the leadership of Drs. D. W. Weaver, T. W. Dibblee and R. M. Kleinpell, and will end with a barbecue at Dos Pueblos Ranch. The program Friday evening at the Miramar Convention Center in Montecito includes Registration and Social Hour, 6:00-7:00 p.m.; Dinner Meeting, 7:00 p.m.; and Field Trip Preview. Expenses include: registration, \$1.00; dinner, \$4.50; guidebook, \$3.00; box lunch, \$1.00; and barbecue, \$3.50.

Those wishing to review the geological features of the area in advance are referred to California Division of Mines and Geology, Bulletin 150: Geology of Southwestern Santa Barbara County, California, by T. W. Dibblee, 1950.

ZARELLA TO DISCUSS GEOCHEMICAL PROSPECTING

On October 18, 1965, at 7:00 p.m. in the Mobil Auditorium, Los Angeles, William M. Zarella, Gulf Research, will speak on "Relationship of Organic Substances in Sediments to the Occurrence of Petroleum," under the auspices of the 1965-66 Distinguished Lecture Series.

Reviewing the distribution and character of organic matter in rock systems, Zarella describes developments in this field which can be utilized in the search for petroleum.

There is outlined a manner in which geochemistry may be applied in evaluating the petroleum potential of a region, in helping to outline attractive areas for exploration and in indicating the presence of an oil pool in a specific prospect.

COAST GEOLOGICAL SOCIETY

The monthly dinner meeting of the Coast Geological Society was held September 14 at the Jet Room in Ventura.

After a succulent steak dinner, Dr. Frederick Pough, Director of the Santa Barbara Museum of Natural History, addressed the gathering on the subject of "Diamond Coloration by Radiation Treatment". In a fascinating dissertation accompanied by slides, Dr. Pough outlined the history of the art of diamond coloration and presented the techniques currently in use. He gave us considerable insight into the economics and methods of the diamond trade as well.

CALENDAR

October 11, 1965

LOS ANGELES, Monday afternoon, 3:00 p.m., U.C.L.A., Chemistry 2250, "Coastal Morphology," by R. J. Russell, Professor of Geography and Geology, Director, Coastal Studies Institute, Louisiana State University.

October 12, 1965

LOS ANGELES, Tuesday noon, University of Southern California, Science G 102, 857 W. 37th St., "Facies Variation in the Late Tertiary of California," by James C. Ingle, Jr., doctoral candidate in geology.

October 13, 1965

SEATTLE-TACOMA, Wednesday evening, 7:00 p.m. (Social hour at 6:00), Poodle Dog Restaurant, Fife, Washington, Northwest Geological Society, "The Geology of the Ocean off Oregon", by Dr. John V. Byrne, Oregon State University.

October 18, 1965

LOS ANGELES, Monday evening, 7:00 p.m., Mobil Auditorium, Geological Forum, "Relationship of Organic Substances in Sediments to the Occurrence of Petroleum," by William M. Zarella, (Gulf Research), AAPG Distinguished Lecturer.

October 19, 1965

BAKERSFIELD, Tuesday evening, 6:30 P.M., El Tejon Hotel, San Joaquin Geological Society "Significance of Hydrocarbon Disposition in Petroleum Exploration" by Wm. M. Zarella, Distinguished Lecturer from Gulf Research and Development, Pittsburgh, Pennsylvania.

October 27, 1965

PASADENA, Wednesday evening, 6:30 p.m., Athenaeum, California Institute of Technology, Branner Club dinner meeting, "Southern California's Water Problems," by Joseph Jensen. Reservations should be made with Lucy Birdsall, Secretary, at 688-2850.

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Published monthly by the PACIFIC SECTION
American Association of Petroleum Geologists
Address communications to the Pacific Petroleum
Geologist, P.O. Box 17486, Foy Station, Los Angeles,
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NEXT DEADLINE - OCTOBER 14

November 4, 1965	LOS ANGELES, Thursday noon, Rodger Young Auditorium, 963 West Washington Boulevard, "Evaluation of Gas Reserves," by Charles Lakey, Mobil Oil Company.
November 8, 1965	BAKERSFIELD, Monday evening, 7:30 P.M., Bakersfield College, Science and Engineering Bldg. Room 56, <u>Biostratigraphic Seminar "Potassium - Argon Dating,"</u> by Mr. Donald Turner, University of California at Berkeley.
November 15, 1965	LOS ANGELES, Monday evening, 7:00 p.m., Mobil Auditorium, 612 S. Flower St., <u>Geological Forum, "Offshore Exploration and Petroleum Possibilities in the Santa Barbara Area,"</u> by Manuel Castro, consultant.

December 6, 1965

BAKERSFIELD, Monday evening,
7:30 P.M., Bakersfield College,
Science and Engineering Bldg.
Room 56, Biostratigraphic
Seminar "Submarine Geology"
by Dr. Robt. Dill, U. S. Navy
Electronics Lab.



MICHEL T. HALBOUTY



GORDON I. ATWATER

1966-67 OFFICER NOMINEES ANNOUNCED BY NATIONAL A.A.P.G.

GORDON I. ATWATER, Senior member of Atwater, Cowan, and Associates, New Orleans, La., and MICHEL T. HALBOUTY, consulting geologist, petroleum engineer, and independent producer and oil operator, Houston, Texas, nominees for President, head the slate of 1966-67 officer candidates for The American Association of Petroleum Geologists as announced today by A.A.P.G. President, ORLO E. CHILDS.

Other officer nominees submitted by the A.A.P.G. Nominating Committee are: for Vice-President, DANIEL A. BUSCH, consulting geologist, Tulsa, Oklahoma, and JAMES P. SPILLERS, State Mineral Board, Baton Rouge, La.; for Secretary-Treasurer, JOHN D. MOODY, Exploration manager, Socony Mobil Oil Co., New York, and JOHN A. TAYLOR, consulting geologist, Oklahoma City, Okla.; and for Editor, incumbent, JOHN C. HAZZARD, Geological Supervisor, Union Oil Company of California, Los Angeles, California.

The A.A.P.G.'s 13,000 active members, representing all fifty states and nearly 80 foreign countries, will do their balloting by mail. The successful candidates of this world-wide ballot will take office April 28, 1966, the last day of the 51st annual meeting of the Association to be held in St. Louis, Missouri. This meeting will mark the Semicentennial for the organization.

Present members of the Executive Committee of the A.A.P.G., the world's largest geological organization, are: President, ORLO E. CHILDS, Colorado School of Mines, Golden, Colorado; Past-President, GROVER E. MURRAY, Louisiana State University, Baton Rouge, La.; Secretary-Treasurer, GEORGE C. HARDIN, JR., Kerr-McGee Oil Industries, Inc., Oklahoma City, Okla.; and Editor, JOHN C. HAZZARD. Chairman of the present A.A.P.G. Nominating Committee is MASON L. HILL, Exploration Manager, Richfield Oil Corporation, Los Angeles, Calif.

MEMORIALS

EDMUND J. BARTOSH, consulting geologist and petroleum engineer, died in Seal Beach, California, on August 28, 1965. A long-time member of the Pacific Section and of the AAPG since 1928, he was retired from the Bankline Oil Company.

VERNON L. KING, consulting geologist and engineer, died September 25, 1965, at Signal Hill. A 1916 graduate of Stanford, King worked for the Midwest Refining Company in Denver before entering the U. S. Army in 1918. After World War I, he played a significant role, as geologist, chief geologist or consultant for a number of companies, in the development of Signal Hill and other Southern California giants of that era. He is survived by two sons, Theodore S. King and Vernon L. King, Jr.

SAN JOAQUIN GEOLOGICAL SOCIETY

On Tuesday evening, September 14th, the San Joaquin Geological Society met at the El Tejon Hotel in Bakersfield to hear Mr. Rod Nahama, Consultant, discuss "The Stratigraphy and Tectonics of the Montezuma Basin, Contra Costa, Solano and Sacramento Counties."

ABSTRACT

The Montezuma Basin is located in portions of Contra Costa, Solano, and Sacramento counties in the southwestern Sacramento Valley. The basin's center approximates the intersection of the Sacramento and San Joaquin rivers at the west end of Sherman Island.

Within the Montezuma Basin's center are preserved over 15,000 feet of Tertiary sediments--the thickest preserved Tertiary sedimentary section in the Sacramento Valley. Isopach maps indicate that the Montezuma Basin subsided more than 5,000 feet during Paleocene and early Eocene time. This basin is elongated northerly and is asymmetrical; its present structural axis hugs the western rim.

This paper describes the structural behavior of the tectonic elements during and between cycles of sedimentation. The portion of the sedimentary section which illustrates the behavior of the tectonic elements is the 8,500 feet of marine sediments deposited during late Upper Cretaceous to middle Eocene time. This is the section between the top of the Domengine sand and the base of the H & T shale.

Ten illustrations show the tectonic evolution:

1. Present tectonic framework map.
2. North-South Stratigraphic section.
3. A stratigraphic section showing the stratigraphic relationships around the periphery of the Montezuma Basin.
4. East-West stratigraphic section.
5. Martinez formation isopach map.
6. Meganos formation isopach map.
7. Capay shale--Hamilton sand isopach map.
8. Base First Massive sand paleogeologic map.
9. Base Meganos shale paleogeologic map.
10. Base Domengine sand paleogeologic map.

The present structural framework resulted from the following tectonism:

1. The Montezuma Basin's north rim was uplifted during late Upper Cretaceous through Eocene time.
2. Early Paleocene orogenic movements uplifted the Kirby Hills tectonic element.
3. During Paleocene and early Eocene time, intense subsidence occurred along the east flank of the Kirby Hills uplift.
4. During the subsidence adjacent to the Kirby Hills uplift, orogenic movements, focused southeast of the Brentwood oil and gas field, uplifted the southeast and east rims of the basin. Both the Kirby Hills and Southeast Brentwood tectonic elements were source areas during Paleocene and earliest Eocene time.
5. Subsidence of the basin along the Midland fault occurred after the regional early Eocene erosion which locally cut a submarine canyon within the present south rim of the Montezuma Basin.
6. Before middle Eocene deposition, the Kirby Hills and Southeast Brentwood tectonic elements subsided to the level of the rest of the basin.
7. Post Eocene orogenic movement, which uplifted the Mt. Diablo horst, resulted in the northerly downwarping of the basin.

COMPUTER SYSTEM FOR WELL STATISTICS ANNOUNCED

DR. ORLO E. CHILDS, President of the American Association of Petroleum Geologists, has announced the successful development of a new system for quickly and accurately processing statistical data on exploratory well drilling in the United States, Canada, and Mexico. The system, which utilizes modern data processing and computer techniques, was designed by the Association's Committee on Statistics of Exploratory Drilling and was used to store, retrieve, and process the 1964 drilling data for publication in the June, 1965 BULLETIN of the AAPG. A description of the new system appears in the September issue of the BULLETIN which is currently being mailed to the Association's members.

Dr. Childs stressed that the computer system not only has produced a 20-fold reduction in the amount of time required to generate the national statistics, but that it has also introduced a higher degree of accuracy than previously possible. Of particular interest to the oil and gas industry and the various regulatory bodies is the new availability of basic drilling data in a form that can be analyzed by the use of computers.

Copies of the 1964 basic data on magnetic tape, and also copies of the CSIED programs which can be easily modified to produce almost any desired statistical information, are available at nominal cost through AAPG Headquarters, P. O. Box 979, Tulsa, Oklahoma 74101.

