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

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### 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.

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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

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"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.

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.