

JAN 13 1963

NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 17

January, 1963

Number 1

ASSOCIATION ACTIVITIES

COAST GEOLOGICAL SOCIETY

On December 11, Mr. Roy Turner, geologist with Newhall Land and Farming Company, and consultant geologist, gave the Coast Geological Society a talk entitled "Recent Developments in the Tapia Canyon (Soledad Basin) Area".

The Tapia Canyon field is located in the eastern Ventura basin, 1 mile southeast of Castaic, and about 1 mile east of the San Gabriel fault trace. Tapia wells spud in Pleistocene, upper Saugus and produce from the Yule sand, Pliocene, lower Saugus. Many dry holes, either lacking the Yule sand, or finding it wet, were drilled in the vicinity of the field before Intex Oil Co. drilled its discovery well, Yule #2, in 1957. The current field production, since the completion of Yule #6, is about 325 B/D.

The Wayside Canyon field, recently discovered by the Texas Company, is located about a mile to the southeast of Tapia Canyon. Production is obtained from the Yule sand depths of approximately 1300'-1500'. The discovery well, Honor Rancho A-NCT-2-#22, came in for about 30 B/D. Subsequent drilling to the southeast presumably across a fault, resulted in individual well initial productions of 800-900 B/D. A southwesterly extension well found the Yule sand wet, while a well to the east of the field failed to encounter Yule sand.

Updip pinching out of the Yule sand appears to form the necessary trap conditions both in the Tapia and Wayside fields. The Yule sand is either lower Saugus or Pico, and is found to pinch out into both. It unconformably overlies the Castaic (Miocene) formation. Faulting is interpreted in both fields, but is primarily based on production and water table anomalies. It is believed that much of the production difference between wells is due to lithologic changes within the Yule sand. Extreme stratigraphic variations from well to well throughout the area tend to increase the problems and risk involved in developing these fields.

LOS ANGELES LUNCHEON MEETING

"Casual Observations of the Geology of New Zealand" was the subject of an interesting and beautifully illustrated talk given by Dr. Robert M. Norris, Professor of Geology, University of California, Santa Barbara, at Rodger Young Auditorium December 6th. Dr. Norris visited New Zealand on a Fulbright Scholarship at the Oceanographic Institute in Wellington, which included reconnaissance geology and collection of rocks for UCSB.

An abstract of this talk was presented in the November, 1962 issue.

SAN JOAQUIN GEOLOGICAL SOCIETY OFFICERS



Newly-elected officers of the San Joaquin Geological Society include, left to right, Daniel B. Flynn (M.J.M.&M.), Vice President; Alvin A. Almgren (Union), President; and Ernest W. Rennie, Jr. (Tide-water), Secretary-Treasurer.

LOS ANGELES GEOLOGICAL FORUM MEETING

The January Geological Forum Meeting will be held in the Mobil Auditorium, Mobil Building, Los Angeles, at 7:00 P.M. on January 21, 1963. The theme for the meeting will be "Heavy Oil in California". Edward A. Gribi, Jr., Consulting geologist from King City, will present a paper on "Habitats of Heavy Oil in California".

Roy K. Murdock, Senior Petroleum Engineer with Mobil Oil, will discuss "Fluid Injection and Secondary Recovery Techniques in Low Gravity Oil Reservoirs".

In addition, we hope to have an authority on crude purchases discuss factors affecting the price structure of heavy crude in California.

The usual informal dinner will precede the meeting at Colombo's, 819 South Figueroa, starting at 5:30 P.M. promptly.

PACIFIC SECTION DUES

Dues for the Pacific Section, A.A.P.G. for 1962 are now overdue. Those who have not paid and desire to continue to receive the P.P.G. should send \$3.50 to Eugene R. Orwig, Treasurer, c/o Mobil Oil Company, 612 S. Flower St., Los Angeles 15, California.

EXECUTIVE COMMITTEE, PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Richard B. Haines	President
Spencer F. Fine	Vice-President
Richard D. Stewart	Secretary
Eugene R. Orwig	Treasurer
John H. Van Amringe	Editor
Irving T. Schwade	Past President
Harrison C. Jamison	Alaska Representative
Edward A. Hall	Coast Representative
William J. Edmund	Sacramento Representative
James L. O'Neill	San Joaquin Representative

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 California.

Editor:	Jack Van Amringe
Assistant Editors:	
Activities	Tom Wright
Calendar	Al Escalante
Selected Bibliography	Lucy Birdsall
Cartoonists:	Mort Kline & Harold Sullwold
Personal Items:	Don Rogers
Correspondents:	
Alaska	Richard Lyon
Coast	Jack Durrie
Los Angeles	Mike Maxwell
Northwest	Bob McCollom
Sacramento	Dorman Graves
San Francisco	David Pfeiffer
San Joaquin	Rod Colvin
Membership Secretary	Pat Metcalf

Next deadline January 28, 1963.

SAN JOAQUIN GEOLOGICAL SOCIETY

The regular evening meeting of the San Joaquin Society was well attended on December 12, in the El Tejon Hotel, Bakersfield. Two interesting and comprehensive papers were given on the Salinas Valley area. Mr. Edward A. Gribi, Jr., Consultant, described the regional structure and stratigraphy pertinent to the oil accumulations in the province. Dr. H. Victor Church reviewed the geology and recent developments of the King City Oil Field.

"SALINAS BASIN OIL PROVINCE"

The Salinas Basin, southern Monterey County, California, lies between the Salinas River on the northeast and Lockwood Valley on the southwest, it is about 45 miles long, 6 miles wide, containing ten to fifteen thousand feet of marine sediments in its deepest portion. Oil production is presently confined to the east flank where sands lap on the granitic shelf of the Gabilan Mesa.

Pliocene marine and non-marine sedimentary rocks range from 1000 to 2500 feet thick in outcrop over the Gabilan Mesa and in Lockwood Valley. Upper Miocene Monterey shales reach 8000 feet in thickness in the basin area but thin and lap-out onto the shelf areas to the northeast and southwest. A hinge zone marks the line of greatest decrease in thickness along the east flank of the basin. East of this line the shales turn to sands as the shoreline on the shelf is approached. Upper Miocene oil production is from these sands in an area ranging from one to six miles wide from the hinge line to the zero edge. Middle Miocene Monterey shales reach a thickness of 3000 feet through the

central portion of the basin and thin by onlap to a zero edge at the hinge line. The major sand bodies and the only oil production are also along the east flank. To the southwest Middle Miocene rocks are absent over the Lockwood shelf due to post-Middle, pre-Upper Miocene uplift and erosion. The remaining portion of the Tertiary section totals around 5000 feet in outcrop along the northwest edge of the basin, including Lower Miocene Sandholdt shale and the Vaqueros sand, non-marine Lower Miocene and Oligocene Berry formations, the Rocks sand (Oligocene and Eocene), and the Lucia shale and the Junipero sand (Eocene).

The structural framework is controlled by the location of the competent basement shelves or buttresses adjacent to the tremendous thickness of incompetent shales in the basin. Folding is sharp and complex in the basin area and gentle and simple on the shelves. Faulting occurs (including low angle thrusting) along the shelf edges wherever compression causes folding to proceed beyond the rupture point. There is, however, no single "King City Fault" as mentioned in early literature. Early (post-Monterey, pre-Pliocene) folding provided most of the oil trapping mechanism.

Upper Miocene producing oil fields are as follows: San Ardo Field, discovered in 1948, 800 wells producing 30,000 barrels per day of 12° crude from around 2000', trapped by shale edge of sands and tilted water tables on anticlinal nose, has produced one hundred million barrels out of a billion and a half barrels originally in place, fire flooding may increase recovery well beyond the 20 percent figure, Lynch Canyon field near San Ardo, discovered in 1962, 4 wells producing 100 barrels per day of 10° oil from 1700', trapped by sand onlapping basement, 100 acres proven with ten million barrels estimated in place; Monroe Swell Field at north end of sand fairway, discovered in 1959, 2 wells producing 30 barrels per day of 19° oil from 3000', trapped at shale edge on east flank of anticline, 20 acres proven with two million barrels in place; Parris Valley Field, 1 well producing very small amounts of 11° high viscosity oil from 700', trapped by anticlinal closure, 300 acres proven containing 120 million barrels in place, pilot steam injection program under way; the King City Field is discussed in the following abstract.

Poor economics rather than poor prospects has been the major reason for the halting and desultory pace of exploration in the Salinas Basin. All the oil discovered to date has been from 10° to 20°. The only pipeline outlet handles San Ardo crude exclusively leaving the other producers dependent on selling crude at Coalinga at 40 to 50 cents per barrel trucking charge. This becomes a vicious circle because another pipeline would not be justified without considerably greater daily production, yet exploration for such additional production is discouraged because of the lack of a guaranteed pipeline outlet. Therefore, explorers in the Salinas Basin must combine a hard headed knowledge of the potential reserves of the sediments with a blind faith in their ultimate ability to find and market such reserves.

THE KING CITY OIL FIELD

The King City Oil Field is located in the Salinas Valley, about 5 miles south of King City and 5 miles west of the Salinas River. It lies

"on trend" between the Monroe Swell field, 10 miles to the northwest, and Parris Valley and San Ardo fields, 12 and 20 miles respectively to the southeast. Geologically the field is situated on the "hinge line" between the granitic structural high underlying the Salinas Valley on the east, and the thick Miocene-Eocene sedimentary basin on the west. Along this "hinge line" are developed the marine sand "fairways" of Upper and Middle Miocene age within the Monterey formation from which production has been obtained in the various Salinas Valley oil fields.

The field was discovered in December, 1959, but development since then has proceeded rather slowly. As of December, 1962, there were only 17 producing wells in two separate pools (Doud Pool, original discovery area, has 13 wells, Kent Basham Pool, one-half mile to the northwest, discovered in 1961, has four wells). Production is obtained from a marine sand (Thorup Zone) of the Luisian stage of Middle Miocene age at depths of 1900 to 2150+ feet in the Doud Pool, and about 2500 feet in the Kent Basham Pool. Present production from both pools totals about 375 barrels per day of 16.5 to 17.2° gravity oil. Cumulative production to date has amounted to approximately 300,000 barrels. The Doud Pool at the present time covers an area of about 80 acres, and the Kent Basham Pool about 30. These two pools lie on an asymmetric anticline having a northwest-southeast alignment. The southwest flank of the anticline dips up to 70°, while the northeast flank dips only 10° to 20°. The relation of this subsurface structure to surface structure is somewhat obscure, due in part, at least, to the relatively poor exposures in the highly folded and faulted Monterey formation exposed over much of the area just west of the Doud Pool. The discovery well was located to test the southeasterly extension of a surface anticline exposed in the Monterey to the northwest. Despite this successful result, however, a number of other tests of surface anticlines, both prior and subsequent to the King City Field discovery, have not met with success. Furthermore, a number of the wells in the Doud Pool have passed through one or more high angle, southwest dipping reverse faults, none of which have been adequately identified at the surface. Movement along these faults is probably only a few hundred feet, and it is believed they may pass into bedding plane faults at depth. A considerable amount of relatively minor cross-faulting is present, but except for a part of the Kent Basham Pool, it does not seem to have affected the accumulations appreciably. Chevron-type folds are also observable both in surface and subsurface.

These structural relations appear to be typical of yielding to compression and shear of the incompetent Monterey Shales against the rigid, fractured basement high to the east. The Thorup Zone is a relatively competent sand bed of several hundred feet in thickness which is underlain by a series of sands and shales of perhaps up to a thousand feet in the Doud Pool, and which grades to non-marine sands and shales to the east. This massive, hard sand appears to have yielded to compressive stresses, in part at least, by fracturing, and it is possible that some of the anomalously high water cuts from a number of the wells may be the result of vertical fractures providing ready access to water from below the known oil-water interface to the well bore.

UNIVERSITY OF SOUTHERN CALIFORNIA

O. L. Bandy has completed several projects this year sponsored by NSF, including foraminiferal and sedimentological trends in the Tecolote Tunnel (with R. L. Kolpack), larger living forams in basins off southern California, foram trends in basinal sands of the San Pedro and Santa Monica basins, and foram trends in general paralic environments of southern California. Orville's report on foram zonation and basinal developments in part of the Philippines should be in print soon. Work is far advanced on his general study of Cenozoic planktonic foram zonation, supported by Shell Development Company. Most new gadgets which arrive at USC, grind grist in Bandy's foram mill, so now he is attempting to determine correlation values between shelf forams and environmental conditions on the Honeywell 800 in the USC Data Processing Center. In addition, the new electron probe lab in the Electrical Engineering Department is starting study of the composition of foram tests found near polluted areas. Both of these projects are underwritten by the U.S. Public Health Service. Finally, the quantitative evaluation of bathyal and abyssal antarctic forams is under way for the National Science Foundation.

In February, 1959, the City of Los Angeles began requiring geological reports on all hillside property before a building permit could be issued, and a board for qualifying engineering geologists was appointed. Tom Clements became a member of the Board about a year later and has continued active on the Board since that time.

Early in 1962 the Qualifications Board for Engineering Geologists was "legitimized" by city ordinance, and in addition to its original duties, was made an appeal board under the Board of Commissioners of Building and Safety. Tom Clements was elected President of the Board, which consists of three engineering geologists and two foundation engineers. The Board meets twice a month and hears appeals of any person who has been refused a building or grading permit. The original duties of qualifying engineering geologists have become completely secondary to the appeals function.

Tom also served as General Chairman for the Cordilleran Section convention of the GSA on the USC campus this past spring.

Gregory Davis resumed igneous and metamorphic field studies in the Trinity Alps, Klamath Mountains, California, during the first part of the summer. During July and August he was one of 24 participants in the AGI International Field Institute - Alps, 1962, which studied Alpine geology in Switzerland, France, Italy, and Austria, under the guidance of Swiss professors.

W. H. Easton spent part of the summer teaching at the University of Hawaii and studying fossil- and living reefs on Oahu. The nice thing about this kind of geologizing is that trading Brunton and pick for a face mask evokes no feeling of guilt! His major work done on the Carboniferous of Montana in 1952 and 1953, was published this summer as Professional Paper 348.

He has completed redescription of some type specimens and field checking of localities begun under a Guggenheim award and recently finished under a GSA grant. Bill was elected to the Council of the SEPM this year.

Donn S. Gorsline has been appointed to the faculty position left vacant when K. O. Emery accepted a research position at Woods Hole Oceanographic Institution. Donn attended Montana School of Mines as an undergraduate and then received his Ph.D. degree from USC. For the past five years he has been in the Oceanographic Institute at Florida State University, in Tallahassee. Present and future studies in the California area by Donn and his students include bathymetric and sedimentologic investigations of Catalina Basin, beach processes, sand transport in submarine canyons, cooperative environmental studies with the Beaudette Foundation, and structural studies of areas of anomalous structures in the Continental Borderland off southern California. Ron Kolpack, one of Gorsline's doctoral students, is working on geochemical aspects of deep-sea sediments which he collected aboard the ELTANIN during the recent cruises in the North Atlantic and later in the South Pacific and the Antarctic seas. These studies are being carried on in the geochemistry laboratory of the Hancock Foundation Geology spaces. Plans for alteration and modernization of the sedimentologic laboratories are also in process.

Geological scientists with research projects requiring assistance of a marine nature are asked to contact Donn. The Hancock Foundation is commencing an increasing program of cooperative work with other local schools. This is initially part of a recent \$200,000 grant for ship support in the bioscience aspects of marine work. Funds for similar support of physical science studies are being requested. Limited space for interested students is often available on the various cruises of VELLERO IV in coastal waters of California. One cruise is scheduled for the latter half of the coming Christmas vacation period.

John F. Mann continues to teach Ground Water and to perfect application of quantitative methods to ground water studies. Work now in progress with the Bureau of Water and Power may lead to control of the Los Angeles Basin water budget through data processing and computer methods.

R. H. Merriam served during the past year as Liaison Representative of the Division of Engineering Geology for the Cordilleran Section of the Geological Society of America and also on the Construction Materials Committee of the Engineering Geology Division of the G.S.A. The past summer, Dick divided his time between consulting in engineering geology and studying the sedimentary petrology of the Imperial and Palm Springs formations in the Carrizo areas.

During the year, Richard O. Stone received an extension of a quantitative geomorphology project from the U.S. Army Corps of Engineers and attended a conference on Terrain Analysis at the Waterways Experiment Station at Vicksburg, Mississippi. He was also a lecturer on geological processes at a National Science Foundation Seminar Series held at the University.

Dick taught the summer field geology class of six undergraduate students at Mountain Pass, California. Housing facilities at the Rare Earth Mine of the Molybdenum Corporation of America were utilized. Field trips were made to the Valley of Fire, the Spring Mountains, the mine and mill of the Rare Earth Mine, and the gypsum plant of the Blue Diamond Mine, all in Nevada, and to St. George, Utah, and to the north rim of the Grand Canyon.

USC inaugurated the first Lunar Geology course in any American University, this fall. Dr. Jack Green, who teaches the subject, is both a geologist and geochemist, with degrees from V.P.I. and Columbia. The course pertains not only to physical features of the moon, but to problems such as how to get water from rocks there. Enrollment is at full capacity and we are being asked how soon the course will be offered again—such being the impact of space-age science on geology here in southern California.

The Geology Department has received a grant of a little over \$20,000 from NSF, which together with matching funds from the USC budget is being used to re-equip the department for undergraduate teaching.

Thirty-eight graduate students are candidates for Master's degrees and 14 for Doctorates. There are only 5 Seniors this year, but elementary classes are very crowded and we have 16 majors and 17 pre-majors.

Two of our graduate students, Calvin Stevens and Ronald Echols, have received NSF Fellowships. John Duncan, who received his B.S. degree at USC this year, was awarded the national Sigma Gamma Epsilon Scholarship.

Visiting Foreign Lecturers last year were P. H. Kuenen, Martin Glaessner, Marius Lecompte, and Alwyn Williams. Dr. Maria Chierici of AGIP Mineraria, Milan, Italy, is currently studying environmental problems in the bug lab on a post-doctoral program.

The list of theses and dissertations has just been brought up to date and is available from the Geology Department.

NORTHWEST GEOLOGICAL SOCIETY

On Friday evening, December 14, Dr. Grant Gross, Assistant Professor of Oceanography at the University of Washington, spoke before the Northwest Geological Society on the subject of "Radioactive Sediments of the Columbia River Drainage". Dr. Gross completed his undergraduate work at Princeton University in 1954 and received a doctorate in geology at Cal. Tech. in 1961. His research at the University of Washington involves the tracing of various radioactive materials which have been introduced into the Columbia River drainage at the Hanford Atomic Power Plant in Washington.

An abstract of this talk will be presented at a later date.

PROPOSED REGISTRATION OF ENGINEERING GEOLOGISTS IN CALIFORNIA

The Executive Committee of the Pacific Section wishes to inform its members of proposed state legislation to register engineering geologists and to point out possible harmful effects of such legislation to the practicing petroleum geologists. The California Association of Engineering Geologists (CAEG) has a definite program underway in which it will attempt to get an amendment to the Professional Engineers Act introduced into the next California Legislative session, which convenes in January, 1963. The CAEG grew out of a discussion among a group of geologists in Sacramento on a program of self-regulation arising from city and county ordinances in southern California calling for engineering geology reports on certain hillside development problems.

The membership of the CAEG numbers about 280. Members are mostly college graduates and relatively young in age. About 55 percent live north of the Tehachapi Mountains, mostly in the Sacramento-San Francisco areas. About 33 percent live in southern California and 12 percent out-of-state. Approximately 35 percent are employed by the State (Dept. of Water Resources, Div. of Highways, Div. of Mines and Geology); 26 percent by Federal agencies (U. S. G. S., Bureau of Reclamation, U. S. Army Corps of Engineers, U. S. Navy); 19 percent for private industry and engineering organizations, and utility firms; 9 percent are consultants; 8 percent city and county employees; and 3 percent are in the teaching profession or are students.

One of the objections to the proposed legislation to an AAPG member is the inclusion of ground-water work in its definition of engineering geology. If strictly policed, the proposed legislation could prohibit an unlicensed petroleum geologist from practicing any ground-water work.

Because the tentative draft of an act to create a Committee of Registration for Engineering Geologists is eleven pages in length, only the highlights on the proposed bill are herewith listed. (A complete copy of tentative draft may be requested from Pat Metcalf, A.A.P.G. Membership Secretary, Pacific Section.)

Definition of Engineering Geologists

7803. "Engineering Geology," as used in this chapter, refers to the application of geologic data, techniques, and principles to the study of naturally occurring rock and soil materials or ground water for the purpose of assuring that geologic factors affecting the planning, design, construction, operation, and maintenance of civil engineering works and the development and conservation of ground water resources are recognized, adequately interpreted, and utilized.

7804. "Engineering geologist," as used in this chapter, refers to a person who practices engineering geology.

7805. Only a person registered under the provisions of this chapter shall be entitled to take and use the title "engineering geologist."

Scope of Regulation

7833. All engineering geology plans, specifications, reports or documents shall be prepared by a registered engineering 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.

7834. Officers and employees of the United States of America practicing solely as such officers or employees are exempt from registration under the provisions of this chapter.

7835. A subordinate to an engineering 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 engineering geology in his own right or to use the title "engineering geologist."

Qualifications

7841. An applicant for registration as an engineering 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 have been approved by the committee.
 - (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) At least four years of professional geological work under the supervision of a qualified geologist. A qualified geologist is one who has had a minimum of five years' experience in responsible charge of geological studies.

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.

- (d) At least three full years of professional work in the field of engineering geology under the supervision of a registered engineering geologist or a registered civil engineer, except that prior to January 1, 196 , a person applying for registration shall qualify under this subdivision if he has one year of professional work under the supervision of a qualified engineering geologist earned not later than one year following the effective date of this section and two years under the supervision of a registered engineering geologist.

The ability of the applicant shall have been demonstrated by his having performed the work in a responsible position. For out-of-state applicants, the adequacy of the supervision shall be determined by the committee.

- (e) Successfully pass an examination.

Grandfather Clause

7843. The committee shall waive the examination requirement for a certificate as an engineering geologist for one who complies with all of the following:

- (a) Who makes written application to the committee 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 engineering geology under the supervision of a qualified engineering geologist or a registered civil engineer. The ability of the applicant shall have been demonstrated by his having performed the work in a responsible position. For out-of-state applicants, the adequacy of the supervision shall be determined by the committee.
- (c) Who complies with the provisions of subdivisions (a), (b), and (c) of Section 7841.

Disciplinary Measures

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 engineering geology 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 committee, 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 engineering geologist, or any other title whereby such person could be considered as practicing or offering to practice engineering geology, unless he is qualified by registration as an engineering geologist under this chapter.
- (g) Who manages, or conducts as manager, proprietor, or agent, any place of business from which engineering geology work is solicited, performed or practiced, unless such work is supervised or performed by a registered engineering geologist.
- (h) Who violates any provision of this chapter.

Herewith are listed some of the objections to the proposed legislation and registration in general, that the Executive Committee submits:

1. Fundamentally, engineering geologists are foundation specialists, not ground-water experts. Such proposed legislation by the CAEG preempts a large segment of the practice of geology, especially in taking over ground-water. The petroleum geologist works with underground fluids, including fresh and salt waters, as well as oil and gas. Every oil well involves ground-water, and the wording of the proposed legislation might include jurisdiction over oil well surface pipe operations.
2. This act is slanted at the subordinate rather than the expert and employment under a civil engineer or a registered engineering geologist is required. This downgrades standards as it would require the most capable and experienced to drop back to a subordinate job under the sponsor group or under a civil engineer.
3. The Pacific Section membership strongly rejected licensing by mailed ballot in 1960. 40 percent of the CAEG has voted against registration.
4. The 1962 report of the Professional Standards Committee, AAPG, states "the actual writing of a registration law under the sole sponsorship of the Association would be premature".
5. The Professional Standards Committee of AGI (Geotimes-Oct. 1962) "rejects, and for the most part, abhors registration or regulation by law at this time".
6. Legislation for engineering geologists once enacted could have retroactive effects, not contemplated, on other groups of geological scientists. Bad legislation is far worse than none. The CAEG, a small group of geologists, proposes registration to take over a substantial field of geology and to set up qualifications which many other competent geologists may not have.

If the reader or Pacific Section Member has a differing opinion or wishes to make pertinent comments on the proposed registration of engineering geologists, please write to Dick Stewart, Secretary of Pacific Section, for consideration by the Executive Committee.

PERSONAL ITEMS

Marathon Oil's new District Geologist is Ernie Lian. Ernie was formerly District Geologist in Los Angeles before his transfer to Bakersfield.

Dick Atchison, Marathon's bowling specialist in Bakersfield, claims his switch from right to left hand has given his game a new twist. Judging by Richard's posture after rolling a few here recently, the ball isn't the only thing that has a new twist.

With Sunray's year-end flurry of exploratory drilling activity, guess where geologists Frank Reynolds and Tom Oldroyd spent Christmas Day? And for dry holes yet!

Gene Templeton, senior geologist for Sunray DX in Bakersfield, will be transferred to Denver in February. Oh the exhilaration of selling in a buyer's market and buying in a seller's market!

Franco Western Oil Company is closing its Anchorage Exploration Office. James K. McIntyre will return to Bakersfield before his transfer to Midland, Texas.

Tex Leverett, formerly with Union Oil Company, has been added to the staff of the Occidental Petroleum Company, in the capacity of scout. Tex has been doing scouting, land and paleo work for approximately 27 years in the oil industry.

Occidental Petroleum Engineering and Geological Staff recently moved into a newly constructed wing at their offices in Bakersfield. The addition more than doubles their pre-existing space.

Bob Lindblom of Standard in Bakersfield journeyed to Minnesota for a winter vacation.

At one of the many gala Christmas parties in Bakersfield, it is reported that Milt Zeni of Standard has really learned to do the twist---eyeballs and all.

John Levorsen of Richfield in Bakersfield is being transferred to their Midland office.

Bob Critchlow of Occidental in Bakersfield can be proud of his sailing prowess. On page 114 of the December issue of Yachting Magazine he is posted for his regatta standing in the Sierra Sailing Association. Bob and his wife frequently are seen on Lake Wollomes in their Lodi 14.

Jean B. Senteur de Boue, Gaviota consultant, has received an urgent request from one Hank Neel for advice on landslide control around the hills of Brentwood. He feels de Boue's opinion will be especially beneficial to those whose houses are still standing.

Mr. A. A. Carrey, Stanford '22, now geologist-engineer for the Philippine Oil Development Company, Manila, reports that he and his wife have just returned from a six month's trip around the world. En route he did some field work in Northern Spain and is now back in the Philippines to continue further oil exploration.

Louis C. Chappuis, reports that he has retired from the oil business and is now a practicing Diplomat for the Peruvian Government as Consul of Peru in Tucson, Arizona. If any of the Gang needs a free visa to Peru, Louis will be glad to do it gratis if he comes to Tucson to get it.

George Brown, Marathon Oil Company, Sacramento, is still having the same old trouble with his "tea bag". Good luck with this for the coming year, George!

Leon Williams, Schlumberger, Sacramento, suffered a recent accident with a "swinging" shower door. He has now fully recovered and in real good shape. Had to, you know, Christmas Holidays and all.

Charles Guion, Humble Oil Company, Sacramento, finally got his heater fixed. Nice going, Charlie, we knew you would do it sooner or later.

Bill Hathaway, formerly with Amerada Petroleum in Rio Vista, has been transferred with E. L. Doheny in Sacramento. Their new office is located in the Country Club Shopping Centre, 3382 El Camino Avenue, Suite #37, Telephone 489-1206. Good luck, Bill, in your new job.

Larry Malarin, Standard, La Habra, has been transferred to Libya.

Rumor has it that Bob Burns and Bob Albert of Geological Exploration both had a slight case of the "flu" while on board the boat Rincon during the last spell of bad weather.

Stan Siegfus, Senior Geologist with Tidewater Oil Company, and wife journeyed to London late in October to witness the marriage of their daughter Shirley to a young Turkish professor of Anthropology, Mr. Nur Yalman, who received his degree at Cambridge and expects to spend the next couple of years at the University of Chicago. After the marriage the Siegfus' spent a couple of weeks touring Europe including Paris, Madrid, Rome, Naples, Pompeii, Zurich and Copenhagen.

Roger Dungan, Exploration Manager, Continental's Pacific Division, recently returned to Bakersfield from a three weeks vacation visiting friends and relatives in Ventura.

Don Edmonston, Tidewater, Bakersfield has returned from Ventura after 18 months. Don was scheduled for a 3 month assignment. Welcome home Don.

Alastair Sinclair has recently been appointed Assistant Professor of Economic Geology at the University of Washington. Dr. Sinclair received a doctorate in geology at the University of British Columbia, and has particular interest in the geochemistry of ore deposits.

Don Lewis, Standard, has left a plush office job in Seattle to find oil in Bakersfield. The lure of the derrick floor was too much for him.

Houston has lured Sig Snelson away from Seattle, at least until the weather gets better this spring.

Bob Shull decided it was too cold sitting on wells in Anchorage, so he's flown down to the warm (?), sunny (??) Seattle environs.

George Budkin, Marathon Oil Company, Sacramento, and Bruce Brooks, Consultant, Sacramento, were so very interested by the fact that Santa Claus was landing at Country Club Centre by plane recently in Sacramento. We believe they might have had a brief discussion with him, and we are anxious to find out if their wishes were granted for Christmas.

Dr. R. A. Stirton, Professor of Paleontology, University of California, Berkeley, recently returned from a 6 months expedition to Australia where he has been engaged in exploration for and research on the Tertiary mammals of that country for the past nine years under the auspices of the National Science Foundation and the University of California. Dr. Stirton was accompanied by Dr. R. H. Tedford and graduate student Michael Woodburne, both of whom will return next year to carry on reconnaissance and stratigraphic work.

Mr. E. R. Stanley and Mr. Harry P. Stolz wish to announce the dissolution of the Stanley and Stolz partnership effective on December 31, 1962. Limited individual consulting services will be carried on from the following addresses:
E. R. Stanley, 612 S. Flower St., Los Angeles 17, California, Madison 4-2367, and Harry P. Stolz, 4064 Chevy Chase Drive, Pasadena 3, California, 790-1662.

CALENDAR

January 3, 1963: Thursday noon, Rodger Young Auditorium, John W. Marlette, Geologist, State Department Water Resources, will speak on a summary of "The Feather River Project".

January 8, 1963: Tuesday evening, 7:45 P.M., State of California Department of Public Works Building, 1120 N. Street, Sacramento, Dr. Ben M. Page, Stanford, will talk on "Gravity Tectonics". Technical exhibit by Cartwright Aerial Surveys.

January 14, 1963: Stanford University, School of Earth Sciences Lecture Series, Monday, 4:00 P.M., Room 320 Geology Building, Dr. James Boyd, President, Cooper Range Company, "The Future of Exploration and the Mineral Industries".

January 15, 1963: Tuesday evening, 7:30 P.M., El Tejon Hotel, Bakersfield, David C. Callaway, Consultant, "Distribution of Upper Cretaceous Sand in the Sacramento and Northern San Joaquin Valleys". Cocktail hour: 6:30 P.M. Dinner hour: 7:30 P.M.

January 21, 1963: Monday evening, 7:00 P.M., Mobil Auditorium, Los Angeles, Geological Forum Meeting, thence "Heavy Oil in California". Edward A. Gribi, Jr., Consultant, will speak on "Habitats of Heavy Oil in California". Roy K. Murdock, Senior Petroleum Engineer, Mobil, will discuss "Fluid Injection and Secondary Recovery Techniques in Low Gravity Oil Reservoirs".

January 25, 1963: The Northwest Geological Society meeting will be held at the Poodle Dog Cafe. Marshall Hunting, Supervisor of Division of Mines and Geology, State of Washington, will discuss "Washington's Mineral Resources, Present and Future". Cocktail hour: 6:00 P.M. Dinner hour: 7:30 P.M.

January 28, 1963: Stanford University School of Earth Sciences Lecture Series, Monday, 4:00 P.M., Room 320 Geology Building, Dr. Raymond C. Moore, University of Kansas, "Periodicities in Earth History".

February 4, 1963: Stanford University School of Earth Sciences Lecture Series, Monday, 4:00 P.M., Room 320 Geology Building, Dr. Hatten S. Yoder, Geophysical Laboratory, Washington D. C. "An Experimental Study of the Origin of Basaltic Magmas".

BIBLIOGRAPHY OF RECENT PUBLICATIONS

U.S. GEOLOGICAL SURVEY

Professional Paper 434-D: Statistics of a runoff-precipitation relation, by N.C. Matalas.....\$.20

Professional Paper 450-A: Geological Survey Research 1962, Synopsis of geologic, hydrologic, and topographic results.....\$1.75

Professional Paper 372-A: The meteorologic phenomenon of drought in the southwest by R.E. Thomas.....\$.75

Professional Paper 440-T: Data of Geochemistry, 6th edition, Chapter T. Nondetrital siliceous sediments, by E. R. Cressman.....\$.25

Bulletin 1083-F: Geophysical methods of exploring for buried channels in the Monument Valley area, Arizona and Utah, by R. A. Black, F. C. Frischmeyer, R. M. Hazelwood, and W. H. Jackson...\$.30

Bulletin 1141-A: Ultrasonic measurement of suspended sediment, by G. H. Flammer.....\$.25

Bulletin 1144-A: Rapid analysis of silicate, carbonate, and phosphate rocks, by Leonard Shapiro and W. W. Brannock.....\$.25

Bulletin 1144-B: An improved method for the determination of FeO in rocks and minerals including garnet, by L. E. Reichen and J. J. Fahey...\$.15

Bulletin 1166-C: Geophysical abstracts 190, July-September 1962.....\$.40

Bulletin 1166-D: Geophysical abstracts 191, October-December 1962.....\$.40

Water Supply Paper 1536-F: A formula for computing transmissibility causing maximum possible drawdown due to pumping, by G. M. Robinson & H. E. Skibitzke.....\$.15

Water Supply Paper 1536-G: Constant-head pumping test of a multiaquifer well to determine characteristics of individual aquifers, by G. D. Bennett and E. P. Patten, Jr.....\$.15

Water Supply Paper 1546: Annotated bibliography on hydrology and sedimentation, United States and Canada, 1955-58, by H. C. Riggs.....\$1.00

Water Supply Paper 1619-R: Flow of springs and small streams in the Tecolote Tunnel area of Santa Barbara County, California, by S. E. Rantz. \$.45

Circular 475: Mineralization associated with a magnetic anomaly in part of the Ely Quadrangle, Nevada, by Arnold L. Brokaw, Garland B. Gott, Don R. Mabey, Howard McCarthy, and Uteana Oda... FREE

MAPS

Mineral Investigations Field Studies Map MF 205: Geologic reconnaissance map of part of the southeastern Mojave Desert, California, by D. H. Kupfer and A. M. Bassett.....\$1.00

I-350B: Topographic map of United Kingdom of Libya, 1962. (Scale 1:2,000,000).....\$1.00

GQ-162: Geology of the Cameron quadrangle, Arizona, by J. P. Akers, J. H. Irwin, P. R. Stevens and N. E. McClymonds, with a section on Uranium deposits by W. L. Chenoweth.....\$1.00

Miscellaneous Geologic Investigations Map I-200-B: Geographic map of the Wadi As Sirhan Quadrangle, Kingdom of Saudi Arabia, by R. A. Bramkamp, G. F. Brown, D. A. Holm, and N. M. Lyne, Jr..... \$1.00

OPEN-FILE REPORTS (Inspection only)

TEI-821: Physical properties of evaporite minerals, by Eugene C. Robertson. (Menlo Park Office)

TEI-828: Outline of geology of the Ulsj and 12J.OI tunnels, Nevada Test Site, by W. H. Laraway and F. N. Houser. 12 pages.

TEI-829: Gamma-radioactivity investigations related to waste disposal, Jackass Flats, Nevada, Test Site, by S.M. Bunker and W. A. Bradley. 19 pages, 7 figs. 2 tables.

Ground-water conditions, U. S. Naval Missile Facility, Point Arguello, California, June 1961-June 1962, by R. E. Evenson. 20 p., 4 figs. (USGS, Santa Barbara.)

Available water supply of the Las Vegas ground-water basin, Nevada, by G. T. Malmberg, 236 p., 43 figs. (USGS, Carson City, Nev.)

TEI 832: Gamma-radioactivity investigations at the Nevada Test Site, Nye County, Nevada, (Interim report, February 1960 to July 1961), by C. M. Bunker and M. D. Shutler. 62 pages, 11 figs., 21 tables.

Geologic reconnaissance and test-well drilling at proposed Air Force facility, near Lompoc, California, by C. A. Miller and R. E. Evenson. 18 pages. (USGS--Los Angeles)

U. S. BUREAU OF MINES (Distribution Section, 4800 Forbes Ave., Pittsburgh 13, Penna.)

Report of Investigations 5819, 6047, 6087: Methods of analyzing oil field waters. Various authors.....FREE

THE JOURNAL OF GEOLOGY, vol. 70, no. 6, November 1962

The latest eruptions from Mount Rainier volcano, by Clifford A. Hopson, Aaron C. Waters, V. R. Bender and Meyer Rubin.

On sorting, sorting coefficients, and the lognormality of the grain-size distribution of sandstones, by Gerald M. Friedman.

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 73, no. 10, October 1962

Zircon and other accessory minerals, Coast Range batholith, California, by John H. Spotts.

Petrogenetic significance of geosynclinal andesitic volcanism along the Pacific margin of North America, by William R. Dickinson.

Stages of oxidation coloration in dune and barrier sands with age, by W. Armstrong Price.

Geologic features of a section across the Casa Loma fault, exposed in an aqueduct trench near San Jacinto, California, by Richard J. Proctor.

Age of lava flows on Haleakala, Hawaii: Comment, by Harold T. Stearns.

THE GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 73, no. 11, November 1962

Classification of Ordovician Chazyan shelly and graptolite sequences from central Nevada, by Marshall Kay.

Flume studies of the transport of pebbles and cobbles on a sand bed, by R. K. Fahnestock and W. L. Haushild.

Three-dimensional specific-gravity variation in the Glen Alpine stock, Sierra Nevada, California, by E. W. Peikert.

OIL AND GAS JOURNAL, vol. 60, no. 49, December 3, 1962

California line will boost offshore gas production.

Spanish Sahara oil hunters focus on northeast area, by Ray G. Gibson.

Desha test a newsmaker, successful or not, by Frank J. Gardner.

OIL AND GAS JOURNAL, vol. 60, no. 50, December 10, 1962

Arizona shows signs of year-end flurry, by Frank J. Gardner.

How reserve statistics can be misused, Part 1 of 2 parts, by Kenneth K. Landes.

OIL AND GAS JOURNAL, vol. 60, no. 51, December 17, 1962

Reserves: do we have enough oil to meet the future's needs? (Part 2, conclusion) by Kenneth K. Landes.

Australia's oil fever soars.

OIL AND GAS JOURNAL, vol. 60, no. 52, December 25, 1962

Where is Alaska's second oil field? by Carl J. Lawrence.

Douglas Creek arch--a good habitat for northwestern Colorado oil and gas, by Paul K. Kopper.

OIL AND GAS JOURNAL, vol. 60, no. 53, December 31, 1962

Paleozoics hold key to Australia's oil, by Frank J. Gardner.

For South Dakota oil--check the Minnelusa formation units, by Jack N. Conley.

How Shell's underwater tree works, by Ed McGhee.

ARIZONA BUREAU OF MINES UNIVERSITY OF ARIZONA,
Tucson

Folio of Geologic and mineral maps of Arizona
(Contains Bulletins 170, and 171, geologic maps of
11 counties, index for geologic cross-sections of
Arizona, and 8 geologic cross-sections.).....\$25.00

OIL WORLD (CALIFORNIA), vol. 55, no. 19, First
issue, October 1962

Long Beach completes plans for huge oil field de-
velopment.

CALIFORNIA DIVISION OF MINES AND GEOLOGY (Ferry
Building, San Francisco, California)

Map Sheet 2: Geology of the Southeast quarter of
the Cross Mountain quadrangle, Kern County, Calif.,
by Howard S. Samsel.....\$1.50

County Report No. 1: Mines and Mineral Resources
of Kern County, California, by Bennie Troxel et al.
Including map.....\$5.00

BOOKS

Study of the Earth: Readings in geological science,
Edited by J. F. White. Prentice-Hall, Inc., Box 903
Englewood Cliffs, New York. 1962 Paperbound..\$3.95

Structural geology of North America, 2nd edition,
by A. J. Eardley. New York. Harper & Row, Pub-
lishers, 49 E. 33rd St., New York 16, N. Y....\$21.50

Formation evaluation, by Edward J. Lynch. Harper &
Row, Publishers, 49 E. 33rd St., New York 16, N. Y.
.....\$12.50

Man's role in changing the face of the earth. An
international symposium. William L. Thomas, Jr.,
editor. University of Chicago Press, Chicago 37,
Illinois.....\$12.50

Volcanoes and their activity, by A. Rittman. Trans-
lated from the Second revised German edition, by
E. A. Vincent. Interscience Publishers, a division
of John Wiley & Son, Inc., 440 Park Ave. South,
New York 16, N. Y. 1962.....\$11.95

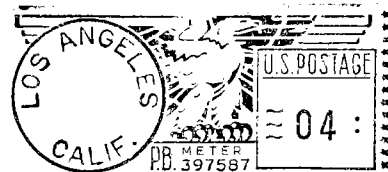
Petrology, by Walter T. Huang. McGraw-Hill, New
York. 1962. 480 pp.....\$9.75

Morphology and evolution of fossil plants, by Theo-
dore Delevoryas. Holt, Rinehart and Winston, New
York. 1962. 189 pp.....\$4.50

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

Volume 17

Number 1



DA

Richard L. Hester
Pauley Petroleum, Inc.
10000 Santa Monica Blvd.
Los Angeles 67, Calif.

PACIFIC PETROLEUM GEOLOGIST

RECEIVED

NEWS LETTER OF THE PACIFIC SECTION
AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

FEB 13 1963

Volume 17

February, 1963

Number 2

ASSOCIATION ACTIVITIES

ALASKA GEOLOGICAL SOCIETY

James A. Williams, Director of Alaska's Division of Mines and Minerals, spoke before the Alaska Geological Society at a luncheon meeting in Anchorage on January 18, 1963. His informative talk was entitled "History and Functions of the Division of Mines and Minerals."

The nucleus of the Division of Mines and Minerals was provided by the U. S. Congress in 1903 through "an act to protect the lives of miners in Alaska". This act called for a mine inspector, although the office of Territorial Mine Inspector was not established until 1913. The Territorial Department of Mines was created in 1935, expanded to include a mining engineer in 1936, and a coal mine inspector in the early 1940's. The current staff numbers 19, including a petroleum geologist, a petroleum engineer, three mining engineers, and a mining geologist. Two additional mining geologists have been authorized. The DM&M budget has grown from a pre-1935 annual rate of \$10,000 to the present \$290,000.

The primary mission of the Division is the fostering and promotion of Alaska's mineral industry. It is also charged with enforcement of safety and conservation regulations, and the protection of the investor. Toward the primary aim, four assay offices are maintained - - at Anchorage, College, Ketchikan, and Nome - - where analyses of Alaskan specimens are provided at no charge. A card file maintained in Juneau lists all known mineral occurrences in Alaska, and is available to the public. The staff mining engineers provide assistance to miners in the more efficient working of prospects.

Williams expressed hope that a state Geological Survey would eventually be established, and that this, as well as other current activities of the Division, would help check the decline in Alaska's mining industry.

NORTHERN CALIFORNIA GEOLOGICAL SOCIETY

Dr. Robert S. Dietz, marine geologist at the U. S. Navy Electronics Laboratory in San Diego, a Distinguished Lecturer for the American Association of Petroleum Geologists, will speak to the Northern California Geological Society 12:00 noon February 20th on "Continent and Ocean Basin Evolution by Sea Floor Spreading", at Pannelli's Blue Room, 451 Pine, San Francisco. Dr. Dietz has published extensively on marine geologic problems, including seven papers concerning aspects of sea floor spreading, one of which was featured in The Saturday Evening Post's Adventures of the Mind Series. Luncheon \$3.00.

SAN JOAQUIN GEOLOGICAL SOCIETY

The regular meeting of the San Joaquin Geological Society was held on Tuesday evening, January 15, 1963. A large and interested audience heard David C. Callaway, General Exploration Company, Bakersfield, speak on "Distribution of Upper Cretaceous Sand in the Sacramento and Northern San Joaquin Valleys." A lively discussion followed the presentation.

ABSTRACT:

The Sacramento - San Joaquin Valley was one large depositional basin during Upper Cretaceous time. Deltaic channel-type sands from a western land mass were deposited along the deep western side of the basin and a series of cyclic regressive-type sands from an eastern land mass were deposited on the shallow eastern shelf.

During E time (Goudkoff's zones), Lathrop - Joaquin Ridge and Winters sands were deposited on the west side. During D-2 time, eastern Panoche - Lower Starkey regressive sands and western Tracy sands filled the basin.

The eastern regressive cycle continued into D-1 and C time and is represented by Upper Starkey (H & T) sands, while on the western side, Blewett sands were being deposited. During the remainder of Cretaceous time and into the Paleocene, a large regressive sand series moved westward across the basin. This regression encompasses the Wheatville, Garzas, Midland-Meganos and Dos Palos sands.

Pre-D-2, pre-Eocene and pre-Miocene uplift and erosion coupled with D-1, C, Paleocene and Eocene gorge erosion and fill all have combined to produce the existing record of the Upper Cretaceous in the Sacramento - San Joaquin Basin.

LOS ANGELES EVENING FORUM MEETING

The February Geological Forum Meeting will be held in the Mobil Auditorium, Mobil Building, Los Angeles, at 7:00 P. M. on February 25, 1963. The theme for this meeting will be "Stratigraphy of the Sacramento Valley".

David C. Callaway, Consultant, will speak on "Distribution of Upper Cretaceous Sands in the Sacramento and Northern San Joaquin Valleys". John N. Thomson, Geologist and partner of Pohlman and Thomson, will discuss the "Geology of the Kione Formation".

The usual informal dinner will precede the meeting at Colombo's, 819 South Figueroa Street, starting promptly at 5:30 P. M.

EXECUTIVE COMMITTEE, PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Richard B. Haines	President
Spencer F. Fine	Vice-President
Richard D. Stewart	Secretary
Eugene R. Orwig	Treasurer
John H. Van Amringe	Editor
Irving T. Schwade	Past President
Harrison C. Jamison	Alaska Representative
Edward A. Hall	Coast Representative
William J. Edmund	Sacramento Representative
James L. O'Neill	San Joaquin Representative

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 California.

Editor:	Jack Van Amringe
Assistant Editors:	
Activities	Tom Wright
Calendar	Al Escalante
Selected Bibliography	Lucy Birdsall
Cartoonists:	Mort Kline & Harold Sullwold
Personal Items:	Don Rogers
Correspondents:	
Alaska	Richard Lyon
Coast	Jack Durrie
Los Angeles	Mike Maxwell
Northwest	Bob McCollom
Sacramento	Dorman Graves
San Francisco	David Pfeiffer
San Joaquin	Rod Colvin
Membership Secretary	Pat Metcalf

Next deadline, February 25, 1963.

LOS ANGELES LUNCHEON MEETING

A summary of "The Feather River Project", which included some of the associated geological problems, was presented by John W. Marlette, Engineering Geologist for the State Department of Water Resources at Roger Young Auditorium, January 3, 1963.

ABSTRACT:

The California State Water Project (formerly known as The Feather River Project) was conceived by the State Department of Water Resources to supply water to meet demands in water deficient areas to the year 1990. The project will cost \$1,750,000,000 and will be completed in 1972. Construction is already underway. Frenchman reservoir, much of the relocation work on the Oroville Reservoir, and a portion of the South Bay Aqueduct have already been completed. Construction is underway on the Oroville Dam, and will soon start on San Luis reservoir.

The project will be financed by funds from the water fund and from the sale of bonds. Full repayment of the project will be made by agencies contracting for water from the State Water Project. Contracts are signed for 47 percent of the 4,000,000 acre feet of water that will be produced annually by the State Water Project, and negotiations are underway for the remainder of the contracts.

The project involves construction of 21 dams, among them two of the largest in the nation. Hundreds of miles of aqueduct, canals and pipelines are planned, as well as many tunnels, power plants, pumping plants, and other installations.

POSSIBLE LARGE LEFT-LATERAL DISPLACEMENT ON THE GARLOCK FAULT

(Abstract of a paper presented November 26, 1962 at the Los Angeles Evening Forum by George I. Smith, U. S. Geological Survey.)

The Garlock fault, a major left-lateral fault along the north edge of the Mojave Desert, appears to have about 40 miles of left-lateral displacement. The chief evidence for displacement of this magnitude is provided by large north- to northwest-trending dike swarms which crop out on the north and south sides of the fault and are believed correlative (Smith, A.A.P.G. Bull., 46, p. 85-104, 1962). The swarm on the north side has been traced for about 145 miles (see Moore and Hopson, Am. Jour. Sci., 259, p. 241-259, 1961). The swarm on the south side extends for about 7 miles into an area occupied by a coarse-grained plutonic rock that either is younger than the dikes, or was not susceptible to dike intrusion. Several miles farther to the south and southeast, sporadic dike swarms crop out that may represent the southward continuation of the swarm. The swarms are probably of late Mesozoic age; most of the displacement on the Garlock fault is of Cenozoic age.

A study of the other pre-Tertiary rocks on opposite sides of the fault suggests that major changes in the character of the bedrock also take place just east of both swarms. North of the Garlock fault, stratigraphically identifiable Paleozoic rocks crop out over large areas east of the dike swarm in the Slate Range, Panamint Range, and ranges east of Death Valley. Granitic rocks of Mesozoic age also crop out in these areas, but chiefly as stocks and small plutons. West of the swarm, the bedrock consists chiefly of late Mesozoic granitic rocks. Precambrian (?) and Paleozoic rocks that crop out in a few areas are more limited in areal extent than those east of the swarm, and the Paleozoic rocks are more highly deformed and metamorphosed.

On the south side of the fault, the areal distribution of these pre-Mesozoic rocks with respect to the swarm is similar. Large areas of Precambrian and Paleozoic rocks and small areas of late Mesozoic granitic rocks occur east of the swarm in the Avawatz and Soda Mountains and in the ranges to the east. Large areas of late Mesozoic granitic rocks and only small areas of highly metamorphosed Precambrian (?) and Paleozoic rocks are present west of the swarm.

North of the Garlock fault, metavolcanic rocks of probable early Mesozoic age are restricted to an area east of the dike swarm which includes the Slate and Panamint ranges. These rocks are at the southern end of a belt that has been traced north-northwest-ly into the Sierra Nevada. A comparable belt of rocks, east of the dike swarm and south of the fault, extends south and southeast from the Avawatz Mountains at least into the Soda Mountains.

NORTHERN CALIFORNIA GEOLOGICAL SOCIETY

Results of the election for officers of the Northern California Geological Society are as follows:

President: L. Kenneth Wilson (Consulting Geologist)
Vice President: J. David Cerkel (Consultant)
Secretary-Treasurer: William L. Effinger (Standard)

P. P. G. STAFF CHANGES FOR 1963

Jack Van Amringe, Union, Santa Fe Springs, has assumed the duties as editor of the Pacific Petroleum Geologist. He is being assisted by Tom Wright, Standard, La Habra and Al Escalante, Union, Santa Fe Springs. New correspondents include: Mike Maxwell, McCulloch, Los Angeles; Jack Durrie, Tidewater, Ventura; Rod Colvin, Mobil, Bakersfield; Gordon Oakeshott, Division of Mines, San Francisco; and Bob McCollom, Standard, Seattle. Don Rogers, Humble, Long Beach and Dick Lyon, Union, Anchorage continue to serve from last year. Material for publication in the newsletter should be referred to any of these representatives.

OREGON ACADEMY OF SCIENCE TO MEET IN CORVALLIS

The 21st annual meeting of the Oregon Academy of Science will be held in Corvallis at Oregon State University on Saturday, February 23, 1963. The Geology-Geography Section, with Raymond E. Corcoran as Chairman, will hold morning and afternoon sessions at 10:15 a.m. and 2:30 p.m., respectively. Twenty-two papers covering a broad range of subjects concerning onshore and offshore geology of Oregon as well as progress reports on geophysical investigations in the State will be presented. Saturday evening Dr. V. C. McMath, Associate Professor of Geology at the University of Oregon, will give an illustrated talk on the geology of the Alps. Dr. McMath was a member of the A.G.I. Institute excursion to the Alps during the summer of 1962.

Those interested in obtaining a copy of the titles and abstracts of papers to be presented at the meeting may do so by writing to Dr. F. A. Gilfillan, Oregon Academy of Science, Oregon State University, Corvallis, Oregon.

NOTICE

The A.A.P.G. Classification Committee and the Conservation Committee have announced their new list of California fields and pools effective January 1, 1963. Copies may be obtained by contacting M. C. Barnard, Jr., Richfield Oil Corporation, 555 South Flower Street, Los Angeles 17, or by phoning MADison 9-4111, Ext. 2312.

Members of the Classification Committee are:

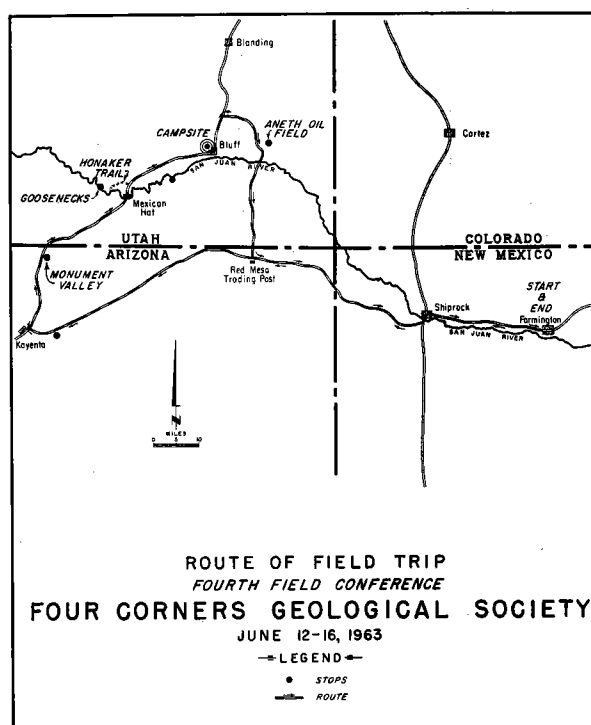
M. C. Barnard, Jr.	-Richfield Oil Corporation
Harold Clark	-Conservation Committee of Calif. Oil Prod.
C. J. Edmundson	-Shell Oil Company
Irvin Prazier	-Texaco, Inc.
J. R. Jackson, Jr.	-Humble Oil & Refining Co.
W. O. Plant	-Union Oil Company
E. H. Rader	-Standard Oil Co. of Calif.
D. E. Ritzius	-Division of Oil and Gas
J. D. Traxler	-Signal Oil and Gas Company
M. T. Whitaker	-Mobil Oil Company

FOUR CORNERS GEOLOGICAL SOCIETY

The Four Corners Geological Society will hold its Fourth Field Conference June 12-16th, 1963. The subject matter of the Conference will be "Pennsylvanian Carbonate Reservoirs Along the San Juan River".

Registration will be in Farmington, New Mexico, on June 12th (Wednesday). The field trip will start on June 13th (Thursday) and will consist of a car caravan through Monument Valley, a rubber boat trip down the San Juan River, and a hike down the Honaker Trail to the San Juan River.

For information on the Field Conference contact H. L. Fothergill, Publicity Chairman, Union Oil Company, Post Office Box 1760, Durango, Colorado.

NATIONAL OIL SCOUTS MEETING

Mr. M. C. (Barney) Barnard, Richfield, was installed as President of the National Oil Scouts Association at their annual director's and editor's meeting held January 18-19, 1963, in Oklahoma City. He previously was Secretary-Treasurer of this organization.

In conjunction with the director's meeting, the first Oil Scouts seminar sponsored by the International Association was held at the University of Oklahoma in Norman January 16-17, 1963.

Scouts from Canada to Louisiana and from California to Pennsylvania were present to hear University professors and specialists conduct seminars in their fields. The agenda covered all subjects related to a scout's work.

CHANGE OF ADDRESS

Listed below are changes of address for those members listed in the latest directory.