Dr. Childs also disclosed that the AAPG has undertaken a study with the American Petroleum Institute to determine if it would be possible to include development well drilling as part of the exploratory well drilling system. The AAPG has been reporting exploratory well drilling for over 25 years; however, there has not been a consistent source of information on development well drilling. Dr. Childs observed that there is reason to be optimistic that there will be a total drilling statistics system available for use by the industry in time to report 1966 drilling data by this method.

LAKEY TO DISCUSS GAS RESERVE EVALUATION

At the Los Angeles luncheon meeting on November 4th at Rodger Young Auditorium, Mr. Charles Lakey of Mobil will speak on the "Evaluation of Gas Reserves." Mr. Lakey will review basic methods for estimating gas reserves and the techniques for valuation of the reserves. Factors involved in the Volumetric and Pressure Decline reserve estimate methods will be discussed, with emphasis on data sources, experience factors and the reliability of completed estimates. The timing of reserve depletion and subsequent valuation procedures will also be covered.

NORTHWEST GEOLOGICAL SOCIETY

Northwest Geological Society meetings continue to be held monthly at the Poodle Dog Restaurant in Fife. The September meeting was held on September 9th, with Dr. Charles V. Fulmer as the speaker. Dr. Fulmer spoke on the Type Section of the Blakeley Formation. His paper is to be published soon by the University of California Press.

The October meeting will be held Wednesday evening, October 13th, when Dr. John V. Byrne of the Oceanography Department of Oregon State University will speak on the Geology of the Ocean off Oregon.

STRATIGRAPHY AND PALEONTOLOGY
OF THE TYPE BLAKELEY FORMATIONAbstract

The type section of the Blakeley formation as defined by C. E. Weaver is exposed in three discontinuous beach sections. Each profile contains all or a portion of the two lithologic members characterizing this formation. The Orchard Point or lowermost member is composed of coarse clastic sediments interbedded with relatively minor amounts of fine-grained sandstone and siltstone. This member is most completely exposed along the southwestern shore of Sinclair Inlet. Here it is approximately 2600 feet thick. The overlying Restoration Point member is characterized by finer-grained sandstone, siltstone and shale with minor amounts of pebbly sandstone. The strata assigned to this member are best exposed along the southern and southeastern shore of Bainbridge Island. Here the Restoration Point member is approximately 4500 feet thick.

Both lithologic members are composed predominantly of volcanic debris derived from two distinct source areas. Basaltic debris is usually the dominant volcanic element of the coarser clastic sediments. The matrix of the sandstone and conglomerates, as well as much of the silt and clay-size material present in the finer clastics, is composed of light-colored felsitic tuff. The basaltic debris was eroded from near-by areas of Metchosin or Coast Range basalt and the felsitic tuff was supplied from the Cascade volcanic province to the east.

The typical Blakeley formation is host to a rich molluscan and foraminiferal fauna. The molluscan elements compose the *Acila gettysburgensis* association of Weaver and the *Echinophoria rex* assemblage of Durham. The lower 850 feet of the Orchard Point member is characterized by a foraminiferal faunule of Refugian age. The remainder of the formation is characterized by a foraminiferal association of Zemorrian age.

PACIFIC SECTION COMMITTEEMEN

The following is a roster of the presently active Pacific Section committees and their respective chairmen. Volunteers to serve on any of these committees will be more than welcome, and participation by younger members is particularly encouraged.

1966 Annual Meeting, Long Beach

Wm. D. Emerson, General Chairman
Humble Oil & Refining Company
P. O. Box 7033, Long Beach 7
GA 4-8121

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GA 3-7921

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MA 5-9411

Convention Site Committee

John H. Packler, Chairman
U. S. Geological Survey
215 West 7th St., Los Angeles
688-2846

Directory Committee

J. D. Traxler, Chairman
Signal Oil & Gas Company
1010 Wilshire Blvd., Los Angeles
HU 2-0722

Earth Science Education Committee

Wm. H. Lee, Chairman
Granada Hills High School
10458 Baird Ave., Northridge
363-5341

Legislation & Ethics Committee

Robert H. Paschall, Chairman
State Board of Equalization
460 Lovella Way, Sacramento
(916) 445-4982

Licensing & Registration Committee

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 HU 2-7600

Life Membership Awards Committee

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 243-3093

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 MA 6-5711

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Spencer F. Fine, Chairman
 Richfield Oil Corporation
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 MA 9-4111

Pacific Coast Cross Section Committee

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 229 Vivian St., King City
 (408) 385-5207

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 10737 Shoemaker Rd., Santa Fe Springs
 941-8751

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 816 West 5th St., Los Angeles
 MA 4-8964

Publications Sales Committee

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 3132 18th St., Bakersfield
 (805) 327-2509

San Andreas Fault Cross Sections Committee

Max B. Payne, Chairman
 1105 Harvard St., Santa Monica
 393-7079

Spring Picnic, Golf & Field Trip Committee

Harry E. Nagle, Chairman
 Standard Oil Company of California
 231 No. Dos Caminos (Box 3317), Ventura
 (805) R05-2111

PERSONAL ITEMS

BOB YEATS, Shell, Ventura, has been nominated by the Ojai Valley Jaycees as a candidate for one of California's five outstanding young men of the year. Bob is a former member of the Ojai City Council and Planning Commission. He has recently presented and published, "Pliocene Seaknoll at South Mountain, Ventura Basin, California."

FRANK GETZ, long-time Standard geologist at La Habra, has resigned to breathe the free (and sometimes thin) air as a consultant. His address is 11509 S. Homeland Ave., Whittier, 943-1367.

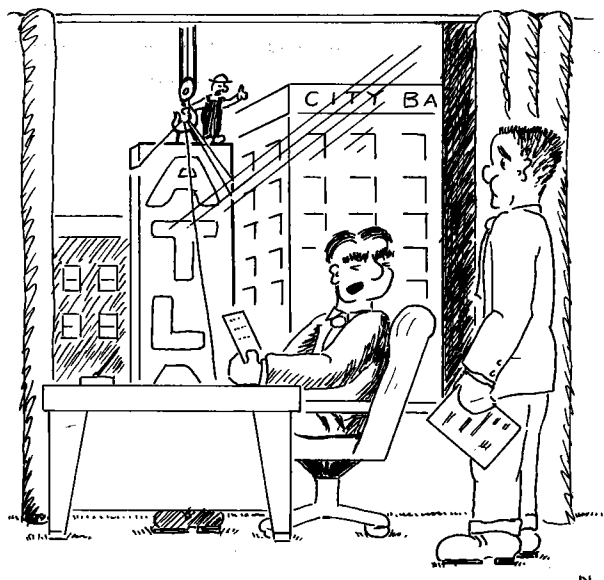
WILLIAM VAN ALLEN has recently opened his own consulting office in Seattle, at 9612 7th Avenue N.E.

BUS IVANHOE, the Pacific Section's own Napoleon Solo, writes from Warsaw:

"We were told by the Russian Intourist travel agency that we were free to go anywhere and photograph anything in Moscow. We had an extra day in Moscow after the guided tour in order to make plane connections. While wandering around alone, I was picked up by two plain clothes men and detained and interrogated for 3 hours by the "Gestapo" (complete with Lenin's picture on the wall) for inadvertently photographing their building (only one block from a subway station on a busy street - I thought it was a run-down apartment house). I finally talked my way out of the jail, kept my film, and ended up telling the young interpreter (in answer to his questions) that I own a Mustang and that all of the Negroes in L.A. drive to work in their own cars.

In Warsaw - our suitcase was stolen from our hotel room. - VIVA MEXICO!"

ELMO SPRECKELS, a recent graduate of the Land Man's School in Texas, has joined the Tidewater Staff in Bakersfield as a scout.



"Nonsense, Frantwell, the Atlantic's 3000 miles away!"

BRICK ROBINSON of Shell's Bakersfield office is moving to Ventura to take up the Saticoy cudgels dropped by SIG HAMANN when he moved to Peru. Letters from Sig indicate that he is happily ensconced in the International Petroleum Company village at Talara.

BOB YEATS, Shell, Ventura, spent the Labor Day holiday heartily indulging himself in two favorite subjects, mountains and hard rocks, during three days of hiking in the northern Cascade Range, his secret purpose: to justify a massive exploration (i.e., fishing) program in the Cascades by finding oil of metamorphic origin.

Many of you will be interested to know that CHARLIE FULMER has completed his paper on the Blakeley formation after many years of work. An abstract is published elsewhere in this issue.

JIM MERCIER, Occidental, enjoyed Beirut so much when he was there in the spring that he went back again for his new company.

JOHN WEIDMANN has resigned from Richfield to study in the School of Education at the University of Oregon.

ED BIEN, Richfield, Bakersfield, came back from vacation sporting a goatee. He now looks like a well sun-tanned modern Genghis Khan.

MIKE CRUSON, Standard, Oildale, spent part of the summer at R.O.T.C. Camp and acquired a bride while he was gone. Mike and Carole Marie Windust were married on July 31, in Portland, Oregon.

PAUL FRITTS has resigned from Standard's Paleontology Section in Oildale to accept a teaching position at Long Beach State.

NEIL SMITH and FRED FLEGE of Standard are happy to announce their respective promotions. Neil Smith is being transferred to Bakersfield replacing Fred Flege. Fred Flege is being transferred to Seattle replacing Neil Smith.

What consulting engineer finally figured out a way to get into DAVE CALLOWAY'S files?

DAN FLYNN, well known West Coast geologist turned realtor, is taking over a real estate office in partnership with Mr. Simmonds at 7765 Girard Avenue in La Jolla. He will be leaving Bakersfield this month.

At the dinner following their recent pre-budget meeting, AL MARTINI, Superintendent of the Northern Division for Standard, remarked, "If the plays we have presented are not real and true, may the walls come tumbling down."

P. W. GESTER, Standard, recent expatriate of Bakersfield, arrived in New Orleans in time to be greeted by Hurricane Betsy. All of the Gesters are reported to be safe and sound but they are living in a newly created style of house -- roofless.

BOB KOCH, a recent graduate from Colorado School of Mines, has joined Standard Oil at Bakersfield, effective September 1.

It seems that Dave Pfeiffer of Standard Oil recently took his boss, Stan Totten, out the Golden Gate on a fishing trip. Dave caught the only fish of the day. The following week Dave went on his own and came back with a 30-pound salmon. (Who will be the next Standard Oil geologist to be transferred from cool, foggy San Francisco to the swamps of Louisiana or the desert of Texas?).

EV RICHARDSON, U.S.G.S., Bakersfield, had everyone sweeping the floor at the El Tejon Ballroom looking for his new contact lens. When he got home he couldn't sleep because of an aching eyeball. Sure enough, the lens was hidden in the corner of his eyelid. But the Spanish Ballroom needed cleaning anyway.

BRAD WILLIAMS, Standard, Oildale, is in advanced seismic training school. He insisted that his wife teach school to keep herself occupied during his absence.

The annual Scouts Picnic and Golf tournament at Bakersfield was a success. M. O'KEEFE, BOB LINDBLOM and BOB ORTALDA were flight winners. Ortalda parlayed his golf winnings at the tables and made a small fraction of his 1st million. This was the first year that DICK ATCHISON of Marathon made no money. He was betting against JACK KAPLER, Tidewater, when Jack had a lucky streak.

