PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION
AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

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ASSOCIATION ACTIVITIES

PACIFIC SECTION CANDIDATES

The candidates for A.A.P.G. Pacific Section offices for 1964-65 have been announced by Richard B. Haines, Chairman of the nominating committee:

President:	Robert R. Knapp - Standard Oil Co. Spencer F. Fine - Richfield Oil Corp.
Vice President:	Robert O. Patterson - Pacific Oil Well Logging Gordon R. Bell - Gulf Oil Corp.
Secretary:	John L. Elliott - Humble Oil and Refining James C. Taylor - Shell Oil Co.
Treasurer:	Robert N. Hacker- Lloyd Corp. Robert S. Burns - Geological Exploration

PACIFIC SECTION DUES

Dues for the Pacific Section, A.A.P.G. for 1964 are now overdue. Those who have not paid and desire to continue to receive the P.P.G. Newsletter should send $3.50 to Milton T.Whitaker, Treasurer, c/o Mobil Oil Company, 612 S. Flower St., Los Angeles 15, California.

LOS ANGELES GEOLOGICAL FORUM

On Monday evening December 16, 1963 the Los Angeles Geological Forum presented a panel discussion by Engineering Geologists. The panel consisted of the following:

John F. Mann, Jr., Moderator
Douglas R. Brown
Russell G. Hood
Robert Stone
Ernest M. Weber

The presentation was in four parts:

What an Engineering Geologist Does

Ernie Weber is currently Senior Engineering Geologist in the Southern District Office of the Department of Water Resources. He reviewed his work with the Department over the last seven years, stressing especially two aspects of that work. The first involved the development of cost estimates for tunneling in conjunction with possible Feather River Project aqueduct routes. Using mostly existing geologic data, costs were developed for the tunnel portions of many dozen possible aqueduct routes. These costs were supplied to the engineers who did the overall economic evaluation. The second problem was the development of a mathematical model for the simulation of a ground water basin on an electronic analog computer. When developed and matched to the basin, the model is used in studies of ground water basin operation under numerous assumed future conditions.

Doug Brown is currently with the consulting firm of Moore and Taber, but discussed mainly his earlier experience with the California Division of Highways Bridge Department and the Los Angeles County Engineer. While with the Bridge Department as Senior Engineering Geologist, he was in charge of foundation investigations in southern California for all state bridges, tunnels, and retaining walls, including major projects such as the Santa Monica Viaduct and the San Pedro-Terminal Island Suspension Bridge. While with the Los Angeles County Engineer as Senior Engineering Geologist he organized and served on the Los Angeles County Engineering Geologist Qualifications Board. Much of this work involved the review of consulting geologists' reports submitted to the Division of Building and Safety. Although originally an Engineering Geologist, he is now a Registered Civil Engineer also. His last position with the County Engineer was as Supervising Civil Engineer in charge of the Grading Section of Building and Safety.

Russ Hood has had a varied experience as an Engineering Geologist, starting with the Corps of Engineers in 1953, then with the California Department of Water Resources, and later with Dames and Moore, Foundation Engineers. In April 1959 he organized the firm of Hood and Schmidt, Inc., which specializes in the geology of construction projects. He did the geology for the Palm Springs Tramway. Russ briefly explained the role of the geologist in hillside home developments. Russ is currently a member of the Los Angeles County Engineering Geologist Qualifications Board.

Bob Stone is President of Stone Geological Service, Inc., a firm specializing in the geology of hillside residential development. He worked with the City of Los Angeles in the framing of the Grading Regulations and was for many years a member of the City of Los Angeles Geological Qualifications Board. Bob discussed the relationship of the geologist to the soils engineer and foundation engineer in hillside development, especially as it relates to legal liability in the event of a failure.

John Mann pointed out how different is the professional route of the Engineering Geologist as compared to the Petroleum Geologist. Whereas more than 50 years of professional experience are represented by the panel, only a year and a half has

Next deadline, January 27, 1964.

been with oil companies. He mentioned that he has been a member of the AAPG for over 20 years, but no one else on the panel is a member. His experience has involved mainly consulting work in ground water along with teaching at the University of Southern California preceded by assignments with the USGS and the Illinois State Geological Survey. He pointed out the shift in emphasis in ground water work away from exploration and toward ground water conservation and management. This involves a relatively small amount of geology and progressively greater amounts of hydrology and water rights. Almost all of the basin-wide ground water problems involve working with or for civil engineers.

The Proposed Registration Bill

Some of the events leading to the Engineering Geologist Registration Bill (SB #1349) were reviewed. State regulation within the field of Engineering Geology commenced shortly after the failure of the St. Francis Dam in 1928. Since then, all dams of a certain minimum height and reservoir capacity were required to be inspected and approved by a State agency. Pressures for protecting the health, safety, and welfare of the public by placing more of Engineering Geology under governmental supervision are derived mainly from the population explosion in southern California since World War II. These population pressures have pushed home building from the flatlands into the hills; they have created unprecedented demands for water, and therefore demands for more dams, canals, pipelines, and tunnels, as well as demands for more intensive management of our ground water resources. More people means more waste materials and the necessity for greater vigilance in preventing pollution and contamination of our ground water basins.

The drought years 1945-51 saw homebuilding in hillside areas proceed at a rapid pace with few failures to stem the trend. The complacency of those drought years was brought to a shocking halt during January 1952 when heavy rains caused millions of dollars worth of damage. The public clamor led to hearings and the passage of the City of Los Angeles Grading Ordinance on October 17, 1952. The importance of geology in hillside developments gained slow but gradual recognition and in 1957 the City of Los Angeles began to require geologic reports on proposed hillside developments. To give assurance that the geologists submitting reports were qualified, the City of Los Angeles set up a Geological Qualifications Board in 1958. Since then, similar Boards have been set up by the County of Los Angeles and the County of Orange.

In 1957, twelve Engineering Geologists in Sacramento became concerned with the move toward local regulation of geologists in southern California and early in 1958 organized the California Association of Engineering Geologists, which in 1962 became the Association of Engineering Geologists. Registration has been the Association's objective from the very start, and a standing committee on Registration was appointed. A proposed bill was drafted and redrafted and finally on April 23, 1963, Senate Bill No. 1349 was introduced. This bill has been referred to the Fact-finding Committee on Business and Commerce and hearings are scheduled for early 1964. It is anticipated that the bill will be re-introduced in the regular session of the Legislature in 1965.

The main elements of the bill were reviewed. Important excerpts of the bill appeared in the January 1963 number of the Pacific Petroleum Geologist. Copies of the complete bill were made available at the meeting to all who wished to make a more detailed study of it.

Why Engineering Geologists Should be Registered

The compelling reason for registration of Engineering Geologists is to protect the health, welfare, and safety of the public. Recognition of this need has led to the formation of Qualifications Boards in the City of Los Angeles, the County of Los Angeles, and the County of Orange. The intent of SB #1349 is to include only those parts of Engineering Geology in which protection of the public is an important factor.

Incidental professional benefits will accrue to the Engineering Geologist if he is registered. About 70 per cent of the members of the Association of Engineering Geologists are in civil service. Almost all work with or for civil engineers, most of whom are registered. The Engineering geologist, unregistered, in addition to suffering from a lack of professional recognition, often has a lower salary while doing the same or comparable work. Registration will in all probability remove these inequities.

Registration, while no guarantee of competence, will, through the setting of minimum qualifications, certainly upgrade average performance. Registration brings legal status, and legal responsibility which has a restraining influence on the poorly qualified, even if they are registered. Existing fields in which there is registration demonstrate improvement in professional practices, with a consequent improvement in the public image.

There are now three local qualifications boards and there will be many more unless there is registration to supersede them. The disadvantages of a multiplicity of city and county boards all over California are obvious. Much unnecessary effort will be expended by Engineering Geologists who are forced as a self-protective measure to assist in the drafting of the Grading Ordinances. Also, Engineering Geologists are called upon to serve on these boards. The time and trouble expended by Engineering Geologists in appearing before these boards is considerable.

The problems of protecting the health, welfare, and safety of the public are more obvious in Engineering Geology than in any other branch of geology. Because of this, local regulation within this specialized field will grow inexorably. Registration of Engineering Geologists would be a good, perhaps the only alternative.

Open Discussion

There were several questions from the floor relating to the wording of the bill. It was pointed out that there had already been many changes in the earlier drafts in response to suggestions and objections. It was suggested that representatives of both the AAPG and the AEG meet in an attempt to work out acceptable modifications of the wording of SB #1349.

It was brought out in the discussion that there is a nation-wide movement for registration of geologists, and that most of the AAPG is now in favor of general registration of geologists. It was urged that California members of the AAPG modify their earlier position in opposition to registration. Mention was made of a recent resolution of the San Joaquin Geological Society expressing (1) opposition to SB #1349, and (2) support for acceptable legislation providing for registration of all professional geologists.

REGISTRATION OF GEOLOGISTS IN THE STATE OF CALIFORNIA

Members of the Pacific Section, A.A.P.G.:

For a number of years our members have been plagued with a recurring problem in the form of proposed government licensing and registration of petroleum geologists. The first occasion was in 1947 when the petroleum engineers joined with other engineers in a bill to license all engineers in the state of California. Due to the overlap of petroleum engineering and petroleum geology many of our members, to protect themselves, became registered petroleum engineers, qualifying under the grandfather clause of the Civil and Professional Engineers Act. Other younger members of our organization could not qualify at that time because of lack of experience, and very few of our newer A.A.P.G. members who have joined since 1951 have been able to qualify. In summary, at the present time, the majority of our Pacific Section members are unregistered in any capacity in the state of California.

Until very recently most of us have felt no need for State registration, viewing it as a restriction on the professional activity of geologists. During the past four or five years another branch of the geological profession, the engineering geologists, who are specialists in foundation work, landslides, dam sites, etc., have brown rapidly in size as demand for this type of work has increased. These engineering geologists feel a strong need for registration to enable them to properly practice their profession and to extricate themselves from their present subordinate position to the Civil Engineers, who enjoy a better status because of their State registration.

More and more our A.A.P.G. members are now called upon as expert witnesses in the courts, to give testimony before governmental bodies on unitization and other agreements and to obtain drilling permits and variances. An increasing number of our members each year are engaged in consulting work. The public, today, is more conscious of the existence of the geologist than in the past, and we are being classified with other professional people who come before the public eye such as doctors, lawyers and engineers, who are licensed to practice their profession in our state.

Petroleum geologists throughout the United States are becoming increasingly aware of the registration problem and action is being contemplated in several states and areas. The leader in this field, the state of Illinois, recognizes membership in the Illinois Geological Society as qualification to practice in that state. The failure of the A.G.I. to help us with our professional problems has led to the origanization of the A.I.P.G. to cope with these problems on a national basis as well as on a state basis.

Our immediate concern about registration is: Should we oppose Senate Bill 1349, proposed by the engineering geologists, simply to kill it and hope that it doesn't come up again, or should we propose to the Association of Engineering Geologists that they withdraw their bill and offer to join them and all other interested geological organizations in proposing an all encompassing bill covering all professional geologists?

Your Executive Committee believes that the latter proposal deserves serious consideration and, influenced by the action of our affiliated societies and the many letters that we have received, has adopted the following resolution submitted by a committee composed of Tom Baldwin, Chairman, Linn Adams, John Elliott, Pete Gardett, Hank Neel and Russ Simonson.

To instigate action a Legislation and Registration Committee, with Tom Baldwin, chairman, and Linn Adams, co-chairman, is being appointed which will consist of members from each of our affiliated societies, to draft a bill covering all professional geologists that will be acceptable to our Pacific Section membership. This committee will report at the business meeting of the Pacific Section's annual convention which will be held April 9 and 10, 1964, at the Biltmore Hotel in Los Angeles. At this time a vote will be taken to determine if we should pursue further this course of action. In the meantime we will indicate to the A.E.G. our strong opposition to Sentate Bill 1349 and our proposal for joint action pending approval of our membership.

John E. Kilkenny., President.
Pacific Section, A.A.P.G.

A RESOLUTION OF THE PACIFIC SECTION
AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

After studying with care the provisions of the State of California Sentate Bill 1349 entitled "A Proposed Act to Register and Regulate Engineering Geologists" and:

After evaluating reports and resolutions by our affiliates, the San Joaquin Geological Society, the Coast Geological Society, the Northern California Geological Society and the Sacramento Petroleum Association and:

After noting that the reports described above show that Senate Bill 1349 would for many reasons be inimical to the best interests of the geological profession, and therefore inimical to the best interest of the public served by the profession, and:

After noting that the resolutions of our affiliated societies call for vigorous opposition to Senate Bill 1349

It is hereby resolved that the Pacific Section of the American Association of Petroleum Geologists shall:

(1) Express to the Business and Commerce Committee of the Senate of the State of California our deep concern with Senate Bill 1349 and our strong opposition to that bill.

(2) Indicate to the Business and Commerce Committee our willing recognition that the public is entitled to be served in geology by professional men of known and approved standards in conduct and training.

(3) Relate to the Business and Commerce Committee the recent reports that appropriate committees of the American Association of Petroleum Geologists and of other geological societies are presently engaged in formulating principles for proper certification or registration, leading toward the drafting of a model law for uniform registration of professional geologists.

(4) Invite the Association of Engineering Geologists and the members of other geological societies to join the Pacific Section American Association of Petroleum Geologists in opposition to Senate Bill 1349 and in our efforts to frame a suitable law for the uniform registration of all professional geologists.

(5) Invite individual members of the Pacific Section American Association of Petroleum Geologists and other geological societies to support this resolution at the earliest opportunity by communicating these concepts to the appropriate members of the Senate Business and Commerce Committee.

SACRAMENTO PETROLEUM ASSOCIATION

The Sacramento Petroleum Association has carefully reviewed the impact on geologists of State Senate Bill 1349. The geologists of the Association are unanimously opposed to this bill and intend to take appropriate action to prevent its passage. It is our contention that the proposed legislation would place unfavorable restrictions on many competent geologists who cannot register under its specific provisions.

Our opposition to SB 1349 is based on these premises:

1 - Its effect, even if unintended, will be to fragment the profession of geology. Typically many geologists have migrated from one specialty to another in the course of their careers. This sort of migration, would, in the future, be possible only to engineering geologists registered under the bill.

2 - The terms of the bill for future applicants require work under a registered engineering geologist "or a registered civil engineer". This deferring to a branch of the engineering profession seems entirely out of keeping with an attempt to place geologists in a position of public trust.

3 - Quoting the AGI study committee: "The great majority of the committee members recognized that the situation has actually devolved into a choice between legal and internal regulation: that there is no longer a third choice. With the impetus from so many sources, the fundamental problem is to attempt to delay any precipitous movement to legal registration by local groups or segments of the profession until all can be acquainted with the facts and be given a choice".

POSSIBLE SOLUTION TO PROBLEMS OF REGISTRATION

We feel that there should be a national organization similar to the medical professions American Medical Association (AMA). Possibly the newly formed A.I.P.G. (American Association of Professional Geologists) could become this type of organization.

NORTHERN CALIFORNIA GEOLOGICAL SOCIETY

Here in San Francisco, a special meeting was called December 2nd to discuss the manner in which the Northern California Geological Society, or its members, would establish and express their opposition to this bill. With the approval of the Executive Committee of the Society, we have resolved that the NCGS advise the Pacific Section of AAPG that we are unanimously opposed to SB 1349. We believe that the bill in its present form would prevent the interchange of talent that characterizes the abilities of a geologist as an earth scientist, rather than the role of a specialist who would, by this bill, be confined by a legislated title. Our membership believes that the interests of the petroleum geologist in particular are not recognized by this proposed legislation.

SAN JOAQUIN GEOLOGICAL SOCIETY

The findings of a committee composed of Messrs. J. Clare, J. Manning, D. Martin and P. W. Gester to study S.B. 1349 were presented at the regular monthly meeting of the Society held on the evening of December 9, 1963. After a long and lively discussion, the enclosed resolution which embodies the recommendations of the committee was adopted by a vote of seventy-eight (78) in favor to one (1) opposed.

RESOLUTION PASSED AND ADOPTED BY
SAN JOAQUIN GEOLOGICAL SOCIETY
DECEMBER 9, 1963

WHEREAS, San Joaquin Geological Society has reviewed State of California Senate Bill 1349 entitled, "A Proposed Act to Register and Regulate Engineering Geologists," and

WHEREAS, it is believed that the passage of Senate Bill 1349 in its present form would be inimical to the best interests of the geological profession in the State of California, and

WHEREAS, San Joaquin Geological Society recognizes the need for the registration and regulation of professional geologists and believes that assistance and encouragement should be given to the passage of legislation which would benefit the geological profession as a whole.

IT IS HEREBY RESOLVED that the San Joaquin Geological Society shall:

1. Inform the Pacific Section of the American Association of Petroleum Geologists and the Business and Commerce Committee of the Senate of the State of California and any other interested parties of its opposition to Senate Bill 1349.

2. Indicate to the Pacific Section of the American Association of Petroleum Geologists and to the Business and Commerce Committee of the Senate of the State of California that it is in favor of acceptable legislation which would provide for the registration and regulation of all professional geologists.

W. E. WRATHER, A.A.P.G. Founder, Succumbs

Wm. Embry Wrather, 80, died November 29 in Washington, D. C., of a stroke. Dr. Wrather was born January 20, 1883, in Brandenburg, Kentucky. He received his Ph.B. (Bachelor of Philosophy) from Chicago University in 1907 and was a geologist with Gulf Oil Company and J. M. Guffey Petroleum Co. from 1908 to 1916. He was a consulting geologist and oil producer from 1916 to 1942 when he became associate chief of the Metals and Minerals Division, Board of Economic Warfare in Washington. In 1943 he became director of the U.S. Geological Survey, retiring in 1956. He was noted for his work in the early application of geology in the north Texas oil fields.

Dr. Wrather received honorary degrees from Southern Methodist University, Kentucky University, Mont. School of Mines, and Colorado School of Mines. He had been a lecturer at Chicago University, Texas University, Yale, Northwestern University, and Southern Methodist University. He was the winner of the Lucas medal in 1950, the Fritz metal in 1954, the Sidney Powers Memorial Medal in 1956, and the Distinguished Service Medal, U.S. Department of Interior, in 1956. He was the National Research Council's delegate to the International Geological Congress held in Madrid in 1926, Pretoria in 1929, and Moscow in 1937. He was chairman of the official delegation to Algiers in 1952 and a delegate to the World Petroleum Congress held in the Netherlands in 1951.

He was a founder of the American Association of Petroleum Geologists in 1917, and in 1922 he was elected the 6th president of that association, receiving honorary membership in 1943. He became a member of the American Association for the Advancement of Science in 1917, was made a fellow in 1925, and was treasurer of that organization from 1941 to 1945. He was a fellow of the Geological Society of America, becoming vice president in 1932 and 1st vice president in 1936. He belonged to the Seismological Society, the American Institute of Mining and Metallurgical Engineers, and the Society of Economic Geologists, serving as president in 1934.

ALASKA GEOLOGICAL SOCIETY

New Officers

Officers of the Alaska Geological Society elected for the 1963-1964 term are:

President:	Ernest R. Bush Sinclair Oil & Gas Co.
Vice-President:	William VanAlen Pan American Petroleum Corp.
Secretary:	Dale Wallington American Stratigraphic Co.
Treasurer:	William G. Binkely Superior Oil Co.

December Meeting

At the December 12th meeting of the Society, Marvin Mangus of Atlantic Refining Co., presented an absorbing talk on "Upper Triassic Rocks along the East Flank of the Richardson Mountains, Yukon Territory".

ABSTRACT:

In 1960 the Atlantic Refining mapped Upper Triassic rocks along the southeast flank of the Richardson Mountains in Yukon Territory, northwestern Canada. The outcrop area is situated at approximately lat. 66° N and long. 135° W, 5 miles north of the Peel River. Heretofore rocks of Triassic age were unmentioned in the published literature of the Richardson Mountains.

The Triassic occurs as small spotty outcrops along the lip of several remarkably flat-topped ridges. The lithology is distinctive, and is a mixture of light gray, sub-lithographic to arenaceous and conglomeratic limestone. At one locality a varigated unit of maroon and olve-gray-green shale occurs.

The limestone rests unconformably on upper Devonian-Mississippian (?) rocks and is approximately 250-400 feet thick. Fossils found in the limestones are Lima sp, Halobia sp, Myophoria sp, and Terebrataloil brachiopod, and are designated Late Triassic in age. The rocks are correlated with both the Shublik formation in the Brooks Range and McCarthy formation in Copper River Valley, Alaska.

Over 50 members of the Society were present and enjoyed Marv's lucid description of Richardson Mountain geology.

NORTHERN SOCIETIES HEAR MARTIN VAN COUVERING

Thirty members of the Northern California Geological Society and the Sacramento Petroleum Association met for dinner at The Nut Tree near Vacaville on December 11. The meeting was arranged by geologists in the Bay Area and Sacramento area because of the concern of petroleum geologists and consultants over a bill which had been introduced in the 1963 State legislative session through the activities of the Association of Engineering Geologists. The bill was referred to interim study by the Legislature, but may be expected to come before that body again in the spring of 1965.

The group meeting at The Nut Tree heard Martin Van Couvering, President of the newly-organized American Institute of Professional Geologists speak on the organization and objectives of that group. Membership is to be open to all fully-qualified professional geologists, regardless of specialty, and objectives are concerned primarily with the professional advancement and ethics of geologists rather than the scientific interests which are so well handled by a number of our leading scientific societies. Mr. Van Couvering appointed a committee of 3, on request and recommendation of the presidents of the 2 local societies, to keep in touch with developments in AIPG, particularly concerning membership qualifications and information on membership. The committee consists of 3 from each of the 2 societies. The Northern California Geological Society will be represented by Elmo Adams, L. Kenneth Wilson, and Gordon B. Oakeshott.

At the meeting the hope was expressed that other local geological societies in California, as well as the various groups affiliated with the Pacific Section of AAPG, would organize similar committees and develop contacts designed to reach some general agreement on these important professional matters, particularly certification and registration.

SPRING CONVENTION NEWS

The annual convention of the Pacific Section of the AAPG, SEG and SEPM will be held at the Biltmore Hotel April 9 and 10. The response from exhibitors has been encouraging so far, and the exhibit display deserves the attention of all delegates. We shall include articles on those firms exhibiting at the convention in the next three issues. Since exhibits are an integral part of our convention, we hope that this advance review of those firms exhibiting will help publicize this important portion of the convention. Some space is available and any firm wishing to exhibit should contact the exhibits chairman, James C. Taylor, Shell Oil Company, 1008 West Sixth Street, Los Angeles, California 90054.

We are pleased to present the following informative articles in this issue from two of the forthcoming exhibitors:

American Paulin System

The American Paulin System specializes in the manufacture of precision zero-gauging Surveying Altimeters and Barographs only and makes no other type of equipment. These fine instruments are in general use throughout the world by Petroleum Geologists of all the major Oil Companies as well as many others. They are the world standard in their field.

The Exhibit Booth will have on display a representative group of the well known MICRO and TERRA series Altimeters. Besides this, the lightweight precision Surveying MICRO Barograph will be shown in operation. This instrument has proved to be one of the biggest money savers to Altimeter Surveyors that has been developed in recent years.

The Booth will be manned by a representative from the American Paulin System factory who has had over 21 years experience in the manufacture and use of these instruments. All those attending the Meeting are urged to see the Surveying Altimeters and MICRO Barograph, ask any questions they may have regarding use of this equipment and discuss Altimeter Procedures that may be of interest to them. A package of literature along with the latest Manual on Modern Altimeter Survey Procedure will be available at no charge to all those interested.

Toyota Motor Company

Toyota is the Orient's largest automotive manufacturer and Japan's sixth largest corporation. Fortune Magazine, in its annual evaluation of the foreign corporations of the world, ranks Toyota the 65th largest foreign corporation in the world and the world's 12 largest automotive manufacturer.

Exporting to 73 countries throughout the free world, Toyota has stepped its production up to over 30,000 units a month and expects to reach the 50,000 unit a month point by the end of 1964.

Pacing the company's import to the U.S. is its rugged, 4-wheel drive Land Cruiser line, acclaimed by U.S. automotive authorities to be "the world's most powerful, all-purpose 4-wheel drive utility vehicle."

As a workhorse, the Toyota Land Cruiser's virtually unstoppable 4-wheel drive and its 135-horsepowered, 6-cylinder, overhead valve engine allows it to climb grades in excess of 64 degrees and to operate safely on slopes with side angles in excess of 30 degrees.

As a vehicle for outdoor sportsmen, the Toyota Land Cruiser can cruise all day at 85-plus mph on the highway. Then, at the flick of a button on the dashboard, shift smoothly into its 4-wheel drive to take the sportsmen to hunting, fishing and camping sites that have heretofore been inaccessible by car.

Maintaining the largest parts-per-car inventory in the U.S. of any import vehicle, Toyota provides 24-hour parts delivery from each of its multi-million dollar warehouses on both coasts.

The Toyota Land Cruiser line includes a 2-door soft top model, a 2-door hard top model, a 4-door station wagon and a three-quarter ton pick-up truck --- all powered by the 135 horsepowered engine and 4-wheel drive transmission that has made the Toyota Land Cruiser the world leader in its field.

PERSONAL ITEMS

Vern Rutherford, Union Oil Co., has been transferred from Santa Maria to the Bakersfield office.

It was announced unofficially at the recent Marathon Oil Co. Christmas party in Bakersfield, that after two weeks of exhausting experimentation, our group had 21°/o fewer callouses using rest. The experiment will most likely be concluded in the near future when the boss returns from vacation. Tom Roy, wherever you are, report to Casper, Wyoming for your regularly prescribed callous count.

William Van Alen, newly elected V.P. of the Alaska Geological Society has also taken on the task of Alaska correspondent for the P.P.G.

No sooner did Chuck Kirshner, Standard, hand the presidential gavel of the Alaska Geological Society over to Ernie Bush, than he left town for an Arizona vacation.

Bill "brittle Bones" Bedford, Texaco, Anchorage, having recently gotten the cast off of his wrist is now sporting one on his ankle, obtained trying to beat the high cost of Christmas trees.

Dick Lyon, Union's Anchorage manager, has relinquished the 1st tuba spot in the German Band to Bill Hughes, Texaco. What a pity all those TV viewers couldn't enjoy your bony knees on that Christmas program, Dick.

Don Patterson, Mobil, transferred up from Venezula, is sitting the Salmonberry Lake well in Alaska's Copper River Basin... Keep drilling, Don, that surface quartzite is only permafrost!

Dick Crick, Atlantic, Anchorage, is doing a bit of moonlighting while on vacation. He's teaching skiing down at Alyeska and can hardly keep his eyes off that pretty scenery.

Dr. James R. Macdonald has been appointed Lecturer at USC. He received degrees from Berkeley and has taught at Berkeley, South Dakota School of Mines and Technology, and University of Idaho. Reid is Curator of Vertebrate Palenontology at the County Museum and will teach VP at USC starting with the spring semester this February.

Dr. Rene Herb of Zurich will be pursuing a post-doctoral research program at USC in micropaleontology for one year beginning January 1, 1964. Dr. Herb was one of the instructors for the NSF Summer Field Institute in Switzerland in 1962.

Although many USC people were involved in the Baldwin Hills flood, the only member of the Geology Department who suffered damage was Reid Macdonald who bought a new car that morning and lost it by mid-afternoon in the flood. The secretary, Mrs. Williston, awakened in the middle of the area but her house was amazingly spared.

The Bakersfield Humble gang hasn't figured out what has caused Tod Harding's recent illnesses, but various thoughts are pressure of work, too much fog and no golf, holiday parties, etc.

John Smith and John Beeson, Humble, Bakersfield, have been walking around the office halls swaying from side to side trying to get their sea legs for their stint of offshore work.

Dave Masterman found a new use for the Bakersfield Humble geophysical vault at Christmas time - an excellent place to hide his children's presents and one that he was sure they couldn't break into.

Cy Bird, Humble, has succumbed to the ways of the idle rich and now has two personal cars to drive around Bakersfield.

Howard Sonneman, Humble, told his wife who hails from the San Francisco area how nice, warm and sunshiny Bakersfield was, but after six weeks of fog and cold she thinks she married a liar.

Orrin J. Wangsness, Valley Exploration, Bakersfield, has taken over the reins as the San Joaquin correspondent for the PPG.

Bob Scott, Signal, recently returned from a week's vacation in and around Acapulco and Mexico City. After regaining circulation, Bob joined Don Hibbard in some relaxing skin diving, water skiing and fishing. He reports the landing of a 138 pound sail fish. Any witnesses Bob?

John L. Harper, Standard at Oildale, has recently become engaged to Miss Joan Franklin - member of the faculty at Bakersfield College. A summer wedding is planned.