BEDFORD, JOHN W. Texaco, Inc. P. O. Box 664 Anchorage, Alaska	PONTIUS, DAVID C. 1008 W. 6th St. Los Angeles 54, Calif.
CASTANO, JOHN R. Shell Oil Co. 112 Cherry Street Seattle 4, Wash.	SAWYER, ERNEST W., JR. Sawyer Petroleum Co. Suite 1414 650 So. Grand Ave. Los Angeles 17, Calif.
FELTS, WAYNE M. Texaco, Inc. P. O. Box 664 Anchorage, Alaska	SCHIESSER, CLARENCE F. 1140 Berenice Dr. Brea, Calif.
STITES, RICHARD L. Marathon Oil Co. 539 South Main Street Findlay, Ohio	STANLEY, E. R. 612 South Flower St. Los Angeles, Calif.
BINKLEY, W. C. Superior Oil Co. P. O. Box 1167 Anchorage, Alaska	VAUGHAN, FRANCIS E. 1882 E. Mountain St. Pasadena, Calif.
ENGEL, NOEL W. Superior Oil Co. P. O. Box 1521 Houston, Texas	WATSON, C. P. 1636 W. 8th St. Los Angeles 17, Calif.
HELMUTH, D. N. Standard Oil Co. P. O. Box 7-839 Anchorage, Alaska	IVANHOE, L. F. 611 Kirkwood Place La Jolla, Calif.
MERRILL, WILLIAM R. Consultant 413 Shurdut Bldg. Intramuros Manila, P. I.	DANA, DREXLER 604 Cherry Hills Dr. Kern City, Calif.
WOODRING, W. P. U. S. National Museum Washington 25, D. C.	MAYER, EDWARD 3831 Fairmount St. Bakersfield, Calif.
PORTER, FRED C. 13554 Lucca Drive Pacific Palisades, Calif.	WEDDLE, HERMAN W. 904 Cherry Hills Dr. Kern City, Calif.
YERINGTON, WILLIAM F. Marathon Oil Co. 550 South Flower St. Los Angeles 17, Calif.	AMUNDSON, BURTON 2621 "O" Street Sacramento, Calif.
FRAZIER, IRVIN 1645 Bedford Rd. San Marino, Calif.	CRANSON, LORIN A. 215 Market Street Room 508 San Francisco 5, Calif.
HARDING, M. W. Phillips Petroleum Co. 3600 Wilshire Blvd. Room 1720 Los Angeles 5, Calif.	FOREMAN, JOHN A. Mobil Oil Co. 612 South Flower Street Los Angeles, California
JOHNSON, CURTIS H. 1321 San Marino Ave. San Marino, Calif.	HART, ORVILLE D. Humble Oil 612 South Flower Street Los Angeles, California
	MILLER, GERALD M. Union Oil Co. P. O. Box 7600 Los Angeles 54, Calif.
	NAIR, JACK D. Phillips Petroleum Co. 3600 Wilshire Blvd. Room 1720 Los Angeles 5, Calif.

Listed below are changes of address for those members not listed in the latest directory.

KINZEY, HOWARD G. 5634 Juanita Street Ventura, California	TRIVERS, WILLIAM B. P. O. Box 2638 Whittier, California
MYERSON, DEANNA J. 331 North Alta Vista Los Angeles 36, Calif.	SMITH, LYLE W. 1008 W. 6th St. Los Angeles 54, Calif.
DEJARNETT, PRESLEY L. 539 South Main St. Findlay, Ohio	FISH, JOHN L. 1112 West Houston Ave. Fullerton, Calif.
SIEMON, PAUL P. O. Box 680 Casper, Wyoming	KISS, GYULA 5900 Cherry Ave. Long Beach 5, Calif.
VAN ALEN, WILLIAM P. O. Box 712 Anchorage, Alaska	BRABB, EARL E. 53 Callie Lane Menlo Park, Calif.
HARRIS, RICHARD C. 3100 Cherry Creek S. Dr. Denver 9, Colorado	
HARTMAN, DONALD C. 4202 Westwood Dr. Anchorage, Alaska	

ANNOUNCING A COURSE FOR THE PETROLEUM INDUSTRY

Engineering Extension, University of California, will offer a course entitled "Petroleum Drilling, Production and Engineering" for the oil and gas industry during the Spring Semester 1963. Among topics discussed will be: petroleum geology, leasing practice, oil law, drilling practice, electric log interpretation, production operations, reservoir engineering, secondary recovery techniques, unitization, valuation, reserve estimation, offshore drilling, etc. Emphasis will be on the interrelation between the different phases of the petroleum industries' activities, new techniques and applications, industry trends, and the increasingly important role of economics in the present highly competitive period. A field trip to the Wilmington and Signal Hill oil fields will be included.

The lectures will be presented by Mr. M. J. Taves of the Richfield Oil Corporation at University Extension, 813 So. Hill Street, Los Angeles on Thursday evenings, 7-9:30 p.m. starting February 7, 1963. Three units of University credit will be granted, and the cost is \$40. Enrollment prior to the first meeting is not required. Further information and copies of the detailed course outline can be secured by calling MADison 9-4111, extension 2654.

PERSONAL ITEMS

Old Country friends of Bill Bedford will be glad to learn that he continues to identify himself with the wholesome things in life. Having been appointed to the coveted post of Recreation Supervisor for Texaco's Anchorage office, Bill proceeded to lay plans for an ice skating party featuring hot chocolate and cookies (sic). Charges that the proposal's failure to get off center is due to something less than wholehearted support by the office force have been labeled "without foundation and with no basis in fact" by a company spokesman.

In late response to an insidious trend, several Anchorage oilmen have formed a weight-lifting and steambath society, with try-weakly meetings at the local YMCA. Charter members include Joe Dockwiller and Harold Lian of Union, Bill Nowlan and Tom Wilson of Marathon, Bob Walker of Humble, and Bill Binkley of Superior. Dockwiller and Wilson have been ruled out of proposed touch football games until the present program takes effect because of discriminatory weight advantages.

Jeff Larminie, BP Exploration (Alaska) Inc., has, for reasons best known to himself, forsaken Palos Verdes Estates for Palmer Slough for the duration of BP's latest exploratory effort.

O. J. "Mike" Gross, formerly at Pan American's Edmonton office, has been transferred to Anchorage in the capacity of District Geophysicist.

John Gates, Senior Geologist for Gulf Oil Corporation of California, has been transferred from Bakersfield to Anchorage.

On February 1, R. B. (Dick) Haines was transferred to the Los Angeles office of the Continental Oil Company as a Senior Geologist. Mr. Haines will handle exploration matters in the west coast area. On this same date the Division Exploration office located in Bakersfield was deactivated.

Shell Oil Company's Exploration staff in Sacramento moved to Bakersfield at the end of January, minus geologists Tom Wootton and Jack Weldon who resigned to take positions with Aerojet.

Alan Hershey, Shell paleontologist in Bakersfield, is hobbling around as the latest casualty in the Shell Lunch Time Volley Ball League. Don't be without medical insurance if you plan to join the game.

Blair Maxfield, Shell paleontologist, is now working in the Bakersfield office, having led the group transferring from Sacramento.

Ward Abbott will be in charge of stratigraphic studies for Shell in Bakersfield, having replaced Jim Cowell who has retired. Abbott was formerly stationed in Eugene, Oregon.

Dennis Mett recently returned from the Canary Islands and is now assigned to Union's head office geophysical staff.

Bob Spalding, recently retired Shell geologist has moved from Bakersfield to San Clemente, where he will be near one of his favorite golf courses.

Geologists golfing at the Kern City links in Bakersfield had best be careful not to lose their balls in R. B. Hutcheson's back yard.

Drexler Dana finds life very agreeable in the new way of living at Kern City. The Danas have just returned from a visit to Denver to see their daughter, Toni Dana Dunrud, and her husband and new twin grandsons, Alan Richard and Douglas James Dunrud. Mother and twins reported to be doing nicely.

T. J. Brooks, Ferguson and Bosworth of Bakersfield, is back on the job after a severe bout with the "pip".

Rod Nahama, Sunray DX, Bakersfield has mastered the technique of textural house painting - just wait for a dust storm!

Greg Stanbro, Standard Bakersfield, has been temporarily transferred to New Orleans for a special assignment - and just in time to catch the Mardi Gras.

David C. Callaway, Bakersfield, is now with the General Exploration Company. Offices are located at 1620 "F" Street, Bakersfield. (FAIRview 4-8011).

While Bill "Limp along" Saunders, ex-Intex geologist turned rancher, and his horse were gazing skyward vainly hoping to see some rain clouds, the horse stepped into a gopher hole. Bill wound up at the bottom of the heap but hopes to discard the crutches soon.

Bill, "100,000 shares" Edmondson, Consultant, Bakersfield, plans an early retirement if Philippine Oil and Development will just get up to a nickel a share. Bill was seen picking up the tab at the geological table in celebration of his recent success in the Sacramento Valley.

Bob Burns, Geological Exploration Company, Los Angeles and Miss Jeannie Monseir, Richfield, have announced their engagement. Congratulations!

L. O. Heintz (Lou), Consultant, and J. W. Vernon (Jim) General Oceanographic Inc., announce the re-opening of L. O. Heintz and Associates, Geological Consulting Offices specializing in petroleum and mineral exploration and development. Offices are located at Laurel Building, Suite 201, 5437 Laurel Canyon Boulevard, North Hollywood, California. Telephone 766-2456.

Dick Benton was recently added to the Long Beach staff of Schlumberger.

After an altercation with a large truck on the freeway, the latest advocate for seat belts is Bob Burns, Geological Exploration Company.

Jerry Marrall, Union, Canary Islands, is en-route to Australia with his family for his next assignment.

Bill Greenwalt, Union, Phillippine Islands, is due to receive a Hong Kong built boat that's either a cabin cruiser or just plain junk. Is it registered under the Barracuda name?

NURSERY NEWS

Ray and Ruth Knight, Franco-Western in Bakersfield, have a new daughter, Kelly Suzanne, born December 29, 1962, 7 lbs. 13 oz.

Alfonso and Ana Escalante added a son to their family last November 9, 1962. Born in Costa Rica, Javier weighed in at 8 lbs. 3 oz.

CALENDAR

February 7, 1963: Thursday noon, Rodger Young Auditorium; L. C. Pakiser, U.S.G.S., Chief Crustal Studies Branch, "Structure of the Earth's Crust and Upper Mantle in the Western United States".

February 11, 1963: Stanford University, School of Earth Sciences Lecture Series, Monday, 4:00 P.M., Room 320 Geology Building, Dr. Howell Williams, University of California, Berkeley, "Problems and Progress in Volcanology".

February 12, 1962: Tuesday evening, 7:45 P.M., Dinkelspiel Auditorium, Stanford; Dr. Howell Williams, University of California, Berkeley, "Volcanoes!".

February 13, 1963: Wednesday noon, U.S.C., Room 104, Geology "A" 855 W. 37th St.; Dr. Gregory Davis, "Structure and Origin of the Nappes of the High Calcareous Alps, Switzerland".

February 14, 1963: Thursday evening, 8:00 P.M., Alaska Geological Society, City Council Chambers, Anchorage; "Cambrian Trilobites", Bob Hutchinson, Bear Creek Mining Company.

February 18, 1963: Monday noon, Rodger Young Auditorium, A.A.P.G. Distinguished Lecture Series, special luncheon, Dr. Robert Dietz, Scripps Institute, La Jolla, "Continent and Ocean Basin Evolution by Sea Floor Spreading".

February 18, 1963: Stanford Lecture Series, Monday, 4:00 P.M., Room 320 Geology Building; George O. Gates, U.S.G.S., "Tectonic History of Alaska", and Ernest H. Lathram, U.S.G.S., "Structure and Tectonic History of Southeast Alaska".

February 19, 1963: San Joaquin Geological Society Meeting, Tuesday evening, 6:30 P.M., Cocktail hour, 7:30 P.M. Dinner (\$2.85 per person), El Tejon Hotel - Spanish Ball Room; Ladies Night - Special Double Feature, "Eruption of Kilauea 1959-1960" color and sound movie, award winner International Film Festival, Venice, Italy, and "A trip to the Scandinavian Countries and the International Geological Congress, Copenhagen, 1960", by R. Stanley Beck, Consultant.

February 20, 1963: Northern California Geological Society, Wednesday noon, Pannelli's Blue Room, San Francisco; Dr. Robert S. Dietz, U.S. Navy Electronics Laboratory, "Continent and Ocean Basin Evolution by Sea Floor Spreading".

February 23, 1963: Saturday, 10:15 A.M.; 21st Annual Meeting, Oregon Academy of Science, Oregon State University, Corvallis.

February 25, 1963: Stanford Lecture Series, Monday, 4:00 P.M., Room 320 Geology Building; Dr. E. L. Hamilton, U.S. Navy Electronics Laboratory, "Recent Advances in Marine Geology".

February 25, 1963: Monday evening, 7:00 P.M., Mobil Auditorium, Los Angeles Geological Forum Meeting; David C. Callaway, Consultant, "Distribution of Upper Cretaceous Sands in the Sacramento and Northern San Joaquin Valleys". John N. Thomson, Pohlman and Thomson, "Geology of the Kione Formation". Dinner at Colombo's 5:30 P.M.

February 27, 1963: Wednesday noon, U.S.C., Room 104, Geology "A" 855 W. 37th St.; James Vernon, "Oil Exploration in Cook Inlet Tertiary Province, Alaska".

March 4, 1963: Stanford Lecture Series, Monday, 4:00 P.M., Room 320 Geology Building; Dr. Adolph Knopf, Stanford, "Measuring Ages of Rocks in Years and it's Application to Geologic Problems".

March 4, 1963: Monday evening, 7:30 P.M., Bakersfield College, Science Building, Room 56; Dr. J. H. Spotts, Cal. Research, "Sand Grain Orientation and Imbrication in Turbidity Current Sandstones".

March 6, 1963: Wednesday noon, U.S.C., Room 104, Geology "A" 855 W. 37th St.; "The Kilauea Eruptions of 1959-1960" (U.S.G.S. color motion picture).

March 14, 1963: Alaska Geological Society, Thursday evening, 8:00 P.M., City Council Chambers, Anchorage; Bob Chapman, U.S.G.S., "Geochemical Prospecting".

April 25-26, 1963: A.A.P.G., S.E.G., S.E.P.M., Annual Meeting, Pacific Sections, Biltmore Hotel, Los Angeles.

BIBLIOGRAPHY OF RECENT PUBLICATIONS

U. S. GEOLOGICAL SURVEY

Professional Paper 440-F: Chemical composition of subsurface waters, by D. E. White, J. D. Hem, and G. A. Waring.....\$1.50

Professional Paper 440-S: Chemical composition of sandstones--excluding carbonate and volcanic sands, by F. J. Pettijohn.....\$.25

Bulletin 1111-H: Geologic reconnaissance of the Yukon Flats district, Alaska, by J. R. Williams.

.....
CIRCULARS (Free on Application to the U. S. G. S.)

C 468: Ground-water studies and analog models, by C. J. Robinova. 12 pages.

C 469: Water and the Southwest--What is the future: by H. E. Thomas. 15 pages.

CALIFORNIA DIVISION OF MINES AND GEOLOGY

Special Report 71: Geology of Butler Estate Chromite mine, Southwestern Fresno County, by Robert A. Matthews.....\$1.00

Special Report 52-A: Index to geologic mapping of California, 1957-1960. (Supplement to Special Report 52).....\$1.00

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 73,
no. 12, December 1962

Revised structural sequence of pre-Cretaceous metamorphic rocks in the southern Klamath Mountains, California, by Gregory A. Davis and Peter W. Lipman.

Reconnaissance geology of Lower Taylor Valley, Victoria Land, Antarctica, by E. E. Angino, M. D. Turner, and E. J. Zeller.

THE GEOLOGICAL SOCIETY OF AMERICA (419 West 117th Street, New York 27, New York)

Petrologic Studies: A volume in honor of A. F. Buddington, by A. E. J. Engel, Harold L. James, and D. F. Leonard, Editors. 660 pages.
Members.....\$ 7.50
Retail.....\$12.00

Special Paper 69: Determination of volcanic and plutonic plagioclases using a three- or four-axis universal stage, by David B. Slemmons. 64 pages, 12 plates (with color).....\$1.25

Special Paper 70: Mechanics of thermal contraction cracks and ice-wedge polygons in permafrost, by Arthur H. Lachenbruch. 63 pages, 2 plates, 13 figures, 4 tables.....\$1.00

Special Paper 71: Displacement along the San Andreas Fault, California. (62 pages, 1 plate, 6 figures) by John C. Crowell.....\$1.00

Special Paper 72: Pre-Tertiary stratigraphy and structure of northwestern Nevada, by N. J. Silberling and Ralph J. Roberts.....\$1.00

JOURNAL OF GEOPHYSICAL RESEARCH, vol. 68, no. 1, January 1963

Sediments at proposed 1000 drilling sites, by Maurice Ewing and John Ewing.

Geophysical investigations in McMurdo Sound, Antarctica, by Edwin S. Robinson

Gravity Survey of Chilean Antarctic bases, by Theodore J. Cohen

Anisotropy of magnetic susceptibility of rocks and minerals, by S. Uyeda, M. D. Fuller, J. C. Beishe, and R. W. Girdler

Magnetic anisotropy and paleomagnetism, by M. D. Fuller

AMERICAN JOURNAL OF SCIENCE, vol. 261, no. 1, January 1963

Geologic features demonstrating aridity of McMurdo Sound, area, Antarctica, by Robert L. Nichols

The solubility of Carbon Dioxide above 100°C in water and in Sodium Chloride solutions, by A. J. Ellis and R. M. Golding

SCIENCE, vol. 139, no. 3549, 4 January 1963

Spiral flow in rivers, shallow seas, dust devils and models, by W. F. Tanner

Recent recession of tropical cliffy coasts, by R. J. Russell

SCIENCE, vol. 139, no. 3550, 11 January 1963

Tertiary Lake deposits in Western Coterminous United States, by J. H. Feth

Biology and the nature of science, by George Gaylord Simpson

ECONOMIC GEOLOGY, vol. 57, no. 7, November 1962

Trace element distribution in the Searchlight, Nevada quartz monzonite stock, by J. N. Shrivastava and P. D. Proctor

Occurrences of sepiolite in Utah and Nevada by A. J. Ehlmann, L. B. Sand and A. J. Regis

WORLD OIL, vol. 156, no. 1, January 1963

Crooked hole problems and techniques analyzed with drilling analysis charts, by M. S. Legge and Alvin Samuels

How to correct records for extraneous seismic energy by Paul E. Jeffers

How to minimize blowouts and lost circulation, by W. B. Huthnance

OIL AND GAS JOURNAL, vol. 61, no. 1, January 7, 1963

Let's have a look at the trends in exploration, by John S. Kelly

'63 will be busy year in Australia

OIL AND GAS JOURNAL, vol. 61, no. 2, January 14, 1963

Radio--can it be a valuable tool for oil exploration? (Part 1), by Donald Slattery

Diamond drag bit trims drilling costs, by R. I. Peters and D. S. Rowley.

OIL AND GAS JOURNAL, vol. 61, no. 3, January 21, 1963

California has poor year for oil, gas discoveries

How equipment used in radio-wave exploration operates (Part 2), by Donald Slattery

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

Volume 17

Number 2



Richard L. Hester
Pauley Petroleum, Inc.
10000 Santa Monica Blvd.
Los Angeles 67, Calif.

DA

Return Requested

PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 17

March, 1963

Number 3

ASSOCIATION ACTIVITIES

JOHN CAMPBELL SPROULE NEW A.A.P.G. PRESIDENT

John Campbell Sproule of J. C. Sproule and Associates, Calgary, Alberta has been elected president of the American Association of Petroleum Geologists. Serving with him on the 1963-64 executive committee will be Thomas H. Philpott, Nilo Oil Co., as vice president; Robert E. Rettger, Sun Oil Co., Dallas, as past president; Robert E. King, American Overseas Petroleum, Ltd., New York, reelected as secretary-treasurer; and John C. Hazzard, Union Oil Co. of California as editor.

The new slate of officers will assume the responsibility of directing the Association at the close of the 48th annual meeting to be held in Houston, Texas March 25-28, 1963.

Retiring members of the present A.A.P.G. Executive Committee are past-president Mason L. Hill, Richfield Los Angeles; vice president Orlo E. Childs, Phillips Petroleum, Denver; and editor Grover E. Murray, Louisiana State University.

PACIFIC SECTION A.A.P.G. - S.E.G. - S.E.P.M. JOINT ANNUAL MEETING

The 1963 Joint Annual Meeting of the Pacific Sections A.A.P.G., S.E.G. and S.E.P.M. will be held April 25-26 in Los Angeles at the Biltmore Hotel. General Chairman of the convention is Robert Knapp. Publicity is being handled by Louis Canut.

An interesting and varied technical program has been arranged for this year's convention. The welcoming address will be given by A.A.P.G. Pacific Section President Richard B. Haines, Continental Oil Co. on Thursday morning. Papers of local interest as well as subjects of broad geological scope have been scheduled. An extra-terrestrial talk is programmed for the special luncheon on Friday, and a number of excellent exhibits will be on display during both days.

Arvin Dale and his 8 piece orchestra will highlight the Dinner Dance Friday evening.

A.A.P.G. DISTRICT REPRESENTATIVES ELECTED

District representatives to the National A.A.P.G. from Los Angeles include:

Edward A. Hall	Union Oil Co.
Robert F. Herron	Signal Oil and Gas Co.
Aden W. Hughes	Consultant
Robert R. Knapp	Standard Oil Co.

Representatives from Bakersfield are:

Otto Hackel	Otto Hackel and Associates
Eugene F. "Bud" Reid	Occidental Petroleum

LOS ANGELES LUNCHEON MEETING

In a joint AAPG-SEG luncheon meeting Mr. L. C. Pakiser of U. S. Geological Survey, Denver, Colorado, spoke on "The Structure of the Crust and Upper Mantle in the Western United States". This well attended talk was held at the Rodger Young Auditorium on February 2, 1963.

ABSTRACT:

Seismic waves generated by underground nuclear and chemical explosions have been recorded in a network of nearly 2,000 stations in the western United States as a part of the VELA UNIFORM program. The network extends from eastern Colorado to the California coastline and from central Idaho to the border of the United States and Mexico.

The speed of compressional waves in the upper-mantle rocks ranges from 7.7 km/sec in the southern part of the Basin and Range province to 8.2 km/sec in the Great Plains province. In general, the speed of compressional waves in the upper-mantle rocks tends to be nearly the same over large areas within individual geologic provinces.

Measured crustal thickness ranges from less than 20 km in the Central Valley of California to 50 km in the Great Plains province. Changes in crustal thickness across provincial boundaries are not controlled by regional altitude above sea level unless the properties of the upper mantle are the same across those boundaries. The crust tends to be thick in regions where the speed of compressional waves in the upper-mantle rocks (and presumably the density) is high, and tends to be relatively thin where the speed of compressional waves in the upper-mantle rocks (and density) is lower. Within the Basin and Range province, crustal thickness seems to vary directly with regional altitude above sea level. Evidence that a layer of intermediate compressional-wave speed exists in the lower part of the crust has been accumulated from seismic waves that have traveled least-time paths, as well as secondary arrivals (particularly reflections).

On a scale that includes many geologic provinces, isostatic compensation is related largely to variations in the density of the upper-mantle rocks. Within geologic provinces or adjacent provinces, isostatic compensation may be related to variations in the thickness of crustal layers. Regions of thick crust and dense upper-mantle have been relatively stable in Cenozoic time. Regions of thinner crust and low-density upper-mantle have had a Cenozoic history of intense diastrophism and silicic volcanism.

SACRAMENTO PETROLEUM ASSOCIATION OFFICERS NAMED

President:	B. R. "Swiss" Holmes, Shell Oil Company
Vice President:	J. M. Jones, Southland Royalty Company
Secretary:	Harry Wiese, Schlumberger
Treasurer:	A. Drake, Texaco, Incorporated

EXECUTIVE COMMITTEE, PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Richard B. Haines	President
Spencer F. Fine	Vice-President
Richard D. Stewart	Secretary
Eugene R. Orwig	Treasurer
John H. Van Amringe	Editor
Irving T. Schwade	Past President
Harrison C. Jamison	Alaska Representative
Edward A. Hall	Coast Representative
William J. Edmund	Sacramento Representative
James L. O'Neill	San Joaquin Representative

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 California.

Editor:	Jack Van Amringe
Assistant Editors:	
Activities	Tom Wright
Calendar	Alfonso Escalante
Selected Bibliography	Lucy Birdsall
Cartoonists:	Mort Kline & Harold Sullwold
Personal Items:	Don Rogers
Correspondents:	
Alaska	Richard Lyon
Coast	Jack Durrie
Los Angeles	Mike Maxwell
Northwest	Bob McCollom
Sacramento	Dorman Graves
San Francisco	Gordon Oakeshott
San Joaquin	Rod Colvin
Membership Secretary	Pat Metcalf

Next deadline, March 27, 1963.

LOS ANGELES EVENING FORUM

Two interesting and informative talks were given at the Geological Forum meeting on January 21 in the Mobil Building Auditorium. Roy K. Mirdock, Senior Petroleum Engineer, Socony Mobil Oil Company spoke on "Fluid Injection and Secondary Recovery Techniques in Low Gravity Oil Reservoirs". Edward A. Gribi, Jr., widely known consulting geologist from King City, spoke on "Habitats of Heavy Oil in California".

ABSTRACT:

Two secondary recovery methods were discussed, both being thermal techniques specifically applicable to California low-gravity reservoirs.

COMBUSTION RECOVERY METHOD: Reservoir crude is burned in place with the combustion being kept active by air injected into the reservoir. Temperature in the zone of combustion will range from 800° to 2,000° F. The injected air supplies the reservoir drive mechanism and moves the oil to the producing wells by pushing forward a cold water flood followed by a water flood which has been heated by the combustion zone. In turn the hot water flood is followed by steam which moves forward the remaining oil. Left in place is a "fuel deposition zone" which is unrecoverable oil that serves as fuel for the advancing combustion front. In actual practice, a combustion zone will tend to follow zones of high gas saturation and an early breakthrough may reduce the efficiency of the sweep. Cost of the injected air was cited as one of the most important of several limiting economic factors in combustion recovery. Air requirements depend upon the amount of fuel burned and may range from 10 to 40 mcf/bbl. of oil produced. Cost of compressing air to down hole conditions will range from 4 cents to 6 cents/mcf.

HOT FLUID INJECTION PROCESS: This method supplies the reservoir drive and heat to the producing formations through the injection of steam or hot water to the oil sands. Steam supplies

three times the amount of heat as does hot water but the manufacturing of steam requires large volumes of very fresh water, whereas hot water injection does not require fresh fluid. The hot fluid injection process moves oil forward ahead of the hot fluid front. This front is preceded by a cold water flood. As in the case of combustion recovery, fingering and early breakthrough will decrease the efficiency of the sweep.

The relative merits of both processes were discussed and it was shown that in theory the combustion process has a slight economic edge in regard to fuel costs and efficiency. The combustion process, however, has disadvantages of high capital requirements, down hole corrosion, gas dilution, smog formation and the possibility of the burning front moving in the wrong direction.

HABITATS OF HEAVY OIL IN CALIFORNIA

Heavy oil, of less than 20° A.P.I. gravity, comprises nearly 1/3 of the daily production in California, and probably more than half of the presently known liquid hydrocarbon reserves. Previous workers have suggested that the heavy, asphaltic oils in California are related to plant or diatom source rocks as opposed to the light waxy oils derived from animal or foraminiferal source rocks (Taff, 1934). Barton (1934) studied Gulf Coast oils statistically and concluded that gravity increases with depth in sands of the same age and that gravity increases with age in sands of the same depth. Haerberle (1951) concluded that the depth and age along the Gulf Coast have only a general relation to gravity and that the rock facies are the controlling factor with gravities increasing from shallow water semi-continental sediments to deeper water marine facies. Weeks (1958) suggested that this variation might be explained by the differences in clays -- marine clays are active, bentonitic clays which have caused more "in-situ refining" of oils to take place than in the environment of the continental inactive, kaolinitic clays. Riecker (1962) after spectroscopic studies of fluorescent emissions of crude oils concluded that lighter oils have migrated farther while heavy oils are retained near the source by being adsorbed on the grains. Dunton and Hunt (1962) studied light hydrocarbons finding no traces of certain light ends in Recent sediments but varying amounts throughout the older rocks.

This study has analyzed oil occurrences in California and their relation to the geological environment. The marine sediments show a general increase in gravity with depth (with wide variants from the norm in the structurally highly deformed basins), but there is no relation between age and gravity. Non-marine sediments show an even wider scattering of gravities, 13° oil occurring below 11,000 feet and 40° oil at a few hundred feet. Upper Miocene rocks in the Kern Arch area show a definite trend from low gravity oils in the thin non-marine part of the section to lighter oils in the thicker marine basinal facies. Lower Miocene rocks of equivalent thickness in the San Joaquin Basin contain lighter oils in the marine facies than in the non-marine facies. Marine rocks of the same age include heavy oils along the west side of the Basin where there are numerous unconformities in the section. Water depth studies of Middle Miocene rocks show a definite straight-line correlation in the San Joaquin Basin between increasing water depth and increasing gravity, yet shallow water non-marine rocks of the same age in the same basin contain high gravity oils. Plotting gravities against sand content of the Repetto formation in the Los Angeles Basin shows the low gravity oils concentrated at the shale edges and the highest gravity oils occurring in the blanket sand areas. This correlation occurs in many other parts of the section, such as the Stevens sand series of the San Joaquin Basin.

It is suggested that oil originated near the shale edges with its initial composition and gravity controlled by the clay composition of the rocks, active clays producing lighter oils and inactive clays producing heavier oils. These oils were modified by migration, the heavier oils being retained by adsorption on sand grains near the source. Some modifications of the oil were caused by "in-situ refining" due to heat and pressure relating to depth of burial and due to chemical makeup of the sediments. Also, oils were undoubtedly modified by oxidation or evaporation of light ends wherever they became exposed to the atmosphere, such as near surfaces that later may become unconformities. The abnormal quantities of heavy oil in California sediments may be related to the high siliceous content of the shales, silica tending to reduce the proportion of active clays and particles even in deeper water marine facies. Thus the inactive environment has produced heavier oils relatively unchanged by "in-situ refining." Conversely, non-marine facies frequently have a high proportion of active clays and, therefore, are often associated with lighter oils. Fruitful fields for additional research on the subject might be studies of gravity versus initial reservoir pressures to establish more useful gravity-depth relationships, gravity versus reserves to determine the relative importance of some of the factors discussed, gravity as it relates to clay content and composition and to original connate water, and more precise and sophisticated studies of thickness and facies to determine the depositional environments and subsequent geological history of the oil producing sediments.

COAST GEOLOGICAL SOCIETY

On February 12th, the Society heard Mr. Frank Weagant Geologist, with Franco-Western Oil Corporation, present a talk entitled "Geology and Developments of the Sacramento Valley".

ABSTRACT:

The Sacramento Valley has been one of the most active drilling areas in California for the last couple of years. Development of Eocene and Cretaceous dry gas production has been the primary objective, with some 350 wells drilled in 1962. There is no oil produced with this gas, the exception being an oil discovery last year near Brentwood by Shell Oil Company. Fourteen gas fields, with potentials of over 50 million MCF, have been discovered since 1958. The overall drilling success ratio, from a selected group of representative wells (major and independent companies), has been about 1:26. One and one-half billion MCF reserves have been added since 1958, placing the present total gas reserve estimate for the Valley at three to four billion MCF.

The Sacramento Valley is generally a flat, north-south-trending valley, bordered on the east by the Sierra Nevada and on the west by the Coast Ranges. Major exceptions to the flatness include the Marysville Buttes, the east-west-trending Rio Vista-Thornton Arch, and the Colusa High.

The producing horizons are Eocene and Cretaceous sands of beach, deltaic and turbidite variety. The sands were deposited in alternating shallow and deep water marine basin environments and overlies some 40,000' of Lower Cretaceous (Shasta) and Upper Jurassic (Knoxville) sedimentary rocks which are probably of Sierra origin. Generally, the shallow water transgressive-regressive sands are more of a blanket type and have

good porosities and permeabilities while the deeper-water sands tend to be lenticular and have poor porosities and permeabilities. The marine producing formations are overlain by a non-marine Plio-Miocene sequence.

The basin sedimentary rocks overlap igneous basement rocks at a gentle dip to the east, but on the west they dip steeply, are intensely folded, and overlie metamorphic basement rocks. Due to erosion the section of rocks now present represents only a small portion of the original deposition.

Major structural features include the Rio Vista-Thornton Arch, Stockton (thrust) fault, Midland (normal) fault, subsurface submarine gorges, and early Pliocene intrusives. Faults are generally lateral, however, evidence supports a great deal of vertical movement. Large pressure discrepancies have been noted on opposite sides of faults, with lesser pressure and better reservoirs on the down-thrown sides. Traps are both pure stratigraphic, and combinations of structural and stratigraphic. The gorges are primarily filled with marine shales, but their few sands have been found to be gas productive.

The relatively complete absence of oil in the Sacramento Valley is still an unanswered question. It is possibly due to ecologic differences.

Due to the varied structural and stratigraphic conditions within the Sacramento Valley, there are undoubtedly still many opportunities for exploration and development.

At the January 8th meeting in Ventura, the Society presented Dr. S. R. Silverman of Cal Research, speaking on "Geochemistry Behind The Iron Curtain".

ABSTRACT:

Dr. Silverman was a member of a six-man geochemist delegation that visited Russia and Hungary as part of the cultural exchange program. This group visited eleven scientific geochemical institutes, two universities, and two government institutes, in addition to a number of oil producing areas such as Baku.

The increasing Russian emphasis on geochemistry is demonstrated, not only in the number of institutes with over 400 scientific personnel, but also by the firm indoctrination of a third of the country's 7,000 petroleum geologists. Scientific personnel engaged in this field probably outnumber U. S. geochemists by over 10 to 1. These Russians make strong efforts to keep up with all foreign literature, with possibly a third of them being able to translate English.

Their basic research has gone beyond the study of chemistry of minerals, oil and hydrocarbon components in rock and soils, with much endeavor in the genesis and migrational history of hydrocarbons. The other main field of study is in geochemical prospecting, and extends to tying in structural occurrence, interpretation of stratigraphic trends, and tectonic deformation. The quality of the Russian efforts in geochemistry was described as being on a par or superior to that of the United States. In the study of isotopes they were considered to be lagging behind.

Dr. Silverman and others of the delegation were invited to give lectures at the various institutes, and the coming Russian delegation will be expected to reciprocate. The U. S. delegation felt they received "red-carpet" treatment. Their hosts were quite liberal in providing technical literature and data, and eager in the exchange of ideas and technical discussion.

The group's trip to Baku was a highlight, as they viewed a continuing oil field development, and also saw and filmed ancient buildings, the Sultan's palace, and other remains of the old city. The Russians continuously drill on platforms in the Caspian Sea, and the many miles of trestles support what amounts to a "city" of facilities. The producing life of a well may only be four years, due to the terrific corrosion problems. Automatic drilling rigs have been tried, but candid evaluations describe their best performance as being noted at exhibitions.

The delegation had the opportunity to visit many other places of interest, such as Leningrad, Volgograd, and Budapest, Hungary. A geochemical convention was attended at the latter city.

The high prices in Russia were described as being offset by high pay for professional and technical personnel. Many fine slides were shown of government buildings, famous palaces and churches. Most of the latter have been converted to museums. These and other cultural attractions draw much interest from the Russians.

The exploratory activity is fully state-controlled, and it may be deduced that a rank doodlebug wildcat is an impossibility. Success ratios of exploratory wells are subject to as many qualifications as in the U.S. One Russian geochemical director offered a 70 percent success figure, but the speaker pointed out this included many newly-developed areas with surface features such as anticlines. In most exploration, geology and geophysics have also been used, and oil scientists in these fields would also claim responsibility for success. Russia now has the advantage of having in recent times found new, relatively unexplored basins, in which to use an advancing industrial skill. There were said to be several thousand field parties active in geochemical, geological, and other methods of exploration.

Along with having the new basin areas to explore, Russia has utilized the past experience and technology of the free world. A forthcoming API publication will describe the findings of the touring geochemists. Within Russia itself, there are a number of geologists who question geochemical prospecting success. Many of the Russian scientific efforts are likely to have a successful future in oil development.

LETTERS TO THE EDITOR

Mr. James Jones
Colossal Oil Company

Dear Mr. Jones:

The first of the year I wrote to you and asked permission to twitch the spots where the Eight test holes will be drilled on the Co. property at Rancho Los Amigos.

I thought that you would at least have the decency to answer my letter.

As the national average of good wells are only 30-1, you don't have a job, you have a position. You can take any kid off the street and get that average.

Some day one of us twitchers will get to Colossal Oil and then you are going to have to work for your job.

Sincerely,

V. W. B.

DISTINGUISHED LECTURE SERIES

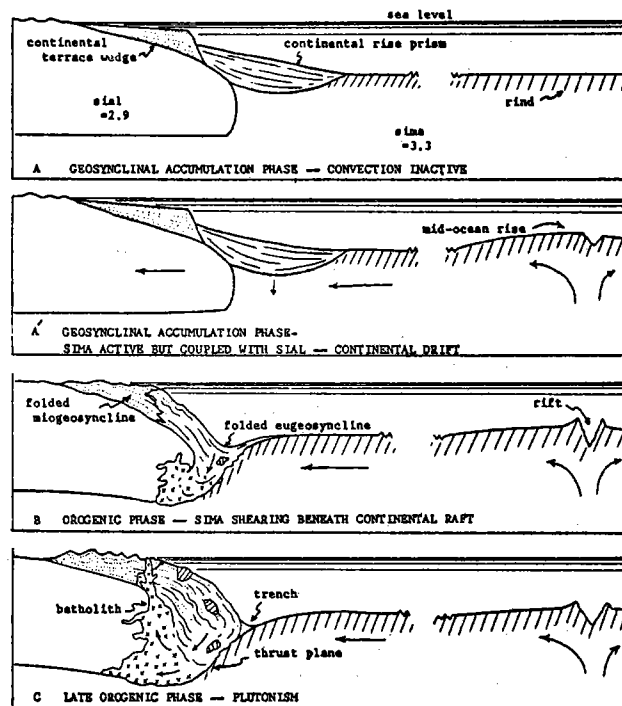
A most fascinating and thought-provoking lecture was given by Dr. Robert S. Dietz, U. S. Navy Electronics Laboratory, San Diego, to Los Angeles members at Rodger Young Auditorium February 18 and to Northern Geological Society members February 20 on "Continent and Ocean Basin Evolution by Sea Floor Spreading" or otherwise known as "Commotion in the Ocean".

ABSTRACT:

Following a concept of highly mobile and translating sea floors of Hess, sea floor spreading is envisioned as the fundamental process creating continents and ocean basins. Accordingly, the sea floor moves out in opposite directions from the mid-ocean rises. The gap is filled by new strips of sea floor created from the ultrabasic mantle. By this giant conveyor-belt action, protocontinental rock is eventually piled up as rafts of sial, continental islands in the world-encircling sima. Thermal convection cells in the mantle provide the fundamental driving force and the mid-ocean rises mark their divergence while the continents tend to lie over the convergences. The principal novelty of this concept is that no fixed layer separates the sea floor from the convection process, rather the ocean bottom is the exposed and outcropping limbs of this convection. Accordingly, it is useful to consider the supra-mantle substance beneath the ocean (serpentine and spilite plus sediment) as only a "rind". In contrast, the buoyant sialic continents ride above this convection and are not invaded by it so that they alone are the true crust.

Although perhaps alarming at first thought, sea floor spreading is an orderly, evolutionary and actualistic process consonant with geologic history. Continents grow in area and thickness with time and the volume of the ocean basins increase as well to accommodate juvenile water. The continents are domains of compression and the ocean basins domains of tension, but the earth as a whole neither contracts nor expands. Continental drift occurs with the continents tending to move to convergence zones. The apparent youth of the sea floor is explained by the destruction of the old floor and replacement by new sea floor.

A new rationale is offered for the development of geosynclines by Sea Floor Spreading.

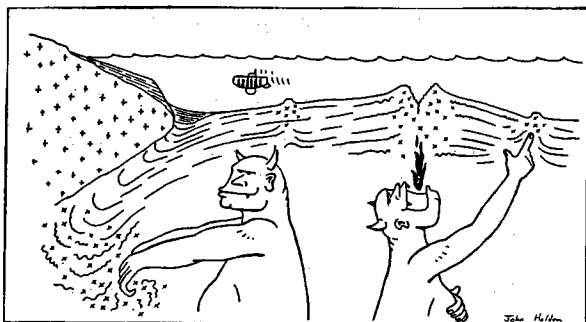


A Schematic time-sequence diagram showing an actualistic concept of geosynclines. Thermal convection circulation of the mantle is assumed to be the fundamental diastrophic force. The ocean floor is considered crustless in the sense that only the sea floor itself is an upper boundary to convection circulation. The oceanic rind is thought to be mostly serpentinized peridotite.

A' This is an alternate possibility (and my preferred view). Geosynclinal accumulation takes place during tectonic quiescence of the continental margin, but this is maintained in spite of sea floor spreading of the ultrabasic sima. The continental raft is coupled so that continental drift occurs.

B Upon decoupling, the sima shears beneath the continent initiating an orogenic cycle. The continental rise is compressed, folded and thrust against the continental raft, being added marginally to it. The miogeosyncline is also folded but to a lesser extent. It is only slightly metamorphosed. The black masses are symbolic of ultramafic serpentine masses which are broken off pieces of the ocean floor incorporated in the eugeosyncline.

C The late orogenic or plutonic period is shown. A trench has developed, marking a thrust plane along which the sea floor pushed beneath the continent. The surficial sea floor sedimentary layers and new detritus carried into the trench is thrust under the continents and sialized, and batholiths form. Water, provided by de-serpentinization of the oceanic rind, helps to flux this reaction. Once the shearing ceases and the mountains have eroded, the conditions are appropriate for the commencement of phase "A" again.



Anthropomorphic View

This is sea floor spreading by the anthropomorphic view. Perhaps the nether spirits, rather than thermal convection, are the cause of the commotion in the ocean.

A.A.P.G. - S.E.P.M. ANNUAL SPRING FIELD TRIP

The 1963 A.A.P.G. and S.E.P.M. Annual Spring Field Trip and barbeque is planned for May 24 and 25 at King City. The trip will encompass the Salinas Valley and geology on both sides of the San Andreas fault.

A geologic map of the area is being prepared, and a guide book will be published containing 25 to 30 papers by A.A.P.G. and S.E.P.M. members on subjects of interest pertaining to the area.

Max Payne is chairman of the field trip and is being assisted by Ed Gribbi, Dick Thorup, Stan Carlson and others. This trip should be a real good one!

CHANGE OF ADDRESS

Listed below are changes of address for those members listed in the latest directory.

GEDDES, R. D.
4367 Oakwood Ave. Apt. 101
Los Angeles 4, California

STOLZ, HARRY P.
4064 Chevy Chase Dr.
Pasadena, California

ZIEGLER, F. M.
P. O. Box 70
Sun City, California

BASHAM, W. L.
10 De Sabla Rd.
San Mateo, California

MCMICHAEL, L. B.
800 National Fidelity
Bldg.
Oklahoma City, Oklahoma

SHELDON, THEODORE D.
600 Petroleum Club Bldg.
Denver 2, Colorado

ELLSWORTH, THEODORE P.
324 Buckingham Lane
Houston, Texas

CASELL, JOHN K.
10537 Kibbee Ave.
Whittier, California

DOHLEN, HOWARD G.
Pacific-Oil Well
Logging, Inc.
22634 Iris Ave.
Torrance, California

DAVIS, E. FRED
1219 A.P. Giannini Bldg.
649 S. Olive St.
Los Angeles 14, Calif.

MCCOWN, KAYE R.
1311 N. Brand Ave.,
Apt. 8
Glendale 2, California

ROTH, LESTER H.
4055 Stevely Ave.
Apt. 31
Los Angeles, California

HACKEL, OTTO
Otto Hackel & Assoc.
3118 18th St.
Bakersfield, California

BRADY, THOMAS J.
Richfield Oil Corp.
Suite 623, M.L.C. Bldg.
Victoria Cross
North Sydney, N.S.W.
Australia

SPALDING, ROBERT W.
147 W. Cadiz Ave.
San Clemente, California

GARDETT, PETER H.
2055 Lombardy Rd.
San Marino, California

DYK, ROBERT
216 G, The Strand
Manhattan Beach, Calif.

SHEEHAN, JACK R.
11614 S. Grovedale
Whittier, California

JENKINS, ELMER L.
824 Moreno
Palo Alto, California

ADAMS, C. F. "MIKE"
1522 "Q" St., #3
Sacramento, California

Listed below are changes of address for those members not listed in the latest directory.

MOHAR, J., JR.
Tidewater Oil Co.
P. O. Box 1960
Durango, Colorado

THOMPSON, CRAIG D.
P. O. Box 1231
Midland, Texas

TRAVERS, WILLIAM B.
c/o General Delivery
Santa Fe Springs, Calif.

IRWIN, MARGARET I.
U. S. G. S.
503 Cordova Bldg.
Anchorage, Alaska

CUSATOR, JAMES A.
District Manager
Core Laboratories, Inc.
Box 666
Bakersfield, California

CERKEL, DAVID
810 Gonzales Dr.
San Francisco, Calif.

ESCALANTE, ALFONSO M.
Union Oil Co. of Calif.
9645 S. Santa Fe Springs
Rd.
Santa Fe Springs, Calif.

GUILLOU, ROBERT B.
2715 Clinton Terrace
Santa Barbara, Calif.

SHEPARD, JOHN B., JR.
Texaco, Inc.
3350 Wilshire Blvd.
Los Angeles 5, Calif.

BURNS, R. T.
437 S. Santa Anita
Pasadena, California

PITTMAN, GARDNER M.
Tidewater Oil Co.
Route 1, Box 197-X
Bakersfield, California

YOUNG, REX J.
Richfield Oil Corp.
P. O. Box 147
Bakersfield, California

CARLOS, DON F.
Tidewater Oil Co.
P. O. Box 1404
Houston 1, Texas

PERSONAL ITEMS

Bill King (Shell geologist - Sacramento) has resigned to accept a position with Aerojet General in Sacramento.

Ed Sprotte has taken over duties as District Geologist for Shell in Sacramento, replacing Adrian Maaskant who has been given a Division assignment in Bakersfield.

Walt Howe (Shell geologist) has been transferred from Sacramento to Los Angeles.

Through wind and rain, the Chuck Carey led Union Oil Company Valley Division golfers emerged triumphant over the Bob Lindblom led Standard Oilers in their Spring semi-annual golf classic for 1963.

Albert Dickas, a graduate of Michigan State, is now with Standard Oil Company in Bakersfield.

The recent rapid market rise of Sunray DX stock only stampeded the prevalent rumor that Sunray's California exploration activities would be dissolved. Official spokesmen have denied this, however, and with the calming market and subsiding panic, the Company's local geologists have resumed mowing their lawns.

Geologists at Marathon in Bakersfield are spending a good deal of time these days looking around the used-car lots and bicycle shops. Rumor has it that there will soon be no personal cars.

Dick Atchison (Marathon-Bakersfield) is quietly brushing up on his pidgin English in hopeful anticipation that he may one day be selected to return to his old wartime home, Papua, New Guinea.

Bruce Hill (ex-Amerada geologist in Sacramento) has joined Occidental Petroleum.

George Feister, Union Los Angeles, was seen wearing a tan he acquired in Fiji and Honolulu on his way back from Sydney, Australia. He was there on a temporary assignment while Doyle Graves was on vacation.

Her Majesty the Queen and His Royal Highness the Duke of Edinburgh will unveil on March 6 a stone at Bulwer Island on the outskirts of Brisbane, to mark the historic occasion of the first major discovery of oil in Australia. For the Auspicious occasion, Union will be represented by Mr. and Mrs. W. L. Stewart, Jr., Mr. and Mrs. A. C. Rubel and Mr. Dudley Tower. Kern County Land Company will be represented by Mr. and Mrs. G. G. Montgomery and Mr. and Mrs. D. M. Cochran.

Mr. Irvin Frazier, Texaco's Senior Scout retired March 1st after more than 38 years of service with the Company. Irv is a native of Galveston, Texas and attended Rice University and the University of Colorado. He joined Texaco in September 1915 as Clerk in the Land Department in Houston. Subsequently, he served in geological, engineering and management positions, becoming Senior Scout in March 1946.

The past 3-day weekend found irrepressible Union Oil geologists Gene Borax, Dick Stewart, Jack VanAmringe and their families wandering over the desert around Death Valley in search of fossils, rocks, scenery and reclusion. In spite of two blow-outs on his trailer on the way home, Jack pulled in in time for a few winks before sunrise. Gene, at last report, was resting comfortably in Baker, waiting for parts to his Microbus (new key or something).

The following transfers in the Exploration Department of Humble Oil and Refining Company's Los Angeles Area have been announced: Frank Palen and Dick Vivion to the Houston area, John Frick, Bill Johnson and Bill Burton to Corpus Christi, Dick Walters to New Orleans; Dave Clanton to Dallas; Don Rogers to Bakersfield.

CALENDAR

March 12, 1963: San Joaquin Geological Society Meeting, Tuesday evening, 6:30 P.M. - cocktail hour, 7:30 P.M. - dinner, Spanish Ballroom, Hotel El Tejon, Bakersfield. Speaking is Bruce D. Martin on "Rose-dale Channels - Evidence for Late Miocene Submarine Erosion in the Great Valley of California".

March 20, 1963: Wednesday noon, U.S.C., Room 104, Geology "A", 855 W. 37th St.; Bruce Martin, "Monterey Submarine Canyon, California".

March 21, 1963: Thursday evening, 7:30 P.M., Founders Hall, Room 129, University of Southern California; C. F. Davidson, University of St. Andrews, Scotland, "Chemical History of the Earth".

April 1, 1963: Monday evening, 7:30 P.M., Bakersfield College, Science and Engineering Building, Room 56; Biostratigraphy Seminar, "Oceanography of Monterey Bay" by Dr. Bruce Martin (Hancock Foundation).

April 1, 1963: Monday evening, 7:30 P.M., Founder's Hall, Room 129, U.S.C.; Prof. Rudolf Trumpp, Federal Institute of Technology, Zurich, Switzerland, "Flysch and Molasse".

April 3, 1963: Wednesday noon, U.S.C., Room 104, Geology "A", 855 W. 37th St.; Ron Kolpack, "The United States Antarctic Research Program, Oceanography".

April 3, 1963: Wednesday evening, 7:30 P.M., Founder's Hall, Room 129, U.S.C.; Prof. Rudolf Trumpp, Federal Institute of Technology, Zurich, Switzerland, "Life History of a Mountain Chain: The Alps".

April 23-26, 1963: A.A.P.G., S.E.G., S.E.P.M., Annual Meeting, Pacific Sections, Biltmore Hotel, Los Angeles.

NURSERY NEWS

Bob and Peggy Carlson (Union Oil-Bakersfield) welcomed their (7th) seventh (7th) child, Andrew, born January 30, 1963. This addition brings the roster to six boys and one girl.

BIBLIOGRAPHY OF RECENT PUBLICATIONS

U. S. GEOLOGICAL SURVEY

Bulletin 1122-D: Geology of the Anlauf and Drain quadrangles, Douglas and Lane Counties, Oregon, by Linn Hoover.....\$1.00

Bulletin 1140-A: Adsorption of cesium on clay minerals, by J. S. Wahlberg and M. J. Fishman...\$.20

Bulletin 1152: Analytical methods used in geochemical exploration by the U.S. Geological Survey, by F. N. Ward, H. W. Lakin, F. C. Cannery, and others.....\$.45

Water Supply Paper 1495-L: Hydrology of stock-water development in the Ely Grazing District, Nevada, by C. T. Snyder.....\$.50

Water Supply Paper 1495-O: Hydrologic and geologic reconnaissance of Pinto Basin, Joshua Tree National Monument, Riverside County, California, by Fred Kunkel.....\$.60

Water Supply Paper 1496-D: Occurrence and distribution of strontium in natural water, by M. W. Skougstad and C. A. Horr.....\$.25

Water Supply Paper 1576-A: Geology and promising areas for ground water development in the Hualapai Indian Reservation, Arizona, by F. R. Twenter.....\$1.50

Water Supply Paper 1619-O: Problems of utilizing ground water in the West-side business district of Portland, Oregon, by S. G. Brown.....\$.65

Water Supply Paper 1544-G: Calculation of resistance and error in an electric analog of steady flow through nonhomogeneous aquifers, by R. W. Stallman.....\$.15

Professional Paper 383-B: Geologic effects of the high-explosive tests in the USGS Tunnel area, Nevada Test Site, by J. M. Cattermole and W. R. Hansen.....\$1.50

Professional Paper 434-C: Use of correlation to improve estimates of the mean and variance, by M. B. Piering.....\$.20

Professional Paper 304-A: Seismic and gravity surveys of Naval Petroleum Reserve No. 4 and adjoining areas, Alaska, Part 4: Geophysics, by J. R. Woolson and others.....\$2.50

Professional Paper 414-E: Algebraic and Graphic methods for evaluating discordant lead-isotope ages, by L. R. Stieff, T. W. Stern, and R. N. Eicher.....\$.25

Professional Paper 440-Y: Data of Geochemistry, Sixth Edition, Chapter Y. Marine evaporites, by F. H. Stewart.....\$.60

MAPS:

GP-352: Aeromagnetic map of part of the Dillingham quadrangle, Alaska, by John R. Henderson, Joseph L. Vargo, and others.....\$.50

GP-354: Aeromagnetic map of parts of the Ugashik and Karluk quadrangles, Alaska, by Gordon E. Andreason, William J. Dempsey, Joseph L. Vargo, and others.....\$.50

OPEN FILE REPORTS: (Deposited in Los Angeles, Inspection only)

Placer tin deposits in central Alaska, by R. M. Chapman, R. R. Coats, and T. G. Payne. 53 p., 13 figs., 6 tables

Preliminary geologic map of the Umiat-Maybe Creek region, Alaska, by W. P. Brosge and C. L. Whittington. 1 map (2 sheets), 1 explanation sheet.

THE GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 74 no. 1, January 1963

Cathedral Cliffs formation, the early acid breccia unit of northwestern Wyoming, by William G. Pierce

Alteration of Chinle siltstone and uranium emplacement, Arizona and Utah by A. M. Abdel-Gawad and Paul F. Kerr

Late Tertiary volcanic rocks and plant-bearing deposits in British Columbia by W. H. Mathews and Glenn E. Rouse

CALIFORNIA OIL WORLD, Second Issue, January 1963, vol. 56, no. 2.

Union opens way to Australia's oil future, by Richard Sneddon.

THE ORE BIN, vol. 25, no. 1, January 1963 (State of Oregon, Department of Geology and Mineral Industries)

Oil and gas exploration in 1962, by Vernon C. Newton, Jr.

JOURNAL OF GEOPHYSICAL RESEARCH, vol. 68, no. 2, January 15, 1963

Volcanic ash deposits as a guide to atmospheric circulation in the geologic past, by Gordon P. Eaton

A Green's Function for determining the deformation of the earth under surface mass loads. 2. Computation and numerical results, by I. M. Longman

JOURNAL OF GEOPHYSICAL RESEARCH, vol. 68, no. 3 February 1, 1963

Internal waves of tidal period off Southern California, by H. J. Summers and K. O. Emery

The Caltech digital seismography, by Wayne F. Miller

Physical properties of Mohole Test Site basalt, by W. H. Somerton, S. H. Ward, and M. S. King

A gravity and magnetic survey of the Uinta Mountains, by John C. Behrendt and Edward Thiel.

The thickness of continents, by J. Weertman

Rigidity of the earth's core and fundamental oscillations of the earth, by H. Takeuchi, M. Saito, and N. Kobayashi

Mineral assemblages in a model mantle composition, by D. H. Green and A. E. Ringwood

SCIENCE, vol. 139, no. 3555, 15 February 1963

Pattern of uplifted islands in the main ocean basins, by J. T. Wilson

Ripple marks show that countercurrent exists in Florida Straits, by R. J. Hurley and L. K. Pink

Polygonal fracture and fold systems in the salt crest, Great Salt Lake Desert, Utah, by F. W. Christiansen

OIL AND GAS JOURNAL, vol. 61, no. 4, January 28, 1963

A geologist looks at seismic shooting, by John M. Cochrane. Review-Forecast Section

OIL AND GAS JOURNAL, vol. 61, no. 6, February 18, 1963

Wildcatters press hunt in deep water off California
by Carl Lawrence

What do near-surface signs really mean in oil finding, (Part 1 of 2) by Robert C. MacElvain

Where we stand on used drill-pipe inspection, by Alexi P. Maradudin

New ways to test gas wells, by Fredrico Fortunati

OIL AND GAS JOURNAL, vol. 61, no. 7 February 25, 1963

What do near-surface signs mean in oil finding?
Part 2 by Robert C. MacElvain

Suddenly next summer: A new offshore theater, by Frank J. Gardner

BOOKS

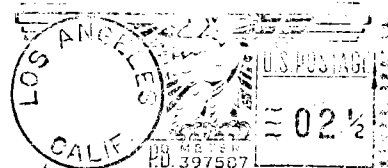
Geology of the Arctic. Gilbert O. Raasch, editor. Proceedings of the First International Symposium on Arctic Geology, Jan. 11-13, 1960, under auspices of the Alberta Society of Petroleum Geologists. 2 vol. and 32 figs. and tables under separate cover. Toronto, University of Toronto Press, 1961.

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

Volume 17

Number 3

BLK RT.
ADL 1/8¢ PD.



Richard L. Hester
Pauley Petroleum, Inc.
10000 Santa Monica Blvd.
Los Angeles 67, Calif.

DA

Return Requested

PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 17

April, 1963

Number 4

ASSOCIATION ACTIVITIES

A.A.P.G.-S.E.G.-S.E.P.M. THIRTY-EIGHTH ANNUAL MEETING BILTMORE HOTEL, LOS ANGELES

The Annual Joint Meeting of the Pacific Sections of the American Association of Petroleum Geologists, the Society of Exploration Geophysicists, and the Society of Economic Paleontologists and Mineralogists, will be held for the first time in the Spring at the Biltmore Hotel, Los Angeles, on Thursday and Friday, April 25 and 26. Registration will begin at 8:00 A.M.