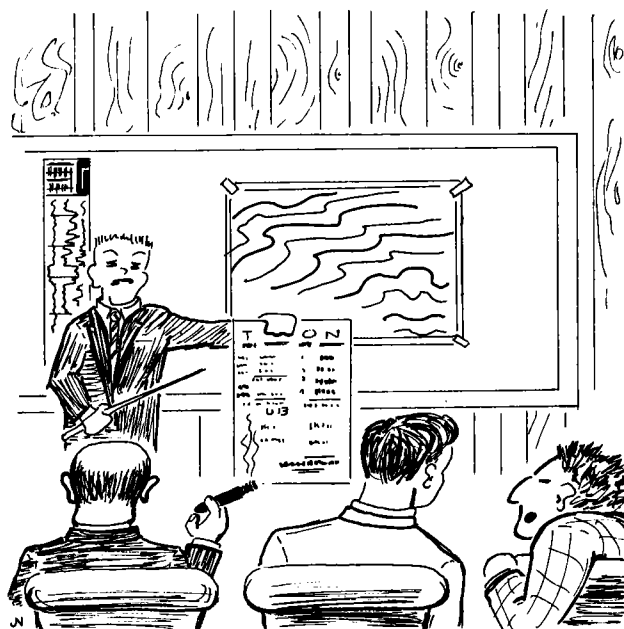
GEORGE RUDKIN, Marathon, is still making a weekly commute between Bakersfield and Sacramento. He still hasn't been able to unload his house in the capital city.

ED HUDSON, CHUCK BREITSPRECHER, DENNIS WEEDEN, CARL ROGERS and VINCE SCURY, Texaco Co. have transferred to Bakersfield with the closing of the Sacramento Office. It is reported that they've all been able to sell their homes in Sacramento.

NURSERY NEWS

On September 14th, NORM and ANN GIEDT became the proud parents of Robert Whitton Giedt. Robert tipped the scales at 6 lbs. 8 oz., and already has started to whip the Giedt household into line.

CYNTHIA and MIKE MAXWELL, McCulloch Oil, Los Angeles, twin boys, Robert and Richard, at 4 lbs., 15 oz., and 4 lbs., 8 oz., on August 14th. Mike was hoping for twin girls to have someone to help him with housework.



"I don't care whose son-in-law he is, we can't lease all of Antarctica!"

BIBLIOGRAPHY OF RECENT PUBLICATIONS

U. S. GEOLOGICAL SURVEY

Professional Paper 470: Geology and tungsten mineralization of the Bishop District, California, by Paul C. Bateman.

OPEN FILE REPORTS (Inspection only)

Approximate location of fault traces and historic surface ruptures within the Hayward fault zone between San Pablo and Warm Springs, California, by Dorothy H. Radbruch. Map with text, scale 1:62,500 (One sheet)

Gravity survey of southern Cascade Range, California, by T. R. LaFehr. 21 pages, plus 48 p. appendix. 1 pl., 2 figs.

Waterpower resources of Idaho, by L. L. Young and J. L. Colbert. 203 pages.

U. S. BUREAU OF MINES

Open Filed Reports (Inspection only. Area VIII Mineral Resource Office, U. S. Bureau of Mines, Juneau, Alaska).

Examination of Hannum Lead Prospect, Fairhaven district, Seward Peninsula, Alaska, by John J. Mulligan.

Examination of the Sinuk Iron Deposits, Seward Peninsula, Alaska, by John J. Mulligan, with a section by Harold D. Hess.

Reconnaissance of the Avnet Manganese Prospects, Tanana quadrangle, Central Alaska, by Bruce I. Thomas

Preliminary investigation of limestone, quartzite, and dolomite resources near the proposed Rampart Dam in Central Alaska, by Bruce I. Thomas.

AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS, BULLETIN, vol. 49, no. 7, July 1965

Basement--not the bottom but the beginning, by Peter T. Flawn

Structural trends in Canadian Shield, by C. H. Stockwell

JOURNAL OF GEOPHYSICAL RESEARCH, vol. 70, no. 10, May 15, 1965

Effects of the Alaska earthquake and tsunami on recent deltaic sediments, by Erk Reimnitz and Neil F. Marshall.

Diffusion creep in the earth's mantle, by Robert B. Gordon.

Displacements, strains and tilts at teleseismic distances, by Frank Press.

THE JOURNAL OF GEOLOGY, vol. 73, no. 3, May 1965

Stratigraphy, non-marine mollusks, and radiometric dates from Quaternary deposits in the Kotzebue Sound area, Western Alaska, by David S. McCulloch, Dwight W. Taylor, and Meyer Rubin.

Temperature and water content as factors in desert weathering, by Eldon S. Roth.

ENGINEERING AND MINING JOURNAL, vol. 166, no. 7, July 1965.

Undersea mining, Part 3., by Thomas W. Wilson.

ENGINEERING AND MINING JOURNAL, vol. 166, no. 8, August 1965.

Undersea Mining, Part 4: The ocean: Mining's newest frontier, by H. D. Hess.

GEOLOGY, vol. 60, no. 5, August 1965

Precipitation of phosphates in sea water, by Duncan McConnell

THE ORE BIN, vol. 27, no. 8, August, 1965

Natural gas and petroleum products pipelines in the Northwest, by Vernon C. Newton, Jr.

NEVADA BUREAU OF MINES (Reno, Nevada, University of Nevada)

Bulletin 63: Geology and mineral deposits of the Bunkerville Mining District, Clark County, Nevada, by Laurence H. Beal. \$3.00

Report 8: Bibliography of graduate theses on Nevada geology, by Ronald V. Wilson. \$.50

Report 9: Correlation of the Middle and Late Quaternary successions of the Lake Lahontan, Lake Bonneville, Rocky Mountain (Wasatch Range), Southern Great Plains, and Eastern Midwest areas, by R. B. Morrison and John C. Frye. \$.75

CALIFORNIA DIVISION OF MINES AND GEOLOGY

Map Sheet 4: Geology of the Redding Quadrangle, Shasta County, California, by V. F. Hollister and J. R. Evans (1965). \$1.50

ARIZONA BUREAU OF MINES

Bulletin 168: Gold placers and placering in Arizona. \$.75

Bulletin 173: Bibliography of the geology and mineral resources of Arizona. \$3.00

Bulletin 174: Guidebook I: Highway of Arizona, U. S. Highway 666. \$.50

GEOLOGICAL SURVEY OF CANADA

Index to reports of Geological Survey of Canada, from 1951-1959. (1965). 379 p.

GEOTIMES, volume 10, no. 1, July-August 1965

A civil engineer reads a geology report, by Don Rose.

OIL AND GAS JOURNAL, vol. 63, no. 30, July 26, 1965.

Northeast McKittrick is California's best strike in 15 years, by Ted A. Armstrong.

OIL AND GAS JOURNAL, vol. 63, no. 31, August 2, 1965.

Union bets a million on core samples in Los Angeles.

Fast pace being set in Australian drilling and exploration.

OIL AND GAS JOURNAL, vol. 63, no. 32, August 9, 1965.

California's McKittrick field enjoys second childhood, by Ted A. Armstrong.

Activity picks up off Oregon.

OIL AND GAS JOURNAL, vol. 63, no. 33, August 16, 1965.

Socal to develop two major offshore California oil fields.

Annual Exploration Section

What's ahead in exploration?

Horizontal stacking improves seismic data, by Edward F. Zagst.

Gravity growing in sophistication as an exploration technique, by Jonathan W. Phillips.

OIL AND GAS JOURNAL, vol. 63, no. 34, August 23, 1965

Downtown Los Angeles play heads west, by Ted Armstrong.

OIL AND GAS JOURNAL, vol. 63, no. 37, September 13, 1965.

Electrical resistivity may mean new help in finding oil, by John C. McCaslin.

WORLD OIL, vol. 161, no. 2, August 1, 1965

Packed hole drilling pays off, by Stanley O. Hutchinson and N. L. Mitchell

How to evaluate oil shale by well log analysis, by S. R. Bardsley and S. T. Algermissen

Australia's offshore areas to be explored, by Jan Howell

Shale oil projects are increasing, by Irvin Nielson.

WORLD OIL, vol. 161, no. 3, August 15, 1964

1965 International outlook issue

WORLD OIL, vol. 161, no. 4, September 1965

High-frequency sound pulser echoes help map sea floor, by T. F. Gaskell

CALIFORNIA OIL WORLD, second issue, March 1965, vol. 58, no. 6

Assisted recovery: Acceleration in California, by Bill Rintoul.

PACIFIC PETROLEUM GEOLOGIST
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Volume 19

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DA

PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 19

November, 1965

Number 11

ASSOCIATION ACTIVITIES

FROM THE PRESIDENT

R. M. PYLES BOYS CAMP

For the past 16 years, the R. M. Pyles Boys Camp, solely sponsored by the men and women of the California petroleum industry, has provided heartfelt companionship and counseling to 5500 deserving boys of limited circumstance and sub-standard environment. Starting with two weeks in a summer mountain camp, the boys are later contacted in their homes by the camp staff to assist them into young manhood with good American living guidance. Further, winter meetings are planned wherein the boys, the camp staff and interested sponsors meet on a bimonthly basis to hear a distinguished speaker talk on a subject providing guidance to boys.

Approximately 500 boys are introduced into the camp fold each summer, and the entire cost of the camp is borne by its contributors. To date, the burden of this support has rested on a relative few, all of whom are within the oil industry. Among those on the 38-man Board of Directors of prominent oil men are the following members of the Pacific Section: Rollin Eckis, P. W. Gester, Russell H. Green, Jr., John R. McMillan, Frank A. Morgan, T. R. O'Neill, and Lee S. Osborne.

It is obvious that if this worthwhile project is to continue as a contribution to our youth by California oilmen, it must solicit the sponsorship and support of new people. I, personally, endorse this program and urge all who can to participate either by direct contribution to the camp office, contribution through the A.I.D. program or attendance at the bi-monthly meetings. Further information may be obtained through Mr. Bob McAdams, Camp Manager, P. O. Box 444, Huntington Beach, California

Eugene R. Orwig, Jr.

NORTHERN CALIFORNIA GEOLOGICAL SOCIETY

The Northern California Geological Society has acquired a brandnew, deluxe room for its regular Monday noon luncheon meetings. Visiting geologists are invited to join us on the 3rd floor of Montgomery House, 654 Sacramento Street, San Francisco, at 12:00 Noon any working Monday.

ALASKA GEOLOGICAL SOCIETY

Newly elected officers for the 1965-1966 year are Don Laswell, Standard, president; Bud Marchetti, Schlumberger, vice-president; Jake Thomas, Atlantic, treasurer, and Ed East, Union, secretary. Many thanks to the outgoing officers, Bill Fackler, Joe Borden, Tom Wilson, and Marv Mangus, for a job well done. A movie on the Union Oil platform Eva, offshore California, will be featured at the October luncheon meeting.