We are very saddened to report that both Jim Kistler and Bob Lindstrom of Standard recently lost their fathers.

J. S. Cunningham - Standard - Oildale - recently won the door prize at Standard's Christmas party. The door prize (a door) slipped out of Jack's well oiled hands and now the Cunningham station wagon has spanking new glass all around.

Bob Ottenstein, Standard Oildale, is recovering from severe hand injuries. Officially he was burned while putting out a blaze in his still, but unofficially we hear rumors about Sinatra slamming a trunk door on his hands or something like that.

Martin Van Couvering, President of the AIPG (American Institute of Professional Geologists) discussed the purpose and aims of the AIPG at a joint meeting of the Northern California Geological Society and the Sacramento Petroleum Association. The geologists of this area have shown much interest in this new organization.

Fred Berry, Jim Levorsen and Sarge T. Reynolds recently went on an extensive duck hunting expedition. Highlight of the day was an epic battle between Dr. Berry and an enraged Muskrat, each of which claimed ownership to a particular duck blind.

Watch it! That red faced fellow slipping into Los Angeles at Christmas time need not be Santa Claus. It could be Pauley's Dick Hester, just back from Teheran in time for Christmas at home.

Could the reason for that year end shortage of exploration money at McCullouch be those expensive locations Mike Maxwell staked on the green fields of Las Vegas? Not only is that coming back from Utah slower, it is more expensive via Las Vegas, huh Mike?

The real estate market in Bakersfield must be picking up. Three geologists who had found themselves in the real estate business there far longer than they wished finally sold their houses. Bob Herron, with AMF in Santa Barbara, and Gordon Bell (Gulf) and Don Six (Texaco) both in Los Angeles are breathing easier now. Of course, Gordon hasn't moved all the way into the smog belt, he's compromised by getting a place in Granada Hills. At the present rate of approach, he ought to be as close in as Glendale by 1985.

Don Hibbard, formerly with Continental here (they call 'em ex-cons), is visiting his parents in Pasadena after a two year hitch in Venezuela with Texaco. When his vacation is over Don will be returning to Venezuela, this time with Mobil.

Ben Lupton is back to work in Mobil's L.A. office after surgery.

P.P.G. readers are hardley likely to be surprised by the hidden talents and skills possessed by so many geologists, but Ed Gribi must be trying for new marks in versatility. When the geological consulting business in King City gets a little slow, as it does now and then, does Ed fret? Nope, he just does a little consulting work on poison ivy for nationally syndicated medical columnist Dr. Walter C. Alvarez. Maybe if Ol' Doc ("Soap and Water") Gribi does well enough in medicine we'll be seeing him on T.V. soon.

Sid Warner, after resisting the charms of the local girls for many years while in Los Angeles and Santa Barbara with Phillips finally succumbed to a girl from Tripoli, Libya, where he's now working. Sid is taking a leave of absence from Phillips and is returning to Ohio in January to go back to school.

Married: Sidney S. Warner, III and Miss Maria Irene Curtessi in Tripoli, Libya, December 28, 1963.

NURSERY NEWS

Leo and Veda Fay, Richfield, Anchorage, a son Patrick Donald ("O'Fay"?) born December 3, 1963.

On 10/27/63 - baby girl, Helen Louise, to Burt and Penny Dickas - Standard Oildale - Their first child.

CALENDAR

January 9, 1964: Thursday, 3:30 P.M., Room 3656, Geology Bldg., U.C.L.A.: Dr. Paul H. Ribbe, Univ. of Chicago, "Peristerite Plagioclases".

January 14, 1964: Tuesday noon, Room 104, Geology A, U.S.C., 855 W. 37th St., Los Angeles: "Geology of the Surigao, Philippines Nickel-Bearing Laterite Deposits", by Louis Heintz.

January 14, 1964: Tuesday Evening, El Tejon Hotel, Bakersfield. San Joaquin Geological Society. "Oil and Gas Possibilities of The Puget Sound Lowland of Western Washington". J. Q. Anderson, Consultant. Cocktail Hour 6:30 P.M.: Dinner Hour 7:30 P.M.

January 14, 1964: Tuesday evening, Ventura Women's Center, 3451 Foothill Road, Ventura. Coast Geological Society. "Geology of Mt. Rainier National Park", by Aaron C. Waters, Dept. of Geology, Univ. of California at Santa Barbara. Cocktail Hour 6:30 P.M., Dinner 7:30 P.M. Also a committee report by T.L. Bailey, R. M. Norris and W. J. Classon, Jr. on S.B. 1349, Registration of Engineering Geologists.

January 20, 1964: Monday evening, 7:00 P.M., Mobil Auditorium, 612 S. Flower St., Los Angeles. Los Angeles Geological Forum: Leo J. (Pat) Herrera, Vice President Cabeen Exploration Corp. will speak on "The Geology of Peru". Henry F. Lippitt, Chief Counsel California Gas Producers Association will discuss "California Gas Marketing Problems". An informal dinner will be held at Columbo's, 819 S. Figueroa St., promptly at 5:30 P.M.

January 21, 1964: Tuesday noon, Room 104, Geology A, U.S.C., 855 W. 37th St., Los Angeles: "Pleistocene Beach Ridges in Ohio", by Raymond Scadden.

February 3, 1964: Monday evening, 7:30 P.M., Room 53, Science and Engineering Bldg., Bakersfield College, Biostratigraphic Seminar. Dr. Emile A. Pessagno, Jr., U.C. Davis, "Mesozoic Radiolaria".

February 6, 1964: Thursday noon, Rodger Young Auditorium, 963 W. Washington Blvd., Los Angeles: Gregg Davis, Assistant Professor of Geology, U.S.C. will speak on the "Structural History of the Central Klamath Mountains of California", illustrated with color slides.

February 11, 1964: Tuesday evening, Ventura Women's Center, 3451 Foothill Road, Ventura. Coast Geological Society. "Sediments and Structure of the Continental Terrace", by Joseph R. Curray of Scripps Institute of Oceanography, and David G. Moore of U.S. Navy Electronics Lab. Cocktail Hour 6:30 P.M., Dinner 7:30 P.M.

PACIFIC PETROLEUM GEOLOGIST
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PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION
AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 18 | February, 1964 | Number 2

ASSOCIATION ACTIVITIES

LOS ANGELES LUNCHEON MEETING

At the regular Thursday noon luncheon meeting, December 5, 1963 in Los Angeles, John B. Adams of the Jet Propulsion Lab presented a most unusual talk on the scientific aspects of the "Geology of the Moon".

ABSTRACT:

Present geologic knowledge about the Moon has been gained by piecing together highly varied types of information and measurements. 1) Astronomical measurements of the Moon's orbit and figure form the basis for existing geophysical models. 2) Landforms visible on the lunar surface have been compared to natural and artificial features on earth; hypervelocity-impact studies, especially, have furthered understanding of many terrestrial and lunar craters. 3) Remote sensing methods such as photometry, polarimetry, radiometry, etc. provide the basis, for example, for existing models of a dust-covered Moon. 4) Deductive reasoning as to the effects of such processes as solar-wind bombardment and micrometeorite bombardment give further indirect evidence on the nature of the surface. 5) Observation of events occurring on the Moon has provided evidence for gas effusion. The search by space geologists for ways to investigate a planetary body by remote means prior to manned exploration, holds promise of adding to our knowledge of ways to further explore the geology of the earth.

SACRAMENTO VALLEY NEWS

The new officers of the Sacramento Petroleum Association are:

PRESIDENT - Ron Ackley (Exploration Logging)
VICE-PRESIDENT - Wm. Hathaway (Doheny)
SEC.TREAS. - Vince Scurry (Texaco)

This left-wing junta replaces a conservative slate and should lend long range stability (?) to the organization.

The new officers of the Northern California Petroleum Round Table are:

PRESIDENT - Hollis Bertrand
VICE-PRESIDENT - Charles Guion
SEC. TREAS. - Roy Martens

Swiss Holmes will write the drilling summary for this year.

REGISTRATION COMMITTEE MEETING

The first meeting of the Pacific Section Coordinating Committee for Registration of Geologists was held January 21 at the Petroleum Club in Los Angeles.

Committee members present were:

T. A. Baldwin, Chairman, Pacific Section A.A.P.G.
L. F. Adams, Co-Chairman, Pacific Section A.A.P.G.
Elmo W. Adams, Northern California Geological Society
Thomas L. Bailey, Coast Geological Society
Peter W. Gester, San Joaquin Geological Society
Vern Jones, Sacramento Petroleum Association
R. H. Paschall, Legislative Representative, Pacific Section

Also present were:

Glenn Brown, A.E.G.
Harold Clark, A.I.M.E.
Mason Hill, G.S.A.
John F. Mann, A.E.G.
W. L. Matjasic, S.E.G.
J. A. Noble, S.E.C.G.
Richard L. Pierce, S.E.P.M.
Martin Van Couvering, A.I.P.G.
C. W. Carson, A.A.P.G. District Representative
John Elliott, A.A.P.G. District Representative
Spencer Fine, A.A.P.G. District Representative
John Kilkenny, President, Pacific Section

This was a very significant meeting as it marked the first time that representatives from all branches of the geologic profession have assembled together to discuss this important subject.

The A.E.G. representatives announced that their organization proposed to modify Senate Bill 1349 so as not to exclude other geologists from engaging in the practice of engineering geology.However, only A.E.G. members would have the right to use the title "Engineering Geologist." This would eliminate one of our major objections to the bill.

Next deadline, February 27, 1964.

Most of the representatives present indicated that they were in favor of a general law covering all geologists, with an examining board to segregate into specialties, if needed. A poll on the question of regulation indicated that self-regulation would be desirable. If this proved to be too costly, a State board under the Department of Natural Resources would be preferred.

It was agreed that an Inter-Society Committee would be formed to continue the study of the registration problem, and that a meeting would be held in late February if possible.

J. E. Kilkenny

COAST GEOLOGICAL SOCIETY

The Coast Geological Society held its first meeting of the new year on the evening of January 14 at the Ventura Womens Center.

After an introduction of the society officers for the coming year, the preliminary resolution concerning Senate Bill #1349 was read, cussed, and discussed.

A study committee composed of Dr. T. L. Bailey, consultant; Dr. R. M. Norris, UCSB; and W. J. Classen, Jr., Standard Oil Co., presented a brief statement of their objections to the bill. Following a spirited discussion, the resolution was referred back to the committee for further study. On hand to add their advice were John Kilkenny, President of the Pacific Section, AAPG, and Ed Hall, Coastal Rep. to the Pacific Section.

The speaker of the evening, Dr. A. C. Waters, Chairman of the Dept. of Geology, University of California at Santa Barbara, discussed the "Geology of Mt. Rainier National Park".

ABSTRACT:

The basement upon which Mt. Rainier rests is composed of a thick succession of fragmental volcanic rocks, ash flows, and andesitic lavas, later intruded by stocks and sill-swarms of granodiorite and quartz diorite.

The oldest rocks were in large part erupted under water, succeeding units were erupted on land.

Of interest was the fact that both the large breccia zones and the interbedded fine grain layers within the Ohanapecosh formation (Oligocene) exhibit graded bedding, and in some cases, slump features. These volcanic deposits are thought to be turbidity current-type sediments.

The coarse breccia zones grade from non-vesicular angular fragments of dacite or andesite upward into pumice and small fragments at the top.

The thin bedded, fine grain units are mostly pumice, and show grading as well.

Coarse breccias resulted from the quenching and shattering of the dacite and andesite lavas in the sea water. The debris was transported down the flanks of the volcano as a turbidity deposit. Fine grained units are thought to represent ash falls that became a "slurry" upon hitting the surface of the sea, and which later settled and slid down the submarine volcano as turbidites for much greater distances. Occasional mudstones with questionable foraminifera are found in the fine grained units. Similar rock types are present in Japan.

Mt. Rainier itself was built upon a mountainous topography carved from these earlier rocks. The complex interplay of volcanism, glacial erosion, and erosion by avalanches and mudflows is responsible for its present form.

Dendrochronology and C_{14} age dating indicates the last eruptions at Mt. Rainier occurred about 550 years ago.

SAN JOAQUIN GEOLOGICAL SOCIETY

In a recent speech before the San Joaquin Geological Society, Bob Teitsworth, geologist for Occidental Petroleum Corp., spoke on the Lathrop Gas Field.

ABSTRACT:

In terms of gross income, the Lathrop gas field is equivalent to an approximately 60-million-barrel oil field, according to Bob Teitsworth, geologist for Occidental Petroleum Corp. Teitsworth described the field, an Occidental discovery of October, 1961, in a recent speech before members of the San Joaquin Geological Society.

Occidental not only found the gas field, which is located near Stockton, but also has dominated the development, serving as operator for each of the 18 wells completed to date. The company is presently completing a 19th well and plans another drilling job soon. The company controls over 90 per cent of the field's reserves, which are estimated -- by several independent sources -- from 578 to more than 700 billion cubic feet of gas, enough to place the field second only to Rio Vista in the hierarchy of California gas fields.

Limits of the field have been considered defined since about the first of this year; seven dry holes contributed to that unpleasant task. Proved area is approximately 2,400 acres. The pay at Lathrop is in the Cretaceous E section, with nine zones proved productive. They're named according to original bottomhole pressures, running from 3,600 psi. to 4,600 psi., with only 4,100 and 4,500 lacking.

In addition to the Cretaceous E zones, three shallower zones have been proved productive between 4,000 and 6,325 feet, including the Blewett and Upper and Lower Tracy zones. They're all behind pipe at the moment.

Of 18 completed wells, 12 are dual-zone completions, 6 singles. Initial productions have ranged for the duals from 23 to 42 million cubic feet per day. In terms of gas production per well, Lathrop's wells probably outrank any others in the state, averaging at last report something like 6 million cubic feet per day per well. Single wells have taken in as much as 600 net feet of pay sand.

Occidental completed the discovery well in October, 1961; in January 1963, gas began to move to market through a 12-inch line to Tracy. Delivery to market was accomplished in what rates as relatively fast time, considering size of the field and the delays that normally occur between the time of gas discoveries and the hookup of fields to market.

At the moment, Pacific Gas & Electric Co. is taking about 100 million cubic feet per day of gas from the field. The average for the year is expected to run around 50 million cubic feet per day. If wells were to be opened up and line capacity increased, it's probable Lathrop could put out between 300 and 400 million cubic feet per day.

Discovery of the Lathrop gas field stands in part at least as a monument to going deeper. Before Occidental appeared on the scene, two other companies had drilled the structure. One venture was a 5,839-foot duster drilled by Texaco, Inc., in 1937; the other a 4,400-foot dry hole abandoned by Marathon Oil Co. in 1947. Both were drilled at a time when wildcatters weren't thinking of the Cretaceous E zone sands as an objective. It remained for Occidental to find the sands productive at depths from 6,800 to 8,700 feet.

SAN JOAQUIN GEOLOGICAL SOCIETY

On Tuesday evening, January 14th, members of the San Joaquin Geological Society heard Mr. J. Q. Anderson, Consultant, speak on the "Oil and Gas Possibilities of the Puget Sound Lowland, Western Washington".

ABSTRACT:

Approximately 1500 square miles of prospective oil and gas territory lie between the foothills of the Cascade mountains and the vicinity of Seattle and Tacoma in western Washington. The area forms a portion of the Puget trough in which as much as 20,000 feet of sediments were deposited during Tertiary time.

The marine Raging River formation of middle Eocene age constitute the oldest exposed rocks. At least 3000 feet of massive sands and shales can be measured in outcrop. Some 12,000 feet or more of non-marine arkosic sands, shales and coal interbeds known as the Puget Series of upper Eocene age overlie the Raging River formation. The series is divided into the Tiger Mountain, Tukwila and Renton formations in ascending order. Several thousand feet of marine tuffaceous sands and shales of Oligo-Miocene age known as the Blakeley formation complete the Tertiary sequence in the Puget Sound lowland. Pleistocene glacial deposits which have obscured much of the Tertiary geology are extensive, throughout the subject area.

A series of roughly parallel northwesterly trending compressional folds can be partially mapped. Axial trends vary in length from 12 to 20 miles with flanks having an average width of 5 miles. Only two of these folds have been partially wildcatted to date. Drilling has proven one fold, the Kummer anticline, to be without closure. However, numerous oil and gas shows were logged. Two tests were drilled in recent years on the south dome of the Lake Tapps anticline. Adverse mechanical conditions may have precluded commercial success in these ventures. Although impressive oil and gas sands were encountered, the drill did not penetrate to the marine Raging River formation.

Several known structures where the depth to the Raging River formation is less than 10,000 feet await the drill of the aggressive wildcatter. The highly significant oil and gas shows together with the thick zones of massive, arkosic reservoir sands afford high promise for the discovery of major reserves in the Puget Sound lowland.

NOTICE OF LECTURES BY AGI VISITING INTERNATIONAL SCIENTIST AT THE UNIVERSITY OF SOUTHERN CALIFORNIA

Professor Peter C. Sylvester-Bradley, Professor of Geology at the University of Leister, England, will present three lectures at the University of Southern California as follows:

1. THE NATURE OF EXTRA-TERRESTRIAL LIFE, Tuesday, 12 noon, March 31, 1964 in Room 133, Founders Hall.

2. EVOLUTION AND THE DESTINY OF MAN, Part 1, POPULATION EXPLOSIONS IN GEOLOGIC HISTORY, Tuesday evening, 8 P.M., March 31, 1964, Room 133, Founders Hall.

3. EVOLUTION AND THE DESTINY OF MAN, Part 2, THE FURTHER EVOLUTION OF HUMANISM, 8 P.M., April 1, 1964, Room 133, Founders Hall.

Dr. Sylvester-Bradley is an outstanding geologist, with areas of specialization in paleontology, stratigraphy, and related aspects of these subjects. In recent years, he has devoted considerable attention to researches involving the source of oil, origin of life, evolution of oysters, extinction and evolution and the nature of extra-terrestrial life.

These lectures are open to the graduate students, undergraduate students and the public.

WORK CALENDAR REVOLUTIONIZED

Jean B. Senteur de Boue submits the following calendar for increased office efficiency.

THIS MONTH						
GEN	FRI	FRI	THU	WED	TUE	MON
8	7	6	5	4	3	2
16	15	14	13	12	11	9
23	22	21	20	19	18	17
31	30	29	28	27	26	24
38	37	36	35	34	33	32

1. Every job is a rush; these jobs should have been out yesterday. With this calendar, plans may be sent on the 7th and received on the 3rd.

2. Everyone wants their jobs out on Friday - so there are two Fridays every week.

3. There are several extra days at the end of the month for those end-of-the-month rushes.

4. Inquiries for job completion and rush jobs should be promised out on the 1st, 10th, or 25th as these dates do not appear on this calendar.

5. There are no non-productive Saturdays and Sundays.

6. There's a new day each week - General Day. On this day plans may be revised or redrawn without loss of time. For instance, a change on the 8th may reach you on the 5th, but you may make the change even though plans were mailed on the sixth. Everyone will be happy and we will have an ulcer-free office.

CHANGE OF ADDRESS

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

GANOPOLE, GERALD
4223 Westwood Drive
Anchorage, Alaska 99503

SHELDON, THEODORE D.
3081 South Krameria St.
Denver 2, Colorado

FEDER, HARRY R.
P. O. Box 298
Mercury, Nevada

TARBET, L. A.
2349 Prancer Street
New Orleans, La. 70114

BARTOSH, EDMUND J.
13370 St. Andrews Dr.
Seal Beach, Calif. 90740

BISHOP, BRADFORD
1810 Fair Oaks Ave.
Suite 207
So.Pasadena,Calif. 91030

NAIR, JACK D.
Phillips Petroleum Co.
3600 Wilshire Blvd.
Los Angeles, Cal. 90005

ONEY, JACK W.
Sunset International
Petroleum Corporation
Sunset Inter. Bldg.
400 S. Beverly Drive
Beverly Hills, Calif.

GREEN, CHARLES F.
Box 1347
Bakersfield, Calif.

HOFFMAN, ROBERT D.
1601 "H" St.,Room 122
Bakersfield, Calif.

BROWN, GEORGE E.
The Ohio Oil Co.
P.O.Box 6036, C.C.C.
Sacramento 21, Calif.

COOK, RUFUS E.
Iranian Oil Exp. and
Production Company
Gachsaran
Abadan, South Iran

GATES, JOHN P.
Gulf Oil Corp.
P.O. Box 1278
Anchorage, Alaska

WHEATLEY, C. Y.
Superior Oil Co.
Box 600
Denver, Colorado

CEBULL, STANLEY E.
2110 N.E. 89th St.
Seattle, Wash. 98115

KNIGHT, FRED G.
Ohio Oil Company
539 S. Main St.
Findlay, Ohio

KRIBBS, GEORGE R.
5103 Earl Drive
La Canada, Calif.

CORDOVA, SIMON
4014 Stevely Ave.
Apt. 8
Los Angeles,Cal. 90008

GREEN, LAURENCE A.
1010 Wilshire Blvd.
Los Angeles 17, Calif.

HANSEN, DAISEY
330 Naomi St.
Arcadia, Calif.

MULVANE, SONJA B.
11649 Sunshine Terrace
Studio City, Calif.

GREENE, R. G.
Great Basins Pet. Co.
1011 Gateway West
Century City,
Los Angeles, Calif. 90067

PYLE, HOWARD C.
Suite 645
550 S. Flower Street
Los Angeles 17, Calif.

BERRY, JOHN F.
4020 Fountain Street
Long Beach, Calif.90804

SCHROETER, JOHN D.
608 Palomar Road
Ojai, Calif.

TAGGART, L. T.
Humble Oil & Ref. Co.
2001 "O" Street
Bakersfield, Calif.

LAVERY, JOHN P., JR.
2616 Sara Way
Bakersfield, Calif.

DOBLER, IDA M.
1106 Redwood Lane
Davis, Calif. 95616

CHAPPUIS, LOUIS C.
P. O. Box 5341
Tucson, Ari. 85703

HILL, Melvin J.
Gulf Oil Corp.
P.O. Box 1166
Pittsburgh, Pa. 15230

ARLETH, KARL H.
P. O. Box 1451
Lafayette, Louisiana

ADAMS, ELMO W.
747 Winchester Drive
Burlingame, Calif.94010

EDWARDS, CHARLES D.
1711 1st City Natl.
Bank Bldg.
Houston, Texas 77002

STODDARD, JOHN N.
340 Lamar Ct.
Denver, Col. 80226

CARTWRIGHT, LON D.
1141 Arden Drive
Pasadena, Calif.

EDWARDS, EVERETT C.
255 Evening Canyon Rd.
Corona del Mar, Calif.,
92625

STACY, D. M.
Royalty Service Corp.Ltd.
658 S. San Vicente Blvd.
Los Angeles 3, Calif.

WEBSTER, FRANK L.
15944 Lakefield Dr.
La Mirada, Calif.

WATERMAN, DOUGLAS R.
Box 3317
Ventura, Calif.

HACKEL, OTTO
P.O. Box 968
Bakersfield, Calif.

PAYNE, MAX B.
1613 Country Club Dr.
Bakersfield, Cal.93306

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Bakersfield, Calif.

HARRINGTON, GEORGE L.
Stanford University
School of Earth Sciences
Stanford, Calif.

KILMER, FRANK H.
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GARDNER, ROBERT C.
571 N. Hermosa Ave.
Sierra Madre, Calif.

ROGERS, DONALD A.
Humble Oil
P.O. Box 612
Bakersfield, Calif.

LUDWIG, C. F.
P. O. Box 486
Lucerne Valley,Calif.

MARIANOS, ANDREW W.
2001 "O" Street
Bakersfield, Calif.

HUTCHESON, ROBERT B.
800 Cherry Hills Dr.
Kern City, Cal. 93309

SILCOX, JOHN H.
3518 Fairmount Street
Oildale, Calif.

ARNDT, JOE
Richfield Oil Corp.
P.O. Box 147
Bakersfield, Calif.

HURNDALL, JOHN P.
226 Via Lido Nord
Newport Beach, Calif.

O'BRIEN, JEROME J.
Box 3100 Terminal Annex
Los Angeles 54, Calif.

O'NEILL, THOMAS R.
P. O. Box 999
Bakersfield, Calif.

HARDING, TOD P.
Humble Oil & Ref.Co.
2001 "O" Street
Bakersfield, Calif.

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

W. F. BLAZE
530 North Dexter
La Habra, Calif.

PERSONS, PHILLIP E.
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136 E. Camino
Beverly Hills, Calif.

GREGERSEN, ALBERT
843 Knapp Drive
Santa Barbara, Calif.

VAN ALEN, WILLIAM
P.O. Box 779
Anchorage, Alaska 99501

WELLS, MELVIN
Western Geophysical Co.
923 North La Brea
Los Angeles 38, Calif.

CALDWELL, Dave L.
2751 Via Rancheros
Fallbrook, Calif.

EDWARDS, CHARLES E.
Standard Oil Company
225 Bush Street
San Francisco, Calif.

KOCH, HEINRICH
1841 Highland Oaks
Arcadia, Calif.

FELSTED, HUGH HERBERT
Pauley Petroleum, Inc.
1000 Santa Monica Blvd.
Los Angeles 67, Calif.

WOLF, M. W.
California Research Corp.
P.O. Box 446
La Habra, Calif. 90631

BROWNLEE, ROBERT L.
Sunset International
Petroleum Company
400 South Beverly Drive
Beverly Hills, Calif.

REYNOLDS, SARGENT T.
1316 Jimeno Lane
Woodland, Calif.

STOMMEL, H. E.
Standard Oil Company
225 Bush Street
San Francisco, Calif.

PERSONAL ITEMS

The Siegfried Hamann family (Shell Oil Co.) welcomed their 8th child and 7th boy on January 14.

Jim Saunders, Tidewater, is busy digging ditches and pouring cement for a new addition to his home. (Humble merger be damned!)

Harry Nagle, Standard Oil Co., recently put on an exhibition of how to fall off your desk chair while talking on the telephone. He continued the conversation without even a pause, showing one of our newer geologists, John Koch, what is meant by savoir-faire.

Earl David, Shell scout has transferred from Seattle to Anchorage. Seattle winters probably weren't so bad after all.

Dana Braislin of Union in Olympia, Washington, made a quick trip to his Los Angeles office in January.

The greatest swindle of all time has just been perpetrated by Sig Snelson, Shell Seattle. His offer of $6000 less than the asking price on a house was accepted by the seller. Now Sig is nervous as a cat, having acquired a mortgage and wondering if perhaps he should have offered even less.

Dee Molenaar, State Division of Water Resources, Olympia, Washington, was seen and heard lecturing mountaineers in the Philadelphia-Washington D. C. area last fall. His exploits as a mountain climber in the Northwest and Himalayas continues to pay off.

Pete Grimstad, Shell Seattle, has returned from a trip to Norway where he and his family visited his folks. Their itinerary also included Holland, Denmark, and Sweden. Only a true Norwegian could possibly save enough money for such an extended vacation.

Anyone want to buy a fold boat? Immediately after purchasing one, Bill Burke, geophysicist, Shell Seattle, was transferred to Los Angeles Don't sell it, Bill - there are times you will need it to get to the LA office.

The comings and goings between Seattle and Alaska continue. Ken Clark, Shell paleontologist, spent the fall in the northland and his replacement, Max Greene, expects to depart to the land of the midnight momentarily.

Dick Emmons, Shell Seattle, has been spending THE winter months on a special assignment in Houston. He apparently has his motel swimming pool all to himself. The Texans are awed by this fool who swims all winter.

Six months "vacation" in Florida was the recent plight of Gus Armstrong, Shell Seattle. Since returning, he has moved into a new home in the suburbs that has a fireplace larger than some homes. During construction, Gus panicked a bit at the size of the fireplace, but has now decided he was right at the start.

Lee Heaton, geophysicist, Shell, and miracle man of the Seattle YMCA, won a 25-pound turkey recently. Over a given period, the Y offered a chance on the bird for every mile a man ran. It has now been divulged that Lee had 32 chances. How desperate can you get?

Jim Tasker, Standard-Anchorage, was a recent visitor to the Oildale Office. Jim and his family have become ardent and skilled skiers -- no broken bones to date.

Greg Stanbro, Standard-San Francisco, brought his "City" golf handicap to the Valley recently and had to buy an extra hand-bag to take back his winnings. Bob Ortalda, Bob Lindblom and John Tucker are eagerly awaiting his return.

Frank Sayers, Standard-Oildale, will soon be a cross-valley commuter replacing Jim Kistler in Taft.

Bill Godsey, Standard-Avenal, is being transferred to the Oildale Office. Welcome back Bill.