General Chairman Bob Knapp and his able assistants have worked hard to make this an outstanding convention. The technical program this year includes papers of local interest with emphasis on the California off-shore and the Northern San Joaquin-Sacramento Valley gas province, as well as subjects of broad geologic scope. Some highlights of the technical sessions include; Thursday morning, Engr. Garcia Rojas, Manager of Exploration, Petroleos Mexicanos, speaking on "Petroleum Geology of Baja California"; Thursday afternoon, Orlo E. Childs, U.S.G.S., on "Career Opportunities in Geology"; Friday morning, John C. Hazzard and W. R. Moran, Union Oil Co. speaking on "Structural Patterns Reflected in the Soil Mantle Overlying Tertiary Rocks, Dosht-i-Khavar Desert Basin, Iran"; and Friday afternoon, James R. McNitt, California Division of Mines on "Exploration and Development of Geothermal Power in California".

In addition to the fine technical program, the following activities are scheduled:

The joint AAPG-SEG-SEPM Annual Luncheon will be held in the Renaissance Room, 12:15 P.M., Thursday, April 25, 1963. Tickets are \$4.75 per person including tax and gratuity. Speaker: Dr. Roy G. Brereton, Staff Scientist, Space Science Division, Jet Propulsion Laboratories. Topic: "NASA-JPL Program for Lunar Exploration".

SEPM Annual Dinner Meeting will be held in Conference Room No. 2, at 7:00 P.M., Thursday, April 25, 1963. The program will be "Mesozoic Rocks and Scenery, South Central Alaska", by David L. Jones. Tickets are \$4.75 per person including tax and gratuity.

Unofficial College Alumni Luncheons will be held at 12:15 P.M., Friday, April 26, 1963. Location of luncheons for Stanford, U.C., U.C.L.A., and U.S.C. will be posted at the Registration Center; all other colleges will make their own arrangements. Tickets are \$4.00 per person including tax and gratuity.

Women's Activity Center will be in Conference Room No. 3. The Center will be open from 9:00 A.M. to 5:00 P.M. both days of the meeting.

The Annual AAPG Dinner Dance (semiformal) will be held in the World Famous Biltmore Bowl of the Biltmore Hotel April 26 with cocktails at 7:30 P.M. and dinner at 8:00. Music will be Arvon Dale and his orchestra from the Biltmore's Rendezvous Room. Individual tables will accommodate groups of eight, and it is suggested that one person be responsible for getting his group together and submitting the names of the group to be seated at his table. The cost of \$10.00 includes two cocktails, dinner and dancing until 1:00 A.M. Please make checks payable to AAPG, Pacific Section, and mail to: A. Kane, 612 S. Flower St., Room 640, Los Angeles, California.

Prepaid tickets may be picked up at the Biltmore April 25 or 26 at the ticket booths.

Convention goers will be interested in the many exhibits featured in the Ballroom Foyer. A photographer will be available at one of the booths to take individual pictures of the general membership for the forthcoming revision of the Pacific Section AAPG-SEG-SEPM Directory. All members are urged to update their present directory pictures at this convenient time. The cost will be \$1.50 per person.

Tickets for the various functions will be available at the registration desks in the Main Galaria, including tickets to the Dinner Dance for those who make last minute arrangements.

Registration Desks will be open from 8:00 A.M. to 5:00 P.M. on Thursday, April 25, and 8:00 A.M. to 12 noon on Friday, April 26. Registration fees are \$3.50 for members and guests, and \$0.50 for students.

A message center will be maintained during the two days of the convention. The telephone number will be MADison 4-7581.

PACIFIC SECTION ELECTION

Results of the balloting for A.A.P.G. Pacific Section officers for the 1963-64 term are as follows:

President:	John E. Kilkenny	Union Oil Co.
Vice President:	Louis J. Simon	Texaco, Inc.
Secretary:	*Arthur O. Spaulding	City of Los Angeles
Treasurer:	Thomas R. O'Neill	Shell Oil Co.

*Art Spaulding has generously accepted the office of Secretary vacated by Secretary-elect John D. Frick (Humble) who has transferred to Corpus Christi, Texas.

The new officers will take office with the close of the Pacific Section Convention on April 26, 1963.

EXECUTIVE COMMITTEE, PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Richard B. Haines	President
Spencer F. Fine	Vice-President
Richard D. Stewart	Secretary
Eugene R. Orwig	Treasurer
John H. Van Amringe	Editor
Irving T. Schwade	Past President
Harrison C. Jamison	Alaska Representative
Edward A. Hall	Coast Representative
William J. Edmund	Sacramento Representative
James L. O'Neill	San Joaquin Representative

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 California.

Editor:	Jack Van Amringe
Assistant Editors:	
Activities	Tom Wright
Calendar	Alfonso Escalante
Selected Bibliography	Lucy Birdsall
Cartoonists:	Mort Kline & Harold Sullwold
Personal Items:	Don Rogers
Correspondents:	
Alaska	Richard Lyon
Coast	Jack Durrie
Los Angeles	Mike Maxwell
Northwest	Bob McCollom
Sacramento	Dorman Graves
San Francisco	Gordon Oakeshott
San Joaquin	Rod Colvin
Membership Secretary	Pat Metcalf

Next deadline April 26, 1963.

HEDBERG NAMED SIDNEY POWERS MEDALIST

The American Association of Petroleum Geologists announces selection of HOLLIS D. HEDBERG, Gulf Oil Corp., Pittsburgh, and Princeton University, to receive the Sidney Powers Memorial Medal, highest award of the Association. The award, the 16th given since it was established in 1943, is made in recognition of outstanding contributions and achievements in petroleum geology, and was presented to Hedberg at the Association's annual meeting in Houston, March 26.

Dr. Hedberg was born in Falun, Kansas, May 29, 1903. After undergraduate work at the University of Kansas and graduate studies at Cornell University, he entered foreign exploration, first with Lago Petroleum Corp., and subsequently with Mene Grande Oil Company. While on leave from Gulf, he completed work on the Ph.D. degree at Stanford University, receiving the degree in absentia in 1937. Transferred to the foreign producing division, Gulf Oil Corp., New York (1946) as chief geologist, he later became manager of exploration. In 1952 he was made chief geologist of the parent company in Pittsburgh and, subsequently, exploration co-ordinator (1953) and vice-president of exploration (1957). Since 1959, he has also been a special lecturer in geology at Princeton University.

An active and participating member of more than 20 scientific organizations, Dr. Hedberg is president of the American Geological Institute and chairman of the AMSOC ("Mohole") Committee of the National Academy of Sciences-National Research Council. He is also chairman of the U.S. committee on geology and geophysics for the 6th World Petroleum Congress, to be held this June in Hamburg, West Germany. He is a past-president of the Geological Society of America and of the International Subcommittee on Stratigraphic Terminology.

Dr. Hedberg has been a member of the Association since 1926, and an Associate Editor of the Bulletin since 1937. For the past 11 years, he has organized and prepared the papers on petroleum developments in Africa for the Bulletin. He is a past president of the Eastern Section of AAPG, and past-chairman of the Association committee on stratigraphic nomenclature.

Among Dr. Hedberg's contributions to geology are the following: development of techniques for utilizing heavy minerals in stratigraphic studies, use of micro-fossils for correlation and environmental determination, development of techniques for evaluating crude oils on the basis of indices of refraction and correlation with API gravity. He has also been a pioneer in the field of investigations into the quantitative importance of compaction of sediments, and in the organization of stratigraphic classification and terminology along rational lines.

SEVEN RECEIVE HONORARY AAPG MEMBERSHIPS

Seven recipients of Honorary Membership in The American Association of Petroleum Geologists were formally presented Tuesday, March 26, at the 48th annual meeting of the Association, in Houston. They are: ALFRED H. BELL, recently retired as Head, Oil & Gas Section, Ill. Geol. Survey; GEORGE V. COHEE, Chm., Geol. Names Committee, U.S.G.S., Washington; MRS. DOLLIE RADLER HALL, consultant, Broken Arrow, Okla.; MARCUS A. HANNA, consultant, Gulf Oil Corp., Houston; KENNETH K. LANDES, senior professor of geology, U. of Michigan; THEODORE A. LINK, consultant, Victoria, B.C., Canada; and GRAHAM B. MOODY, consultant, Berkeley, Calif.

This will bring to 49 the total number of living AAPG Honorary Members, and marks the first time a woman has been so honored. Mrs. Hall, associated with Amerada Petroleum Corporation, Tulsa, 1921-1950, is also the only woman Honorary Member of the Tulsa Geol. Society.

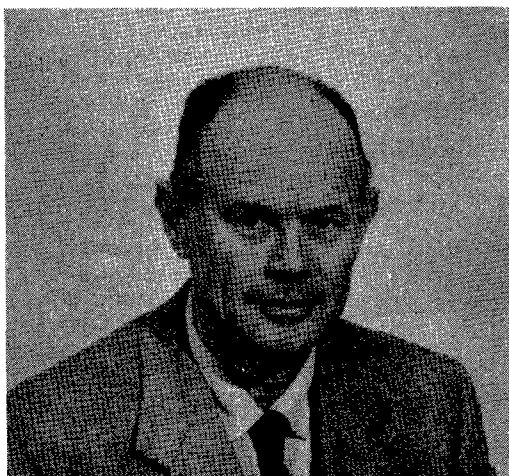
The seven have a combined 244 years of AAPG membership, five have served the Association as officers (Link and Moody are past-presidents), and all as committee chairmen. Two are natives of Indiana, with Oklahoma, Kansas, Washington, Colorado, and Canada contributing one member each.

Dr. Bell's work is credited with leading to the second bonanza discovery of oil in Illinois, in 1937; and Link's, in 1919, to the discovery of Norman Wells, Canada--the first production from Devonian reef reservoirs in Western Canada. Another searcher "behind the ranges" was Hanna, whose pioneer work on the Gulf Coast provided new concepts in the hunt for oil in that prolific area.

Scientific publications of the seven are numerous, and include Landes' textbook Petroleum Geology. Mr. Cohee was chairman of the committee that prepared the second edition of the Tectonic Map of the United States; and Mr. Moody was editor of the Petroleum Exploration Handbook.

NEW AAPG-SEG-SEPM DIRECTORY PLANS

A booth has been reserved at the 1963 Pacific Section Convention for the convenience of members who want new directory pictures taken. The new directory will be available in the spring of 1964. Members will receive return card questionnaires late this fall.



IN MEMORIAM

It is with feelings of deep loss that we report the death of Professor William C. Putnam, of the Geology Department at U.C.L.A. on Saturday, March 16, 1963. His passing happened at home in the evening, very quickly, as a result of a coronary attack, and without previous warning.

Dr. Putnam was born in Redding, California on May 21, 1908. He graduated from Stanford University in Geology in 1929, and took his M.A. there in 1930. From 1931 to 1938 he taught at Los Angeles City College, during which time he studied for the doctorate in Geology at the California Institute of Technology. He was awarded the Ph.D. in 1937.

In 1938 he came to U.C.L.A. as Instructor, becoming full Professor in 1948. From 1950 to 1957 he was Chairman of the Department. From 1943 until the end of the war in 1945 he was with the United States Geological Survey where he served both in Washington, and in the southwest Pacific area in Australia, New Guinea and the Philippines.

During his distinguished career at the University he served on innumerable committees, of the department, of the campus faculty and administration and of the entire University. His wisdom and forthrightness contributed extensively to the development of the University at many levels.

In his teaching he had sincere concern for the welfare of the beginning students who took his elementary courses which he taught with distinction. His contribution to the training of professional geologists at the junior, senior and graduate levels is reflected in the many students who took his courses, who are employed in industry and who are teachers of geology in many colleges and universities throughout the country.

Dr. Putnam was a member of many societies and he participated as officer and committee member in their activities. He was the author of a number of papers on California geology, his most significant contributions being on coastal terraces, and on glacial history in the Sierra Nevada.

For a time in 1930 Dr. Putnam was employed as a petroleum geologist, and he continued to maintain his interest in the petroleum field, especially in California, throughout his career. His membership in A.A.P.G. dates from 1943.

Dr. Putnam is survived by his wife, Evelyn and by his daughter, Margaret.

Cordell Durrell

Note: The friends of Professor William C. Putnam are establishing as a memorial to him a small collection of books to be especially marked, and placed in the Ralph D. Reed Library of the Geology Department at U.C.L.A. Anyone wishing to contribute may send a check made out to the Regents of the University of California, marked for the W. C. Putnam Memorial book fund, to Professor K. D. Watson, Chairman, Geology Department, University of California, Los Angeles.

COAST GEOLOGICAL SOCIETY

The regular meeting of the Coast Geological Society was held on March 12, at the Ventura Women's Center. Highlighting the evening was an interesting and beautifully illustrated talk by Major Donald J. Bowen, U.S.A.F., Point Mugu, entitled "The Pacific Missile Range". Major Bowen is the program manager for the Pacific Missile Range.

The United States presently has three ranges in which it is able to test missiles and launch space vehicles. The original, and most limited range, is at White Sands, New Mexico, completely within the continental United States. The Atlantic Missile Range (A.M.R.) has its headquarters at Cape Canaveral and extends down the south Atlantic. The Pacific Missile Range (P.M.R.) has launching sites at Vandenberg Air Force Base and Point Arguello, and extends into the west and south Pacific. These ranges are run by executive agents for each of the armed services and are used by all services for their testing.

Three types of programs are in effect at the Pacific Missile Range. They include the launching of (1) ballistic missiles, (2) orbital satellites, and (3) space probes. The heavier vehicles are sent up from Point Arguello. A list of ICBM's tested at PMR includes Thor, Atlas, Titan I, Titan II, and Minuteman. The latter has a 5500 mile range, and will eventually replace all other ICBM's.

Satellites of the Thor-Agena and Atlas-Agena types are sent up from PMR. Problems involved with this program are (1) putting the Agena into orbit, (2) communicating with it, and (3) recovering the pay load. Most returning pay-loads are picked up by airplanes before they hit the surface of the earth.

The space probes include Phoenix, for inexpensive, reliable, short range studies; Beanstalk, for communications studies; and the Blue Scout family, which is a variety of engines that can be interchanged to fit a particular shot. Special space probes have been Cambridge, which attempted to pinpoint the location of Hawaii exactly by triangulation, and Blue Scout Jr., a deep probe (20,000 miles) to investigate the outer Van Allen radiation belt.

An important future probe out of PMR may be the Dyna-Soar project. This involves putting a manned aerospace plane into orbit and having the pilot bring it back to earth by skipping along the outer edge of the atmosphere until it is slowed down enough to be brought all the way in. The power to launch such a shot would be provided by a Titan II vehicle with two additional booster rockets on the sides.

LOS ANGELES GEOLOGICAL FORUM

The Los Angeles evening Geological Forum Meeting held February 25, 1963 at the Mobil Auditorium heard David C. Callaway, General Exploration Co., speak on "Distribution of Upper Cretaceous Sands in the Sacramento and Northern San Joaquin Valleys". The abstract of Mr. Callaway's speech appears in the February issue of the P.P.G. Newsletter. Mr. John N. Thomson, Pohlman and Thomson, gave a talk entitled "Geology of the Kione Formation". The complete text of the speech is published in Selected Papers Presented to San Joaquin Geological Society, Volume I.

ABSTRACT:

The Kione formation is an Upper Cretaceous unit with a maximum thickness of 2,200' of alternating sands and shales encountered in the northern two-thirds of the Sacramento Valley, California. The formation is trough-shaped in gross form and is truncated by younger formations on its north, west and east sides. The formation disappears to the south by shaling out at the base into the Forbes formation. The Kione also shales out at the base to the north and west, and locally to the east.

The sand portion of the formation was derived from the Sierra Nevada to the east and was deposited in a marine environment. The Kione is generally considered to be of shallow water origin, although there is little direct evidence for this conclusion.

Gas is produced from the Kione in numerous fields in the northern portion of the Sacramento Valley. Salinities of formation waters and the heating qualities of the produced gas show a wide range of variation with no set pattern.

Shallow depths and favorable reservoir qualities make the Kione an attractive objective. Future exploration for Kione gas will be stimulated by the increasing amount of data available from the Sacramento Valley.

As an added attraction Mr. Ab Ten Dam, Consultant, Rome, Italy, spoke on "Geothermal Energy Developments".

ABSTRACT:

At present natural steam is utilized by electric plants in Italy, New Zealand, United States, Mexico and Iceland representing a total capacity of over 400,000 KW.

Exploration for geothermal energy shows many analogies with oil exploration. Steam-generating hot water is sought in porous and permeable reservoirs overlain by cap rock in structurally high positions. Most steam in geothermal fields originates from meteoric waters infiltrating porous formations heated by igneous bodies. It has been established that porous aquifers carry hot water in liquid form and that steam is only generated due to pressure release when a well is drilled into the reservoir.

The utilization of geothermal energy has been developed in a number of countries. The Larderello field in Italy produces three-fourths of the world's geothermally generated electricity. In 1905 a small, electric generator was set up in Larderello capable of lighting five light bulbs; in 1912 a small turbo-generator with a capacity of 250 KW was built for local use. Today the Larderello field has a total capacity of 300,000 KW and produces 2.3 billion KWh per year--sufficient for the entire Italian railroad

system which in fact consumes nearly two-thirds of the output of the field. Larderello has over 160 producing wells, some of which have been producing for 20 years. Average depth is 2,300', and the steam is dry having an average wellhead temperature of 200°C. Average production cost per KWh at Larderello is between .02 and .04 U.S. cents, which is lower than the largest, most recent hydroelectric or conventional thermal plants.

The second largest industrial application of geothermal energy is at Wairakoi on North Island, New Zealand. In 1960 a geothermal electric plant with a total capacity of 69,000 KW commenced operation at Wairakoi. By the end of 1963 this field will provide one-fifth of the total electric energy needs of North Island. The production cost per KWh is between .04 and .05 U.S. cents. The field has 26 wells on production exploiting saturated steam at wellhead temperatures ranging from 200° to 260°C, and produces from depths between 1,500' and 3,000'.

The third largest application of geothermal energy is at The Geysers in California where eight wells supply one turbo-generator having a capacity of 12,500 KW. Presently under construction is a second 12,500 KW unit scheduled to increase the capacity of the field to 25,000 KW by the end of 1963. The Pacific Gas and Electric Company buys the steam generated in The Geysers field at a cost of .25 cents per net KWh produced. Dry steam exploited by The Geysers field has a wellhead temperature ranging from 169.5° to 197.5°C produced from 820' to 1,050'. Some wells drilled in the early twenties for a very small electric plant providing power for a camping ground and a hotel have been in operation for 38 years.

The existing lack of interest in geothermal energy as the cheapest source of electric power comes from the traditional conservatism of the power companies; the oil industry, however, is familiar with the risk involved in exploration ventures and has the technical experience needed for the search of geothermal fields. In the next few years a growing number of geothermal fields will be developed, and due to its extremely low cost of production, geothermal energy will enter into competition with the conventional thermal and hydroelectric plants. The oil industry, as producer of one of the world's most versatile sources of energy, will have to take up this challenge to tap this tremendous energy provided by the heat of our own planet.

SAN JOAQUIN GEOLOGICAL SOCIETY

The regular monthly meeting of the San Joaquin Geological Society was held at the El Tejon Hotel in Bakersfield on March 12, 1963. Dr. Bruce D. Martin gave his paper on the "Rosedale Channel - Evidence for Late Miocene Submarine Erosion in the Great Valley of California". A stimulating discussion followed the presentation.

The abstract of this paper is published in the current March issue of the AAPG Bulletin. Dr. Martin will give this paper at the Pacific Section meeting in April.

NOTICE

Address all inquiries for Pacific Section cross sections and guidebooks to Harry Stuveling, c/o Comet Reproduction Service, 11515 E. Washington Blvd., Whittier, California.

TEMPLE AND PERRY
RECEIVE PRESIDENT'S AWARD

Peter G. Temple, Princeton Univ., Princeton, N.J., and Le Roy J. Perry, Esso REP, Bordeaux, France have been named recipients of the AAPG President's Award, presented by Robert E. Rettger on March 26, at the 48th annual meeting of the Association in Houston.

The award, consisting of a certificate and \$100 in cash, is given yearly to the author, or authors, under the age of 35, whose article in the Association's Bulletin of the previous year is judged by the Medal Award Committee the most significant contribution to petroleum geology.

Their article "Geology and Oil Occurrence, Southeast Turkey", in the September 1962 issue of the Bulletin, presents briefly the sedimentary and tectonic history of this region. The reconnaissance structural and stratigraphic mapping was carried out by Temple and Perry, then in the employ of Esso Standard of Turkey, over a three-year period in the Toros Mountains and on the Syrian Plain.

Peter G. Temple is a native of Montreal, Quebec, where he attended McGill Univ., receiving the B.Sc. degree, with honors, in 1956. On graduation, he was employed by Standard Oil Co. (N.J.), and was sent to Turkey as a field geologist, where he met Perry. From there, he was re-assigned to Esso Hellenic, Greece. Now on leave from Standard, he is attending Princeton University as a graduate student.

Le Roy J. Perry was born in Brooklyn, N.Y., and attended the Univ. of California, Los Angeles, receiving the M.A. degree in 1954. From 1951 to 1953 he was employed by the U.S.G.S. During 1954-55 he taught geology at Pierce Junior College in Los Angeles. In 1955 he attended the Univ. of Turin, Italy under a Fulbright fellowship. His work with Standard began in 1957. Assignments have taken him to Turkey, Greece, and, since 1962, France, where he is a member of the Regional Studies Group, Esso REP.

LOS ANGELES - SALVADOR
SISTER CITY BOOK EXCHANGE PROGRAM

The City of Los Angeles has recently adopted as a Sister City, the City of Salvador, Bahia, Brazil, under the worldwide People to People program authorized and sponsored by the U.S. Department of State. In Los Angeles, the program was founded by the Los Angeles Advertising Women, and is now a city-wide activity.

The Geological Society of UCLA is cooperating in the book exchange program with the special aim of sending geological literature to aid the library of the newly founded School of Geology of the University of Bahia, located in the City of Salvador. The Society is soliciting contributions of books or journals in earth sciences or in the field of petroleum engineering. Arrangements to pick up contributions promptly may be made by a telephone call to the secretary of the Geology Department, UCLA, at BRadshaw 2-8911, Ext. 2247 or 3350.

Contributions of books or journals in fields such as the other sciences, humanities, social sciences, arts, medicine, and others will be welcomed by the people of Salvador, and will also be picked up by the Geological Society of UCLA. Books in all fields coming from Salvador to Los Angeles will be housed in the UCLA Library.


PACIFIC SECTION
SOCIETY OF ECONOMIC
PALEONTOLOGISTS AND
MINERALOGISTS

8

AMERICAN ASSOCIATION
OF
PETROLEUM GEOLOGISTS

1963 ANNUAL SPRING FIELD TRIP
THE SEPM AND THE AAPG PRESENT THEIR
ANNUAL SPRING FIELD TRIP MAY 24th & 25th,
1963 TO BE HELD AT KING CITY.
THIS YEAR WE PRESENT

**SALINAS VALLEY AND
SAN ANDREAS FAULT**



FRIDAY MAY 24th
(AFTERNOON)

SATURDAY MAY 25th
(ALL DAY FIELD TRIP)

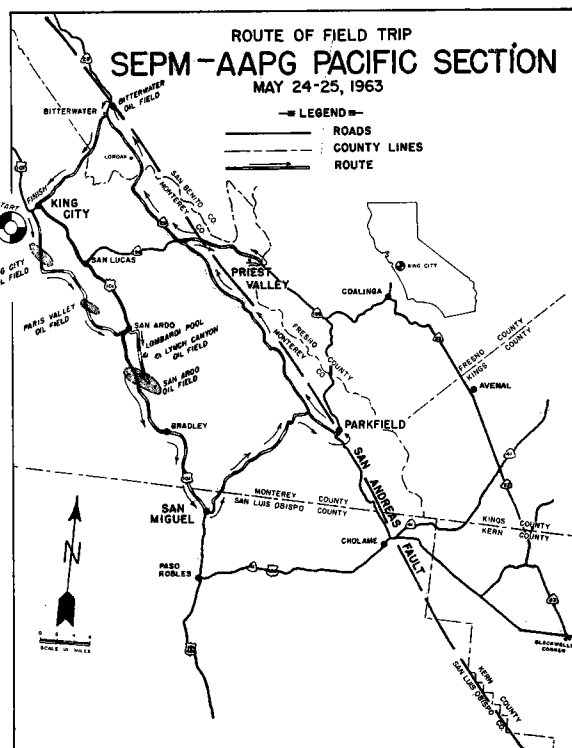
BARBECUE DONATED BY
VINCENT CONSTRUCTION CO.
(PHIL VINCENT)
AND
NEWTON DRILLING CO.
(MAX NEWTON)

REGISTRATION
TECHNICAL PAPERS
BARBECUE DINNER AND
SOCIAL HOUR AT THE
KING CITY FAIRGROUNDS

LOAD BUSES 8 am
(NO CARS)
LUNCH AND REFRESHMENTS
SALINAS VALLEY OILFIELDS
SAN ANDREAS FAULT
PARKFIELD TO BITTERWATER
RETURN KING CITY 5 pm

FOR FURTHER INFORMATION WRITE MAX B. PAYNE
924 TRUXTON AVENUE, BAKERSFIELD, CALIFORNIA

**REGISTRATION, GUIDEBOOK, BARBECUE DINNER,
BREAKFAST, BUS TRANSPORTATION, AND LUNCH
ALL ON ONE TICKET**



ROCKY MOUNTAIN SECTION
13TH ANNUAL MEETING

The Thirteenth Annual Meeting of the Rocky Mountain Section A.A.P.G., will be held April 21-24, 1963 in Casper, Wyoming. Convention headquarters will be at the Henning Hotel with registration beginning Sunday noon. Registration Monday morning, exhibits and the technical program will be held at the Natrona County Fair Ground Industrial Building. The keynote address will be given by John T. Isberg, President of Superior Oil International. General Chairman is John B. Carrier. James A. Barlow, Jr., is Chairman of the technical program. Inquiries may be addressed to John B. Carrier, P. O. Box 1025, Casper, Wyoming.

An interesting and varied technical program has been arranged for this year's convention. The theme "An Appraisal of the Geological Part of Petroleum Exploration" promises to provoke considerable thought concerning the geologist's accomplishments and his role today with the advanced tools, research, and thinking available to him, as well as his role in the future. A symposium on exploration and development will cover important discoveries and activity in the Rocky Mountain region during the past year, discussed by geologists from each locality. A panel discussion of the topic "Appraisal of Geologists in Oil Exploration" will be a special part of the program. The panel, composed of leaders from industry and the academic life, will be moderated by Warren Beebe. To aid the geologist in his constant and continuing education, a group of papers has been assembled on the topics, "Tools of Exploration" and "Research in Exploration". To close the meeting there are timely and interesting papers which will highlight the current geologic approach to exploration.

GEOLOGIC MAP OF CALIFORNIA

The State Division of Mines and Geology has recently placed on sale the Redding sheet of the colored, lithographed 1:250,000-scale State Geologic Map series. This extends from the northern end of the Sacramento Valley on the east to the coast. Offshore contours show such features as the Gorda Escarpment, and Mendocino, Mattole, and Delgada submarine canyons. Of particular interest to petroleum geologists are the Eel River Cenozoic basin, the Mattole country, and the northern end of the Sacramento basin.

SAN JOAQUIN GEOLOGICAL SOCIETY
REGISTRATION QUESTIONNAIRE

The results of a recent poll of members of the San Joaquin Geological Society as to whether they favored or did not favor the registration of Engineering Geologists in California are as follows:

Yes (favored)	23 votes
No (did not favor)	101 votes

The results of this poll will be used to advise the California Legislature as to the views of the San Joaquin Geological Society concerning registration.

PERSONAL ITEMS

Jean B. Senteur De Boue, Esq., drinking Brazilian coffee from an old English cup, while sitting on Danish furniture, after coming home in a German car from an Italian movie, picks up his Japanese ball point pen and writes to his Congressman demanding that something be done about spending gold reserves on lower Slobovian peanut oil.

Tony "Foreign Benefit" Morris, Dick "Pay is the Same" Hester, and Quentin "South of the Border" Moore insist that their recent sunburn was not acquired at Acapulco, but on top of 18,850' Mount Orizaba, Mexico. They acquired a certificate of achievement which could only be obtained from the Registrar at the top.

Gene Muelhberger, Shell, Ventura, is being transferred to Shell's Anchorage, Alaska office.

Joe Schweitzer, Standard, Ventura, will be representing the Coast Society at the A.A.P.G. National Convention in Houston.

Dick Altman, Standard, La Habra, has been transferred to Ventura. Welcome to Ventura, Dick.

We understand that Roger Alexander, Standard, Ventura, recently returned from a pleasant 2 weeks at "School" in Pasadena. "Charmed" to have you back, Roger.

Jim Wylie, Alaska Senior Geologist and District Bowman for Gulf, has been transferred from Anchorage to Jackson, Mississippi.

Bill Fackler, formerly with American Stratigraphic Company, is now associated with Phillips Petroleum as a geologist in Anchorage.

Sinclair Oil and Gas has had two recent transfers to its Anchorage office: Ted V. Tucker, as Senior Geologist, from Colombia by way of Oklahoma; and John Robertson, Geophysicist, from Tyler, Texas.

Chuck Durfee, Geologist for Pure, has been transferred from Anchorage to Regina, Saskatchewan.

Bob Ottenstein's IBM card has apparently become wedged in Standard's travel arrangements machine. Bob is now commuting between Anchorage and Tacoma at approximately 3-week intervals.

That inscrutable look on Al Scouler's face as he drifts about Standard's Anchorage office these days has been attributed by the bearer to the effect of listening for many hours to bagpipe music through stereophones.

Friends of John Sweet, Atlantic, Anchorage, were recently startled to see him sporting a spectacular red-orange bouffant wig. John parried questions about the method of adhesive with vague remarks about skin friction.

On the skiing casualty list is Dick Crick, Atlantic, Anchorage, with leg lacerations. Dick suspects that some cuts were inflicted by overzealous knifework on his stretch pants by fellow geologist, Al Schlottman, of Phillips.

Henry (Hank) Adams, ex-Marathon Oil, Bakersfield, has left the field of geology to enter ballistic programming with Aerojet-General in Sacramento. He, Jane, and their two daughters will be living in Fair Oaks.

Incidentally, Hank sold his house in Bakersfield to John Beeson with Humble, who with John Switzer and Howard Sonneman are closing Humble's Livermore field office and transferring to Bakersfield, effective April 1st.

Cutler Webster, Tidewater, and Tom Roy, Marathon, bought Volkswagens in Bakersfield on the same day. Cutler went a bit more "top drawer" with a Karmann Ghia, and reportedly is so fond of his choice that it's all he can do to get out of it.

Ed Karpe, Kern Oil, Bakersfield, has been transferred to New Orleans. The San Joaquin Geological Society will greatly miss Ed's enthusiastic participation.

Authors and committee for the Annual AAPG Spring Trip to the Salinas Valley on May 24 and 25th have been reportedly taking "no doz" pills as the printer's deadline for the guide book approaches.

Deepest sympathy is extended to Dick Thorup, Consultant, King City, in the loss of his son Bob by an accidental gun shot wound.

Don Six, District Geologist, Texaco, Bakersfield, is being transferred to Los Angeles to assume added responsibilities. Walt Harris, Texaco, Los Angeles, will be the new District Geologist in Bakersfield, effective April 1st.

Shell has added a geologist to their Sacramento District Staff in Bakersfield with the transfer of Pete Fischer from Farmington, New Mexico.

Walt Howe, geologist for Shell in Los Angeles, has resigned his position and returned to Sacramento.

U.S.G.S. geologist Tom Dibblee and wife are currently in Lucerne Valley, California. Tom is mapping the Old Woman Springs quadrangle east of Lucerne Valley and north of the Big Bear Lake area. Tom's temporary residence has been a mecca for visiting geologists, including Frank Tolman, retired, Rod Cross, Consultant, Arch Warne, Richfield, and various graduate students doing work in the nearby desert areas.

Fred Sierveld is off in a newly purchased car to join Warren Stoddard, also formerly of Bakersfield, in Richfield's recently opened geological office in New Orleans. A suitable send-off was organized and attended by the remainder of Richfield's Bakersfield geological staff.

Tom Brady, Richfield, Sidney, Australia, writes that he is fighting off sharks from his newly acquired 12 foot sailboat. Mrs. Brady is keeping the insurance policies in force.

In February the Ferry Building suffered another disastrous fire. Last July the Division of Mines and Geology lost its employee's room in a fire. This time the Division had nothing but smoke damage in a \$150,000 fire, but staff geologists pitched in for a day to clean up the Mineral Exhibit and it took three man-weeks to get the library in shape. Fortunately, there was no damage to map files.

The Northern California Geological Society has been getting a good attendance of local and visiting geologists at its regular Monday luncheons at Lambro's, 315 Bush Street, San Francisco, one block from the Standard Oil Building. Whenever you're in town, please join us.

ODE TO OUR GARBAGE MAN

Oh sing a song for Leo!
For Leo "Rocky" Fay,
Who left his rocky samples
In his wastebasket one day.

And ho! for careful janitors
Who do their duty well,
Who empty all wastebaskets
In every Richfield cell.

For wastebaskets are for emptying
And samples are for sampling -
And ne'er the two should meet, me lads,
For now our Leo's tramping...

He's tramping round the garbage dump
Hour after hour -
Our Leo's Rocks are in his head,
Our Leo's looking dour.

Fear not, fear not! our rocky friend -
You'll learn to love the dump
As through the years you wend your way
From pile to stack to lump.

You'll much prefer the rats and mice
To plaster, steel and tile...
But think of all your friends at home
Once in a garbage while.

BIBLIOGRAPHY OF RECENT PUBLICATIONS

U.S. GEOLOGICAL SURVEY

Professional Paper 316-G: An aeromagnetic reconnaissance of the Cook Inlet area, Alaska, by Arthur Grantz, Isidore Zietz, and G.E. Andreason...\$1.00

Professional Paper 434-B: Autocorrelation of rainfall and streamflow minimums, by N.C. Matalas \$.20

Professional Paper 440-G: Data of Geochemistry, 6th edition. Chemical composition of rivers and lakes, by D.A. Livingston.....\$.45

Professional Paper 450-E: Geological Survey Research 1962. Articles 180-239.....\$1.50

Professional Paper 454-B, C (Combined) Pillowed lava. I: Intrusive layered lava pods and pillowed lavas, Unalaska Islands, Alaska and Pillowed Lavas, II: A review of selected recent literature, by G.L. Snyder and G.D. Fraser.....\$.35

Bulletin 1108-C: Geology of the Freshwater Bay area, Chichagof Island, Alaska, by R.A. Loney, W.H. Condon, and J.T. Dutro, Jr.....\$1.00

Bulletin 1121-K: Geology of the eastern part of the Mount Fairweather quadrangle, Glacier Bay, Alaska, by D.L. Rossman.....\$1.25

CALENDAR

Bulletin 1141-B: Surface geology of the Nash Draw quadrangle, Eddy County, New Mexico, by J.D. Vine
.....\$.75

Bulletin 1162-C: Selenium in some oxidized sand-stone-type uranium deposits, by D.F. Davidson.\$.20

Water Supply Paper 1475-M: Ground-water resources of the Bryce Canyon National Park area, Utah, with a section on the drilling of a test well, by I. Wendell Marine......\$.65

Water Supply Paper 1539-K: Ground-water in the coastal dune area near Florence, Oregon, by E.R. Hampton......\$.65

Water Supply Paper 1539-O: Hydrogeologic reconnaissance of San Nicolas Island, California, by W.L. Burnham, Fred Kunkel, Walter Hofmann, and W. C. Peterson......\$1.00

Water Supply Paper 1619-F: Geology and ground-water features of Point Arguello Naval Missile Facility, Santa Barbara County, Calif., by R.E. Evenson and G.A. Miller......\$1.00

Geophysical Abstracts, No. 194, March 1963.\$.35

CALIFORNIA DIVISION OF MINES AND GEOLOGY

Special Report 68: Igneous and metamorphic rocks of the western part of Joshua Tree National Monument, Riverside and San Bernardino Counties, California, by John J. W. Rogers......\$1.00

Special Report 71: Geology of the Butler Estate Chromite Mine, southeastern Fresno County, California, by Robert A. Matthews......\$1.00

Geologic Map of California. Redding Sheet. Scale 1:250,000, 1962......\$1.50

April 9, 1963: Tuesday, noon, Nikabob Restaurant, 875 S. Western Ave., Los Angeles, Society of Exploratory Geophysicists. Speaker: Dr. John Crawford, "Case History of an Exploration Method - Vibroseis".

April 9, 1963: Tuesday evening, 7:30 P.M.; The LeConte Geological Club will sponsor the Annual dinner for the Cordilleran Section, G.S.A., at the Claremont Hotel Empire Room, Ashby and Domingo Streets, Berkeley. Cocktail party 6:00 - 7:30 P.M. Speaker: Prof. A. D. Howard, Stanford, will speak on "The Taiwan Scene".

April 17, 1963: Wednesday noon, U.S.C., Room 104 Geology "A", 855 W. 37th St.; Dr. Thomas Clements, "Mineralogy and Petrology of Ancient Mexican Sculptures".

April 24, 1963: Wednesday noon, U.S.C., Room 104, Geology "A", 855 W. 37th St.; "Advances in Porpoise Research" (USNOTS Color Motion Picture).

April 25-26, 1963: Pacific Sections AAPG-SEG-SEPM Joint Annual Meeting.

April 29, 1963: Monday, 4:00 P.M., Room 320, Stanford School of Earth Sciences: Dr. Helmut Winkler, University of Gottingen, Germany (AGI visiting international scientist) "Artificial Metamorphism".

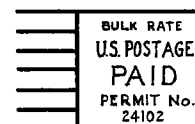
May 1, 1963: Wednesday noon, U.S.C., Room 104, Geology "A", 855 W. 37th St.; Louis Lidz, "Shoreline Morphology and Sedimentation of Nantucket Bay, Massachusetts".

May 6, 1963: Monday evening, 7:30 P.M., Bakersfield College Science and Engineering Building, Room 56; Biostratigraphy Seminar, "Tertiary Geologic History of Western Oregon and Washington" by Dr. Parke D. Snively, Jr., Geological Survey.

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

Volume 17

Number 4



Richard L. Hester
Pauley Petroleum, Inc.
10000 Santa Monica Blvd.
Los Angeles 67, Calif.

DA

Return Requested

PACIFIC PETROLEUM GEOLOGIST

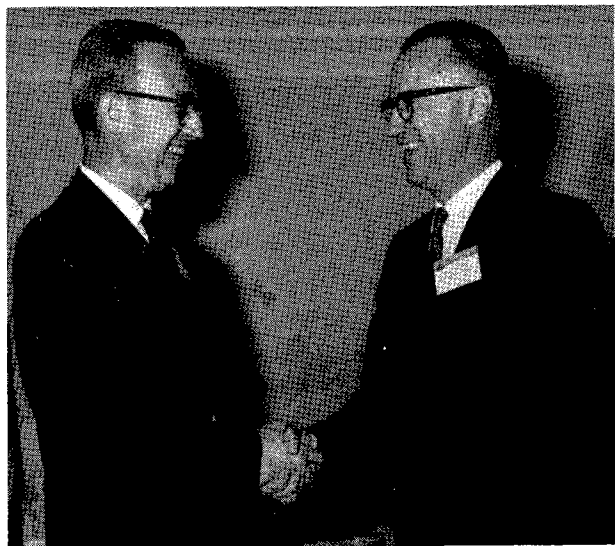
NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 17

May, 1963

Number 5

ASSOCIATION ACTIVITIES



Outgoing A.A.P.G. Pacific Section President Richard B. Haines (right) congratulating newly instated President John E. Kilkenny (left) at the annual convention business meeting.

PRESIDENT'S WELCOMING ADDRESS

A.A.P.G. PACIFIC SECTION ANNUAL MEETING

Richard B. Haines

Welcome to our 38th annual meeting, all members of A.A.P.G., S.E.G. and S.E.P.M., and friends. We sincerely hope this new convention time meets with your approval. I would like to talk briefly about the Pacific Section activities. Current membership in the Pacific Section of A.A.P.G. is 1051 active members. There are 166 members residing outside of California, including 54 in Alaska and foreign countries. We have 205 inactive members. The Pacific Section started in 1925, and in 1926 there were 146 members. The high-water mark was reached in 1956 with a membership of 1326.

We publish a monthly newsletter called the Pacific Petroleum Geologist with which you are all familiar. Its newsy format has changed but little since Martin Van Couvering started the first issue in January 1947 with Loyde Metzner as editor. Over 1100 copies are now mailed out each month. The P.P.G. helps weld our far-flung membership together and is sometimes the only way to find out the latest activities of that famous Gaviota geologist, Senteur De Boue, or the whereabouts of your ubiquitous friends.

The Pacific Section holds monthly luncheons and geological forum meetings and with the help of the S.E.G. and S.E.P.M., it fosters field trips, barbecues and a Christmas dance. We periodically publish a Membership Directory, a new edition of which is now in preparation.

All these regular activities don't just happen. They are directed by your executive committee through able committee chairmen. It is true that the Pacific Section functions as a Southern California geological society. But it does more than this; it acts as a service organization for all the Pacific Section members and their local societies whether they reside in California, Oregon, Washington or Alaska. The Pacific Section has traditionally held the annual convention in Los Angeles. Your outgoing executive committee is recommending that consideration be given to holding future conventions in Long Beach and possibly Bakersfield on a rotation basis.

The Pacific Section acts as your tie to A.A.P.G. headquarters and keeps apprised of problems and geological activities at the national level. Every five years the Pacific Section hosts the A.A.P.G. National Convention. Our next turn will come in 1967. At the State level, our legislative committeeman watches and reports from Sacramento to the executive committee any proposed legislation which may affect the best interests of the membership.

Registration or certification of geologists has long been a controversial issue. In the past, our members have been overwhelmingly opposed to registration. Recently, members of the San Joaquin Geological Society voted by 5 to 1 margin as being opposed to the proposed registration of engineering geologists now being discussed in Sacramento, a summary of which appeared in the January issue of the Pacific Petroleum Geologist. With the growth of landslide and foundation problems here in Southern California, local cities and counties are adopting lists of certified engineering geologists. Only geologists on such lists can legally handle landslide and foundation problems. These governmental actions are equivalent to legislation, and there is no recourse to their arbitrary certification.

There appears to be a definite trend toward restricting the field of the petroleum geologist. An augmented committee will be immediately appointed to study all current trends in registration and certification and perhaps find a solution that is compatible to our membership's wishes. I firmly believe that we can deal more effectively with this issue by operating within the framework of our existing Pacific Section than by starting new organizations or geological specialist groups.

EXECUTIVE COMMITTEE, PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

John E. Kilkenny	President
Louis J. Simon	Vice-President
Arthur O. Spaulding	Secretary
Thomas R. O'Neill	Treasurer
John H. Van Amringe	Editor
Richard B. Haines	Past President
Harrison C. Jamison	Alaska Representative
Edward A. Hall	Coast Representative
William J. Edmund	Sacramento Representative
James L. O'Neill	San Joaquin Representative

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 California.

Editor:	Jack Van Amringe
Assistant Editors:	
Activities	Tom Wright
Calendar	Alfonso Escalante
Selected Bibliography	Lucy Birdsall
Cartoonists:	Mort Kline & Harold Sullwold
Personal Items:	
Correspondents:	
Alaska	Richard Lyon
Coast	Jack Durrie
Los Angeles	Mike Maxwell
Northwest	Ralph Rudeen
Sacramento	Dorman Graves
San Francisco	Gordon Oakeshott
San Joaquin	Rod Colvin
Membership Secretary	Pat Metcalfe

Next deadline May 27, 1963.

I believe that we have experienced a most successful year, one that has included the informal dinners at Columbo's before the forum meetings and the interesting luncheon meetings at Rodger Young Auditorium. The regulars were there, the faithful, but often there was only a scattering of the younger geologists. We all need to keep abreast of our profession and exchange new ideas. I hope you supervisors will encourage your junior geologists to take an active part in Pacific Section affairs. If no one asks you to serve on a committee, simply volunteer--you will be welcomed.

Our primary job is to help find oil or gas with the help of our colleagues, the geophysicists and the paleontologists. Statistics show that West Coast discoveries are down. Retrenching and consolidation of geological personnel are managements' answer to the problem. Experienced exploration people are leaving the oil industry to become teachers, realtors, or moon geologists. What is wrong with California, a state which can boast of 41 giant oil fields, and according to the best available estimates of recoverable reserves, for every two barrels already produced, there's still one barrel left.

There is plenty of oil remaining to be discovered, but it won't come easily. Let more geologists be engaged in basic geology, employing regional and detailed stratigraphic studies. There are countless thousands of well logs in company files that have never been examined. There are dozens of clean permeable sands that have never been traced more than a half-dozen locations away. To this basic approach we must employ all the new tools at our command, plus many yet untried. Fellow explorationists, we are now at a low point in the West Coast discovery cycle. We hope the papers you are about to hear will stimulate you and help start our West Coast discoveries on a grand upswing during the rest of 1963.

PACIFIC SECTION HONOR AWARDS

Three years ago the Pacific Section started presenting Honorary Life Memberships to outstanding members who through the years had given service to the section and attained a prominent professional standing. Previous honorees include Olaf P. Jenkins, Homer J. Steiny, and Graham B. Moody. At the recent luncheon during the spring meeting at the Biltmore Hotel, Art Huey, Chairman of the Honors Committee, introduced the honorees for this year and presented them with engraved plaques. The men named this year by approval of the executive committee are Walter A. English and John R. (Bill) Pemberton. Brief biographical sketches follow.



Walter A. English graduated from the University of California (Berkeley) in 1910 and received a masters degree in paleontology in 1913. After graduation he worked for the U.S.G.S. and contributed to the early geologic literature on the California oilfields and regional geology. From 1922 to 1929 he was with the Standard Oil of California and had a part in the discovery of the Inglewood Oil Field. From 1929 to 1939 he was Chief Geologist of the Superior Oil Co. Since 1939 he has been a prominent consulting geologist. For several summers he served as chief technical advisor in the exploration of the Alaska Naval Petroleum Reserve. Walter is well and continuing his active life.



John R. (Bill) Pemberton is a native son, born in Los Angeles on September 22, 1884. Bill is a nickname that has stuck. He graduated from Stanford University in 1908. He had a remarkable

athletic record starring on six Stanford football teams (note: the rules of eligibility were different in those days). He rowed second oar on two championship crews. Bill was quite a heavy-weight boxer and in the years he was at Stanford he never was defeated. The "Champ" as he was also called received several offers to go professional but he declined. From 1911 to 1916 he did geological work for the Argentine government. From 1918 to 1923 he was geologist for the Newmont Corporation. Bill became Chief Geologist for E. L. Doheney in 1923. From 1932 to 1940 he served effectively as Oil Umpire for the California oil producers. Since 1940 he has been a prominent consulting geologist and engineer. During 1950 he served as President of the Pacific Section A.A.P.G. Bill is also a distinguished ornithologist, and an authority on the California condor. For many years past he was active in the Wildcaters Hi-jinks. Bill is retired and resides in Flintridge, but occasionally gets in town for a domino game.

BEST PAPER AWARD

John Loofbourow, Chairman of the Award Committee, announces the award for the best paper given at the A.A.P.G. Session of the Convention, was won by Lowell E. Redwine for his presentation of the "Morphology Sediments and Geological History of the Basins of the Santa Maria Area, California".

The trophy will be presented at the next Los Angeles luncheon meeting June 6 at Rodger Young Auditorium.

ABSTRACT:

This basin study includes several elongate, occasionally deep, structural basins trending northwesterly to westerly, as shown on the pre-Tertiary "basement" contour map. Large faults trend similarly. Cross sections suggest that these faults and others as yet unknown or incompletely known probably have brought different basin segments into their present juxtapositions by lateral slip. True paleogeologic reconstructions of basin conditions thus would require complex palinspastic restorations. Lacking these, we can trace basin history only crudely with the aid of subcrop maps representing pre-Vaqueros, pre-Pt. Sal, pre-Monterey, and pre-Sisquoc times. Suggested depositional environments progressed from above sea level in the Oligocene to water depths of more than 4,000' in Lower Miocene, 1,000' to 1,500' in Middle and Upper Miocene, 1,500' to sea level in Pliocene, to above sea level in Pleistocene. Miocene cherty oil reservoirs probably are genetically related to diatomite deposited under conditions possibly similar to those now found in the Gulf of California. Tracing cherty and other reservoir facies probably requires true paleogeologic analysis. Until sufficiently sophisticated geological studies of one of California's oldest producing areas are available, the currently fashionable view that onshore California offers little for economic oil exploration is at best premature.

PACIFIC SECTION CONVENTION PROGRAM

Due to an oversight by the General Convention Chairman, the Alaska Representative, Harry Jamison, and Bill Edmund, the Sacramento Representative, were not included in the Executive Committee listing of the Official convention program. This is to rectify our error and offer our apologies.

NORTHWEST GEOLOGICAL SOCIETY

Dr. John C. Crowell, Department of Geology, University of California at Los Angeles, was guest speaker at the monthly dinner meeting of the Northwest Geological Society. A capacity crowd was on hand at the Poodle Dog Cafe, Fire, Washington, to hear this Distinguished Lecturer for the A.A.P.G. give a very interesting and well presented paper entitled "Investigation of Wrench Faults".

ABSTRACT:

A post-earliest Miocene displacement of about 160 miles (260 km) on the San Andreas fault system in southern California is suggested by the occurrence of similar rocks and geologic histories in three terranes--the Tejon, Soledad, and Orocochia. These three terranes are interpreted as parts of an original east-west trending belt now displaced with right slip of about 130 miles (210 km) on the San Andreas fault and 30 miles (50 km) on the San Gabriel fault.

Augen gneiss and blue-quartz gneiss of the amphibolite facies, intruded by a complex of gabbro, diorite, anorthosite, and syenite, and all intruded again by granitic rocks, constitute basement terranes of similar compositions and histories that are offset about 130 miles along the San Andreas fault. Other distinctive rocks on both sides of the fault include basic dikes and mafic bodies rich in ilmenite, magnetite, and apatite in the anorthosite and blue-quartz granite, quartz-bearing syenite, granophyre, and pegmatite in the syenite. Greenschist, marine Eocene strata, and Oligocene non-marine beds and included volcanic rocks are associated. Similar terranes, but lacking the anorthosite-syenite complex, are apparently separated by about 30 miles on the San Gabriel fault, a displacement compatible with evidence from Upper Tertiary sedimentary units that suggest later right slip of as much as 20 miles.

Post early Miocene displacement on the San Andreas fault in central California is probably about 175 miles (Hill and Dibblee, 1953). This displacement is based on the offset of unusual associations of lower Miocene volcanic rocks (with remarkable similarities in petrography), red beds, and marine lower Miocene and Oligocene strata. Younger and smaller displacements, although still incompletely described, appear acceptable, because they are geometrically sound and are concerned with slip and not with separation alone. Displacements of older features in California, which form the basis for statements that perhaps the San Andreas has a right slip of more than 300 miles, rest on arguments of a different order of acceptability. Available information suggests that the fault system originated in the earliest Tertiary.

Progress in the study of the major California faults, although inseparable from the complex geology along the continental margin, can be accelerated through the geometric analysis of geological terrains. Trace slip has displaced some low-dipping sedimentary, volcanic, and metamorphic units, intensive studies of these and other units are required to discover gross linear features, such as basin-margin lines of facies change that form the basis for finding net slip.

1963-64 A.A.P.G. NOMINATING COMMITTEE

President John C. Sproule has named Dan E. Boone, Leslie Bowling, Orlo E. Childs, John F. Mason, and J. Ben Carsey to the 1963-64 Nominating

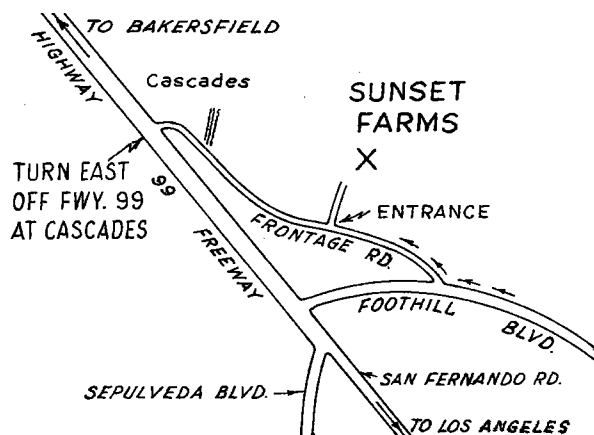
Committee of the American Association of Petroleum Geologists.

In accordance with provisions of the Constitution of the Association, the Nominating Committee is required to nominate two or more candidates each for president and vice-president and one or more candidates each for secretary-treasurer and editor. The members of the Nominating Committee not only desire that the most capable members available for these offices be nominated, but also wish to make the nominating procedure as democratic as possible. Suggestions from a Section, Local Society or individual member for possible candidates for specific offices will be welcomed by the Nominating Committee.

Recommendations of possible nominees should be addressed to J. Ben Carsey, 1633 Chamber of Commerce Building, Houston 2, Texas, Chairman Nominating Committee A.A.P.G., and must be received by June 1, 1963. A concise biography of each individual suggested, together with his record of service to the Association and his business and residence addresses and telephone numbers should be included with any recommendation submitted to the Nominating Committee. His willingness to serve if elected should also be determined.

A.A.P.G. Annual Stag Spring Picnic

The annual A.A.P.G. Spring Picnic and Golf Tournament will be held this year, on Friday, June 7, according to Bill Castle, Chairman. The Golf Tournament will be held at the Balboa Golf Course, Ventura Freeway and Balboa Blvd. starting at 8:00 a.m. Fee \$2.50 per person. The picnic will be again at Sunset Farms, Sylmar, just north of the intersection of Highway 99 and Foothill Blvd. Festivities will begin at 12:00 noon. Fee \$3.50 per person.



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

1963 ANNUAL SPRING FIELD TRIP

MAY 24-25 KING CITY

The annual spring field trip of the Pacific Section of the S.E.P.M. and A.A.P.G. will be held May 24th and 25th in King City, California. The technical session will commence immediately after registration on Friday afternoon at 3:00 P.M. at the King City fairgrounds. A social hour and barbecue will be held from 5:00 P.M. following the technical session.

Saturday morning promptly at 8:00 A.M. buses will be loaded at the fairgrounds for the field trip.

Dick Thorup, Ed Gribi and others will lead the group to such points of interest as the King City oil field, San Ardo, and a tour along the San Andreas fault from Parkfield to the Bitterwater oil field. A Guidebook will include 20 or more technical papers, road logs and geologic map of the area.

Registration, barbecue, breakfast, lunch, bus fare and Guidebook will all be on one ticket for only \$15.00. Please send check for registration before May 15 to Mr. Paul Wesendunk, Standard Oil Company of California, P. O. Box 5278, Oildale, California.

MERLE ISRAELSKY

AWARDED S.E.P.M. HONORARY MEMBERSHIP

Merle Israelsky, well known Paleontologist and Stratigrapher, was named honorary member of the National S.E.P.M. at the Annual Meeting in Houston this April.

Mr. Israelsky has had a long and productive career in micropaleontology, first with major oil companies in the Gulf Coast and the last fifteen years with the U.S. Geological Survey. His research contributions on standard foraminiferal zoning of the Eocene of the Gulf Coast have been of basic importance to the understanding of Gulf stratigraphy of the middle and upper Eocene.

Merle is a native San Franciscan and a graduate of the University of California, class of '22. He is now located at Menlo Park for the U.S.G.S. We are proud to have another Californian join the distinguished group of A.A.P.G.-S.E.P.M. honorary members.

GEOLOGICAL SOCIETY OF SACRAMENTO 1963 ANNUAL FIELD TRIP, MAY 17-19

The Geological Society of Sacramento will hold its annual field trip on the weekend of May 17 to 19. The theme of the trip will be a "Granite to Granite Traverse of the Great Valley of California" from San Juan Bautista to Yosemite.

Registration will be on Friday, May 17 from 2:00 to 5:00 P.M. in the Stein Room of Sam's Downtown Hofbrau, 815 "L" Street, Sacramento. Registration fee of \$16.50 includes the Guidebook, transportation, box lunches and refreshments.

The field trip begins and ends at Sacramento. Greyhound busses load at 6:00 P.M. Friday at Sam's Downtown Hofbrau after registration and will return there about 9:00 P.M. Sunday, May 19. Friday night will be spent at Salinas and Saturday the trip will traverse the Pacheco Pass route to Fresno, where the first leg ends.

Saturday evening a special panel will discuss the oil and gas possibilities of the southern Sacramento and northern San Joaquin Valleys in conjunction with Open House at Fresno State College, from 7:30 to 9:00 P.M.

Sunday the trip will progress thru the Mother Lode Country to Yosemite Valley where the trip will end about 4:00 P.M. Return to Sacramento will follow a tour of the Yosemite Valley floor.

Please send in your reservation before May 10. Send checks to Dalton Pollard, c/o Brazos Oil and Gas Co., P. O. Box 1054, Sacramento, California.

COMPUTERS IN THE MINERAL INDUSTRIES SYMPOSIUM

The School of Earth Sciences at Stanford University, in conjunction with the University of Arizona, will hold a symposium entitled Computers in the Mineral Industries from June 24 to June 28, 1963, at Stanford, California. The symposium is an outgrowth of symposia held previously at the University of Arizona in 1961 and 1962, which were devoted to computer applications in the mining industry. The forthcoming symposium will continue to deal with mining industry applications, but will, in addition, include many applications in petroleum exploration and production.