CALENDAR

- | | |
|-------------|---|
| November 4 | LOS ANGELES, Thursday Noon, Rodger Young Auditorium, 963 West Washington Blvd., "Evaluation of Gas Reserves," by Charles Lakey, Mobil Oil Company. |
| November 8 | BAKERSFIELD, Monday evening, 7:30 P.M., Bakersfield College, Science and Engineering Bldg., Room 56, <u>Biostratigraphic Seminar</u> "Potassium - Argon Dating," by Mr. Donald Turner, University of California at Berkeley. |
| November 9 | LOS ANGELES, Tuesday Noon, University of Southern California, Bldg. GB, Room 102, 857 West 37th Street, "Sedimentological Studies, Malpeque Bay, Prince Edward Island, Maritime Provinces, Canada," by Dale Buckley, Graduate Student in Geology. |
| November 16 | SEATTLE-TACOMA, Tuesday evening, "The Effect of Decrease in Porosity with Depth on Oil and Gas Reserves in Sandstone Reservoirs," by Dr. Gordon I. Atwater, AAPG Distinguished Lecturer. Meeting place to be announced. Contact Harold Billman, Union Oil, Olympia, or Jim Salveson, Standard, Seattle. |
| November 17 | OXNARD, Wednesday evening, 7:00 P.M. (social hour at 6:30), Colonial House, Coast Geological Society, "Economics -- The New Dimension in Geological Thinking," by Michel T. Halbouty, AAPG Distinguished Lecturer. |
| November 18 | LOS ANGELES, Thursday Noon, Rodger Young Auditorium, 963 West Washington Blvd., "Economics -- The New Dimension in Geological Thinking," by Michel T. Halbouty, AAPG Distinguished Lecturer. |
| November 18 | BAKERSFIELD, Thursday evening, El Tejon Hotel, social hour 5:30 P.M., dinner 6:30 P.M., <u>San Joaquin Geological Society</u> , "Economics -- The New Dimension in Geological Thinking," by Michel T. Halbouty, AAPG Distinguished Lecturer. |
| November 23 | LOS ANGELES, Tuesday Noon, University of Southern California, Bldg. GB, Room 102 857 West 37th Street, "Cretaceous Biostratigraphy of California," by Dr. Y. Takanayagi, University of Tohoku, Japan. |
| December 2 | LOS ANGELES, Thursday Noon, Rodger Young Auditorium, 963 West Washington Blvd., "Regional Paleontological Principles," W. Thomas Rothwell, Richfield. |

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PACIFIC PETROLEUM GEOLOGIST

Published monthly by the PACIFIC SECTION
American Association of Petroleum Geologists
Address communications to the Pacific Petroleum
Geologist, P.O. Box 17486, Foy Station, Los Angeles,
California 90017

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NEXT DEADLINE - NOVEMBER 14

- December 4 VENTURA, Saturday evening, Ventura Women's Center, Coast Geological Society Annual Dinner Dance.
- December 6 BAKERSFIELD, Monday evening, 7:30 P.M., Bakersfield College, Science and Engineering Bldg., Room 56, Biostratigraphic Seminar "Submarine Geology" by Dr. Robert Dill, U. S. Navy Electronics Lab.
- December 7 LOS ANGELES, Tuesday Noon, University of California, Bldg. GB, Room 102, 857 West 37th Street, "Shoreline Precambrian Carbonate Sediments in Southwest Alberta, Canada," by John Adshead, Graduate Student in Geology.
- December 13 LOS ANGELES, Monday evening, 7:00 P.M., Union Auditorium, 461 South Boylston Avenue, "The Province of Borehole Geometry as it Relates to Gravity," by Thane McCulloh, U.S.G.S.

December 14 LOS ANGELES, Tuesday Noon, Univ. of S. California, Bldg. GB, Room 102, 857 West 37th Street, "Radiometric Age of an Ash Bed in the Pico Formation, Ventura Basin, California," by Dr. R. S. Yeats, Shell Oil Company.

December 14 BAKERSFIELD, Tuesday evening, El Tejon Hotel, social hour 5:30 P.M., dinner 6:30 P.M., San Joaquin Geological Society, "The Profession of Geology - Fractionation, Erosion, Professional Responsibility, and the AIPG," by Henry H. (Hank) Neel, Consultant.

LOS ANGELES SEEKS ENGINEERING GEOLOGISTS

The City of Los Angeles is seeking specialists in engineering geology for its positions of Engineering Geologist and Assistant Engineering Geologist. The duties involve professional engineering geological investigations and studies in connection with the design and construction of tentative tracts, dams and reservoirs, tank sites, public buildings, streets and highways, tunnels, and other structures; collecting, classifying, and analyzing rock and soil samples, geological investigations, surveys and special reports pertaining to mineral deposits, water-bearing strata, landslides and other geologic hazards, and certain legal questions; and related work.

Assistant Engineering Geologist is the entrance-level position in geology. It requires a college degree in geology or engineering geology and pays a salary of \$677 to \$856 a month.

Engineering Geologist requires five years of professional experience in this field in addition to the above college graduation. The salary for these positions is \$914 to \$1,216 a month.

An open competitive examination for these positions will be held on Saturday, November 27, 1965, in Los Angeles, and will be given 60 percent weight toward appointment; an interview provides the remaining 40 percent weight. For the positions of Engineering Geologist, the Interdepartmental Promotional list will be used before the Open Competitive list. Applications and information may be obtained at Room 5, Los Angeles City Hall, or at City Hall Branches in San Pedro, Van Nuys, West Los Angeles, Westchester, and Venice. Application and \$1.00 filing fee must be received by Tuesday, November 16, 1965.

LOS ANGELES LUNCHEON MEETING

Mr. Michel T. Halbouty, a consulting geologist and petroleum engineer, independent operator and producer of Houston, Texas, a Distinguished Lecturer sponsored by The American Association of Petroleum Geologists, will address a meeting of the Pacific Section of the American Association of Petroleum Geologists on November 18, 1965. The meeting will be held at 12:00 Noon in the Rodger Young Auditorium at 936 West Washington Boulevard, Los Angeles, California. Mr. Halbouty will lecture on "Economics -- The New Dimension in Geological Thinking." Mr. Halbouty will be speaking before approximately 50 geological society and university groups over the United States and Canada between September 29 and December 15, 1965.

ZARELLA ADDRESSES LOS ANGELES DINNER MEETING

William M. Zarrella, Gulf Research, presented a very interesting talk entitled "Relationship of Organic Substances in Sediments to the Occurrence of Petroleum," under the auspices of the AAPG Distinguished Lecturer program at the October 18th meeting of the Geological Forum in Los Angeles. The same lecture was given in Bakersfield on October 19 for the San Joaquin Geological Society. An abstract of the talk appears below.

The program was scheduled, on a trial basis, as a dinner meeting with a social hour beforehand, and was held at the Rodger Young Auditorium. Price of the dinner was \$4.25. Attendance was at or above the usual level for Forum meetings when held as is customary at the Mobil or Union Auditoriums. If the idea of dinner meetings meets with a favorable response, they may be continued, on a regular or occasional basis.

ABSTRACT

An important facet of petroleum geochemistry is the study of the distribution and character of organic matter in rock systems. Developments in this field have resulted in new knowledge on the history of petroleum. The acquired knowledge can, in turn, be utilized in the search for petroleum. Three examples of research programs dealing with the character and distribution of dispersed and accumulated organic matter are illustrated to indicate the present and future potential of geochemistry in exploration. These examples are selected to outline the manner in which geochemistry may be applied in evaluating the petroleum potential of a region, in helping to outline attractive areas for exploration within the region, and in indicating the presence of an oil pool in a specific prospect.

A regional study of the Lower Cretaceous Mowry shale in Wyoming shows that the concentration of organic matter increases in the northeast - southwest direction. The areas of maximum concentration of organic components in the Mowry coincide with the major occurrences of Lower Cretaceous oil fields in this region. Similar observations of the relationship of the abundance of organic matter in fine-grained sediments to the occurrence of petroleum in adjacent reservoirs have been reported by A. B. Ronov, G. T. Philippi, and M. Louis. The patterns of concentration of organic matter in shales thus appear to reflect the areas of greater petroleum potential. The results also suggest that a portion of the petroleum generated in a source rock can be and is accumulated in close proximity to the locale of petroleum generation.

The chemical constitution of Lower Cretaceous crude oils from the Clearwater group on the eastern flank of the Alberta Basin and from the McMurray sands at Athabaska strongly indicates the correlation of these petroleum. An equivalent source, probably the Lower Cretaceous shales, is suggested. Major differences in composition have also been observed between the Lower Cretaceous crude oils and the Devonian reef petroleum in the basin. Crude oil correlation studies of this type suggest that petroleum accumulates in reservoirs close to the source beds, and that vertical migration is restricted, except possibly along open fractures in the rock system.

Low molecular weight hydrocarbons present in petroleum have been found to partition in the subsurface between the oil and water phases. The most soluble of these hydrocarbons, benzene, occurs in decreasing concentration in the brine with increasing distance from the oil pool. Evidence also exists for the migration of benzene several miles laterally, but vertical migration through overlying, fine-grained, competent rock is negligible.

These observations indicate the potential utility of hydrocarbon-in-brine measurements in predicting the presence of, and distance to, undiscovered petroleum accumulations. They also add further support to the view of restricted vertical migration of hydrocarbons.

In summary, it is clear from the composition, properties, and distribution of organic matter that oil pools do not occur randomly in the subsurface, but rather they occur in those parts of the geologic column where petroleum has been generated, where reservoir rocks are available, and where suitable trapping conditions exist. From considerations of the disposition of organic matter in a rock system, it should, therefore, be possible to determine which parts of the geological section are most likely to be productive and the amount of petroleum generated in a given rock unit. More directly, the types and amounts of hydrocarbons and their distribution in the subsurface can be used to evaluate the existence of undiscovered oil.

NORTHWEST GEOLOGICAL SOCIETY

On Wednesday evening, October 13, Dr. John V. Byrne of the Oceanography Department of Oregon State University spoke to the Northwest Geological Society on The Geology of Offshore Oregon. Dr. Byrne discussed the geomorphology of the offshore area and the results of bottom samples taken to date by O.S.U. in their studies of the marine geology off Oregon.

The guest speaker for the November meeting will be Dr. Gordon I. Atwater. Dr. Atwater is on the Distinguished Lecturer circuit and will speak on "The Effect of Decrease in Porosity with Depth on Oil and Gas Reserves in Sandstone Reservoirs." The November meeting will be held November 16, but as yet the meeting place is not determined. The Poodle Dog restaurant is unavailable that date, so members will be notified by mail as to the meeting place arrangements. Anyone not receiving a notice should contact Harold Billman of Union Oil Company in Olympia or Jim Salvesson of Standard Oil Company of California in Seattle for time and place details.

NEWS FROM U.S.C.

W. H. Easton, chairman of the Geology Department, spent eight weeks at Boulder, Colorado, where he participated in the second ESCP writing conference along with 43 other scientists. The revised edition of the high school earth science text, teacher's guide, and lab manual were prepared. Some time was devoted to touring about the Front Range, visiting many old mining camps such as Cripple Creek, Central City, Georgetown, and Gold Hill. Bill estimates that eight man-hours of gold panning netted about 25 cents worth of gold. At this rate, the gold pan will be paid for in 1971. Bill was elected Chairman of the Cordilleran Section of the GSA at the spring meeting in Fresno. He also is on the Council and Research Committee of the SEPM.

Construction of the new Stauffer Laboratories for graduate studies in physical geology is almost finished. The dedication probably will be in January. At the same time, our lecture halls in another new building nearby will be dedicated so that visitors to the lecture program series will no longer have to put up with the barracks. The marine sciences facility on Santa Catalina Island is under construction, so a convenient base with living quarters and labs will be available for research in marine geology and oceanography.

A new biosystematics institute will be developed which will involve more cooperative work among the S. C. biologists, S. C. paleontologists, and the staff of the Los Angeles County Museum.

There are about 27 undergraduate majors and about 50 graduate students this year.