Frank B. (Hop) Conger, has replaced C. W. Prewett, as District Geologist of the Bakersfield District, for the Shell Oil Company. Conger comes from the Los Angeles office. Prewett, has been given an assignment in the New York head office.

Bill D'Olier, recently with the Reserve Oil and Gas Company in San Francisco, has joined the Occidental Petroleum Company. Bill will be assistant to the vice president, Eugene Reid, Jr.

Bill Whitley, with Otto Hackel and Associates, has returned from a year of duty in Thailand. Bill had his family with him, and reports that they all enjoyed their stay over there. Bill is currently making arrangements to return to Denver, Colorado, where he will continue managing the exploration program for Otto Hackel and Associates.

John E. Szatai joined Signal January 16th as Exploration Manager for Europe. He was formerly with Richfield in foreign work. He will leave for Europe in a couple of weeks. His new address is: Signal Europe 143 Ave. de Neuilly, Neuilly sur Seine, France.

Andy Vidos has been stricken with a liver ailment and recently had a week sojourn in the hospital. His nurse's aid told him exasperatedly on one occasion "there's two ways to take your temperature and you'll find the other way if you don't shut your mouth!"

Henry Dawson, Humble Oil Co., Bakersfield Scout, has not decided if that new company car is as good as the last one. Last report from a trip over the grapevine was that the six cylinder engine lost out to a strong head wind. Guess he will have to plan his trips on windless days only.

Ron Hart became engaged over the holidays. Too much Holiday Cheer can be a dangerous thing.

Lowell Garrison is the chairman of the upcoming Sacramento Geological Society field trip.

Dave Nixon (U.C. Davis) has taken a position of Engineering Geologist with the Department of Water Resources.

Al Escalante and Tom Redin both of Union's Santa Fe Springs office have just finished moving into new homes, Al in Monterey Park and Tom in Corona.

Oil operators in Anchorage just got used to talking freely, following Scout Joe Dockwiller's departure last year, and now comes Earl David, Shell Scout transferred up from Seattle!!!!

Chuck Johnson, Union Oil Co., has recently joined Union's geological staff in Anchorage. Chuck's previous assignment was in Santa Maria.

Dick and Barbara Lyon, Union, Anchorage, their third child, a son, Craig Howard. Born January 1, 1964 (!), 6 pounds 1/2 ounce.

Having attended all recent investigations and carefully monitored the testimony, Jean B. Senteur de Boue has decided to expand his already extensive consulting services by adding a "Professional Testifier" Department. This will eliminate the need for expensive preconstruction geologic surveys by being able to unequivocally predict the cause of dam disasters, slides, etc., immediately after the event.

SHAKER CUTTINGS FROM THE BOTTOM OF THE PIT

There are more Cadillacs per capita wandering around the Placerita--Newhall area than any other place in the State. Counted ten of same in two hours one day!

Now comes the list of new offspring -- Received the following telegram: "NUMBER THREE COMPLETED 1:15 A.M. JUNE 12 FOR 8 LBS., 15 1/2 OZ NET USUAL CUT TO FOLLOW. STOP. OPERATOR SOUND. STOP. GEOLOGIST WEARY. BEST REGARDS, LOWELL REDWINE.

Speaking of beaches and stuff-like-that-there, Irv Schwade was about to sue the U.S. Government for selling him a limp life-raft. Then he discovered he just didn't have enough air in the darned thing.

Harry Stoltz turned down a temporary Navy assignment--mostly because it was for eight months plus. The plus was what had him worried!

The Alaska Expeditionary Forces of the Union Oil Company and the Ohio Oil Company are now in Los Angeles. Dick Shelton and Gene Vallat of the Ohio, both first year men, report that Alaska is beautiful country to fly over. John Hazzard, a three year man, and Gene Borax, a two year man, are not saying one way or the other.

The A. E. Bell Corp. actually declared a holiday for all employees when they brought in a well at South Cuyama.

W. S. W. Kew is reported to have purchased a winery, no less! Conducted tours in the future???

Did you read where the Shell Oil Company has been "de-Inc'd."? This comes as quite a shock to many of us!

Vince Vandiver went back to school several weeks ago---just for a day or two. Seems he just happened to be passing through Columbia, Missouri on the day of the big game with Oklahoma. Anyhow, he donned his rooter's cap and sat with the members of his fraternity--on the 50 yard line! This I would like to see.

This one I like: Seems as how Hunter Yarborough, Joe Hudson and other Humble boys decided to have a weight-losing contest. The pre-contest weighing-in ceremony was uneventful except for the fact that Yarborough and Hudson seemed to be heavier than they appeared. Further investigation disclosed that their pockets were loaded with paper weights!!! All bets are off!

The Rincon office of the Richfield Oil Corp. (where "sea" meets the "sub-sea") was recently burglarized. The calendars are missing!

Have you seen the latest Rapid Blue Print calendar--without the calendar?

As the direct result of Stanford losing to Cal in the "big game", Frank Hornkohl was obligated to sing the California fight song from the clock tower in Bakersfield at high noon. To make a long story even shorter--he paid off on schedule, although he stopped traffic with his booming bass. The winner--who else but Tommy Fitzgerald.

Vol. 3, Nos. 7-12, 1949.

CALENDAR

February 11, 1964: Tuesday evening, El Tejon Hotel, Bakersfield San Joaquin Geological Society "Oceanography", A New Frontier" by Robert Herron. Cocktail Hour 6:30 P.M., Dinner Hour 7:30 P.M.

February 17, 1964: Monday afternoon, 4:00 P.M., Room 320 Geology Bldg., Stanford University, Dr. Donald L. Blackstone, Jr., University of Wyoming, "Some Aspects of Crustal Behavior in the Central Rocky Mountain Region".

February 24, 1964: Monday afternoon, 4:00 P.M., Room 320 Geology, Stanford University. Dr. Donald B. McIntyre, Pomona College, "X-Ray Fluorescence, New Tool for the Petrologist".

March 2, 1964: Monday afternoon, 4:00 P.M., Room 320 Geology, Stanford University. Professor Evan Just, Stanford, "Minerals in a Teeming World".

March 2, 1964: Monday evening, 7:30 P.M., Bakersfield College Science and Engineering Bldg., Room 53, Biostratigraphic Seminar. Dr. Siemon Muller, Stanford, "Geologic Field Procedures".

March 5, 1964: Thursday noon, Rodger Young Auditorium, 963 W. Washington Blvd., Los Angeles. Speaker and subject to be announced.

April 9-10, 1964: A.A.P.G., S.E.G., S.E.P.M. Pacific Sections Annual Meeting, Biltmore Hotel, Los Angeles.

BIBLIOGRAPHY OF RECENT PUBLICATIONS

U. S. GEOLOGICAL SURVEY

Professional Paper 372-G: Effects of drought along Pacific Coast in California, by H. E. Thomas and others .....$ .60

Professional Paper 388-A: Surficial geology and geomorphology of the Lake Tapps quadrangle, Washington, by D. R. Crandell.....$1.75

Professional Paper 414-D: The Sierra Nevada batholith--a synthesis of recent work across the central part, by P. C. Bateman, L. D. Clark, N. K. Huber, Jr., and C. D. Rinehart.....$1.25

Professional Paper 475-A: Summary of investigations, 1963 (Geological Survey Research 1963). $2.00

Professional Paper 475-C: Geological Survey Research 1963: Short papers in geology and hydrology, articles 60-121, 1963.....$2.00

Water Supply Paper 1619-S: Geology and groundwater appraisal of the Naval Air Missile Test Center area, Point Mugu, California, by R. W. Page $1.00

Circular 419: The definition of known geologic structures of producing oil and gas fields, by E. A. Finley, (1960). Reprint.....Free

Circular 480: Preparation of water sample for carbon - 14 dating, by H. R. Feltz and B. B. Hanshaw. 3 pages. .....Free

MAPS

GQ 248: Geology of the Manzanita Lake quadrangle, California, by G. A. Macdonald $1.00

GP-440: Aeromagnetic map of the Topopah Spring quadrangle and part of the Bare Mountain quadrangle, Nye County, Nevada, by G. R. Boynton and J. L. Vargo.....$ .50

I-388: Reconnaissance geologic map of Chichagof Island and northwestern Baranof Island, Alaska, by R. A. Loney H. C. Berg, J. S. Pomeroy and D. A. Brew .....$ .75

NEVADA BUREAU OF MINES

MAPS

Map 20: Preliminary geologic map of the Diamond Springs quadrangle, Nevada, by E. R. Larson and John F. Riva .....$ .75

CALIFORNIA DEPARTMENT OF WATER RESOURCES

Bulletin No. 91-7: Data on water wells and springs in the Chuckwalla Valley area, Riverside County, California.

Bulletin No. 91-8: Data on water wells and springs in the Rice and Vidal Valley areas, Riverside and San Bernardino Counties, California.

JOURNAL OF GEOPHYSICAL RESEARCH, vol. 68, no. 20, October 15, 1963.

Simulation of the evolution of drainage--basin networks with a digital computer, by Hilbert Schenck, Jr.

Structure of the crust and Upper Mantle of the western United States, by L. C. Pakiser.

Crustal structure in Nevada and southern Idaho from nuclear explosions, by L. C. Pakiser and D. P. Hill.

Crustal structure in Eastern Colorado from seismic-refraction measurements, by W. H. Jackson, S. W. Stewart and L. C. Pakiser.

Crustal structure along the coast of California from seismic-refraction measurements, by J. H. Healy.

Crustal structure from San Francisco, California, to Eureka, Nevada, from seismic-refraction measurements, by Jerry P. Eaton.

Seismic-refraction measurements of crustal structure between Santa Monica Bay and Lake Meade, by John C. Roller and John H. Healy.

JOURNAL OF GEOPHYSICAL RESEARCH, vol. 68, no. 21, November 1, 1963.

Sediment sound velocity measurements made in situ from bathyscaph TRIESTE, by Edwin L. Hamilton.

Seismic measurements on the ice sheet of the Antarctic Peninsula, by John C. Behrendt.

Seismicity of the South Pacific Ocean, by Lynn R. Sykes.

BULLETIN OF THE AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS. vol. 47, no. 11, November 1963.

Chromatographic analysis of gases from soils and vegetation, related to geochemical prospecting for petroleum, by Gerould H. Smith and Max M. Ellis.

Cretaceous of Vancouver, British Columbia, Canada, by C. H. Crickmay and S. A. J. Pocock.

COMPASS, vol. 39, no. 1, Fall 1961

Desert pavement, by Robert A. Ward.

Criteria for field recognition of Turbidites, by Richard B. Wells.

SCIENCE, vol. 142, no. 3591, 1 November 1963.

Suspended clay in a water sample from the deep ocean, by J. J. Groot and M. Ewing.

Lealid Conchostracan zone in Antarctica and its Gondwana equivalents, by G. A. Doumani and Paul Tasch.

SCIENCE, vol. 142, no. 3596, 29 November 1963

Sea level and climate of the past century, by W. L. Donn and L. M. Shaw.

SCIENCE, vol. 142, no. 3597, 6 December 1963

Miocene-Pliocene boundary in the Philippines as related to Late Tertiary stratigraphy of deep-sea sediments, by O. L. Bandy.

Phosphate glass electrode with good selectivity for alkaline-earth cations, by A. H. Truesdell and A. M. Pommer.

SCIENCE, vol. 142, no. 3598, 13 December 1963.

Carbonate rocks: Cleaning with suspensions of hydrogen-Ion exchange resin, by Stephen F. Percival, Jr., Everett D. Glover and Lee B. Gibson.

WORLD OIL, vol. 157. no. 6, November 1963

Detection of gas in drilling muds--value and limitations, (Part 1) by Richard F. Mercer.

Arctic oil search gains momentum, by Joseph A. Kornfeld.

WORLD OIL, vol. 157, no. 7, December 1963

Cook Inlet gas finds are important, by K. Davison

Detection of gas in drilling mud--value and limitations, by Richard F. Mercer.

PACIFIC PETROLEUM GEOLOGIST
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PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION
AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 18 | March, 1964 | Number 3

ASSOCIATION ACTIVITIES

GROVER E. MURRAY
NEW A.A.P.G. PRESIDENT

Grover E. Murray, Vice-President and Dean of Academic Affairs of Louisiana State University, will become the 48th president of the American Association of Petroleum Geologists on May 21, 1964, as announced by J. C. Sproule, president of the Association. Serving with him on the 1964-65 Executive Committee of the world's largest geological organization will be: William H. Curry, Jr., independent geologist, Casper, Wyoming, as vice-president; J. C. Sproule of J. C. Sproule & Assoc., Calgary, as past-president, George C. Hardin, Jr., a partner of Hardin & Hardin, Houston, Texas, as Secretary-Treasurer; and John C. Hazard, Union Oil Co. of California, Los Angeles, in a re-elected term as editor.

The new slate of officers will assume the responsibility of directing the 15,000 member organization at the close of the 49th annual meeting of the Association to be held at the Royal York Hotel in Toronto, Ontario, Canada, May 18 through 21. The convention will be the first A.A.P.G. convention ever held outside of the United States.

Retiring members of the present A.A.P.G. Executive Committee are past-president Robert E. Rettger, (retired) Sun Oil Co., Dallas; vice-president, Thomas H. Philpott, LaSalle Oil Co,, New Orleans; Secretary-Treasurer Robert E. King, American Overseas Petroleum Ltd., New York.

PACIFIC SECTION ELECTION

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

PRESIDENT:	Spencer F. Fine	Richfield
VICE PRESIDENT:	Gordon R. Bell	Gulf
SECRETARY:	John L. Elliott	Humble
TREASURER:	Robert N. Hacker	Lloyd Corp.

PACIFIC SECTION - A.A.P.G., S.E.G., S.E.P.M. ANNUAL MEETING - APRIL 9 and 10, 1964 BILTMORE HOTEL, LOS ANGELES, CALIFORNIA

The 1964 Joint Annual Meeting of the Pacific Sections A.A.P.G., S.E.G., and S.E.P.M. will be held April 9 and 10 in Los Angeles at the Biltmore Hotel. General Chairman of the convention is Bill Kennett, ably assisted by Jack Nair.

Bill has lined up a interesting and varied technical program on subjects of local as well as broad interest. Principal speakers of the two-day meeting are J. C. Sproule, A.A.P.G. National President; A. C. Rubel, President, Union Oil Company; W. E. Grant, U. S. Bureau of Land Management and Dr. F. B. Van Houten, Princeton University.

TENTATIVE PROGRAM

THURSDAY MORNING - JOINT AAPG - SEG

Welcoming Address
John E. Kilkenny
Union Oil Company of California

Certification and Registration and the AAPG
J. C. Sproule, President
American Association of Petroleum Geologists

What is AIPG
Martin Van Couvering, President
American Institute of Professional Geologists

An Island of Freedom
Thomas A. Baldwin
Humble Oil & Refining Company

Round Table Discussion

JOINT AAPG - SEG - SEPM ANNUAL LUNCHEON

The AAPG - Past, Present and Future (Tentative)
A. C. Rubel, President
Union Oil Company of California

PACIFIC PETROLEUM GEOLOGIST

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Coast	Willard Classen
Los Angeles	Mike Maxwell
Northwest	Ralph Rudeen
Sacramento	Sargent T. Reynolds
San Francisco	Gordon Oakeshott
San Joaquin	Orrin Wangsness
Membership Secretary	Pat Metcalf

Next deadline, March 27, 1964

THURSDAY AFTERNOON - JOINT AAPG - SEPM

San Andreas Fault Cross-Sections - Interim Report, AAPG Committee for the Study of Lateral Faulting in California.
Max B. Payne
Norris Oil Company

Offshore Exploration and Developments - Southern Santa Barbara County.
Robert F. Herron
American Machine & Foundry Company

Geology of a Portion of the Continental Shelf off the Central Coast of Oregon.
John V. Byrne, Speaker
Neil J. Malone
Oregon State University

Geology and Education.
John A. Mann
Standard Oil Company of California, Western Operations, Inc.

Stratigraphy and Oil Possibilities of the Mesozoic Rocks in the Kandik Basin, Alaska.
Earl Brabb
United States Geological Survey, Menlo Park

The Regional Correlation of Pacific Coast Oligocene Microfaunas.
W. Thomas Rothwell, Jr.
Richfield Oil Corporation

Round Table Discussion

A. C. Rubel, President, Union Oil Company to be featured speaker at the joint AAPG-SEG-SEPM Annual Convention luncheon Thursday, April 9th at the Biltmore Hotel

THURSDAY EVENING

SEPM ANNUAL DINNER MEETING

Some Unsolved Problems in the Origin of Redbeds.
F. B. Van Houten, Princeton University, Visiting Professor 1964
University of California, Los Angeles

FRIDAY MORNING - JOINT AAPG - SEG

A Background and History of the Outer Continental Shelf Mineral Leasing Program.
W. E. (Bill) Grant
Bureau of Land Management, United States Department of Interior

Onshore and Offshore Developments in Washington.
Donald M. Ford
Department of Natural Resources, Olympia, Washington.

Migration and Segregation of Oil and Gas.
S. R. Silverman
California Research Corporation

Origin of Nitrogen Gas and High Pressures in the Sacramento Valley, California.
Frederick A. F. Berry
University of California, Berkeley

Round Table Discussion

Business Meeting

COLLEGE LUNCHEONS

FRIDAY AFTERNOON - JOINT AAPG - SEG - SEPM

Developments in Alaska in 1963
John M. Sweet
The Atlantic Refining Company

The Deep Structure of Continents
Gordon J. F. MacDonald
Institute of Geophysics and Planetary Geophysics
University of California, Los Angeles

Geology and Development of the Lathrop Gas Field, San Joaquin County, California
Robert A. Teitsworth
Occidental Petroleum Corporation

The 29D Monarch & 10-10 Pool: A "Sleeper" in the Old Midway-Sunset Field
James O. Kistler, Speaker
Darrel C. Gallear
Standard Oil Company of California, Western Operations, Inc.

River of Sand
Robert F. Dill
Sea Floor Studies, U. S. Navy Electronics Laboratory

Reflection Techniques Suggest the Nature of Deep Ocean Sediments
Donald M. Blue
Western Geophysical Company of America

S.E.G. AND S.E.P.M. TECHNICAL SESSIONS

Thursday afternoon April 9th the Society of Exploration Geophysicists will hold a technical session with emphasis on offshore seismic surveys and digital seismograms. Friday morning April 10th the Society of Economic Paleontologists and Mineralogists will hold a technical session on a variety of stratigraphic subjects.

CONVENTION COCKTAIL PARTY

Convention-goers of the joint AAPG-SEG-SEPM Annual Meeting will converge on the Renaissance Room of the Biltmore Hotel Thursday evening April 9th from 5:00 PM to 7:00 PM following the first day's talks. Cocktails and hors d'ourvs will be served.

The cocktail party will replace the annual Dinner Dance usually held Friday evening and will be included in the registration fee.

CLASSIFICATION COMMITTEE

The A.A.P.G. Classification Committee and the Conservation Committee have announced their new list of California fields and pools effective January 1, 1964. Copies may be obtained by contacting M. C. Barnard, Jr., Richfield Oil Corporation, 555 S. Flower St., Los Angeles, or by phoning MAdison 9-4111, Ext. 2312.

Members of the Classification Committee are:

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

REGISTRATION COMMITTEE MEETING

A second meeting of the Committee for Registration of Geologists was held February 20, 1964, at the Petroleum Club, Bakersfield, California. This committee consisted of representatives from the Pacific Section Coordinating Committee and representatives from other geological organizations who had attended the first meeting held in Los Angeles on January 21, 1964.

In attendance were:

T. A. Baldwin, Chairman	- A.A.P.G.
Martin Van Couvering	- A.I.P.G.
Mason L. Hill	- Geological Society of America
James A. Noble	- Society of Economic Geologists
Carlton M. Carson	- Coast Geological Society
R. E. Kropschot	- Society of Exploration Geophysicists
P. W. Gester	- San Joaquin Geological Society
John C. Manning	- San Joaquin Geological Society and A.E.G.
Richard L. Pierce	- S.E.P.M.
David Martin	- San Joaquin Geological Society
John E. Clare	- San Joaquin Geological Society
Henry Lynch	- Attorney
Wesley G. Bruer	- Pres., San Joaquin Geological Society
John Kilkenny	- A.A.P.G. - also representing Los Angeles Petroleum Geologists

Pete Gester and his San Joaquin Geological Society Legislation Committee (Dave Martin, John Manning, John Clare) and the able legal counsel of Henry Lynch presented a preliminary draft of a bill to register Professional Geologists. Some changes were made and a revised draft will be sent to committee members.

It was decided that further committee work should be carried on under the auspices of the A.A.P.G. in order to present a unified front of all geological organizations in California.

Provisions of the proposed bill will be presented to A.A.P.G. members at the Pacific Section Convention, April 9-10 at the Biltmore Hotel in Los Angeles.

A.A.P.G. EXECUTIVE COMMITTEE MEETING

The Executive Committee of the A.A.P.G. were among those in attendance at the Sixth Annual Regional Meeting of the Southwestern Federation of Geological Societies (S.W.F.G.S.), held in Midland, January 29-February 1, 1964. The Committee consisting of President J. C. Sproule, Past President R. E. Rettger, Vice-President Thomas H. Philpott, Editor John C. Hazard and Secretary-Treasurer R. E. King took advantage of the occasion to hold the fourth meeting of their year in office, to discuss the business of the Association.

Following the Technical Program, Mr. Sproule pointed out that the general theme of the Midland Meetings, subsurface mineral fluid studies in relation to the oil business, is a new departure as a petroleum geologist's symposium and points up the increasing awareness of the petroleum geologist that closely related geological studies

are of equal importance to the study of the nature and occurrence of oil itself. He also expressed the opinion of the Executive Committee that this symposium was a real credit to the Southwestern Federation and that the A.A.P.G. is most pleased at the prospect of being able to publish the results in a special volume. The papers presented are largely from local sources, but the application and use made of the conclusions will be of potential value on a worldwide basis.

With respect to the deliverations of the Executive Committee President Sproule commented briefly on the several problems that face the members of the A.A.P.G. Some of the more pressing problems have to do with publication of technical papers and the professional needs of the membership. Mr. Sproule advised that the Executive Committee and Tulsa Headquarters Staff are well aware of the changing requirements due to evolutionary changes in the profession and industry. The A.A.P.G. plans to do everything possible to meet those needs. One of the more pressing problems is to bring to the attention of the general public the scientific and professional contributions that have been made and are being made by petroleum geologists, and the position they occupy among other professional scientists. This program is being spearheaded by, and coordinated with, a proposed certification program now under consideration by the membership at large, to be submitted for their approval later in 1964. It is anticipated that the overall result of these current studies will be to improve the public knowledge and professional image of the geologist.

LOS ANGELES LUNCHEON MEETING

At the monthly luncheon meeting at Rodger Young Auditorium, February 6, 1964, Gregory A. Davis, U.S.C., gave a very interesting talk on "Pre-Cenozoic Tectonic History of the Klamath Mountains, California".

ABSTRACT:

The Klamath Mountains of northwestern California comprise an area of approximately 7000 square miles. This geologic and physiographic province and its southwestern Oregon counterpart have received little detailed geologic study prior to the last decade. The province has been divided into four arcuate belts concave eastward, and named from east to west: the eastern Paleozoic belt, the central metamorphic belt, the western Paleozoic and Triassic belt, and the western Jurassic belt. Pre-Cretaceous metasedimentary, metavolcanic, and plutonic igneous rocks characterize all four belts. Recent studies primarily in the central metamorphic belt by Irwin (USGS), Lipman (Stanford), Holdaway (California at Berkeley), Romey (Berkeley), and current NSF-sponsored work by the writer have revealed Klamath structural and metamorphic complexities unsuspected even five years ago.

A continually clearer picture is emerging of a tectonic pattern resulting from two major structural events believed to be parts of an extended Nevadan orogeny: (1) late Triassic or Jurassic westward thrusting on a regional scale→ and (2) late Jurassic-early Cretaceous folding about subvertical axial planes and subhorizontal north-south axes. Regional metamorphism appears to have been continuous over the period of the two structural events. The orogeny apparently terminated with late syntectonic and post-tectonic intrusion of late Jurassic-early Cretaceous granitic plutons. An earlier magmatic event, the intrusion of an extensive sheet of ultramafic rocks between the eastern Paleozoic and central metamorphic belts, preceded north-south folding, but its relationship to westward thrusting is not yet clear.

The writer interprets the east-dipping contact between the western Paleozoic and Triassic belt and the central metamorphic belt, rocks of which exhibit higher metamorphic grade and greater structural complexity, as an upturned low-angle thrust fault which flattens and extends eastward below the latter belt. This thrust contact and underlying low-grade metamorphic rocks believed correlative with western belt rocks are exposed in windows through the thrust plate in the eastern part of the central metamorphic belt. In earlier studies north of Weaverville, Holdaway, Lipman, Romey, and the writer had recognized the probability of regional thrusting to explain an upward increase in metamorphic grade and structural complexity, but correlation of low-grade rocks within the central metamorphic belt with those of the adjacent western belt had not been possible at the time. The minimum displacement by thrusting of central metamorphic belt rocks over the underlying western belt sequence (at 41° N latitude) can be estimated from the positions of windows in the now-folded thrust plate as 15 to 20 miles.

The case for imbrication of the four Klamath lithologic belts by regional Mesozoic thrusting is strengthened by Irwin's work in the southern Klamath Mountains. A large isolated area of eastern Paleozoic belt rocks west of Weaverville is interpreted by Irwin as a Klippe resting in thrust contact on rocks of the central metamorphic belt. Similar boundary relationships between the two belts may exist 50 miles to the north in the Etna-Callahan area studied by Romey. It is worthwhile to note that detailed tectonic studies in the Klamath Mountains lend support to recent suggestions, largely based on occurrances of low-grade metamorphic rocks above unmetamorphosed rocks of Franciscan type, that widespread Mesozoic thrusting has also occurred in the northern Coast Ranges of California. Confirmation of major thrust faulting in the northern Coast Ranges would be of great interest to many California petroleum geologists, especially those engaged in exploration studies along the western side of the Sacramento Valley.

NOTICE

John Sheehan of the California State Personnel Board announces that from time to time a number of openings appear for geologists in connection with the State Lands Commission program of offshore core hole drilling and exploration. Mr. Sheehan wishes in particular to contact all the members of the geologic profession who might be available to engage in such work on short notice.

This work is of short duration but pays as much as $100 per week. Mr. Sheehan's telephone number is MAdison 0-2830 (Los Angeles).

COAST GEOLOGICAL SOCIETY

The Coast Geological Society met on the evening of February 11, at the Ventura Women's Club.

A resolution opposing Senate Bill 1349, the proposed Engineering Geologist registration act, was passed and adopted. Copies were sent to local Senators and Assemblymen, as well as to the Business and Commerce Committee.

The evening's program was changed somewhat due to the fact that Dr. Curray of Scripps Institute was unable to be with us. He and Mr. Moore, NEL, San Diego, are going to discuss "Continental Terraces" for us in April.

Mr. Martin Van Couvering presented a very interesting and timely discussion of the newly founded "American Institute of Professional Geologists". He pointed out that this was to be an organization of individuals, composed of all types of geologists who meet the requirements for membership.

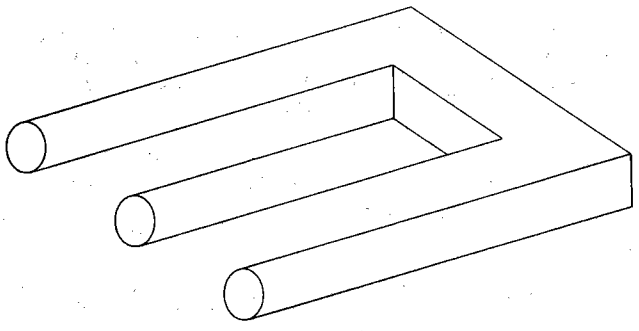
Although not as yet fully operative, A.I.P.G. has attracted nation-wide interest. Mr. Van Couvering concluded his remarks by stating that A.I.P.G. is trying to up-grade the geological profession in the eyes of the public and the courts. The organization also hopes to be able to render assistance in the registration problem on an individual state basis to any geological group requesting advice.

Preliminary thoughts about membership qualifications include twelve (12) years experience (including school years) and a favorable recommendation by screening boards to be set up in the near future.

Judging from the interest expressed by Coast Society members, Mr. Van Couvering undoubtedly gained many new recruits for A.I.P.G.

ATTENTION OIL FINDERS

Jean B. Senteur de Boue may have become a menace to the profession with the announcement of the results of his latest research. His new 3-D oil finding tool is illustrated below. This tool is unique in that it copes with the depth parameter impossible in the now obsolete two-dimensional equipment. A new basis of measurement is required to equate all data and, appropriately, oil values will be read in BOUE-GERS and the instrument known as DE BOUEGER-METER.