The symposium is divided into two parts. Persons may elect to attend either or both parts. The first part extends from Monday to Wednesday, June 24 to 26, and the second part extends from Wednesday to Friday, June 26 to 28. Persons who attend the first part may elect to attend either classes in computer programming, or they may attend a series of panels and seminars. Instruction in computer programming will be offered to small, individually-led groups in which actual preparation of computer programs will be undertaken. Programs prepared by participants will be run on a computer shortly after they are written. The panels and seminars will be devoted to present and future aspects of computer utilization by oil and mining companies, problems of financing and inter-company sharing of computers, information storage and retrieval systems adapted to oil and mining company operations, and applications of computers in business decisions.

The second part of the symposium will extend from Wednesday morning through Friday afternoon, June 26 to 28. It will be devoted to presentation of papers dealing with computer applications in petroleum geology, petroleum engineering, exploration geophysics, mining engineering, mining geology, mineral processing and extractive metallurgy. Some of the papers will be presented in seminar fashion, with the techniques employed developed on a step by step basis. Ample time will be allowed for discussion between the speaker and the participants in the audience.

Speakers have been drawn from industry and from universities. Major oil companies that are participating include Standard Oil Company of California, Richfield, Shell, and Northern Natural Gas Company; Professors W. C. Krumbein, R. L. Miller, J. C. Griffiths, F. W. Preston, C. F. Weinaug, and C. J. Grayson are among the roster of speakers from universities.

Topics of general interest to oil industry people include automated well data storage and retrieval systems, application of statistical sampling methods in location of wells, automated contour mapping, application of information theory to oil exploration, computer control of producing wells in an oil field, automated oil reservoir calculations, digital computer simulation of fluid flow in oil reservoirs, four dimensional trend surface analysis in subsurface geology, use of computers in handling paleontological information, statistical methods of simulation of miscible flooding, applications of critical path scheduling in oil field drilling and other development operations, and use of computers in making oil exploration decisions.

For additional information and application forms, write to Department of Mineral Engineering, Stanford University, Stanford, California.

PERSONAL ITEMS

A number of geologists from the Bay Area attended the great Houston convention during the last week in March. Noted particularly enjoying the whole situation were a number of the San Francisco people who, at this time a year ago, were up to their necks in our San Francisco convention. These included Bill Barbat, Willard Classen, Charlie Cross, Graham and Mrs. Moody, Gordon Oakeshott, and Parke Snavelly.

The general vice-chairman of last year's San Francisco convention has been laid up at Portola Valley the last couple of months with a rather serious broken leg. Our sympathy and regards go to Noel Stearn with best wishes that he will soon be on his feet again.

Lonnie Brantly, formerly of Casper, has been transferred to Anchorage as District Geophysicist for Atlantic Refining.

The inscrutable look on Al Scouler's face wasn't due to listening to bagpipe music after all. Al, District Development Geologist for Standard in Anchorage, was married to the former Marie Atkins on April 13.

Lum Lovely, formerly with Union Oil in Anchorage, has established a consulting practice, and will remain in Alaska.

Hal Fothergill, Union, has transferred from Durango, Colorado to become District Geologist at Denver.

Walt Fillippone, formerly District Geologist for Union at Denver was transferred to Casper, Wyoming to become District Geologist there. He has been joined by Bud Oakes, a recent evacuee from Cut Bank, Montana.

Bob Burns, Geological Exploration, and Jeanne Monseir were married April 6 at the Lorelei Chapel in Montebello. A very nice reception followed, and it appeared that Bob was in fine spirits. Last seen Bob had his new bride describing the virtues of some of his new gas analyser equipment at the convention.

One of the latest shops in Bakersfield to open its doors for business is the cosmetic salon at 122 Chester Avenue, operated by Emma Lou Smith, wife of Fred Smith, Jr. of Marathon Oil, and Fred's sister.

Rod Nahama, Sunray DX Bakersfield, has resigned and has joined the geological staff of Franco-Western in Bakersfield.

Dave Callaway, Bakersfield, has joined the ranks of the local Consultants fraternity.

Bill King, former Shell geologist, is in the hospital recovering from a fractured skull and other injuries sustained from an auto accident near Sacramento.

Bob Herron, formerly with Signal Oil and Gas in Los Angeles, has now hung out his shingle as a Consultant.

With the departure of Bob McCollom to southern Oregon, Ralph Rudeen has assumed the duties of Northwest Correspondent for the Pacific Petroleum Geologist.

Paleontologists Max Greene and Kent Clark, Shell, Seattle, have traded places; Kent is now in Fairbanks to see whether Alaska winters are as bad as Max indicates.

Dana Braislin, Union, Olympia, must be quite proud of his son, John, who just won first place in the Tenth Annual Puget Sound Science fair with a physiographic exhibit. John now goes to Albuquerque, New Mexico to compete in the nationals.

Anyone with septic tank problems? Joe Dixon, Shell, Seattle, now has the background and experience to handle anything.

George Goodspeed, professor emeritus, University of Washington, attended the April meeting of the Northwest Geological Society and is the picture of health. He is still pursuing his Wallowa Mountains study with vigor.

Sig Snelson and John Lawrence, geologists with Shell, are back in Seattle after a winter "vacation" in Houston, Texas. While there, Mrs. Snelson presented Sig with a little Texan.

Charlie Fulmer, Boeing, was last seen leaving Fife, Washington, with a fifth of Jim Beam; no doubt to be used on a lunar probe.

What are those four old codgers with Shell Exploration, Seattle, trying to prove? Surely only a coronary can result from those Washington Alpine Club classes and rock-climbing trips.

Chuck Carey has resigned from the golfing environs of Kern County Public Course to join one of Bakersfield's two best Country Clubs. He said, however, that he will continue to play and captain in the Annual Standard-Union Trophy Golf Match each spring. Good luck, Chuck!

Roy Wilks, Standard - Oildale, has resigned to become Assistant Golf Professional at the North Kern links in Bakersfield.

John Jacobson, Standard, has been transferred from Oildale to La Habra.

Bill Godsey, Standard, is leaving the delta area of Rio Vista to begin a tour of the hilly environs of Avenal.

Dick Atchison, Marathon, Bakersfield underwent minor arm surgery on the day prior to his birthday April 23. One thing Dick is closed-mouth about is divulging his age, but his medical forms tell all -- he and Jack Benny are the same.

Russ Simonson, Marathon, Los Angeles is planning a vacation trip along the newly inaugurated Pan American Highway through Mexico and Central America. Lots of Luck and Buen Viaje, Russ!

Harold Billman, Union, Canary Islands has been transferred to the Foreign Operations Staff in Los Angeles, following the conclusion of Union's operations in the Spanish Sahara.

SHAKER CUTTINGS FROM THE BOTTOM OF THE PIT

Boris Laiming is an honorary member of the Tokyo Fire Department.

Tom Diblee, it seems, became entangled with a fan belt, resulting in a rather badly broken thumb.

On January 1, 1947 C.C.M.O. moved the head office to a company owned building at 4549 Produce Plaza West. The street name gives some clue to its location.

The convention got off to a spirited start when a delegation met the Special at San Berdoo. Louis Chappuis, all rigged up in a Western costume including sombrero and six-guns approached the meeting place at 5:00 A.M. Local police were unappreciative and picked up Louis. After a call from the bastille to the Mrs. and a lawyer, freedom was granted. Bill Pemberton got signals crossed and was waiting on the corner - 24 hours late - 5:00 A.M. Monday morning.

The Pacific Section now has a total of 362 paid members.

Don't fail to ask Russ Simonson for details about the fish that carried a club and other experiences on Refugio Creek.

Found Saturday morning at Pico Canyon one \$20.00 bill, which will be surrendered to the owner on positive identification. "Rats" Rathwell says there are four contenders so far. All claims such as "I lost one" or "its mine" will be rejected. Vic Barlow also reports finding four bits.

(P.P.G. Vol. 1 Nos. 1-6)

CALENDAR

May 14, 1963: Tuesday evening, El Tejon Hotel, Bakersfield. San Joaquin Geological Society monthly dinner meeting. Cocktail hour 6:30 P.M., Dinner at 7:30 P.M. Otto Hackel and Robert D. Hoffman, Consulting Geologists will speak on "Sub-surface Geology of the Northern San Joaquin Valley".

May 15, 1963: Wednesday noon, U.S.C., Room 104, Geology "A", 855 W. 37th St.: Gerald Fowler, "Late Tertiary Stratigraphy of Western Washington".

May 17-19, 1963: Friday 6:00 P.M. to Sunday 9:00 P.M. Geological Society of Sacramento Annual Field Trip. (See notice)

May 24, 1963: Friday evening dinner meeting, Northwest Geological Society, cocktails 6:00 P.M., dinner, 7:00 P.M., Poodle Dog Cafe, Fife, Washington. "Geology of the Libby Dam Project", by Ralph Morrison and Al Carey, U.S. Corps of Engineers. This will be the last regular meeting until fall. Wives are cordially invited to attend. A new slate of officers will be elected at the meeting.

May 24-25, 1963: Friday afternoon and evening from 3:00 P.M. and all day Saturday. Pacific Section S.E.P.M. - A.A.P.G. Annual Spring Field Trip and Barbecue, King City fairgrounds. Bus trip to the oil fields and geologic phenomena of the Salinas Valley area.

June 7, 1963: Friday afternoon and evening, Sunset Farms, A.A.P.G. Annual Spring Picnic.

June 12, 1963: Wednesday evening, 7:00 P.M., Union Oil Auditorium, Los Angeles Section, Association of Engineering Geologists monthly meeting. Mr. John P. Pollock, prominent local attorney will speak on "A Landslide Case Goes to Trial", dealing with the much-publicized Portuguese Bend Landslide and the recent lawsuit just concluded. All members of the Pacific Section A.A.P.G. are cordially invited to attend.

STANFORD JOURNAL CLUB PROGRAM

The Stanford University School of Earth Sciences Journal Club has scheduled the following programs for the month of May. All meetings are at 4:00 P.M., Monday, Room 320, Geology.

May 13: "Miocene History of the Santa Cruz Mountains", Joe Clark, Graduate Student, Dept. of Geology.

"Scale-Model Study of Decollement Thrusts and Related Phenomena", Dick Vincelette, Graduate Student, Dept. of Geology.

May 20: "Geological Investigations in the Canadian Arctic Archipelago", Dr. Peter Fricker (Zurich, Switzerland), Post-Doctoral Fellow, Dept. of Geology.

May 27: "Application of Pressure Build-up Theory to Geology", Jim Taylor, Graduate Student, Dept. of Petroleum Engineering.

"A Progress Report on a Layered Sphere Model Study", Victor G. Gregson, Graduate Student, Dept. of Geophysics.

BIBLIOGRAPHY OF RECENT PUBLICATIONS

U. S. GEOLOGICAL SURVEY

OPEN FILE REPORTS: (Inspection Only)

Aeromagnetic map of the Roberts Mountains area, central Nevada, by P. W. Philbin, J. L. Meuschke, and W. E. McCaslin. 1 map (in 2 parts)

NEVADA BUREAU OF MINES

Bulletin 60: Geology of the Bull Run quadrangle, Elko County, Nevada, by Robert W. Decker, 1962..\$1.25

JOURNAL OF GEOPHYSICAL RESEARCH, vol. 68, no. 4, February 15, 1963

Longshore currents and longshore troughs, by Per Bruun.

Position and fluctuations of water level in wells perforated in more than one aquifer, by Daniel Sokol.

Moisture and energy conditions within a sloping soil mass during drainage, by John D. Hewlett and Alden R. Hibbert.

JOURNAL OF GEOPHYSICAL RESEARCH, vol. 68, no. 6, March 15, 1963

Structural framework of the continental terrace, Northwest Gulf of Mexico, by David G. Moore and Joseph R. Curray.

ECONOMIC GEOLOGY, vol. 58, no. 1, January-February 1963

Deposits of the manganese oxides: Supplement, by D. F. Hewett, Michael Fleischer, and Nancy Conklin.

Sun chart compass corrections for reconnaissance mapping and geophysical prospecting in areas of magnetic disturbance, by D. C. Fraser.

WORLD OIL, vol. 156, no. 2 February 1, 1963

Petrofabric studies may find fracture-porosity reservoirs, by G. H. Martin

Waterflooding conglomerate reservoirs, by E. A. Riley and R. L. Nabbefeld

How good are North Sea offshore oil prospects?, by Joseph A. Kornfeld.

WORLD OIL, vol. 156, no. 3, February 15, 1963

Exploration outlook--1963.

Drilling depth records.

Advancements in the drilling industry, by Mel Hobbs.

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 74, no. 2, February 1963

Sequences in the cratonic interior of North America, by L. L. Sloss.

Sanpete-Sevier Valley anticline in central Utah, by William N. Gilliland.

Sedimentary volcanism in eastern Mexico and northern Colombia, by William E. Humphrey.

Mountains from mole hills, by H. F. Garner.

Origin and age of superficial structures, Jicarilla Mountains, central New Mexico, by A. J. Budding.

Potassium-argon dating of volcanic rocks near Grants, New Mexico, by W. A. Bassett, P. F. Kerr, O. A. Schaeffer and R. W. Stonner.

SCIENCE, vol. 139, no. 3556, 22 February 1963

Pliocene-Pleistocene Boundary in Deep-sea sediments, by D. B. Ericson, M. Ewing, and G. Wollin.

SCIENCE, vol. 139, no. 3558, 8 March 1963

Are we retrogressing in science, by M. King Hubbert.

Geothermal brine well: Mile-deep drill hole may tap ore-bearing magmatic water and rocks undergoing metamorphism, by D. E. White, R. T. Anderson, and D. K. Grubbs.

Gamma emitters in marine sediments near the Columbia River, by C. Osterberg, L. D. Kulm, and J. V. Byrne.

Nuclear explosions: Some geologic effects of the Gnome shot, by L. M. Gard.

SCIENCE, vol. 139, no. 3560, 22 March 1963

Alkanes in natural and synthetic petroleum: Comparison of calculated and actual compositions, by R. A. Friedel and A. G. Sharkey, Jr.

Calcium Carbonate: Factors affecting saturation in ocean waters off Bermuda, by R. F. Schmalz and K. E. Chave.

Calcite-Aragonite equilibrium, by G. Simmons and P. Bell.

U. S. BUREAU OF MINES (Distribution Section, 4800 Forbes St., Pittsburgh, Penna.)

Report of Investigation 6087: Methods of analyzing oilfield waters. Metallics: Copper, nickel, lead, iron, manganese, zinc, and cadmium, by A. Gene Collins, Cynthia Pearson, Dave H. Attaway, and Thomas G. Ebrey. 24 pp. 7 figs.....FREE

Report of Investigation 6098: Rapid determination of permeability of porous rock, by Jerry B. F. Champlin. 9 pp. 3 figs.....FREE

Report of Investigation 6110: Underground borate mining, Kern County, California, by Leonard Obert and Albert E. Long. 64 pp., 45 figs.....FREE

OIL AND GAS JOURNAL, vol. 61, no. 9, March 4, 1963

Dredgers contribute to coastal drilling, by Ed McGhee and Carl Hoot.

Geologists need time in field, (Dr. J. C. Sproule)

OIL AND GAS JOURNAL, vol. 61, no. 10, March 11, 1963

Date set for federal lease sale off California.

Geothermal exploration? Why not? by Frank J. Gardner.

Despite 60 years of dry holes, Oregon drilling continues, by Vernon C. Newton, Jr.

PACIFIC PETROLEUM GEOLOGIST
PACIFIC SECTION. A.A.P.G.
P.O. BOX 17436. FOY STATION
LOS ANGELES 17. CALIFORNIA

Volume 17

Number 5

Return Requested

OIL AND GAS JOURNAL, vol. 61, no. 11, March 18, 1963

Geological significance is key to gravimetric interpretation, by Maynard P. Jones.

Deep oil: Is it only a mirage, by Frank J. Gardner.

Annual Exploration Section.

Are we substituting rebellion for reason in evaluating new exploration methods?, by James F. Johnson.

Deeper exploration is in store, by Dorsey Hager and deBenneville K. Seeley, Jr.

How geophysics is sharpening its methods and tools, by T. J. O'Connell.

How computers find oil, by James M. Forgotson, Jr.

OIL AND GAS JOURNAL, vol. 61, no. 12, March 25, 1963

Western Williston basin hits repeatedly, by Frank J. Gardner.

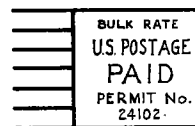
British Columbia shows signs of tremendous gas potential, by F. F. Gray, J. R. Kassube, and J. H. Van De Venter.

BOOKS

Theory of Ground Water movement, by P. Ya. Polubarinova-Kochina. Translated from the Russian edition by J. M. Roger de Wiest. Princeton University Press, Princeton, New Jersey. 1962. 613 pp.\$10.00

The system of mineralogy of James Dwight Dana and Edward Salisbury Dana, Revised and enlarged by Clifford Frondel. Vol. 3, Silica Materials. ed. 7, 1962. 334 pp.....\$ 7.95

Charles Lyell (British Men of Science, vol. 1, Sir Gavin De Beer, General Editor.) by Sir Edward Bailey. Doubleday, Garden City, New York, 1963.\$ 3.95



Richard L. Hester
Pauley Petroleum, Inc.
10000 Santa Monica Blvd.
Los Angeles 67, Calif.

DA

PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 17

June, 1963

Number 6

ASSOCIATION ACTIVITIES

INCOMING PRESIDENT'S ACCEPTANCE SPEECH AAPG PACIFIC SECTION CONVENTION APRIL 26, 1963

JOHN E. KILKENNY

Members of the AAPG and guests:

The past year has been a successful one for the Pacific Section and no small measure of credit is due Dick Haines and the outgoing executive committee. On behalf of your newly elected officers I wish to say that we will do our best to keep up the good work.

I, personally, have benefited greatly from my 23 years of membership in the AAPG and the Pacific Section. If we are to meet the challenges of oil finding in the years ahead, we must continue to have a strong organization. This is a team effort and the more of our members who take an active part, the easier the job will be. I would particularly like to encourage our newer and younger members to take an active part in our affairs. During the last few years we have been in a cycle of oversupply of geologists, and many of our college graduates have been unable to find a place in the oil industry. There is evidence that this cycle has reached bottom and that we may be on the upgrade again. The present tempo of exploration activity in our Pacific Coast sedimentary basins requires a large amount of geological manpower, and there is every indication that this pace will continue for several years.

Looking back a decade or two, it is interesting to note how our exploration methods have changed. A few years ago many of our members were engaged in field mapping projects, and continuous coring was the practice in most wildcat wells. Today, the average geologist spends most of his time working the sub-surface with electric logs, and the mudlogger has replaced continuous coring. These are advances in oil-finding technology. However, good as these new tools are, there is still no substitute for looking at the rocks themselves to understand and solve geological problems. The AAPG and SEPM, through sponsoring frequent field trips, can keep us in touch with these fundamentals of petroleum geology.

As an organization there are several problems that face us during the coming year. One of these is the problem of registration. Legislation has been passed in several states requiring registration of geologists. At least one group of geologists is seeking legislation to register in California. I do not believe that we can ignore these developments, and, in order to keep abreast of these activities and to better decide on a course of action to follow, I plan to appoint a committee to study this problem and make recommendations.



Newly elected Pacific Section A. A. P. G. officers, from left to right: Arthur O. Spaulding, secretary; Louis J. Simon, vice president; Thomas R. O'Neill, treasurer; and John E. Kilkenny, president.

As our out-going treasurer reports, we are basically in good shape financially. Any financial ills that may occur from time to time can be alleviated by increasing our membership, and there are a number of qualified geologists who should, but do not, belong to our organization.

With your help we can maintain a strong AAPG Pacific Section and improve our collective efforts in the search for new oil and gas fields in the year ahead.

SAN JOAQUIN GEOLOGICAL SOCIETY

The regular monthly meeting of the San Joaquin Geological Society was held at the El Tejon Hotel in Bakersfield on May 14, 1963. In a short business meeting, Bob Paschall, Sacramento, State Board of Equalization, made some pertinent comments regarding the registration of geologists. Topic of the evening was "The Geology of the Northern San Joaquin Valley" prepared by Otto Hackel and Bob Hoffman. Bob made an interesting presentation with excellent slides.

ABSTRACT:

The area covered in this talk includes all but the southernmost portion of Merced County, all of Stanislaus County, and that portion of San Joaquin County south of the Stockton Arch fault zone. Four gas fields have been discovered in this area, with

EXECUTIVE COMMITTEE, PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

John E. Kilkenny	President
Louis J. Simon	Vice-President
Arthur O. Spaulding	Secretary
Milton T. Whitaker	Treasurer
John H. Van Amringe	Editor
Richard B. Haines	Past President
Harrison C. Jamison	Alaska Representative
Edward A. Hall	Coast Representative
William J. Edmund	Sacramento Representative
James L. O'Neill	San Joaquin Representative

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 California.

Editor:	Jack Van Amringe
Assistant Editors:	
Activities	Tom Wright
Calendar	Alfonso Escalante
Selected Bibliography	Lucy Birdsall
Cartoonists:	Mort Kline & Harold Sullwold
Personal Items:	
Correspondents:	
Alaska	Richard Lyon
Coast	Jack Durrie
Los Angeles	Mike Maxwell
Northwest	Ralph Rudeen
Sacramento	Dorman Graves
San Francisco	Gordon Oakeshott
San Joaquin	Rod Colvin
Membership Secretary	Pat Metcalf

Next deadline, June 28, 1963.

reserves of nearly a trillion cubic feet of gas. These fields include Tracy, Vernalis, McMullin Ranch and Lathrop. All of the fields are anticlinal, and all but Tracy have multiple zones.

The area has been very active since the extension of the Vernalis Field in mid-1958, with three-quarters of the 250 ± wells in the area having been drilled since that time. Even with this activity, however, much of the area is untested.

Structural trends in the area follow the northwest-southeast trend of the Sacramento-San Joaquin basins. This portion of the basin is asymmetrical, with a steeper western flank, a fairly broad flat synclinal area, and a shallow dipping eastern shelf area. The entire region has been tilted to the south as a result of uplift along the Stockton Arch fault zone. This fault trends directly across the regional grain and marks the northern border of the area. The west side of the basin immediately south of the fault is complicated by the presence of the Tracy-Vernalis anticlinal trend, and the Vernalis fault.

Sediments within the area include several thousand feet of marine Upper Cretaceous sands and shales, Paleocene and Eocene marine sands and shales in the southern portion of the area, and several thousand feet of Plio-Miocene continental beds. Four stratigraphic sections and three isopach maps have been constructed to show the stratigraphic conditions throughout the area.

It is felt that the present high rate of activity in the area will continue for some time to come. Attractive features include: Very low drilling costs and land costs; commercial success for the fields found; and the presence of large untested areas underlain by sediments of proven source and reservoir capabilities.

S.E.P.M. BEST PAPER AWARD

An award has been made for the best paper presented at the SEPM Convention of April 25 and 26, 1963. The award of \$25.00 was won by Prof. Orville L. Bandy, University of Southern California, for his paper entitled "Cenozoic Planktonic Foraminiferal Zonation". Judges for the best paper award were Richard L. Pierce, Richfield Oil Corporation, and Edwin H. Stinemeyer, Shell Oil Company.

ABSTRACT:

Modern planktonic foraminiferal ecology serves to define limitations of Cenozoic zonation. Modern tropical species are abundant and diverse, temperate zone species are sparse and diverse, and cool temperate and polar areas have an extreme abundance of very few species. Keel globorotaloids are restricted to water temperatures higher than about 17 degrees C., nonkeeled globorotaloids to waters warmer than about 9 degrees C., and there are no globorotaloids in polar regions. Thus a keeled planktonic line is one criterion for the recognition of boundaries of tropical and warm temperate areas in the Cretaceous and Cenozoic. Large heavy tests of planktonic species are indicative of bathyal environments.

Planktonic zonation for the Cenozoic is considered to have general world-wide uniformity and thus provides a means of recognizing the standard European stages in open marine deeper water facies of tropical areas of the world. General planktonic parameters include: (1) the development of keeled globorotaloids in the Paleocene and their decline and disappearance in the Middle Eocene; (2) a second development of keeled globorotaloids in the Burdigalian and their continued dominance into the Recent; and (3) the recognition of important times of appearance of specific groups--the Globigerinoides triloba datum at the base of the Aquitanian, the Orbulina datum at the base of the Burdigalian, the Globorotalia menardii datum near the top of the Burdigalian, and the Sphaeroidinella dehiscens datum at the base of the Pliocene.

GEOLOGIC HIGHWAY MAP OF TEXAS

The Dallas Geological Society wishes to announce the recent publication of the new Geological Highway Map of Texas. This map is beautifully colored, depicting the age of outcropping rocks within the state. The geology is superimposed on the Texas Highway Department's "Official Highway Travel Map". The type of rocks comprising these outcrops are shown and identified on the Generalized Chart of Time and Rock Units of Texas.

This new 1963 edition includes on the reverse side a discussion of the geological history of Texas, a North-South and East-West Cross Section, a Tectonic Map, and a Physiographic Map. The Geological Map of Texas is designed to present the geology of Texas in a generalized manner for use by geologists as well as the general public as a source of information and explanation of the rocks, soils, and land forms that may be observed throughout the state.

These maps are available for \$1.00 folded or \$1.25 rolled, and may be obtained by sending a check or money order payable to the Dallas Geological Society, P. O. Box 2867, Dallas 21, Texas.

COAST GEOLOGICAL SOCIETY

The annual "Ladies Nite" dinner meeting of the Coast Society was held on May 14th at the Ventura Women's Center. A talk entitled "The Geology of Greenland, Including Elements of History, of Exploration, and of the Work of Geologists" was presented by Mr. Finn E. Bronner. Mr. Bronner is with General Electric Company in Santa Barbara, and has been on two expeditions to Greenland.

ABSTRACT:

Greenland is an island located in the extreme northern Atlantic Ocean, with its coast bordering the Arctic Sea. It is 1650 miles long, 800 miles wide, and has an area of 840,000 square miles, 700,000 of which are "permanently" covered with ice and snow. Greenland is situated on a relatively higher sea floor than is common to the central Atlantic region.

A geologic map of the country shows that most of it is covered with ice, but abundant outcrops and accessible rock formations occur around the perimeter of the island. Although most of the coast line has Pre Cambrian basement outcrops, there is a 7000'± section of Paleozoic sediments exposed along the northern coasts. A period of intense Eocene volcanism extruded a tremendous volume of basalt (6-1/2 miles thick) along the southeastern coast. In general the geologic structures of Greenland have a north-south lineation.

Geologic studies of most of Greenland is essentially impossible, due to the thick (11,000') ice cap. The cap, however, offers excellent opportunities for the study of glaciation. Numerous classic examples of glacial structural features are found on the island. A magnetic deviation of from 33° to 45° west, also causes confusion during mapping.

Living in Greenland presents many more problems than exist in temperate and non-glacial areas. Travel across most of the country is limited to airplanes or special snow vehicles. Construction on ice and permafrost involves unique methods to keep buildings from sinking, some shelters are designed to sink into the ice. The Air Force has adapted to Greenland's ice by using it as a building material. "Peter's Snow Eaters" are used to dig out trenches in the ice, which are later covered over and used as buildings.

COAST GEOLOGICAL SOCIETY POLL

A poll conducted among coastal section geologists by President C. M. Carson had the following results:

Question #1 Do you, or do you not, favor registration of Engineering Geologists in California?

Yes - 8
No - 22

Question #2 If Petroleum Geologists were to be registered, would you favor a governmental or non-governmental registering and policing body?

Governmental - 10 in favor
Non-governmental - 18 in favor

SALINAS VALLEY
ANNUAL AAPG-SEPM SPRING FIELD TRIP

The annual Spring Field Trip of the Pacific Section AAPG-SEPM was held in King City on May 24 and 25, and attended by approximately 175 members, guests and students. Highlights of the event were the technical session, the extensive road trip with running commentary by many geologists familiar with the oil developments and colorful history of the region, and the issuance of the comprehensive guidebook.

The Pacific Section AAPG-SEPM 1963 Field Trip Committee wishes to express thanks and appreciation again to all those who made this year's Guidebook and Field Trip possible. The authors of papers, the advertisers, the Hunter Printing Company all contributed in their own way.

Special thanks should be given to the Oil Scouts, especially to Pat Wright (Hoss) who made the Guidebook financially possible by his fine work with the advertisers, in making the arrangements for the beer truck and driving the truck on the Field Trip. Bill Horsley was an able Committeeman in charge of the drafting and assisted with the beer truck. Everyone was pleased to see these two Oil Scouts assisted by the distinguished President of the National Oil Scouts Barney Barnard. Many service companies graciously contributed to the Bar and Beer expenses.

The Chairman would like to thank all the committeemen for their tireless effort and support. All did their job's willingly and didn't seem to mind a little pressure from time to time. Henry Walrond compiled the Geologic Map from many sources in a critical, scientific, and conscientious manner. Lesh Forrest masterfully organized the Road Log and obtained papers for the Guidebook. Ralph Kraetsch and Stan Carlson assisted very well as editors.

The officers of the Pacific Section of the AAPG have been very helpful, cooperative and indispensable. The officers of the San Joaquin Valley Geological Society contributed the drafting of the Geologic Map.

Ed Gribi and Dick Thorup, the excellent field trip leaders, were ably assisted by the King City residents in well organized arrangements, making the field trip most enjoyable and memorable with their wonderful culinary delights. This seemed to be an especially enjoyable trip with the King City hospitality -- even the weatherman provided a cool ocean breeze for the day.

Guidebooks may be purchased from Paul Wesendunk, c/o Standard Oil Company, P. O. Box 5278, Oildale, California. Costs - \$12.00 each, extra map sets, \$2.50. Make checks payable to the SEPM.

NOTICE

The following telephone number changes became effective June 1, 1963.

U.S. GEOLOGICAL SURVEY (Los Angeles)

Branch of Oil and Gas Leasing
(Mr. LeRoy Snow). 688-2846

Public Inquiries Office
(Maps and publications). 688-2850

U.S. BUREAU OF LAND MANAGEMENT (Los Angeles)

Pacific Coast Office Continental Shelf
. 688-2854

COMPUTERS IN THE MINERAL INDUSTRIES

STANFORD UNIVERSITY - JUNE 24-28, 1963

PETROLEUM EXPLORATION SESSIONSTechnical Papers

Wednesday, June 26th. Engineering Corner

1:30-2:15 - Assiter, E. J., (I.B.M.), "Contouring with a Digital Computer."

2:15-3:00 - Dillon, E. L., (Shell), "Development of the Permian Basin Well Data System."

11:30-12:15 - Norem, W. L. and Russell, C. R., (Richfield), "Application of Machine Manipulation to Palynology."

1:30-2:10 - Preston, Floyd, (University of Kansas), "Use of Asymmetric Frequency Distribution Curves of Core Analysis Data in Calculating Oil Reserves."

2:10-3:00 - Weinaug, Charles, (University of Kansas), "Automated Oil Property Evaluation and Control Systems."

3:15-4:00 - Jizba, Z. V., (Cal. Research), "A Contribution to the Statistical Theory of Classification."

4:00-5:00 - Basham, William and Ojakangas, Dennis, (Standard), "Experience with Automated Map Contouring at Standard Oil Company of California."

Case-History Demonstrations

Wednesday, June 26th. Engineering Corner

3:15-4:00 - Krumbein, W. C. (Northwestern), "Selection of Wells in Preliminary Evaluation of an Exploration Program."

4:00-4:45 - Krumbein, W. C., (Northwestern), "Application and Statistical Testing of Trend Surfaces in Exploration."

Thursday, June 27th. Engineering Corner

9:00-10:30 - Dowds, John, (ANABACO), "Application of Information Theory in Establishing Oil Field Trends."

Technical Papers, etc.

Thursday, June 27th. Cubberley Auditorium

10:45-12:15 - Spring, Carl, (I.B.M.), "Data Storage and Retrieval."

Engineering Corner

1:30-2:15 - Griffiths, J. C., (Pennsylvania State), "Statistical Approach to Problems of Distinguishing Potential Oil Reservoir Sands from Non-Reservoir Sands."

2:15-3:00 - Miller, R. L., (University of Chicago), "Information Theory Applied to Mapping Environment of Deposition of Sediments in Oil-Producing Areas."

3:15-4:45 - General Question-and-Answer Panel Discussion.

Friday, June 28th. Engineering Corner

9:00-9:45 - Morrison, Jack, (University of Oklahoma), "Storage and Retrieval of Information from Autwine Field, Oklahoma."

9:45-10:30 - Bonham, L. C., (Cal. Research), "Experience with a Mechanized Well Data System."

10:45-11:30 - Harbaugh, John W., (Stanford), "Application of Four-Variable Trend Hypersurfaces in Oil Exploration."

CHANGE OF ADDRESS

Listed below are changes of address for those members listed in the latest directory.

Geddes, R. D.
650 North 2nd West St.
Apt. 111
Salt Lake City, UtahSheldon, Theodore D.
600 Petroleum Club
Bldg.
Denver 2, ColoradoHolman, William H.
3300 New Hope Road
Grants Pass, OregonHill, Bruce P.
c/o Occidental
Petroleum Corp.
5000 Stockdale Hiway
Bakersfield, Calif.Kirkpatrick, John C.
Superior Oil Co.
Box 1977
Billings, MontanaHowe, Walter H.
950 Fulton Ave.
Sacramento 25, Calif.Templeton, Eugene A.
329 West Caley Drive
Littleton, ColoradoAmundson, Burton
2321 2nd Avenue
Sacramento 18, Calif.Vivion, Richard W.
Humble Oil & Refining Co.
P. O. Box 2180
Houston, 1, TexasSeltzer, Robert A.
P. O. Box 5728
Oildale, CaliforniaBuchanan, Robert A.
6266 So. Ivanhoe Ct.
Englewood, ColoradoHuppi, R. G.
Standard Oil Co. of
Calif.
Box 7-839
Anchorage, AlaskaErwin, Margaret I.
U.S.G.S.
503 Cordova Bldg.
Anchorage, AlaskaPalen, Frank S.
1308 Krist Drive
Houston 55, TexasStarke, George W.
California Research Corp.
P. O. Box 446
La Habra, CaliforniaCronin, John F.
9 Anena Terrace
Concord, Mass.Tomko, Henry J.
14862 La Capelle Rd.
La Mirada, CaliforniaHare, Donald S.
Pauley Petroleum Co.
10000 Santa Monica Blvd.
Los Angeles 25, Calif.Hayes, Paul L.
1223 No. Maplewood St.
Anaheim, CaliforniaHarris, Walter S.
Texaco, Inc.
P. O. Box 3127
Bakersfield, Calif.Neel, H. H.
1244 Norman Place
Los Angeles 49, Calif.Herron, Robert F.
3058 Coolidge, Apt. 2
Anaheim, Calif.

Kiessling, Ed
Calif. Div. Mines & Geology
1065 State Bldg. #2
107 So. Broadway
Los Angeles 12, Calif.

Erskine, Kenneth
2648 Newcoms Ct.
Sacramento 26, Calif.

Basham, W. L.
610 Pullman Rd.
Hillsborough, Calif.

Sherman, Robert P.
P. O. Box 185
Tipton, Calif.

Fothergill, Harold L.
Union Oil Company
1515 Cleveland Pl.
Denver 2, Colorado

Ellsworth T. P.
324 Buckingham Lane
Houston 24, Texas

McMichael, L. B.
800 National Fidelity
Bldg.
Oklahoma City, Oklahoma

Callaway, David C.
1620 "F" Street
Bakersfield, Calif.

Cowell, James L.
5213 Ojai Drive
Bakersfield, Calif.

Folsom, Tom
90 Morningside Dr.
Route 2
Loomis, Calif.

Listed below are changes of address for those members not listed in the latest directory.

Anderson, A. Taylor
Box 34621
Los Angeles 34, Calif.

Curtice, Arthur A.
616 No. Canon Dr.
Beverly Hills, Calif.

Travers, William B.
Santa Fe Drilling Co.
P. O. Box 310
Whittier, Calif.

Roberts, William R.
1008 W. Sixth Street
Los Angeles, Calif.

Deardorff, Dwight
Phillips Petroleum Corp.
3600 Wilshire Blvd.
Los Angeles, Calif.

McNeil, Mary
3989 So. Old Malibu Rd.
Malibu, Calif.

Hook, Joseph S.
4211 Berryman Ave.
Los Angeles 66, Calif.

Kline, Jr., Mortimer A.
550 So. Flower St.
Suite 603
Los Angeles 17, Calif.

Marsau, Allan F.
12952 Meadow Green Rd.
La Mirada, Calif.

Adams, Henry J.
5320 Castle
Fair Oaks, Calif.

Walters, Richard F.
Humble Oil and
Refining Co.
Box 61812
New Orleans, La.

Harrington, H. E.
Superior Oil (U.K.)
16 Stratton St.
London W.1, England

Trapesonian, Michael
7452 Sepulveda Blvd.
Van Nuys, Calif.

Cutler, Jr., Willard W.
4978 Cromwell
Los Angeles 27, Calif.

McLean, T. C.
1200 West Lincoln
Montebello, Calif.

Vernon, James W.
6270 Lennox
Van Nuys, Calif.

Maaskant, Adrian
950 Fulton Ave.
Sacramento 25, Calif.

Hagen, D. W.
P. O. Box 3337
Ventura, Calif.

Christian, Louis B.
Mobil Petroleum Co.
Rufino Building
Manila, Philippines

Oldroyd, Thomas T.
Sunray DX
930 Truxton Ave.
Bakersfield, Calif.

Parkinson, L. J.
Standard Oil Co. of
Calif.
Box 5278
Oildale, Calif.

Dunfield, Robert R.
8562 Remmet Ave.
Canoga Park, Calif.

Rodden, A. S.
Richfield Oil Corp.
555 So. Flower St.
Los Angeles, Calif.

Schweitzer, Joseph J.
4402 Pomona St.
Ventura, Calif.

Fish, John L.
1733 Locust Dr.
Bakersfield, Calif.

Nelson, Hal E.
3301 Brundage Lane
Bakersfield, Calif.

Eschner, Stanford
3109 Wenatchee Ave.
Bakersfield, Calif.

Kerr, Albert R.
3519 Pickwick
Bakersfield, Calif.

Childs, Orlo E.
345 Middlefield Rd.
Menlo Park, Calif.

Bishop, Charles C.
Div. of Mines and
Geology
Ferry Building
San Francisco 11, Calif.

Johnson, Joseph A.
3127 19th St.
Bakersfield, Calif.

PERSONAL ITEMS

NEW PACIFIC SECTION TREASURER NAMED

Milton T. Whitaker, Mobil, runner-up in the last election, will take over the duties of Pacific Section treasurer upon the departure of Tom O'Neill to New York this month.

Cordell Durrell, Professor of Geology at UCLA is transferring to the Davis Campus of the University of California, effective July 1, 1963, where he will become Chairman of the Department of Geological Sciences.

The varied talents of some Ventura area geologists came to the fore recently. K. B. "Pete" Hall, Richfield and Richard Glenn were both elected to the Nordhoff school board in the Ojai area. Tom Bailey, consultant, was re-elected to the Ventura City Council.

Dennie Smith, formerly with Schlumberger-Ventura, has moved to Cincinnati to work for General Electric. New in the Ventura office are Bob Talley from Farmington, New Mexico, and Jim Clayton of Utah.

Jack Durrie, Tidewater-Ventura, is on the mend from his recent trip to the hospital. He claims the doctors sliced too long a cross-section in their exploration effort.

Bob Smith and Lee Heaton, Shell, Seattle, spent a rather chilly hour in Lake Washington before they were rescued by a police boat. A gust of wind dumped Bob's sailboat onto its side. Skindivers are welcome to dive for a \$150 spinnaker which is apparently on the bottom.

Andy Fish and Norm Mundorf, Phillips, are setting up housekeeping in Olympia, Washington.

The Cuss II is back in Cook Inlet, Alaska, and Pete Grimstad and Dick Emmons, Shell, Seattle, are "anxiously" awaiting the spud date. They are scheduled to sit on the proverbial keg of dynamite otherwise known at Middle Ground Shoal.

Bob Ottenstein, Standard, Anchorage, has been "vacationing" in the southern 48, i.e., sitting on the Lake Tapps well near Tacoma.

Don Swiers, formerly of Schlumberger, has joined the engineering staff of Occidental Petroleum in Bakersfield.

Robert Deacon, publisher of the Northwest Oil Report, and Robert Elias of Interstate Minerals, Inc., were spreading good will and cheer of the oil and gas prospects of Oregon and Washington while spending a few days in Bakersfield recently.

Just how Orrin Wangsness got down field fast enough to get hit in the back by his own drive at the recent API Golf Tourney is not apparently clear! Maybe the Rams could use him.

The annual fishing trip of Mobil geologists and engineers (and alums) reconvened at Johnsondale and suffered no casualties from the rigors of outdoor life. B. C. "King" Lupton acquired his usual limit of fish and "chance" winnings, Pat McCullough was the Mickey Mantle of Indian Baseball, E. L. "Gentleman Jim" De Maris cooled the card games, and Rod Colvin's pickup truck managed to struggle up the mountain laden with all the food and fuel for the hungry mob.

Bachelor geologist Tom Sisk, who sports a bright red MG convertible and works at the Humble, Bakersfield office, has taken such good care of this flashy automobile that he recently had to have it repainted bright red because he had cleaned and polished it so much the paint was all gone.

It seems that some of the Humble geologists in the Bakersfield office aren't through with school yet. Recently, John Smith, John Beeson, and Bill Schetter returned from a five week course at the Humble logging school in Houston, and soon John Switzer will attend. Cy Bird attended last December. Guess the others are so smart they don't need extra courses!

Dick Atchison, Marathon, Bakersfield, has developed a healthy respect for that first step, which can be a lulu. While embarking from his roof top a couple of weeks ago, the ladder slipped and Dick ended up with a break in both bones of the right forearm and a cracked vertebrae. We note that Dick is recovering nicely and should be back in tiptop golfing form shortly.

Ed Karpe, Kern Oil, is presently "batching" in New Orleans while waiting for his house to sell in Bakersfield.

Seventy-two men from the Standard (Oildale) Exploration Department enjoyed the annual spring stag at the Kern River Picnic area on May 18. A golf tourney was held in the morning with Bob Lindblom winning low gross honors with 72. Flight winners included Bob Goff, John Jacobsen, Bob Lindblom and Walt Gray. The annual East vs. West softball game was finally won by the West after 7 consecutive defeats over past years. The East made a mild protest because of the 6 outfielders on the West team. Final score was 5-0. The horseshoe champs were Dick Darrow, Monty Montgomery, and Keith Berry. A red Jaguar was seen at a late hour driving an obstacle course made up of picnic tables, pavilions and swing sets. Beer

consumption was at an all time high with temperatures in the 90's. Ernie Expenschied was General Chairman of the event.

Local Giant rooters Bob Ortalda and Milt Zeni in the Standard Oildale office had long sad faces over the Dodger victories in the recent series.

The annual Union Oil-Standard Oil golf tourney has been postponed until fall. The respective Captains Chuck Cary and Bob Lindblom report a summer of practice is needed to assure a top tourney.

KING CITY FIELD TRIP NOTES:

Barney Barnard was respectfully in bed by 10:30 P.M. on Friday night to the immense relief of the King City constabulary. By contrast his roomy Spence Fine was reported shooting pool 'til midnight at one of the KC bright spots.

A local lady patron at the "San Lucas Petroleum Club" waited 20 minutes to use the rest room before someone told her that the "Welcome Geologists" sign on the door applied to Gladys Louke.

When the microphone finally turned on near the end of Ed Gribi's talk, a cry was heard from the back of the room, "Have you been talking all this time, Ed?"

Max Payne won't drink beer from a dusty beer can.

The 7.8 cans of beer per man statistic was seriously reduced by the huge consumption of lime soda by the paleontologists - except for Andy Marianos who manfully switched to beer when the cola ran out.

Some concern was registered at the beginning of the trip when it was noted on the road log out of King City, that you must stay on the northbound lane in a southwest direction.

Stan Carlson is just getting his color back. He was sitting over the right rear wheel of the bus when it rolled over space on a tight turn in the hills and nearly dumped No. 2 bus in the ravine.

By the way, is that pickup truck still waiting on one of those hairpin turns for the fifth bus to go by?

Snookie Chambers, retired, came out undisputed Indian Wrestling Champ in Keefer's Bak room.

Mike Maxwell, McCullough, has surrendered his "lover" title in favor of "tiger" for his stout defense of a "Welcome Geologists" sign at the Bak room.

Bob Lindblom, Standard, at the Bak room was claiming a 4 handicap to scare off a golf challenge by a King City cattleman known to play to a 5 handicap.

Hal Reade and Bob Morrison, Richfield, spent the field trip weekend building the construction jig for a pair of El Toro sailboats in time for summer vacations.

FOUND - One Estwing 11" all metal masonry hammer, rubber handle.

LOST - One Estwing 9 1/4" all metal masonry hammer, leather handle. (E. Gribi)

LOST - One Guidebook at Technical Session.

Jean B. Sentour de Boue suggests that paleontologists of 38,465,384 A.D. may be able to solve slip problems of the San Andreas by reference to sudden appearance of new species all on the west side of the fault at four localities. New species to be named *Buschii Bavarianii* (Max Payne), to add to a large assemblage of earlier occurring species.

The Pacific Section was honored to have Dr. A. I. Levorsen join the Field Trip.

CALENDAR

June 6, 1963: Thursday noon, Rodger Young Auditorium, 936 W. Washington Blvd., Los Angeles. Robert H. Paschall, Petroleum Appraisal Engineer, State Board of Equalization will discuss "Oil Property Evaluation for Ad Velorem Tax Purposes."

June 7, 1963: Friday all day. A.A.P.G. Annual Spring Picnic. Golf at 8:00 A.M. Field Trip starts at 10:00 A.M. to Castaic Junction Oil Field and Rancho Temescal. Picnic in afternoon at Sunset Farms, Sylmar.

June 12, 1963: Wednesday evening, 7:00 P.M., Union Oil Auditorium, Los Angeles Section, Association of Engineering Geologists monthly meeting. Mr. John P. Pollock, prominent local attorney will speak on "A Landslide Case Goes to Trial", dealing with the much-publicized Portuguese Bend landslide and the recent lawsuit just concluded. All members of the Pacific Section A.A.P.G. are cordially invited to attend.

June 14, 1963: Friday noon, San Joaquin SEG Luncheon. Cutler Webster, Tidewater, will discuss with colored slides "Tidal Waves and Landslides in Alaska". Place to be announced, Bakersfield.

June 18, 1963: Tuesday evening, El Tejon Hotel, Bakersfield. San Joaquin Geological Society will hear Hy Seiden speak on "The Asphalto Oil Field". Cocktail hour 6:30 P.M.; Dinner hour 7:30 P.M.

June 24-28, 1963: "Computers in the Mineral Industries Symposium", Stanford University.

BIBLIOGRAPHY OF RECENT PUBLICATIONS

BULLETIN OF THE AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS, vol. 47, no. 1, January 1963

Jurassic age of Franciscan Formation south of Panoche Pass, California, by Paul Enos.

Early Eocene angular unconformity of western front of Northern Cascades, Whatcom County, Washington, by Gerald M. Miller and Peter Misch.

BULLETIN OF THE AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS, vol. 47, no. 2, February 1963

Possible mechanism for concentration of brines in subsurface formations, by J. D. Bredehoeft, C. R. Blyth, W. A. White and G. B. Maxey.

Rhythmic linear sand bodies caused by tidal currents, by Theodore Off.

BULLETIN OF THE AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS, vol. 47, no. 3, March 1963

Rosedale Channel--Evidence for Late Miocene submarine erosion in Great Valley of California, by Bruce D. Martin.

Biogeographic units as biostratigraphic units, by James W. Valentine.

Fluid dynamics of viscous buckling applicable to folding of layered rocks, by Hans Ramberg.

U.S. GEOLOGICAL SURVEY

Professional Paper 440-K: Data of Geochemistry, 6th edition. Volcanic emanations, by D. E. White and G. A. Waring.

Bulletin 1141-E: Cenozoic geology in the Mammoth area, Pinal County, Arizona by L.A. Heindl....\$1.00

Bulletin 1144-C: Strontium sorption studies on crandallite, by Irving May, M.M. Schenpfe, and C.R. Naeser.....\$.15

Water Supply Paper 1590: Ground-water resources of the Fairbanks area, Alaska, by D.J. Cederstrom \$.75

Water Supply Paper 1619-H: Reconnaissance of Headwater Springs in the Gila River drainage basin, Arizona, by J.H. Feth and J.D. Hem.....\$1.00

Water Supply Paper 1619-L: Ground water in the alluvium of Kings River Valley, Humboldt County, Nevada, by C.P. Zones.....\$.45

Water Supply Paper 1655: Ground water in the Pullman area, Whitman County, Washington, by B.L. Foxworthy and R.L. Washburn.....\$.75

MAPS:

MF-260: Reconnaissance geologic map of the eastern half of the Klamath Falls (AMS) quadrangle, Lake and Klamath Counties, Oregon, by George W. Walker.\$.50

CALIFORNIA DIVISION OF MINES AND GEOLOGY

Special Report 74: Index to graduate theses on California Geology, to December 31, 1961, by Charles W. Jennings, and Rudolph G. Strand.....\$1.00

U.S. BUREAU OF MINES (Government Printing Office, Washington 25, D.C.)

Information Circular 8155: Production of mineral fuels and hydropower in the United States since 1800, by Richard M. Gooding.....\$.30

U.S. BUREAU OF MINES (Distribution Section, 4800 Forbes St., Pittsburgh 13, Penna.)

Information Circular 8145: Velocity of sound in petroleum reservoir rocks and other mediums: A bibliography, by C.A. Komar.....FREE

Information Circular 8146: Ultrasonic Phenomena and methods of measurement: A bibliography by C.A. Komar and J. Pasini, III.....FREE

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 74, no. 3, March 1963

Permo-Pennsylvanian stratigraphy of western Colorado Plateau and eastern Great Basins regions, by Kenneth G. Brill, Jr.

Structure and mode of emplacement of Caribou Mountain pluton, Klamath Mountains, California, by Gregory A. Davis.

WASHINGTON DIVISION OF MINES AND GEOLOGY (Dept. of Conservation, 335 General Administration Building, Olympia, Washington)

Report of Investigations No. 22: Tertiary geologic history of western Oregon and Washington, by Parke D. Snively, Jr., and Holly C. Wagner.....\$.25

WASHINGTON DIVISION OF WATER RESOURCES (Olympia, Washington)

Bulletin No. 20: Geology and ground water resources of Northwestern King County, Washington, by Bruce A. Liesch, Charles E. Price and Kenneth L. Walters\$2.00

SCIENCE, vol. 140, no. 3563, 12 April 1963

Geologic evolution of North America, by A.E.J. Engel.

Surface material of the moon, by C.R. Warren.

SCIENCE, vol. 140, no. 3564, 19 April 1963

Accuracy of radiocarbon dates, by W.F. Libby.

WORLD OIL, vol. 156, no. 5, April 1963

Better interpretation through better data handling, by H.T. Brundage.

Here's Socal's experience with a mechanized well data system, by L.C. Bonham.

PETROLEUM ENGINEER, vol. 35, no. 3, March 1963

Are you sure you want to find natural gas?

JOURNAL OF GEOLOGY, vol. 7, no. 2, March 1963

Precambrian age determinations in the Western San Gabriel Mountains, California, by L.T. Silver, C.R. McKinney, S. Deutsch, and J. Bolinger.

Alluvial-fan deposits in western Fresno County, California, by William B. Bull.

Soil creep and the development of hillside slopes, by W.E.H. Culling.

OIL AND GAS JOURNAL, vol. 61, no. 13, April 1, 1963

Offshore oil: A losing proposition?

Ultradeep drilling will pay off, says Cram.

The next 40 years of oil and gas (Special Section).

OIL AND GAS JOURNAL, vol. 61, no. 14, April 8, 1963

Steam injection wins new support, by Carl J. Lawrence.

How to find 165 billion bbl of oil by year 2000, by Frank J. Gardner.

OIL AND GAS JOURNAL, vol. 61, no. 16, April 22, 1963

Acreage off Huntington Beach, Calif., up for bidding.

Computers: The ultimate is yet to be attained, by H.H. Ammerman, and R. Ted Smith.

Who found the giant oil fields?, by Frank J. Gardner.

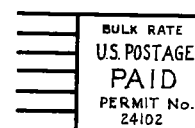
How "normal moveout" helps determine seismic velocities, by Louis B. Christian.

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

Volume 17

Number 6

Return Requested



RECEIVED

JUN 17 1963

Richard L. Hester
Pauley Petroleum, Inc.
10000 Santa Monica Blvd.
Los Angeles 67, Calif.

DA

PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION
AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

RECEIVED

JUL 16 1963

Volume 17

July, 1963

Number 7

ASSOCIATION ACTIVITIES



Gordon Bell, Gulf, (squatting) giving low down on Oak Canyon Oil Field to group of attentive geologists at recent field trip to Temescal Ranch.

SOCONY MOBIL GEOLOGIST TO RECEIVE MATSON AWARD

John D. Moody, manager of exploration, Socony Mobil Oil Co., New York, N. Y., has been selected as 1963 recipient of The American Association of Petroleum Geologists' Matson Award, made yearly in recognition of the best technical paper presented at the Association's annual meeting.

Announcement of the award was made by J. Ben Carsey, Houston, Texas, chairman of the 1963 selection committee. Carsey reported that Moody's paper, "Tectonic Pattern of Middle America," pointed out the relation between oil and gas distribution and the basement tectonic pattern. The paper was presented during the March 25-28 Houston meeting. J.C. Sproule, AAPG president, will make formal presentation of the award in Toronto, Canada, May 19, 1964 at the 49th annual meeting.

Established in 1957 by the Matson family of Tulsa in memory of the late George C. Matson, fifth AAPG president, the award consists of a large silver cup bearing the seal of the Association and the engraved names of annual winners, of whom each receives, for his permanent possession, a smaller engraved replica.

Moody, a member of the Association since 1940, served on the Business Committee and is presently on the Boy Scout Committee and the Committee for Publication. He is a fellow of the Geological Society of America, the Geological Association of Canada, and the Geological Society of London. He is a member of the American Geophysical Union, the American Association for the Advancement of Science, and the American Petroleum Institute.

GEOLOGICAL SOCIETY OF SACRAMENTO FIELD TRIP

The Geological Society of Sacramento's annual week end field trip attracted a total of 76 participants for a sweeping "Granite to Granite" cross section of central California geology on May 18 and 19, 1963.

The trip started with examination of the sedimentary Sur series and intruding Santa Lucia granite of the Gabilan Range just east of Monterey Bay and ended two days later at the foot of towering El Capitan peak in Yosemite Valley. Between these two points, members of the field trip were exposed to a wide variety of topics including: structural geology along the San Andreas fault; California history at Mission San Juan Bautista; engineering geology at the site of the massive San Luis dam which, on completion, will pond 2 million acre feet of water; and, geomorphology and ground water geological studies of rapid subsidence along the western margin of the central San Joaquin valley.

The first day's activities were concluded by a symposium on the future of oil and gas exploration in the Great Valley with emphasis on geological and geophysical techniques presented in an evening, open house session at Fresno State College. Economic geology, metamorphic and igneous petrology of the Foothill belt, and the history and glacial geology of Yosemite National Park were investigated during the second day.

The purpose of the trip was to present a panoramic view of the central Great Valley of California and to provide in the many papers written especially for the 143 page, 32 plate guidebook, a background for appreciation--and perhaps solution--of some of the complex problems facing California geologists.

GEOLOGICAL SOCIETY OF SACRAMENTO OFFICERS ELECTED

The Geological Society of Sacramento elected the following officers for the 1963-1964 term:

William Bull - President
United States Geological Survey

George E. Brown - Vice-President
Marathon Oil Company

T. W. Todd - Secretary
Department of Geological Sciences
University of California, Davis

Lawrence K. Lustig - Treasurer
United States Geological Survey

EXECUTIVE COMMITTEE, PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

John E. Kilkenny	President
Louis J. Simon	Vice-President
Arthur O. Spaulding	Secretary
Milton T. Whitaker	Treasurer
John H. Van Amringe	Editor
Richard B. Haines	Past President
Harrison C. Jamison	Alaska Representative
Edward A. Hall	Coast Representative
William J. Edmund	Sacramento Representative
James L. O'Neill	San Joaquin Representative

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 California.

Editor:	Jack Van Amringe
Assistant Editors:	
Activities	Tom Wright
Calendar	Alfonso Escalante
Selected Bibliography	Lucy Birdsall
Cartoonists:	Mort Kline & Harold Sullwold
Personal Items:	Bill Fowler
Correspondents:	
Alaska	Richard Lyon
Coast	Jack Durrie
Los Angeles	Mike Maxwell
Northwest	Ralph Rudeen
Sacramento	Dorman Graves
San Francisco	Gordon Oakeshott
San Joaquin	Rod Colvin
Membership Secretary	Pat Metcalf

Next deadline, July 26, 1963.

COASTAL GEOLOGICAL SOCIETY

The society's dinner meeting on June 11, was held at the Ventura Women's Center. Mr. Edward A. Gribi, Jr., consultant, reviewed the "Salinas Basin Geology", and activities of the May 24-25 S.E.P.M. Field trip. An abstract of an earlier talk may be found in the January issue of the P.P.G. newsletter. But for a comprehensive study of the area, refer to the 168 page guidebook, "Salinas Valley and the San Andreas Fault", which makes a new, major contribution to the literature. Mr. Gribi's talk also included much information which came out during the field trip, and provoked enthusiastic discussion of the area's many prospects.