During the summer months, Orville Bandy worked on research programs involved with developing more precise cross correlations in deep-sea stratigraphy and in evaluating methods of planktonic foraminiferal correlations. He attended the annual meeting of the American Society of Limnology and Oceanography in Washington, D. C., in June to report on foraminiferal studies of the Indian Ocean and also the results of a study of the relationship between ocean pollution and foraminifera. In September, he attended the INQUA Congress in Boulder, Colorado, to report on the Pleistocene of southern California and to participate in a symposium on deep-sea stratigraphy.

A joint study was commenced during the spring and summer with Dr. Kiyoshi Asano of Japan to investigate migration patterns of foraminifera between Asia and North America. Dr. Yokichi Takayanagi of Tohoku University is spending three months at U.S.C. this fall as one of the participants.

Nikolas Christensen spent most of the summer at Harvard University's Hoffman Laboratory. His research there ranged from measurements of the elasticity of rocks and minerals to thermal conductivity studies of feldspars. His trip to Harvard was preceded by the presentation of a paper at the 46th annual meeting of the American Geophysical Union. USC is currently launching a program in geophysics under the direction of Dr. Christensen.

Gregory A. Davis spent most of the summer completing structural field studies -- on thrust faulting in the Clark Mountains of the Mojave Desert with Clark Burchfiel, Rice University, and on thrust faulting and ultramafic intrusions in the Klamath Mountains of northern California. Greg was recently promoted to Associate Professor in the Department of Geology.

Donn S. Gorsline was busy with personal research work on sediments of Tanner Basin, on contract research of submarine canyons, and on the sediments of the Colorado Delta. He participated in the work on Geostudies for AGI in Boulder, Colorado, for a short time. He has been very busy with cruises of Velerio IV, diving at San Clemente Island, and in field work on the Colorado Delta. Donn is the SEPM Technical Program Chairman for the national AAPG-SEPM 1967 meetings in Los Angeles. He is also a member of the Research Committee of the SEPM and AAPG.

Dick Merriam divided his time during the summer among teaching summer geology courses on the U.S.C. campus, consulting in engineering geology, and in research on engineering properties of typical southern California commercial "granites." He has recently completed a short report on some structural features of Sonora.

During the summer, Dick Stone worked on a research grant from NASA and Texas Instruments of Dallas concerned with the selection of landing sites for Apollo, the first manned lunar landings. In conjunction with the work, he attended a conference in August at the Manned Spacecraft Center in Houston. Also, he taped a television series for CBS which is being shown this fall (6:30 A.M., MWF) entitled "The Earth and the Seas." Dick is also president of the Branner Club this year.

Vernon Taylor spent the summer doing field work in Arizona, Colorado, and New Mexico in connection with his studies of replacement processes.

It is planned to offer several courses in the evening during the spring semester. These will be stratigraphy, seminars in engineering geology, advanced structural geology, and lunar geology, and ground water. All are graduate level courses, except stratigraphy.

BIBLIOGRAPHY OF RECENT PUBLICATIONS

U. S. GEOLOGICAL SURVEY

Professional Paper 470: Geology and tungsten mineralization of the Bishop district, California, by P. C. Bateman, with a section on Gravity study of Owens Valley, by L. C. Pakiser and M. F. Kane, and a section on Seismic profile, by L. C. Pakiser. \$8.00

Geological Survey Research 1965, Chapter C \$2.00

Bulletin 1189: Geology and ground-water resources of the Pica area, Tarapaca Province, Chile, by R. J. Dingman and Carlos Galli O. \$1.25

Water Supply Paper 1667-D: Reduction and complexing of manganese by gallic acids, by J. D. Hem. \$0.20

Water Supply Paper 1696-C: Determination of uranium in natural waters, by F. B. Barker, J. O. Johnson, K. W. Edwards, and B. P. Robinson. \$0.15

Geophysical Abstracts 224, September, 1965, by J. W. Clarke, D. B. Vitaliano, V. S. Neuschel, and others. \$0.35

Circular 510: Index of surface-water records to December 31, 1963, Part 10. The Great Basin, by H. P. Eisenhuth. 35 p. (Supersedes Circular 390). Free

Circular 511: Index of surface-water records to December 31, 1963 -- Part 11: Pacific slope basins in California, by H. P. Eisenhuth. 50 pages. (Supersedes Circular 391.) Free

MAPS

GP 512: Aeromagnetic map of the Sarcobatus Flat area, Esmeralda & Nye Counties, Nevada, by P. W. Philbin and B. L. White, Jr. \$0.50

GP 513: Aeromagnetic map of the Wheelbarrow Peak quadrangle, Nye and Lincoln Counties, Nevada, by P. W. Philbin and B. L. White, Jr. \$0.50

GP 514: Aeromagnetic map of the Belted Peak quadrangle and part of the White Blotch Springs quadrangle, Nye County, Nevada, by P. W. Philbin and B. L. White, Jr. \$0.50

Map I-445: Permafrost map of Alaska, compiled by O. J. Ferrians, Jr. \$1.00

Map I-453: Map of eastern Prince William Sound area, Alaska, showing fracture traces inferred from aerial photographs, by W. H. Condon. \$0.50

Map MF-298: Preliminary geologic map of Esmeralda County, Nevada, by J. P. Albers and J. H. Stewart. \$0.50

OPEN FILED REPORTS (Inspection only)

Approximate location of fault traces and historic surface ruptures within the Hayward fault zone between San Pablo and Warm Springs, California, by Dorothy H. Radbruch. Map with text, scale 1:62,500 (one sheet).

Geologic map of the San Francisco South quadrangle, California, by M. G. Bonilla.

Tectonic deformation, subaqueous slides, and destructive waves associated with the Alaskan March 27, 1964, earthquake: an interim geologic evaluation, by George Plafker and L. R. Mayo. 32 pages, 19 figures.

CALIFORNIA DIVISION OF MINES AND GEOLOGY (Mail orders to Ferry Building, San Francisco, California)

"Legal guide for California prospectors and miners," Revised edition, 1962 (Second Printing, 1965) \$1.00

Special Report 75: Exploration and development of geothermal power in California, by James R. McNitt. 1963 (Second Printing, 1965) \$1.00

U. S. BUREAU OF MINES (Distribution Section, 4800 Forbes Street, Pittsburgh, Pennsylvania)

Report of Investigations 6668: Flotation of California mica ore, by James S. Browning and Paul E. Bennett. Free

Report of Investigations 6688: Removal of water blocks from gas-producing formations, by J. L. Eakin, J. S. Miller and W. E. Eckard. Free

GEOLOGICAL SURVEY OF CANADA (Queens Printer, Ottawa)

Index to reports of Geological Survey of Canada from 1951-1959. Published in 1965. \$10.00

RESEARCH COUNCIL OF ALBERTA, Edmonton, Alberta, Canada

Preliminary Report 65-3: Athabasca oil sand bibliography (1789-1964) by M. A. Carrigy. 1965. \$0.75

AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS BULLETIN vol. 49, no. 5, May, 1965

Pliocene seaknoll at South Mountain, Ventura Basin, California, by Robert S. Yeats.

Biotitized graptolites from Northeastern Nevada, by Charles H. Thorman.

AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS BULLETIN vol. 49, no. 6, June, 1965

Exploratory drilling in 1964, by E. L. Dillon and Leo R. Newfarmer.

Developments in West Coast area in 1964, by E. C. Doell.

Developments in Alaska in 1964, by Robin A. Saunders.

AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS BULLETIN vol. 49, no. 7, July 1965

Basement -- not the bottom but the beginning, by Peter T. Flawn.

Genetic and geometric relations between structures in basement and overlying sedimentary rocks, with examples from Colorado Plateau and Wyoming, by Robert A. Hodgson.

AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS BULLETIN vol. 49, no. 8, August, 1965

1964 developments in foreign fields (including Mexico and Southwest Pacific).

AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS BULLETIN vol. 49, no. 9, September, 1965

Characteristics of continental shelves and slopes, by K. O. Emery.

Paleocene -- A micropaleontologists's point of view, by W. A. Berggren.

Observations on Marine Lower Jurassic stratigraphy of North America, with special reference to United States, by A. Hallam.

Quantitative determination of reservoir pressures from conductivity log, by J. R. MacGregor.

Type section of Naturita Formation, by Robert G. Young.

SCIENCE, vol. 149, no. 3685, August 13, 1965

Organic Pigments: Their long-term fate. (Fossil pigments provide evidence of modification of chemical structure under geological conditions.) by Max Blumer.

Pliocene-Pleistocene boundary, Northern Gulf of Mexico, by W. H. Akers.

Subbottom profile of abyssal sediments in the Central Equatorial Pacific by G. Ross Heath and Theodore C. Moore, Jr.

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Radioactivity of the Columbia River effluent, by M. Grant Gross, Clifford A. Barnes, and Gordon K. Riel.

Liquid waves by computer, by Francis H. Harlow, John P. Shannon, and J. Eddie Welch.

SCIENCE, vol. 149, no. 3689, September 10, 1965

Mariner IV measurements near Mars: Initial results, by Hugh R. Anderson.

SCIENCE, vol. 149, no. 3690, September 17, 1965

Electron microscopy of fossil bacteria two billion years old, by J. William Schopf, Elso S. Barghoorn, Morton D. Maser, and Robert O. Gordon.

Solar distillation of water from soil and plant materials: A simple desert survival technique, by Ray D. Jackson and C. H. M. van Bavel.

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Terrestrial heat flow: Measurement in lake bottoms, by S. R. Hart and J. S. Steinhart.

Chert: Modern inorganic deposition in a carbonate-precipitating locality, by M. N. A. Peterson and C. C. Von Der Borch.

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Recurrent groups of bonded species in mixed death assemblages, by James W. Valentine and Bob Mallory.

Debris-covered hillslopes of the Southern Arizona desert -- consideration of their stability and sediment contribution, by Mark A. Melton.

ECONOMIC GEOLOGY, vol. 60, no. 2, March-April, 1965

The future of coal production in the Rocky Mountain Region, by Paul Averitt.

ECONOMIC GEOLOGY, vol. 60, no. 3, May, 1965

Genesis of bedded phosphates, by M. I. Youssef.

ECONOMIC GEOLOGY, vol. 60, no. 4, June-July, 1965

Exploration for phosphorite in Turkey, by A. J. G. Notholt.

ECONOMIC GEOLOGY, vol. 60, no. 6, September-October, 1965

Recently discovered beryllium deposits near Gold Hill, Utah, by Wallace R. Griffiths.

THE AMERICAN MINERALOGIST, vol. 50, no. 7 & 8, July-August, 1965

Basic regional metamorphic rocks in part of the Klamath Mountains, northern California, by M. J. Holdaway.

JOURNAL OF GEOPHYSICAL RESEARCH, vol. 70, no. 16, August 15, 1965

Experimental deformation of serpentinite and its tectonic implications, by C. B. Raleigh and M. S. Paterson.

Comparison of Th^{230} and C^{14} ages for carbonate materials from Lakes Lahontan and Bonneville, by Aaron Kaufman and Wallace Broecker.

JOURNAL OF GEOPHYSICAL RESEARCH, vol. 70, no. 18, September 15, 1965

Mesozoic-Cenozoic tectonic history of the southwestern Oregon Coast in relation to Cordilleran orogenesis, by R. H. Dott, Jr.

Upper mantle structure of western North America from apparent velocities of P waves, by Mansour Niazi and Don L. Anderson.

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 76, no. 8 August, 1965

Mineral paragenesis in Franciscan metamorphic rocks, Panoche Pass, California, by W. G. Ernst.