DE BOUEGERMETER

NOTICE TO MEMBERS OF PACIFIC SECTION, S.E.P.M.

Dues are now payable for 1964. Please send $1.00 to Mr. Robert Steinert, Shell Oil Company, P.O. Box 999, Bakersfield, California.

ALASKA GEOLOGICAL SOCIETY

At the regular monthly meeting of the Alaska Geological Society in Anchorage on January 9, Thomas Marshall, State Petroleum Geologist, presented a talk entitled, "Function of the Petroleum Branch, Division of Mines and Minerals, State of Alaska," The following is an abstract of Tom's talk:

ABSTRACT:

It is not difficult to understand how an aura of mystery might surround the activities of the Petroleum Branch as we do not have a spokesman or titled head of this branch and the office of the Director of the Division of Mines & Minerals is in Juneau and therefore, geographically quite removed from the oil activity of Alaska.

Furthermore, some of the activities of the Petroleum Branch are closely related with those of the Division of Lands and by virtue of the fact that the administrative office of that Division is located at the administrative center of the oil activity in Anchorage, the Division of Lands becomes a mouthpiece for information on the work of both Divisions. I am happy that the Division of Lands is in a position to assume more responsibility for public information and that they have had the foresight to train employees in this field. However, this situation further diminishes the public knowledge of the precise activities of the Petroleum Branch.

The main purpose of the Petroleum Branch is the conservation of oil and gas to insure the greatest economic ultimate recovery and consequently the largest royalty and tax return to the State of Alaska.

Our Branch consists of one Petroleum Geologist (myself) and one Petroleum Engineer, Mr. Karl Vonder Ahe.

Our regulatory activities are outlined as follows:

A. Approve applications for permit to drill any well within the State boundaries regardless of whether on State, Federal or Fee Lease. Thirty-three well operations were active in 1963.

B. Approve abandonment or suspension of all wells.

C. Inspect drilling operations in the field to determine safety standards, adequacy of blowout prevention equipment and protection afforded aquifers and petroleum reservoirs.

D. Check completed or abandoned locations as to clean up and well monumentation.

E. Production and formation tests are witnessed that affect the State's 5 percent Discovery Royalty awards or the extension or validation of Unit Areas.

F. All accidents relating to Petroleum Exploration, drilling or production are investigated and reported.

G. Approximately 50 sets of well samples are stored in the new addition to the Mines & Minerals building.

H. Detailed monthly records of oil and gas production are kept and published in the montly Mines News Bulletin. Accuracy of metering equipment is periodically checked. Statistics, well data and exploration history are published in the annual report.

I. Questions on all phases of the oil industry asked by the general public and various State offices are answered to the best of our ability.

J. Required well logs are evaluated as to information which might affect a 5 percent royalty determination, Unit Agreement or another well location. These logs are released after a 2-year confidential period. Logs are then released to reproduction companies.

K. The Division of Lands is assisted:
1) In determining acceptability of lease bonus bids.
2) In conferring with oil industry groups.
3) In formulating new regulations.
4) In approving State Units.

L. We draft conservation orders and assist in conducting public hearings.

Fortunately for the State of Alaska, we started out early in the game with basic conservation regulations which, if properly used, will automatically preclude serious conservation problems.

Most of our wells are drilled in areas subject to approved State or Federal Unit Agreements which further simplifies regulatory problems.

As more land is patented to the State of Alaska the formation of State Units will rapidly increase as will the number of wells drilled on State Leases. In 1961, the first well was drilled on a State of Alaska Lease. By the end of 1963, 18 wells had been drilled on State of Alaska Leases.

Although our job is certainly not that of finding oil for the State, we hope that the future will bring us at lease the satisfaction of having properly regulated conservation without inhibiting the people who are in fact searching for and producing oil.

ANNUAL CONVENTION NEWS

Delegates to the Spring convention being held April 9 and 10 at the Biltmore Hotel, are urged to arrive early to have time to visit the exhibits in the foyer adjacent to the main lecture room. Two coffee bars and a juice bar, offered by Core Lab., Schlumberger and Baroid, will help open your eyes to the other exhibits which should be of interest to all. Below is a preview of some of those exhibitors and their displays.

CORE LABORATORIES, INC.

Core Laboratories, Inc., will participate in the meeting with its traditional courtesy Coffee Bar. This function is well known throughout the petroleum industry as a focal point for registrants and other exhibitors.

Core Lab is an international petroleum engineering firm serving oil and gas operators in the United States, Canada, South America, Europe, Africa and Asia. Services include Core Analysis, Mud Logging, Reservoir Fluid Analysis, Special Core Analysis, Production Research and Development, and Engineering and Consulting.

Permanent laboratory facilities are located in Bakersfield, California, under the management of James A. Cusator.

MAX ERB INSTRUMENT CO.

Max Erb Instrument Co. will exhibit and demonstrate the latest models of Petrographical Microscopes by Zeiss and Leitz and important new developments in accessories. The most noteworthy Equipment will be the "Automatic Camera Polarizing Microscopes" for black and white and color photography with 35mm and 4" x 5" films and Polaroid.

The "Microrefractometer" attached to the Microscope Stage and the continuous running "Filter Monochromator" useable by easy attachment to the regular built-in light source of the Microscope are two of the outstanding examples of the progress that has been made in valuable accessories.

Other items of interest will be Stereoscopic Microscopes and their accessories for photography.

MUNGER OIL INFORMATION SERVICE

Munger Oil Information Service, established in 1919, provides the Oil Industry with a Daily Report of California drilling activity, as well as a Weekly Report covering the Western States. Our library of histories has a detailed record of more that 75,000 wells.

In February of each year, we publish our Annual Report, which features Oil and Gas Discovery data, complete Dry Hole Record, deepest test in each field, Completions by field and operator, and a production and water cut by field and pool.

Our Monthly Exploration Map Service of Alaska, California and Nevada, is a two-color 36" x 40" Map, which shows wells Abandoned, exploration activity at the close of the month, and New Fields, Pools and Extensions.

To help drilling contractors in their bidding, we publish bit records weekly. These sheets show the make, size, type, footage, hours drilled, mud weight, pump pressure, RPM, etc.

In April of each year, we publish the California Oil and Gas Field Map Book. This 300-page spiral bound Atlas, is used regularly to post Development and Exploration wells as they are announced.

In addition to 1" to 4000' Sacramento Valley Maps, we have two wall maps, designated N 1/2 and S 1/2. These California maps show Abandoned wells outside the fields which are distinctly outlined.

OFFSHORE NAVIGATION, INC.
OFFSHORE RAYDIST, INC.
INTERNATIONAL OFFSHORE NAVIGATION, INC.

Since 1946 the "Offshore" Companies have furnished radiolocation services for numerous applications throughout the world. Their operations have encompassed over 2200 crew months of operation in all coastal states of the U. S., including

Alaska and Hawaii, and in some 40 foreign countries on 6 continents.

Radiolocation, or radiopositioning, as it is also known, is the determination of geographic positions through the use of various electronic measuring systems. In addition to the established methods of Shoran, Hiran and the several Raydist configurations, the "Offshore" Companies hold themselves ready to use any other method commercially available.

The Shoran and Hiran systems are VHF-UHF radar beacon methods. The Raydist systems use continuous wave phase comparison methods. All of the systems utilize the essentially constant velocity characteristics of electromagnetic radiation for position determinations.

Within the petroleum industry, these radiopositioning services are utilized in connection with marine seismograph and gravity surveys, airborne magnetometer operations and in the fixing of offshore well locations. They are also used for aerial photogrammetry, hydrography, oceanography and marine engineering studies. Additonally, the "Offshore" Companies offer complete hydrographic services, contract computing and drafting services, and astronomic position determination using the Zenith Camera method.

In 1963, Offshore Raydist, Inc. was chosen by the United States Navy to provide positioning services for all Polaris submarines to calibrate the navigational equipment on those vessels.

RAPID BLUE PRINT COMPANY

In 1963 Rapid celebrated its 50th Anniversary and is the oldest reproduction firm in California and is one of the largest in the United States.

Rapid has over 170 Processes to serve the Oil Industry - from Xerox Copyflo of electric logs and seismic records to Lithography of Reports, Sales Pamphlets and Annual Reports in full color. Rapid has a total of 22 printing presses and the largest is 42" x 58".

Rapid has a total of 17 cameras and the largest will make negatives at same scale 52" x 96" in one piece - and we can also make precision negatives accurate to .002".

SCHLUMBERGER WELL SURVEYING CORPORATION

Mr. R. L. Forsythe, Pacific Coast Area Manager of Schlumberger Well Surveying Corporation, announced that his Company will again supply the Coffee Bar at our Spring Convention. This is the twelfth consecutive year Schlumberger has started our morning coffe and doughnuts and helped keep us alert for the talks.

Of interest to California Geologists are the Interpretation Conferences that Schlumberger has scheduled for this year. The first three-day Conference will be held at the Untington-Sheraton Hotel in Pasadena starting March 31, and the next will convene at the Hacienda Hotel in Bakersfield starting April 29. Basic and new methods of formation evaluation will be emphasized at these meetings. Applications and interpretation of the Continuous Digital Dipmeter, Amplitude and Cement Bond Logging, and the Wireline Formation Tester will also be covered.

WARD'S NATURAL SCIENCE ESTABLISHMENT

Ward's Natural Science Establishment has been an educational and commercial supplier of geological specimens and equipment for the past 102 years. The company was founded in 1862 by Henry Ward as a museum supply house in Rochester, New York, and since that time has developed into a major biological and geological supply house. Ward's main office and plant is still located in Rochester, New York, but recently a western branch has been established in Monterey, California, to better serve our western customers.

Ward's in cooperation with Ingram Laboratories of Griffin, Georgia, has recently introduced an entirely new line of thin section equipment for the field of geology. This system is composed bascially of two units; a thin section cut off saw and a thin section grinder. By the use of these two machines a mounted slab or chip of rock, ceramic, fossil, concrete, and many other products may be made into a sawed section and then to the final thin section. The entire process from mounted chip to finished thin section can be accomplished in seven minutes or less.

To our knowledge this equipment is the finest and most complete line of thin section machinery available anywhere. It has caused much comment and we have had many requests from our western customers for demonstrations. We are very happy, therefore, that the AAPG Pacific Section meeting has offered us an opportunity to exhibit and demonstrate the capabilities of this new thin sectioning system. Mr. Frank Ingram, designer and manufacturer, will be on hand to demonstrate and answer any questions about the equipment.

WELEX

Welex will feature its Dipmeter and Micro-Seismogram* Log at the Pacific Coast Section of AAPG meeting in Los Angeles April 9 and 10.

Welex's new dipmeter service, which has several unusual features, offers more information than ever before. For instance, the Welex transducer provides a record that shows the direction and amount of hole drift, directly recorded. This eliminates the need for correction and reduces dip calculation time.

The Welex Dipmeter tool exerts a total of 210 pounds of pressure on the pad section, more than twice that of other dipmeter tools. This high pressure assures better correlation across the hole and reduces tool rotation and the chance for "floating" arms.

Other advantages of the Welex Dipmeter service includes faster galvanometer response. The basic Welex galvanometer responds to frequencies up to 100 cps, compared to the usual 15 cps response of other galvanometers. This enables Welex to record many more usable anomalies throughout the entire hole.

A calibration tail attached to the log given assurance that the results of the dipmeter log were valid. This is particularly valuable when the dipmeter data contradicts information from other sources or when the dipmeter information is questioned at a later date. The calibration check is run just before the tool is lowered into the hole and confirms that the tool is functioning properly.

The Micro-Seismogram Log is a continuous recording of the full scope of information presented by the acoustic signal. Presented on the regular log depth scale, the MSG* Log when run with the Welex Fracture Finger Log readily verifies low amplitude, indicative of fractures and vugs which ordinarily do not affect the first arrivals used in recording the velocity log.

For more information about these and other Welex wireline services, see the Welex representative at the exhibit area.

PERSONAL ITEMS

Harold Brenner of Johnson Testers has been transferred to Bakersfield. Harold's job as Secretary-Treasures of the Northern California chapter of the A.P.I. has been taken over by Sargent T. Reynolds.

Standard's Oildale basketball team in the City Recreation League has had a winless season due in part to the retirement of such pros as Jim Kistler, Jim Bloom and Bob Stoddard. Gerry Paulsen and Frank Sayers are the co-managers.

Greg Stanbro, Standard, is being transferred to the Chevron Oil Company and will be located in Dallas, Texas. He says he will miss his golfing sojourns to the San Joaquin Valley, especially the money. His travel time to the annual Oklahoma-Texas football game will be about eliminated however.

Mr. Robert Herron, of the American Machine and Foundry Co., spoke before the San Joaquin Geological Society, Tuesday, February 11, 1964. The title of his talk was "Oceanography, a New Frontier". Bob, explained the new and varied techniques which are being considered by the various companies becoming interested in underwater activities. It was "Ladies Night" and the program was thoroughly enjoyed by all.

Al Robins, geologist for Shell Oil Company, in Bakersfield, is being transferred to the New Orleans area.

Effective March 1, 1964, Jack Edwards, will be transferred from the New York office, and assume the position of Exploration Manager for the Pacific coast area of Shell Oil Company in Los Angeles. He will be replacing Jerry Burton, who will be taking a head office assignment in New York. Edwards, was formerly the Division Exploration Manager in Bakersfield.

The Richfield Oil Co. (Bakersfield) drag racing geologists, have disbanded because dragsters, Bob Morrison, Ed Bien Bill Lovelace, piloting V.W.'s , Dick Pierce and Bob Hickernell guiding Triumphs, AND Hal Reade, in his Renault "Draggin Wagon", AND John Wiedemann, in his Alpha Romeo, were consistently beaten by Rex Young, peddling his J. C. Higgins 10 speed velocipede.

R. Stanley Beck, is still "picking bugs" in his micropaleontology laboratory in Bakersfield. There has been some confusion with names ever since it was reported that Stanley A. Beck, had joined the banking business. Stanley A. Beck, formerly with the Honolulu Oil Co. does work for the Security First National Bank, in their engineering department, but R. Stanley, is still doing business at 621 Truxton Ave., in Bakersfield.

Spring approaches, the birds fly North, the Phillips Geologists head East. Phillips is closing the Olympia, Washington Office and transferring Andy Fish to Midland, Texas. Norm Mundorff is going to the Special Projects Group at Phillips' Bartlesville, Oklahoma headquarters as is Bill Fowler from the Los Angeles Office. Oregon and Washington will be handled from the Pacific Coast Regional offices in Los Angeles.

Bob Badger formerly with Pauley in Los Angeles has headed back for McAllen, Houston and other Texas points. Looks like he will be there in time for that cool texas summer.

Friends of Jimm O'Flynn, Richfield's Peruvian District Geologist, will be pleased to hear that he is returning to their Long Beach office where he will be assigned to the Foreign Exploration Department.

With MJM&M diversifing out of the oil exploration business, Dan Flynn is busy wearing two hats, or rather carrying two brief cases. One contains sure-fire, can't miss, oil plays for which call him c/o Geo. La Perle & Assoc., FA 7-1324. The other brief case contains his California Real Estate Salesmans license with the listings of the best houses in Bakersfield! So if you're moving in or out of the hub of the oil business please call him at Boydstuns, Bakersfield's leading Realtor, FA 4-6788.

Among the surfers at Rincon Point this winter was Doug Traxler, up for a little clam-digging, unlicensed surfing and, oh yes, well sitting. This same Doug Traxler is that shifty eyed fellow with all the pictures of seedy characters he wants identified who has been showing up at all the geological meetings recently. To ease the minds of several people who were afraid they might have identified their friends in connection with some criminal case, it was for the new directory, forthcoming (we hope) later this spring.

Pauley's Ron Heck is departing his normal weekend chores on the ski patrol at Mammoth for a week of skiing at Aspen. Colorado Medical Journals please note.

Those who think that hitting a post is a better excuse for a black eye than that old ran-into-a-door chestnut should check with Dwight Deardorff of Phillips' Los Angeles office.

That Ol' Globe-Trotter Tony Morris is at it again! This time he is off to India for Pauley Petroleum.

NURSERY NEWS

Those heavy breeders at Humble's Los Angeles Office have outdone themselves this time. Dean and Pat Morgridge announced the birth of twins Keven Marie and Keith Douglas on January 16, 1964, then Patrick and Janet Haley announced the birth of son Mark James on February 3, 1964.

John C. and Pat Kirkpatrick, with Superior in Billings, Montana, announced the birth of David Curtis, their third child, on January 19, 1964. This ought to please some of their old friends from Los Angeles days.

CALENDAR

March 10, 1964: San Joaquin Geological Society Cocktail Hour 6:30 P.M., Dinner 7:30 P.M. Speaker: L.F. Ivanhoe, consultant, "Oil Prospects of the Los Angeles Harbor Area"

March 16, 1964: Monday evening, 7:30 P.M., Mobil Auditorium, 550 S. Flower St., Los Angeles Geological Forum; Dr. Aaron C. Waters, U.C.S.B. "Graded Tuffaceous Sediments of Mt. Ranier National Park and Their Origin.

March 17, 1964: Tuesday noon, U.S.C. Room 104, Geology "A", 855 W. 37th St.; "Sediments Along the Massachusetts Coast, by H. Zimmerman.

March 31, 1964: Tuesday noon, U.S.C. Room 133, Founders Hall; Prof. Peter Sylvester-Bradley, "The Nature of Extra-terrestrial Life".

April 3, 1964: Thursday noon, Rodger Young Auditorium, Los Angeles Luncheon Meeting; Speaker and Subject to be Announced.

April 6, 1964: 7:30 P.M. Monday evening, Bakersfield College Science and Engineering Bldg., Room 56, Biostratigraphic Seminar. "Miocene Molluscks of Southeastern San Joaquin Valley" by Warren Addicott, U.S.G.S.

April 7, 1964: Tuesday noon, U.S.C. Room 104, Geology "A", 855 W. 37th St.; Dr. W.H. Easton, "Field Studies of Marine Terraces of Oahu, Hawaiian Islands".

April 9-10, 1964: Thursday and Friday, A.A.P.G., S.E.G., S.E.P.M., Pacific Sections Joint Annual Meeting, Biltmore Hotel, Los Angeles.

April 14, 1964: Coast Geological Society: Social hour 6:30 P.M., Dinner 7:30 P.M., Ventura Women's Center, 3451 Foothill Road. Speakers: J.R. Curray, Scripps and D.G. Moore, Naval Electronics Lab, "Sediments and Structure of the Continental Terrace".

April 14, 1964: Tuesday evening, San Joaquin Geological Society "Case Histories In Ground Water Hydrology" by John C. Manning, Hydro-Development Inc. Cocktail Hour; 6:30 P.M. Dinner Hour; 7:30 P.M.

May 12, 1964: Coast Geological Society, in Santa Barbara. Dr. Brian Rust, U.C.L.A., "Cretaceous Stratigraphy of the Wheeler Gorge Area, Ventura County". Place and time to be announced.

June 12, 1964: A.A.P.G. Annual Spring Field Trip, Golf Tournament and Picnic.

BIBLIOGRAPHY OF RECENT PUBLICATIONS

U. S. GEOLOGICAL SURVEY

Professional Paper 303-E: Geology of the Chandler River region, Alaska, by R. L. Detterman, R. S. Bickel, and George Gryc. $4.00

Bulletin 1137: Geology of the Lees Ferry area, Coconino County, Arizona, by D. A. Phoenix. $3.25

Water Supply Paper 1330-G: Water requirements of the petroleum refinery industry, by L. E. Otts, Jr. $0.60

Water Supply Paper 1536-I: methods of determining permeability, transmissibility, and drawdown, compiled by Ray Bentall $0.35

Water Supply Paper 1779-A: Geologic reconnaissance and test-well drilling, Cordova, Alaska, by K. L. Walters. $0.40

MAPS

GP 305: Complete Bouger anomaly map of the Death Valley region, California, by D. R. Mabey. $0.50

WASHINGTON DEPARTMENT OF CONSERVATION, DIVISION OF MINES AND GEOLOGY

Information Circular 40: Caves of Washington, by William R. Halliday. $1.00

STATE OF OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

Oil and Gas Investigations NO 1: Petroleum geology of the western Snake River Basin, Oregon-Idaho, by V. C. Newton, Jr. and R. E. corcoran $2.50

THE ORE BIN, vol.25, no. 9, September 1963.

Geomorphology of the Oregon continental terrace south of Coos Bay, by John V. Byrne

THE ORE BIN, vol, 25, no. 12, December 1963

Geomorphlolgy of the Continental terrace off the northern coast of Oregon, by John V. Byrne

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 74, no. 10, October 1963

Gibson Peak Pluton: A discordant composite intrusion in the southeastern Trinity Alps, northern California, by Peter W. Lipman.....

Anomalous gravety field in east-central California, by Howard W. Oliver and Don R. Mabey

GEOLOGICAL SOCIETY OF ANERICA BULLETIN, vol.74, nO. 11, November 1963

Geology of the San Benito Islands, Baja California, Mexico, by Lewis H. Cohen, Kent C. Condie, Louis J. Kuest, Jr., Glenn S. MacKenzie, Fred H. Meister, Paul Pushkar and Alan M. Sueber

PACIFIC PETROLEUM GEOLOGIST
PACIFIC SECTION, A.A.P.G.
P.O. BOX 17486, FOY STATION
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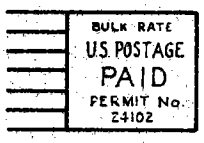
Volume Number



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PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION
AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 18 | April, 1964 | Number 4

ASSOCIATION ACTIVITIES

NORTHERN CALIFORNIA GEOLOGICAL SOCIETY ELECTION

Elmo W. Adams, Consulting Geologist of Burlingame, California, has been elected President of the Northern California Geological Society, according to an announcement by Kenneth Wilson, retiring President of the Society. Wilson will continue as Chairman of the Executive Committee.

Elected to serve with Adams are: Vice-President, William L. Effinger, Standard Oil Co.; and Secretary-Treasurer, Roger Alexander, Standard Oil Company.

Also elected, as Representatives of the American Association of Petroleum Geologists from the Northern California District for the 1964-66 term are: Gordon B. Oakeshott, California Division of Mines and Geology; and Graham B. Moody, Consultant, past-President of AAPG, and Chairman of the Board, Buttes Gas & Oil Company.

LOS ANGELES DISTRICT REPRESENTATIVES ELECTED

District Representatives to the National AAPG from Los Angeles for the 1964-1966 term have been elected:

Robert E. Anderson, Consultant
Phillip S. Kistler, Consultant
Howard E. Stark, Richfield Oil Corp.
Jack C. West, Signal Oil and Gas Co.

The two year term will begin after adjournment of the 1964 annual convention in Toronto, May 21.

LOUIS CANUT, NEW EDITOR

Louis Canut (E. B. Hall, Wilmington) has accepted the job of editor of the Pacific Petroleum Geologist Newsletter. He will replace Jack Van Amringe (Union) following the Spring Convention. Lou will be assisted by Bob Long (E. B. Hall) as Activities Editor and Jack Nisbet (Richfield) as Calendar Editor.

Address all correspondence c/o E. B. Hall and Company, P. O. Box 125, Wilmington, California.

COAST GEOLOGICAL SOCIETY

Coast Geological Society met at the Ventura Women's Center on the evening of March 10, 1964, to hear an interesting discussion on "The Origin of Red Colored Sediments" by Dr. F. B. Van Houten, Princeton University Professor of Geology, and currently visiting professor at UCLA.

Dr. Van Houten outlined the long standing principal arguments concerning the origin of the red pigment in these sediments:

A. The color is primary and the pigments originated in the source area, or

B. The color is due to diagenetic alteration of clay minerals after deposition.

He noted that red beds aren't particularly odd or unique rocks, but are a more normal facies in sediments associated with three major categories:

1. Cratonic derived sediments,

2. Mudstone and arkosic sandstone fault basin sediments, and

3. Sediments with low grade metamorphic fragments such as the deltaic, Paleozoic mobil belt sediments.

Dr. Van Houten discussed the clay mineral associations found in upland soils, alluvium, and red beds. He noted that while kaolinite is dominant in lateritic soils, it is very rare in red beds where illite and chlorite are dominant. The latter are characteristic of brown soils. Alpha hematite is the dominant iron pigment in red beds. Chlorite-Vermiculite-Sepiolite associations are characteristic of playa or saline lake red beds.

In summary, Dr. Van Houten stated that he believes that the "drab colored" sediments become depleted of black minerals by leaching. The iron changes to ferric iron and is eventually taken out of solution to form the red hematite pigment (under oxidizing conditions) so common to red beds. Diagenetic changes produce the red colored beds in the general case, through post depositional alteration of brown soils.

LOS ANGELES LUNCHEON MEETING

Dr. Robert J. Weimer, Colorado School of Mines and AAPG Distinguished Lecturer, gave a very interesting talk at Rodger Young Auditorium March 5 entitled "Comparison of Recent Shoreline Sedimentation with the Stratigraphy of Upper Cretaceous Oil Fields, Rocky Mountain Area".

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San Joaquin	Orrin Wangsness
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Next deadline April 27, 1964

ABSTRACT:

The recognition of the shoreline of a marine basin is one of the most important tasks facing the stratigrapher. Determining the position and trend of the shoreline aids in lithofacies studies and is the basis for the art of paleogeography. An important depositional feature of some modern shorelines is the barrier island on which barrier bar sands are accumulating. The barrier bar deposit is characterized by a narrow linear shape, well sorted porous and permeable sandstone, beach structures and littoral fauna on one flank, beach ridges, eolian deposits and other minor features. Sedimentation along the central Georgia coast illustrates the factors which disrupt normal barrier island development and cause abrupt termination of barrier bars. A knowledge of these factors is important to the trend-pursuing petroleum geologists.

Using lithologic and biologic criteria developed from Recent sediment studies, barrier bar sands can be demonstrated as common shoreline deposits in the Cretaceous of the Rocky Mountains. These sands are important petroleum reservoirs and are prime targets in the search for stratigraphic traps. Surface and subsurface studies indicate that the newly found petroleum accumulations on the Wamsutter Arch, southern Wyoming, are in barrier bar sands of Late Cretaceous Age. The trend of these shoreline deposits is nearly perpendicular to the axis of the broad east-plunging anticline. The up-dip permeability seal on the trap is the change from barrier bar sands to impermeable swamp and lagoonal sediments. Because bar sands represent less than 1 per cent of the Cretaceous strata, they are elusive targets in petroleum exploration.

ALL ABOUT AIPG

THE AMERICAN INSTITUTE OF PROFESSIONAL GEOLOGISTS

Geology, as an organized science, is less than 200 years old. In that period, the fortunes of geologists, as a profession, as well as individually, have fluctuated in the manner that is common to all human affairs. The tides of economics have brought first one, and then another, type of geologist into demand. Probably the greatest flowering of geological activity, to date, occurred in connection with the development of the oil industry. But there are no sharp lines of definition between many of these categories, and individual geologists often are proficient in more than one field.

Despite the broad range of scientific activities being carried on in the field of geology, the great majority of geologists share certain sentiments:

1. They are proud of their profession: "Why would anyone want to be anything but a geologist?".
2. They consider themselves geologists first, and specialists second;
3. They are individualists, and opposed to regimentation.

But the profession as a whole shares certain problems too. There has been a strong upsurge of resentment, on the part of respectable geologists, against the small number of competent geologists who engage in unethical practices, and against the invasion of charlatans, taking over work that should be done by responsible geologists. There has also been a strong feeling that much public and private construction and industrial work is being done without the benefit of geological advice, although it is badly needed.

Another problem involves professional certification. In various parts of the country, governmental bodies--city, county, or state--are requiring certification, under a multiplicity of standards. In certain areas, a report covering a construction project will not be accepted by the governing body unless it is signed by a registered engineer, which forces the geologists either to register as engineers, if they can, or to write their reports, for an engineer to sign.

The legal status of geologists is a difficulty in many areas. For instance, here in California, the engineering geologists work almost entirely in conjunction with civil engineers, who have been licensed by the State and who, therefore, have a distinct and unfair advantage over them. For example, a civil engineer can qualify immediately in court, by showing that he is registered by the State, while his geological associate, with at least equivalent training, cannot.

All of these problems have contributed to an uncertain image of the profession of geology in the minds of the general public. It was to combat these problems that a number of outstanding geologists decided to found an entirely new association, devoted solely to these matters of professional status and conduct, affecting all geologists, whatever their particular fields of geological specialization may be.