"SALINAS BASIN GEOLOGY"

The Salinas Basin is a relatively deep, but narrow accumulation of up to 14,000 feet of marine sediments. Pliocene sediments range up to 2500 feet thick and are separated by an unconformity from the Miocene. Controlling structures for oil accumulation are believed to be pre-Pliocene. Miocene sediments are predominately shales, which in the Upper Miocene, grade into sands to the east of a "hinge zone".

The San Ardo field produces from a number of Upper Miocene sands which appear to be in a synclinal position, but structure is controlled by adjacent basement buttresses or thrust-elevated shelf areas. Thinning sand trends, often in a "shingle-pattern", also control productive limits. Although the low-gravity oil produced is not in great demand, the one and one-half billion barrels plus of

oil in place puts this field in the "major" category. Still unsolved is the mechanics of the north-westerly "tilted" water table.

The Middle and Lower Miocene sediments in the area also offer a wide range of depth for sedimentary study and exploration. Some structures, such as the San Miguel Dome, have not been found to be productive. This helps to point out that depositional trends need further study, beyond the fine work done by the authors of the guidebook.

Discussion of oil habitats and the San Andreas Fault area reflected the keen interest of the group. Comments by many of the 176 field trip registrants complimented the excellent preparation for the field trip and fine guidebook.

LOS ANGELES LUNCHEON MEETING

Robert H. Paschall, Senior Petroleum Appraisal Engineer with the State Board of Equalization, spoke at the Rodger Young Auditorium on June 6 on the subject of "Appraisal of Petroleum Properties for ad valorem Tax Purposes." Paschall said that California oil and gas properties, with only minor exceptions, are appraised each year by the assessor of the county where they reside. His own role is that of advisor to the assessors of counties which do not have mineral rights appraisers on their staff.

Oil and gas producing properties are subject to Article XIII, Section 1 of the State Constitution which says "All property shall be taxed in proportion to its value". Court decisions have further established that "value" may be considered equivalent to fair market value. Producing properties are, therefore, subject to assessment on the same basis as commercial and residential property. The assessor places a fair market value on each piece of property; the value is reduced, by the application of an "assessment ratio" of about 25 percent, but often a higher ratio is assigned to certain commercial and industrial properties.

All of the major oil producing counties have long-established and varied procedures for the assessment of oil properties. Some counties maintain decline curves on all leases, and in some cases on each producing zone in every field, while others employ tables to arrive at present worth and costs. Reserves and future rate of production are determined, and are reduced to present worth by an appropriate discount factor. Deduction of future costs from the discounted present worth yields the value on which the assessment is based. "Present worth" tables incorporate production decline and a discount rate, and in some cases an assessment ratio. It must be noted that some assessors offices have hundreds of separate oil properties, on each of which a new value must be placed within a three-month period every year.

No allowance normally is made either for overhead or depreciation. One aspect of petroleum appraisal reveals that failure to allow for depreciation is not an onerous provision. This is the fact that the fair market value determined by an appraiser includes the value of the equipment. That is, the oil reserve itself would have little or no value unless the equipment was present, and in fact might not even be known to exist. Since the equipment is, therefore, an integral part of the calculated present worth of future net income, it is not penalized by not being depreciated annually.

The northern gas counties have a different history of assessment than the southern oil counties. In the northern gas counties, the fair market value for a gas field presently is derived in this manner: multiply the reserves times the field price times the discount factor for the estimated years of remaining life, using a 10 percent discount rate, from that discounted gross income subtract the estimated future operating costs, including those for compression and for drilling needed to maintain contact deliverability.

Paschall noted that he feels it is advisable to consider oil and gas taxes not simply in terms of cents per barrel or MCF, but in terms of the percent that taxes bear to posted or field price. One rough estimate indicates that oil taxes average 5 percent to 6 percent of posted price in California, but there are individual cases which range at least from 1 percent to 16 percent. This range is a consequence of differing assessment practices and tax rates. Gas taxes range from about 5 percent to 13 percent, but this results mainly from the rate of production. Since it is gas reserves and not production that is assessed, the lower the production rate is the higher become the taxes per MCF actually produced.

In summary, the bulk of California taxes on oil and gas are based on the assessment of reserves, and are not severance taxes on production as in many other states. The assessor determines an assessed value; the board of supervisors and local taxing bodies determine the tax rates which shall be applied to that value. The assessors of the major oil-producing counties are presently engaged in a joint effort to produce a manual for the appraisal of producing properties in the State.

SAN JOAQUIN GEOLOGICAL SOCIETY

The regular monthly meeting of the San Joaquin Geological Society was held at the El Tejon Hotel in Bakersfield on June 18, 1963. Over 100 geologists gathered to hear details by Hy Seiden of the San Joaquin Valley's newest oil discovery at Asphalto.

ABSTRACT:

The Asphalto Field is located on the west side of the San Joaquin Valley approximately two miles east of the town of McKittrick. The discovery well, the E. A. Bender "Standard Oil Co." No. 18-23Z in section 23, T. 30 S., R. 22E., M.D.B. & M. was completed on December 14, 1962 for an initial production of 312 B/D, 37° oil from the interval 5612' to 5762'. Since then, 19 wells have been completed for daily production of about 5500 B/D.

The discovery well has three main sands which have been named respectively the 1st Asphalto sand, 2nd Asphalto sand, and 3rd Asphalto sand. They are upper Miocene in age and are generally equivalent to the Stevens sands found further out in the valley. Only the 1st Asphalto sand was productive in the discovery well, but subsequent wells have established production in all three sands.

Stratigraphy is complicated by the channel-like deposition of the sands and by the progressive overlap of older by younger sediments. From presently available subsurface and dipmeter data, the structure appears to be a low elongated knob on the southeast plunge of the McKittrick Front structure. The water tables varies between -5,000' and -5,020' in all zones, thus ruling out faulting of any great magnitude, but additional drilling will provide more information. A strong reversal does exist between

this area and the 24Z area to the east, as the Standard Oil Company No. 47-23Z was wet in the original hole and dipmeter showed northeast dips. The well was redrilled southwest and completed in the 3rd Asphalto sand.

Operators in the field include E. A. Bender, Standard Oil Company of California, Sunray D-X Oil Company, J. Ainslee Bell and Richfield Oil Corporation, operator for the U. S. Navy. Five wells are presently drilling or being completed, and will substantially increase daily production.

W. W. PORTER, II ADDRESSES 36th. ANNUAL A. P. I. SPRING MEETING

W. W. Porter, II, consulting geologist, Los Angeles, delivered the Management Address at the A. P. I. Spring Meeting in Los Angeles on May 23, 1963. The subject "Dangers of Increasing Government Control" showed how socialism is advancing rapidly by the Keynesian short-cut to socialism through complete direct control of enterprise without need for seizure of ownership.

WYOMING GEOLOGICAL ASSOCIATION BILLINGS GEOLOGICAL SOCIETY

JOINT ANNUAL FIELD CONFERENCE . . . CAMP-OUT TRIP

LOCATION - Northern Powder River Basin - Wyoming, Montana and South Dakota.

DATES - August 8, 9, 10, 1963 (Thursday morning through Saturday noon).

REGISTRATION - Registration is by mail. Send \$5.00 for registration and \$18.00 for 7 meals to the Wyoming Geological Association Registration Committee, P.O. Box 545, Casper, Wyoming.

NO REGISTRATIONS AND NO CANCELLATION REFUNDS processed after July 31, 1963.

The caravan will convene at Sheridan, Wyoming, at 7:00 a.m., August 8. Meal tickets and car numbers will be distributed upon presentation of receipt between 5:00 and 10:00 p.m., August 7 at the Sheridan Inn. Guidebooks may be purchased at this time.

TRANSPORTATION AND ACCOMMODATIONS - Transportation on the field trip will be by private car caravan. Please indicate if you desire transportation. Wherever possible, at least three men to a car.

Accommodations are available in Sheridan, Wyoming, for August 7. If you plan to spend that night in Sheridan, please so indicate on the registration form.

PROGRAM - The caravan route and camp grounds are shown on the attached map. There will be approximately 10 talks covering the Cretaceous and Permo-Pennsylvanian (Minnelusa). The site of Yellowtail Dam and Soap Creek field will be visited.

GUIDEBOOK - The Guidebook will include 25 papers on stratigraphy and general geology and 12 oil field papers. Special emphasis will be placed on the Permo-Pennsylvanian (Minnelusa).

FURTHER NOTES ON THE S.E.P.M.-A.A.P.G. 1963 SPRING
FIELD TRIP, KING CITY, CALIFORNIA, MAY 24-25, 1963.

Paid attendance: 176 persons (four bus-loads).

Technical session: Four excellent papers given during the afternoon of the first day at the King City Fairgrounds;

- "Salinas Basin Oil Province" - E. A. Gribi
- "The San Ardo Oil Field" - Rodney Colvin, Mobil
- "Hydrodynamics of the San Ardo Area" - Dr. F. A. F. Berry, University of California
- "Landforms of the Salinas Valley" - T. A. Baldwin, Humble Oil

Barbeque: Donated by Phil Vincenz and Max Newton, Consumption - 260 lbs. of steak, 10 gallons beans, 20 loaves french bread, 1 crate lettuce; 10 gallons Charles Krug Cabernet Sauvignon Wine donated by J. F. George Co.

Social Hour: 6 gallons bourbon, 5 gallons Scotch donated by Cook Testers, B. J. Services, Schlumberger, Wilson Trucking Co., Rich Sand, Thorco Oil.

Field Trip: 150 miles in four buses, steak barbeque at lunch. 1200 cans (2,57 American barrels) of beer were consumed. (The beer consumption rate during the Field Trip probably exceeded the daily production of oil of the Bitterwater Field) - courtesy of Cook Testers, Welx, ABC Blueprint, Halliburton and others.

Guidebook: 160 pages, 25 technical papers, road logs, geologic map of entire area and accompanying cross sections, 92 illustrations including maps, sections, photos and sketches. Price \$12.00 - available from Paul Wesendunk, P.O. Box 5278, Oildale, California, payable to the S.E.P.M.



Dick Thorup receiving a complementary copy of the new Guidebook to the Salinas Basin from John Kilkenny, Pacific Section President at the recent King City Field Trip. Is this the blind leading the blind? Photo courtesy "King City Rustler".

NOTICE

If any of your geologist friends complain that they didn't receive their July Newsletter - could be they haven't paid their 1963 dues. A check for \$3.50, payable to the Pacific Section A.A.P.G. and mailed to M. T. Whitaker, Mobil Oil Co., P. O. Box 2122, Los Angeles 54, will correct the situation and then they won't have to borrow your copy.

A.A.P.G.-S.E.P.M. Spring 1963 Field
Trip to Hathaway Ranch Area,
Los Angeles County, California

Southern California geologists were fortunate this year to hold their Annual Spring Field Trip, June 7th, in an area usually closed to the public. The A.A.P.G. is very appreciative to the Hathaways for allowing this group to become familiar with the geology of their Temescal Ranch first hand. The trip was led by Gerry Miller, Union, and comments along the way were supplied by Gordon Bell, Bill Corey, John Hazzard, John Crowell and others.

The first stop was a visit to the Oak Canyon Oil Field before entering the confines of the Hathaway Ranch.

Oak Canyon Oil Field
Gordon Bell, Gulf Oil Corp.

The Oak Canyon oil field is situated at the Highest structural point on a southeasterly plunging anticlinal fold trending roughly parallel to Hasley Canyon in Sections 31 and 32, T5N, R17W, north of the Santa Clara River and east of Piru Creek in western-most Los Angeles County. Elevations range from 1400 to 2000 feet within the field.

Strata exposed at the surface in the Oak Canyon Field are Pliocene, Upper Pico coarse grained sandstones and conglomerates and a series of fine grained to medium grained sandstones and sandy siltstones. Wells penetrate 1000' to 1500' of Pliocene section and go into slightly over 7700' of Upper Miocene sandy shales, siltstones and bodies of fine to medium grained sand. The deepest well in the field, No. 6 USL G, bottomed at 10807' in Middle Miocene (Luisian stage) sands and shales.

The near surface structure of the fold upon which the field is located is a rather broad, gentle southeast plunging anticline with surface dips of from 10 to 20 degrees. No reversal of dip can be demonstrated up-plunge in a northwest direction. Below depths of 5000 feet, however, faulting and repetition of beds combine to give closure in this direction and production in the various sand zones.

Discovery of the field was made in January 1941 in well Lechler #1 from the shallow 1-A oil zone, producing 56 B/D of 21 gravity oil from 50 feet of sand in the interval 2358-2408. Subsequent drilling has proved this zone to be only a lensing sand on the flank of the structure and present only in the northwest portion of the field.

Eight oil zones are now productive in the field from depths of 2500' to 9600' of which zone #5A at 7000' is the thickest and most widespread. Initial production from this zone averaged 300 B/D of 32 gravity oil.

Twenty-two wells are presently producing in the field. Of 5 wells drilled to the deepest zone at 9600', only 2 are producers. Permeabilities in the deeper sands appear to decrease rapidly from east to west, and the Anticline appears to be more tightly folded than at shallower depths, both factors combining to appreciably reduce the productive area of the deep zones.

Hathaway Ranch Road Log

A road log of the route including geologic map and section, compiled by Gerry Miller, Bill Corey and Ed Hall, will appear in a subsequent issue for the benefit of those unable to make the trip.

PERSONAL ITEMS

Bill Fowler, Phillips, has joined the P.P.G. Staff as the new Personal Items Editor. Any scuttlebutt about your friends you think worthy of print, send it on to Bill, c/o Phillips Petroleum Co., 3600 Wilshire Blvd., Los Angeles 5, or call 385-6281.

Charlie Sturz, of Tidewater's Foreign Exploration Department, was a visitor in the Bay Area for a few days this week. He has just come from several years of experience for his company in Pakistan and Iran. Charlie is well remembered in San Francisco from the days, several years ago, when Tidewater had its home office for domestic exploration in our city.

Stanford Rose showed up for the regular monthly luncheon of the Northern California Geological Society (held every Monday noon at Lambros', 315 Bush Street) after being away for some months. Stan spent some time in the northern part of the vast territory of western Australia in exploration for Standard's subsidiary, California Chemical Company, investigating non-petroleum mineral occurrences.

Dr. Alfred Bentz, world-recognized petroleum geologist and retired head of the Federal Geological Survey, Hannover, Germany, was a recent visitor in the Bay Area. He and Dr. Paul Witherspoon of the University of California spent a day in San Francisco visiting the California Division of Mines and Geology and attending the regular weekly luncheon meeting of the Northern California Geological Society in San Francisco. Bay Area geologists heard him speak the following day at the Department of Mineral Technology at the University of California in Berkeley. Dr. Bentz gave a very interesting first-hand discussion of geologic occurrences of petroleum in Germany and the North Sea area.

Up to the north slope of Alaska for a summer of field work for Richfield are Joe Arndt from Long Beach and Walt Scott from Ojai.

Badger is back! After a three year stay in McAllen, Texas, just long enough to marry a Texas girl, Bob has been transferred back to Pauley's Los Angeles office.

A recent arrival to Socony Mobil's downtown office is Jack Hobbs, the new Division Geophysicist. Jack was transferred in from Durango, Colorado. Let's hope the change from mountain resort to smogville in the summertime isn't too much for him.

Moving from Long Beach to New Orleans in time for the mosquito season is Richfield geophysicist Jim Crow.

Paris in the spring - Phooey! It's the Sahara in the summer for Mobil geologist, Conrad Maher, off to Libya for a three month stay.

Bud Oakes, Union, recently from Cut Bank writes that his new address is 97 Marigold, Casper, Wyo., a bit more southerly in the banana belt. The shift of Union's personnel there (May 1963) should have noted that Walt Phillipone is Division (not District) Geologist.

Doug Waterman, Standard Oil Co., La Habra, is now District Geologist in Ventura.

The longest mile is the last mile, or the last half mile, if you ask L. S. (Snooky) Chambers, (retired) who made the first 400 miles of the recent Kint City field trip from Los Angeles to his motel but couldn't make the half mile trip from his motel to the starting point of the field trip. Next field trip he plans to sleep late the day after the trip. Snooky is shaking the California dust from his feet and driving up to Alaska for a vacation. He plans to fly home. Hope he catches the limousine in time!

Mason Hill presented a paper on the occurrence of oil in the Cook Inlet, Alaska to the World Petroleum Congress in Frankfurt, Germany. Then he and John Wiese, also of Richfield, took part of their vacations to do a little sightseeing in Europe. Tony Morris, with Pauley, had already done his sightseeing before coming to Frankfurt, having stopped by and scouted the fleshpots and mountain climbing possibilities of Lebanon and Iran on the way. Others from Los Angeles doing the wealthy tourist bit in Frankfurt included Loring Snedden and Art Huey from Signal, and John Kilkenny, Layton Stanton and Bill Moran from Union. Bill gave a paper on Australia.

Reports that a local drilling contractor will miss a dividend as a result of offering a free meal to visitors at an open house for a new drilling barge are completely false. Despite the swarms of free-loaders, officials assure the public that they had sufficient disaster insurance to cover it.

John Graves, Phillips' commuting geologist, has once more left the fairways of Santa Barbara for the bright lights of Enumclaw (Pop. 2789), Washington to do a little well-sitting for the vacationing Andy Fish.

The Union Oil Southern Division Field Department held a Bar-B-Que at the Stearns Picnic Grounds, June 1. There was a good attendance of employees and their families, and in addition the steaks and beans were "out of this world". The door prize was won by John Sloat -- Guess what? A handy home hair dryer in convenient carrying case.

The Coastal Geological Society elected Willard J. Classen, Jr. as Treasurer. With the transfer of Roger Alexander, Standard-Ventura, to San Francisco the vacancy of the Vice-president position is to be filled by Don Hagen, Texaco. Harold Sugden, Tidewater has moved up to position of secretary.

Warren Gillies, Texaco, Ventura, has been transferred to Colombia, South America.

Jim Taylor, recent U.C.L.A. graduate, is now with Texaco in Ventura.

Roger Alexander, Standard Oil Co., Ventura, has been transferred into the Controller's Office in San Francisco. Sorry to see you go, Roger, but lots of luck.

Jack Van Amringe, Union, and his wife and family took the trailer on a relaxing two-week vacation into the Sierra along the Yuba and Feather Rivers. This was a good chance to collect some "hard rocks" for a change and visit some old mines along the Mother Lode.

Marshall Ayres, Standard, has recently been transferred to La Habra from Bakersfield, where he sold his house in record time.

Bill Horsley, Richfield, Bakersfield has been elected to the Board of Directors of the East Niles Community Services District, a domestic water and sewer service, locally known as the "East Niles New & Used Water District". Bill is also a V.P. of the Community Services District Association of California.

Fred Green, Consultant, has recently returned to the valley of sunshine from Santa Barbara. His office is now located at 3913 State Row (next to Miller & York Drlg. Co.), Phone 399-8353 and mail address P. O. Box 1397, Bakersfield.

Tom Ray, Marathon, Bakersfield has sold his home prior to departing for a six month attendance to a company logging school in Denver, to begin early in August. Destination unknown for post graduates.

Louie Fitzhugh, Texaco, has been transferred from Bakersfield to Sacramento.

Don Scanlin, Union, has been transferred to Bakersfield from Olympia, Washington.

Dick Brennen has joined the staff of Union Oil Company as geophysicist in Bakersfield. Dick was formerly with United Geophysical.

Gerry Rickels, District Geologist for Union Bakersfield, was temporarily assigned to the Los Angeles office as acting Division Geologist while John Kilkenny was in Europe.

Gordon Bell, Gulf, has been transferred from Bakersfield to Los Angeles to be Area Geologist for the Los Angeles Basin.

Bill Zajic has rejoined the staff of Gulf in Bakersfield. Bill was formerly with Gulf in Denver and more recently a consultant in Sacramento.

Bob Nesbitt, Gulf, Midland, recently visited in Bakersfield. Bob Johnston also breezed through Bakersfield while away from his regular chores in Lafayette.

John Todhunter has assumed new duties as a geologist for Sunray D-X in Bakersfield.

The new car fever seems to be catching on at the Humble Bakersfield office. So far three new station wagons and one "new" used car have been purchased, and another new sport coupe has been ordered. Others have been noticed with that fevered look in their eyes. At present it is a toss up whom will be next!

C. D. (Chuck) Edwards, Consultant, Bakersfield is leaving California to become Chief Geologist for Camerina Petroleum Corporation August 1st, with offices located at 1711 First, City National Bank Bldg., Houston 2, Texas. Chuck, Marge and family have been in California for more than 13 years during which time they have resided in Ventura and Bakersfield. Their presence will be sorely missed but everyone wishes them well.

Most people have their appendix removed while still children, but Tod Harding of Humble Bakersfield office waited until his second childhood. "Hard working Harding" couldn't take all the peace and quiet at home and is back on the job after a very speedy recovery.

Kent Johnson has joined the Standard Oil Company's Exploration staff in Oildale. Kent received his Ph. D. from the University of Wisconsin.

Gordon Maxon, Geological Exploration, was lucky to have avoided serious injury when his pickup was sideswiped by a semi at a stop signal near Stockton. Gordon came out with only a couple of bruises but the pickup was not so lucky - a total wreck.

Bob Herron has recently joined American Machine and Foundry and will be primarily involved in oceanographic studies at their Santa Barbara offices. Anyone interested in the best clam, mussel, game fish or sundry flotsam localities along the S. B. coast, be sure to look up Bob.

NURSERY NEWS

Ed and Joy Miller, Marathon, Bakersfield, their fifth boy, Thomas Carl, born June 21, 1963. A full quota achieved for basketball.

Bruce and Leila Hill, Occidental, Bakersfield, a son, Kurt Robert, born May 24, 1963, 9 lbs. 4 oz.

Harry and Joy Jamison, Richfield, L.A., welcomed Sara Lee, 6 lb. 13 oz. newcomer to their family on May 25, 1963. Sara Lee is their 7th child, 4th daughter.

CALENDAR

Vacation from meetings during summer for the San Joaquin Geological Society. Daily luncheons at the El Tejon Hotel, Bakersfield at 12:00 Noon.

San Joaquin S. E. G. Luncheon every Friday. Reservations and location through Bob Kropshot, Standard Oil Co., Bakersfield, EX 9-1741.

The monthly dinner meetings of the Northwest Geological Society have been discontinued for the summer. The next meeting will probably be held the latter part of September.

The Long Beach Geologists Luncheon is held on the first Wednesday of every month at the Long Beach Petroleum Club, 3636 Linden Ave., Long Beach. If you wish to add any names to the mailing list, please contact Bruce Barron, HEMlock 6-4254.

BIBLIOGRAPHY OF RECENT PUBLICATIONS

SHAKER CUTTINGS FROM THE BOTTOM OF THE PIT

General Petroleum Corp. (Mobil Oil) Geological Department annual "fishing" trip was held at Bass Lake over the Memorial Day week-end. Al Bowie carried away all of the honors by catching the fewest fish (none?), drinking the most whiskey, (2/5ths) and accumulating the greatest amount of sack time. (99°/o).

Bob Paschall, formerly with C.C.M.O., reports from his Tulip farm in Scio, Oregon, that he plans to take graduate work "in geology" at Oregon State this fall.

Fred Vandenberg, Kern Oil Co., has been handling flagstones - either too many or too large - he's laid up with a sprained back.

The athletically inclined members of the San Joaquin Geological Society have been venting their excess energy on the softball diamonds of Bakersfield. A team was organized and competed this summer in the FAST Industrial League. At the conclusion of the season, the team, known as "The Geologists", finished in fifth place. Captain and organizer of the team was Don M. Davis, Union Oil Company's scout, who also took care of catching duties. Others were Gene Courtright, Shell, pitcher; Jack Beach, Independent Exploration, first base and heavy hitter; Max Capen, Superior, second base; Vic Church, Shell, shortstop; George Roth, Shell, third base; Kenny Obert, Schlumberger, left field; Ralph Brodeck, Western Gulf, center field; and Walt Grey, Standard, right field. It was reported that "ringers" were imported by several teams in the league, but this could not be verified. Ed. Note: How many teams in that league? 5?

Tom Baldwin, Texaco, and Frances Baldwin have been participating in radio programs over the Paso Robles station. Tom is identified as Mr. Gildersteine in a serial, and Mrs. Baldwin has her own program under the title of "Feminine Frances".

Dick Reese has been in an enviable rooting situation during the football season having his daughter, Janet, at U.S.C. and his son, Richard, at U.C. Berkeley,

Manly Natland, Richfield, has finally moved into his new estate atop Palos Verdes Hills. Included in the home is a \$300.00 Natland swimming pool.

The General Petroleum Corp. has spudded its thirteen-story project on the corner of Fifth and Flower - Union Oil scouting service reports cement trucks on location recently - Richfield geological brains claim that they are located higher structurally.

(P. P. G. Vol. 1, Nos. 7-12.)

U. S. GEOLOGICAL SURVEY

OPEN FILE REPORTS (INSPECTION ONLY)

Principal facts for gravity stations in the San Francisco Bay area, California, by G. M. Greve and W. G. Clement. 1 p. explanation, 25 p. tables.

Astrogeologic studies, Annual Progress Report, Aug 25, 1961-Aug. 24, 1962. 447 p. (5 vols.) 3 pl., 87 figs., 30 tables.

Preliminary report on landslides in a part of the Orinda formation, Contra Costa County, California, by Dorothy H. Radbruch and Louise M. Weiler.

Data on wells and springs along the Richardson Highway (State 4), Alaska, by R. M. Waller and D. A. Tolen. 31 p., 2 figs.

Data on water supplies at Nome, Alaska, by R. M. Waller and S. P. Mathur. 12 p., 2 figs.

Data on wells along the Alaska Highway (State 2), Alaska, by R. M. Waller and D. A. Tolen. 26 p., 2 figs.

Data on ground-water exploration and development in southeastern Alaska, by R. M. Waller and D. A. Tolen. 14 p., 2 figs.

Geology and ground-water of the Luke area, Maricopa County, Arizona, by R. S. Stulik and F. R. Twenter. 74 p., 8 figs.

Geology of the Terra Bella-Lost Hills area, San Joaquin Valley, California, by G. S. Hilton, R. L. Klausing, and Fred Kunkel. 64 p., 12 figs.

Hydrology of the Terra Bella-Lost Hills area, San Joaquin Valley, California, by C. S. Hilton, E. J. McClelland, R. L. Klausing, and Fred Kunkel. 74 p., 21 figs.

Quality of water in the Terra Bella-Lost Hills area, San Joaquin Valley, California, by E. J. McClelland and G. S. Hilton. 48 p., 9 figs.

The effect of artesian-pressure decline on confined aquifer systems and its relation to land subsidence, by J. H. Green. 25 p., 4 figs.

TEI-834: Interim geological investigations in the U12e.07 tunnel, Nevada Test Site, Nye County, Nevada, by J. W. Hasler. 22p., 4 figs., 5 tables.

U. S. BUREAU OF MINES (Distribution Section, 4800 Forbes St., Pittsburgh, Penna.)

Information Circular 8145: Velocity of sound in petroleum reservoir rocks and other mediums: A bibliography, by C. A. Komar. 51 p. FREE

Information Circular 8158: Beryllium investigations in California and Nevada, 1959-62, by George H. Homes, Jr., 19 pp. FREE

JOURNAL OF GEOLOGY, vol. 71, no. 3, May 1963

Historical explanation in Geology, by David B. Kitts.

Collapsing continental rises: an actualistic concept of geosynclines and mountain building, by Robert S. Dietz.

Geophysical evidence on the origin of Gullied submarine slopes, San Clemente, California, by Edwin C. Buffington and David G. Moore.

Rate of Denudation in Hawaii, by Ralph Moberly, Jr.

The nature of geologic data, by John J. W. Rogers.

Fabric studies of Virgil and Wolfcamp Bioherms, New Mexico, by Carel Otte, Jr. and James M. Parks, Jr.

AMERICAN JOURNAL OF SCIENCE, vol. 261, no. 5, May 1963

Major epeirogenic and eustatic changes since the Cretaceous, and their possible relationship to crustal structure, by A. Hallam.

Precipitation of calcian dolomites and magnesian calcites in the southeast of South Australia, by H. Catherine Skinner.

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 74, no. 4, April 1963

Are we retrogressing in science?, by M. King Hubbert.

Potassium-argon dates of some Cenozoic volcanic rocks of the Sierra Nevada, by G. Brent Dalrymple.

Subaqueous pyroclastic flows in the Ohanapecosh Formation, Washington, by Richard S. Fiske.

Subaudible noise during compression of rocks, by Richard E. Goodman.

Pollen analyses of surface materials and lake sediments from the Chuska Mountains, New Mexico, by Anne M. Bent and H. E. Wright, Jr.

Age of the intrusive rocks of the southeastern San Gabriel Mountains, Calif., by K. Jinghwa Hsu, George Edwards, and W. A. McLaughlin.

OIL AND GAS JOURNAL, vol. 61, no. 18, May 6, 1963

Oil men describe geologists' role, by John C. McCaslin.

Texaco scores heavily in Arizona, by Frank J. Gardner.

Floating platform may drill the Mohole.

OIL AND GAS JOURNAL, vol. 61, no. 19, May 13, 1963

First well in Australia's Amadeus basin shows gas.

OIL AND GAS JOURNAL, vol. 61, no. 20, May 20, 1963

Shell dominates offshore lease sale.

OIL AND GAS JOURNAL, vol. 61, no. 21, May 27, 1963

Drill ship "Discoverer" is larger, more flexible, by Ed McGhee.

What's ahead in digital control?, by George F. Adams.

Wildcat interest ranges far and wide, by Frank J. Gardner.

Major strike for Central California.

Alaska wildcatters launch new assault, by Carl J. Lawrence.

UNESCO Publications Center (801 Third Ave., New York 22, N. Y.)

The Geological Map of Africa, scale of 1:5,000,000. 9 charts, with accompanying text. Set: \$55.00. Additional individual maps will be available at \$6.50 each.

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

Volume 17

Number 7



Return Requested

Richard L. Hester
Pauley Petroleum, Inc.
10000 Santa Monica Blvd.
Los Angeles 67, Calif.

DA

PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 17

August, 1963

Number 8

ASSOCIATION ACTIVITIES

COASTAL GEOLOGICAL SOCIETY

The July 9, 1963 meeting of the Coastal Geological Society was well attended at the Ventura Women's Center. Guest speaker was Dr. John C. Crowell of the University of California, Los Angeles, who presented a most enlightening lecture on "Investigation of Strike-Slip Faults". This distinguished lecturer for the A.A.P.G. expanded the area of study beyond major California fault problems, and with excellent slides generated lively interest in this "controversial" subject.

ABSTRACT

Any study of faulting requires a periodic review of its basic geometry, and the slides of Dr. Crowell showed initially simple text-book examples. Strike-slip faults were shown, followed by progressively more complex movements. After showing the need for "lines of piercement" or planes of correlatable units, various means of determining correct geometrical offsets were described.

The problem of determining offset in a trace-slip movement in horizontal strata was noted as being almost insolvable, and such faults may be unrecognized in many areas. Proceeding to more complex faulting sequences, when two strike-slip structural units have been moved to resemble two offset "sea-serpent profiles", comparable units are difficult to match when seen from the surface. If unconformities and subsequent fault movements are added, the net results become difficult to estimate and improbable for agreement of results.

Attention was then called to several world-wide examples of strike-slip movements. One writer described the movement at the Dead Sea Trough as about 85 miles. Another in New Zealand has estimated the Alpine Fault to have 350 miles displacement. The West Bay Fault in Canada and Great Glen Fault, along a major fault trend in Scotland, were described as left-lateral movements of large magnitude.

Returning to California fault habitats, some recent mapping and new ideas were discussed. Estimates of San Andreas Fault offsets made in earlier papers by Dr. Crowell were closely retained at 175 miles post-Oligocene-Miocene, 225 miles post-Eocene, and 320 miles post-Cretaceous. The need was outlined for better criteria for correlatable units, such as new facies changes, isopachs, and well-defined types of basement rocks. Evidence of displacement must be used also to distinguish between separation or slip, and more geometrical application made, such as fault-plane sections. Further study should consider the dynamics and the history of faults, to bring in the fourth dimension of movements.

In reviewing the San Gabriel and more minor fault movements, the discussion concluded that closer cooperation and exchange of data was needed between those doing detailed local studies and the more academic regional investigators.

SMITH TO BE AAPG EXECUTIVE DIRECTOR

John C. Sproule, Calgary, President of the American Association of Petroleum Geologists, announced appointment of Norman C. Smith to succeed Robert H. Dott as executive director of the Association, effective July 1.

Dott, the Association's first executive director, has held this position since 1952. Prior to that he had been director of the Oklahoma Geological Survey for 17 years. He will now devote full time to editorial duties connected with the publication of books on petroleum geology, nine of which are scheduled to appear within the next three years.

Smith, who came to AAPG Tulsa headquarters in September 1962 as Dott's assistant, had previously been a consulting geologist in Dallas, specializing in air photo interpretation. He has mapped photo-geological prospects in both the southeast and southwest U. S., along the Gulf Coast, and also in Alaska, Canada, Argentina, Guatemala, and Venezuela. One of his recent assignments was as consultant to the Geotechnical Corporation, Dallas, on the Vela Uniform contract, relative to the location of five permanent seismological observation stations. Subsequently, he served as consultant to the Graduate Research Center of the Southwest and to the Graduate Research Center of S.M.U., both in Dallas.

Prior to entering consulting practice, Smith had been a surface geologist for the Humble Oil & Refining Co. and the Standard Oil Co. of Venezuela. He is a graduate cum laude of Washington and Lee University (1937), with graduate work at Harvard University, the Massachusetts Institute of Technology, and the University of Oklahoma.

A member of the AAPG since 1940, Smith served as chairman of the Business Committee in 1958. He is a former president of the Dallas Geological Society and the Council of Scientific Societies, Dallas-Fort Worth area. In 1960 he served on the planning committee of the International Oil and Gas Center, S.M.U., Dallas.

EXECUTIVE COMMITTEE, PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

John E. Kilkenny	President
Louis J. Simon	Vice-President
Arthur O. Spaulding	Secretary
Milton T. Whitaker	Treasurer
John H. Van Amringe	Editor
Richard B. Haines	Past President
Harrison C. Jamison	Alaska Representative
Edward A. Hall	Coast Representative
William J. Edmund	Sacramento Representative
James L. O'Neill	San Joaquin Representative

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, California.

Editor:	Jack Van Amringe
Assistant Editors:	
Activities	Tom Wright
Calendar	Alfonso Escalante
Selected Bibliography	Lucy Birdsall
Cartoonists:	Mort Kline & Harold Sullwold
Personal Items:	Bill Fowler
Correspondents:	
Alaska	Richard Lyon
Coast	Jack Durrie
Los Angeles	Mike Maxwell
Northwest	Ralph Rudeen
Sacramento	Dorman Graves
San Francisco	Gordon Oakeshott
San Joaquin	Rod Colvin
Membership Secretary	Pat Metcalf

Next deadline, August 28, 1963

REGISTRATION RE-VISITED (Letter to GEOTIMES May 5, 1963)

Mr. Carl F. Austin recently set up some straw men in a field marked "Professional Registration" (see GEOTIMES, April, 1963 p. 16-17) and then obligingly knocked them down. His six questions and answers are an honest reflection of a broad spectrum of professional opinion, but they unfortunately ignore some political realities. I should like to recount a few of these. First I should note that I have served for five years as Legislative Representative of the Pacific Section of the A.A.P.G. I am not speaking here for the Pacific Section, but wish to point out that I have pursued the subject of registration actively for some time.

Registration for geologists in general is indeed a difficult task to reconcile and achieve, and I am not at all certain that it is necessary or possible. Registration in fact if not in law is, however, now in effect in California for some geologists. Three cities and five counties demand that all engineering geology within their boundaries be done by geologists certified by that city or county. Licensing has thus been accomplished by fiat, and the current tendency is toward a spreading of this piece-meal "registration." This sorry situation is a prime motive behind the present attempt by the Association of Engineering Geologists to achieve California registration for their specialty. Their conclusion is that a State-wide law embodying sound professional qualifications is a better solution than that offered by the unilateral actions of a series of county supervisors and city councils. (I must note here that I would not qualify professionally under the strictures set up by the A.E.G. for registration.)

Let us examine Mr. Austin's questions in the light of some present realities:

1- "Will professional registration create an intense personal need for geologists...?" No, of course not, but this is quite irrelevant. What is relevant is that certain public bodies now feel a need for engineering geologists, and perhaps for other geologists as well. Some time back I testified at a legislative committee hearing, at which I was protesting legislation that would bring petroleum geologists under registration. An assemblyman asked me "But isn't it true that competent geologic advice might have prevented the subsidence in the Wilmington oilfield and harbor area?" Anyone familiar with this major economic and political problem will recognize the fairness of the question, from a legislator who was honestly concerned with the general public welfare.

2- "Will professional registration guarantee the competence of the professional geologist?" No, of course not. Neither does registration guarantee the competence of the individual doctor or lawyer, but no one would seriously challenge the idea that registration does tend to upgrade medicine and law professionally.

3- "Will professional registration increase honesty or guarantee ethical practices?" This has to be given a qualified yes. It would not guarantee anything, of course, but it seems likely that laws against dishonesty and unethical conduct might give a few people pause. We should certainly like to think that is the case with professionals who are now licensed. It doesn't seem likely that geologists would suffer unduly from laws in this field, as Mr. Austin implies. Doctors are seldom prosecuted because a patient died, or lawyers because they lost a case.

4- "What does professional registration mean to colleges?" It is hard to believe that registration might be considered "...a direct insult to...the college." This state now registers electrical, mechanical, chemical, petroleum, civil, and structural engineers, doctors, lawyers, and some others. I have never heard the faculties who trained these people indulge in cries of professional outrage. Licensing is, in fact, generally confined to people with degrees from accredited colleges, and is often a feather in one's cap rather than a slap in one's face.

5- "What will professional registration do to the geologic profession as a whole?" Again, one can only note that registration in itself does not appear to have hampered the development of modern medicine or engineering. If geologists themselves are active participants in the wording of legislation regarding their profession, there is no reason why legislation should stultify the science. If, however, geologists stand idly by, simply shouting "no, no, no!", well-intentioned but uninformed legislators may write their own laws. And heaven then help us.

6- "What will...registration mean to the...geologist in his...attempts to earn a ... living?" Registration definitely should not attempt to deplete or limit the number of geologists, but that element of registration should lie with the geologists themselves. The matter of registration by one person in several states is another problem, and a difficult but not insoluble one. There is no Federal licensing, fortunately, of any profession except perhaps that of airline pilot, so all licensing must be considered

on a State by State basis. We must recognize that, with our fluid population, many doctors, lawyers, and engineers have had to obtain several licenses, so we are not alone. If geologists find themselves forced to go the route of licensing they should work toward laws which extend reciprocity to fellow professionals from State to State. This idea should be uppermost in the minds of any geologic groups which find themselves under political pressure to be licensed.

I have tried to follow Mr. Austin's stipulation that we avoid "...blandly accept(ing) sweeping generalizations about the cures that professional registration will effect." Frankly, I don't believe that licensing will effect any cures, except possibly in the area of engineering geology in California. Licensing at present appears to fall more in the field of preventive medicine. Are we to be whittled away bit by bit, backed off into a corner by petroleum engineers, civil engineers, and our professional fellows in engineering geology? Or should we exercise a positive rather than a negative approach for a change, and start leading rather than being pushed?

In closing I must comment on one aspect of the licensing of petroleum engineers in California. At its inception fifteen years ago this was viewed as a catastrophe by many geologists and engineers. To my knowledge it has posed no problem since that time. In fifteen years the law has not been amended (a common fear among those opposed to licensing). Recently someone commented to me: "Look how stupid it was to license petroleum engineers. It hasn't meant a ----- thing to anyone." Perhaps he overlooked a point. The law is on the books, the politicians are happy, and certainly the petroleum engineers are not unhappy. The law appears to have solved, for all time and to everyone's satisfaction, the problem of licensing petroleum engineers in California. Who could ask for more?

Robert H. Paschall
Senior Petroleum Appraisal Engineer
California State Board of Equalization

INTERMOUNTAIN ASSOCIATION OF PETROLEUM GEOLOGISTS

The I.A.P.G. will conduct its Annual Field Conference in southwestern Utah in the Cedar City-St. George-Kanab area during the period September 4-7, 1963. The theme is: "Geology of Southwestern Utah; Transition from Basin and Range to Colorado Plateau." This area is one of considerable stratigraphic change, complex structural relationships and both proven and unproven mineral and hydrocarbon potential. As such, it should be of much interest to petroleum, academic and mining geologists alike.

The conference, which is planned for MEN ONLY, will commence Wednesday night, September 4, 1963, in Cedar City, Utah. The field trip will begin at 7:30 Thursday morning, September 5, and will proceed by air-conditioned bus (NO CARS) along the route shown on the attached map. Lodging will be in motels along the way. Meals will be catered by Hatch Cafe of Delta. Conference termination near Parowan will be after lunch Saturday, September 7. Buses will return to both Cedar City and Salt Lake City.

Those who plan to attend the conference must pre-register and should plan to be in Cedar City on Wednesday night, September 4. Conference Headquarters will be at the Imperial 400 Motel. Conference costs, exclusive of Wednesday night's meal and any motel costs, are \$38.50 per person. This includes \$17.50 for meals, \$7.50 bus (bus from Salt Lake and return, extra), \$8.50 for Guidebook and \$5.00 registration fee. Make checks payable to Intermountain Association of Petroleum Geologists, and mail to Mr. G. Harvey Hamilton, Registration Committee, 778-17th Ave., Salt Lake City 3, Utah.

Registrants cancelling before August 30 will receive a guidebook and a refund of \$30.00. No refunds of conference fee will be made after this date. No registrations will be accepted unless received by August 30. It is suggested that registration be submitted as early as possible because the trip will be limited to 150 men. There will be no provisions for late registration in Cedar City.

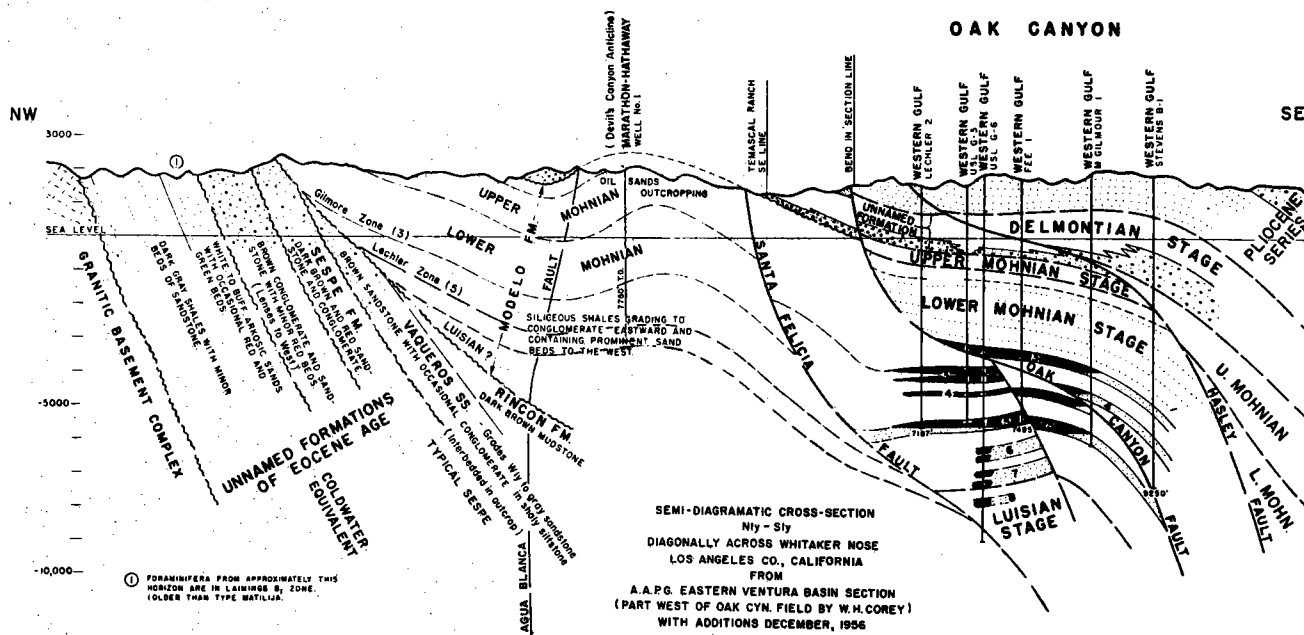
Major features of the field conference include:

1. Geology of the Hurricane Fault.
2. Fingers of the Kolob, excellent exposures of Jurassic and Triassic strata.
3. The Pintura Structure, anticlinal structure recently tested by the Pan Am Pintura well.
4. The Virgin Canyon: A study of the Triassic, the Hurricane fault, and the Virgin anticline.
5. In the Beaver Dam Mountains will be seen the Precambrian core and the Paleozoic strata including oil-stained Pennsylvanian reefs.
6. The stratigraphic section from Permian into Tertiary on the second day; Jurassic sediments in their type areas as well as some of the most spectacular scenery in this part of the country.
7. The third day visit and sample the Colombia Iron mine.
8. Granite Mountain, a quartz monzonite intrusive, with its overlying, mineralized Homestake (Carmel equiv) formation.
9. The Parowan Gap area, the so-called "T square" angular unconformity between the Tertiary Wasatch and underlying Cretaceous sediments. This is the area of the recently abandoned Mountain Fuel Supply Little Salt Lake well which bottomed in a quartz monzonite intrusive at an unexpectedly shallow depth.

The trip ends after lunch at this location.

GUIDEBOOK

A guidebook entitled, "The Geology of Southwestern Utah; Transition Between Basin-Range and Colorado Plateau Provinces," will be provided for each registrant. This standard sized, easily readable book will contain some 22 pertinent, well-illustrated papers by recognized authorities. Also included, will be a copy of the new geologic map of the southwestern quarter of Utah which is scheduled for release by the Utah Geological and Mineralogical Survey. This map is brand new, and will be printed on special light-weight paper at a scale of 1:250,000. Appropriate road logs, stratigraphic nomenclature charts, etc., will be in the guidebook. Extra copies of the guidebook will be available at the time of the field trip or by mail. Price of separate guidebooks, including the aforementioned map, is \$8.50 plus \$0.50 for mailing.

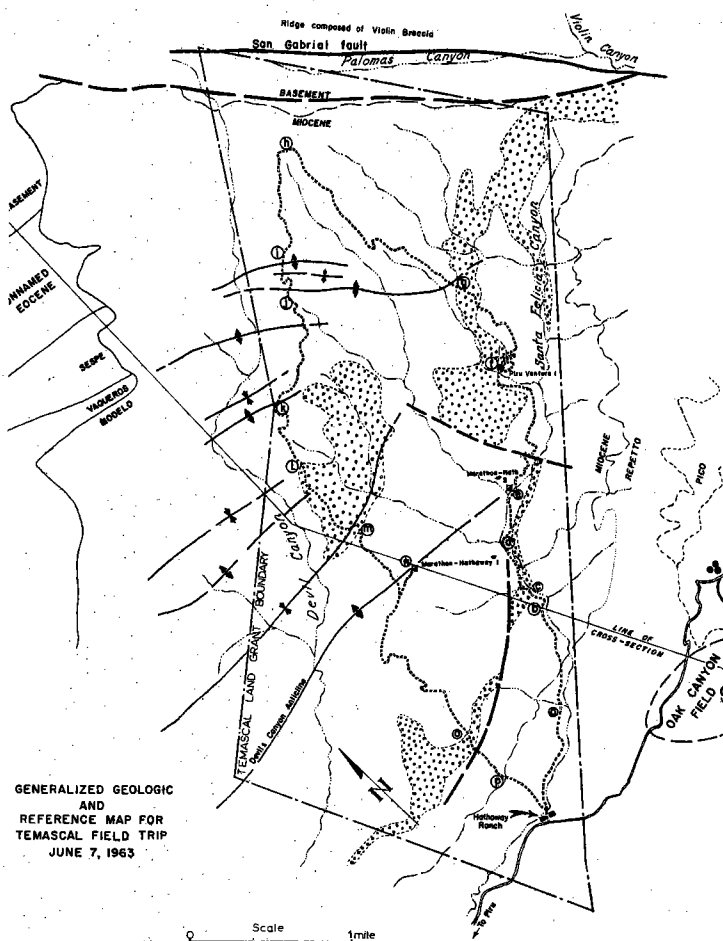


ROAD LOG FOR SEPM
SPRING 1963 FIELD TRIP TO HATHAWAY RANCH AREA

Compiled by G. M. Miller
W. H. Corey
E. A. Hall

A road log of the route including geologic map and section was compiled by Gerry Miller, Bill Corey and Ed Hall. The part through the Ranch is reprinted here for the benefit of those unable to make the trip. Note: Letter designations for the points of interest noted are located on the map for easy reference.

- 0 First gate to Rancho Temascal. Second gate is located at the ranch house.
 - .7 (a) Road cuts in Repetto on the left. On east side of Santa Felicia Canyon are cliffs composed of SE dipping Repetto. Repetto-Miocene contact at road complicated by faulting.
 - 1.5 (b) Road cuts in platy Upper Miocene shales. Dips range from 25° to vertical.
 - 1.7 (c) Contact with Hasley Canyon Conglomerate (U. Mohn.) which is prominent marker in area. Local unconformity at base.
- Hasley Canyon Conglomerate = Wickham zone of the Oak Canyon field (sub-commercial).
- 2.2 (d) Up canyon to left (west), the axis of the Devil's Canyon (Hathaway) anticline is visible. Marathon #1 location visible on ridge top.
 - 2.5 (e) Location of Marathon-Hathaway #2 on left.
 - 3.8 (f) Piru Venture #1 drilled in 1910. T.D. 1200'± Seeping tar.
 - 4.7 (g) Red-brown terrace gravels (Pleistocene?) through narrow gulley. Underlain by Miocene shales and sandstone. Note increase in conglomerates in Miocene sections for next two miles of traverse. Terrace gravels were mined for placer gold in canyon to northeast.



GENERALIZED GEOLOGIC
AND
REFERENCE MAP FOR
TEMASCAL FIELD TRIP
JUNE 7, 1963

- 6.6 (h) North end of ranch stop - In U. Mohnian conglomerates and sandstones. This ridge is near northeastern end of a Miocene depositional basin near the source area. Dark brown ridge to north composed of Violin Breccia. Gray knobs in valley composed of metamorphic basement.
- 7.4 (i) Knob of NE dipping shale and conglomerate on north flank of Whitaker anticline. In places, thick lenses of breccia and large blocks of basement up to several hundred feet in size occur in shaly section.
- 7.8 (j) Southerly dips on south flank of Whitaker anticline.
- 8.8 (k) Anticlinal axis, Devil Canyon on right.
- 9.6 (l) Base of Hasley Canyon Conglomerate (U. Mohn). Outcrop is in core of syncline (see accompanying cross-section).
- 10.0 (m) Narrow road-cut through lower portion of Hasley Conglomerate which rests unconformably on steeply dipping Lower Mohnian shale. Outcrops are on north flank of Devil's Canyon (Hathaway) anticline.
- 10.6 (n) Stop at Marathon - "Hathaway" #1. Anticlinal axis exposed in bank on west side of site. Tanks of Oak Canyon field visible to SE. Prominent cliff outcrop between here and Oak Canyon is Repetto siltstones and sandstones. Top of Miocene approximately along base of cliff.
- (n-o) Lower Mohnian shales exposed in road cuts on south flank of Devil's Canyon Anticline. Note minor folds and slump structures. On right side of road, large landslide in canyon.
- 12.3 (o) Hasley Canyon Conglomerate on south flank of anticline. Note sharp contortion in road cut.
- (o-p) Note sharp flexure (knee fold) across canyon to right.
- 13.0 (p) Base of Repetto sandstone and siltstone. Southerly dips.
- 13.4 Hathaway Ranch house.

In conclusion, I will say that your property has so many splendid features, such as the railway transportation, good roads, paved boulevards, accessibility to towns, and supplies; water for drilling and domestic purposes, houses available (as living quarters) and a structure that has all the earmarks of a splendid oil field, where drilling should be easy and oil encountered in commercial quantities at reasonable depths, that your efforts should be very successful.

Respectfully submitted,
/s/

NOTE: Topographic maps of the Elizabeth Lake Quadrangle are available.

A.A.P.G. FINANCES

Not generally known among A.A.P.G. members is the fact that this organization has been operating in the red for five years. The situation is getting very serious because the five-year total is now over \$80,000, which means that the net worth of the Association has been reduced about 25 percent. Here are the yearly figures:

1958	\$ 9,109.16 deficit
1959	\$11,353.17 deficit
1960	\$20,857.89 deficit
1961	\$13,297.06 deficit
1962	\$26,091.48 deficit

Five-Year Grand Total - \$80,708.76 deficit

You may recall that the reason given for increasing the dues last year was to generate funds to cover the yearly AGI payment. If you will examine the financial statement in your March 1963 Bulletin you will find that the A.A.P.G. went \$26,091.48 in the red in 1962 without making its 1962 AGI payment. The 1962 payment was put off until January of this year. If it had been paid, the 1962 deficit would have been over \$40,000!

The membership of the A.A.P.G. should be aware of these facts. It is time for us to demand our house be put in order!

PERSONAL ITEMS

LETTERS TO THE EDITOR

DRY SPRINGS AREA

In accordance with your instructions I have personally made a special examination of the area surrounding Dry Springs and particularly that part lying Northerly from the springs...

Between the ends of the two faults an immense gas blowout occurred as evidenced by an intrusive nearly round iggeous hill indicative of the great pressure and the extreme heat caused by the gas and oil at the time of the explosion that caused the faulting...

Bob Maynard (District Geologist for Sunray DX Oil Company in Bakersfield) is vacationing with his family in the Tioga Pass country following a week spent in San Diego. A third week will be spent in the splendor of his back yard - recuperating.

News from Occidental was curtailed this month because it's Bakersfield correspondent, Dave Martin, was at the hospital awaiting the birth of his new baby.

Lou Villanueva (Tidewater) has again returned to Bakersfield after $2\frac{1}{2}$ years in the Canary Islands.

Phil Ryall (Shell - Bakersfield) finally has the cast off his foot. He was the most recent victim of Shell's boisterous volleyball contests.

Dave Shoemaker (Shell Geologist - Bakersfield) is now into the third year of a repair project of his 1951 Jaguar sports roadster. His wife, among others, is beginning to wonder whether the job will ever be finished.

Bill Johnson (Shell Geologist) has recently been transferred from Sacramento to Bakersfield.

The Standard Oilers softball team, Bakersfield, was promoted to the "A" league this year. Manager Gerry Paulson reports the new league is tough on geologists with Jim Bloom and Craig Lyon on the injury list. The team is playing 500 ball in the league.

Bob Lindblom, Standard, has successfully defended two golf titles in June and July - the Frank Yule memorial trophy of the Pacific Section A.A.P.G. and a service club trophy which was won at a recent vacation and convention in Seattle.

Don Laswell, Standard, was a recent visitor to Bakersfield enroute to Seattle. He showed the old foursome at Kern River, which included John Tucker and Bob Lindblom, how the Texas Handicapping system works - net scores averaged 63!!! Take note you Seattle golfers!!!

Tom Atkinson, proprietor of the Alaska Scouting Service, was married to the former Carolyn Roop on July 12. Following a brief honeymoon in the fashionable resort of Palmer, Tom has resumed his scuba-equipped surveillance of offshore activity in Cook Inlet.

This month's bad timing prize goes to Don Hartman, Texaco, Anchorage. Don, a confirmed camping buff, sold his visiting mother-in-law on the joys of outdoor living in Alaska's sunshine, and promptly exposed the entire cortege to one of the season's biggest rainstorms.

Bob Ottenstein, formerly at Standard's Anchorage office, and in transit to the Oildale complex, is still shortstopped in the Tacoma area at last word.

John Gates is currently swinging through Gulf's Alaska indoctrination program, trying to squeeze a little geology in with the geophysical, land and secretarial activity.

Darrel Helmuth, Standard, Anchorage, has maintained a perfect record of sorts in the vacation department, having recently been cancelled out of his second attempt when child #2 came down with case of measles #2.

Don Six (Texaco, L.A.) is planning to ask the airlines for sealed bids on a major transportation contract for hauling Don, his wife and four children to Indiana and back for their vacation. Don decided to ask for bids after careful economic analysis of his original plan of buying a 707 showed too low a rate of return and too long a payout.

Gordon Bell has been transferred into Los Angeles from Bakersfield to be Gulf's area geologist. He's been preparing for the move by sitting in a parked car for two hours a day and swearing out the window to simulate freeway conditions.

Ron Heck (Pauley) has the tastiest camping equipment in the west, according to a recent poll of the half wild hogs of Baja California. Ron and his wife and some friends had their camp invaded by these mangy critters while out skin diving near Punto Santo Tomas. He says he wasn't so surprised about the food, but he didn't realize that his sleeping bags and other camping equipment was such delicious hog food.

Bucking the trend, Jerry Miller left Union and Los Angeles to return to his old Washington stomping grounds, where he'll be working for a subsidiary of Kennecott Copper Co.

Humble closed its Ventura scouting office, but left scouts Hal Haun and Charley Lilly in Ventura, confirming the suspicions of many of us about what scouts do in the office.

Screen tests have been cancelled by geologists Jim Hassell (C.W.O.D) and Mike Maxwell (McCulloch) who did not receive their proofs back from the A.A.P.G. convention in time. They complained they'd have nothing to answer their fan mail with. Reports that the delay was caused by the photographer having to add measurements and numbers to the pictures for filing with local law enforcement agencies have been denied.