Structure, metamorphism, and plutonism in the south-central Klamath Mountains, California, by Gregory A. Davis, M. J. Holdaway, Peter W. Lipman, and W. D. Roney.

Gravity folds in the Modelo Formation, western Los Angeles County, California, by Martin L. Stout.

Preliminary measurements of the anisotropy of magnetic susceptibility of the Franciscan formation of central California, by A. I. Rees.

OFFSHORE, vol. 24, no. 3, September, 1965

Esso hits again off Australia, in Bass Strait.

Pan Am big producer in Cook Inlet.

Union, Shell drill off Oregon.

PETROLEUM MANAGEMENT, vol. 37, no. 10, September, 1965

TOSCO gets set.

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Geologic exploration from orbital altitudes, by Peter C. Badgley, William Fischer, and Ronald J. P. Lyon.

Medical geology, by Harry V. Warren and Robert E. Delavault.

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Relation of Carbon 14 concentration to saline water contamination of coastal aquifers, by Bruce B. Hanshaw, William Back, Meyer Rubin, and Robert L. Wait.

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A guidebook to the Sunset Ranges of Southern California, by R. Leadabrand, Ward-Ritchie Press, Los Angeles, 1965. \$1.95

Geology of a portion of the Berkeley and San Leandro Hills, California, by J. E. Case. Ph.D. Thesis, University of California Berkeley. (Microfilm copies: Ann Arbor, Michigan, University Microfilms.)

Salt deposits, the origin, metamorphism and deformation of evaporites, by Hermann Borchert and Richard O. Muir. pp. 338, figs. 49. D. Van Nostrand Co., Ltd., New York, 1964. \$12.50

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OIL AND GAS JOURNAL, vol. 63, no. 38, September 20, 1965

Atlas of natural gas pipelines of the United States and Canada.

Betsy batters Louisiana oil patch, by Howard M. Wilson

OIL AND GAS JOURNAL, vol. 63, no. 39, September 27, 1965

Ultradeep Pacific leases will strain offshore technology.

Australian Government eyes role in oil.

California offshore up for bids.

OIL AND GAS JOURNAL, vol. 63, no. 40, October 4, 1965

Oil's fourth quarter outlook: bullish, by W. A. Bachman.

U. S. petroleum demand: a 16-year boom.

OIL AND GAS JOURNAL, vol. 63, no. 41, October 11, 1965

Annual Drilling Number.

Computers invade the rig floor, by O. E. Mechem and Hal B. Fullerton, Jr.

Modernistic "office building" houses rig in Los Angeles.

PERSONAL ITEMS

Pacific Section members, SPENCER FINE, HENRY NEEL, ROBERT PASCHALL, ARTHUR SPAULDING, STANLEY TOTTON, and MARTIN VAN COUVERING were noted engaged in solemn conversation at the Denver convention of the American Institute of Professional Geologists. During the convention, Bob gave a talk on "The Politics of Registration," Art was named to A.I.P.G.'s national Advisory Board and Martin was the recipient of a unanimous resolution and a certificate commending him for his services to the profession of geology.

The blasting heard on the east side of the Washington Cascades on October 16 and 17 was caused in large part by four members of Standard's Seattle office. JOHN GALLOWAY, JACK RICHGELS, RAY JOHNSON, and REG HARRIS were taking advantage of the opening day of hunting season to unlimber their shotguns at the local pheasant and duck population.

MARSHALL HUNTING and WELDON RAU of the State of Washington Geology Department spent their vacation in a fish camp in the wilds of western Canada this summer. Apparently, 3- and 4-pound trout could literally be hauled out at will. It must be a great place as this is their third vacation spent at this spot.

DICK DAWE, formerly Draftsman for Superior is soliciting geological drafting of all types for his new Company at Bakersfield Drafting Services located at 514 Chester Avenue, Telephone: 324-3737.

Kewanee Oil Company is opening offices at Office E, 214 Bernard Street, Bakersfield. JOHN M. OUZTS is the company representative.

GAR PESSEL, Richfield, and Janet Gibbon were married in Anchorage October 9. Congratulations to the newlyweds.

With the first snowfall of the season, BOB SNOW, Schlumberger's Alaska manager, wangled a transfer to Long Beach, effective November 1. Pretty dastardly from this angle. Bob's able replacement will be BUD MARCHETTI, an Anchorage resident for over a year now.

MICHAEL LEKAS has joined the ranks of Bay Area geologists. Mike is geologist for AEC and is working particularly on possible applications of nuclear explosions in mineral resources development. He hopes shortly to work out a test explosion in the oil shale near Rifle, Colorado. His office is in the Atomic Energy Commission building on Bancroft Way in Berkeley. A native of Oakland, he is at home again.

KERO TV, Bakersfield, again offered beer, peanuts and atmosphere for the World Series. Drawings for T.V. sets were held each day. WAYNE ESTILL and DAVE MASTERMANN both won T.V. sets, even though they had to root for the team they opposed on the days they won.

DICK ATCHISON, Marathon, Bakersfield, is the fighting Chairman of the Booster's Club of Bakersfield High. He is clamoring for more money for the Athletic Department.

David Minche, son of BARNEY MINCHE, Union, Bakersfield, is one of the students at the new University Campus at Irvine. He has been elected President of his Apartment Complex and reports that studies are tough, bicycles are transportation and University life is pleasing.

CHARLIE FOSS, Tidewater, has been transferred from Durango to Bakersfield.

The Bakersfield Petroleum Wives held a very successful Beatnik Party at Veteran's Memorial Hall on October 9. The decorations were superb and a couple of the soliloquies were excellent, but too long. We can't mention any names here.

JOE DUNWOODY and STU SMITH packed into the high Sierras and lived off the land for a week. They walked in and rode out. Saddle sores are as painful as foot sores, so they report.

NURSERY NEWS

On October 12, LEO HORN of Standard in Seattle passed out cigars announcing the arrival that day of Heather Ann Horn. Heather Ann is reported to have weighed in at 6 lbs. 1 oz. with lovely red hair.

MARY and ERNIE K. ESPENSCHIED, Standard, Bakersfield, third child, first son, Eric Kurt, born on September 21, 1965, weight 7 lbs. 11 oz.

NANCY and L. J. (JIM) PARKINSON, Standard, Bakersfield, third child, third daughter, Susan Alice, born on October 4, 1965, weight 6 lbs. 11 oz.

CHANGES OF ADDRESS

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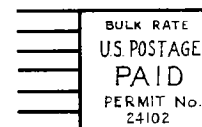
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PACIFIC PETROLEUM GEOLOGIST
PACIFIC SECTION. A.A.P.G.
P.O. BOX 17486. FOY STATION
LOS ANGELES 17. CALIFORNIA

Volume 19

Number 11

Return Requested



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DA

PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 19

December, 1965

Number 12

ASSOCIATION ACTIVITIES

CONSTITUTIONAL REVISION TO BE VOTED ON

Review and revision of the Constitution of the Pacific Section, A.A.P.G., has been a major objective of this year's Executive Committee. The need for certain revisions was set forth by President P. W. Gester and reaffirmed by his successor, E. R. Orwig, who appointed T. A. Baldwin as Chairman of the Constitutional Review Committee. Baldwin presented the Committee's report, including a draft of the revised Constitution, at the November 10 meeting of the Executive Committee. By unanimous vote of the Executive Committee, the revised Constitution will be submitted to the membership for approval by mail ballot. The Committee's report and the recommended revised Constitution follow:

The Pacific Section Constitutional Review Committee has completed a long term study of our constitution and recommends to the membership the various changes embodied in the accompanying revised constitution.

These amendments fall into two classifications:

- (1) Primary changes essential to bring our constitution into line with the changing nature of our organization and predictable changes in our profession.
- (2) Secondary changes required by the interrelationship of other constitutional clauses with those in which primary changes are recommended. The reasons for secondary changes are considered self-evident and will not be reviewed here.

Primary Changes

Article III, Section III

Spells out the position of our nonmember subscribers and protects their right to full participation (other than voting or holding office). This change falls in line with the national effort to up-grade the profession.

Article IV, Section I

These changes are partly reworded to correct a clause outdated by the adoption of election through mail ballot in recent years. Other changes in this paragraph spell out in detail the succession to office should any officer be unable to fill his term due to death, illness or transfer outside the Pacific area. Transfers in particular will probably be an increasing headache. This year's Executive Committee found the constitution provided no guide-lines when President Gester was transferred to New Orleans. The amendments formalize our traditional methods of handling such emergencies.

Article IV, Section II

In recent years we have broadened the base of Pacific Section participation by electing or appointing officers and committeemen from the Bakersfield, San Francisco,

LONG BEACH CONVENTION TO STRESS ACTIVE AREAS

The Pacific Section AAPG-SEG-SEPM 1966 Annual Meeting, to be held March 24-25, 1966, at the Long Beach Auditorium and LaFayette Hotel in Long Beach, will feature a number of papers on areas of current competitive activity. Already announced are papers on:

Middle Ground Shoal - Cook Inlet
Offshore Huntington Beach Structure
Los Angeles Basin Exploration

The exhibits and many other papers will emphasize the theme, "Offshore Oil."

CALENDAR

- | | |
|-------------------|--|
| December 13, 1965 | LOS ANGELES, Monday evening, 6:00 P.M., Rodger Young Auditorium, 936 West Washington Boulevard, <u>Evening Dinner Meeting</u> , "Precise Borehole Gravimetry in Petroleum Exploration and Exploitation," by Dr. Thane McCulloh, U.S.G.S. |
| December 14, 1965 | LOS ANGELES, Tuesday noon, University of Southern California, Building GB, Room 102, 857 West 37th Street, "Radiometric Age of an Ash Bed in the Pico Formation, Ventura Basin, California," by Dr. R. S. Yeats, Shell Oil Company. |
| December 14, 1965 | BAKERSFIELD, Tuesday evening, El Tejon Hotel, Social Hour 5:30 P.M., dinner 6:30 P.M., <u>San Joaquin Geological Society</u> , "The Profession of Geology - Fractionation, Erosion, Professional Responsibility, and the AIPG," by Henry H. (Hank) Neel, Consultant. |
| December 15, 1965 | BERKELEY, Wednesday, 4:00 P.M., University of California, 141 Earth Sciences Building, "Remote Determinations of Chemical and Mineralogical Composition of Terrane," by Ron Lyons, Department of Geophysics, Stanford University. |
| January 4, 1966 | LOS ANGELES, Tuesday noon, University of Southern California, Building GB, Room 102, 857 West 37th Street, "The Engineering Geologist and Hillside Problems," by Mr. Mel Bliss, Chief Grading Inspector, City of Los Angeles. |

EXECUTIVE COMMITTEE, PACIFIC SECTION
AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

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Otto Hackel	Vice-President
David C. Callaway	Secretary
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Spencer F. Fine	Past President
Edward A. Hall	Coast Representative
William F. Edmondson	San Joaquin Representative

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Dean L. Morgridge	Alaska
Dana B. Braislin	Northwest
Gordon B. Oakeshott	Northern California

PACIFIC PETROLEUM GEOLOGIST

Published monthly by the PACIFIC SECTION
American Association of Petroleum Geologists
Address communications to the Pacific Petroleum
Geologist, P.O. Box 17486, Foy Station, Los Angeles,
California 90017

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Coast	Bruce A. Black
Los Angeles	Bill Reed
Northwest	Jim Salvesson
Sacramento	Lowell Garrison
San Francisco	Gordon Oakeshott
San Joaquin	Chester H. Rudel
Membership Secretary	Pat Metcalf

NEXT DEADLINE - DECEMBER 17

January 5, 1966

BERKELEY, Wednesday, 4:00 P.M.,
University of California, 141 Earth
Sciences Building, "Salt Diapirism:
The Importance of Temperature and
Energy Source of Emplacement," by
William C. Gussow, Research Center,
Union Oil Company, Brea, California.