AIPG was born in the hope of restoring the geologist to the esteem he deserves. The only chance of accomplishing this is from within the profession itself, and those of us who love geology

deplore its fractionation. To most of us, the fact that a man is a geologist automatically establishes a bond of brotherhood with him, even though his specialty is far divergent from our own. But the only way the profession can raise the esteem in which it is held is by its own performance, and the most effective way to do that is to have a standard around which all of us can gather. That standard, we hope, will be AIPG--nation-wide and all-embracing.

There is already in existence the American Geological Institute, an association that aims to unify the scientific efforts of all kinds of geological groups, and AIPG hopes and plans to become affiliated with it. But AGI deliberately excludes professionalism from its activities, and that, exclusively, is what AIPG is concerned with.

The AIPG Constitution provides that its members shall be known as "Certified Professional Geologists". In this context, of course, certification means voluntary self-discipline, as distinguished from legal registration by a governmental body. Professional certification can be very helpful; for example, the title "Certified Public Accountant" has gained widespread acceptance as a symbol of professional competence. AIPG hopes to achieve the same public recognition and acceptance of the title "Certified Professional Geologist".

At the national level, AIPG takes no stand either for or against legal registration, but its Legislative Council will be prepared to assist the State Sections as much as they may desire. The Council will also try to formulate a "model law" for the benefit of such Sections, and in the interests of reciprocity between the various States which may require registration.

Dr. Ben Parker, Chairman of the AIPG Advisory Board, a former President of the Colorado School of Mines and of the American Association of Petroleum Geologists, and also a former member of the Colorado Board of Examiners of Professional Engineers, has summarized the aims of AIPG in the following statement:

> "With the formation of this new national professional institute, we hope to establish a professional elite which will not only strengthen the profession internally, but will offer to the public a firm set of standards that will insure professional competence and integrity. This is a system that has been used for may years by the engineering, medical and legal professions, and we believe that the continued growth and importance of geology in everyday life, as well as in developing our natural resources, makes this step one of vital significance to geologists and the public alike."

The organization of AIPG was completed at the founding convention at Golden, Colorado, last November. Dr. Orlo Childs, President of the Colorado School of Mines, graciously placed the facilities of the School at our command and offered to let us maintain our headquarters there. This offer was accepted, after due consideration, because of the Denver area's central location in the nation and because it was felt that this site would be the most congenial to all branches of geology.

The Constitution, as adopted at this convention, makes it clear that the Institute concerns itself with the professional status and conduct of its members, and not with the scientific aspects of geology. It is intended to supplement the existing geological societies, not to compete with them. In fact, one of the qualifications for membership is "membership in a scientific society the adequacy of whose ethical, scientific and professional standards shall have been approved by the Institute". Furthermore, AIPG urges that each of its members not only belong to at least one scientific society, but that he participate actively in its affairs, in order to be constantly aware of scientific advances in his field. This practice will work to the member's own benefit and will also result in the betterment of the science of geology.

To assure ourselves, and the public, that the membership meets the highest standards, an applicant is also required to have twelve years of suitable geological experience. Credit is given for college training, up to a total of eight years, depending upon the degree obtained. AIPG is well-aware that many worthy young geologists cannot meet the experience requirement, but this exclusive feature applies for a relatively short period in the life of a young geologist, during which he can learn and prove himself qualified, by his professional endeavors and conduct, for subsequent membership in AIPG.

On behalf of these young people, the Executive Committee is currently considering the adoption of a plan whereby individual State Sections could, at their option, have a category of Junior Associates, such as has been done by the Arizona Society of Professional Geologists. Members of such groups would have no vote in the affairs of the Institute, and would not have membership in AIPG at the national level. Their affiliation would be strictly with their State Section. However, this affiliation would encourage loyalty to the aims of our Institute and prepare them for future membership.

The Code of Ethics, as adopted, sets forth the general principles, the relation of members to the public, to employers and clients, and to each other, and the duties to the Institute. This Code is very explicit and offers protection to the public, to the members of the Institute, and to the clients and employers of the members.

AIPG was incorporated in Colorado, as a non-profit organization. It is governed by an Executive Committee; an Advisory Board, representing Sections comprised of the members in each State; and by State Sections, for dealing with local problems. The Institute will co-ordinate professional policies and standards at the national level. The organizational structure is so formulated that much authority is delegated to the States or Sections, and that a good balance in representation, by interests and numbers, shall be possible.

The founding convention elected the following officers:

President:	Martin Van Couvering, Consultant, Pasadena, Calif.
Vice-President:	Allen C. Tester, Prof., University of Iowa, Iowa City, Iowa
Secretary-Treasurer:	Thomas R. Beveridge, State Geologist, Rolla, Mo.
Editor:	Frank B. Conselman, Consultant, Abilene, Texas

Executive Committee Members from Advisory Board:

Chairman: Ben H. Parker, Vice-President, Frontier Refining Co., Denver, Colorado

Fred N. Earll, Professor, Montana School of Mines, Butte, Montana

Adolf U. Honkala, Consultant, Richmond, Virginia

W. A. Newton, President, Rocky Mountain Natural Gas Co., Denver, Colorado

Howard E. Rothrock, Consultant Coleman, Texas

Booklets containing the Code of Ethics, Constitution and By-laws will be sent upon request, as will the application blank, with the membership qualifications stated in detail. The annual dues are $15.00; to cover the costs of enrollment, a non-refundable fee of $5.00 will be charged. The mailing address of the Institute is:

American Institute of Professional Geologists
Post Office Box 836
Golden, Colorado 80402

Being a new organization, we welcome your inquiries for further information, as well as your comments and suggestions.

Martin Van Couvering
President, AIPG

NORTHERN CALIFORNIA REPRESENTATIVES, AAPG

Graham B. Moody, past-President, AAPG, and Gordon B. Oakeshott, General Chairman of the 1962 Convention, have been elected to represent Northern California, beginning after the 1964 convention, Graham and Gordon will both be attending the 1964 meeting of the Business Committee at Toronto through the courteous invitation of AAPG headquarters.

LE CONTE CLUB MEETING

The semi-annual meeting of the Le Conte Club, oldest Bay Area geological society, was held in Cubberly Hall, Stanford University, on Saturday afternoon, April 11. Five or six technical papers were given. This spring meeting was an opportunity for new and budding Ph.D's to present results of their research. Some professors were on the program, also. Papers were on the general theme of the Cenozoic in California, including stratigraphy, paleontology, and geomorphology.

Officers this year are President Ian Campbell, Vice-President W.B.N. (Bill) Berry, and Secretary W.R. (Bill) Dickinson. Nominating-committee members for next year's officers are Max Crittenden, Chairman, Stanley Davis, and Clyde Wahrhaftig.

REGISTRATION HEARING

On April 7, 1964, at 1:30 P.M. in room 2040 of the State Capitol, the State Senate Fact Finding Committee on Business and Commerce is holding a public hearing to consider the merit of proposed Senate Bill 1349. The latter bill in its present form, if approved by the Committee, passed by the Legislature, and signed by the Governor, would provide for the registration of Engineering Geologists in California.

The Executive Committee of the Pacific Section of the American Association of Petroleum Geologists has adopted a position opposing passage of Senate Bill 1349 on the basis that registration of a relatively small group of California geologists would divide the geological profession. In the interest of maintaining professional unity while at the same time providing a means of registration for those geologists who regard licensing as a necessity, the Pacific Section has drafted a substitute bill which would give every geologist the opportunity to register.

Recently at a meeting in Bakersfield, the American Institute of Professional Geologists (AIPG), in response to the request of the Pacific Section, agreed to assume responsibility for the preparation of suitable legislation for the registration of all geologists in California and to spearhead the opposition to Senate Bill 1349. Mr. Martin Van Couvering, president of AIPG, and several members of the AIPG Legislative Committee, California Section, plan to be present April 7, 1964 before the Senate Committee to offer testimony in favor of more general registration of geologists. Also present will be John Kilkenny, AAPG Pacific Section President, and incoming president Spence Fine.

NOTICE OF LECTURES BY AGI VISITING INTERNATIONAL SCIENTIST AT THE UNIVERSITY OF CALIFORNIA, LOS ANGELES DEPARTMENT OF GEOLOGY

Professor Christoffer Oftedhal, Professor of Geology, Technical University of Norway, Trondheim, Norway will present two lectures at the University of California, Los Angeles as follows:

On the Origin of Injection Gneiss, Banded Gneisses, and Lense-Shaped Granite Bodies, Monday April 13, 1964 at 3:30 P.M. in Room 3656, Geology Building.

Problems of Caledonian Thrusting in Scandinavia, Thursday, April 16, 1964, at 3:30 P.M. in Room 3656, Geology Building.

THE PUBLIC IS CORDIALLY INVITED!

ERRATUM

The following error in the March 1964 issue has been pointed out: Page 3, column 2, paragraph 4 -- "It was decided that further committee work should be carried out under the auspices of the AIPG."

WHAT IS THE HALF-LIFE OF YOUR GEOLOGIST?

A recent AAPG newsletter carried the following editorial which we think many members will find of interest. We are taking the liberty of reprinting it for your information.

A prominent educator recently estimated that unless engineers take the time to study to retain previous training and learn of new developments, their knowledge of their field is only half of what it was ten years ago. In other words, the educational "half life" of an engineer is about ten years. Which makes us wonder, what's the "half life" of a geologist?

New geologic and exploration techniques, methods and theories emerge almost every day. The job of keeping up with and on top of all of the new ideas and information is not an easy one.

Most geologists or their employers can't afford the costs of returning to the universities for refresher courses. Thus, the problems of continuing education is left largely to the individual and his professional societies and associations. Continuing education is one of the principal objectives of the AAPG.

One look at the technical program of the coming AAPG convention will bear this out. It is current, it is vital--solid, practical, sink-your-teeth-into subjects -- presented by the most talented pool of petroleum geologists in the world today.

Many organizations have an established program for professional development of technical personnel. The annual convention of the AAPG in Toronto in 1964 should be a definite part of your continuing education program.

What is the "half life" of your geologist? Probably shorter than you realize. What better way to put new life into him than making sure that he attends the 1964 AAPG-GAC-SEPM conference in Toronto?

HOT SPRINGS PROBLEM

The world's largest subterranean hot water lake, with a temperature near the boiling point, lies under western Siberia and extends over three million sq. km. Other extensive geothermal resources are located in eight other Soviet republics, some of which import timber, coal, and fuel oil from great distances. Soviet scientists are trying to map and investigate the location, temperatures and accessibility of steam and hot water resources. How to develop their ideas for geothermal power stations remains a problem, mainly in view of the fact that the special drilling and other equipment required is not made in the U.S.S.R. Utilization of these resources could provide not only heating but a continuous supply of fresh vegetables.

EXPLORING GEOTHERMAL POWER -NEW SCI. v. 17, No. 320, pp 28-29, 1/3/63

THE GEOLOGIST

Here we have a geologist, who treads his weary way,
Looking for a contact he thinks must go this way.
His feet are sore, his back does ache, but on and on he goes
Where the heck he'll ever get, I'm sure God only knows.

He has looked and mapped, and mapped and looked some fifty weary days
He is becoming quite accustomed to his bathless dirty ways.
If only now his wife could see this picture of remorse
She would take a train to Reno and get a quick divorce.

He beats the brush, he cuts the bush and tromples through the grass.
His throat is dry, his thirst mounts up, he needs a frosty glass
His dog tired feet say he must stop, but this he cannot do.
For across another hilltop, there is another clue.

He beats the rocks, he splits the shales, the fossils they are few
His fingers are a bloody mess, but he must find that clue.
His pants are torn, his shoes are worn, his eyes are rimmed in red
As structures and the picture go coursing through his head.

He with a pencil pointed sharp, writes notes upon his map.
He jots down all the real facts, pens some extraneous crap.
And when the evening shadows fall, he from the field may go
To use his inks back in his tent, by the brilliant Coleman glow.

He inks in red, he inks in green, he inks in black and blue.
The flash of all these colors presents a gaudy view
But when the map is all complete, there is one thing we can say.
He is really not completely sure that the contact went this way.

He writes his notes, he types his notes, he makes them most complete.
He puts them in a folder, and makes them rather neat.
And when he to his senior goes, to show him all his work
The only thing the senior says is "You mapped this like a jerk."

The Senior is a seasoned man, and many contacts traced.
And in his several years of work has many problems faced
But when he on the map does gaze, his heart it could almost fail.
For down in the legend corner, he has forgotten the mileage scale.

Now if work was good, if work was bad, there is nothing one can say.
For all of you, for all of me, the contact may have gone that way.

But when one does the scale omit, his crime it is complete.
He may as well turn in his Brunton, and admit that he is beat.

Now if you will, now if you must, a geologist to aspire
And to prevent your going from the fry pan to the fire
Then draw a scale upon your map, so large the blind can see.

So that your seasoned senior can measure from A to B.

P. G. Cook, 1964

PERSONAL ITEMS

Bay Area petroleum people were saddened by the death on March 12, 1964, at Palo Alto, of Carl R. Helfenberger. Carl was for several years Staff Assistant, Financial Control, in the Exploration Department of Standard Oil of California in San Francisco. He worked under the direct supervision of Stanley W. Totten. At the time of our national AAPG Convention in San Francisco in 1962, Carl was the principal assistant to Stan, who served the Convention as chairman of finance. Carl's work started at least 2 years before the Convention and he finally disposed of the last misguided personal check only a few months ago. His meticulous and conscientious work in keeping track of our finances was an important factor in the success of the Convention. He will be sorely missed in San Francisco, not only by his company but by the many friends he made in our profession in connection with his Convention work on the Finance Committee.

Carl lived with his family in Menlo Park. He left his wife, Doris, and a daughter, Carla, in high school and a son, Kirk, in elementary school, as well as 2 brothers.

The consulting club of the Sacramento Valley has two new members. Rolland Bain has resigned from Texaco after six and a half years in the Sacramento District to become a consulting geologist. Rolland's office is at 5418 Sutter Way, Sacramento; phone EDison 2-1592. In addition to free lance consulting Rolland will often work with S. M. and S. T. Reynolds. Dalton Pollard has resigned from Brazos to work as a consultant. Dalton may be reached at 5424 Cedarhurst Way, Carmichael; phone 967-7586. We join in wishing Dalton and Rolland the best of luck.

A bronzed Ron Ackley has just returned from working (?) in Australia by way of the Hawaiian Islands.

A geological good weekend is in the offing for June. The Sacramento Petroleum Association will hold its annual bar-b-que on June 5th immediately before the Sacramento Geological Society Mt. Diablo field trip. The location of the bar-b-que will be announced at a later date, but it will be convenient to the Mt. Diable area; allowing southlanders to take in both functions with one trip.

Evil Omens Department: Recently two buzzards circled a rig while the log was being run and apparently put on quite a hex. The well was redrilled, became involved in a week long fishing operation, and produced a log not much better than the original hole. What the buzzards say let no man try to change; however, the sacrifice of a pure white dove prior to drilling may help.

Kenneth Wilson, outgoing President of the Northern California Geological Society, attended the Southwestern Regional Meeting of AAPG in Midland during February. The meeting was sponsored by the West Texas Geological Society in cooperation with the Southwestern Federation of Geological Societies.

Bill Horsley, Richfield Oil Company scout in their Bakersfield office will resign to take a position with the city of Bakersfield. Effective April 1, 1964, Bill's new job will be Director of Water Resources for the City of Bakersfield. For any further information see Bill at "City Hall". We all wish Bill success in his new venture.

C. B. (Chuck) Stone, geophysicist for Shell Oil Company, was transferred to Bakersfield, from Corpus Christi, effective March 1, 1964. Chuck's assignment in Bakersfield, will be as Division Geophysicist.

The windmill class sailboaters of Richfield Oil Company (Bakersfield) have hull #1 off the jig. Scantlings are in place for hull #2. Hull #3 is expected to be ready soon.

Jim Dalzell has recently transferred from Santa Maria to Union's Southern District Headquarters at Santa Fe Springs.

Our news pipeline to Alaska this month was abruptly cut off due to the disastrous earthquake that flattened parts of Anchorage and surrounding communities March 27th. We hope all hands are safe up there and by next month will have some first-hand reports.

Dick Stewart, Union, reports that he is back in the office at Bangkok after three months field work in northeast Thailand.

It must be that Doug Traxler's offshore experience in Signal's southern California operations has qualified him for sea duty on the North Sea. Smooth sailing, Doug.

A flood of requests have come to this desk for information on the revolutionary new oil finder The De Bouegermeter (P.P.G. vol. 18, no.3). For information on the availability of this tool contact J. B. S. De Boue, Wildrose Station, Box 397, Trona, California.

Gene Borax, roving Union Oil Geologist, has just returned after six months in Thailand with Dick Stewart. Gene reports he was able to keep the amoeba pretty much under control.

Jack Nisbet, Richfield, Long Beach, is increasing "closet space" in his home at the request of the "Boss". The result- a 578 sq. ft. addition and another Nisbet on the way.

CALENDAR

April 21, 1964: Tuesday noon, U.S.C., Room 104, Geology "A", 855 W. 37th St. R. McCurdy, "Sedimentation in Los Angeles Harbor, California."

April 28-30, 1964: A.P.I. Pacific Coast District Meeting, Biltmore Hotel, Los Angeles.

April 30, 1964: Thursday afternoon, 3:30 P.M., Room 3656, Geology Bldg. Dr. F. B. Van Houten, visiting professor (Princeton) U.C.L.A. "Origin of Abundant Soda in Lacustrine Triassic Deposits, New Jersey and Pennsylvania."

May 4, 1964: Monday evening, 7:30 P.M. Bakersfield College, Science and Engineering Bldg., Room 53. Biostratigraphic Seminar. "Biostratigraphy of the Caliente Range" by John Vedder, U.S.G.S.

May 5, 1964: Tuesday noon, U.S.C., Room 104, Geology "A", 855 W. 37th St. Dr. Gregory Davis, "Field Studies in the Klamath Mountains, California."

May 7, 1964: Thursday noon, Rodger Young Auditorium, 936 W. Washington Blvd., Los Angeles. Robert F. Herron, A. M. F. Advanced Products Group, Santa Barbara, "Oceanography - New Boundaries."

May 12, 1964: Tuesday Evening, El Tejon Hotel, Bakersfield. San Joaquin Geological Society, "Origin of Nitrogen in the Sacramento Valley" by F. A. Berry, University of California at Berkeley. Cocktail Hour 6:30 P.M.; Dinner Hour 7:30 P.M.

May 18-21, 1964: A.A.P.G.-S.E.P.M.-G.A.C. National Convention, Royal York Hotel, Toronto, Canada

June 12, 1964: A.A.P.G. Annual Spring Field Trip, Golf Tournament and Picnic.

BIBLIOGRAPHY OF RECENT PUBLICATIONS

U. S. GEOLOGICAL SURVEY

Professional Paper 372-B: General effects of drought on water resources of the Southwest, by J. S. Gatewood, Alfonso Wilson, H. E. Thomas and L. R. Kister.....$ .60

Professional Paper 408: Geology of the Cerro Gordo mining district, Inyo County, California, by C. W. Merriam.....$1.50

Professional Paper 411-E: Multiphase fluids in porous media -- a review of theories pertinent to hydrologic studies, by R. W. Stallman.....$ .40

Professional Paper 444: Geology of Mount Rainier National Park, Washington by R. S. Fiske, C. A. Hopson, and A. C. Waters.....$1.75

Bulletin 1141-C: Geology of the Imuruk Lake area, Seward Peninsula, Alaska, by D. M. Hopkins....$1.50

Bulletin 1161-D: Geologic reconnaissance of the Antelope-Ashwood area, North-central Oregon, with emphasis on the John Day Formation of late Oligocene and early Miocene age, by D. L. Peck $ .65

Water Supply Paper 1595: Effects of hydraulic and geologic factors on stream-flow of the Yakima River basin, Washington, by H. B. Kinnison and J. E. Sceva.....$1.75

Circular 487: Growing importance of urban geology by J. T. McGill.....FREE

MAPS

GQ-250: Geology of the Paradise Peak quadrangle, Nevada, by C. J. Vitaliano, and Eugene Callaghan $1.00

GP-415: Gravity map of Eureka County and adjoining areas, Nevada, by Don R. Mahey.....$ .50

I-406: Preliminary geologic map of the McCarthy C-5 quadrangle, Alaska, by E.M. MacKevett, Jr. $.50

MF-275: Preliminary geologic map of the Weaverville quadrangle, California by W.P. Irwin.....$ .50

U. S. GEOLOGICAL SURVEY - OPEN FILE REPORTS (Inspection Only)

Aeromagnetic map of the Garlock area, Kern and Los Angeles Counties, California, by R. W. Bromery and M. S. Tyson. 1 map.

Aeromagnetic map of the Kramer area Kern, San Bernardino and Los Angeles Counties, California, by F. C. Frischknecht and F. A. Petrafeso. 1 map.

THE ORE BIN vol. 26, no. 1, January 1964

Oil and Gas exploration in Oregon, by V. C. Newton, Jr.

UNIVERSITY OF CALIFORNIA PUBLICATIONS IN GEOLOGICAL SCIENCES, vol. 40, no. 4, 1962 (University of California Press, Berkeley and Los Angeles)

Anorthosite and related rocks along the San Andreas fault, Southern California, by John C. Crowell and John W. R. Walker.

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 74, no. 12, December 1963

Pleistocene volcanism and deformation of the Truckee area, north of Lake Tahoe, California, by Peter W. Birkeland.

Late Pleistocene glacial events and relative sea-level changes in the northern Puget Lowland, Washington, by Donald J. Easterbrook.

JOURNAL OF GEOLOGY, Vol.172, no. 1, January 1964

Windborne volcanic ash: A possible index to polar wandering, by Gordon P. Eaton.

AMERICAN JOURNAL OF SCIENCE, vol. 262, no. 21, February 1964

Structure and origin of an untramafic pluton in the Klamath Mountains, California, by Peter W. Lipman.

History and causes of channel trenching in western Fresno County, California, by William B. Bull.

A correlative geothermometric mineral study, by Homer C. Liese.

Potassium-Argon dates and the Cenozoic mammalian chronology of North America, by J. F. Evernden, D. E. Savage, G. H. Curtis and G. T. James

Three dimensional geologic maps, by H. W. Patnode and Robert A. Hodgson.

CALIFORNIA OIL WORLD, 31st Annual Review, vol. 57, no. 2, January 31, 1964

California oil boom of the 1860's: The ordeal of Benjamin Silliman, Jr., by Gerald T. White.

West Coast offshore, by Bill Rintoul.

WORLD OIL, vol. 158, no. 1, January 1964

California harbor ventures to spur offshore drilling, by Harrison T. Brundage.

WORLD OIL, vol. 158, no. 2, February 1964

Modern exploration methods and field applications, by Harrison T. Brundage.

SCIENCE, vol. 143, no. 3602, 10 January 1964

Mohole: The project that went awry.

SCIENCE, vol. 143, no. 3603, 17 January 1964

Mohole: The project that went awry (II)

Pleistocene chipped stone tool on Santa Rosa Island, California by P. C. Orr.

SCIENCE, vol. 143, no. 3604, 24 January 1964

Mohole: The project that went awry (III)

Cretaceous fossils collected at Johnson Nunatak, Antarctica, by John C. Behrendt, and Thomas S. Laudon.

SCIENCE, vol. 143, no. 3606, 7 February 1964

Sea level changes in the past 6000 years: Possible archeological significance by F. P. Shepard.

Drilling in the Ocean Floor (Editorial)

OIL AND GAS JOURNAL, vol. 62, no. 4, Jan. 27, 1964

"Quiet" Los Angeles oil field is success.

OIL AND GAS JOURNAL, vol. 162, no. 7, Feb. 17, 1964

Oil found in Central California gas field.

PACIFIC PETROLEUM GEOLOGIST
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PACIFIC PETROLEUM GEOLOGIST

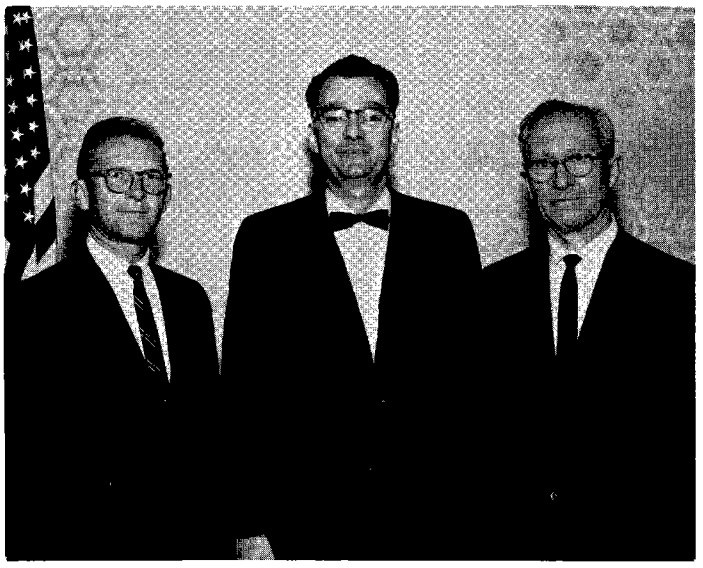
NEWS LETTER OF THE PACIFIC SECTION
AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 18 | May, 1964 | Number 5

ASSOCIATION ACTIVITIES

New Society Officers

A.A.P.G. from left to right Treasurer Robert N. Hacker, Lloyd Corporation; President Spencer F. Fine, Richfield; Vice President Gordon R. Bell, Gulf; Secretary John L. Elliott, Jr., Humble.



S.E.P.M. from left to right Treasurer Robert E. Steinert, Shell; President Richard L. Pierce, Richfield; Vice President Clifford C. Church, Tidewater and, not shown, Secretary James G. Watkins, Richfield.

S.E.G. from left to right Northern Vice President James E. Groom, Texaco; Southern Vice President Judson B. Hughes, Jr., United Geophysical Co.; Secretary-Treasurer Lucius C. Geer, Union and, not shown, Editor Norman P. Jokerst, Standard.

Best Paper Award

The award for the best paper presented at the 1964 annual meeting of the A.A.P.G. Pacific Section went to John V. Byrne and Neil J. Maloney of the Department of Oceanography, Oregon State University, for their joint paper concerning the offshore geology of Oregon. There were many excellent papers presented at the meeting, and the selection of a single one as outstanding was not an easy assignment. The winning presentation was a combination of two papers jointly prepared, originally scheduled to be given one by each author: "Offshore Oregon: -Some Notes on Petrography and Geologic History". On short notice, it became necessary for John Byrne to present the material from both papers incorporated in a single talk. He handled the problem remarkably well, and the result was judged by the committee as the best paper given at the meeting based on verbal presentation, content and illustration.

When President Kilkenny found out that it cost 10¢ per letter to engrave the winner's name on the award plaque, he was somewhat staggered. When the committee came up with a double-name winner, he was really shaken up. He was greatly relieved to find that by the clever ruse of closing the books prematurely, he could pass the whole thing along to incoming president, Spence Fine.

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Sacramento	Sargent T. Reynolds
San Francisco	Gordon Oakeshott
San Joaquin	Orrin Wangsness
Membership Secretary	Pat Metcalf

Next deadline May 27, 1964

S. G. S. SPRING FIELD TRIP

Final arrangements have been made for the Sacramento Geological Society spring field trip which promises to surpass George Brown's "best ever" statement of some months ago.

The trip will be held on June 6th and will start at 7 a.m. from 19th Street between K and L Streets. in Sacramento and pick up Bay Area passengers at 8:30 in Concord at the intersection of Clayton Road and Park Street. Parking will be available at both these locations.

The trip will cover the structure, stratigraphy, paleontology, and economic development of the north flank of Mt. Diablo with emphasis on the upper cretaceous and Eocene. Of special interest will be an extensive paper on the Brentwood Field, including maps and three cross sections. The Guidebook will also include a 1"-4,000' geologic map of the area from Los Medanos to Livermore.

The cost of the trip will be $12.00, which includes guidebook, bus transportation, box lunch, beer, and soft drinks. For those who wish to bring wives the additional cost will be $6.00. Extra guidebooks may be purchased for $6.00.

All those interested should send reservations or guidebook orders to: Laurence Lustig
c/o U.S. Geological Survey
Room 8540
650 Capital Mall
Sacramento, California

TAR SAND PROJECT

A survey of outcropping petroleum-impregnated rocks is being conducted by the U.S. Bureau of Mines and the Interstate Oil Compact Commission with cooperation of the U.S. Geological Survey. This survey will update a similar study completed in 1951 by the late Max W. Ball which was part of a Bureau of Mines survey of synthetic liquid fuel sources and potentials.

Ball Associates, Ltd., is the principal contractor for the project and is interested in obtaining accurate locations of deposits, brief descriptions of them, references and clues to references. There is abundant information available on larger, well-known deposits of "tar sands" in the United States. The purpose of this study is to uncover as much information as possible on smaller deposits. The definition agreed on for this study is: "petroleum-impregnated rocks outcropping, or near outcropping, and their extension to 500 feet".