Anyone desiring sponsorship as an active member of the A.A.P.G. should contact T. R. McCullough and/or Dick Hester, Pauley Petroleum, Inc. These two "original thinkers" will (for a free lunch) qualify prospective applicants with remarks such as:
EXPERIENCE: He owns a geologist pick and likes to dig fossils.
PROFESSIONAL CONDUCT: He eats raw oysters.
SPONSOR'S ABILITY TO JUDGE APPLICANT: I've gotten drunk with him.
CHARACTER: Oh yes.

"Lou Christian, formerly geologist with Standard, Anglo-Philippine, and a Consultant, is heading three geological parties in Mindanao for Mobil Philippine Exploration, Inc. Three 24 hour stopovers were enjoyed with cohorts in Anchorage, Tokyo and Taipei, and then on the 9th day of continuous frolic, he was temporarily struck down by "El Tor." Anyway it's nice to be back in Manila."

Charles M. Cross, formerly of Honolulu Oil, now a consultant in San Francisco, has just returned from several weeks in Europe where he attended meetings of the 6th International Petroleum Congress, at Frankfurt. We like to think he represented our San Francisco group--Northern California Geological Society--albeit without benefit of an expense account. At the luncheon last Monday, Charlie told us about Pacific Section men he saw at the Congress, and also filled us in on gossip on the latest scandal as he heard it in London.

A. J. Solari, Standard, visited San Francisco for a week or so. For some months Al has been moving--by degrees--to Calgary, where he will carry on there in a new assignment for the Company.

CALENDAR

September 5, 1963: Thursday noon, Rodger Young Auditorium, 936 W. Washington Blvd., Los Angeles. Speaker and subject to be announced.

SHAKER CUTTINGS
FROM THE BOTTOM OF THE PIT

Stanley Siegfus, of Pacific Western Oil Co. (Tidewater) is teamed with the club champion in the Calcutta golf tournament at Oakmont Country Club. It is not known whether this is the result of good playing or good luck.

Al Solari appeared in his S. F. Office one recent morning sporting a noteworthy "shiner". Al's explanation of his acquisition of said decoration was refreshing. He said that he got it from the door of his automobile. That is much better than the old standard version and indicates that Al has considerable imagination.

Harold "Rats" Rathwell has come out with an official statement for publication. "My future home will be Paradise, California. I intend to devote my time to subdividing land, building homes, fishing, and general hill-billy loafing. No farming--as has been erroneously reported". As the natives up there object to the nickname "Rats", henceforth it will be "Ben" Rathwell.

Some 30 of our members took part in the Salinas Valley core sampling regatta. Texaco representatives had carefully laid out the cores of six wells the day before the sampling, but during the night, the neighboring alfalfa field was irrigated along with the cores. The more credulous geologists who saw "live" forams in the soaked cores may have done too much soaking in King City the night the dam (dike?) went out.

Gene Powell of the Barnsdall Oil Co. (Sunray) in Calgary, writes that they have been having lovely weather--only one blizzard every fourth day.

The geologists in the Bay region got themselves all spruced up not so long ago when they heard that numerous top-flight oil correspondents were in S. F. These same geologists were much deflated when they discovered that the writers were not attracted to S. F. by geological exploits but had come to attend the California Research Corporation's open house entertainment (?) at Richmond.

It is reported that Harold Hoots, while working in Ventura County recently, was attacked by a horde of large red ants. Harold attempted to repel the invasion single handed, but the battle became so hot that he was forced to bare the field of action and call up the reserves, consisting of two assistants, who dashed to the rescue, armed with any weapons available (presumably geologists picks). Their timely arrival soon turned the tide of battle, the enemy was routed, and quiet and dust once more descended upon the scene.

(P.P.G. Vol.2, Nos. 1-6)

NURSERY NEWS

Lori Ann, born to Mr. and Mrs. Orville D. Hart, Humble, Los Angeles on July 15, 1963, their first.

Diane Lee, 7 pounds 2 ounces, born to Mr. and Mrs. Dwight L. Deardorff, Phillips, Los Angeles on July 19, 1963, their second.

BIBLIOGRAPHY OF RECENT PUBLICATIONS

CALIFORNIA DIVISION OF MINES AND GEOLOGY

Geochemical prospecting, by Melvin C. Stinson and G. W. Putman. IN: Mineral Information Service, vol. 16, no. 5, May 1963.

Special Report 74: Index to Graduate theses on California geology to December 31, 1961, by Charles W. Jennings and Rudolph G. Strand.....\$1.00

Silver, by Mary R. Hill, IN Mineral Information Service, vol. 16, no. 6, June 1963.

Trona sheet, California, Geologic map (in color) Scale 1:250,000.....\$1.50

WASHINGTON DIVISION OF MINES AND GEOLOGY (Olympia, Washington)

Report of Investigations No. 19: A stratigraphic section in the Yakima basalt and the Ellensburg formation in south-central Washington, by J. Hoover Mackin.....\$.75

Report of Investigations No. 21: Stratigraphy of Eocene rocks in a part of King County, Washington, by James D. Vine.....\$.50

Report of Investigations No. 22: Tertiary geologic history of western Oregon and Washington, by Parke D. Snively, Jr., and Holly C. Wagner..\$.25

Information Circular No. 22 R: Introduction to Washington geology and resources, by Charles D. Campbell.....\$.25

Geologic Map GM-1: Preliminary geologic map of the Hobart and Maple Valley quadrangles, King County, Washington, by James D. Vine.....\$.75

U. S. GEOLOGICAL SURVEY

Professional Paper 409: Geology and petrography of volcanic rocks of the Truk Islands, East Caroline Islands, by J. T. Stark and R. L. Hay.\$2.25

Professional Paper 386-B: Dispersion in ground water flowing through heterogeneous materials, by H. E. Skibitzke and G. M. Robinson.....\$.20

Professional Paper 423: Paleozoic rocks of Antelope Valley, Eureka and Nye Counties, Nevada, by C. W. Merriam.....\$1.00

Professional Paper 433-A: Uptake and transport of radionuclides by stream sediments, by W. W. Sayre, H. P. Guy, and A. R. Chamberlain.....\$.30

Professional Paper 434-A: Probability distribution of low flows, by N. C. Matalas.....\$.25

Bulletin 1089-C: Geology of the Willow Springs and Rosamond quadrangles, California, by T. W. Dibblee, Jr.....\$1.50

Bulletin 1121-F: Geology and petrology of two stocks of layered gabbro in the Fairweather Range, Alaska, by D. L. Rossman.....\$1.00

Bulletin 1111-I: Frost heaving of piles with an example from Fairbanks, Alaska, by T. L. Pewe and R. A. Paige.....\$1.25

Bulletin 1130: Geology of the Mount Pinchot quadrangle, southern Sierra Nevada, California, by J. G. Moore.....\$1.00

Bulletin 1141-D: General geology of the Jackson Mountains, Humboldt County, Nevada, by Ronald Wilden.....\$1.00

Bulletin 1141-O: Reconnaissance geology of northern Baranof Island, Alaska, by H. C. Berg and D. W. Hinckley.....\$.70

Water Supply Paper 1498-G: Some effects of fine sediment on flow phenomena, by D. B. Simons, E. V. Richardson, and W. L. Haushild.....\$.25

Water Supply Paper 1605: Geology and hydrology of Agua Caliente Spring, Palm Springs, California, by L. C. Dutcher and J. S. Bader.....\$1.00

Water Supply Paper 1619-Z: Water-resources reconnaissance in southeastern part of Honey Lake Valley, Lassen County, California, by G. S. Hilton....\$.40

U. S. GEOLOGICAL SURVEY

OPEN FILE REPORTS (Inspection only)

TEI-834: Interim geological investigations in the U12e.07 tunnel, Nevada Test Site, Nye County, Nevada, by J. W. Hasler. 22 p., 4 figs., 5 tables.

Preliminary geologic map of Fort Bayard quadrangle, Grant County, New Mexico, by W. R. Jones. 1 map, 1 expl.

Field guide to halobiid and monotid pelecypods of the Alaskan Triassic, by N. J. Silberling. 9 p., 6 pl., 1 table.

Preliminary report on landslides in a part of the Orinda Formation, Contra Costa County, California, by Dorothy H. Radbruch and Louise M. Weiler. 35 p., 1 pl., 7 figs and 2 tables.

Water-supply potential in the Ohlson Mountain area, Kenai Peninsula, Alaska by A. J. Feulner. 16 p., 2 figs.

Data on water wells and springs in the lower Mojave Valley area, San Bernardino County, California, by H. B. Dyer, J. S. Bader, F. W. Giessner, and others. 37 p., 2 figs.

Electric logs -- A training aid, by Fred Kunkel. 6 p., 2 figs.

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 74, no. 5, May 1963

Large-scale exfoliation in massive sandstone on the Colorado Plateau, by William C. Bradley.

Wanderrie banks: Micro-relief patterns in semiarid Western Australia, by J. A. Mabbutt.

Sediments of the Gulf of Thailand and adjacent continental shelf, by K. O. Emery and Hiroshi Niino.

Analysis and review of sandstone and classifications in the North American geological literature, 1940-1960, by George de Vries Klein.

Isotopic evidence on the origin of the Colorado Plateau uranium ores, by Donald S. Miller and J. Laurence Kulp.

JOURNAL OF GEOPHYSICAL RESEARCH, vol. 68, no. 10, May 15, 1963

A study of diagnostic techniques for identifying earthquakes, by Frank Press, Gilbert Dewart and Ralph Gilman.

Fossil floras suggest stable, not drifting, continents, by Daniel I. Axelrod.

Accuracy of gravity measurements off the coast of Southern California, by Michele Caputo, J. C. Harrison, Roland von Huene, and M. D. Helfer.

JOURNAL OF GEOPHYSICAL RESEARCH, vol. 68, no. 11, June 1, 1963

Relative excitation of surface waves by earthquakes and underground explosions in the California-Nevada region, by James Brune, Alvaro Espinosa and Jack Oliver.

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

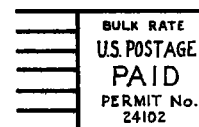
Volume 17

Number 8

Return Requested

Richard L. Hester
Pauley Petroleum, Inc.
10000 Santa Monica Blvd.
Los Angeles 67, Calif.

DA



PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 17

September, 1963

Number 9

ASSOCIATION ACTIVITIES

COAST GEOLOGICAL SOCIETY

The regular monthly meeting of the Coast Geological Society was held on Tuesday, August 13th at the Ventura Women's Center. An excellent talk entitled "Paleoenvironmental Analysis As A Geologic Tool" was presented by Dr. Orville Bandy, Professor of Geology, University of Southern California. The talk was followed by a very stimulating discussion.

ABSTRACT

During the past decade much progress has been made in the development of criteria for the recognition of marine depositional environments of the geologic past. In principle, it is possible to recognize and distinguish among paralic biofacies, larger divisions of shelf-type biofacies, and a number of bathyal subdivisions. Inner shelf and paralic biofacies are clearly distinguishable into (1) those associated with very fine grained sediments, low energy, and variable salinity, (2) those with similar conditions but with stable salinity values, (3) those of shallow platforms with coarse sediments, high energy conditions, and high oxygen values, and (4) those which are identified with reef-front areas, with coarser sediments, high energy conditions, and high oxygen values.

Principal biofacies trends in deeper waters are those associated with bathymetric change. Planktonic/benthonic ratios of foraminifera increase away from shore into upper bathyal depths, radiolarian/foraminiferal ratios increase significantly in middle and lower bathyal depths. Benthonic foraminiferal species of deeper waters include those that appear to be isobathyal, occurring in the same depth ranges in entirely different oceanic areas with severely contrasting temperature profiles. Careful evaluation of modern faunal trends permits the recognition of both the normal indigenous and non-indigenous components of biofacies.

Analysis of paleoenvironmental conditions based upon a study of modern faunal trends shows many mutually corroborative criteria for the reconstruction of the environment of deposition and mode of sedimentation. Biofacies trends reflect the sorting characteristics of former platform deposits and identify the margins of these areas. Rates of differential subsidence and/or uplift are reflected in the environmental logging of stratigraphic sections, thus defining structural trends which existed at the time of deposition of the sediments. Peculiar faunal associations and faunal mixtures in modern turbidites and graded beds of deeper basins find their exact counterparts in graded beds of the geologic past. Source of the sediment is indicated by

the deeper water indigenous faunal elements, direction of sediment transport is reflected by depositional structures, and rates of tectonism are computed by evaluating environments of deposition against rates of sediment accumulation. Producing trends of deep-water sands show a correlation with structural trends so defined, usually near the base of steeper slopes, and in zones characterized by rapid biofacies change. Former submarine canyons were the probable conduits for introducing coarser sediments into deeper basins.

PACIFIC SECTION COMMITTEE APPOINTMENTS

Pacific Section AAPG President John Kilkenny announces the following committee appointments:

Forum Chairman -- Bob Hacker, Lloyd Corp.
Distinguished Lecture Chairman -- Ted Lee, Texaco
Publicity Chairman -- Louis Canut, E. B. Hall and Co.
Lateral Faulting Committee Chairman -- Otto Hackel
Projectionist -- John Lindquist, Texaco

The 1964 Pacific Section AAPG Convention will be held at the Biltmore Hotel April 8 and 9. Bill Kennett, Phillips, has been appointed Convention Chairman. His Co-Chairman is Jack Nair, Phillips. Mr. Kennett has appointed the following sub-chairmen:

Arrangements -- John Elliott, Humble Oil and Refining
Program -- John Mann, Standard Oil Co.
Exhibits -- Jim Taylor, Shell Oil Co.
Registration -- John Terpenning, Mobil Oil Co.

IN MEMORIAM

The Coast Society is sorry to report the death of Mr. Archie A. Weatherspoon, an engineer for Welex in Ventura, on August 11, 1963, of a heart attack while in the field. Archie was born in Bequeen, Arkansas on December 15, 1925, and had worked for Welex for the past 8 years. He held a B. S. degree in Geology from the University of Oklahoma. He is survived by his wife, Marjorie, and two children - Randy, 10 and Barbara, 4.

Archie was well known and liked by oil geologists and engineers throughout the Coastal area, and will indeed be missed. We wish to extend our deepest sympathy to his wife and family.

EXECUTIVE COMMITTEE, PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

John E. Kilkenny	President
Louis J. Simon	Vice-President
Arthur O. Spaulding	Secretary
Milton T. Whitaker	Treasurer
John H. Van Amringe	Editor
Richard B. Haines	Past President
Harrison C. Jamison	Alaska Representative
Edward A. Hall	Coast Representative
William J. Edmund	Sacramento Representative
James L. O'Neill	San Joaquin Representative

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 California.

Editor:	Jack Van Amringe
Assistant Editors:	
Activities	Tom Wright
Calendar	Alfonso Escalante
Selected Bibliography	Lucy Birdsall
Cartoonists:	Mort Kline & Harold Sullwold
Personal Items:	Bill Fowler
Correspondents:	
Alaska	Richard Lyon
Coast	Jack Durrie
Los Angeles	Mike Maxwell
Northwest	Ralph Rudeen
Sacramento	Dorman Graves
San Francisco	Gordon Oakeshott
San Joaquin	Rod Colvin
Membership Secretary	Pat Metcalf

Next deadline, September 27, 1963.

LOS ANGELES GEOLOGICAL FORUM MEETING

Forum Chairman Bob Hacker announces the program of the first of the 1963-1964 series of monthly geological forum meetings in Los Angeles. The meeting will be begin at 7:00 P.M. Monday evening, September 16 at the Mobil Auditorium, 555 S. Flower Street. Prior to the meeting there will be an informal dinner at Colombo's Restaurant, 819 S. Figueroa Street at 5:30 P.M. for \$3.00 with registration not required.

PROGRAM

Dr. Donn S. Gorsline, Professor of Geology, U. S. C. and the Allan Hancock Foundation will give a "Report on the A. G. I. Symposium on Geology Curriculum in High Schools."

Charles A. Davis, California State Department of Employment will speak on "Aptitude Testing for Future Geologists".

Robert Hacker, Lloyd Corporation will give a paper entitled "Geology and Oil Possibilities of Southwest Utah".

CHANGE OF ADDRESS

Listed below are changes of address for those members listed in the latest directory.

GALE, Hoyt Rodney
P. O. Box 428
Jackson, New Hampshire

AYRES, Marshall G.
P. O. Box 606
La Habra, Calif.

OAKES, Millis H.
97 Marigold
Casper, Wyoming

BURNS, Richard M.
2170 Rocking Horse Road
San Pedro, Calif.

ELLSWORTH, Theodore P.
324 Buckingham Lane
Houston, Texas

ENGSTROM, David B.
Standard Oil Co. of Calif.
Box 3317
Ventura, Calif.

LOVELY, L. C. Jr.,
1419 "L" Street
Anchorage, Alaska

WOOD, Jack W.
21 S. California
Ventura, Calif.

BURNS, Robert S.
Geological Exploration
201 Barranca Drive
Monterey Park, Calif.

HILL, Bruce P.
c/o Occidental Petroleum
Corporation
5000 Stockdale Hiway
Bakersfield, Calif.

JACOBSON, John B.
Standard Oil Co.
Box 606
La Habra, Calif.

ALEXANDER, Roger G., Jr.
Rm. 620 - Comptrollers
W. O. I.

GREUTERT, Ray
Gulf Oil Corp. of Calif.
1800 Olympic Blvd.
Los Angeles 6, Calif.

P. O. Box 3495
San Francisco 20, Calif.

KELLY, Robert B.
8360 Catalina Ave.
Whittier, Calif.

BORETA, John
19 Camino del Diablo
Orinda, Calif.

LEE, William H.
10458 Baird
Northridge, Calif.

DANEHY, Edward A.
40712 Robin St.
Fremont, Calif.

MC LEAN, Thomas C.
1200 W. Lincoln Ave.
Montebello, Calif.

MAC KEVETT, Nat. H.
11372 Pemberton
Los Alamitos, Calif.

MC FARLAND, Lee C.
Gulf Oil Corp. of Calif.
1830 Olympic Blvd.
Los Angeles 6, Calif.

THOMAS, George M.
P. O. Box 997
Chico, Calif.

NEAL, H. H.
802 Roosevelt Bldg.
727 W. 7th St.

STUCKER, W. R.
Nigerian Gulf Oil Co.
Private Mail Bag-2469
Lagos, Nigeria
Africa

ELLIS, Wesley E.
2308 Shire
Whittier, Calif.

KRIBBS, George R.
Indian Creek Ranch
La Veta, Calif.

CHAPPUIS, Louis C.
P. O. Box 236
Fillmore, Calif.

Listed below are changes of address for those members not listed in the latest directory.

CHILDS, Orlo E. Colorado School of Mines Golden, Colorado	BURNS, R. T. Union Oil Co. P. O. Box 7600 Los Angeles 54, Calif.
TAYLOR, James B. Texaco, Inc. P. O. Box 3337 Ventura, Calif.	YEAGER, John W. State Land Division, Room 305 217 W. 1st Street Los Angeles, Calif.
COX, James R. 2600 Haley, Apt. #17 Bakersfield, Calif.	PICHEL, George B. Union Oil Co. P. O. Box 7600 Los Angeles 54, Calif.
POLSKI, William 619 Arvin Street Bakersfield, Calif.	HAGEN, D. W. P. O. Box 3337 Ventura, Calif.
TABOR, Lawrence L. 2423 - 15th Ave. San Francisco, Calif.	KILMER, Frank H. 15 Fellowship Circle Santa Barbara, Calif.
TODD, T. W., Secretary Geological Society of Sacramento Dept. of Geological Sciences Davis, California	

PERSONAL ITEMS

Notes on the "Affluent Society": Cutler Webster, Tidewater, Bakersfield, staunch advocate of the Volkswagen though he is, reportedly drove a rental car from San Francisco to Montana for his vacation.

At our luncheon on the 12th, we welcomed James D. (Don) Weir as a new member of the Northern California group. Don comes to S.F. from Calgary where he was with Standard of California for several years. He is replacing Al Solari, recently removed to Calgary.

William J. (Bill) Plumley recently paid the Northern California Geological Society a visit. Bill is with California Research at La Habra.

Martin Van Couvering visited the Division of Mines and Geology and attended the Monday luncheon of N.C.G.S. He and his wife have just returned from a wonderful tour of Alaska where they enjoyed taking photographs at midnight.

The Division of Mines and Geology played host to a distinguished committee of AGI on August 19. Present were:

Linn Hoover, new Executive Director of AGI;
Tom Nolan, Director of the U.S. Geological Survey; Manley Natland; Konrad Krauskopf;
Bill Gussow; and Ian Campbell, host.

The Division is expecting a number of earth scientists during the Berkeley meetings of the International Union of Geodesy and Geophysics, August 19-26.

Dick Stewart, in an effort to really get away from the home office, is accepting a transfer to Bangkok where he will be Resident Geologist in Union's new office handling their concession in Northeast Thailand. An old Los Angeles freeway expert, Dick is not too concerned with reports of traffic problems there, but is considering getting checked out in rickshaws before his scheduled early September departure.

Doug Traxler was spotted on Highway 6 in August, heading for a vacation in the summer resort country around Palmdale, Mojave and points north.

Carl Kennedy, now working in Gulf's Midland office came through on vacation with the usual quota of Texas tales and other horror stories for his old Los Angeles buddies.

Louis Simon (Texaco) finally figured out how to beat those crowds at Mammoth. Go skiing in August, go to Chile to do it. Louis and the whole Simon family flew down for three weeks of skiing in Chile with a visit to Peru thrown in.

Gordon Bell, now of Gulf's Los Angeles office is hopefully waiting for the housing shortage to hit Bakersfield and get him out of the real estate business. He figures that a couple of months of this double rent stuff is enough for anyone.

Lou Martinez (Pauley, L. A.) has been temporarily transferred to Houston. No matter what they say about temporary, Lou, buy a raincoat anyway.

Tony Morris (Pauley) is back in Iran, where Dick Hester is scheduled to join him for a six months stay in September.

Sargent T. Reynolds has just been chosen as the correspondent for the Sacramento Petroleum Association.

New at Texaco's Sacramento office are: Louis Fitzhugh, area geophysicist, from Bakersfield. Mark Delisle, geophysicist, from San Diego State. M. E. Benson, district foreman, replacing Ross Furlong, from San Ardo. Dennis Weedon, geologist, from University of Oregon.

Jim Wiley (ex-Gulf) is reported on his way back to the Sacramento area after travels to Alaska and Louisiana. Another addition to Aerojet's exploration staff?

Sarge "Lucky" Reynolds recently won his fifth consecutive free lunch from the Sacramento Petroleum Association, chalking up his sixth win since acquiring the "Christmas bottle". Fortunately, Sarge missed the scouts barbeque causing a more equal distribution of the prizes.

Ernie Pronske, Shell, Ventura has departed Shell Oil Company for a position as representative for Johns-Manville Company in Ventura County.

T. J. Brooks is now a Consultant, Bakersfield, but will be on retainer with Ferguson and Bosworth Exploration until the end of the year.

Bakersfield Humble geologist, Tom Sisk, has purchased a new Olds 88 but couldn't take those weekly Los Angeles trips in solid comfort because of vibrations. Two ulcers later, he found all it needed was four good tires.

Local Bakersfield golfers beware! The golf bug has bitten Humble's geologists, John Smith and John Beeson. They are in the market for a good set of used clubs, and were overheard offering the large sum of \$10 for a set!

Cy Bird, Humble, Bakersfield geologist is reportedly wearing his old hard hat around his daughter's playhouse. He has been mumbling something about making the little house taller or shrinking himself, as his old head can't take too many more bumps.

L. F. "Buzz" Ivanhoe writes that he is moving back to Smogville to be closer to the oil business. La Jolla is a wonderful place to live but that's the trouble with it -- people think anyone living there has it made. His new address is 224-1/2 Lasky Dr., Beverly Hills.

J. Q. Anderson, Consultant, Bakersfield, has returned to home base after an extended sojourn in the Pacific Northwest. Welcome back, Jack!

Married Geologists beware of "Happy Hour" sessions at the Bakersfield Hacienda, particularly when in combination with a wine growers' convention and a beautician's contest - to wit: free champagne and models!

John Thomson, Consultant, Bakersfield, lost his oldest son, Bruce, in an auto accident near Ojai, August 9th. The four other members of the family received injuries ranging from critical to slight in the tragedy in which the car rolled 150' down a cliff in the Casitas Pass area. John, still gingerly nursing ten broken ribs while watching in amazement the rapid recovery of his critically injured daughter, will attest to all that his seat belt investment paid off immeasurably.

Wallace Matjasic, Tidewater, Bakersfield, has been elected Pacific Section SEG District Representative for the ensuing two years. Congratulations, Mat!

Dick Atchison, Marathon, Bakersfield, started his vacation in Ensenada, but wound up in the Navy Hospital in San Diego, and an early return home to recuperate from a slipped disc injury. Dick is back at work and may try again.

Gene Schnieder, Texaco, Bakersfield, has been transferred to Long Beach where he will assume similar geophysical duties.

Carl Kennedy, Gulf, Midland, Texas, recently visited friends and relatives while vacationing through Bakersfield.

Glenn Ledingham, Gulf, on vacation from Nigeria, held a delightful cocktail party in Los Angeles for many of his California friends.

Charlie Booth, Shell, Ventura, has been transferred to New Orleans, effective the middle of September.

The Standard Oil soft ball team, managed by Gerry Paulson, placed second in the Kern County Soft Ball Tournament, defeated by the slight margin of 6-5.

Richard Meditz, Standard, Taft, has returned to the Oildale Exploration office.

With a target date of December 1st, Sunray DX will combine its Bakersfield Exploration and Producing District and its Newhall Producing District into a single California District, located at Castaic Junction - (You know, just behind Tips!).

Bob Maynard, District Geologist, Sunray DX, Bakersfield, after holding on to his home for eleven years, has surrendered to the open market since being transferred to Denver September 1st. He has become District Geologist for a combined Denver and Salt Lake City District. For many of Bob's friends and associates, California's loss will become a Rocky Mountain gain.

Bob Hindle, presently District Geologist for Sunray DX, Denver, assumed duties as District Geologist in Bakersfield, as of September 1st. He has played musical chairs in California before, having served in Santa Maria, Los Angeles and Newhall. Welcome back, Bob!

Rod DeLuca, Geophysicist, joined the staff of Standard's Exploration office in Oildale on August 5th. Rod is from Vancouver, B. C., and graduated from Colorado School of Mines. His wife, Sue Ann, is from Denver. Welcome to California.

Dave Callaway, Consultant, Bakersfield, has returned from a glorious vacation in Carpinteria - with 2nd degree sunburn.

CALENDAR

September 5, 1963: Thursday noon, Rodger Young Auditorium, 936 W. Washington Blvd., Los Angeles. Edwin C. Allison, San Diego State College will present "Geology of Peninsular Ranges, Northern Baja California, Mexico".

September 16, 1963: Monday evening, 7:00 P.M., Mobil Auditorium, 535 S. Flower St., Los Angeles. Informal dinner at Colombo's Restaurant, 819 S. Figueroa St. at 5:30 P.M. Dr. Donn S. Gorsline, U. S. C., "Report on A. G. I. Symposium on Geology Curriculum in High Schools". Charles A. Davis, California State Department of Employment, "Appitude Testing for Potential Geologists". Robert N. Hacker, Lloyd Corp., "Geology and Oil Possibilities of Southwest Utah".

September 16, 1963: Monday evening, El Tejon Hotel, Bakersfield, San Joaquin Geological Society. "Drill Stem Testing Pressure Build-up Analysis" - L. O. Petty, Jr., Johnston Testers, Houston, Texas. Cocktail Hour: 6:30 P.M.; Dinner Hour: 7:30 P.M.

October 3, 1963: Thursday noon, Rodger Young Auditorium, 936 W. Washington Blvd., Los Angeles. Dr. Donn S. Gorsline will be the speaker; subject to be announced.

October 7, 1963: Monday evening, Bakersfield College, Science and Engineering Building, Room 56, Biostratigraphy Seminar; 7:30 P.M. "Paleontology" - Dr. Helen Tappan Loeblich, University of California at Los Angeles.

SHAKER CUTTINGS
FROM THE BOTTOM OF THE PIT

WELL-SITE GEOLOGIST'S NIGHTMARE

A Bay Area geologist who inclines toward re-search completed two weeks of intensive investigation of a problem on July 5th. The problem concerned relaxation or more specifically: Is relaxation more complete in prone position face up or face down on the sand beach at Lake Tahoe. This geologist reports that tests were inconclusive, that he will pursue further research on this question later in the summer and that he wonders if other geologists have experimental data on this line of research.

Clark Gester and Graham Moody had a fast trip to Washington, D. C. They say it was H O T!! We recall that these two young chaps are interested in gas reserves and we wonder if there might be some connection between their trip to Washington and the special session of Congress. Interpret this as you choose.

Irving Schwade of the Richfield Oil Co. was recently on the "Jack of All Trades" radio program where an attempt is made to guess the trade of each contestant. They called "Irv" a Postmaster.

Our genial president, Bill Winham, displayed some of his old time masterful golf form last month when he won the fourth flight of the handicap division of the California State Amateur Golf Tournament at the Monterey Peninsula Country Club at Carmel. He qualified with an 81 under a 10 handicap and went on to win a nice silver serving tray as a prize for this flight. Bill's "rippling rhythm" swing has kept him out in front in the golfing fraternity for a long time and it seems from this victory that he has not lost any of his tournament ability which he began to show twenty five years ago in the same tournament. In the past whenever there was a geologists tournament Bill always won, and there has been increasing interest lately in reviving this as an annual affair.

James B. O'Flynn has been appointed publicity agent for the San Joaquin Geological Society, by R. B. Hutcheson, chairman.

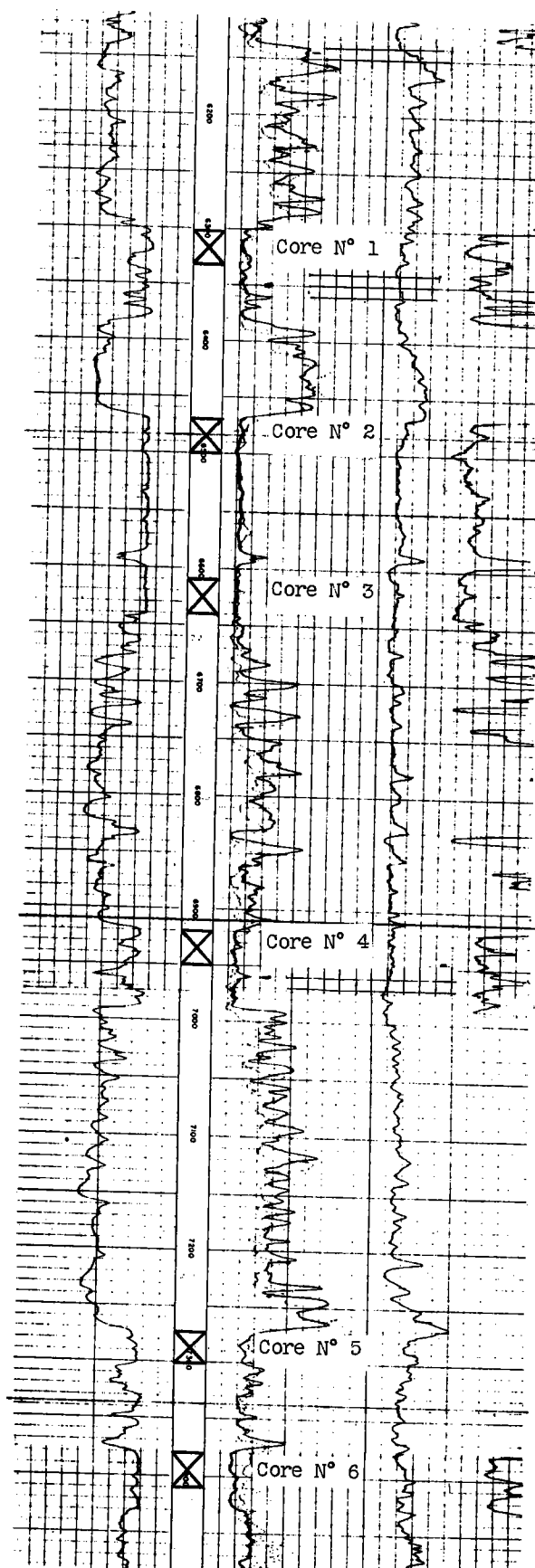
Vol. 2, Nos. 7-12, 1948.

NURSERY NEWS

Born to Don and Ann Scalin, Union, Bakersfield, a daughter, Lisa Ann, August 17, 1963, weighing in at 6 lbs., 6 oz., their first child.

Dave and Sally Martin, Occidental, Bakersfield, their first - a son, Johnathan David, born August 14, 1963; 9 lbs., 14 oz.

Mr. and Mrs. Neil Carroll, (Texaco, L.A.) a son, Michael Joseph, their first child, born August 16, 1963.



A. M. E.

BIBLIOGRAPHY OF RECENT PUBLICATIONS

U. S. GEOLOGICAL SURVEY

Professional Paper 413: Geology of the Funeral Peak quadrangle, California, on the east flank of Death Valley, by Harald Drewes.....\$1.50

Professional Paper 429-A: Quantitative and qualitative analysis of the family Boliviniidae, by P. B. Smith.....\$2.75

Professional Paper 475-B: Short papers in geology and hydrology, articles 1-59, 1963. (Geological Survey Research 1963).....\$1.75

Bulletin 1103: Geology and uranium-vanadium deposits of the Monument Valley area, Apache and Navajo Counties, Arizona, by I. J. Witkind and R. E. Thaden, with sections on Serpentine at Garnet Ridge, by H. E. Malde and R. E. Thaden, and Mineralogy and paragenesis of the ore deposit at the Monument No. 2 and Gato Sells mines, by D. H. Johnson.....\$3.25

Bulletin 1131: Geology and mineral deposits of the Turtle Lake quadrangle, Washington, by G. E. Becraft and P. L. Weis.....\$1.50

Bulletin 1134: Ordovician graptolites of the Basin Ranges in California, Nevada, Utah and Idaho, by B. J. Ross, Jr., and W. B. N. Berry.....\$1.75

Bulletin 1166-E: Index to geophysical abstracts 188-191, 1962, by J. W. Clarke, D. B. Vitaliano, V. S. Neuschel, and others.....\$.50

Water Supply Paper 1544-D: Application of electrical and radioactive well loggings to ground-water hydrology, by E. P. Patten, Jr., and G. D. Bennett.\$.25

Water Supply Paper 1619-Q: Reconnaissance study of the chemical quality of surface waters in the Sacramento River basin, California, by Robert Brenman.\$.55

Circular 476: Principal lakes of the United States, by C. D. Bue. 22p.....FREE

MAPS

GP 329: Aeromagnetic map of Long Valley and Northern Owens Valley, California by J. R. Henderson, B. L. White and others.....\$.50

Miscellaneous Geologic Investigations Map I-206-A: Geologic map of the Wadi Ar Rimah quadrangle, Kingdom of Saudi Arabia, by R. A. Bramkamp, L. F. Ramirez, G. P. Brown and A. E. Pocock.....\$1.00

CALIFORNIA DIVISION OF MINES AND GEOLOGY (Mail orders to Ferry Building, San Francisco, Calif.)

County Report 2: Mines and mineral resources of Calaveras County, California, by William B. Clark and Philip A. Lydon.....\$4.00

CALIFORNIA UNIVERSITY PUBLS. GEOL. SCI., vol. 40, no. 3, 1962

Late Cenozoic geology of McGee Mountain, Mono County, California, by William C. Putnam.

CALIFORNIA UNIVERSITY PUBLS. GEOL. SCI., vol. 42, no. 1, 1962

Superposed deformation in the Central Sierra Nevada Foothills east of the Mother Lode, by Alexander K. Baird.

CALIFORNIA UNIVERSITY PUBLS. GEOL. SCI., vol. 41, no. 1, 1962

Upper Eocene foraminifera from the southwestern Santa Ynez Mountains, California, by William R. Weaver and Donald W. Weaver.

JOURNAL OF GEOPHYSICAL RESEARCH, vol. 68, no. 12, June 15, 1963

Baseflow recession analysis for comparison of drainage basins and geology, by Walter G. Knisel, Jr.

A magnetic profile around the world, by Leroy R. Allredge, Gerald D. Van Voorhis and Thomas M. Davis.

Tests of chemical treatments to reduce erosion from burned watersheds, by Jay S. Krammes and Henry Hellmers.

JOURNAL OF GEOLOGY, vol. 71, no. 4, July 1963

Sedimentary structures, sand shape fabrics and permeability. I, by Edwin Potter and Richard F. Mast.

Physical and sedimentary environments on a large spitlike shoal, by Dean A. McManus and Joe S. Creager.

An interpretation of turbidites whose sole markings show multiple directional trends, by K. W. Glennie.

WORLD OIL, vol. 157, no. 1, July 1963

North Sea is one of world's most unusual oil, gas plays, by Harrison T. Brundage.

Geochemistry can help find oil if properly used, by Martin. J. Davidson.

Progress report on infrared as an oil search tool, by Allen M. Feder.

CALIFORNIA OIL WORLD, vol. 56, no. 13, First Issue July 1963

Development of Long Beach Unit of Wilmington Field moves closer.

JOURNAL OF PALEONTOLOGY, vol. 36, no. 4, July 1962

Ammonites from the MEEKOCERAS GRACILLOTATUS zone at Crittenden Spring, Elko County, Nevada, by Bernhard Kummel and Grant Steele.

On terminations used in suprageneric classification of the Rhizopodea: A reply, by Alfred R. Loeblich, Jr. and Helen Tappan.

BATTELLE TECHNICAL REVIEW, vol. 11, no. 10, October, 1962

Reserves of fossil fuels in the United States, by Harlan W. Nelson.

U. S. BUREAU OF MINES (Distribution Section, 4800 Forbes Ave., Pittsburgh, Penna.)

Report of Investigation 6206: Pine Flat and Diamond Flat nickel-bearing laterite deposits, Del Norte County, California, by W. T. Benson. 19 pp..FREE

Report of Investigation 6214: Reconnaissance of beach sands, Bristol Bay, Alaska, by Robert V. Berryhill. 48 pp.....FREE

Report of Investigation 6196: Reservoir oil characteristics, Great Aneth area, Utah. Unusual saturation-pressure variations, by R. F. Zaffarano, C. Q. Cupps and J. Fry. 61 pp.....FREE

SCIENCE, vol. 140, no. 3564, 26 April 1963

Geochronology, by G. R. Tilton and S. R. Hart.

SCIENCE, vol. 140, no. 3567, 10 May 1963

Early history of Carbon-14, by M. D. Kamen.

SCIENCE, vol. 140, no. 3570, 31 May 1963

Helicoplacoidea: A new class of Echinoderms, by J. W. Durham and K. E. Caster.

SCIENCE, vol. 140, no. 3572, 14 June 1963

Geothermal heat flow in the Gulfs of California and Aden, by R. P. Von Herzen.

SCIENCE, vol. 140, no. 3573, 21 June 1963

Groundwater: Flow toward an effluent stream, by J. H. Lehr.

Basalts dredged from the northeastern Pacific Ocean, by C. G. Engel and A. E. J. Engel.

Cretaceous, Paleocene, and Pleistocene sediments from the Indian Ocean, by Y. Herman.

SCIENCE, vol. 141, no. 3576, 12 July 1963

Transformation of montmorillonite to kaolinite during weathering, by Z. S. Altschuler, E. J. Dwornik and Henry Kramer.

AMERICAN JOURNAL OF SCIENCE, vol. 261, no. 6, June 1963

Emplacement of the Twin Sisters Dunite, Washington, by Donal M. Ragan.

JOURNAL OF GEOPHYSICAL RESEARCH, vol. 68, no. 8, April 15, 1963

Remnant magnetization of some Upper Cretaceous granitic pluton in the Sierra Nevada, California, by R. G. Currie, C. S. Gromme, and J. Verhoogen.

JOURNAL OF GEOPHYSICAL RESEARCH, vol. 68, no. 9, May 1, 1963

A preliminary evaluation of Uranium series inequilibrium as a tool for absolute age measurement on marine carbonates, by Wallace S. Braecker.

GEOTIMES, vol. VII, no. 8, May-June 1963

The new geologic map of California. A progress report by Charles W. Jennings.

STATE OF NEVADA, DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES (Carson City)

Ground-water Resources-Reconnaissance Series, Report 14: Geology and Ground water of Amargosa Desert, Nevada-Calif., by George E. Walker and Thomas E. Eakin

OIL AND GAS JOURNAL, vol. 61, no. 23, June 10, 1963

Northwest eyes deep Washington wildcat, by Frank J. Gardner.

OIL AND GAS JOURNAL, vol. 61, no. 24, June 17, 1963

Australia's Cabawin area tested again.

OIL AND GAS JOURNAL, vol. 61, no. 25, June 24, 1963

Search for reefs along Fusselman hinge lines, by Floyd Wright.

Machines can process data; but can they find oil? by Frank J. Gardner.

OIL AND GAS JOURNAL, vol. 61, no. 27, July 8, 1963

California sees lively gas play.

OIL AND GAS JOURNAL, vol. 61, no. 28, July 15, 1963

Offshore...mid '63.

Oil search to plunge deep in federal water.

Pan Am sharpens Cook Inlet techniques.

OIL AND GAS JOURNAL, vol. 61, no. 29, July 22, 1963

Long Beach lease up next year.

Geophysical exploration drops again in 1962.

Gas cuts California completion costs, by E. R. Hoagland.

BOOKS

Formation evaluation, by Edward J. Lynch. Harper and Row, New York, 1962.....\$12.50

Basic problems in geotectonics, by V. V. Belousov. Translated by Paul T. Broneer for the American Geological Institute. John G. Maxwell, Ed. McGraw-Hill, New York, 1962.....\$14.00

The structure and distribution of coral reefs, by Charles Darwin. Berkeley and Los Angeles, California. University of California Press. 214 p., 5 figs., 3 pls., 1962.....

Water atlas of the United States. Water Information Center, Inc., Water Research Building, 44 Sintsink Drive East, Fort Washington, Long Island, New York. (Pre-publication offer, \$6.95)

International gravity measurements, published by the Society of Exploration Geophysicists, 913 Sheel Building, Tulsa 19, Oklahoma.....\$15.00

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

Volume 17

Number 9

Return Requested

Richard L. Hester
Pauley Petroleum, Inc.
10000 Santa Monica Blvd.
Los Angeles 67, Calif.



DA

PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 17

October, 1963

Number 10

ASSOCIATION ACTIVITIES

1964-65 OFFICER NOMINEES ANNOUNCED BY THE A.A.P.G.

GROVER E. MURRAY, Boyd Professor of Geology and Vice President of Louisiana State University, Baton Rouge; and WARREN B. WEEKS, Manager, Exploration Division of Phillips Petroleum Company, Bartlesville, Oklahoma, nominees for President, head the slate of officer candidates for 1964-65 offices of the American Association of Petroleum Geologists as announced by A.A.P.G. President, JOHN C. SPROULE.

Other officer nominees submitted by the A.A.P.G. Nominating Committee are: for Vice-President, THOMAS A. BALDWIN, Humble Oil & Refining Co., Los Angeles, California, and WILLIAM H. CURRY, JR., independent geologist, Casper, Wyoming; for Secretary-Treasurer, HARRY L. THOMSEN, Manager of Exploration Economics, Shell Oil Company, New York City, and GEORGE C. HARDIN, JR., partner in the firm of Hardin and Hardin, petroleum geologists, Houston, Texas; and for Editor, incumbent, JOHN C. HAZZARD, Geological Supervisor, Union Oil Company of California, Los Angeles.

The A.A.P.G.'s 15,000 members, representing all fifty states and 76 foreign countries, will do their balloting by mail. The successful candidates of this world-wide ballot will take office May 21, 1964, the last day of the 49th annual meeting of the Association to be held in Toronto, Canada.

Biographical Brief, Presidential Candidates

GROVER E. MURRAY

Attended the University of North Carolina, receiving B.S. degree in 1937, and Louisiana State University, receiving M.S. degree in 1939, and Ph.D. in 1942. From 1938-41 he was with the Louisiana Geological Survey as a research fellow. He was then employed by Magnolia Petroleum Company. In 1948 he returned to the Louisiana Geological Survey as Director of Research. Since then has been professor of stratigraphy (1948-50) at L.S.U., Chairman of the Geology Department (1950-53), and has been Boyd professor of geology since 1955. Early in 1963, he accepted appointment as Vice President of L.S.U. and Dean of Academic Affairs.

WARREN B. WEEKS

Attended the University of Oklahoma, receiving B.S. degree in engineering geology in 1929 and attended Colorado State College of Education 1931-32. From 1929 to 1932 was with Wm. H. Atkinson, geologist; 1932-33 with Bale, Evans & Weeks, consulting geologists; and in 1933 was employed by Phillips Petroleum Company as geologist. He has been a district geologist, a division geologist, Assistant Chief Geologist, and Manager of Land and Geology with Phillips. He is

currently Manager of their Exploration Division at Bartlesville, Oklahoma.

Biographical Briefs, Vice Presidential Candidates.

THOMAS A. BALDWIN

Attended Los Angeles City College 1935-36 and the University of Southern California, receiving B.A. (cum laude) in geology in 1943. He did graduate work at U.S.C. 1943-44. In 1937-38 he was a lab assistant and paleontologist with Texaco, Inc. (California). From 1943-48, he was with Texaco as a field geologist, coastal California; from 1948-51 he was an exploration and production geologist with Jergins Oil Company. From 1952-60 was a senior geologist with the Monterey Oil Company. In 1961, he was employed by Humble Oil & Refining Company, Los Angeles area, where he is now supervisor for special exploration problems and stratigraphic studies.

WILLIAM H. CURRY, JR.

Attended the University of Washington at Seattle from 1922-23. He received his A.B. in geology in 1926 from the Johns Hopkins University, Baltimore; and did graduate work there from 1926-27. From 1927-36 he was field geologist, assistant division geologist, and district geologist for Roxana (Shell Petroleum Corp.) in south and east Texas. From 1936-42 he was Chief Geologist for the Wellington Oil Company, San Antonio; 1943-49 he was with the Atlantic Refining Company as research geologist, Golden, Colorado, and as district geologist, Casper, Wyoming. From 1949-54 he was Vice President and Rocky Mountain Manager of the Far West Oil Company Casper, Wyoming. From 1954 to the present he has worked as an independent geologist with offices in Casper.

Biographical Brief, Editor (Incumbent) 1964-65

JOHN C. HAZZARD

Attended the University of California at Los Angeles 1924-27 and received his B.A. at Berkeley in 1928, his M.A. in 1931. He received his Ph.D. in 1937 from the University of Southern California. In 1929 he was assistant field geologist with Western Gulf Oil; from 1930-37 temporary field geologist with the California Division of Mines. In 1937 he was employed by Union Oil Company of California, Los Angeles, where he was a field geologist from 1937-44, division geologist 1944-48, senior geologist 1948-51. He was Acting Chief Geologist, Cia. Petrolera de Costa Rica, San Jose, 1951-52. Returning to Union Oil's Los Angeles office, he became Assistant to the Manager of Exploration from 1952-54, a Senior Staff Geologist 1954-55, Supervisor Special Exploration Group from 1955-60. Since 1960 he has been Union's Geological Supervisor of Regional Studies.

EXECUTIVE COMMITTEE, PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

John E. Kilkenny	President
Louis J. Simon	Vice-President
Arthur O. Spaulding	Secretary
Milton T. Whitaker	Treasurer
John H. Van Amringe	Editor
Richard B. Haines	Past President
Harrison C. Jamison	Alaska Representative
Edward A. Hall	Coast Representative
William J. Edmund	Sacramento Representative
James L. O'Neill	San Joaquin Representative

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 California.

Editor:	Jack Van Amringe
Assistant Editors:	
Activities	Tom Wright
Calendar	Alfonso Escalante
Selected Bibliography	Lucy Birdsall
Cartoonists:	Mort Kline & Harold Sullwold
Personal Items:	Bill Fowler
Correspondents:	
Alaska	Richard Lyon
Coast	Jack Durrie
Los Angeles	Mike Maxwell
Northwest	Ralph Rudcen
Sacramento	Sargent T. Reynolds
San Francisco	Gordon Oakeshott
San Joaquin	Rod Colvin
Membership Secretary	Pat Metcalf

Next deadline, October 28, 1963.

SACRAMENTO GEOLOGICAL SOCIETY

The first meeting of the Sacramento Geological Society will be held Wednesday, October 9th, at 7:45 p.m. at 1120 N St. Dr. Berry of the University of California, Berkeley will talk on "Mechanisms for the Origin of Nitrogen Gas in the Sacramento Valley". The society's November meeting will feature a talk by Judd Hughes of United Geophysical on "Shallow Refraction Studies in Engineering Geophysics". This meeting will take place on November 12th, same time, same place.

DISTINGUISHED LECTURE SERIES

The first of a distinguished lecture series will be held at the Mobil Auditorium, 612 S. Flower St., on November 18th. Speaking will be Mr. R. A. Baile, President of Independent Exploration Company, Houston, Texas. The speaker's subject will be "Some Concepts in Geophysics". Emphasis will be placed on the "Vibro-Seis". A sound film and lantern slides will illustrate his talk. Mr. Baile will present this talk to members of the Northwest Geological Society Thursday evening, November 21st at a 7:00 P.M. dinner meeting at the Poodle Dog Cafe, Fife, Wash.

NOTICE

A.A.P.G. - S.E.G. - S.E.P.M. Directory News proofs have been mailed to those who had their pictures taken at the convention. The photographer plans to take additional pictures or retake pictures as required at the next forum meeting. Please return the directory questionnaire promptly.

SAN JOAQUIN GEOLOGICAL SOCIETY

The regular monthly meeting of the San Joaquin Geological Society was held in the El Tejon Hotel at Bakersfield on Monday Evening, September 16, 1963. Mr. L. O. Petty, Jr. of Johnston Testers, Houston, Texas, reviewed Drill Stem Testing Pressure Buildup Analysis.

ABSTRACT:

Rather briefly, this paper covers the purposes behind the modern day analysis of a drill stem test. The assumptions and conditions used and their relation to the DST conditions and assumptions are discussed. The development of the Horner plot is briefly discussed.

The use of the Horner plot and development of the data used in this plot from DST information is discussed. The calculations for making permeability determinations are shown. Maximum reservoir pressure determination methods are illustrated and the use of this maximum reservoir pressure determination as a cross-check with the DST initial shut-in pressure readings are shown. Slides are given showing formation and fluid phase changes and the results on the Horner plot. A brief discussion is made as to how these phase changes are recognized and used for DST analysis.

The four major causes of well bore damage are brought out and the resulting effects on the drill stem test production flow are shown. A brief look is made into the Hurst-van Everdingen skin factor and the development of the present estimated damage ratio empirical equation is made and how it is used is discussed.

Recognizing that it requires a good DST data to make the above calculations a brief statement is made as to how to conduct a good drill stem test to achieve the data required.

Questions from the floor are encouraged on any drill stem test subject.

LOS ANGELES GEOLOGICAL FORUM

After the usual quiet gathering at Colombos Restaurant, Los Angeles members of the A.A.P.G. heard three interesting talks at the monthly geological forum held at the Mobil Auditorium.

Mr. Charles A. Davis of the California State Unemployment Department talked on "Aptitude Testing for Potential Geologists" and asked for successful professional geologists to volunteer for a 2-1/2 hour aptitude test in order that the department could recognize future potential geologists. A resume of this talk will be presented later.

Dr. Donn S. Gorsline, Professor of Geology, U.S.C. gave a very enlightening "Report on the A.G.I. Symposium on Geological Curriculum in High Schools". This report will be included in a later issue.

Robert N. Hacker, Lloyd Corporation, gave an interesting and descriptive talk on "Geology and Oil Possibilities of Southwest Utah". A map and stratigraphic column are presented here.

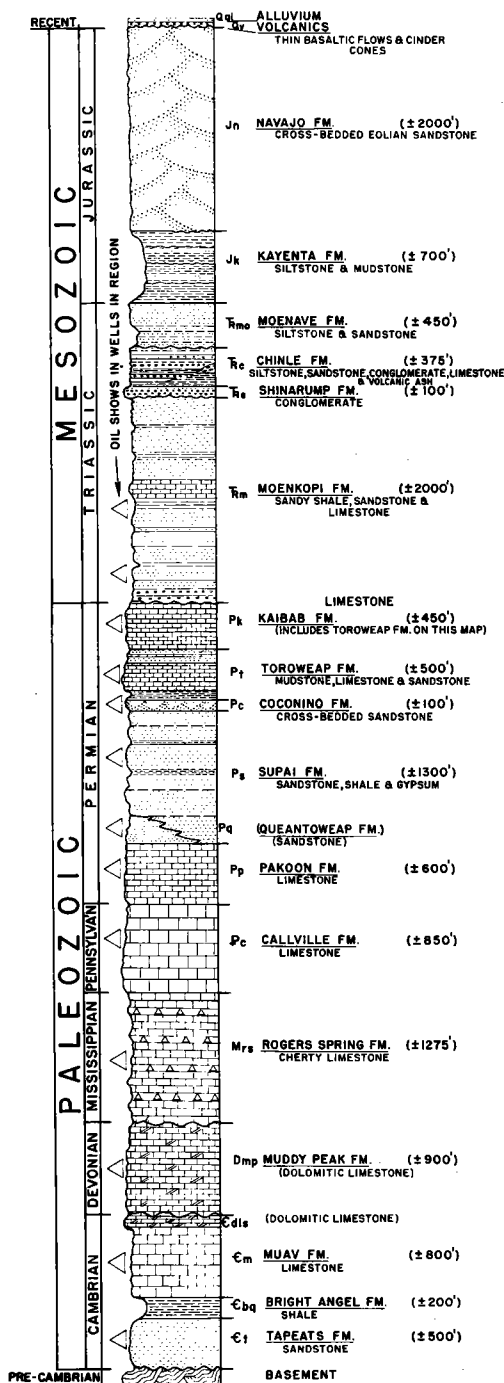
GEOLOGY AND OIL POSSIBILITIES OF SOUTHWEST UTAH

by R. N. Hacker

ABSTRACT:

The Southwest Utah area lies on the western margin of the Colorado Plateau and is separated from the Basin and Range Province by the Hurricane-Grand Wash Faults.

Rocks in the area range in age from the Pre-Cambrian Basement to Recent Basalts. There are over 19,000 feet of sedimentary rocks consisting of marine limestone, dolomites, sandstones and shales as well as non-marine wind-blown sands.



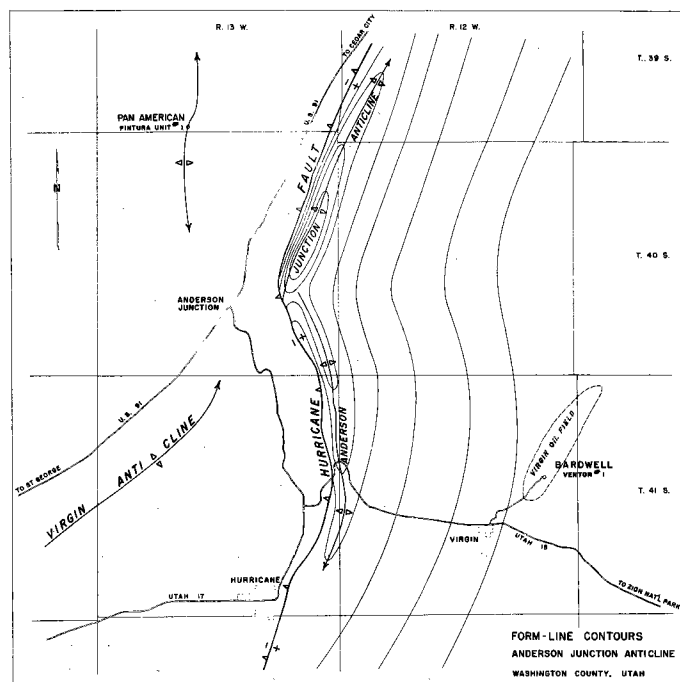
STRATIGRAPHIC COLUMN
PRE-KAIBAB THICKNESSES BASED ON AVERAGES IN DEEP WELLS IN ADJACENT AREAS. FACIES CHANGES AND REGIONAL UNCONFORMITIES MAY INCREASE THICKNESS OF SOME STRATA.

The region is cut by a series of major north-south trending, west-dipping normal faults. The Hurricane Fault on the west runs from south of the Grand Canyon to north of Cedar City, Utah, a distance of more than 180 miles. This fault has a throw of from 800 feet on the south end to more than 10,000 feet in the Cedar City area. The 1,000 to 1,500 foot west facing scarp is one of the most prominent topographic features of the region.

The gross structure east of the Hurricane Fault is a gentle easterly dipping homocline which culminates in the Anderson Junction Anticline west of Zion Park. This structure is more than 15 miles long and is associated with and parallel to the Hurricane Fault. The anticline has more than 1,200 feet of independent domal closure covering an area of 3,000 acres. Depth to basement at the crest of the fold is estimated to be 5,000 feet.

The area holds promise in several zones for oil accumulation, particularly east of the Hurricane Fault. Shows of oil have been encountered in a number of deep tests in Southwest Utah and Northern Arizona in Pre-Triassic rocks. Oil shows in a deep test in the Virgin Oil Field in the Pakoon, Callville and Rogers Spring Formations have stimulated interest in the region. There is a thick marine section containing adequate source beds. Regional stratigraphic variations indicate good porosities with possible reefing as well as structure to furnish traps for the oil.