January 6, 1966

SEATTLE-TACOMA, Thursday evening,
7:00 P.M. (Social Hour at 6:00),
Poodle Dog Restaurant, Fife,
Washington, Northwest Geological
Society, "The Cobb Seamount" (off
the Washington coast), by Walter
Sands, Lecturer and Senior
Oceanographer, University of
Washington.

January 10, 1966

BAKERSFIELD, Monday evening,
7:30 P.M., Bakersfield College,
Science and Engineering Building,
Room 56, Biostratigraphic Seminar,
"Miocene Planktonics," by Mr. J. H.
Lipps, University of California,
Los Angeles.

January 11, 1966

BAKERSFIELD, Tuesday evening,
6:30 P.M., El Tejon Hotel, San
Joaquin Geological Society, "Lunar
Geology and the Ranger Pictures,"
by Mr. Nerval J. Trask, U.S.G.S.,
Menlo Park.

January 11, 1966

LOS ANGELES, Tuesday noon,
University of Southern California,
Building GB, Room 102, 857 West
37th Street, "Geological Problems
in New Zealand," by Dr. J. P.
Kennett, University of Wellington,
New Zealand.

January 12, 1966

BERKELEY, Wednesday, 4:00 P.M.,
University of California, 141 Earth
Sciences Building, "Earth Tides,"
by Hitoshi Takeuchi, Geophysical
Institute, University of Tokyo

ALASKA GEOLOGICAL SOCIETY

The November luncheon meeting was highlighted by a talk
given by Donald H. Richter, State of Alaska mining
geologist, on "Drilling in the Kilauea-Iki Lava Area."
Don gave a colorful slide-illustrated paper on what is
probably a first for the geologic profession, drilling
into an above-the-ground magma chamber formed by the
crusting over of a lava lake following the eruption of
Kilauea-Iki on the island of Hawaii in 1959.

At the time of the eruption, Don was a member of the
USGS volcanology team stationed in the Hawaiian Islands.
Within three months after the eruption of Kilauea-Iki,
the hearty group of scientists was probing away with
primitive equipment to learn the secrets of a cooling
magma chamber. Much valuable first hand information on
the crystallization of basalt was derived from this
investigation.

SAN JOAQUIN SOCIETY PUBLISHES

Selected Papers, Volume #3 of the San Joaquin Geological
Society are off the press. Papers included are:

"San Andreas: Predominant Lateral or Vertical
Displacement?" by Gordon B. Oakeshott.

"The 29-D-Monarch and 10-10 Pool: A Sleeper in
the Old Midway-Sunset Field," by Darrell C. Gallear
and James O. Kistler.

"The Meganos Gorge" by Wm. F. Edmondson.

"Blue Sky Laws and the Geologist" by Walter L. Rouse.

Quoted price for Volume #3 is \$2.25, including mailing
charges.

Volumes #1 and #2 are also available, and the total price
for all three is \$6.00, including mailing charges. Order
your copies from San Joaquin Geological Society,
P. O. Box 1056, Bakersfield, California.

CONSTITUTION- Continued from Page 1

Sacramento, Long Beach, and Alaskan areas. Our 1965 convention in Bakersfield was a great success due largely to the efforts of members who in years past could hardly have participated in Pacific Section affairs. It is proper, therefore, that representation on the Executive Committee be granted to the areas where the new work loads are being assumed. The paragraph as amended gives the Executive Committee authority to grant such representation to local societies whenever desirable, and will avoid the necessity of a constitutional amendment every time a new geologic community wishes representation.

Article V, Section I

This paragraph as amended spells out the fiscal responsibility of the Executive Committee and restricts the Executive Committee from increasing dues. The right to assess dues is retained by the membership gathered at the annual business meeting. The present Executive Committee does not intend to request any increase of dues at the annual meeting of 1966 but will present a financial report to the members at that time. The suggested procedure is somewhat parallel to good corporate practice and conforms with our articles of incorporation, while protecting the interests of our members.

Article VII, Section I

These clauses allow additional time in our nominating and election procedures so that ballots from Alaska, etc., may be returned and counted. A method of assuring two candidates for each office is specified to avoid repetition of this year's confusion when a presidential candidate announced his transfer on election eve.

Article VII, Section III

The present method of constitutional amendment by voice vote is a hangover from the days when the Pacific Section was a tightly knit group in the Los Angeles Area. The revision, to amendment by a mail ballot two-thirds vote, is a democratic change that is long overdue. Members should be aware, however, that this change, if adopted, will make future amendments difficult and costly. For this reason our President, Bob Orwig, has recognized that the entire constitution should be reviewed and revised to avoid future changes as far as possible.

The Constitutional Review Committee (listed below) recommends that the various amendments be approved by the membership:

Tom Baldwin (Chairman - Past President)
W. F. Edmondson (S.J.G.S. - Representative)
Spence Fine (Past President)
R. B. Haines (Past President)
R. L. Hester (Past Treasurer)
J. L. Kilkenny (Past President)
E. R. Orwig (President)
I. T. Schwade (Past President)
J. D. Traxler (Past Treasurer)

Amendments recommended are indicated as follows:

Deletions (lined through)

Additions (underlined)

CONSTITUTION
OF THE
PACIFIC SECTION
AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

ARTICLE I

Name

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

ARTICLE II

Object

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

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

ARTICLE III

Membership

Sec. 1 ~~A Any member, in any classification, associate-or-junior~~ of The American Association of Petroleum Geologists in good standing shall be eligible ~~to~~ for membership in this Section.

Sec. 2 Annual payment of the ~~annual~~ dues of this Section by any person qualified ~~as-in-Section-1~~ above shall be ~~deemed-to-be~~ a declaration of Active membership in this Section. ~~and-shall-be-known-as-an~~ Active-member.

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

Sec. 3 Other persons not members of The American Association of Petroleum Geologists who are interested in the activities of this Section, ~~upon payment of annual dues and subject to their acceptance by the Executive Committee may become subscribers~~ may subscribe to the publication of the Section "Pacific Petroleum Geologist" subject to the approval of the Executive Committee. Non-member subscribers shall not have the right to vote or hold office but may otherwise participate in all the activities of this Section.

ARTICLE IV

Officers

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

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

~~selected by such other Cooperating geological societies (including the Coast Geological Society and the San Joaquin Geological Society) as are at any time approved by the then existing Executive Committee, one member selected by the San Joaquin Geological Society and one member selected by the Coast Geological Society.~~

ARTICLE V

Funds

Sec. 1 ~~The dues of this Section shall be \$3.50 per year, due and payable in advance. The Executive Committee shall review the financial position of the Section and have a current financial statement available at each annual business meeting. Annual dues of the Section shall be payable in advance in an amount established by the membership at the annual business meeting. The Executive Committee shall not have authority to levy assessments against the membership and shall not have the authority to increase annual dues.~~

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

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

ARTICLE VI

Meetings

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

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

ARTICLE VII

Elections

Sec. 1 The President of the Pacific Section of The American Association of Petroleum Geologists, with the approval of the Executive Committee, shall appoint a nominating committee at least three months prior to the Business Meeting of the Pacific Section, consisting of five (5) members, two (2) of whom shall be past officers of the Pacific Section. The nominating committee shall select two (2) candidates for each of the following offices: (1) President, (2) Vice-President, (3) Secretary, and (4) Treasurer. The slate of candidates shall be announced in the Pacific Petroleum Geologist at least five weeks ~~one month~~ prior to the election. Additional nominations may be made by a written petition of twenty-five or more members of the Pacific Section in good standing, received by the Secretary within two weeks following the publication of the nominating committee slate of candidates. The Executive Committee shall have the authority to name an additional nominee, in case of necessity, to assure two candidates for each office. Voting shall be by mailed ballot. The Secretary shall set a date for counting ballots and shall mail ballots to all members not less than three ~~two~~ weeks prior to this date.

Sec. 2

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

Sec. 3

~~This Constitution may be amended by two-thirds vote of all members present and voting at any Business Meeting which has been announced in the Pacific Petroleum Geologist two months in advance or by mail ballot and in the event of the latter, two-thirds count of the ballots returned within ten days following their mailing to the membership.~~

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

Voting members of the Pacific Section will receive post-card ballots similar to the sample below. The revised constitution above will be your only reference -- save it.

DO NOT MAIL THE BALLOT BELOW

<u>BALLOT</u>	
<u>REVISION OF CONSTITUTION</u>	
PACIFIC SECTION, A.A.P.G.	
With reference to adoption of the revised Constitution of the Pacific Section, American Association of Petroleum Geologists, as published in the Pacific Petroleum Geologist, volume 19, number 12 (December, 1965), I	
<u>SAMPLE</u>	<div style="display: flex; justify-content: space-around;"> <div> <p>Approve</p> <p>Disapprove</p> </div> <div> <p><u>SAMPLE ONLY</u></p> </div> </div>
(SAMPLE BALLOT -- DO NOT MAIL)	

A.I.P.G. ANNOUNCES NEW OFFICERS

The following are new officers of the A.I.P.G., California Section:

H. H. Neel, President
Wesley G. Bruer, First Vice President
John F. Mann, Second Vice President
Clifton H. Gray, Secretary-Treasurer

Area Representatives:

Richard L. Threet - San Diego
J. Douglas Traxler - Los Angeles
John F. Curran - Coast
John E. Clare - San Joaquin
Charles M. Cross - San Francisco
Robert H. Paschall - Sacramento

National Advisory Board Delegate:

Arthur O. Spaulding

MEMORIALSDOWNS McCLOSKEY

Downs McCloskey, General Manager of the Pacific Coast Division of Amerada Petroleum Corporation, died in Pasadena on November 7, 1965. McCloskey graduated in 1918 from Stanford, where he won his block S in crew and belonged to Delta Upsilon fraternity. He worked for Associated Oil from 1920 to 1928, for General Petroleum from 1929 to 1932, and for Amerada since 1932. He had been a Director of the Western Oil and Gas Association, and was a member of the AAPG, AIMME, SEG, and API. He is survived by his wife, two sons, three grandchildren, and two sisters.

ROBERT L. RIST

Northern California Geological Society and Pacific Section friends of Robert L. Rist were saddened by his death on Friday, November 26. Early in the month he had had a serious stroke.

Bob was a member of SEG and had been an active member of AAPG since 1947. He was a most helpful member of Charlie Cross' Technical Services Committee for the National AAPG Convention in San Francisco in 1962. Only a month or so ago he acted as Chairman of the Nominating Committee for NCGS and succeeded in placing in nomination a fine slate of officers.

Bob got his A.B. in geology at the University of Redlands in 1935 and also did some graduate work at the University of California. He had been geologist with Monterey and Standard of California and, for the past several years, for Porter Sesnon in San Francisco. He lived in the city.

He is survived by his wife, Maryjo; mother, Mrs. Bernice Rist, Glendale; sisters, Mrs. William Hudson and Mrs. Hollis McBride; and son, Gregg Hazle.

LEW SUVERKROP

Lew Suverkrop, a well known geologist and petroleum engineer of Bakersfield, died on October 18 at the age of 70. He was a graduate of the Michigan College of Mines. His first job after graduation was with the Armed Forces in World War I. He was wounded in the battle of St. Mihiel and returned with the rank of Captain.