Any pertinent information may be sent to:
"Tar Sands Project"
Ball Associates, Ltd.
509 Seventeenth Street,
Denver 2, Colorado

COAST GEOLOGICAL SOCIETY

Coast Geological Society met at Ventura Women's Center the evening of April 14, 1964.

Mr. R. H. Paschall, State Board of Equalization, Sacramento, and long time member of the Coast Society, reported on the recently held hearings on SB #1349. Bob felt that the most significant thing to come out of the hearing was the fact that the Committee indicated that they weren't interested in licensing segments of the geology profession, and that the State wasn't pushing for registration of geologists. Bob felt the Committee Report, when issued, would not be favorable to SB #1349.

The Coast Society will not meet during the summer months of July and August, but the announcement for the annual picnic will be forthcoming from Harold Sugden, T.W.O., Picnic Chairman.

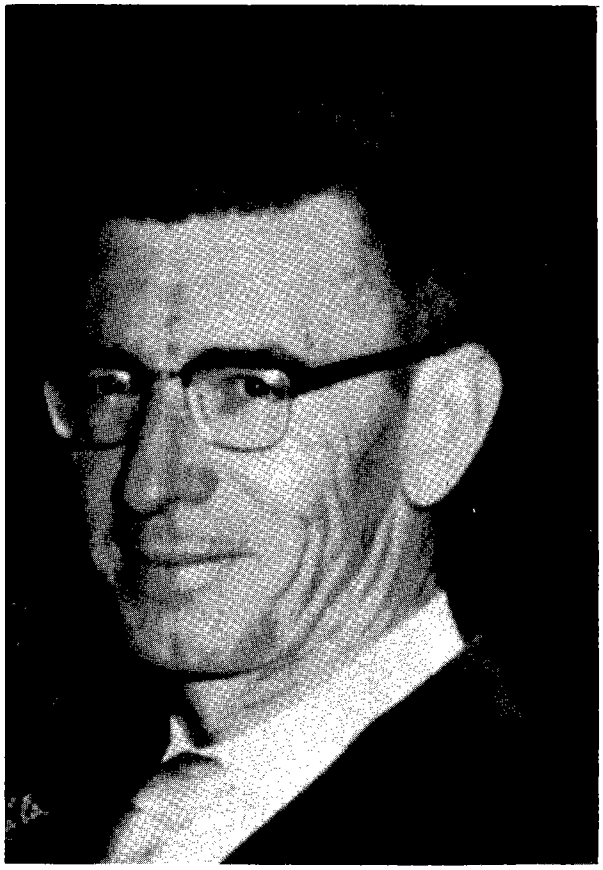
The June 9th meeting in Ventura will feature Donn S. Gorsline, Professor of Marine Geology, USC. He will discuss some recent studies conducted off the southern California coast.

The speakers for the evening, Dr. Joe Curry, Scripps Institute, and David Moore, N.E.L., San Diego, discussed "Continental Terraces".

They have been sampling the structure associated with the continental slope from different parts of the world by means of the "sonoprob" and also an "arcer". The continuous reflection profiles ranges in depth from 60' to approximately 6,000' (at water velocity) and showed many interesting geological features from a Pleistocene delta at Costa de Nayarit on the Gulf of California, to steep, faulted and slumped blocks west of the Farallon Isls. off the Golden Gate.

They showed profiles which they believed to show turbidites and normal shale deposits off the Mediterranean coast between Italy and central Sardinia in the Terranian Sea. Also shown were profiles from the Aransas Pass area, Gulf of Mex., Bodega Bay, N. California, and a portion of the offshore S. California region in the vicinity of San Nicolas Island.

Outbuilding and upbuilding seems to account for some of the continental terrace deposits, but due to higher sea level today, these terraces aren't prograding as rapidly as during the Pleistocene.



MEMORIAL -Benjamin C. Lupton (1908-1964)

The Lord is my Shepherd- I shall not want.
He maketh me to lie down in green pastures,
He leadeth me beside the still waters . . .
23rd Psalm

So commenced the Remembrance Service for Benjamin Charles Lupton, member of the geological staff for Socony-Mobil Oil Company since July 1, 1937. Ben passed away in the early afternoon of April 10, 1964 in San Marino after a brief illness. For those many friends who made the journey to pay homage to Ben, memories will long endure of that beautiful warm spring day in Ballard, between Solvang and Los Olivos, in the heart of picturesque Santa Ynez Valley, California. Here in quiet country solitude stood a lovely, high-steepled, small white church and across the green meadow was a little red schoolhouse with a tall bell tower. During internment in the cemetary on a nearby knoll, one could look out and see the green pastures in the valley and be near the still waters of the Santa Ynez.

Ben was born on November 11, 1908 in Adena, Ohio. His family moved to Fullerton, California where he completed his primary and secondary education and graduated from Fullerton Junior College. Like others in the years of the great depression, Ben had to work his way through college. He was a Good Humor salesman in Fullerton, worked on a survey crew in Colorado, for the Edison Company in the High Sierras of California and on a geological survey in the remote Hoh River area on the Olympic Peninsula in Washington. He graduated from the University of California as a Phi Beta Kappa and with a degree in Geology in 1936. He was a teaching fellow at the University in 1936-37. A good number of geologists, including the author, remember his patient counseling, his enthusiastic hiking and his expert horseshoe pitching as assistant instructor at geology summer camp.

Ben loved the outdoors and the wonders of nature. He was a Nature Counselor for the Boy Scouts for years and, even during the time of his affliction, he helped young boys work for their merit badges. Ben was a true freshwater fisherman. He knew all the good streams in the High Sierras, and he balanced and finished his own rods and tied his own flies. He completely enjoyed the annual fishing trip held each year by his fellow employees at Mobil. Understanding his love of nature, it seems natural that Ben should have chosen a career in geology but there is no doubt that some influence in this direction came from his Uncle Charles. Charles T. Lupton was a nationally-famed geologist associated with the United States Geological Survey from 1907 to 1916, whose pioneering efforts led to the opening of the Cat Creek oil field in 1920--giving Montana its first real petroleum resource.

Ben began his professional career as a geologist when he joined General Petroleum Corporation (now Socony-Mobil Oil Co.) on July 1, 1937 as a surface and subsurface geologist in the Santa Ynez Valley. He spent several years in Bakersfield, Sacramento and Santa Maria and, in 1950, was transferred to Los Angeles headquarters as Senior Geologist. He was promoted to Assistant Supervisor of Exploration and later to Division Exploration Superintendent. From 1960 to his untimely passing, Ben was Senior Staff Exploration Geologist. During this long tenure, Ben played an important roll in company exploration activities in California, including pioneering in offshore exploration.

Ben was a member of the American Assoc. of Petroleum Geologists and its Pacific Section since 1938. He was long active in Pacific Section affairs, being Editor of the Pacific Petroleum Geologist newsletter in 1954 and Vice President of the Section in 1955.

During the course of his work in the Santa Ynez Valley he met and courted his beloved wife, then Evelyn Carol Kalouner. They were married August 13, 1938 in Ventura, California. Son John Edward is a Sophomore at Princeton University and daughter Mary Lou is a Freshman at San Marino High School. Ben is also survived by his mother, Luella Lupton of Winton, California; two brothers--Watson, a petroleum engineer for Shell in Ventura, Calif., and Alvin of Lafayette, California; and two sisters, Ann of Lafayette, whose husband, Galen Sturgeon, is a geologist for Shell and Jessie of Cleveland, Ohio whose husband, Richard Mielenz, is a geologist and Director of Research for Master Builders.

We who knew Ben have lost a sincere friend but we are enriched from our association with him.

-William E. Kennett

Publication

The San Joaquin Geological Society wishes to announce that "Selected Papers" #2, is now on sale. Papers included in this publication are: "Distribution of Uppermost Cretaceous Sands In The Sacramento-Northern San Joaquin Basin of California", by David C. Calloway; "Geology and Development of The Lathrop Gas Field San Joaquin County, California", by Robert A. Teitsworth; "Geology of The Northern San Joaquin Valley", by Robert D. Hoffman; and "Kettleman Hills Area" by Hy Seiden. The price of the publication is $2.25, and may be purchased through the San Joaquin Geological Society at P.O. Box 1056, Bakersfield, California.

Life-Time Membership Awards

Martin Van Couvering

Martin Van Couvering was born in Allendale, Michigan. He attended school in Michigan, California, and Oregon, receiving his B.S. in Mining Engineering from Oregon State in 1916. After graduation he was employed by the Magma Copper Co. in Bisbee and Superior, where he became acquainted with A. C. Rubel. Both entered the Army and went to France during World War I.

In January 1920 Martin became an Inspector of the State Mining Bureau, Department of Oil and Gas. In September of that year he was transferred to Los Angeles as Chief Petroleum Engineer. In 1922 he opened a consulting office in Long Beach and has remained self-employed to the present time. During these 42 years he has acted as consultant for many clients, both major companies and smaller operators.

During the first half of his professional career the emphasis was on Petroleum Engineering, which included a large amount of economic analysis and subsurface geology. Martin's success in legal cases made him in demand as expert witness in lawsuits, such as the one involving the Kettleman Hills North Dome Field. He spent 44 days on the witness stand, including 10 days of cross-examination. The three-dimensional models prepared for this case were exhibited by request at the 1939 San Francisco Worlds Fair and at the Tulsa Oil Show. During the Kettleman Hills lawsuit, Martin was closely associated with Dr. R. D. Reed and became very interested in geology. To broaden his knowledge he enrolled at UCLA, where he received his M.A. degree in geology in 1941. His thesis was on the "Geology of The Devil's Den Area, Kern County, California."

In 1923 Martin organized the Long Beach Petroleum Engineering Club and was its first President. He has been a member of AAPG since 1924, a Fellow of The Geological Society of America since 1947. He is an Honorary Member of the New Mexico and Utah Geological Societies and has written guide book reviews for various organizations, mainly in the Rocky Mountain area. He is a member of the Branner Club and was President in 1948. He also belongs to the American Academy for the Advancement of Science. Last year he was chosen President of the American Institute of Professional Geologists.

After heading a study group in stratigraphy for a year, Martin was elected President of the Pacific Section of AAPG in 1947. During his term of office he initiated the Geological Forum and founded the newsletter, Pacific Petroleum Geologist, both of which are still going strong.

Earl B. Noble

Mr. Earl B. Noble was born in Springfield, Mass. He received his PHB degree from Yale University in 1916 and went to work for the Chile Exploration Co. in the fall of the same year. In 1918 he returned to the U.S. to enter the U.S. Army at Camp Zachary Taylor, Ky. After the war Earl did independent oil work in Texas and Louisiana. In 1920 he worked for the American Smelting & Refining Co. in Mexico. He did post-graduate work at the University of California in 1921 and the following year became an Inspector for the State Mining Bureau, Dept. of Oil & Gas in Taft, California. In 1923 Earl was employed by the Union Oil Co. of California and worked for them for the ensuing 27 years. He was a scout in 1923 and became Division Geologist for the San Joaquin Valley in 1924. In 1929 he was Assistant Chief Geologist and became Chief Geologist in 1937. He was Manager of Exploration from 1944 to 1950 when he became Manager for Western Canada. In 1951 he left the Union Oil Company and became Petroleum Consultant for the National City Bank of New York. The eastern climate apparently did not agree with him and he returned to the West Coast and began a consulting practice, engaging in foreign and domestic oil and gas exploration. He is President of E. B. Noble & Associates, with offices here in Los Angeles.

Earl joined the AAPG in 1924--he was President of the Pacific Section in 1928, Vice President of the national organization in 1941 and President in 1946. Earl is a member of the AIME, G.S.A., American Assoc. for the Advancement of Science and the California Academy of Sciences.

Throughout 40 years of active association with the oil business, Earl has developed this formula for successful oil exploration:

1. Select men of ability and imagination as employees or associates.

2. Delegate authority in order to:

   a. Encourage independent thinking.
   b. Develop responsibility.
   c. Promote departmental or group teamwork.

This formula made it possible for Earl to be closely associated with a number of substantial discoveries. The Rio Bravo field in Kern County, California and the recent discovery of oil in eastern Australia are but two examples.

LOS ANGELES GEOLOGICAL FORUM

Dr. Aaron C. Waters, Chairman of Department, University of California, Santa Barbara, and Mr. L. F. Ivanhoe, Consultant, Beverly Hills, spoke on March 16th before the Pacific Section A.A.P.G. at the regular evening meeting held at the Mobil Auditorium, Los Angeles. The abstract of Dr. Waters' talk entitled "Graded Tuffaceous Sediments of Mt. Ranier National Park and Their Origin" will appear in the June issue of the P.P.G. The abstract of Mr. Ivanhoe's talk entitled "Oil Prospects of the Los Angeles Harbor" appears below.

Abstract:

The oil prospects of the Los Angeles harbor include a potential major oil field located beneath the shallow protected waters inside the L.A. breakwater. This is a ready-made play that should draw considerable interest in oil ranks. The entire prospective area is under the jurisdiction of the L.A. Harbor Dept. (LAHD) which operates autonomously under a special charter from the City of Los Angeles.

The virgin trap was outlined by seismic surveys shot for the LAHD in 1963 by G.S.I. (marine) and U.G.Co. (on land). The structure is within the prolific L.A. Tertiary basin and only two miles from the 2,500 million barrel Wilmington oil field. The L.A. harbor is bisected by the NW-SE trending Palos Verdes fault zone, which is believed to have had a substantial right-lateral strike-slip movement. All of the oil fields of the L.A.Basin, as well as the L.A. Harbor "A" prospect are on the northeast side of this major break. The seismic data show this fault conspicuously as well as the NW-SE "Harbor Syncline" that separates the untested area from the Wilmington anticline. Regional seismic dip is to the south and east in the N.E. Harbor area so that "A" prospect is basically a southeasterly plunging nose, cut off by the Palos Verdes fault zone on its west side. N-S cross faulting and shale-out of some reservoir sands, as found at the west end of Wilmington field, may also provide NW closure in addition to the Palos Verdes thrust. Convergence of reflections over the N.E. Harbor anticline are at the same stratigraphic depth as at Wilmington, thereby suggesting that the two folds were originally of the same (L. Pliocene) age, although Wilmington is larger and higher today.

The reservoir sands at the untested L.A. Harbor "A" prospect should be comparable to those in the huge Wilmington field, barely two miles away, and where the average oil recovery is 125,000 bbls/acre. Only 400 acres of such production would make a major 50,000,000 bbl. oil field worth $100,000,000 at $2/bbl. Over 540 acres of structural closure are indicated on the best "A" (N.E. Harbor) prospect, with an additional potential area of 350 acres in the NW Harbor area where the geology is more complex.

A water location (20' water + 10' max. tides) and an estimated 8000' total depth will be required for the first well to test all of the eight main horizons (Lower Pliocene, Upper Miocene, Schist) that produce at Wilmington, plus an extra 3000' of Lower Pliocene sediments that are too shallow to be tested by whipstocking from shore. Later wells can be drilled from an island to be built by LAHD

This unique prospect is within an industrial area near the refineries of Los Angeles - one of the greatest oil markets of the world. There is no proration of production in California since it is an oil-importing state. All responsible operators, large or small, will be invited to bid on the lease to operate the prospective area. No cash bonus will be required. The basic royalty will be 16-2/3 per cent and bids will be on a "net-profit" basis for a 1580 acre lease covering the entire "A" prospect. The successful bidder will have a drilling commitment, but no additional exploration or land acquisition costs or rentals, and will have only a single sympathetic land owner (LAHD) to deal with. All LAHD seismic and geological reports are being made available free to interested persons so they can check out the geology and economics of the local drilling and operating, in advance of the date (sometime this summer) when bids will be requested from the industry. Complete information can be obtained from: L.A. Harbor Dept., City Hall, Los Angeles 12, California.

CONGRATULATIONS

To John Kilkenny, the 1963 Executive Committee, and the many other Pacific Section committees for a highly successful year. All have benefited the association, and we wish them to know their efforts are appreciated. Bill Kennett and his convention committee did a tremendous job in staging the 1964 Convention at the Biltmore. Many thanks. The Pacific Section, like any other organization, is as good as the interest shown by its members. Perhaps many don't realize the effort involved (and the personal reward) until having served as an officer, or as a committee member.

PERSONAL ITEMS

McCulloch Oil Corporation of California not ONLY has a new address, but a new building. The Executive Offices are now located on the 12th floor, McCulloch Building, 6151 West Century Blvd., Los Angeles 90045. The new telephone no's are: 776-1151 and 645-4280.

Tom Roy (Marathon) has been transferred from Bakersfield to Casper. Tom's new address is Box 120, Casper, Wyoming 82602.

Sarge Reynolds (Consultant, Sacramento) recently took a tour of Cord Durrell's new workshop and reports that there would be no need for a war on poverty if everyone lived in a house as nice as Cord's workshop.

If you would care to become more active in association affairs, how about offering your services to one of the new committee chairmen? Or, call any of your local officers. They will welcome your interest.

The latest report from Anchorage via Harry Jamison, Richfield, L.A., a recent Alaska traveler, is that all the night clubs came through the Quake in good condition--but several of the favorite watering places have closed their doors.

Walt Scott, Richfield, Long Beach, has finally decided to move the family down from up Ventura way. Walt claims the commuting from his new abode to Long Beach will be an improvement but nothing to get excited about.

Tom Brady, Richfield, ex-Bakersfield, and now hailing from Sidney, Australia, is currently in the Los Angeles area on his long leave. We understand Tom has agreed to return down under for another tour. Wonder what the attraction is?

Earl Turner, Union, Los Angeles, has been transferred to Union's coastal area headquarters in Santa Maria.

Jack Van Amringe, Union, Santa Fe Springs, has recently been appointed Los Angeles District Representative to fill the unexpired term of Dick Hester, Pauley Petroleum. Dick's frequent journeys out of the country and an added load of work prompted him to turn the job over to Jack.

Members of the AAPG will be happy to know Frank Parker, local consultant, has kindly consented to give the rest of his recent paper at a future meeting of the organization. Time and technical difficulties prevented Frank from doing justice to the Beverly Hills - Las Cienegas area. Frank tells us he still has Jean Senteur de Boue under contract and they are currently working on some new, even more revealing and lurid illustrations for the paper.

Shell Oil, Los Angeles, reports Gray Hebrew, former Shell district geologist for the Farmington, New Mexico area has been transferred to Los Angeles.

The PPG Newsletter reporters sorely miss their prime contract man, Doug Traxler, Signal, L.A. Doug promises us the complete low-down on all Western Europe next month at this time.

Ray Gruetert, Gulf, L.A., has finally been struck down by the evil mumps virus that has been making the rounds in his family. Barring serious complications, Ray is expected back at his desk in another 10 days.

The Anchorage Sewer Outfall Yacht Club members will be glad to know that John Forman, Mobil, L.A., has finally succeeded in launching a sailboat. John and family may currently be found at the docks working on their craft. Word has it they occasionally get it out on the high seas from time to time. John reports that at last count the family is still all present and accounted for. More news on this item will surely be found in future PPG Newsletters.

The Richfield, Los Angeles, Exploration staff is still puzzled about how Jerry Knowles was able to arrange a business (?) trip to Miami Beach during the height of the season. Rumor has it Jerry is currently working on a trip to Toronto.

Andy Marianos (Humble, Bakersfield) will be program chairman for the Biostratigraphic Seminar for the coming season, 1964-1965. The first lecture will be on the first Monday in October, 1964.

Richfield Oil Corp., exploration department, Bakersfield, held their Spring Golf Tournament at the Kern River Golf Course on April 18th. Jim Rennels won top honors with a low gross of 79. Following Rennels were: Dick Chalk, Dick Hales, Jim Acord, and Stan Carlson. Don Dozier won the Blind Bogey with a gross 98 and a net 56. Net 56?

Les Herndon has replaced Bill Horsley as Northern Division Scout for Richfield with offices in Bakersfield.

Jim Benzley (Gulf, Bakersfield) is acting Area Manager while Malcolm Ott is on vacation. Jim reports their first dry hole, in the Dutch Slough area, as soon as he took over. How are you stacking up with the national average, Jim?

NURSERY NEWS

Late report from Pauley, Los Angeles, is Tony and Maria Morris have done it again. Their eighth child, Paula, a 6-1/2# girl, arrived recently. The count is now 5 girls and 3 boys.

Alfonso and Ana Escalante, Union, Santa Fe Springs, are the proud parents of their 3rd boy, Guillermo, born in San Jose, Costa Rica, on April 28th --and weighing in at a healthy 9 lbs., 5 oz.

Born to Rosemary and Jim Dalzell, Union, Santa Fe Springs, a son, Michael Landon, at 7 lbs. (even) on April 30th. The new addition is the Dalzell's first child.

CALENDAR

June 9, 1964: Tuesday evening,
El Tejon Hotel, Bakersfield
Cocktail Hour 6:30 p.m.
Dinner Hour 7:30 p.m.
San Joaquin Geological Society, "10-10 pool of 29D, Midway-Sunset" -by Jim Kistler, Standard Oil Co.

AAPG-SEPM-SEG Pacific Section Spring Picnic
June 12th at Sunset Farms -
Field trip, if feasible, and Golf Tournament.

CHANGE OF ADDRESS

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

HOSKINS, Ernest G.
14435 Crystal Lantern Dr.
Hacienda Heights, Calif.

ELLIS, Wesley E.
540 Hera Street
San Dimas, Calif.

BARLOW, W. R.
207 Lowell Drive
Bakersfield, Calif.

BAIN, Roland J.
5418 Fort Sutter Wy
Sacramento, Calif.

STEWART, Richard D.
1114-4 Sukumvit RP
Prakanong
Bangkok, Thailand

EDWARDS, Charles D.
Camerina Petroleum Corp
1600 1st City Nat'l Bank Bldg
Houston 2, Texas

GARDNER, Robert C.
2109 Gladys Street
Pasadena, Calif.

REDWINE, Lowell
4 Howard-Canfield Bldg.
831 State Street
Santa Barbara, Calif.

BROOKS, Bruce D.
P.O. Box 6265
Sacramento 21, Calif.

FRICK, John D.
Wilson Tower
Corpus Christi, Tex.

CHAPPUIS, Louis
P.O. Box 5341
Tucson, Arizona

GENTRY, A. W.
315 Acacia Ave.,
Apt. A
Fullerton, Calif.

HOBLIT, Albert L., Sr.
5537 W. 134th Place
Hawthorne, Calif.

CAHILL, Ralph P.
P.O. Box 3337
Ventura, Calif.

DUNWOODY, Joseph A.
3531 Dundee Ct.
Bakersfield, Calif.

SISK, Thomas H.
c/o Humble Oil & Refg.
2001 "O" Street
Bakersfield, Calif.

NAHAMA, Rodney
200 Truxton Ave.
Bakersfield, Calif.

NEUMANN, Fred R.
319 Orient St.,
Chico, California

HERMAN, T. C.
Shell Oil Company
1008 West 6th Street
Los Angeles 54, Calif.

FAZIO, Patrick J.
McCulloch Oil Corp.
6151 W. Century Blvd.
Los Angeles, California

FAGGIOLI, Richard E.
Humble Oil & Refining Co.
Wilson Towers
Corpus Christi, Texas

PREWETT, Charles W.
5 Hazelnut Road
Westport, Connecticut

ELLIOTT, Wayne
Richfield Oil Corporation
5900 Cherry Avenue
Long Beach, California

O'FLYNN, James B.
Richfield Oil Corp.
5900 Cherry Avenue
Long Beach, Calif.

HORSLEY, William R.
City of Bakersfield
1501 Truxtun Avenue
Bakersfield, Calif.

LAMMERS, Edward C. H.
12222 Broken Bough
Houston 24, Texas

GEDDES, R. D.
346 East 3360 South
Salt Lake City, Utah

BRAUN, Theodore H.
1029 Glenhaven Dr.,
Pacific Palisades,
California

CONGER, Franklin B.
2516 Silver Drive,
Bakersfield, Calif.

LEVERETT, Ben D.
1603 California Ave.
Bakersfield, Calif.

WELLBAUM, Edgar W.
1707 30th Street
Bakersfield, Calif.

GESTER, Stephen H.
189 McKinley Circle
Leisure Town
Vacaville, Calif.

BURNS, Russell W.
Central Del Rio Oil Co.
224 - 9th Ave. SW
Calgary, Alberta
Canada

DAVIDSON, William R.
2500 Bishop Dr., Apt B
Bakersfield, Calif.

McMICHAEL, L. B.
800 Fidelity Bldg.
Oklahoma City, Oklahoma

FOWLER, William A., Jr.
Phillips Petroleum Co.
13 WWFPB
Bartlesville, Okla.

PEASE, Everett
Buttes Gas & Oil Co.
2150 Franklin Street
Oakland 12, Calif.

LEDINGHAM, Glen W.
Gulf Oil Corp.
1801 Avenue of Stars
Los Angeles 67, Calif.

WELLBAUM, Edgar W.
1707 30th Street,
Bakersfield, Calif.

REEDY, Robert D.
2129 Hacienda Way
Sacramento, Calif.

HARRINGTON, H. E.
Superior Oil (U.K.)Ltd
5th Floor, Chestergate
House, Vauxhall Bridge Rd
London SW 1, England

DONOVAN, Terrence J.
Mobil Oil Company
PO Box 2122 Terminal Annex
Los Angeles, California

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

SELTZER, Robert A.
P.O. Box 3317
Ventura, California

NIX, Ernest E., Jr.
Baroid Division
National Lead Company
Bakersfield, Calif.

BAUER, William E.
1215 E. San Antonio Dr.
Long Beach, Calif.

MARSHALL, John H., Jr.
Mobil Oil Company
PO Box 2122 Terminal Annex
Los Angeles 54, Calif.

ANDERSON, Richard E.
302 South Lucia
Redondo Beach, Calif.

MILLER, Gerald A.
1629 SE 8th Street
Bellevue, Washington

FERGUSON, Robert B.
643 S. Flower Street
Los Angeles, Calif.

WILSON, Richard D.
Humble Oil & Refg. Co.
612 S. Flower Street
Los Angeles, Calif.

BIBLIOGRAPHY OF RECENT PUBLICATIONS

U. S. GEOLOGICAL SURVEY

Professional Paper 395: Geology and mineral deposits of the Mount Morrison quadrangle, Sierra Nevada, California, by C. D. Rinehart and D. C. Ross, with a section on A gravity study of Long Valley, by L. C. Pakiser $2.00

Professional Paper 402-E: Turbulence in groundwater flow, by W. O. Smith and A. N. Sayre . $ .20

Professional Paper 419: Miocene marine mollusks from the Astroia formation in Oregon, by E. J. Moore $2.75

Professional Paper 422-A: Morphology and hydrology of a glacial stream--White River, Mount Rainier Washington, by R. K. Fahnestock . . . . . .$ .55

Pacific Section Directory

For the convenience of those members who were not able to buy the Pacific Section A.A.P.G., S.E.G., S.E.P.M. Membership Directory at the Annual Meeting, the directory may be ordered by mail from the following companies:

Pacific Log Exchange
11515 E. Washington Blvd.
Whittier, Calif.

Price's Blueprint
1600 "G" Street
Bakersfield, Calif.

Enclosed find $_____(check or M.O.).
Please send me _____ copies of the Pacific Section A.A.P.G., S.E.G., S.E.P.M. Membership Directory, at $5.00 per copy.

Name:_____

Street:_____

City, State:_____

Professional Paper 432: Upper Cretaceous (Campanian and Maestrichtian) ammonites from southern Alaska, by D. L. Jones $2.00

Professional Paper 462-D: Scour and fill in sand-bed streams, by B. R. Colby . . . . . $ .30

Bulletin 1043-E: Recognition criteria of igneous and metamorphic rocks on aerial photographs of Chicagof and Kruzof Islands, southeastern Alaska, by J. S. Pomeroy . . . . . .$ .15

Bulletin 1141-Q: Geology of the Reliz Canyon, Thompson Canyon and San Lucas quadrangles, Monterey County, Calif., by D. L. Durham . . $2.75

Bulletin 1154: Geology and ore deposits of the Bokan Mountain uranium-thorium area, southeastern Alaska, by E. M. MacKevett, Jr. $2.00

Bulletin 1171: Hawaiian volcanos during 1955, by G. A. MacDonald and J. P. Eaton $1.00

Water Supply Paper 1574: Quality of surface waters of the U.S., 1958 parts 9-14, Colorado River basin to Pacific slope basins in Oregon and lower Columbia River basin $1.75

MAPS:

GQ 336: Geology of the French Gulch quadrangle, California, by J. P. Albers, A. R. Kinkel, Jr., A. A. Drake, and W. P. Irwin $1.00

Map I-400: Geologic map and sections of the Torrance Station 4 NE quadrangle, Lincoln County, New Mexico, by W. A. Fischer and R. J. Hackman .75

Map M F -276: Preliminary geologic map of the Hunters quadrangle, Stevens and Ferry Counties, Washington, by A. B. Campbell and O. B. Raup $ .50

OPEN FILED REPORTS (Inspection only):

Preliminary report on recent surface movements through July 1962 in the Baldwin Hills, Los Angeles County, California, by Staff, Geological Survey

Reconnaissance geochemistry of stream sediments from three areas near Juneau, Alaska, by Henry C. Berg. 4 p., 1 fig. 2 tables.