The Virgin Oil Field, discovered in 1907, is the only existing production in the region. This field produces two types of oil of 24 and 32 to 38 gravity. Cumulative production is 195,000 barrels from 500 to 800 feet in depth. About 30 wells have been productive and 440 acres proved. It is suggested that the different types of oil migrated into the porous Moenkopi beds from two separate deeper sources by way of minor or regional joints.



NORTHERN CALIFORNIA GEOLOGICAL SOCIETY

The Northern California Geological Society will hold a joint meeting with the San Francisco Landmen on Friday, October 18, 1963, at the Engineers Club, 206 Sansome Street near Pine Street, San Francisco. Cocktails and hors d'oeuvres will be available starting at 5:30, dinner at 7:30 (?), prime rib and lobster \$4.50, including tax and tip.

George J. Schlocker of the U. S. Geological Survey will discuss geology in home construction (or, Is Your House on a Drifting Sand Dune). The talk will be illustrated with Kodachrome slides.

Ladies are invited. San Francisco Landmen and members of the American Association of Petroleum Landmen, and their ladies, will join with the Northern California Geological Society. Other interested geologists and their wives are invited.

Reservations should be mailed to Mr. William L. Effinger, Secretary-Treasurer, Northern California Geological Society, P. O. Box 3495, San Francisco 20.

COMPUTER PRESENTED TO THE UNIVERSITY OF CALIFORNIA, RIVERSIDE

An optical analogue computer for interpreting variations in the earth's gravity has been presented to the Geology Department of the University of California, Riverside. The computer will be used by UCR geology students and staff for instructional purposes and basic research.

The computer, a gift of Standard Oil Company of California, was presented to Dr. Michael A. Murphy, chairman of the UCR geology department, by Mr. L. F. Adams, superintendent of the Exploration Department, Western Operations, Inc., during a visit to UCR last week.

Designed for routine types of gravity variations analysis, the computer has been used principally in exploration for oil and gas by Standard Oil.

The computer will be used at UCR primarily for academic research by upper division and graduate students working on problems of structural geology under the direction of Dr. Thane H. McCulloch, professor of geology. It will also be used to illustrate applications of potential field theory to geological and geophysical problems.

The operation of this type of equipment is based on a principle of comparison between a source of light of known intensity and the intensity of light which has been passed through a graphic model under study. The gravitational effects of hypothetical geologic models can be computed and compared with those observed in nature to determine likely interpretations of rocks hidden deep beneath the area under study.

The computer was manufactured by the Seismograph Service Corporation of Tulsa, Oklahoma, and has been used extensively by the Standard Oil Company in oil exploration work in California. A large capacity digital computer in San Francisco has now replaced this type of equipment for geologists of the Standard Oil Company.

COAST GEOLOGICAL SOCIETY

The regular monthly meeting of the Society was held on Tuesday, September 10, at the Ventura Women's Center. The guest speaker was Mr. Harry Whaley, geologist with Tidewater Oil Company, who gave us a brief description of the Zaca Creek Oil Field.

ABSTRACT:

The Zaca Creek Oil Field is located in the eastern part of the Santa Maria Basin, about 8 miles north of Buellton, California. The discovery well, Tidewater Oil Co. "Davis" #1 was drilled in 1942, and produced 94 B/D, 7° oil, from a fractured shale and chert reservoir of the Miocene "Monterey" Formation.

The structure consists of a complexly faulted, southwesterly dipping monocline, located on the down-dropped side of the "Quati" fault. Miocene sediments in the area rest directly on "Knoxville" sediments or older serpentine.

Forty seven wells were drilled in the field, of which 2 were abandoned as dry holes, and 38 are currently producing. Cumulative oil to date is approximately 14-1/2 million barrels.

NOTICE

If those who have sent cards for reservations at the monthly luncheon meetings at Rodger Young Auditorium find that they are unable to attend the luncheon, would they please, if possible, contact Louis Simon, DU 5-0515, Ext. 408, prior to 9:00 A.M. on the day of the meeting.

DIRECTORY PLANS

Plans for the New 1964 AAPG-SEG-SEPM directory are now being finalized. New design and format will combine membership-company-affiliation-section with the advertisers section.

By the use of bold-face type similar to the advertising in a telephone directory, this new format will prominently emphasize the advertiser's company name in the most utilized section of the directory.

You are requested to direct this notice to the proper individual in your organization for appropriate action. If this solicitation is successful, your assistance will decrease the directory costs and will permit the widest possible circulation in the exploration field of the oil business.

A reply in the near future to R. O. Patterson, Advertising Chairman, P.O. Box 17486, Los Angeles 90017, would be appreciated since the printer's deadline is early in 1964.

Suggested donations:

Large organizations requiring prominent display of all district offices and phone numbers	\$50.00
Small companies	\$25.00
Consultants and independents	\$ 7.50

PERSONAL ITEMS

Union Oil geologists Ed Borglin and Joe Fantozzi, formerly in the Engineering Department, are now assigned to the Bakersfield Exploration Department. Ed has been in Bakersfield several years and Joe will be moving from Santa Paula.

Jack Cunningham, Standard, has returned to the Oildale office after a sojourn in the Westside 11-C Taft office. Jack misses the early hours and commuting venture each day.

Orrin Gilbert, Standard, has returned to California after a lengthy stay in the wilds of Alaska. He is now located in Taft, but his intercontinental radio station is keeping close contact with Anchorage.

The Bakersfield Petroleum Bowling League has started a new season. Tidewater has returned to the fold with another top team. Ernie Rennie is President, Jack Claire is Vice President and Dale Rodman is Secretary to the League.

Bob Lindblom won low gross honors in the recent three way County Golf Tourney between the Kern River, North Kern, and the Buena Vista Courses. Bob shot a 71 at the Kern River course to lead a field of over 100 golfers

Sherman MacKay, recently returned from the Spanish Sahara, has joined Geological Exploration well logging in Los Angeles. Sherm now resides in Whittier with his lovely Danish bride, Irene, whom he met in Copenhagen.

John R. Sloat, formerly Director of Exploration for Union Oil, Los Angeles, has been named Manager of Union's Foreign Operations.

Joe Arndt is back in Long Beach after a summer in Alaska for Richfield. He's now in the midst of preparations for his forthcoming marriage. Guess those bears aren't such good company after all!

Pauley has brought two geologists in to their Los Angeles brain trust from their southern Mexican operations, Mark Kavinick, returning to his old home grounds, and Herb Felsted, a transplanted Texan.

John Curran (Consultant) recently addressed the Santa Barbara Mineral & Gem Society on "Seeking the Willy Oilwell in its Native Habitat". If John has finally run the "wily oilwell" to earth at the Santa Barbara Mineral & Gem Society, no wonder the rest of us missed it. We'll be right up there with gun and camera, John, just keep it pinned down!

Texaco has transferred two geophysicists into their Long Beach office, bringing in supervisor Will Silva from their Los Angeles office and Gene Schneider in from Bakersfield.

Jim Wylie, who was transferred by Gulf from Alaska to Jackson, Mississippi, resigned to go into the real estate business in Sacramento. Probably always wanted to be a landman and make that big money, huh Jim?

Gulf has shuffled their L. A. offices around, with their division office moving out to Century City (Phone TR 9-0670). Under this office are the two area offices at Bakersfield, and in L. A. on W. Olympic Blvd.

John R. Graves, Phillips' geologist, golfer, bon vivant and bachelor of many years standing finally went the way of almost all male flesh, leaving on his vacation single and returning to work married. That romantic Santa Barbara atmosphere must have finally got through to him after five years. John married the former Miss Marifrances Bellamy, August 28, 1963 in Santa Barbara.

Since Fuzzy Randall embarked on a three week Hawaiian luxury cruise, Richfield's Long Beach office has been flooded with applications from prospective bug-washers. There's gold in them thar samples men, keep washing!

John E. Kilkenny, Union Oil, formerly Chief Geologist for the Pacific Coast Division, has been appointed Geological Coordinator for all Union's domestic operations. George B. Pichel replaces Kilkenny as Chief Geologist for the Pacific Coast and W. O. "Bill" Plant has been appointed Assistant Chief Geologist. Pichel was formerly with the Foreign Division as Exploration Coordinator and Plant was formerly Division Exploration Coordinator for the Pacific Coast.

Doug Manske has left Texaco's Sacramento office to return to Oregon State University where he will work toward a Ph. D. in Oceanography. Good luck, Doug.

Don Barrett (Socony, Midland) has left for Libya.

The latest addition to the list of service companies in Woodland is the Reynolds Oil Tool & Service (P. O. Box 148, Woodland; Phone 662-1450). Driltrol hosted a barbeque to celebrate the grand opening and a great time was had by many geologists and service company people of the northern valley. Thanks again to Jerry Reynolds and Driltrol for the fine function.

Dr. Thomas Clements has retired as Chairman of the Geology Department at the University of Southern California after 30 years of service in this position. He has been invited by the faculty to continue teaching this year as Hancock Professor of Geology.

The new Chairman, Dr. W. H. Easton, has been at USC 17 years and also has been employed by the U. S. Geological Survey, Arkansas Geological Survey and National Park Service.

Dr. John V. Byrne, (Ph. D. USC, 1960) gave a seminar at USC on September 24 on coastal and marine problems under study by the Department of Oceanography at Oregon State University.

On Friday, September 20, 1963, the Northern Division of the Pacific Coast Section of the SEG presented the film of the 1963 Master's Golf Tournament. Some 50 geologists and geophysicists viewed the film at Shakey's Pizza Parlor which proves the tremendous local interest in "Geophysics".

Sig Hamann, Shell, Ventura, is now heading up the Ventura Avenue Subsurface group.

Howard Kinsey, Shell, Ventura, has been transferred to their Los Angeles office.

The Coast Geological Society wishes to extend thanks to the Lagomarsino family and Mr. Jack Wood again this year for the use of their ranch facilities on Gridley Road, Ojai, on September 7, for the annual Coast Geological Society picnic. "Chef" Wood and able assistants, Roy Turner and Otto Hackel, did an excellent job preparing the food. Over 50 persons attended and enjoyed the swimming, games, and cuisine.

It fell upon a certain oil company scout, the only person on hand with a pickup truck, to save the day at the Coast Geological Society picnic in Ojai. When the existing garbage disposal facilities could not be used, this man voluntarily loaded large, nasty, dripping burlap sacks of garbage onto his vehicle and removed them from the scene!

Humble has been filling up its new office building in Bakersfield, transferring geologists George R. Harlow and Nick Greene and geophysicist Chuck Morris in from Los Angeles, and bringing in Andy Marianos, Larry Taggart and Gene Borden from the now closed Castaic Paleo Lab.

NURSERY NEWS

Max and Charlotte Payne, Norris Oil, Bakersfield, A boy, Robert Howard, 9 lbs. 12 oz., September 11th, 1963. "Fourth & Final".

Henry and Audrey Dawson, Humble, Bakersfield. A girl, Denise Lynn, 8 lbs. 13 ozs., September 5th, 1963. Denise has 3 brothers.

Mike and Bernice Rector, Consultant, Bakersfield, a girl, Kimberley Ann, 6 lbs. 2 ozs., August 30, 1963. Even up - 3 boys and 3 girls.

Born to Jim and Rita Kistler, Standard, Oildale, a daughter, Karen Lynn, September 7, 1963, weighing in at 6 lbs. 10 ozs. Their third child.

Ted and Pat Ehring, Texaco, Bakersfield, their fourth child, a boy, Kevin Richard, 6 lbs. 10 ozs., August 31, 1963. Veteran Ted just happened to be away fishing during the critical hours.

CALENDAR

October 14, 1963: Monday evening, El Tejon Hotel, Bakersfield. San Joaquin Geological Society. "Use of Paleo-environment studies in Determining Producing Trends" - Dr. Orville L. Bandy, Distinguished Lecturer. Cocktail hour 6:30 P.M.; Dinner hour 7:30 P.M.

October 21, 1963: Los Angeles Evening Forum Meeting, 7:00 P.M., Mobil Auditorium, Mobil Bldg. David L. Jones, USGS, Menlo Park - "Franciscan, Cretaceous and Related Rocks of the California Coast Ranges." The topic for the evening meeting is a portion of a study entitled, "The Profile Theory of the Origin of the Franciscan", by D. L. Jones, C. A. Anderson, E. H. Bailey & W. P. Irwin. An informal dinner will be held at Columbo's, 819 So. Figueroa, 5:30 P.M. promptly.

October 24, 1963: Northwest Geological Society will hear Albert E. Weissenborn, U.S.G.S., Spokane, talk on "Development of Iron Ore Deposits in Liberia". 7:00 P.M. dinner Poodle Dog Cafe, Fife, Washington.

November 4, 1963: Monday evening, 7:30 P.M. Bakersfield College, Science and Engineering Building, Room 56, Biostratigraphic Seminar. "Potassium/Argon Dating" - Dr. J. Evernden, Univ. of Calif., Berkeley.

November 7, 1963: Thursday noon, Rodger Young Auditorium, 936 W. Washington Blvd., Los Angeles. John Shelton, Claremont, will present a panorama of the Grand Canyon, including a series of beautiful aerial photos.

November 18, 1963: Distinguished Lecture Series, Monday evening 7:00 P.M., Mobil Auditorium, 612 S. Flower, Los Angeles. Mr. R. A. Baile, Independent Exploration Co., "Some Concepts in Geophysics", with emphasis on the "Vibro-Seis".

November 21, 1963: Distinguished Lecture Series, Thursday evening 7:00 P.M. Dinner Meeting, Poodle Dog Cafe, Fife, Washington. Mr. R. A. Baile, Independent Exploration Co., "Some Concepts in Geophysics", with emphasis on the "Vibro-Seis".

SHAKER CUTTINGS FROM THE BOTTOM OF THE PIT

"Pete" Hall, of the Richfield in Ventura, is sporting an English Austin. Just the thing for a "gentleman" farmer! It's also easy to hide under a bush when scouting.

Hans Ashauer is having his problems in training a new field geologist in the Salinas Area. It's a "she" and the natives don't understand.

The Honolulu Oil Corporation and the Signal Oil and Gas Company are now great favorites of those lucky persons who were taken on a conducted tour of Santa Rosa Island a few weeks ago. The boys, seventeen in all, went by boat from Santa Barbara in the good ship "La Busca" and were stuffed with turkey, steak and strawberry shortcake. Needless to say, a good time was had by all, especially Russ Simonson and Bill Thomas who started lobster hunting at 3:00 a.m.

During the last Salinas Valley bi-monthly dinner scout meeting a more than unusually successful gathering was marred by the late arrival of one of the charter members, who, due either to the necessity of a restricted diet or financial embarrassment, ordered nothing but coffee. Contributions which were obtained to feed the character were spent a la main street at the Bar, and it is doubted that there was enough left over for a reasonable tip. Consequently another collection will be made for this purpose at our April 5th meeting.

Ted Lee, photographer par-excellence, took some swell pictures of the gang on the convention-bound train. Too bad he didn't remove the lens cap!

The Blue Goose Cafe at Summerland now has a new item on its menu called "Orrin Special". It didn't take Sam Spade to trace it to Orrin Gilbert of the Standard Oil Co. It seems that his favorite breakfast is a cheese omelet, and he ordered one every morning for a month while he was in the area watching Standard's Summerland gas well.

No babies reported during the month of April, but several are on tap. Watch this column! Remember Andy Lawson was 87 years young!

To the ladies who read this portion of the PPG Bulletin. Don't give the old man a bad time! There are many items here he honestly didn't know about!

The Oil Scouts softball team, sponsored by the major oil companies, lost a pitchers duel in the opening game of the season. Score: 17-16.

(P. P. G., Vol. 3, Nos. 1 - 6, 1949)

BIBLIOGRAPHY OF RECENT PUBLICATIONS

U. S. GEOLOGICAL SURVEY

Professional Paper 341-C: Geology and ore deposits of the Itabira District, Minas Gerais, Brazil, by J.V.N. Dorr 2d, and A.L. de Miranda Barbosa \$2.50

Professional Paper 369: Geology of San Nicolas Island, California, by J. G. Vedder and R. M. Norris. \$2.75

Professional Paper 372-H: General Summary of effects of the drought in the southwest, by H. E. Thomas. \$0.25

Professional Paper 386-C: Relation between dual acidity and structure of H-montmorillonite, by A. M. Pommer. \$0.25

Professional Paper 454-H: The disparity between present rates of denudation and orogeny, by S. A. Schumm. \$0.20

Bulletin 1119: Geology of Portland, Oregon, and adjacent areas, by D. E. Trimble. \$2.00

Water Supply Paper 1650-A: Floods of December 1955-January 1956 in the Far Western States, Part I. Description, by Walter Hofmann and S. E. Rantz, \$1.00

Circular 473: Reports and maps of the Geological survey released only in the open files, 1962, by B. A. Weld, E. S. Asselstine and Arthur Johnson. 15 p. Free

Circular 474: Automation of streamflow records, prepared by a work group composed of R.W. Carter, Chairman, W.L. Anderson, W.L. Isherwood, K.W. Rolfe, C.R. Showen and Winchell Smith. 18 p..Free

Circular 479: Beryllium deposits of the western Seward Peninsula, Alaska, by C. L. Sainsbury, 18 p. Free

MAPS:

I-380: The Indian Ocean. The geology of its bordering lands and the configuration of its floor, by James F. Pepper and Gail M. Everhart. . . . \$1.25

I-210: Geologic map of the Southern Hijaz quadrangle, Kingdom of Saudi Arabia, by G. F. Brown, R. G. Jackson, R. G. Bogue and W. H. Maclean..\$1.00

OPEN FILE REPORTS:

Surface water records of Hawaii and other Pacific areas, 1962.

Northern Nevada reservoir site investigation, 1962, by Kenneth W. Sax.

Areas of potential flood inundation, San Luis Rey River basin, California, By H. A. Ray and L. E. Young. 25 p. 12 figs. (Menlo Park, Calif.)

Methods of estimating ground water pumpage in California, by E. J. McClelland. 19 pages. (Sacramento)

Ground water and related geology of Joshua Tree National Monument, California, by J. E. Weir, Jr., and J. S. Bader. 101 p.

Land subsidence in the Arvin-Maricopa area, California, 1959-62, by B. E. Lofgren. 1 map.

TRANSACTIONS AMERICAN GEOPHYSICAL UNION, vol. 44, no. 2, June 1963.

Triennial report to the Thirteenth General Assembly, IUGG.

Evidence suggesting continental stability since the Early Carboniferous, by Daniel I. Axelrod.

Geological evidences of past climate, by William L. Donn.

Fumaroles, hot springs and hydrothermal alteration, by Donald E. White.

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 74, no. 6, June 1963.

Paleozoic stratigraphy of the southern Egan Range, Nevada, by Harold E. Kellogg.

Overlapping of the Late Mesozoic orogens in western Idaho, by Warren Hamilton.

Lead-alpha dates for some basement rocks of southeastern California, by Johnathan Busbee, Jon Holden, Barbara Geyser, and Gordon Gastil.

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 74, no. 7, July 1963.

Effect of the toe in the mechanics of overthrust faulting, by C. B. Raleigh and D. T. Griggs.

Volcanic stratigraphy of the Pahranaagat area, Lincoln County, southeastern Nevada, by Abraham Dolgoff.

Composite columnar section of exposed Paleozoic and Cenozoic rocks in the Pahranaagat Range, Lincoln County, Nevada, by Anthony Reso.

CALIFORNIA DIVISION OF MINES AND GEOLOGY

Geologic Map of California (Colored, 1:250,000):
Long Beach Sheet..... \$1.50
San Diego-El Centro Sheet..... \$1.50
Walker Lake Sheet..... \$1.50

SCIENCE, vol. 141, no. 3578, 26 July 1963

Pleistocene marine microfauna in the Bootlegger Cove
clay, Anchorage, Alaska, by R. A. M. Schmidt.

SCIENCE, vol. 141, no. 3580, 9 August 1963

Ice movement of valley glaciers flowing into the
Ross Ice Shelf, Antarctica, by Charles W. Swinbank.

JOURNAL OF PETROLEUM TECHNOLOGY, vol. 15, no. 7,
July 1963

The Society's obligation to the permanent literature
of petroleum engineering, by H. M. Krause, Jr.

TRANSACTIONS OF THE ROYAL SOCIETY OF CANADA, 3rd.
Series Vol. LVI, Section III, 1962.

Energy source of intrusive masses, by William C.
Gussow.

PACIFIC NATURALIST, vol. 3, no. 8, October 1962

Benthic marine exploration of Bahia de San Quintin,
Baja California, 1960-61., by Donn S. Gorsline and
Richard A. Steward.

ALASKA DIVISION OF MINES AND MINERALS

The mineral industry of the Kenai-Cook Inlet-Susitna
region, by William H. Race, 42 p., 18 tables, 1962.

OIL AND GAS JOURNAL, vol. 61, no. 31, August 5, 1963

Wildcatting picks up in Alaska.

Interest high off Washington, Oregon.

Two sites near Hawaii considered for Mohole.

How to select a floating rig, by R. H. Grahm.

Now - map making made accurate, objective, by H. A.
Slack, G. D. Brunton, H. C. Lee, M. A. Rosenfeld,
and I. H. Cram, Jr.

OIL AND GAS JOURNAL, vol. 61, no. 33, August 19, 1963

Biggest magnetometer survey spans 144,000 sq. miles.

Two dormant giants may compete by 1970, by Frank J.
Gardner.

Big marine study off Iran in the works

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

Volume 17

Number 10

Return Requested

Richard L. Hester
Pauley Petroleum, Inc.
10000 Santa Monica Blvd.
Los Angeles 67, Calif.

DA



PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 17

November, 1963

Number 11

ASSOCIATION ACTIVITIES

SAN JOAQUIN GEOLOGICAL SOCIETY

The San Joaquin Geological Society heard Dr. Orville L. Bandy, U. S. C. give his paper on "Paleo-environmental Analysis as a Means of Defining Oil Producing Trends" on October 16, 1963, at the El Tejon Hotel in Bakersfield. The paper was well received, and was the initial performance of the Distinguished Lecture Tour to many parts of the country.

ABSTRACT:

During the past decade much progress has been made in the development of criteria for the recognition of marine depositional environments of the geologic past. In principle, it is possible to recognize and distinguish among paralic biofacies, larger divisions of shelf-type biofacies, and a number of bathyal subdivisions. Inner shelf and paralic biofacies are clearly distinguishable into (1) those associated with very fine grained sediments, low wave energy, and variable salinity, (2) those with similar conditions but with stable salinity values, (3) those of shallow platforms with coarse sediments, high wave energy conditions, and high oxygen values, and (4) those which are identified with reef-front areas, with coarser sediments, high wave energy conditions, and high oxygen values.

Principal biofacies trends in deeper waters are those associated with bathymetric change. Planktonic/benthic ratios of foraminifera increase away from shore into upper bathyal depths; radiolarian/foraminiferal ratios increase significantly in middle and lower bathyal depths. Benthic foraminiferal species of deeper waters include those that appear to be isobathyal, occurring in the same depth ranges in entirely different oceanic areas with severely contrasting temperature profiles. Careful evaluation of modern faunal trends permits the recognition of both the normal indigenous and the non-indigenous components of biofacies. Analysis of ancient environments by study of modern faunal trends show that there are many mutual criteria for reconstructing the environment of deposition and mode of sedimentation of ancient sediments. Biofacies trends reflect the degree of sorting of former platform sediments and identify the margins of the platforms. Rates of differential subsidence and/or uplift are reflected in the environmental details of stratigraphic sections, thus defining structural trends which existed at the time of deposition of the sediments. Peculiar faunal associations and faunal mixtures in modern turbidites and graded beds of deeper basins find their counterparts in graded beds of the geologic past. Source of the sediment is indicated by the displaced shallow water fractions, environments of deposition are indicated by the deeper water indigenous faunal elements, direction of sediment transport is reflected by depositional structures, and rates of uplift or down-warping are

computed by evaluating environments of deposition against rates of sediment accumulation. Producing trends of deep-water sands show a correlation with structural trends so defined, usually near the base of steeper slopes, and in zones characterized by rapid biofacies change. Former submarine canyons were the probable conduits by which coarser sediments were introduced into deeper basins.

LOS ANGELES LUNCHEON MEETING

At the October 3 regular luncheon meeting of the Pacific Section A.A.P.G. members and guests heard Dr. Donn S. Gorsline, Geology Department, U. S. C., speak on "Recent Marine Sediments of the Netherlands." An abstract of this interesting talk appears below.

ABSTRACT:

An unusual opportunity to see modern sediments and sedimentary structures was provided at the recent international meeting of the International Association of Sedimentology held in Antwerp and Amsterdam in June, 1963. The speaker was a participant in the meetings and in the recent sediments field trips preceeding the meetings. The northern Belgian and the Netherlands coastal areas are formed by the present and ancient deltaic deposits of the Rhine, Scheldt, Meuse and Ussel Rivers and by the marine deposits of the various stands of the Pleistocene sea invasions of these areas. The product of these shallow marine, estuarine and fluvial periods is complex and has been deciphered in the Low Countries by the cooperative work of many sciences. In this respect, the speaker was impressed by the excellent support of geological studies and the close and mutually respectful association of engineers and geologists in all major coastal and river projects.

Because this coast of the North Sea experiences a large tidal range, coastal studies are able to examine sediments and sedimentary structures of numerous shallow water environments at first hand. The trips included visits to mud flats, marshes, sand flats and tidal channels. Impressive displays of mega and micro ripples were observed. Excavations for locks and dikes were opened to the group and sections of as much as 20 meters thickness were cleared and trenched. In a very simplified section, the exposures included approximately the last 10,000 to 12,000 years of record ranging from the Preboreal eolian and fluvial sands and associated soil horizons to the coastal dunes, lagoonal sediments and fresh and salt water silts, clays and sands of historic time. The Preboreal sands are truncated and covered by peats containing logs and organic sands. These are overlapped by lagoonal clays or sands of Atlantic

EXECUTIVE COMMITTEE, PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

John E. Kilkenny	President
Louis J. Simon	Vice-President
Arthur O. Spaulding	Secretary
Milton T. Whitaker	Treasurer
John H. Van Amringe	Editor
Richard B. Haines	Past President
Harrison C. Jamison	Alaska Representative
Edward A. Hall	Coast Representative
William J. Edmund	Sacramento Representative
James L. O'Neill	San Joaquin Representative

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 California.

Editor:	Jack Van Amringe
Assistant Editors:	
Activities	Tom Wright
Calendar	Alfonso Escalante
Selected Bibliography	Lucy Birdsall
Cartoonists:	Mort Kline & Harold Sullwold
Personal Items:	Bill Fowler
Correspondents:	
Alaska	Richard Lyon
Coast	Jack Durrie
Los Angeles	Mike Maxwell
Northwest	Ralph Rudeen
Sacramento	Sargent T. Reynolds
San Francisco	Gordon Oakeshott
San Joaquin	Rod Colvin
Membership Secretary	Pat Metcalf

Next deadline: November 27, 1963

age (5000 to 8000 years before Present), Sediments of sand flats, tide channels and marshes of the late stages of Atlantic time merging into clays of both salt and fresh water marshes and finally covered or cut by river channels and their associated sands, silts and some peats. These in turn are covered or interfinger with tidal deposits and at their seaward edges interfinger with North Sea sands. Barrier island, spit and beach deposits front these various sedimentary facies and are now covered in turn by sands of coastal dunes and barriers of medieval age. Cross bedding and ripple marks, graded layers, peats, cut and fill structures, slumps and compactional structures are all in evidence. Minor features such as burrows and trails are also beautifully preserved.

In the Zuider Zee area, the original terrain in Roman time was a fenland of lakes and marshes. This was gradually engulfed by the encroaching sea as the land subsided by compaction of fine sediments and possible due to some small increment of sea level rise and the Zuider Zee formed. This salt water bay was then reclaimed in small areas and in modern time (20th century and post 1930's) was first completely enclosed and converted to a fresh water lake, the present Ysselmeer, and is now being blocked out into several large diked areas (polders) which are then drained and brought into condition for agricultural development. Trips to these polders in various stages of construction were lead by engineers and geologists of the reclamation agencies and numerous exposures of the Zuider Zee deposits and the older underlying sediments were visited. The crowning trip was a study of exposures of contemporary and early Recent North Sea and coastal sediments laid bare in the drained floor of a giant

cofferdam in the mouth of the Scheldt estuary in which a section of about 20 meters of these sediments was trenched and cleared for our examination. Shallow marine and inner shelf bedding, channels and minor structures were viewed.

The most striking feature of the excursions was the viewing of structures and sediments of present environments and recognizing in them the same features so often seen in sedimentary rocks. The experience was a visual testimony to the old statement that the "Present is the Key to the Past".

AAPG - SEG - SEPM DIRECTORY

For the convenience of the members who have not received their proofs or for those who wish to take new directory pictures, the following schedule has been arranged:

Ventura: November 12, 1963, 6:30 p.m. at the Women's Club.
Los Angeles: November 18, 1963, 6:30 p.m. at the Mobil Building Auditorium.
Bakersfield: November 19, 1963, 6:30 p.m. at the El Tejon Hotel.

Price is \$1.50. Other members may send pictures (enclose \$1.50 to cover reduction costs) to the Membership Secretary, P. O. Box 17486, Los Angeles, California, 90017.

LOS ANGELES GEOLOGICAL FORUM

At the September 16 meeting of the Pacific Section Geological Forum, Mr. Charles A. Davis, Area Occupational Analyst, Los Angeles Metropolitan Area Office, California Department of Employment spoke on "Aptitude Testing for Potential Geologists". Individuals wishing to assist in this project as described below should contact Mr. Davis at the Department's Los Angeles office at RI 8-6511, Ext. 567.

ABSTRACT:

The California Department of Employment, in affiliation with the United States Employment Service, conducts test research to determine the various combinations and degrees of aptitudes required to perform successfully in specific occupations. Aptitude norms for a number of professional occupations, such as Physician, Dentist, Engineer, and Mathematician, have already been developed. These norms, along with norms for other occupations, are used by the Employment Service to refer test-selected persons to employers and to aid in counseling the high school student to decide on a vocation. The United States Employment Service is constantly attempting to increase the number of professional occupations for which occupational norms have been established, since one of the primary and most important uses of this information is for counseling high school students throughout the nation. The Los Angeles Metropolitan Area Office is interested in developing occupational norms for the Petroleum Geologist. We would appreciate the cooperation of the A.A.P.G. in our project.

Generally, the services of our office are requested by an employer who has a labor turnover problem, or a problem in recruiting and selecting trainees for a particular job. The reason we are here today is because we understand there is a shortage of Petroleum Geologists at present, and that this shortage will become critical very shortly. We would like to assist you in meeting this problem.

The process of developing occupational norms involves several steps. One of the first steps is the job analysis. By direct observation of the job and interview of the worker and his supervisor, information concerning the job duties, skills, knowledges, abilities, and training time, is obtained. Then the entire General Aptitude Test Battery, which consists of twelve tests measuring nine aptitudes and is referred to as the GATB, is administered to an experimental sample--a group of at least 60 workers employed in the same occupation. A suitable criterion or measure of job proficiency is then chosen. Various types of criteria, such as average hourly earnings, work samples, and supervisor's ratings are used. The criterion data and personnel information are collected for each worker in the sample. All of the data are then analysed by appropriate statistical techniques to determine the important and irrelevant aptitudes.

Tentative plans are to administer the GATB to members of the A.A.P.G. at one of the monthly Geological Forum meetings. These tests will take approximately 2-1/2 hours. A group of at least 60 geologists should be available to take the tests. Criterion data consisting of supervisory ratings will be obtained from the employer of each individual tested.

At the meeting on September 16, 1963, a show of hands by the members indicated interest and cooperation in this project. We shall appreciate any further suggestions or information that will help us to conduct this project most expeditiously.

Following Mr. Davis' talk, Dr. Donn S. Gorsline, Professor of Geology, U. S. C., addressed the meeting with a "Report on the A. G. I. Conference on Geological Education in High Schools."

ABSTRACT:

The speaker was privileged to be a participant in a two week conference on Earth Science Curricula in the high schools convened by the American Geological Institute with N. S. F. support. Approximately 30 Earth Scientists and a chosen group of high school instructors discussed numerous approaches to the teaching of Earth Science and to the content of a course to be offered at the ninth grade level. The great interest in the Earth and its composition, structure, surficial features and the processes forming them were noted. It was also agreed that the aim of the proposed course should be to provide a comprehensive view of the Earth and to show how the Earth Scientist studies the Earth. It is not intended to be a "recruiting drive", but to provide a basic and generally useful course for all students regardless of their eventual life's work. For many students, it may well be the only science they encounter and thus should stress the thesis that the study of the Earth utilizes all of the sciences.

Many areas have already begun Earth Science programs with considerable success. Pennsylvania and New York have a very effective program which is now in full swing. The status of the Earth Sciences in various states has been discussed recently in GEOTIMES by Dr. Coash of Bowling Green University and by several committees of the A. G. I. meeting during the G. S. A. national meetings over the past three years.

Geologists have lagged behind the other sciences in developing a secondary school curriculum. Math, Physics, Chemistry and Biology are all well along in organizing and testing materials and texts for sec-

ondary school use. Much of their experience is available to the new Earth Science Curriculum Program headed by Dr. Robert Heller. ESCP plans to commence writing conferences next summer and will test the initial efforts next school year in a small group of chosen high schools around the U. S.

Geologists often receive calls from their local secondary schools for information and for lectures. In such circumstances, the advice and assistance of the A. G. I. and ESCP staffs in education should be used to the eventual advantage of Earth Science.

LOS ANGELES LUNCHEON MEETING

Dr. Edwin C. Allison from the Geology Department of San Diego State College, spoke on September 5, before the Pacific Section A.A.P.G. at the regular noon meeting held at the Rodger Young Auditorium. The abstract of Dr. Allison's talk entitled "Geology of the Peninsular Ranges, Northern Baja California, Mexico" appears below:

ABSTRACT:

The lack of a comprehensive geological map of the Peninsular Ranges, encompassing the peninsula of Baja California and adjacent parts of southern California, has inspired a cooperative reconnaissance mapping project by San Diego State College and the Universidad Autonoma de Baja California. Efforts of twelve students and staff members of these two institutions, under the direction of Dr. R. Gordon Gastil, during the past summer have been directed towards meeting this need. The area mapped and gravimetrically traversed extends from the vicinity of the Agua Blanca Fault, north of the area under intensive study by geologists of the California Institute of Technology, northward into inadequately mapped areas of southern California. A southward continuation of geological mapping with an expanded geophysical program is hopefully anticipated during future field seasons.

Other objectives of the mapping project include the inspiration of future Baja California geologists and the recognition of problems for which solutions are urgently required in the sought-after understanding of a most significant geological province and its organic inhabitants. Important problems, some of which are already under further investigation by participants of this summer's project, include:

Paleoecologic and biostratigraphic studies of post-Miocene fossils to determine the significance of maximum and minimum water temperatures extremes indicated by faunules conventionally labeled Pliocene locally.

Provenance studies of distinctive clasts in post-Cretaceous conglomerates distributed widely over Pacific slopes of the northern Peninsula Ranges, they are now known to be associated with a great erosional surface which is veneered by rocks bearing marginal marine Eocene fossils at high elevations many miles east of the modern Pacific coast.

Analyses of Upper Cretaceous gradients observable in many continuously exposed traverses laterally through scarcely distributed and richly fossiliferous strata with inferred environments of deposition ranging from bathyal, near the present Pacific coast, to various near-shore settings inland.

Individual studies of the great variation in size, shape, composition, structure, and relationships to surrounding rocks, exhibited by the numerous plutons which constitute the Peninsular Ranges batholith, synthesis of those studies to reach general conclusions concerning mechanisms of batholith emplacement.

Biostratigraphic and chorographic studies of diverse and abundantly fossiliferous faunules in Cretaceous pre-batholithic rocks.

Structural analysis, at every scale, of pre-batholithic structures which generally trend in westerly and northwesterly directions in northwestern Baja California, obliquely to the predominantly north-northwesterly trends of more modern structures in the Peninsular Ranges.

Determination of the pre-Cretaceous history of the Peninsular Ranges through geological studies of older, in part metamorphosed, rock units; exploiting stratigraphic, radio-metric, paleontologic, and geophysical methods, especially.

Systematic paleontologic studies of fossils from every rock unit in which they are available.

SACRAMENTO VALLEY ACTIVITIES

The first meeting of the Northern California Chapter of the API was a great success. Over 108 charter members were signed up. Those chosen as officers were:

Chairman: Paul Tuttle (Gulf)
First Vice Chairman: Bob Donnelly (Amerada)
Second Vice Chairman: A. E. Albiston (Brown Drilling)
Secretary-Treasurer: Harold Brenner (Johnston Testers)
Board Members:
Fred Ellenz (Cameron)
Bill Gholson (Amerada)
Bill Potts (National Supply)
Sarge Reynolds (Consultant)
Dick Whiting (Tretolite)

The next meeting will be held November 21 at Aileen's Restaurant, five miles south of Woodland on Highway 40 Alternate.

The Sacramento Petroleum Association Fall Barbeque and Softball Game once again proved an adequate energy outlet for all the area's athletically inclined petroleum people. As usual, more muscle strain was incurred in using the one available church key than on the diamond. The evening's recreational program skidded to a halt when the big winner developed a "headache" leaving the games without adequate funds to carry on. Many thanks to Chairman John Evers and Chef Dan Daniels.

Dr. Berry of the University of California will present a talk to the Sacramento Geological Society on December 9th at 7:45 p.m. at 1120 "N" St. Dr. Berry's talks are always interesting and thought-provoking and all interested southlanders are cordially invited to attend.

CHRISTMAS DINNER DANCE

Don Dhonau, Chairman of this year's A.A.P.G. Christmas Dance announces that the dance will be held December 14 at the Oakmont Country Club in Glendale. Dancing from 9:30 p.m. to 1:00 a.m. will be to the music of Carroll Wax and his fine orchestra. A cocktail hour and dinner will precede the dance. Ticket applications will be mailed to all local A.A.P.G. members this month. For further information you may call Don at MA 6-7701 or assistant chairman Joe Hudson at MA 6-5496.

NORTHERN CALIFORNIA GEOLOGICAL SOCIETY

Sixty members and their wives of the Northern California Geological Society had a most successful joint dinner meeting with Bay Area Petroleum Landmen on the evening of October 18 in San Francisco. A happy hour, extending from 5:30 to 7:45, helped all to get acquainted and contributed to enjoyment of prime rib or lobster at the Engineers Club.

The following abstract, purported to deal with the evening talk, bore little resemblance to the excellent post-dinner talk and Kodachrome illustrations given by George Schlocker, Menlo Park (USGS) engineering geologist.

ABSTRACT:

A new research tool which will enable geologists and landmen to work many complicated problems in their respective fields has been developed by a joint research project conducted cooperatively by the two groups. The machine, known as a turbo-encabulator, involves entirely new principles in electronics.

The breakthrough in research came when a method was found for energy induction by the model interaction of magneto-relectance and capacitive directance. A pilot-size model which has given excellent results in field experiments consists essentially of a baseplate of prefabricated amulite, surmounted by a malleable logarithmic casing in such a way that the two spurving bearings are in direct line with the pentametric fan.

The latter consists simply of six hydrocoptic marzel vanes, so fitted to the ambifacient lunar vaneshaft that side-fumbling is effectively prevented. The main winding is of the normal lotus-o-delta type, placed in panendormic semibloid slots in the stator. Every seventh conductor is connected by a nonreversible tremie pipe to differential gridsprings on the ulterior termini of the gram-meters.

A revolutionary feature of the new turbo-encabulator is the spacing of the reminative grouting brushes with relation to the bitugenous spandrels so as to give a high annular grillage coefficient and a low h.f. rempeak. This was achieved by modulating the barescent skor motion to the periodicity of the sinusoidal depletionation.

The present model still uses a conventional transcendental hooper dadoscope, but further experiments will be conducted by nubbing together a regurgitative purwell and supramitive wennel-sprocket, provided a sufficiently robust spiral decommutator can be devised to absorb the quasipiestic stresses in the gremlin studs of the roffit bars and prevent wending of the fromaging spanshaft.

LOCAL GEOLOGISTS PLAN
NATIONAL PROFESSIONAL INSTITUTE

ON FRIDAY THE 13th OF SEPTEMBER, A MEETING WAS HELD IN OKLAHOMA CITY WHICH MAY BE A MILESTONE IN THE ANNALS OF THE PROFESSIONAL GEOLOGIST.

It was the meeting of a Steering Committee whose purpose it is to form the American Institute of Professional Geologists. Final plans for the founding convention are being made. It will be held on the campus of the Colorado School of Mines at Golden, Colorado on November 14th and 15th of this year. All Professional Geologists are invited. Each local, area and state geological society is asked to send an official observer appointed by the President of the local society. The official observer will also be a participant.

The Steering Committee is composed of Professional Geologists who were mutually chosen because of their background and interest in the professional movement in geology. They have studied the problem over an extended period of years and are well informed on the subject. They are listed below:

Robert M. Becker, Consultant, Oklahoma City, Oklahoma; Oklahoma City Geological Society Professional Standards Committee; Host of the Steering Committee meeting.

Thomas R. Beverage, State Geologist of Missouri, Rolla, Missouri; AGI Professional Standards Committee; Active in professional movement in Missouri.

Frank B. Conselman, Consultant, Abilene, Texas; Past Vice President of AAPG; Geological Advisor of Southwestern Legal Foundation, AGI and AAPG Professional Standards Committee since inception of both.

Bernold M. Hanson, Consultant, Midland, Texas; Chairman AAPG Professional Standards Committee and actively interested in professional up-grading.

Adolph U. Honkala, Consultant, Richmond, Virginia; AGI Professional Standards Committee; Director, founder and Past President of the Virginia Association of Professional Geologists.

W. W. Mallory, USGS, Denver, Colorado; AAPG Professional Standards Committee; Actively interested in the national professional up-grading of geologists.

Ben H. Parker, Vice President, Frontier Oil & Refining; President of the Board of Trustees, Colorado School of Mines; Past President AAPG; 5 years on AGI Professional Standards Committee, First Chairman of AAPG Professional Standards Committee.

Edward E. Rue, Consultant, Mt. Vernon, Illinois; Illinois Geological Society, AAPG and AGI Professional Standards Committees; Active in reorganization of IGS on professional level.

R. G. Rogers, Colorado Interstate Gas Company, Amarillo, Texas; Chairman of Professional Ethics and Standards Committee, Panhandle Geological Society.

Allen C. Tester, Professor of Geology, State University of Iowa, Iowa City, Iowa; AGI Professional Standards Committee; Active in the

reorganization of the Iowa Geological Society on a professional level.

Martin VanCouvering, Consultant, Pasadena, California; Past President of the Pacific Section AAPG and actively interested in improving the status of geologists.

BACKGROUND FOR ACTION

In recent years almost every geological organization has had active groups attempting to focus attention on the professional problems of geologists. Serious studies have been made in Colorado, Michigan, Missouri, Ohio, Oklahoma, Texas, Utah, and Wyoming. And in California, Illinois, Indiana, Iowa, Kentucky and Virginia existing geological groups have been reorganized into professionally oriented societies. Each group certifies its members on certain academic, ethical and experience standards. The need is to coordinate this "grass roots" action so that uniform standards can be maintained and reciprocity between these groups extended. In addition, we have needed a voice by which we could speak as a unit to the public, to government and be heard, not as a scientific group but as professionals. Today, changes in the employment picture have set in motion throughout the profession forces which are strongly felt not only in industry, but also on university and college campuses and in government geologic circles as well. The need for professional orientation, self-leadership and exploration of new channels for geologic activity has never been greater.

These problems cannot and should not be met by existing scientific societies, however influential they may be. GSA and AAPG, for example, have imposing records of contribution to the development of the science of geology, but their charters commit them to the technical aspects of geology. Their leaders are therefore properly reluctant to distort the functions of these organizations which have served the science so well for decades lest more be lost than gained. Moreover, by tradition and interest, these societies have represented only specialized segments of the profession. When AGI was formed many among us hoped it would fill the great need of a professional organization. It has now become apparent that AGI cannot meet this need. The taxation and legal status of its scientific member societies would be jeopardized if the necessary functions of a strong professional association were carried on and made a part of its policy.

The Steering Committee envisions a national association of individuals, not of national scientific societies, entitled the American Institute of Professional Geologists. The individual members residing within a particular state will constitute a strong administrative unit. In this way there is no duplication of membership and each individual has a direct channel to national policy.

The Steering Committee has unanimously adopted the following statement of purpose:

WHEREAS, the geological profession has no nationwide structure dedicated to the establishment and maintenance of professional standards, and
WHEREAS, the public has an uncertain concept of the identity of this profession, and
WHEREAS, both the public and profession have insufficient protection against unethical and inadequate standards as related to the geological profession, and

WHEREAS, the profession lacks proper legal status in the eyes of its members, the public and the courts.

NOW THEREFORE, be it resolved that:

A professional organization herein designated as the American Institute of Professional Geologists be established to take the action necessary to strengthen the profession by the establishment and constant evaluation of its qualifications and thereby to enhance and preserve the standing of the geological profession in the public community. And that standards be established which will insure the protection of both the public community and the profession from non-professional practices.

In addition to this statement of purpose the American Institute of Professional Geologists will allocate to itself, with the express consent of its future members, the following professional, not scientific responsibilities:

1. To define who properly is a Professional Geologist.
2. To protect reputable geologists from those who would engage in unethical practices in the name of the profession.
3. To protect the public from incompetent persons purported to be geologists.
4. To establish a system of certification to implement the administration of items 1, 2 and 3.
5. To better serve the public by advancing the application of geology to vast new engineering projects being undertaken by industry and government.
6. To provide a mechanism for representing the profession to the public in connection with differences of opinion involving the application of geology to public projects.
7. To keep our educational standards properly high and to maintain continuing mutual understanding on common professional ground between academic and professional fields.
8. To speak to the press and to government and be heard.

DEFINITIONS CLEAR THE AIR OF MISCONCEPTIONS

The following definitions have been formulated and used by persons studying the professional development of geologists:

Certification: Internal self control of standards by geologists.

Registration: Legal licensing by states.

Geology: 1. The science which treats of the composition and history of the Earth and its life, especially as recorded in rocks. 2. The applied science, art of practice of utilizing knowledge of the physical, chemical, biological and structural properties, configuration and forces of the Earth and its many constituent rocks and minerals to predict, locate and evaluate the occurrence of materials, sources of power and natural phenomena that may be useful to mankind.

Geochemistry: A subdivision of geology in which a geologist adapts or interprets the laws, principles and theories of the science of chemistry as related to the constituents of the Earth.

Engineering Geology: A subdivision of geology in which a geologist studies the application of geology to the solution of engineering problems.

Geophysics: A subdivision of geology in which a geologist adapts or interprets the laws, principles, and theories of the science of physics as related to Earth structures and forces.

Geological Engineering: A subdivision of the general field of engineering in which geological factors are the principal or collateral functions in the solution of engineering problems.

Geologists: 1. One well versed in geology. 2. One who follows as a calling any branch of geology, a professional geologist.

Professional Geologist: A person qualified to apply the principles of geology or its subdivisions to economic, industrial or engineering problems, by having high standards of training, experience and personal integrity.

The term apply or applied as an economic consideration of a desired result separates the professional from the purely scientific geologist. This does not mean that a geology teacher is not a professional geologist. He may quite well be a professional if his research or part time employment is directed at the solution of an economic problem. When he is teaching in a class room, however, he is an academician whose profession at the time is teaching or professing. The same is true for a pure research geologist. Both may be professional geologists from time to time.

All professional geologists in the United States are invited to take part in framing the policies of this new entity by attending its founding convention.

PROGRAM FOR FOUNDING CONVENTION November 14 and 15

- 12:00 Noon, Thursday - Bus leaves Main Door of Denver Hilton Hotel.
- 1:30 P.M., Room 113, Arthur Lakes Library
Welcome by Orlo E. Childs, President
Colorado School of Mines.
Introduction of Steering Committee.
Election of meeting Chairman.
- 2:00 P.M., Committee Workshops:
Constitution Committee
Thomas R. Beverage, Chairman.
Public Relations and Membership
Edward E. Rue, Chairman.
Qualifications and Ethics
Frank B. Conselman, Chairman.
Budget Committee
Bruno Hanson, Chairman.
- 5:30 P.M., Bus leaves Lakes Library for Denver Hilton Hotel.
- 8:00 A.M., Friday - Bus leaves Denver Hilton Hotel.
- 9:00 A.M., Room 113, Lakes Library
General Assembly: Presentation of Committee reports.
- 12:00 Noon, Informal Luncheon, Holland House.
- 1:00 P.M., Room 113, Lakes Library
General Assembly: Discussion of Committee reports - adoption of constitution, election of officers, and other business.
Adjourn.
- 5:30 P.M., Bus leaves for Denver Hilton Hotel.

UNIVERSITY OF SOUTHERN CALIFORNIA NEWS

The following is a short summary of recent activities at the University of Southern California Geology Department.

Dr. Thomas Clements, Head of the Department of Geology for 30 years, has retired as Head but will remain as a member of the teaching staff for at least one additional year. Last summer Dr. Clements taught in the summer session and consulted in Engineering Geology.

Dr. William H. Easton has been elected Chairman of the Department under the newly adopted rotational system. The summer was spent in Hawaii mapping interbedded marine and terrestrial sediments, studying marine terraces and reefs, and assembling data for an attempt to date Diamond Head Crater. These studies are supported by the National Science Foundation and will be the subject of a lecture in the Allan Hancock Lecture Series next spring.

Dr. Richard Merriam has returned from his sabbatical leave. He has been engaged in a study of the delta of the Colorado River and investigation of the Palm Springs Formation in western Imperial County. The latter project is supported by NSF.

Dr. Gregory Davis is engaged in a field study and laboratory study of metamorphic rocks in the Klamath Mountains (Trinity Alps) of northern California. The two-year research program is supported by the National Science Foundation.

Dr. Donn Gorsline participated in the Congress of the International Association of Sedimentologists in Europe during the latter part of May and June. He served as a session chairman. He has recently returned from Boulder, Colorado, where he was a member of the AGI Earth Science Curriculum Project Planning Conference.

Dr. Orville L. Bandy has been completing studies of the relationships between foraminifera and ocean pollution off southern California (supported by the U. S. Public Health Service) and he is also completing a study of foraminiferal trends in the Peru-Chile Trench (supported by the National Science Foundation). He received "Best Paper Award" for his paper, "Cenozoic Planktonic Foraminiferal Zonation", at the SEPM annual meeting April 25, 1963 in Los Angeles. Also, he was elected as Councilor, National SEPM for 1963-64. Orville was invited to spend one week in Milan, Italy collaborating with members of the research staff of AGIP MINERARIA and lecturing there on Biofacies trends in carbonate sediments. Results of part of this program will be submitted to the International Geological Congress in India in December, 1964. He also spent one week attending the European Micropaleontology Colloquium in Vienna, Austria, as one of three Americans in attendance. He returned via several institutions and outcrops in France and England. Travel was supported by the National Science Foundation. On October 14, he will commence a 6-week Distinguished Lecture Tour for the American Association of Petroleum Geologists.

Dr. Richard Stone spent the summer in research on quantitative expression of microrelief for the U. S. Army Corps of Engineers. He spoke at the Terrain Analysis Conference in Vicksburg in July. Dick won a "Best Teacher Award" at USC this past year, which brought him \$1,000 prize money. He is involved in the Faculty Senate, is an officer of Phi Beta Kappa, and is one of the Honor Student Advisors at USC.

Dr. John Mann, Lecturer, made an extended trip to Canada.

Dr. Jack Green, Lecturer, remains snowed under helping to expand, equip, and finance the Space Physics program, as well as an international Conference on Lunar problems. He is again offering the seminar on Lunar Geology.

ALASKA GEOLOGICAL SOCIETY

The Alaska Geological Society held its first monthly meeting of the season on October 16 at the Harbor House restaurant. Morris "Mo" Kaufman, State of Alaska Economic Geologist, was the guest speaker and spoke on "New Techniques in Mining Exploration". The meeting was well attended and the talk was most enlightening for the oil fraternity. A resume of the talk follows:

ABSTRACT:

Prior to and shortly after World War II metal exploration consisted largely of finding surface shows of ore grade and subsequent drilling and underground development. Search for outcrops still continues in remote areas but in less remote places these have all been found.

Several factors have changed the exploration outlook in recent years. Among them are (1) improvements in mining technology, (2) new geological concepts, (3) improved geophysical techniques, and (4) the growth of geochemistry.

These new ideas have changed exploration from merely prospecting for surface outcrops in remote areas to careful geological, geophysical, and geochemical studies around known mineralization. As a result of this, important finds have been made around numerous "mined out" districts, some very close to urban areas.

Improvements in mining technology include: Use of ammonium nitrate in blasting, more efficient mining tools and improved haulage equipment. The overall influence is mining larger tonnages which has enabled mining lower grade ore. New geological concepts and improved geophysical techniques have contributed greatly. Prior to World War II few mines hired geologists. Since the war, almost all do, and ore deposits have received more study. The result has been greater attention to structural and stratigraphic ore controls, studies of hydrothermal alteration, and more attention to trace metal halos.

Since World War II instrumentation of the electrical induction methods has been improved and airborne techniques combining electromagnetic method (EM) and magnetometer have been perfected. Gross effect has been to enable prospecting in covered areas.

EM is based on the principal that massive metal sulphide ore bodies will act as electrical conductors. Current is induced into the ground by a generator and coil. If a conductive body exists at depth the magnetic field will be excited and detectable current will be derived from it anomalous from normal electrical currents in the area. EM is good only for detecting massive sulphide bodies in excess of 30 or 40% of the rock and it is only effective to a depth of approximately 200' to 400'.

Numerous problems arise, such as conductive overburden, non-metallic conductors (graphite, etc.) and faults. Experience in interpretation has aided greatly. EM is used in the air as well as on the ground.

Induced polarization (IP) is based on the principle that if pulsating current is induced into the ground any conductive particles will be polarized and a current will be set up in individual particles which will eventually decay. In this method, time of decay or capacitance of individual particles is measured, along with resistivity. Thus, this method can detect disseminated sulphide bodies as well as massive ones.

IP has depth penetration of 1,000' to 2,000', but has problems similar to EM, i.e. conductive overburden and clay particles in rock. IP has not been perfected as an airborne method.

Geochemistry has become increasingly important in locating primary and secondary dispersion halos. Primary dispersion halos are trace element concentrations around ore bodies. Secondary dispersion halos are those which emanate from covered metal deposits. Such halos may show up under the right conditions in the soil or the stream waters and stream sediments above and away from the ore body. The theory is that metal ions migrate upward in the soils and downward in the stream waters. Using dithizone and organic reagents up to a few PPM, copper or other heavy metals can be detected. This method is good in areas of up to several hundred feet of overburden and for several miles along drainages. Even with the success to date, much more work needs to be done on geochemical techniques.

In conclusion, improved mining technology has encouraged the mining of large tonnages which lowers the ore grade necessary to be economic. This has particularly affected porphyry copper-molybdenite deposits which by nature make large and low grade ore bodies. Search for these ore bodies has been intense from South America through British Columbia and Alaska. Southern Arizona and British Columbia have been focal points. In Arizona alone, a reserve of between 500 million and one billion tons of 1 percent cu-mo ore with a gross worth of between 3 and 6 billion dollars has been proved using these new exploration methods.

COAST GEOLOGICAL SOCIETY

The society's dinner meeting of October 8, 1963 was held at the Ventura Women's Center. Guest speakers were Dr. and Mrs. George McGinitie, noted marine biologists now on the staff of the Navy's Pt. Mugu facility. It was a most rewarding evening as two excellent color films were shown on living invertebrates, in authentic habitat and activity. The films were prepared for Walt Disney and the Navy, and made use of a large aquarium to show life-like sequences of the animals' ocean activity.

ABSTRACT:

Dr. McGinitie narrated about the invertebrates' highly-varied functions during the filming and showed a keen insight into the development of ancient animals and how the fossil record is related.

In showing how many animals live off the detritus and nutrients of the sea, the heavy reproduction of some species in cyclical patterns often results.

An example was told of diatoms dividing and increasing in an ocean area of heavy silica content. They divided as often as every other day. Thus the reproduction continued at an increased progression, until the sea nutrients diminished and natural enemies increased.

The 90,000 marine invertebrates are each found where favorable environment and food may be found. Food is generally abundant with most species using animals "detritus" instead of vegetable matter. Bacteria is believed to be found primarily at the ocean floor and surface, rather than in the main water mass. Food requirements are usually low, as little energy is required of most ocean dwellers. Many animals were observed taking rest periods and most were believed to require a form of sleeping. The entertaining films showed the variety of mechanical means animals have to acquire and use food.

The lagoon at Pt. Mugu was described as one of the last few remaining in Southern California, and is needed as a laboratory for lagoonal animals. Discussion of several means of fossilization of marine animals indicated Dr. McGinitie's interest in their geological applications.

CHANGE OF ADDRESS

Listed below are changes of address for those members listed in the latest directory.