He spent the next several years at a mine in Peru and then came to California with the U. S. Geological Survey. He soon switched to the California Mining Bureau and came to Taft in the year 1924. After about a year he resigned to become a consulting geologist and engineer, mostly concerned with underground conditions in the Taft-Maricopa area. This is a region of overlapping beds with lithologic variations within short distances, so considerable ingenuity was required to come up with the right answers. During this work he managed to buy a small property near Maricopa which had good production for a number of years.

In 1932, he moved to Bakersfield, where he remained for the rest of his life. As a sideline, and later as his principal occupation, he worked on the development of a number of new instruments. Among them was a pocket sized transit of particular use to geologists. When his friends headed for the golf course to spend their spare time, he headed for the small machine shop in his back yard. In this work his idea was that it was more interesting to develop a better mousetrap that worked, than to spend time on a lunar projectile that would accomplish little even if it got there.

He is survived by his wife, Elizabeth, a daughter, two sons, and eight grandchildren.

-Walter A. English-

AAPG-SEPM FALL FIELD TRIP HELD

The annual field trip of the AAPG-SEPM Pacific Coast Section was held under the auspices of the Coast Geological Society, October 15-16, in the Santa Barbara area.

Friday evening, October 15, over 200 geologists gathered for a dinner meeting in the Miramar Convention Center, Montecito, which was addressed by three men with many years' experience unravelling the geological complexities of the western Santa Ynez Range. Tom Dibblee of the U.S.G.S., Menlo Park, described the range's structure; Don Weaver of U.C., Santa Barbara, the paleontology, stratigraphy, and east-west facies changes; and Bill Corey, consultant, the paleogeography of the early Tertiary period.

Saturday morning, the field trip began at Gaviota State Beach Park, where there are brea tar sand lenses at the Monterey/Sisquoc contact with an appropriate view of drilling platforms offshore, and proceeded as a car caravan across Hollister Ranch. Leaving the cars, the group climbed the Agua Canyon/Santa Anita Canyon divide, which furnishes a splendid panorama of the Eocene through lower Miocene section of the Santa Ynez foothills and of the facies changes occurring along the strike. All current topo maps of the area were rendered obsolete by the earth-moving activities of paleontologists gathering sample material and of stratigraphers searching for evidence of pet theories of sediment environment and origin.

After lunch at Gaviota Beach, where those sitting on the berm played that hilarious game, "I'll bet the rising tide gets your feet wet and leaves mine dry," the car caravan proceeded over Gaviota Pass to Solvang and then south over Refugio Pass, gaining spectacular views of the early Tertiary section at stops along both routes. The excursion terminated at the Rancho Dos Pueblos Beach with its superb Monterey formation cliffs, where there was a tasty steak barbecue and a sunset John Wayne would have been proud to ride away into.

Announcement card returns for the field trip included one from Dale H. Dooley, who wrote, "I truly regret that I cannot attend." The envelope was post-marked Casablanca, Morocco.

NORTHERN CALIFORNIA GEOLOGICAL SOCIETY

The Northern California Geological Society Nominating Committee, comprised of William Barbat, Standard Oil; Gordon Oakeshott, State Division of Mines and Geology; and Robert Rist of Porter Sesnon, the latter as chairman, has unanimously nominated the following slate for NCGS officers for 1966:

President: Frederic R. Kelley
State Division of Mines and Geology

Vice-President: James W. Higgins
Standard Oil of Calif., San Francisco

Secretary-Treasurer: Joseph K. Morford
Dow Chemical Company

For the upcoming vacancy, 1966-1967, for the Northern California Representative to the National AAPG: Willard J. Classen and Charles M. Cross are the nominees. Only in the case of the two latter is there any contest. We, therefore, fully anticipate the election of Fred, Jim, and Joe as our officers for the coming year.

Members and their wives of the Northern California Geological Society enjoyed a social and technical evening on Friday, November 12, at the Montgomery House in

San Francisco. Landmen and scouts of the area were invited to meet with the group.

After-dinner speaker was George Plafker of the U. S. Geological Survey, research geologist working primarily in Alaska for the past several years. George gave an informative and entertaining talk on "Tectonic deformation associated with the Alaska earthquake of Good Friday, March 27, 1964," illustrated by beautiful colored slides and diagrams.

Since publication, a few weeks after the earthquake, of Geologic Survey Circular 491, a great deal of the vast area affected by uplift and depression has been surveyed to give quantitative data. George discussed and interpreted this data with the use of photos showing the striking evidences of tectonic uplift and subsidence along the shorelines of Prince William Sound and the tremendous vertical fault displacements on Montague Island.

At a recent Northern California Geological Society meeting held in San Francisco, members and guests heard four reports, mostly on the continuing war on earthquakes.

Elmo Adams, geological consultant, told of the current use being made of the NCGS "Geologic Hazards Committee" report by various municipal planning agencies.

Charlie Cross, consulting geologist, discussed a consulting firm's report on Redwood City's "Redwood Shores" project, a potential billion dollar housing venture. The report, Charlie says, is outstanding because of its completeness and quantitative analysis, as well as its relatively low cost. And, it almost promises a major earthquake before all the buildings fall down of their own accord.

Joe Morford, Dow Chemical, informed the group on the McAteer-Petris ("Save-the-Bay") Act and its creation of a commission composed of municipal, County, State, and Federal members for the welfare of the present and future Bay Area residents.

George Gates of the USGS in Menlo Park got up and said he did not have too much to report concerning the activities of the Earthquake Committee of the San Francisco Section of the Association of Engineering Geologists. But, we were glad to hear from him anyway.

Michael T. Halbouty, consulting geologist from Houston, addressed the Northern California Geological Society at a luncheon meeting on November 22 at Montgomery House. He gave an excellent and spirited talk on the importance of recognition by geologists of the economic situation. Mike pointed out that all predictions indicate that the United States will have an increasing need for new petroleum reserves in the next few years. He stated that it is essential that we find a minimum of 45,000,000,000 barrels of oil and 275,000,000,000,000 cubic feet of gas within the next ten years. During 1962 and 1963 we actually found less crude oil reserves than we produced, and in 1964 it looks as if we may have discovered slightly more reserves than we consumed.

In 1964 we drilled 9,250 exploratory wells and 36,200 development wells. In order to meet the demand for the next ten years, we should be drilling approximately 25,000 exploratory wells and 35,000 development wells per year. Of course, these 25,000 exploratory wells would require at least 25,000 drillable prospects. This would mean a 3-fold increase in the petroleum exploration program. In order to find 25,000 drillable prospects per year, the oil industry is going to have to employ maximum brainpower. First, the management teams of exploration companies must create an atmosphere which generates

maximum creative exploration thinking. Second, the explorationists must strive to stimulate their own creative processes. Third, in order to achieve maximum brainpower utilization, management must include the geologist, the geophysicist, and the petroleum engineer on its exploration team. Geologists, geophysicists, and petroleum engineers have a great opportunity to find the needed reserves of the future by working together. We must be bold in recommending the drilling of stratigraphic tests within small limits.

Mike concluded his dynamic address by stating that we will surely improve our finding of new reserves if we act positively with the knowledge that faith, determination, and optimism open the doors to scientific exploration success.

PERSONAL ITEMS

MARK MILLER, ex-Continental, ex-consultant has joined Argosy Oil Company at Bakersfield. Mark says the Valley certainly beats fighting traffic in Los Angeles.

JIM WALKER, Shell, has been transferred to the Marine Division in Los Angeles from Bakersfield, effective November 15.

STEVE BORN, Shell, has been transferred from Bakersfield to Ventura.

CONRAD HOWARD of Shell, Bakersfield, is reported to have had a three-month vacation at Company expense in the Gulf Coast area. He claims to have fallen in love with that part of the country.

TAD FYOCK has joined Texaco at Bakersfield. He has recently been discharged from the Army and received his education at Oregon State and the University of Washington.

After 12 weeks of bowling in the Mens' Handicap Commercial league at the Highland Bowl in La Habra, the Standard Exploration team is in first place. Members of the team include BILL REED, SHESS SCHIESSER, BOB McCRAE, MARSHALL AYRES, BOB LINDBLOM, and JERRY WARD.

GARY PLAYER is now a geologist for Union Oil Company in Los Angeles. A graduate of Stanford, Gary is completing his graduate work at UCLA, and was employed by Standard Oil Company this past summer.

DON WALTERS and BILL KING have been transferred to the Los Angeles office of Humble Oil Company. Don Walters has spent the past eight years with International Petroleum Company in Talara, Peru, and Bill King was formerly located in London, England, for one year.

On a windy, rain-swept November 14, the final match for permanent possession of the golf trophy between Standard Oil and Union Oil in Bakersfield was held at the North Kern Links. Captained by BOB (Big Julie) ORTALDA, the Standard team defeated the Union Oil team 16-8 to win the trophy. The Union team, captained by JOE (Big Mike) ROSSI, gave a tough fight, but Standard's handicapping system and low scoring were the deciding factors. The tournament has been an annual event for the last five years, with Standard winning three times and Union twice.

A moment's silence on the first tee was held by the Union players for the old Stockdale "hustler," CHUCK CARY, who was unable to play because of his recent transfer to Santa Fe Springs.

Kudos to DICK LYON, Union, on becoming president of the Anchorage Petroleum Club. Perhaps, with Dick's influence the "entertainment" will improve at the annual Oyster Stag.

The hunting season is in full swing in the Anchorage area and local nimrods who are filling their freezers with moose, caribou, goats, and sheep are CHUCK KIRSCHNER, Standard; BOB SAUNDERS, Union; DALE WALLINGTON, American Stratigraphic; KEITH CALDERWOOD, Phillips; and KARL VONDERAHE, State of Alaska. In our off-hours we do a little geology, too.

DARRELL HELMUTH of Standard has been transferred from Newport, Oregon (vacation spot of the Oregon coast), to Seattle.

A. B. DICKAS, Standard, has been transferred from Bakersfield to La Habra, fulfilling his three-year dream. All from the east anticipate moving to the Big City, where the action is.

The Standard Oil Golf enthusiasts of Oildale finally captured the Standard-Union Golf trophy permanently. The trophy has been retired and will go on display with others in the Lobby of the Exploration Building. A new trophy will have to be built for future tournaments.

We extend our sympathies to the ED JOUJON-ROCHE family, Shell, Bakersfield, on the loss of their son and brother who was killed in action in Viet Nam.

NURSERY NEWS

Born to SUE and DON LEWIS, Standard, Bakersfield, a son, David, on November 8, 1965. Weight: 6 lbs. 11 oz.

"TO SURVIVE, WE MUST USE SUBTLE NEW APPROACHES TO EXPLORATION" -- MICHEL HALBOUTY



"AND 1600 FEET OF CLOSURE, AND FOUR PAY SANDS ABOVE 6000 FEET, AND A RECOVERABLE OIL FACTOR OF 700 BARRELS PER ACRE-FOOT, AND..."

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A preliminary report on some magnetite-bearing rocks near Frying Pan Lake, Iliamna D7 quadrangle, Alaska, by Bruce L. Reed and Robert L. Detterman. 3 p., 2 figs. 1 table.

CALIFORNIA DIVISION OF MINES AND GEOLOGY

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Alaska's Cook Inlet gets another strike.

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Petroleum geologists must see the whole picture of oil.

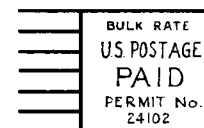
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