Preliminary geology of the Furnace Creek borate area, Death Valley, Calif., by James F. McAllister. 1 map with sections, explanation.

Exploration targets in north-central Nevada, by Ralph J. Roberts. 10 p., 12 figs.

CALIFORNIA DIV. OF MINES & GEOLOGY:

SANTA ROSA SHEET (of California Geologic map) Scale 1:250,000 1 . . . . . $1.50

Special Report 73: Economic geology of the Panamint Butte quadrangle and Modoc District, Inyo County, California, by Wayne E. Hall and Hal G. Stephens $2.00

Special Report 78: Age and structural relationships of the Franciscan Formation in Montara Mountain Quadrangle, San Mateo County, California, by Richard L. Darrow $1.00

THE ORE BIN, vol. 26, no. 1, January 1964 (State of Oregon Department of Geology and Mineral Industries)

Oil & Gas exploration in Oregon, by V. C. Newton, Jr

AMERICAN JOURNAL OF SCIENCE, vol. 262, no. 3, March 1964

Origin of the Black Peak Quartz Diorite, Northern Cascades, Washington, by John B. Adams

PACIFIC PETROLEUM GEOLOGIST
PACIFIC SECTION, A.A.P.G.
P.O. BOX 17486, FOY STATION
LOS ANGELES 17, CALIFORNIA
Volume 18 Number 5

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Los Angeles 67, Calif.

DA

PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION
AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 18 | June, 1964 | Number 6

ASSOCIATION ACTIVITIES

ALASKA EARTHQUAKE

The disastrous earthquake which rumbled and heaved through southern Alaska for over 4 minutes at dinner time late Friday afternoon, March 27, fortunately spared members of the Anchorage geological community and their families from major injuries. The buildings of eight oil companies were destroyed or received major damage. Significant property damage was inflicted on members' homes. Basements and foundations received the main brunt of the damage in those homes which were not completely destroyed. Current restoration effort is directed toward urging early completion of Corps of Engineers soil studies in the area so that condemnation or restoration of property can be effected before freeze-up in October or November.

The main instrument of destruction triggered by the quake in the Anchorage area was landslides, whereas in Kodiak, Seward, and Valdez, seismic sea waves and fire comprised the main destructive forces.

The Geologic profession in Anchorage rallied rapidly to the call issued Monday, March 30 by Alaska State Housing Authority and the City of Anchorage for all available professional geologists and soil scientists to participate in a crash study program to map the earthquake effects in the Anchorage area. As stated in the addenda to the Engineering Geology Evaluation Group's report, "By Tuesday morning, base maps had been prepared, the Greater Anchorage area divided into sectors, and professional volunteer geologists, working in teams of two men each were mapping the entire area. Aerial photographic surveys were also contracted and flown."

On Monday morning, April 13, a 38-page report, replete with 14 illustrations and 13 maps and cross sections was presented to the Anchorage City Council together with eight specific recommendations relating to future land use in the area.

The following are the "Summary and Conclusions" from the report:

1. Major damage to the Anchorage area occurred in bluff areas where major landslides were initiated by the earthquake.

2. These landslides are considerably larger than any of the older landslides which can be seen on the aerial photographs, suggesting that earthquakes of the magnitude of the Great Alaska Earthquake had not been experienced for perhaps several hundred years.

3. Landslides listed in order of greatest areal extent are: Turnagain Slide, "L" Street Slide, Fourth Avenue Slide, Government Hill Slide, and First Avenue Slide. Other slides known to be present in the Greater Anchorage Area not covered by this report are on Point Campbell, 2 slides along the railroad cut near Rabbit Creek, West Government Hill east of the City Dock area, the bluff east of International Airport and the bluffs west of Knik Arm.

4. Maximum horizontal movement of the slides was 1200 feet (Turnagain); maximum downdropping was 30 feet (Government Hill, Turnagain). Horizontal movement across the highly fractured area behind the Turnagain Slide was as much as 4 feet between Northern Lights Boulevard and Iliamna Avenue during the earthquake.

5. Failure within the Bootlegger Cove Clay was the cause of the landslides. The failure planes were weak zones in a delicate state of equilibrium. Movement generated by the earth-quake destroyed the equilibrium and caused the consequent loss of the clay's shearing strength. Exceedingly weak zones in the clay have been detected by drilling through the new landslides. These zones occur in the interval between 7 feet below sea level and 23 feet above sea level.

Failure was not due to slippage along the surface of the Bootlegger Cove Clay. Near the top of the formation the clay has a moisture content averaging 5 to 10 per cent lower than the liquid limits. Average shear strengths are 1 to 1.5 tons per square foot. The natural moisture-liquid limit relationship of clay samples taken from the new bluff line is similar to samples collected by the U. S. Geological Survey 15 years ago indicating that the moisture-liquid limit relationship near the surface has not changed.

6. Spring thawing will probably weaken the already unstable condition of the slides and the badly fractured areas, resulting in continual future slumping and cracking of foundations. A major earthquake similar to the recent quake (with the same wave action and motion) even though less intense would probably cause immediate sliding of the presently weakened areas.

7. Local areas of low topography and swamp conditions show minor displacements and cracks. This is probably cause by compaction of the peat or muskeg in the swampy areas. Excavation of the peat and muskeg to the underlying gravel prevented serious damage to the International Airport runways, whereas a small roadfill over a peat bog immediately south of the airport was affected by a considerable number of cracks and fissures.

8. With the exception of the bluff areas of potential landslide conditions, the remainder of Greater Anchorage appears to be relatively stable.

Dr. Lydia Selkregg, a geologist with the Alaska State Housing Authority, directed the formulation of the Anchorage Engineering Geology Evaluation Group and Dr. Ruth Schmidt served as Group coordinator.

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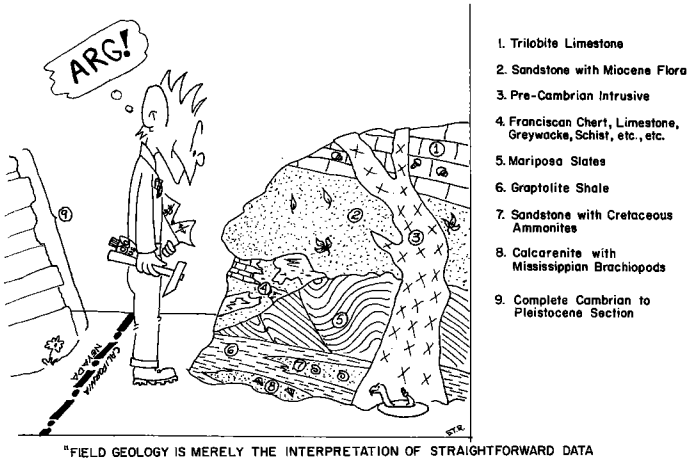
Next deadline June 26, 1964.

Approximately 40 professional geologists worked on the project, including many whose homes and offices were destroyed in the landslides. Among those who worked during the entire program were: William F. Attwood, Bill Bedford, Keith W. Calderwood, William C. Fackler, Gerald Ganopole, James A. Hamilton, Marvin G. Harp, D. N. Helmuth, Harold J. Moening, Julius Moor, J. C. Moores, Bruce G. Purcell, Don H. Richter, Kirk W. Stanley.

After completion of the study, two men, Bill Bedford and Gerry Ganapole, did an excellent job of guiding the presentation of the geologic information contained in the report to the Anchorage populace via radio, television, and the press.



"FIELD GEOLOGY IS MERELY THE INTERPRETATION OF STRAIGHTFORWARD DATA FROM SIMPLE EXPOSURES."
Prominent Geophysicist

COAST GEOLOGICAL SOCIETY

The Coast Geological Society met on the evening of May 12 at El Cielito Restaurant in Santa Barbara.

Nominations for a new slate of officers were placed in the hands of a committee composed of Lowell Redwine, Carl Stehle, C. M. Carson, and Doug Waterman.

H. E. Nagle, Standard Oil, has been named chairman of the fall dinner dance.

Harold Sugden, TWO, picnic chairman announced August as the month for beer and steaks.

AAPG Certification Vs. Registration was discussed once more, with the majority of those present being unopposed to AAPG Certification. However, there was considerable doubt that this approach would accomplish anything that AIPG couldn't do as well, or better.

President Bob Yeats, Shell Oil, announced there would be no meetings during the months of July and August.

The evening's program highlighted Dr. Brian Rust, Visiting Lecturer in Geology at UCLA, who discussed his work on the sedimentary structures exhibited by Cretaceous rocks in the Wheeler Gorge area.

He prefaced his remarks by stating that a "Certified" person in England was one who failed to pass a sanity hearing! (Geologists take note.)

Dr. Rust has mapped an upper and lower shale member in the area, separated by a conglomeratic member. Fossils date the shale as being Upper Cretaceous, Campanian to Maestrichtian, in age. He showed a number of photographs of sedimentary structures which included groove casts, flute casts, prod casts, sole marks, graded bedding, delayed grading, multiple grading, and ripple marks in the thin bedded shales. The marine shales are the normal depositional sequence while the siltstone and sandstone thin bedded sequences represent small scale turbidity deposition. Prominant flute casts in the conglomerate member indicated a source direction to the southeast.

Dr. Rust has concluded that these conglomerate lenses are turbidites due to the sedimentary structures, the angular shale clasts and the clean sandstone matrix. Redeposited shore-line deposits would account for the rounded clasts in a fairly deep water environment of deposition for the conglomerates.

The sandstone clasts in the conglomerate contain up to 50 per cent feldspar (soda feldspar); the siltstone is rich in quartz grains. Other clasts included metamorphic and igneous rock types. Of interest was the occurrence of clasts of anorthosite and norite which are identical in hand specimen and thin section with similar rock types in the San Gabriel Mountains.

LOS ANGELES LUNCHEON MEETING

At the monthly luncheon meeting at Rodger Young Auditorium May 7, 1964, Robert F. Herron, American Machine and Foundary Co., Santa Barbara, gave an interesting talk entitled, "Oceanography - New Boundaries". Abstract:

Oceanography is rapidly emerging as a new and vitally important field of science. Although it has been pursued as a discriptive science for over 100 years it is only since World War II that oceanography has come into its own. Today's oceanographer draws from the various disciplines of physics, chemistry, geology, meterology, and biology.

Less is known about the oceans and the earth beneath them than is known about the moon. When it is realized that over 71 per cent of the earth's surface is covered by the seas and that 46 per cent of the earth's surface is beneath 2 miles of water, one can begin to appreciate the magnitude of the task of acquiring data from this "inner space". Up until only a year ago, the total area of the ocean's bottom deeper than 600 ft. that had been photographed comprised about 20,000 sq. ft., or less than one-half an acre!

The need for this knowledge is becoming increasingly greater each year. The event of the modern nuclear powered submarine has changed the entire aspect of global politics. The nation that fails to acquire an intimate knowledge of the submarine environment will be left far, and hopelessly, behind in the struggle for survival in the highly-competitive world of the near future. It is to the sea that many nations such as Russia, Japan, Chile, Peru, Norway, England and the USA must turn for their future needs in the realm of food and mineral resources. It is very unfortunate that the US has dropped to 5th place among the world's fishing nations.

The US Government is just beginning to take notice of this state of affairs and funding for oceanographic research is just beginning to get off the ground. The present annual budget is about 125 million dollars which seems pathetically small when compared with the billions being spent for a shot at the moon. However, this is a step in the right direction and it is hoped that future funding will be even greater. There are indications that this will be the case. In addition to the Government (mostly the Navy), there are numerous other institutions that are engaged in oceanographic studies. There are now 12 universities on the Pacific Coast alone that are giving courses in oceanography and about half of them are now able to give advanced degrees. A number of the industries now engaged in space research also include the ocean as an area for research. Bathyscaphs are being built by a number of firms and man's capability to explore the deep ocean is quickly becoming a reality.

1964 National Convention at Toronto - May 18-21

Spence Fine reports that about 20 California geologists attended. About 1800 registered, including 1300 geologists, 100 students and 400 wives. The technical sessions were well attended and several panel discussions were highlights. Field trips were well planned and executed, aided by pleasant weather.

At the business committee meeting we were well represented, either by district representatives or alternates. The following amendments to the AAPG constitution were passed at the business meeting and therefore will be submitted this fall to the membership for mail vote.

ARTICLE II OF THE CONSTITUTION

"The object of this Association is to promote the science of geology, especially as it relates to petroleum and natural gas to promote the technology of petroleum and natural gas and improvements in the methods of winning these materials from the earth; to foster the spirit of scientific research amongst its members; to disseminate facts relating to geology and technology of petroleum and natural gas; to maintain a high standard of professional conduct on the part of its members; and to protect the public from the work of inadequately trained and unscrupulous men posing as petroleum geologists."

ARTICLE VII, CERTIFICATION

(Present Article VII to be renumbered Article VIII).

"Should any active member desire certification he shall make application for said purpose to the Association and comply with the procedure outlined below.

And provided his application and qualifications are approved he shall thereafter be known as a "Certified Petroleum Geologist".

"At the time of application the member shall submit complete and up-to-date data as to the nature of his specialties and experience, which shall have been substantially in petroleum geology or closely related fields of practice.

"The executive committee shall then make a proper investigation and request recommendations from at least three active members as to the applicant's record, which must show at least two more years of experience in responsible work in petroleum geology, or closely related disciplines, beyond that required for active membership. The applicant shall also be required to supply references from three responsible members of his business community and, in the case of domestic members, from one district representative. The executive committee shall be the sole judge of the adequacy of the member's qualification for certified status.

"The Association shall issue to those who qualify for certified status a certificate over its corporate seal, which shall be evidence of professional standing as determined by the established procedure of the American Association of Petroleum Geologists."

(Many district representatives voiced that a majority of their membership favors certification. It would appear that opposition to certification is strongest in California. It is planned to publish certification pros and cons in the August Bulletin).

ARTICLE III - New Section 7 - Add "Student" class of membership.

"A geology major student in good standing at a degree-granting college, institution, school, or university approved by the executive committee, who has been nominated by one instructor of the nominee who is an active member in good standing of the Association, and endorsed by the head of the department, may be eligible for Student Membership.

"Student Members shall be known as students.

"Students shall enjoy all the privileges of active membership in the Association, save that they shall

not hold office, sign applications for any class of membership, or vote. Neither shall they have the privilege of advertising their affiliation in any manner whatsoever.

"The executive committee may advance to junior membership upon application those students in good standing who have, subsequent to election, fulfilled the requirements therefor.

"Student Membership shall be limited to such period of time as the student may be enrolled as an undergraduate or graduate student in a college, institution, school, or university as may be approved by the executive committee, and provided further that he is not eligible for junior membership. Any student member who becomes eligible for junior membership, and who has not applied for transfer to junior membership, shall be considered as having resigned."

SECTION 9, first sentence, delete "or" and add "or student".

SECTION 10, first sentence, delete "or" and add "or student".

(If the above amendment is passed, the by-laws will specify student membership dues at $5.00/year. This amount approximates the actual printing and mailing cost of the bulletin. It is not believed the cost to other members will be significant.)

The following by-laws changes were made at the business meeting. (Mail ballot of membership not required.)

Article VI, Section 18, was amended to read as follows:

"TRUSTEES OF THE EMPLOYEES' PENSION TRUST

"SECTION 18. There shall be three trustees, all of whom shall be members of the Association in good standing. The executive committee shall annually appoint one trustee to serve for a period of three (3) years. It shall be the responsibility of the trustees to supervise the administration of the American Association of Petroleum Geologists' Employees' Pension Trust as provided in the pension trust agreement."

Article VI, first paragraph of the by-laws was amended by deleting "and" before "Membership Qualifications Committee" and adding "and trustees of Association Group Insurance", and by the addition of a new Section 20 to Article VI, to read as follows:

"TRUSTEES OF ASSOCIATION GROUP INSURANCE

"SECTION 20. There shall be three trustees. It shall be the responsibility of the trustees (1) to maintain constant liaison with the administrator of the Association's group insurance program, (2) to audit the administrator's annual report and supervise the handling of any retention or excess dividend funds which may accrue, and (3) to make periodic reviews of existing and available programs with appropriate reports of findings to the executive committee."

SUBSTITUTE FOR SECTION 2, ARTICLE II

Section 2 - Any member who is in arrears in payment of dues shall be suspended from the Association, and thereby will be deprived of the rights and privileges of membership, including the right to receive the Bulletin and the privileges of purchasing association publications at special member prices until such arrears are met. The suspension will be removed immediately upon receipt of the arrears before December 31 of the current year. Any active member, junior or associate more than one year in arrears shall be dropped from the Association.

SUBSTITUTE FOR SECTION 2, ARTICLE I OF THE BY-LAWS

Section 2 - The annual dues of active members, juniors, and associates shall be fourteen dollars ($14.00) if paid in advance before the first day of each calendar year, fifteen dollars ($15.00) if paid between January 1 and March 1, or sixteen dollars ($16.00) thereafter. A bill shall be mailed to each active member, junior and associate before December 1 of each year, stating the amount of the annual dues and penalty and conditions for default in payment.

Richard G. Reese

On May 12, 1964, Richard G. Reese passed away at the age of 61. Dick died at St. Mary's Hospital in San Francisco after an extended illness.

He was manager of oil exploration for the Kern County Land Company, having held this position since 1958. Dick graduated in 1923 from the University of Nebraska, and in his earlier years worked for Standard Oil in southern California and in the San Joaquin Valley. In 1950 he was selected by Arctic Contractors to serve as chief geologist in Alaska and then later he was chief geologist for the Hudson Bay Oil and Gas Company for its Canadian operations.

Dick was a member of AAPG of long standing and was a past-president of the Pacific Section.

Dick and Mrs. Reese assisted us in preparations for the 1962 Convention. Mrs. Reese served as chairman for decorations for the Ladies' Entertainment Committee.

He is survived by his wife, May, of Mill Valley; a son, Richard, of Los Angeles ; a daughter, Mrs. Joel Barlow Coulter of Bakersfield; two brothers and a sister; and eight grandchildren. Kern County has set up the KCL Foundation for the Richard G. Reese memorial fund to aid students, address 600 California Street, San Francisco 8. The Fund will receive donations from any friends interested.

USC NEWS

Vernon A. Taylor has joined the faculty as Assistant Professor of Geology and will teach geochemistry and X-ray analysis at USC. Vern received a bachelor's degree in chemistry and then a master's in geology at South Carolina. After working for the Florida Survey and putting in a stint in the Navy, he worked for 6 years with Atlantic Refining, mostly in Venezuela. His doctoral research at Florida State University is on replacement reactions.

USC's geology department expects to move into new quarters for graduate research in November, 1965. The five-story Stauffer Hall of Science, designed by

William Pereira, is to be constructed in the Science Quadrangle. The cost of about $1.4 million is being borne by grants and gifts from the Stauffer Chemical Company, the Ford Foundation, and the National Science Foundation. Laboratories will serve geochemistry, petrography, space physics, X-ray, geophysics, and quantitative geomorphology, plus an extensive research program in the Department of Physics. Research facilities for oceanography and micropaleontology will remain in Allan Hancock Foundation.

Summer Field Camp will be located at Mountain Pass, San Bernardino County again this summer. Greg Davis from USC and Clark Burchfiel from Rice will be the instructors.

PERSONAL ITEMS

Jim Gless, SOCO (Petroleum Engineer) is moving from the Exploration office in Ventura to Producing Dept., La Habra. He says he will miss all the standard "pigeons" on the local golf course.

C. J. Thompson, SOCO, Ventura, is back on development duty after a special assignment. He will also remain in Ventura.

Jim Taylor, Texaco, Ventura, is off for Jungleland. (Bogota, that is!) Good luck with Texas Petroleum Co., Jim.

Signal Oil and Gas Co. has moved into new offices in Sacramento. The new address being 2129 Hacienda Way, Suite "E", Telephone 916 482-6457.

Les Brockett, Richfield, L.A., has joined the current exodus to Europe for business purposes. Les is now trying to figure out some method to bring over his family for a vacation when the job is completed.

Among the numerous West Coast geologists in attendance at the National Convention in Toronto recently were several who brought along their wives and families for an extended vacation. To name a few -Frank Morgan, Tom Baldwin, John Kilkenny, Joe Le Conte, L. S. "Snookey" Chambers. It looks like the Pacific Section will be well represented at the New York World's Fair this year.

The word is out that a large number of high handicap golfing geologists were seen polishing up their game at the API tournament in Bakersfield last May 15th. It appears the competition will be pretty fierce at the Spring Picnic this year. They say the man to watch this year is Richfield's Chief Scout, M. C. "Barney" Barnard.

Forty-three exploration-minded personnel of Richfield Oil celebrated their annual spring field conference by a 3-day trip into the Death Valley Shoshone area. Benny Troxel of the California Div. of Mines and Geology led this group of astute beer drinkers and poker players into the field. The highlight of the trip was a Mexican Hat Dance performed by one of the more versatile members of the group at the Furnace Creek Ranch. It is reported a good time was experienced by all. However, no heavy oil leasing activity has been reported from this area as a result of this trip.

Sam Tate, Humble, is frantically calling BREWERIES for the Spring Picnic beer. Heavy drinkers are reminded that the "strike" is not a beer discovery.

Don Scanlon resigned his position with Union Oil Co., Bakersfield, in favor of real estate and other promotional schemes. Any oil company personnel looking for houses or office space, contact Don for further information.

Jerry Weber, new geologist with Union Oil Co., is spending the summer on temporary assignment offshore in Washington. He will be back in Bakersfield at the end of the summer.

Joe Arndt, geologist with Richfield Oil Corp. in Bakersfield, is temporarily working with the offshore group stationed on a boat off the Oregon coast.

Tom Brady, Australian representative for Richfield Oil Corp., stopped in Bakersfield on his way back to the "Down Under Country". Tom was formerly stationed in Bakersfield.

Jim Blom, recently with Standard Oil Co., has resigned and gone to work for Occidental Petroleum Corp. in their Bakersfield office.

R. P. Barnes, Standard Oil, has been transferred from the Santa Maria area to well sitting duties. He will remain in Ventura.

Word has arrived from Toronto that Aero Service Corp. expects to do a booming business with several West Coast companies during the ensuing year. Their cocktail bar in the Royal York Hotel was indeed the place to meet your next-door neighbor from California.

Several West Coast geologists were seen visiting Niagara Falls, the honeymooner's paradise, without their spouses. Some were even seen examining the Silurian Rocks of the Niagara escarpment. No doubt this was necessary to obtain permission for going at all.

Jerry Merrill, Union, Toowoomba, Australia, was able to tear himself away from his vacation paradise in Wisconsin and attend the National Convention in Toronto.

John Elliot, Humble, L.A., is currently highlighting the Broadway shows and the World's Fair after a business (?) trip to the Toronto convention.

George Feister, Union, L.A., is currently catching up on his shots in preparation for a stint in the Philippines where he will relieve Bill Greenwalt who has earned a long vacation.

Chuck Cline, Mobil, L.A., is a recent transfer into this area from Durango. Chuck is an ex-California geologist who has been enjoying himself in Durango for several years. Welcome to the smog, freeways, etc., Chuck.

Conrad Maher, confirmed bachelor of the Mobil Oil Co., L.A., has succumbed to the charms of a young Swiss miss he met on vacation in Switzerland last year. An early date for this future event has been selected. Conrad's old married friends in this area have volunteered him a wealth of advice which was subsequently disregarded.

Carrol Hogt, Mobil, L.A., is currently back in Los Angeles from the Alaskan area after abandoning a few wells.

Ed Hall, Union, L.A., has been recently transferred to the Union Oil Research Laboratory in Brea. Ed allows as how he'll have to move again as the La Canada to Brea commute is a pretty tough one.

Union, Bakersfield, announces the employment of Jim Groom in their geophysics department. Jim is an ex-Texaco man.

Pacific Section members and wives will be saddened by the news of the recent death of Glen Ledingham's wife, Anne, who had been seriously ill for some time.

From the fire into the boiling pot. Lee Freeman, Bill Hughs, Bill Bedford of radio and TV fame and Bill Potter (geological department) along with Len Woker and Al Haight (geophysical department) from Texaco's Anchorage District are now working out of Long Beach. Wonder why Don Hartman and Wayne Felts were left behind?

Norris Saunders (Texaco) has been transferred from the Long Beach office to Sacramento.

Oleta Jones and John Browning, palynologists with Shell, have both been transferred from Bakersfieldto Seattle . . next stop Anchorage?

After 10 years in the Northwest, Larry Kuenzi, Standard, will be moving to Southern Calif. this summer.

Mahlon Kirk, paleontologist, Shell, recently attended a school board conference in Houston, representing the Shoreline (Seattle) School Dist., of which he is president. He also attended the A.A.P.G. Convention in Toronto.

Richard W. Vivion, Humble Oil scout, has returned to the Pacific Northwest to scout Washington and Oregon areas, including offshore. He has been transferred effective May 1 from Houston to Portland, Oregon. Dick had worked out of Olympia, Washington, from 1957 to 1963, prior to his transfer to Houston last spring.

Several Shell people from the Seattle office have been spending considerable time in Houston: Jack Castano, geologist, was there for a week this winter; Cliff Barkell, Division Geologist, just returned from 2-1/2 months there; and not to be outdone, Dick Emmons, palynologist, spent all fall, winter, and spring in Houston.

Bill J. Lewis, paleontologist, Standard, is temporarily in Seattle from their Oildale office.

Just back to the Shell office in Seattle from a field trip to Southern California are Dick Story, Joe Dixon, Conrad Howard, John Lawrence, Jim Moore, Sig Snelson, Art Weller, Jack Castano, and Bob Smith. It seems that one night they had dinner at "St. Vincent de Paul's" steak house on 7th Avenue, in Los Angeles.

Doug Hastings, Standard, Seattle, attended the recent A.A.P.G. meeting in Toronto.

After spending the winter in Nome, surely Ralph Rudeen, Shell, Seattle, is now a sourdough!

Recent visitors to the National AAPG and SEPM convention in Toronto, Canada, were Mason Hill, Spencer Fine, Dick Pierce, Jerry Knowles, Manley Natland, John Wiese, and Don Grinsfelder, all of the Richfield Oil Corp.

Bob Quinn, ex-petroleum Consultant from Long Beach, is now with Fenix and Scisson of Tulsa, Okla., and currently the Chief Drilling Engineer at the Nevada Test Site, Yucca Flats area. Bob's chief problems are to drill 72-inch diameter "dry holes". He questions this experience if he returns to Calif.

Bob Littlejohn is also with Fenix and Scisson at the Nevada Test Site and assigned as a Research Engineer to solve the problem of drilling large diameter "dry holes".

Andre Robetaille, Holmes and Narver, Inc., Las Vegas, Nevada, is the Project Engineer and Section Chief of the Network Analysis Group (PERT/CPM) On-Continent Operations. He reports that "Las Vegas Shows" are much better than "Oil Shows".

Leo Fay with Richfield in Anchorage reports that he now has gone through a total of eight earthquakes. He proudly states that he displayed stoic calm while riding out the first seven. His reaction differed during the eighth!

You should have seen Jim Tasker, Standard (Anchorage) during the quake. Everything came crashing down to the floor except the drink in his hand.

Gil Mull with Richfield (Anchorage) played the part of the perfect absentminded professor during the Alaska temblor. He carefully noted his watch at the outset and conclusion of all the shaking and then promptly forgot what the times were.

It's getting so Anchorage landlords break out into a cold sweat over concern for their future when approached by Pan American for office space. All three buildings occupied by Pan American since 1959 were wiped out by the quake! (A 4th structure, an annex, was destroyed by fire last winter.)

Isn't it interesting to note that over 30 geologists in Anchorage live within the confines of a potential major slide area!

It is suggested that only close acquaintances interrogate Marv Mangus, Atlantic, concerning the interruption of his activities during the quake.