EDWARDS, CHARLES D. c/o Camerina Petroleum 1st Nat'l City Bank Bldg. Houston 2, Texas	KNAPP, ROBERT R. 4 Vista Real Rolling Hills Estates, Calif.
STOKESBARY, WALTER A. 374 Limalia Loop Kailua, Hawaii (Oahu)	SMITH, COLIN H. 395 Los Osos Valley Rd. Apt. C Los Osos, Calif.
FOTHERGILL, HAROLD L. 619 West Texas Ave. Midland, Texas	VERNON, JAMES W. 6740 Lennox Ave. Van Nuys, Calif.
BLAISDELL, ROBERT C. P. O. Box 250 Seattle, Washington	HAINES, RICHARD c/o Continental Oil Co. P. O. Box 451 Ventura, Calif.
HAMNER, ED J. 5060 Navarro Lane Houston 27, Texas	SCHROETER, JOHN D. 608 Polomer Rd. Ojai, Calif.
HUMMEL, PETER W. 2140 Green Tree Lane Reno, Nevada	TRAPESONIAN, MICHAEL 207 Cypress St. Bakersfield, Calif.
IVANHOE, L. F. 224-1/2 Lasky Dr. Beverly Hills, Calif.	ELLIS, WESLEY E. 5101 West Kent Santa Barbara, Calif.
FOLLANSBEE, G. S., JR. 1801 Avenue of the Stars Los Angeles, Calif.	GRAVES, JOHN R. 227 Ocean Santa Barbara, Calif.
MC MILLAN, JOHN R. Lacal Petroleum Co. 550 S. Flower St. Room 406 Los Angeles, Calif.	STEWART, RICHARD D. 2800 Armstrong Dr. Sacramento, Calif.

HERRON, ROBERT F.
221 Las Ondas
Santa Barbara, Calif.

LILLY, CHARLES E.
669 Via Cielito
Ventura, Calif.

WOOD, JACK W.
Suite 202, Central Bldg.
21 So. California
Ventura, Calif.

ADAMS, HENRY J.
P. O. Box 291
Carnegie Inst. of
Technology
Pittsburgh 13, Pa.

BROWN, ROBERT D., JR.
U.S. Geological Survey
Room 4209 GSA Bldg.
Washington 25, D. C.

STUCKER, W. R.
Nigerian Gulf Oil Co.
Lagos, Nigeria

DUDLEY, PAUL H., JR.
Humble Oil & Refining Co.
P. O. Box 2180
Houston 1, Texas

DOHLEN, HOWARD G.
18245 Regina
Torrance, Calif.

GARDNER, DION L.
532 No. Maplewood
Orange, Calif.

SAWYER, J. A.
Condor Oil Co. of Calif.
Suite 1103
650 So. Grand Ave.
Los Angeles, Calif. 90017

REDWINE, LOWELL
234 La Arcada Bldg.
1114 State St.
Santa Barbara, Calif.

HARLOW, GEORGE R.
Humble Oil & Refining Co.
2001 "O" St.
Bakersfield, Calif.

BOOTH, CHARLES V.
c/o Box 60193
New Orleans 60, La.

TERPENING, JOHN N.
Mobil Oil Co., E & P
150 East 42nd St.
New York 17, New York

DUGGAN, HELEN G.
Apt. 176-D
13310 Fairfield Lane
Seal Beach, Calif.

GREUTERT, RAY
Gulf Oil Corp.
1830 W. Olympic Blvd.
Los Angeles 6, Calif.

ROTH, LESTER H.
2151 Roscomare Rd.
Los Angeles 24, Calif.

ZIEGLER, FREDERICK M.
28856 Thornhill Dr.
Sun City, Calif.

BELL, GORDON R.
Gulf Oil Corp.
1830 W. Olympic Blvd.
Los Angeles 6, Calif.

GAINES, GILBERT
2916 W. Main St.
Alhambra, Calif.

SZATAI, JOHN E.
Richfield Oil Corp.
5900 Cherry Ave.
Long Beach, Calif.

SMITH, JOHN W.
Humble Oil & Refining Co.
2001 "O" St.
Bakersfield, Calif.

ARLETH, KARL, Sr.
1126 Woodland Dr.
San Mateo, Calif.

JONES, VERN C.
P. O. Box 214676
Sacramento, Calif.

DURRELL, CORDELL
Dept. of Geological
Sciences
University of Calif.
Davis, Calif.

KERR, ALBERT R.
1320 Knoxville Ave.
Long Beach, Calif.

SMART, ROBERT R.
Mobil Oil Co.
P. O. Box 2122,
Terminal Annex
Los Angeles 54, Calif.

LUNDGREN, CHARLES E.
3524 Winston Way
Carmichael, Calif.

PERSONAL ITEMS

Doug Waterman, Standard Oil Co., Ventura, is presently attending "charm" school in Pasadena.

Mike Zaikowsky, Texaco, Inc., Ventura, recently purchased an 18' cabin cruiser. We understand that his wife recently went to work at the Broadway Store. Wonder who is paying for that boat?

Fred Peters of Formation Logging Service Co. is on a job for his company on a North Sea island off the coast of Holland. Fred says he enjoys the wonderful Dutch food and bathing in the North Sea, as the water temperature is still a few degrees above freezing.

Walt Scott, Richfield Oil Co., Ojai, is being transferred to their Long Beach office. We understand that Walt thinks there may be some oil under Signal Hill.

Warren Gillies, Texaco, Ventura, has been transferred to Bogota, Colombia.

John Coch, a recent Ph. D. graduate, has joined Texaco, in Ventura. To all young, single, good-looking, female geologists that read this publication, John is single and looking for dates.

W. Layton Stanton, Union Oil Co., has been named Director of Exploration replacing John Sloat who is now Manager of Foreign Operations. Mr. Stanton had previously been Division Manager at Denver and most recently Geological Supervisor in Los Angeles.

John Hazzard, Union, has been appointed Co-ordinator for Exploration Research and will be responsible for special exploration projects. John was formerly Geological Supervisor of Regional Studies for the Foreign Department.

Ed Hall, formerly District Geologist for Union's California Offshore and L. A. Basin, has been promoted to Staff Geologist and will remain in Los Angeles. Frank Noble will become the new Southern District Geologist with headquarters in Santa Fe Springs. Frank has been in Lafayette, La. for the past two years after having been in Santa Maria and Bakersfield.

Lowell Redwine, consulting geologist, has moved his office from Bakersfield, California, to 234 La Arcada Bldg., 1114 State St., Santa Barbara, Calif.

Don Six is making another try at breaking the long distance commuting record. Certainly commuting from his still unsold Bakersfield house to his job at Texaco's downtown L. A. office should be good for honorable mention.

Listed below are changes of address for those members not listed in the latest directory.

TRAVERS, WILLIAM B.
P. O. Box 2638
Santa Fe Springs, Calif.

BEITMAN, RAYMOND E.
2465 Hidden Valley Rd.
La Jolla, Calif.

KILMER, FRANK H.
4620 Arlington
Riverside, Calif.

SHEPARD, JOHN B. JR.
Texaco, Inc.
1921 - 19th St.
Bakersfield, Calif.

WEBB, GREGORY W.
Dept. of Geology
University of Mass.
Amherst, Mass.

HERRERA, LEO J., JR.
Wm. Ross Cabeen & Assoc.
444 Vineland
No. Hollywood, Calif.

KINZEY, HOWARD G.
9608 So. Barkerville
Whittier, Calif.

LINDQUIST, JOHN W.
Texaco, Inc.
3350 Wilshire Blvd.
Los Angeles 5, Calif.

Over 150 Standard Oilers, Bakersfield, and wives and children enjoyed the Annual Family Picnic at the Kern River Picnic Area, October 5. Fred Flege was Chairman of the successful affair. Mort Polugar was the Pied Piper of the picnic with Ned Snodgrass head of the games events. The annual east-west football game did not materialize due to the advancing age of the two quarterbacks, Milt Zeni and Bob Ortalda. Largest families in attendance with 8 each, were the Rebers and Klines.

"Haggard Hal" Reade, Richfield, Bakersfield, is getting that way from redecorating an older house which will be his new home. Hal's current residence is for sale, so feel free to inquire. His El Toro sailboat is mothballed until his current residence is disposed of profitably.

Ward Abbott, Shell geologist, Bakersfield, reported substantial damage to the top and hood of his company vehicle, in the Antioch area. Cause of damage? -- a stray drunk performing a dance on the car while in a restaurant parking lot.

Jerry Horne, Geophysicist, Texaco, was recently transferred from Lafayette, Louisiana to Bakersfield.

Gene Schnieder, Geophysicist, Texaco, Bakersfield, has moved to the Long Beach office, switching with Jack Sheppard, now in Bakersfield. Jack was also married October 19. His bride is the former Linda Cox of Hemet, California. Welcome to Bakersfield, Jack and Linda.

SEG District Representative, Wally Matjasic, Tidewater, Bakersfield, and his wife, Elizabeth, recently attended the SEG Convention in New Orleans. Plans were to take a week's vacation touring the South following the Convention activities.

Karl Arleth, Jr., is now the District Geologist for Occidental Petroleum in Lafayette, Louisiana. Karl was formerly with Marathon Oil in Bakersfield, Ventura, Sacramento and more recently, Lafayette.

Reported conversation between Dave Day, KCL, Bakersfield, and his Junior High School son, Jimmy -- "Gee, Dad, how can I teach you those Judo throws when you keep yelling like that!"

Yes, that's really ex-heavy weight Bob Anderson, Rheem, Bakersfield, going around in those baggy slacks, and weighing in now (he says) at 174#.

J. Waggoner, Consultant and Bachelor, Bakersfield, has had so much success plotting various stocks on the market that he is now reported to be using the system with the ladies. We hope J. can be persuaded to give a paper on this soon.

Correction: Joe Fantozzi, Union, formerly in the Engineering Department, has been transferred from Santa Paula to Santa Maria.

Standard Oil golfers defeated Union Oil divot diggers at the Annual Tournament held October 12, at the North Kern Links. It is two apiece now with permanent possession of the trophy coming up in 1964. Respective Captains, Bob Lindblom and Chuck Cary, are already figuring handicaps. As in the past, Union had the most low net (69) players -- Art Golden and Frank Souza, but Standard's Jim Parkinson also made the select group. Bob Lindblom shot low gross score of 78.

Spence Reber, Standard-Oildale, has been transferred to 11-C Taft in the Review Team.

John Burr and Gordon Hardey, formerly of Standard, have left the oil business to sell soft water (Rayne of Sacramento) in the Capital City. Good luck fellows.

All personnel have moved into Humble's new Bakersfield Exploration Office, located at 2001 "O" Street, without too many unfortunate incidents. Probably the worst crisis arose from the coffee maker not getting plugged in on the first morning. Every geologist and geophysicist has his own office, but they seem to like the file room and lobby better. Could it be they find the two pretty girls working in those places more attractive than the logs and maps in their own offices?

Jack Edwards, Exploration Manager for Shell in Bakersfield, has been transferred to the New York office. His successor in Bakersfield is T. R. (Tom) O'Neill, formerly District Geologist in Los Angeles, and recently on temporary assignment in New York.

Bill Barnwell has been recently assigned to Sinclair's Anchorage Division Office in Alaska, being transferred from Libya. Quite a change in environment!

Hal Lian, formerly District Manager for Union in Anchorage, has been recalled to Los Angeles to become the new Chief Geologist for the Foreign Division. Dick Lyon, after a brief stint as District Geologist has been promoted to District Manager.

Joe Dockwiller has been transferred from Anchorage to Union's offshore office in Santa Barbara. Joe was seen weeping all the way to the plane.

Grant Valentine, District Geologist for the Columbia district of Shell's Northwest division, and Ernie Hoskins, District Geologist at Farmington, N. M. have been transferred into the Los Angeles Area office. Welcome to the narrow closed spaces, fellows.

John Turpening has been transferred to Mobil's New York office on a "rotational assignment", whatever that is. Hope John won't miss all that underwater fun too much.

When the directory comes out you should be able to tell the fellows who didn't break the camera at the convention. They'll be the ones who look six months younger.

The October issue of the "Windmill Class Racing Yacht Association" reported that Rex Young, Bill Horsely and Cecil Ray, (Richfield, Bakersfield) are pooling their talents to build three 15-1/2' Windmill Sloops over a common mold in Rex's garage. At last report the keel and chings were in place for hull No. 1. While in Sacramento for the Sacramento Petroleum Association recent affairs, Young and Horsely took in the Regatta at Folsom Lake. They filled in as crewmen for two Windmill skippers, and were filled with mixed emotions when they were luffed at the first mark by Hal Hansen, formerly of Oceanic, Bakersfield, now geologist with the State Board of Water Resources, Sacramento.

Richfield, Bakersfield, have added John Wiedmann to their Exploration staff. John is from Sacramento, received his B.S. and M.S. from Stanford, is a bachelor, and his second favorite hobby is general sports.

Helen Duggan has retired from the Geology Department, U.C.L.A. and is now living at Leisure World in Seal Beach.

Back in Los Angeles to rest up is Signal's Andy Alpha after a leisurely vacation going from border to border and as far east as Memphis, visiting friends and family en route.

Talk about a good man doing two men's work! Joe Arndt, Richfield, was transferred from the Long Beach office to Bakersfield, and into Long Beach was transferred Walt Scott from Ojai and newly-hired Princeton Ph. D. Bela Caejty.

NURSERY NEWS

Born to Betty and William J. M. Bazeley, Richfield, Bakersfield, a son, Michael, on April 5, 1963. Michael joins a sister, Victoria, aged 4 years.

Jack and Sharon Durrie, Tidewater Oil Co., Ventura. A boy, Randall Scott, 6 lb. 3-1/2 oz., August 25, 1963. Present count: 2 and 0.

CALENDAR

November 7, 1963: Thursday afternoon, 3:30 p.m., Dept. of Geology, U.C.L.A., Room 3656; Dr. Gordon J. F. McDonald, Prof. of Geophysics, U.C.L.A. will talk on "Deep Structures of Continents".

November 11, 1963: Monday, 4:00 p.m., Stanford U. Journal Club, Room 320 Geology; "Conformable Pb-Zn Deposits of the Kootenay Arc", by Ted Muraro, and "Geochemistry of the Lower Truckee River", by Robert J. Harwood.

November 12, 1963: Tuesday noon, Room 104, Geology "A", U.S.C., 855 W. 37th St., Los Angeles; "Ecology and Distribution of Recent Sediment and Foraminifera of Bermuda", by John Barnhart.

November 13, 1963: Brammer Club Meeting, Wednesday evening, dinner 6:30 p.m. (\$3.00), Athenaeum, Cal Tech, Pasadena; Dr. Ronald L. Shreve, U.C.L.A., will present a talk on "Research on Blue Glacier". For Reservations call Lucy Birdsall (phone 688-2850) prior to noon November 12.

November 18, 1963: Monday, 4:00 p.m., Stanford U. Journal Club, Room 320 Geology; "Geology of the Mission Copper Mine, Arizona", by Robert E. Gale, and "Gravity and Crustal Structure in the Southern Cascade Range", by Tom LaFehr.

November 19, 1963: Tuesday evening, El Tejon Hotel, Bakersfield, San Joaquin Geological Society. Distinguished Lecturer, R.A. Baile, President Independent Exploration Company of Houston, Texas. "Some New Concepts in Geophysics". Cocktail hour 6:30 p.m.; Dinner hour 7:30 p.m.

November 21, 1963: Distinguished Lecture Series, Tuesday evening, 7:00 p.m. Dinner Meeting, Poodle Dog Cafe, Fire, Washington. Mr. R. A. Baile, Independent Exploration Co., "Some Concepts in Geophysics", with emphasis on the "Vibro-Seis".

November 22, 1963: Annual Coast Geological Society Dinner Dance, Friday evening, Ventura Women's Center. Cocktail hour 6:30 p.m. - 8:00 p.m., Dinner 8:00 p.m., Dancing 9:00 p.m. to 1:00 a.m.

November 25, 1963: Monday, 4:00 p.m., Stanford U. Journal Club, Room 320 Geology; "The Fabric of Mudrocks", by Arthur O. Beall, and "The Papuan Basic Belt", by Hugh L. Davies.

November 26, 1963: Tuesday noon, Room 104, Geology "A", U. S. C., 855 W. 37th St., Los Angeles; "Stratigraphic Correlation by Means of Constant Assemblages", by William Frerichs.

December 2, 1963: Monday evening, 7:30 p.m., Bakersfield College, Science and Engineering Bldg., Room 56, Biostratigraphic Seminar "Palynology" - Dr. William R. Evitt, Stanford University.

December 3, 1963: Tuesday noon, Room 104 Geology "A", U.S.C., 855 W. 37th St., Los Angeles; "Origin and Nature of Nakimu Caves, British Columbia," by Richard Dixon.

December 5, 1963: Thursday noon, Rodger Young Auditorium, 936 W. Washington Blvd., Los Angeles; John B. Adams, Jet Propulsion Lab. will present scientific aspects of the "Geology of the Moon".

BIBLIOGRAPHY OF RECENT PUBLICATIONS

U. S. GEOLOGICAL SURVEY

Professional Paper 374-E: Reconnaissance geology between Lake Mead and Davis Dam, Arizona-Nevada, by C. R. Longwell.....\$1.25

Professional Paper 403-C: Petrology of the volcanic rocks of Guam, by J. T. Stark, with a section on trace elements in the volcanic rocks of Guam, by J. I. Tracey, Jr. and J. T. Stark.....\$.30

Bulletin 1141-H: Geology of the Pinal Ranch quadrangle, Arizona, by N. P. Peterson.....\$1.00

Water Supply Paper 1800: The role of ground water in the national water situation, by C. L. Mc Guinness.....\$4.50

Circular 477: A tentative classification of alluvial river channels, by S. A. Schumm, 10 p.....FREE

Circular 481: The Atlantic Continental Shelf and Slope: A program for study, by K. O. Emery and J. S. Schlee, 11 p.....FREE

MAPS

GQ 214: Geology of the Oak Spring quadrangle, Nye County, Nevada, by Harley Barnes, Fred N. Houser and Forrest G. Poole.....\$1.00

GQ 222: Geologic map of the San Andreas Quadrangle, Calaveras County, California, by Lorin D. Clark, Arvid A. Stromquist and Donald B. Tatlock....\$1.00

GP 441: Aeromagnetic map of the Tippih Spring quadrangle and parts of the Papoose Lake and Wheelbarrow Peak quadrangles, Nye County, Nevada, by G. R. Boynton, J. L. Meuschke and J. L. Wayne...\$.50

CALIFORNIA DIVISION OF MINES AND GEOLOGY

Special Report 72: Geology of the Little Antelope Valley Clay Deposits, Mono County, California, by George B. Cleveland.....\$1.00

NEW MEXICO BUREAU OF MINES & MINERAL RESOURCES

Memoir 8: Stratigraphy and paleontology of the Mississippian System in southwestern New Mexico and adjacent southeastern Arizona, by Augustus K. Armstrong. 99 p., 41 figs. 1962

THE ORE BIN, vol. 25, no. 8, August, 1963 (State of Oregon Department of Geology & Mineral Industries)

Ground water in the Orchard Syncline, Wasco County, Oregon, by R. C. Newcomb.

PENNSYLVANIA STATE UNIVERSITY (University Park, Pennsylvania, Palynological Laboratories) and UNIVERSITY OF ARIZONA (Tucson) Geochronology Laboratories.

Catalog of fossil spores and pollen. Vol. 17: Paleozoic spores, by G. O. W. Kremp, and H. T. Ames. 162 p., illus.

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 74, no. 8, August 1963

Wave-base, marine profile of equilibrium, and wave-built terraces: A critical appraisal, by Robert S. Dietz.

Composite dike of andesite and rhyolite at Klondyke, Arizona, by Frank S. Simons.

Geological observations from the bathyscaph TRIESTE near the edge of the continental shelf off San Diego, California, by David G. Moore.

Physical properties of erupting Hawaiian magmas, by Gordon A. MacDonald.

Additions to classical sequence of Pleistocene glaciations, Sierra Nevada, California, by Robert P. Sharp and Joseph H. Birman.

GEOLOGICAL SOCIETY OF AMERICA (419 W. 117th St., New York, 27, N. Y.)

GSA Memoir 89: Supai Formation (Permian) of Eastern Arizona, by Stephen S. Winters. 100 p.....\$4.50

GSA Memoir 88: Standard Wolfcampian Series (Permian), Glass Mountains, Texas, by Charles A. Ross. 205 pages.....\$7.50

JOURNAL OF GEOPHYSICAL RESEARCH, vol. 68, no. 16, August 15, 1963

Measurements of the California countercurrent off Baja California, by Joseph L. Reid, Jr.

Fossils tracks of charged particles in mica and the age of minerals, by P. B. Price and R. M. Walker.

JOURNAL OF GEOLOGY, vol. 71, no. 5, September 1963

Sedimentary structure, sand shape fabrics, and permeability, II, by Richard F. Mast and Paul Edwin Potter.

JOURNAL OF MARINE RESEARCH, vol. 20, no. 1, March 1962

Long-period waves over California's continental borderland. Part II: Tsunamis, by Gaylord R. Miller and others.

GEOPHYSICS, Vol. 27, no. 5, August 1962

A history of well logging, by Hamilton M. Johnson.

JOURNAL OF SEDIMENTARY PETROLOGY, vol. 32, no. 2, June 1962

Computing mineral compositions of sedimentary rocks from chemical analyses, by Alfred T. Miesch.

OIL AND GAS JOURNAL, vol. 61, no. 38, September 23, 1963

Techniques of outcrop rock sampling, by J. B. F. Champlin, R. D. Thomas and A. D. Brownlow.

"Minimum-size platform" promises cheaper development offshore, by Ed McGhee.

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

Volume 17

Number 11

Return Requested

Richard L. Hester
Pauley Petroleum, Inc.
10000 Santa Monica Blvd.
Los Angeles 67, Calif.

DA



PACIFIC PETROLEUM GEOLOGIST

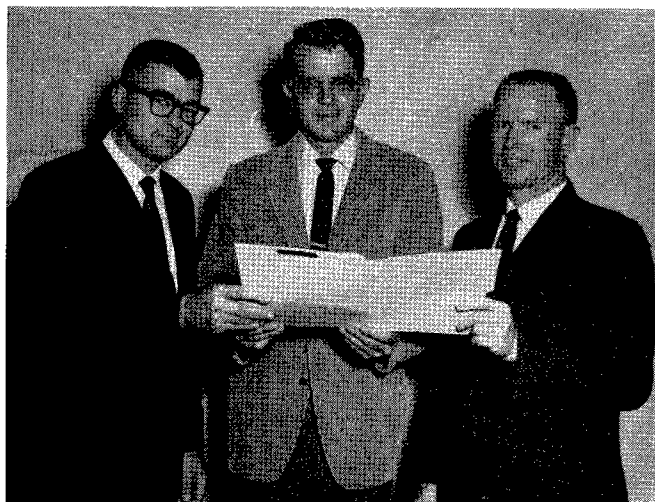
NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 17

December, 1963

Number 12

ASSOCIATION ACTIVITIES



SAN JOAQUIN GEOLOGICAL SOCIETY OFFICERS

Newly-elected officers of the San Joaquin Geological Society for 1964 include, from left to right, Wesley G. Bruer (Consultant), President; Rodney G. Colvin (Mobil Oil Co.), Vice-President; and Gardner M. Pittman (Tidewater Oil Co.), Secretary-Treasurer.

LOS ANGELES GEOLOGICAL FORUM

On Monday evening, December 16, 1963 the Los Angeles Geological Forum will present a panel discussion by Engineering Geologists. The meeting will be held at the Mobil Auditorium, 612 S. Flower St., Los Angeles at 7:00 P.M.

Moderator: John F. Mann, Jr.
Panel:

Ernest M. Weber
Douglas R. Brown
Russel G. Hood
Robert Stone

Part I: "What an Engineering Geologist Does"

Part II: "The Proposed Registration Bill"

Part III: Open Discussion

The January forum will feature Leo J. (Pat) Herrera (Wm. Ross Cabeen and Assoc.) speaking on the "Geology of Peru", and Henry F. Lippitt, General Council California Gas Producers Association discussing "California Gas Marketing Problems".

COAST SOCIETY ELECTS OFFICERS

The Coast Geological Society has elected a new slate of officers for the coming year. They were installed by vacating President Carlton M. Carson at the November 12th meeting. New officers are:

Robert S. Yeats - President
Harold E. Sugden - Vice President
Stuart A. Keesling - Secretary
William D. Poyner - Treasurer

Willard J. Classen, Jr. was appointed to the newly created office of Publicity Chairman and will also serve as correspondent (PPG) for the coming year.

S.E.P.M. OFFICERS NAMED FOR 1964

New officers have been elected for the Pacific Section of the Society of Economic Paleontologists and Mineralogists.

President: Richard L. Pierce
Richfield Oil Corporation
Bakersfield, California

Vice-President: Clifford C. Church
Consultant
Bakersfield, California

Secretary: James G. Watkins
Richfield Oil Corporation
Long Beach, California

Treasurer: Robert E. Steinert
Shell Oil Company
Bakersfield, California

LOS ANGELES LUNCHEON MEETING

Dr. John S. Shelton, of Claremont addressed the luncheon meeting of the AAPG Pacific Section, held at the Rodger Young Auditorium on November 7th. Dr. Shelton's talk entitled "Colorado Plateau Geology", was illustrated by many colored slides of the numerous geologic features present in the Plateau.

A very interesting chronology of the sequence of geologic development of the Grand Canyon area was presented, which was illustrated by a series of excellent drawings.

EXECUTIVE COMMITTEE, PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

John E. Kilkenny	President
Louis J. Simon	Vice-President
Arthur O. Spaulding	Secretary
Milton T. Whitaker	Treasurer
John H. Van Amringe	Editor
Richard B. Haines	Past President
Eugene R. Orwig	Alaska Representative
Edward A. Hall	Coast Representative
Glen C. Ware	Sacramento Representative
James L. O'Neill	San Joaquin Representative

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 California.

Editor:	Jack Van Amringe
Assistant Editors:	
Activities	Tom Wright
Calendar	Alfonso Escalante
Selected Bibliography	Lucy Birdsall
Cartoonists:	Mort Kline & Harold Sullwold
Personal Items:	Bill Fowler
Correspondents:	
Alaska	Richard Lyon
Coast	Jack Durrie
Los Angeles	Mike Maxwell
Northwest	Ralph Rudeen
Sacramento	Sargent T. Reynolds
San Francisco	Gordon Oakeshott
San Joaquin	Rod Colvin
Membership Secretary	Pat Metcalf

Next deadline, December 30, 1963.

COAST GEOLOGICAL SOCIETY

The regular monthly meeting of the Society was held on Tuesday, November 12th at the Ventura Women's Center. The guest speaker was Mr. Walter Scott, geologist with Richfield Oil Company who presented a fine talk on the South American country of Colombia, along with numerous excellent slides.

ABSTRACT:

Colombia is located in northwest corner of South America, and borders on Venezuela on the east. The country is crossed by two north-south mountain ranges, the Eastern Andes and the Western Andes, which are separated by the Magdalena River Valley. Northeastern Colombia is primarily desert and much of eastern Colombia is unexplored. Thick jungles are found in the northeastern area, and forty foot mud volcanoes are local phenomenon along the coast. The capital city, Bogota, is located in the Andes at an elevation of 10,000 feet.

Principal oil producing areas are along the Venezuelan border (near Lake Maracaibo), and the intermountain Magdalena Basin. Production is obtained from Tertiary continental sandstones, with the Eocene being a prominent oil horizon. A 1962 Eocene discovery well near the Venezuelan border flowed over 3,000 BOPD from a depth of 6,000'. Cumulative 1962 production: 51,000,000 bbls. oil and 78,000,000 MCF gas.

DISTINGUISHED LECTURE SERIES

Distinguished lecturer, Mr. R. A. Baile of the Independent Exploration Company of Houston, Texas, presented his paper on "Some New Concepts in Geophysics" at the Los Angeles Evening Forum Meeting, November 18, then traveled to Bakersfield where he presented the talk the next evening to the San Joaquin Society at their regular monthly meeting. On Thursday evening he addressed the Northwest Geological Society in Fife, Washington. His talk, emphasizing the "Vibro-Seis", was accompanied with excellent slides and a movie of current geophysical procedures.

ABSTRACT:

New methods are rapidly being introduced in geophysical prospecting which are greatly enhancing the oil-finder's ability to discover additional reserves at a lower cost. The following movie briefly shows a method, now in common use, wherein a free-falling weight develops seismic energy sufficient to examine subsurface strata to great depths. In addition to the weight dropping method, as shown, other surface initiated energy systems have been developed, notable among which bears the trade name "Vibro-Seis". In experimental, and initial usage stages, are various other methods which offer considerable potential for vastly improved methods of geophysical prospecting. Improvements in magnetic tape recording and processing facilities have provided new impetus to better methods.

In a more general sense, consideration must be given to personnel, economic conditions, and how such relate to oil company and contract geophysical efforts. In view of Western Hemisphere reserve position, rising nationalism in foreign areas and in spite of current surpluses along with depressed product prices, a more favorable and stabler climate must be developed for the explorationist in order to keep petroleum competitive in the total energy market.

* - Registered trademark of Continental Oil Company.

COAST GEOLOGICAL SOCIETY DINNER DANCE

The annual Coast Geological Society Dinner Dance was held on Friday, November 22nd, in the Main Ballroom of the Ventura Women's Center. An excellently catered dinner, fine dance music, and many bottles of champagne combined to make the party a great success. We would like to thank the many AIME members who turned out and to congratulate the society members on a fine job of organizing the evening's festivities: Kit Carson, Harold Sugden, Will Classen, Don Hagen and John Koch (the able bartender donated by Standard Oil). Also, we are grateful to the following companies for their contributions:

Schlumberger - Lane Wells - McCullough - Global Marine - Western Offshore - Rocky Mountain Drilling Co. - Petroleum Technology - Borst & Giddens and Petrolog.

Rumor has it that J. E. Dryden will be nominated for the position of Bartender Emeritus of the Coast Geological Society

It was noted at the Coast Society Dance that Mr. Pete Hall, the Society's dance instructor, has developed a new style of ballroom dancing.

33rd. ANNUAL S.E.G. MEETING HIGHLIGHTS

The Bakersfield chapter of the SEG recently heard Wally Matjasic, District Representative of the Pacific Coast Section, review highlights of the 33rd Annual SEG International Meeting held in New Orleans as follows:

ABSTRACT:

The Society of Exploration Geophysicists held their 33rd Annual International Meeting October 20-24 at New Orleans, Louisiana. Registered attendance was 1217 men and 442 ladies, totaling 1659. Of the 56 men from California, 27 were sent by oil companies; the balance represented contractors, supply companies and instrument firms. Exhibit space, which was housed in two spacious ball rooms, was completely sold out. An invitation from the Exhibit Committee to the various High Schools resulted in a large attendance by science-prone students at the many instrument booths.

There was excellent membership attendance at the general, research and mining sessions. The general sessions contained a full program of interesting papers on exploration techniques, instrumentation, seismic, gravity, magnetics, basement-crustal studies, multiples, velocity, refraction and data processing.

The meeting was opened with welcoming addresses by Merrill Smith and K. H. Shaffer. Ira H. Cram, Vice-President of Continental Oil Co., gave the keynote address. This was followed by John C. Hollister's SEG presidential address "The Pursuit of Competence" and J. C. Sproule's AAPG presidential address "Geology and Geophysics". Honorary memberships were presented to Roy L. Lay and Arthur A. Brant. The best paper award was given to Franklyn K. Levin and John D. Ingram for their paper "Head Waves from a Bed of Finite Thickness".

The surprise event of the opening session was the personal appearance of astronaut Scott Carpenter who gave a very informative account of his experiences followed by an interesting motion picture on the training and experiences of astronauts.

The highlights of the business meeting were:
(1) The decision to re-affiliate SEG with AGI in accordance with the 4 to 1 approval of the active membership based on a written poll which was circulated earlier in the year; (2) The agreement to review the Distinguished Lecture program with local memberships and local executive committees with respect to number of speakers, subject matter and suggested speakers; (3) The decision to continue the publication, periodically, of the Supplement to Geophysics on "Papers for the Field Geophysicist", in accordance with a majority approval of the membership which responded to the questionnaire that was inserted in the first Supplement (December 1962); and (4) The fact that none of the local Societies or Sections extended an invitation for the 1968 Annual International Meeting!

The financial report for the fiscal year ending June 30, 1963, revealed total assets amounting to \$185,556. This report also showed a steady decrease in total operating expense from \$79,876 in 1961 to \$72,920 in 1963, indicating that our business affairs are in good hands. Total membership as of June 30, 1963, was 5,566.

Dates and sites of future Annual Meetings are:

34th - Los Angeles - November 16-19, 1964
35th - Dallas - November 14-18, 1965
36th - Houston - November 13-17, 1966
37th - Oklahoma City - October 29- November 2, 1967

Officers for the 1963-1964 term are:

President - Norman J. Christie, Calgary
1st Vice-President - Flint H. Agee, Los Angeles
Vice-President - Lynn D. Ervin, Houston
Secretary-Treasurer - Craig Ferris, Tulsa
Editor - F. A. Van Melle, Houston

AMERICAN INSTITUTE OF
PROFESSIONAL GEOLOGISTS CONVENTION

On November 14 and 15, 1963, the founding meeting of the American Institute of Professional Geologists was held at the Colorado School of Mines in Golden, Colorado. Eighty-five geologists, including representatives from the petroleum, natural gas, mining, geophysical, the universities, the U.S.G.S. and the States were present.

A constitution, code of ethics and membership qualifications were drafted and approved. The following officers were elected:

President: Martin Van Couvering
Consultant, Pasadena

Past President: Ben Parker
Frontier Oil & Refining Co.

Vice President: Allen C. Tester
University of Iowa

Secretary-Treasurer: Tom Beveridge
State Geologist,
Missouri

Editor: Frank Counselman
Consultant, Abilene, Texas

Executive Director: E.E. (Bud) Rue
Consultant, Illinois

The new organization will headquarter in Golden at the Colorado School of Mines, arranged through the courtesy of Orlo Childs, and it will be incorporated under the laws of the State of Colorado. Legal advice will be furnished by the Frontier Oil & Refining Company attorneys.

Invitations to join the new organization will be sent to all members of the A.A.P.G., S.E.G., S.E.P.M. and other geological organizations. The initiation fee and dues will be set after the size of the membership has been determined. An initial operating fund was established by contributions from those attending the meeting.

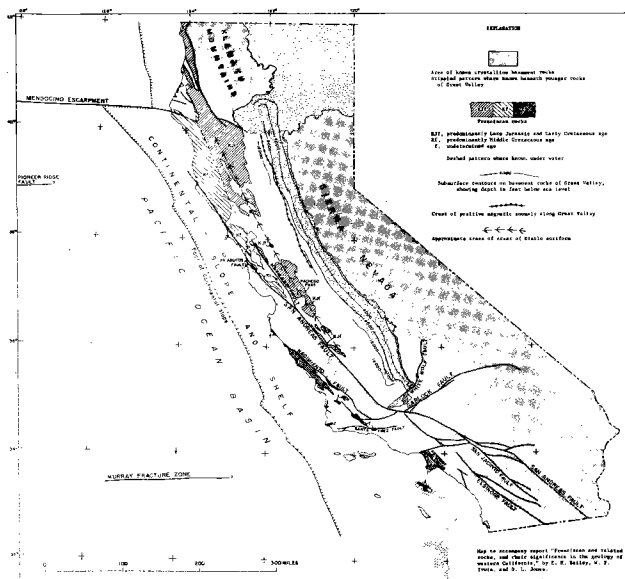
It is planned to divide the A.I.P.G. into sections by states or groups of states where there are not sufficient members in one state. Each section will be responsible for certification and registration within its own state.

LOS ANGELES GEOLOGICAL FORUM

The Pacific Section Geological Forum meeting was honored on October 21 by Mr. David L. Jones from the U. S. Geological Survey, Menlo Park, California who spoke on "Franciscan and Related Rocks of the California Coast Ranges". A summary of Mr. Jones' extremely interesting and thought-provoking presentation appears below:

ABSTRACT:

The Franciscan consists of a thick assemblage of graywacke and argillite; volcanic rocks, mainly pillow basalts; chert; foraminiferal limestone; and peculiar metamorphic rocks characterized by the mineral glaucophane. The structure of these rocks is extremely complex and many outcrops show evidence of intense shearing, accompanied, in places, by intrusion of serpentine. Sparse faunal evidence and assumed structural relationships, together with a few radiometric age determinations obtained from schists, show that Franciscan rocks range in age from Late Jurassic (Kimmeridgian?) to Late Cretaceous (Campanian).



Two belts of Franciscan rocks can be discriminated: an eastern belt, predominantly of Late Jurassic and Early Cretaceous age, and a western belt, predominantly of mid-Cretaceous age. These two belts are in apparent structural juxtaposition along the Hayward fault and its projection to the north.

In marked contrast to the complex Franciscan rocks, a non-volcanic bearing, structurally simple sequence of Late Mesozoic rocks is exposed along the western border of the Great Valley and in various places throughout the Coast Ranges. These rocks, termed the "Great Valley sequence," range in age from Late Jurassic ("Knoxville") to latest Cretaceous and are equivalent in age to much of the Franciscan.

Study of the present distribution of these two facies of Late Mesozoic rocks leads to the conclusion that their relationship cannot be explained by simple, abrupt facies changes. Rather, the juxtaposition of coeval but lithologically unlike rocks along known faults indicates that they have been brought together by large-scale structural displacements.

Several hypotheses are presented to explain these great displacements. These include strike slip faulting, sphenochasmic rifting, and thrust faulting. Present data are insufficient to choose between these hypotheses but do support the contention that large-scale displacements of some sort must be considered in any interpretation of Coast Range geology.

U.C.L.A. GEOLOGY DEPARTMENT NEWS

During the past year the UCLA Geology Department has seen several extensive changes both in staff and in quarters. About a month ago the department expanded into a new wing which includes air-conditioned space, and which represents an expansion of space of about 20 percent. Soon the Geology Library will move also into fine new quarters which will be associated with an enlarged geologic map room. Adequate study and laboratory space are now available for all graduate students and most seniors.

With regard to faculty, the department is still shocked by the untimely death of Professor William C. Putnam last spring. In addition, it sorely misses Cordell Durrell, who has transferred to the University of California at Davis Campus, Edward L. (Jerry) Winterer, who has transferred to the Scripps Institution of Oceanography at La Jolla, and George Tunell, who transferred a year ago to the Riverside Campus. UCLA has certainly been doing its part toward upgrading these sister institutions! New additions to the staff this fall include Drs. Edward C. Jests, Brian R. Rust and Byron G. Weissberg. All members of the faculty have continued to work away at their research as well as teaching.

Professor Donald Carlisle spent the summer with a group of undergraduate students studying the geology of part of Vancouver Island under the auspices of a National Science Foundation program. Dr. Charles E. Corbato was in charge of the Geology Summer Camp held in the Inyo Mountains in collaboration with the Berkeley Campus and included students from other institutions as well. Dr. W. Gary Ernst just returned from a semester sabbatical leave with the University of Tokyo where he was concerned mainly with studying petrographic problems in Japan.

Enrollments in geology at UCLA include 70 graduate students most of whom are aspirants for the Ph. D. degree, and about 45 undergraduate majors. Enrollments in the beginning courses are increasing sharply but the dearth of employment opportunities in geology has seriously affected the undergraduate major enrollment.

The department is very pleased that Professor W. W. Rubey has been awarded the GSA Penrose Medal, one of the highest honors in geology today. Under the system of rotating chairmanships Kenneth D. Watson has served three years and John C. Crowell is replaced again in the position.

VERNON A. TAYLOR JOINS U.S.C. GEOLOGY STAFF

U.S.C. is pleased to announce the addition of Vernon A. Taylor to the staff of the Department of Geology to teach geochemistry. After taking degrees in chemistry and geology from the University of South Carolina, he worked in geological exploration in Venezuela for 6 years and is now finishing his doctorate on carbonate geochemistry at Florida State University. He will assume his duties in February.

IN MEMORIAMEVAN H. BURTNER

1913 - 1963

The many local friends of Evan Burtner were grieved to hear of his death in Amarillo, Texas on November 19th. Evan graduated in Geology from the University of California at Berkeley in 1936 and went to work for Standard of California shortly thereafter. He did geological work in California until 1959, with the exception of two years foreign field work in India, Egypt and Baluchistan. Evan was at one time Exploration Superintendent at Bakersfield, and was Assistant to the General Manager, Western Operations, Inc., before going to a similar position at Standard of Texas.

Evan was an outdoorsman and a mountain climber of unusual ability. He will be long remembered by those fortunate enough to have known and worked with him. He leaves a wife and two daughters, who will remain in Amarillo for the remainder of the school year, and his parents in California.

FOSTER D. SMITH JOINS A.G.I.

Dr. Foster D. Smith, Jr. has joined the American Geological Institute as Director of Scientific Publications.

Dr. Smith, who has been the staff geologist of the Mobil Oil Co. de Venezuela, is to direct AGI programs in publishing foreign geological material in English (International Geology Review and Doklady of the Academy of Sciences of the USSR, earth-sciences sections); abstracting earth-science literature (GeoScience Abstracts), and in the Earth Science Register.

In 1960 he obtained his PhD from New York University; his specialties are micropaleontology and sedimentology. A major advantage for the AGI is his knowledge of geological literature in Spanish, French, German and Russian.

In Venezuela, a recent significant accomplishment was his co-ordinating work on the Geologic-Tectonic Map of Northern Venezuela (scale 1:1,000,000), published for the First Venezuelan Petroleum Congress. He is past president of the Asociación Venezolana de Geología, Minería y Petróleo.

1964 DIRECTORY

The new A.A.P.G.-S.E.G.-S.E.P.M. Directory will be available at the 1964 Spring Convention. Many modifications and changes are planned, such as the new loose leaf style multi-ring binder, combined advertiser's and company affiliation sections, larger page size (5 x 8 inches), home phone numbers and wives first names.

Those members who have the directory pictures taken, but have not expressed their picture choice by January 1, 1964, a selection will be made for you by the following members of the directory committee: James Jones and J. B. S. de Boue.

It is requested that companies intending to utilize the advertising section get their contributions in early. Return directory questionnaire as soon as possible.

WILLIAM R. MORAN APPOINTED MANAGER
OF UNION OIL SUBSIDIARY

William R. Moran has been appointed Manager of MINERALS EXPLORATION COMPANY, a wholly-owned subsidiary of Union Oil Company of California. MEXCO operates all Union's mining operations in the United States and overseas. He will be headquartered in Los Angeles.

Bill has been with Union Oil Company since leaving Stanford in 1942. He has done geological work in all the western United States, was in Paraguay from 1946 to 1950, and Costa Rica in 1951. He spent a year (1959-1960) in Australia, and was responsible for his company's entry into the oil exploration operation in that country which resulted in the discovery of the first commercial oil field in Australia. Until his new appointment, since 1959, he has been Senior Geologist in Union's Foreign Exploration Department, and has done work in Iran, Pakistan, India, England, etc. In June, 1963 he presented a paper on the Australian Moonie Oil Field at the World Petroleum Congress in Frankfurt, Germany.

Bill has authored papers for the American Association of Petroleum Geologists, the Geological Society of America, and the International Geological Congress. He has been active in A.A.P.G. affairs, and is currently a member of that organization's Convention Policy Committee, and Chairman of the Committee on Projection Slides, which was responsible for the publication of the organization's SLIDE MANUAL. He is a member of the American Association of Petroleum Geologists, a Fellow of the Geological Society of London, the American Association for the Advancement of Science, and the American Geographical Society. He was the founder of the STANFORD ARCHIVE OF RECORDED SOUND at Stanford University, and is a world authority on early recordings, having contributed numerous articles to books and periodicals on this subject.

SACRAMENTO VALLEY ACTIVITIES

Dr. Gardner of the USGS recently spoke to a special dinner meeting of the Sacramento Petroleum Association on "The Registration of Engineering Geologists". After the talk, Dr. Gardner, Ray Taber, and Pat Guthrie answered questions from the floor. Many thanks to these men for informing us on the "why's" and "how's" of the proposed legislation. At its last afternoon meeting, the SPA set up a committee to study the proposed legislation and to determine the desirability of the bill from the Petroleum Geologist's and Petroleum Engineer's point of view.

Faced with Hector Hollis' 5 to 1 drinks and a power failure (supplemental power supplied by Lane Wells) the latest meeting of the Northern California Chapter of the API came off as well as could be expected. Much interest was shown in the association's vocational training and scholarship programs. After the meeting an influential group of members attended a local girlie show, where (we hear) they put on quite a show of their own.

George Brown declares that the Sacramento Geological Society is planning the "best ever" field trip to the Mt. Diablo area. The trip will be held "sometime between March and June."

GEOLOGISTS ANNOUNCE
NATIONAL RESEARCH FUND DRIVE

Houston, Texas -- President J. C. Sproule, of the American Association of Petroleum Geologists, announced today that the A.A.P.G. is launching a drive, under the leadership of Michel T. Halbouty, Chairman of the Association's Voluntary Research Fund Campaign Committee, to raise a \$500,000 endowment fund to further its research projects.

Halbouty, nationally known independent oilman and geologist, said that the income from the fund will be spent on grants-in-aid and other selected petroleum geological research projects.

"In the past eight years", Halbouty said, "the A.A.P.G. has made more than 100 of these grants-in-aid to students and teachers engaged in geological research. Our program helps achieve two goals: to attract brilliant and capable students into the field of geology and to work toward the solution of some of the research problems which eventually must be solved.

"We have already achieved substantial results from a very modest program, and this permanent endowment will allow us to enlarge this program and set it up on a permanent basis."

The announcement said that district chairmen and committees chosen from the membership of the A.A.P.G. will be selected in most areas of the United States and Canada.

SAN JOAQUIN GEOLOGICAL SOCIETY
PUBLICATIONS AVAILABLE

The San Joaquin Geological Society still has available copies of the following publications for sale:

1. "Selected Papers Presented to the San Joaquin Geological Society", Vol. 1, October 1962. (Includes four papers on the Sacramento Valley and one on the Midway-Sunset Oil Field, 64 pages, illustrated) Price: \$2.25 prepaid.
2. "Guidebook of the Geology of the Carrizo Plain and the San Andreas Fault" by the S.J.G.S. and Pacific Section of the A.A.P.G. - S.E.P.M., 1962 (12 papers, 52 pages illustrated including one large geologic map). Price: \$3.25 prepaid.

Make checks payable to the San Joaquin Geological Society, P. O. Box 1056, Bakersfield, Calif.

ANNOUNCEMENT

As a new service to members, the BULLETIN of the American Association of Petroleum Geologists will publish a classified advertising section, commencing with the January, 1964 issue. "THE BULLETIN BOARD" will accommodate advertisements of positions wanted and available, and of A.A.P.G. and affiliated society publications wanted and for sale.

NOTE: Closing date for classified ad copy: 1st of month preceding month of publication.

CHANGE OF ADDRESS

Listed below are changes of address for those members listed in the latest directory.

GALLOWAY, JOHN D. 2366 Eastlake Avenue Seattle, Washington	HURNDALL, JOHN P. 226 Via Lido Nord Newport Beach, Calif.
HILL, MELVIN J. P. O. Box 1166 Pittsburgh, Penn. 15230	SIX, DON E. Texaco, Inc. 3350 Wilshire Blvd. Los Angeles, Calif.
MAYNARD, ROBERT G. Sunray DX Oil Company 101 University Blvd. Denver, Colorado 80206	VALENTINE, G. M. 15565 Shefford St. Hacienda Heights, Calif.
TARBET, L. A. 2349 Prancer Street New Orleans, Louisiana	LAVERY, JOHN P., JR. 2616 Sara Way Bakersfield, Calif.

Listed below are changes of address for those members not listed in the latest directory.

EAST, EDWIN H. Union Oil Company 2805 Denali Street Anchorage, Alaska	MOORE, NEIL A. Rayflex Exploration Co. P. O. Box 175 Dallas, Texas
ROLLINS, J. FRANK Rayflex Exploration Co. P. O. Box 175 Dallas, Texas	RICHARDSON, ROBERT L. 536 East Meta Street Ventura, California

PERSONAL ITEMS

Jim Thompson attended the S. C. field trip in Nevada during his vacation. He reports that the girls and wallpaper have changed but the houses are still the same in Beatty.

Roy Earhart (geophysicist) formerly with Geoprospectors of Dallas has joined the staff of Signal Oil and Gas in Los Angeles.

Dick Hester is expected back from Tehran around Christmas.

John H. Marshall, Jr. has been transferred from Mobil's office in Oklahoma City to Los Angeles as District Geologist for Mobil's Pacific Offshore District.

Tony Morris has just returned from a 10 week tour of Tehran, India, Kuwait, Rome, London and??

Jim Roth has just returned to Colombia for his second two year tour of duty as Texaco's District Geologist in Bogota after a two month visit in the Los Angeles area. He reports that Bob Sprinkle has just replaced Ken Bishop as Texaco's Division Geologist in Colombia. Bob worked for Shell and Ken worked for Conoco in California.

Bill Schlax' wife and youngest daughter have been on a two month visit of relatives in New Zealand while Bill has stayed home keeping house for the rest of the family. He says that he couldn't have done it without the dishwasher.

If any Los Angeles geologists have jury trials coming up within the next 30 days they are warned to have them postponed to a later date as Ron Heck is on jury duty.

Conrad Maher has returned to Mobil's offshore district via a European vacation after a 3 month well sitting tour on the Libyan desert.

Senor Bill Fowler, your Hedda Hopper of the Pacific Petroleum Geologist is vacationing in Mexico. While he is away, the Company is trying to decide what to do about his poor walking record. He recently received a \$6.00 citation for trying to pass an old lady on the right against the DON'T WALK signal on Wilshire Boulevard. One week later he was harpooned by the hood of an MG at the corner of 3rd and Normandie. He has about decided that being overweight has some serious complications that he didn't realize.

Charlie Booth, Shell Oil Co., writes that his address has changed from "Sunny Ventura" to P. O. Box 60193, New Orleans 60, La. He's become a charter member of the 3F Club -- Fat, Forty and -- (Fatigued?), is very busy and will probably be there for a while.

Bob Hindle, District Geologist, Sunray DX, Bakersfield, is preparing to buy a 5-acre avocado ranch in Los Posas. Despite transfers, mergers and sales of companies, we think Bob anticipates retirement in this part of California.

Newly elected officers of the San Joaquin Geological Society for 1964:

Wesley G. Bruer - President (Consultant)
Rodney G. Colvin - Vice President (Mobil Oil Co.)
Gardner M. Pittman - Secretary - Treasurer
(Tidewater Oil Co.)

Tex Leverette, Occidental, Bakersfield, is back on the job "stealing" logs only half of the time, after recuperating from a recent heart attack.

Wayne Estill, Intex, Bakersfield, recently took one of the leads in the Bakersfield Playhouse Theater as "Zeus" in the "Rape of the Belt".

Joe Arndt, geologist with Richfield, was recently transferred from Long Beach to Bakersfield. Joe and his wife, Cecy, are honeymooning on this new assignment. Joe is a collaborator with Arch Warne for shark tooth collecting.

The Annual Turkey Golf Tourney of Standard's Bakersfield Exploration Office in Oildale was held November 23, 1963, at the Kern River Course. Flight winners included Bob Lindblom, George Webb, Marty O'Keefe and Chuck Cleve. Twenty-four golfers participated. Accuracy prizes were won by Ted Robey, Bob Ortalda and Joe Mecey. Bob Lindblom shot low gross.

Dan O'Halloran, Standard, Oildale, has returned from a month's duty in Amsterdam for Amoseas. The weather was rainy but dark beer was in abundance.

Dale Turner and Nick Nicholeris, Superior, Denver, have been transferred to Bakersfield. Arrival is anticipated some time after January 1st.

Bill Zajic, Gulf, Bakersfield, has joined the local home owners society.

W. S. "Bill" Johnson, Shell geologist, Bakersfield, has resigned to accept a position in Materials Research with the State Division of Highways in Sacramento.

NURSERY NEWS

Jim and Paula Groom, Texaco, Bakersfield, their first child, a son, Steven Lawson. Born October 17, 1963. 8 lbs., 11 ozs.

Fred and Aileen Flege, Standard, Bakersfield, Andrew Frederick arrived July 12, 1963.

Bill and Trina Godsey, Standard, Bakersfield, a girl, Catharine Jennie, born July 2, 1963.

CALENDAR

December 9, 1963: Monday evening, El Tejon Hotel, Bakersfield. San Joaquin Geological Society. "Lathrop Gas Field & Vicinity" - R. A. Teitsworth, Occidental Petroleum Company. Cocktail Hour 6:30 P.M. Dinner Hour 7:30 P.M.

December 16, 1963: Monday evening, 7:00 P.M. Mobil Auditorium, 612 S. Flower St. Los Angeles Geological Forum, "A Panel Discussion by Engineering Geologists", John F. Mann, Jr., Moderator. An informal dinner will be held at Columbo's, 819 So. Figueroa St. promptly at 5:30 P.M.

December 17, 1963: Tuesday noon, U.S.C., Room 104, Geology "A", 855 W. 37th St. "Geological Experiences in the Spanish Sahara" will be presented by Kent Rottweiler.

January 2, 1964: Thursday noon, Rodger Young Auditorium, 936 W. Washington Blvd. Distinguished Lecturer Dr. Orville L. Bandy, U.S.C., will present "Use of Paleoenvironment Studies in Determining Producing Trends".

January 6, 1964: Monday evening, 7:30 P.M., Bakersfield College, Science and Engineering Bldg., Rm 56. Biostratigraphic Seminar. "Coccoliths" - Dr. M. N. Bramlette, Scripps Institute of Oceanography.

January 7, 1964: Tuesday noon, U.S.C., Room 104, Geology "A", 855 W. 37th St. Richard Slater and Kenneth Means will discuss "Marine Geology and Sedimentation of a Portion of San Francisco Bay".

January 20, 1964: Monday evening, 7:00 P.M. Mobil Auditorium, 612 S. Flower St. Los Angeles Geological Forum; Leo J. Herrera, Geology of Peru. Henry F. Lippitt, "California Gas Marketing Problems".

BIBLIOGRAPHY OF RECENT PUBLICATIONS

U. S. GEOLOGICAL SURVEY

Professional Paper 260-BB: Subsurface of Eniwetok Atoll, by S. O. Schlanger, with sections on Carbonate mineralogy by D. L. Graf and J. R. Goldsmith; Petrography of the basalt beneath the limestones, by G. A. MacDonald; Dating of carbonate rocks by ionium-uranium ratios, by W. M. Sackett and H. A. Potratz.....\$1.25

Professional Paper 382-A: Stratigraphy and structure of the Rainier and USGS Tunnel areas, Nevada Test Site, by W. R. Hansen, R. W. Lemke, J. M. Cattermole and A. B. Gibbons.....\$1.25

Professional Paper 456-A: Type section of the Beacon Sandstone of Antarctica, by Warren Hamilton and P. T. Hayes.....\$.25

Professional Paper 462-B: Vertical distribution of velocity and suspended sediment, Middle Rio Grande, New Mexico, by C. F. Nordin, Jr., and G. R. Dempster, Jr.....\$.20

Professional Paper 474-A: Uranium in carbonate rocks, by K. G. Bell.....\$.30

Bulletin 1144-E: Porosity and bulk density of sedimentary rocks, by G. E. Manger.....\$.25

Bulletin 1155: Contributions to economic geology of Alaska.....\$1.00

Bulletin 1162-B: Geology of the Railroad mining district, Elko County, Nevada, by K. B. Ketner and J. F. Smith.....\$.65

Bulletin 1181-A: Fluvial sediments -- a summary of source, transportation, deposition, and measurement of sediment discharge, by B. R. Colby.....\$.25

MAPS

I-345: Geology, structure and uranium deposits of the Shiprock quadrangle, New Mexico and Arizona, compiled by Robert B. O'Sullivan and Helen M. Beikman.....\$2.00

UTAH GEOLOGICAL AND MINERALOGICAL SURVEY, (103 Civil Engineering Bldg., University of Utah, Salt Lake City, Utah)

Bulletin 54: Oil and gas possibilities of Utah; re-evaluated. Symposium by 54 authors, 564 p., 160 figs.....\$6.50

Parts I and II: Surface, structure and stratigraphy of Utah, available separately as Bull. 54-A for \$4.00

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

Volume 17

Number 12

Return Requested

CALIFORNIA DIVISION OF MINES AND GEOLOGY

Special Report 75: Exploration and development of Geothermal Power in California, by James R. McNitt.....\$1.00

OIL AND GAS JOURNAL, vol. 61, no. 39, September 30, 1963

Economics is key to Salinas basin oil exploration, by Edward A. Gribi, Jr.

Nevada oil find expected to produce 900 b/d.

Alaska has second oil strike--at last.

OIL AND GAS JOURNAL, vol. 61, no. 40, October 7, 1963

Arizona wildcats hum, by Frank J. Gardner.

OIL AND GAS JOURNAL, vol. 61, no. 42, October 21, 1963

Photo from space...a new tool for oil exploration, by Howard Wilson.

Paleogeomorphology a practical exploration technique, by Edith M. McKee.

OIL AND GAS JOURNAL, vol. 61, no. 43, October 28, 1963

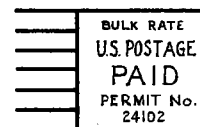
Are you drilling too many cute little prospects?, by Frank J. Gardner.

BOOKS

Geochemistry in mineral exploration, by H. E. Hawkes and J. S. Webb. (Harper's Geoscience Series) Harper & Row, New York. 1962.....\$12.50

Salinas Valley and San Andreas fault, Guidebook, by Pacific Section, A.A.P.G. and S.E.P.M. 168 pages.....\$12.00

(Copies may be obtained from Paul Wesendunk, Standard Oil Company of California, Box 5278, Oildale, California. Make checks payable to: S.E.P.M. Guidebook)



Richard L. Hester
Pauley Petroleum, Inc.
10000 Santa Monica Blvd.
Los Angeles 67, Calif.

DA