Seventy-eight men from the Standard (Oildale) Exploration and Land Departments took part in the annual spring stag picnic at the Kern River Picnic Area on May 16. The golf tourney was held in the morning with Bill Winham (Annuitant) winning low gross honors with 73. Flight winners based on low net were Bill Winham, Marty O'Keefe, Bob Goff and Don Gibson. The low net "registered" USGA handicap event was won by John Tucker with a 64. Pete Gester finally won his 1st prize (2nd low net) in a Northern Division Golf Tournament. The Annual East vs. West softball game ended in a 10 to 10 tie after the East's Harold Deane smashed a triple in the last inning. The players were too tired to go into extra innings. Lackey and Lindblom for the East and Montgomery and Strang for the West were the pitchers. Dick Meditz survived the umpire's job in good shape. Horseshoe winners were Keith Berry, Dick Darrow and Elmer Montgomery.

Volleyball, beer drinking and poker rounded out a full day's activity. Gerry Paulsen was General Chairman of the event.

The annual golf tourney between Standard and Union will be held in the fall, reports Bob Lindblom and Chuck Cary, respective Captains. Chuck needs the additional time to get used to a new set of irons.

Robert Lindblom (Standard) was elected San Joaquin District Representative for the 1964-66 term. The two year term will begin after adjournment of the 1964 Toronto Convention.

In the recent API San Joaquin Golf Tourney, John Tucker, Standard, won a low net prize by the use of "serendipity" as well as golf clubs.

Andy Bengston, Standard Oildale, is being transferred to La Habra and California Research Corporation. The Racquet Club is losing one of its most dedicated players.

Dick Darrow, Standard, Oildale, is driving one of the first Ford Mustangs delivered in the Valley.

Ken Hunter, Jr. has moved his offices from Bakersfield to Fillmore. The new address is 540 Sespe Ave., Rm. 3.

Richard L. Brenan, Union geophysicist, is temporarily in the Olympia, Washington, area from Bakersfield, California.

Ike Holston, the last Tidewater geologist in Los Angeles, has joined the Tidewater Ventura office. Welcome to smog-free Ventura, Ike.

NOTICE

After this issue, members whose dues are delinquent will be removed from the mailing list.

NURSERY NEWS

Born March 24, 1964, to Ed and Claire Borglin, Union Oil Co., in Bakersfield, a son, Edgar Kenneth, Jr., (Ned) weighed 8 lbs. Joins sister, Kristine, age 13-1/2.

SPRING FIELD TRIP AND STAG PICNIC

June 12, 1964

Field Trip: The AAPG Spring Field Trip will be a tour of the San Guillermo-Big Pine fault area led by Bill Poyner of Richfield. From the assembly point (at 9:00 A.M. at the Frazier Park turn-off on U.S. Highway 99), the field trip caravan will proceed 23 1/2 miles to the junction of the San Guillermo and Big Pine faults, which will be the starting point for the road log. These two faults are among the major structural features in the area. The San Guillermo fault is a generally northwest-trending, high-angle reverse fault which separates a south-southwest dipping homocline of middle (perhaps lower) Eocene marine strata on the hanging wall from continental Miocene rocks on the footwall. The Big Pine fault is an east-northeast trending, essentially vertical fault which truncates the San Guillermo fault at the northwest end. From the junction of the faults, the road log proceeds about five miles easterly in the fault wedge formed by these faults, essentially following the surface trace of the San Guillermo fault, which is visible immediately south of the road. The route then drops into the Lockwood Valley and goes northeasterly for ten miles to the junction of the Big Pine fault with the San Andreas fault near the community of Lake of the Woods. The route then swings easterly for seven miles, paralleling the San Andreas fault, back to U.S. Highway 99 and the assembly point.

The focal point of the trip will be the good exposures along the San Guillermo fault which reveal an apparent flexure in the fault surface, a fairly broad fold having a vertical axis. The flexure and other features to be discussed lend strong support to the argument that the San Guillermo fault once formed a continuous trace with the Ozena fault but has been offset left-laterally about eight miles by movement on the Big Pine fault.

Box lunch and guidebook are available for $1.00.

Golf: Starting 7:30 A.M., Balboa Golf Course (Ventura Freeway and Balboa Street) $3.50

Picnic: Afternoon, Sunset Farms, access from Foothill just north of intersection of Highway 99 and Foothill Boulevard (2 miles NW of San Fernando) $3.50

Activities: Softball, volleyball, horseshoes, swimming (bring your own suit), horseback riding.

Pacific Section Directory

For the convenience of those members who were not able to buy the Pacific Section A.A.P.G., S.E.G., S.E.P.M. Membership Directory at the Annual Meeting, the directory may be ordered by mail from the following companies:

Pacific Log Exchange 11515 E. Washington Blvd. Whittier, Calif.	Price's Blueprint 1600 "G" Street Bakersfield, Calif.

Enclosed find $_____(check or Money Order).
Please send me _____ copies of the Pacific Section A.A.P.G., S.E.G., S.E.P.M. Membership Directory, at $5.00 per copy.

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BIBLIOGRAPHY OF RECENT PUBLICATIONS

U. S. GEOLOGICAL SURVEY

Professional Paper 431: Geology and mineral deposits of the Osgood Mountains quadrangle, Humboldt County, Nevada, by P. E. Hotz and Ronald Willden-$2.

Professional Paper 435: The Hebgen Lake, Montana, earthquake of April 17, 1959 $4.00

Professional Paper 454-I: The Late Cretaceous cephalopod Haresiceras Reeside and its possible origin, by W. A. Cobban $ .35

Professional Paper 468: Crystal chemistry of beryllium, by Malcolm Ross $ .30

Professional Paper 475-D: Short papers in geology and hydrology. Articles 122-172 (Geological Survey Research 1963) $2.00

Bulletin 914: Microscopic determination of the ore minerals, by M. N. Short (Reprinted 1964) $1.75

Bulletin 1168: Stratigraphy of the Dripping Spring Quartzite, southeastern Arizona, by H. C. Grangaer and R. B. Raup $ .75

Water Supply Paper 1597: Geology and ground-water resources of the upper Grande Ronde River basin, Union County, Oregon, by E. R. Hampton and S. G. Brown $2.75

Water Supply Paper 1779-R: Snowmelt hydrology of a Sierra Nevada stream, by S. E. Rantz $ .20

Geophysical Abstracts, 1963. Index to numbers 192-203 $ .75

Geophysical Abstracts, 207. April 1964 $ .35

MAPS:

I-375: Geologic map and section of the Chandalar quadrangle, Alaska, by W. P. Brosge and H. N. Reiser $1.00

I-410: Geologic map and sections of the northern part of the McCarthy A-4 quadrangle, Alaska, by D. J. Miller and R. S. MacColl $ .50

I-41 1: Reconnaissance geologic map of Baranof and Kruzof Islands, Alaska, by R. A. Loney, J. S. Pomeroy, D. A. Brew and L. J. P. Muffler $ .75

CALIFORNIA DIV. OF MINES AND GEOLOGY:

Special Report 77: Geology and mineral deposits of the Ord Mountain District, San Bernardino County, Calif., by F. Harold Weber, Jr. $1.50

Special Report 79: Xenotime mineralization in the Southern Music Valley area, Riverside County, Calif., by James R. Evans $1.00

County Report 3: Mines and mineral resources of San Diego County, Calif., by F. Harold Weber, Jr. $8

U. S. BUREAU OF MINES

Information Circular 8203: The Petroleum Industry of Iran, by L. Nahai and C. L. Kimbell (Order from Government Printing Office, Washington, D. C.) $1.00

AMERICAN JOURNAL OF SCIENCE, vol. 262, No. 4, April 1964

Late Pleistocene glacial chronology of north-central Brooks Range, Alaska, by Stephen C. Porter

Quantitative observations on pediments in the Mojave and Sonoran Deserts (Southwestern United States), by Jacqueline Mammericks

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NEWS LETTER OF THE PACIFIC SECTION
AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 18 | July, 1964 | Number 7

ASSOCIATION ACTIVITIES

CERTIFICATION ISSUE

CERTIFICATION AND THE AAPG
A STATUS REPORT

William H. Curry
Vice President, A.A.P.G.

The matter of referring the question of certification to the general AAPG membership was approved at the Annual Meeting in Toronto, by a substantial majority. Two societies, South Texas, San Antonio and RMAG, Denver, were opposed to having AAPG do the certifying, albeit, it should be done by some agency. The Rocky Mountain Section vote for that date, was 41 per cent in favor of AAPG Certification, 29 per cent against, and 30 per cent undecided.

For the dissenters, Dr. Orlo Childs, President of Colorado School of Mines, voiced the opinion that probably those voting in favor did not understand the issue. Although the question has been discussed widely throughout the Nation by those interested, perhaps AAPG should again state the reasons for being in favor of a voluntary certification program by itself.

First, the idea of petroleum geologists being certified and/or licensed, and AAPG being interested in the program, is not new. When exploratory drilling and exploration in general began to decline in 1957, it was suggested that AAPG might help its members by some means of certification. However, AAPG was not ready for the issue and it was dropped. The merits of certification were discussed informally by members until 1961, when Dr. Ben Parker, then president of AAPG, in his presidential address at Denver, came out flatly for some kind of certification and, or, licensing by some "properly organized body". An AAPG Committee on Professional Standards instituted a study, 1962-63. The current program was proposed 1963-64.

Now we are to vote on whether AAPG shall or shall not certify members who voluntarily seek that status. The ballots must be distributed within sixty days from the Toronto meeting which will be the latter part of August. There are certain fundamentals of the issue which we all should recognize:

1. AAPG can be concerned only with petroleum geology. Certification must be only for an accepted petroleum geologist. True, there are general practicioners and specialists of various kinds, with differing degrees of aptitude.

2. The current demand for the certification program is undoubtedly a sign of the economy of the times. Exploration is down, drilling is down, incentives for the independent are down, and there is a tightening of the ranks in employment. Certification is not an insurance of employment, but it is a shoring-up process that will improve confidence, morale and stature. In the midst of a general economic advance for the Nation, petroleum geologists are in a private recession of their own.

3. Certification is principally for the man who hangs out his shingle---who meets and serves the public. This was brought out in Toronto at a meeting of the AGI Committee on Professional Standards. The remark was made by counsel for the American Society of Professional Engineers who was discussing licensing as applied to engineers. It was agreed that geologists would be comparable.

4. One hears the term, "second class membership" applied to those AAPG members who do not have certification. It should be remembered that many salaried geologists will have no need nor desire for certification. Such derogatory description of their standing would be unwarranted. Anyone who believes mere membership in AAPG, is the great leveler, ignores the great range of status in AAPG by virtue of personal achievement. Geologists who have achieved executive positions with major companies, professors and executives of great universities, prominent members of eminent governmental Surveys, those who have held AAPG office, all have quite differing de facto membership ratings from the rank and file. This is an expression of our American free enterprise system as applied to the individual.

5. Many geologists have a form of certification as evidenced by their employment. One who proudly wears a badge of a reputable company, school, government agency, thereby has his own certification.

The AAPG program is to give additional standing to the petroleum geologist who has no such endorsement.

6. Self certification by a geological group would probably help in the administration of a state licensing program, although it would not necessarily guarantee the granting of a license. Presumably, members of a state licensing board would know the standing of various geological bodies which would be an aid to evaluating a given applicant. This, again, from the AGI meeting on Professional Standards.

7. One hears wonderment as to who in AAPG shall be so virtuous as to deny certification. The answer to this is, judgment will be made strictly on the record. One of the most important conditions of certification will be approval by three members of an applicant's business community and his AAPG business representatives as to his integrity and acceptability. If affirmative, who in

AAPG should moralize the issue? If there are any weaknesses in our moral fiber it will be those of our business ethics, today, not AAPG. If a man is accepted in business, who in AAPG can do less, provided his other qualifications are adequate? So, an applicant's acceptability for certification will be up to you, his peers.

8. The cost of instituting the program has been called to our attention. True, there will be a small fee for processing the AAPG application, but nothing in the world is really for free. If another agency were to certify, there again would be the payment of dues, after an initiation fee. Geologists should remember also, there is a fee for state licensing together with an annual remittance for staying current. To certify, license or register, will be an expense. We believe the least costly at the moment will be through AAPG

9. Coming back to previous efforts by AAPG to certify, we quote from Dr. Parker's presidential address*--"In my judgment, some form of community sanction of professional geologic practice is due the public and the profession." And further, "This (stopping of disreputable practices) can be accomplished either by the establishment of legally controlled licensing of professional geologists or by certification of qualifications by a properly organized professional body." Again, Dr. Parker says, "I am convinced, however, that some such authorization for professional public practice is a necessity for the best interest of all concerned. If desired by the majority of our group, (AAPG) this type of regulation could be limited to those offering their services to the public so as not to affect geologists engaged in regular, continuing employment. I urge you to accept the professional responsibility of finding the most feasible solution to this problem."

This, AAPG is currently attempting to do, starting from the simple query of who can judge us better than we, ourselves?

*Bulletin, American Association of Petroleum Geologists Vol. 45, No. 7, July 1961, pages 1009-1110. (Parenthesis mine) WHC

THE CASE AGAINST AAPG CERTIFICATION

Martin Van Couvering, President
American Institute of Professional Geologists
(40-year member of AAPG)

This contribution is written at the invitation of the AAPG Executive Committee in order that the members may be fully informed of the "pros and cons" concerning the issue of certification by AAPG. I am very grateful for this opportunity and appreciate the spirit of fairness that prompted it. It is my purpose and desire to treat the subject with equal objectivity.

Certification by the AAPG of some of its members is being recommended as the result of studies, made by the Executive Committee during the past year, of the problems affecting these members in their professional practice. If the members of AAPG desire certification by the Association, they are certainly entitled to it, assuming they can qualify, and, in that case, I shall apply for such certification. But is there any real need for such action?

Why is a certificate on your wall any more evidence of your ability and your respectability than the membership card in your wallet? Is not your Active Member's card a de facto certification of your qualifications for membership and for practice in the field of petroleum geology?

The Executive Committee recognizes that any society as large and as old as AAPG is likely to include some members who are unqualified, some who are disreputable. Apparently, one of the reasons for the certification proposal is the desire to be rid of such persons. In effect, though, AAPG will be proclaiming that it has been operating on shoddy standards.

What if the unqualified members do not ask for certification? AAPG proposes to certify only those who ask for it. Can the unfit retain membership simply by not asking to be certified?

The proposal recognizes that many AAPG members neither desire nor require certification. Many eminent members of AAPG, including some past presidents, feel this way. If they fail to ask for AAPG certification, how are they to be distinguished from the unfit in the eyes of the uninformed public?

It seems to me that this selective certification proposal, if carried out, will create a favored class in AAPG, and a resultant schism in the presently-unified membership. What will be the reaction of

those present members who are denied certification?

It is important to recognize the distinction between certification by the Association and registration and licensing by a state. The former, of course, has no legal status. I find much confusion on this point in the minds of geologists - even among leaders.

Certification of thousands of AAPG members is a monumental undertaking. To illustrate, let us suppose that only 4800, or about one-third of the AAPG members, apply for certification. If an Executive Committee member spent only 15 minutes per application, and worked at it 40 hours a week, it would take him seven months! Since "the Executive Committee shall be the sole judge" of an applicant's qualifications, is it fair to the other members to spend so much time on this project? Or is it even possible for the Executive Committee to find the time for it?

Certification will not be free, and this is not a one-time project. "A nominal annual fee should be charged to take care of clerical work". Five dollars has been suggested. The proposal requires that the applicant's record "must show at least two more years of experience . . . . beyond that required for active membership". So, any future member who desires to be certified must first become an active member, and then, at some later date, apply for certification.

What about the many AAPG members who belong to more than one scientific society? If AAPG adopts this certification plan, it seems inevitable that the other scientific societies will adopt similar plans, in self-protection. Individual geologists are often proficient in more than one field; must the professional geologist pay multiple fees for certification in multiple scientific societies, in addition to his regular membership dues? Why should not his membership alone certify his scientific competence in those fields?

Certification will not provide legal protection; for that, you have to go to the law. The AAPG proposal recognizes this: "Although our principal present problem is to establish a means of voluntary certification for our members, it is obvious that any certification effected must carry sufficient weight as to be acceptable to established registration bodies. . . we have no intention of suggesting that registration be attempted by the AAPG. Our studies have shown that registration by AAPG is not only impractical but undesirable."

Since there is already in existence an organization created solely for such purposes, would it not be wiser for AAPG to save time, expense and worry by leaving certification, legal registration and other problems of professionalism to this newly-created collateral society, whose President, Vice President and Chairman of the Advisory Board have all been members of AAPG since the 1920's and fully appreciate its worth? Of course, I refer to the American Institute of Professional Geologists. All AIPG members are certified upon admission to membership.

AIPG is not antagonistic to AAPG; its Executive Committee contains seven AAPG members, representing a total of 223 years of active membership. These members are fully aware of the preeminence of AAPG in the field of petroleum geology.

AIPG is prepared to devote all its efforts to fighting for the rights of all geologists against encroachment by the unqualified. In areas where registration is not imminent, AIPG hopes to make its certification so effective that legislation will be unnecessary. It will work for acceptable legislation where it seems unavoidable, as in California, where AIPG has already influenced the course of legislation. In such states, it will work for reciprocity in the formulation of registration laws. Its National Legislative Co-ordinating Council is formulating a model law for use in such areas.

AIPG is working actively to upgrade the status of all geologists; it hopes and plans to work closely with the scientific societies in order to avoid further fragmentation and to promote professional unity; one of its requirements for membership is that the applicant must be and remain a member of a recognized scientific society.

AAPG should not jeopardize its status as an outstanding scientific society. Now, more than ever, the need is for the kind of geological thinking that produced such giants as Sidney Powers, Wallace Pratt, W. E. Wrather, E. L. DeGolyer and A. I. Levorsen. Let AAPG continue to devote all of its superb talents, time, funds and energy to geological problems related to petroleum; these alone will keep it busy for years to come.

PROGRESS REPORT ON
Registration of Geologists in California

At a meeting in Bakersfield recently, Mr. Martin Van Couvering, President of the newly formed American Institute of Professional Geologists, addressed a diverse group of geologists to report organizational progress and to discuss matters in which the Institute has become involved.

Of chief interest in the discussion was the subject of geological registration in California, and from the remarks made by the group it was evident that many California geologists are uninformed concerning the current status of the registration issue. In 1963 attention was directed to the geological registration movement by the introduction in the State Senate of Senate Bill 1349, which would provide for the exclusive registration of engineering geologists. This bill was referred to the Senate Committee on Business and Commerce, and a public hearing for the receipt of testimony related to the bill was scheduled for April 7, 1964. Confronted with the prospect that a comparatively small segment of the geological profession would become registered and that limitations would be imposed upon the practice of geology within the State, certain groups of geologists, notably the Pacific Section of AAPG, determined to oppose passage of Senate Bill 1349. The Pacific Section, however, recognizing the clear need engineering geologists have for registration and, not wishing to be entirely negative in its attitude on the issue, adopted the resolution of its Executive Committee to prepare a substitute legislation satisfactory to both engineering geologists and petroleum geologists. The Legislative Committee of the Pacific Section was created and, subsequently, a draft of an alternative proposal was prepared for presentation at the April 7, 1964, public hearing.

While the substitute legislation was being prepared, many members of the AAPG became distrubed

with the thought that the Association was becoming involved in an issue which was incompatible with the scientific objectives and tax exempt status of the society. Assailed by these doubts, the Pacific Section in February of 1964 delivered responsibility for coping with the problems of geological registration in California to the American Institute of Professional Geologists whose principal aim is the elevation of the status of geologists throughout the United States. The subject of registration, therefore, falls quite naturally within the realm of AIPG activity.

On April 7, 1964 an AIPG delegation was on hand in Sacramento to testify before the Senate Committee on Business and Commerce. AIPG representatives made a convincing showing that registration of a small segment of the geological profession would be bad for the profession as a whole, but at the same time AIPG delegates were particularly emphatic in expressing the need of engineering geologists for registration in California. The Senate Committee will probably not complete its report of the public hearing until late this year, but it is apparent that the committee was impressed by arguments advanced by AIPG representatives against S.B. 1349. Consequently, the Senators are expected to recommend against the passage of the bill, primarily because it does not reflect the views of the entire geological profession.

More than two months have passed since the public hearing on S.B. 1349, and interest in geological registration seems to have waned. Many petroleum geologists have never favored registration and only tolerated the idea when the scope of their particular activities was threatened by the legislation proposed for engineering geologists. Now that the threat of such restrictive legislation has largely vanished, these same petroleum geologists, forgetting the action taken by the Executive Committee of the Pacific Section AAPG, apparently believe that geological registration in California is a dead issue. Yet AIPG feels a deep commitment to the Association of Engineering Geologists, for, on the one hand, it has destroyed legislation which they have sponsored and, on the other hand, it has acknowledged the need of engineering geologists for registration.

To resolve this problem and fulfill its obligation, AIPG has appointed a Legislative Committee to operate in California. The latter committee now proposes to take action leading eventually to the introduction of a profession-wide registration bill under which it is contemplated that all geologists practicing in California will be given the opportunity to register. At this time a proposal is being made to the Association of Engineering Geologists, inviting their cooperation in the drafting of effective legislation.

As progress is made in preparing a suitable legislation for the registration of the geological profession in California, further announcements will be carried in the Pacific Petroleum Geologist, Mineral Information Service, and other media read by geologists to ensure that the profession is kept abreast of new developments.

Arthur O. Spaulding

104 nonpaying members were dropped from the mailing list. If your friends do not receive this issue, tell them to pay their dues.

AMERICAN INSTITUTE OF PROFESSIONAL GEOLOGISTS

Because of the interest of California geologists in the problem of registration, they may be interested to know that a very restrictive law regulating the practice of petroleum geology was recently introduced into the Louisiana State Legislature. At the personal request of Grover Murray, AAPG President, AIPG, represented by Gordon Atwater, helped in getting this bill tabled for the present session of the Legislature. No new bill can be introduced until the 1966 session.

The Chairman of the Legislative Committee of the California Section, AIPG, is Arthur O. Spaulding of Los Angeles; Robert H. Paschall of Sacramento is the Legislative Liaison Officer. This committee is working with the national Legislative Co-ordinating Council of AIPG, which has B. Warren Beebe of Boulder, Colorado, for its Chairman. Mason Hill of Los Angeles, is one of the members of this committee. Ben H. Parker is Chairman of a subcommittee which is working on a model law for the registration of geologists to be used in those states where it is necessary.

The organization of AIPG affairs in California is nearing completion; in the interim, a staff of Co-ordinators for California has been appointed. These include Elmo W. Adams of Burlingame, Chief Coordinator, and his principal assistant, John E. Kilkenny of Los Angeles. Their regional assistants are Paul A. Witherspoon of Berkeley for the East Bay area; Vern C. Jones of Sacramento for the Sacramento Valley; Wesley G. Bruer of Bakersfield for the San Joaquin Valley; Carlton M. Carson of Ventura for the southern coastal region; and, in the San Diego area, Richard L. Threet of San Diego.

Inquiries about AIPG may be directed to any of the above-named AIPG officials; to Martin Van Couvering, AIPG President, or to AIPG Headquarters, P.O. Box 836, Golden, Colorado 80402.

COAST GEOLOGICAL SOCIETY

The Coast Geological Society met on the evening of June 9th at the Jet Room Restaurant in Ventura.

President Bob Yeats, Shell Oil Company, entertained a motion from the floor that Senate Bill 1349 not be discussed. The motion carried amid a loud round of cheers and applause.

Harold Sugden, Tidewater Oil Company, announced a tentative date of Saturday, August 22, for the Coast Society Barbeque. Chef Jack Wood will again preside over the glowing coals.

The evening's speaker was Dr. Don Gorsline, Associate Professor of Geology at U.S.C., who spoke on some aspects of the Marine Geology off the Southern California continental borderland.

He proved to be one of our most enthusiastic and interesting speakers to date. The discussion ranged from complex telemetery of sand grain behavior in knee-deep water to the 1000' dive by Dr. Shepard in the diving saucer.

Some of the interesting U.S.C. projects he mentioned were the study of long shore currents

and drift by means of dyed sand grains; the fact that energy zones as strong as those in the surf zone have been noted in water 170' deep; the observation of ripple marks off San Diego in sands up to 60' under water which appear to move as much as 100 yards in 12 hours; the fact that some sands are moved shoreward by wave action; meandering channels with natural levies on fans whose slope is only a few minutes of arc; submarine canyons with an inverted "key-hole" cross section; and the cirque shape of some submarine canyons and their relation to "sand glaciers".

Dr. Gorsline discussed the turbidite concept and implied that large scale slumping and sliding of detritus off the steep slopes where probably much more important processes of deposition than the turbidity deposits in the old sense.

Of interest were terraces in the outer basins at depths of 200 fathoms commonly and at depths of 3-400 fathoms frequently. Possible terraces have been noted on sonar-type profiles as deep as 3000 to 4000 feet. These terraces may represent submarine erosion processes.

He also mentioned guyot-type seamounts off Pt. Arguello and west of San Clemente at "NE Bank". They appear to be oceanic-type basalt cones of Miocene (?) age with flat top depths at 200 to 300 fathoms. A more recent uneroded cone is also present off the Pt. Arguello area.

He concluded his talk with displays of several echo sounder bottom profiles and in summing it all up, Dr. Gorsline stated that many of the older ideas and principles in the text books appear to be in need of revision.

Abstract of Speech by
Joseph Jensen, Chairman of the Board,
Metropolitan Water District of Southern California

Presented Before the American Association of
Petroleum Geologists, Pacific Section

May 21, 1964

On the coastal plain of Southern California within the boundaries of the Metropolitan Water District, there live today nearly 9,000,000 persons and they are amply supplied with water of good quality. When we ponder on the amazing development this coastal plain has experienced since the end of World War II, it is difficult to remember this is a semi-arid area and without imported water growth would have been sharply curtailed.

In the same manner that Los Angeles looked first to the Owens Valley and the Metropolitan Water District then to the Colorado River for water to grow on, so must all Southern California remain united in insuring the flow of Northern California water to our people when it is needed. It will require the solution of many extremely complex problems; but we must have it by 1972 in order to continue to grow. This need is so urgent that we have no choice except to march along, do what is required and, of course, pay our 75 per cent of the total bill of the State Water Project.

The Metropolitan Water District has numerous problems of great moment before it. The most critical is the future of its Colorado River Aqueduct and the supply of water which Metropolitan must secure to keep this aqueduct full. For this reason, the District is supporting the "Pacific Southwest Project Act" which has been introduced by Senator Kuchel as S. 2760. This bill is a truly regional plan. Besides safeguarding the Colorado River Aqueduct it requires the Federal Government to explore all sources of new water for the Colorado River Basin, whereas the Udall Plan would bring water only from Northern California.

Replacement works must be built in time to deliver water into the Colorado River simultaneously with the reduction of the river supply below 7.5 million acre-feet annually. Fortunately, there is ample time to solve these problems before they damage the economy of Southern California. All we need are the same elements that have made Southern California grow; namely faith to believe, vision to see, and courage to do.

PERSONAL ITEMS

Hal Reade, Richfield, in Bakersfield, is back from a vacation spent at Balboa--swimming and boating.

Stan Carlson, Richfield, Bakersfield, is back from a "Honey-do" vacation. It was, "Honey, do this and honey, do that" while he painted, washed windows, and various other household chores.

Joe Shea, Richfield engineering department in Bakersfield, is with his wife and a group of tourists in Europe this summer, taking in sights from England to Palestine.

Bill Bedford, Texaco, stopped in Bakersfield on his way back from Alaska to a new assignment in Long Beach.

Al Robbins, Shell Oil in Bakersfield, is in Europe with his family on a vacation prior to accepting a new assignment.

Dave Shoemaker, Shell in Bakersfield, is in Hawaii with his family spending a short vacation.

The Oildale Exploration group of Standard Oil, joined Bob Lindblom in Section 8 at Hart Park for a send off to the La Habra office on June 30th. Lloyd Owens was in charge of the operation and the group enjoyed a quiet evening of hymns and stimulating technical geological discussion.

R. B. Kraetsch has again joined the Bakersfield to Taft Commuters Club, replacing Bob Lindblom on the geology staff of the Producing Department.

The Standard Oil Company innertube flotilla was launched on the Kern River prior to farewells to Bob Lindblom. They had hoped for a view of the first Kern County model for the topless swim suits, who was sighted by one of the group on Sunday.

B. Dale Kline recently transferred to San Francisco and moved his family to the Bay Area July 1st. Local grocery men are considering asking Governor Brown to declare Bakersfield a disaster area.

Robert Votaw has joined the Exploration Department at Standard Oil, Oildale. Bob received his Master's Degree from Indiana U.

John Szatai (Signal, Europe) was in Los Angeles recently gathering up his family for a move to Duesseldorf, W. Germany where he will open up a new exploration office.

Don Grinsfelder (Richfield, L.A.) just returned from a restful vacation in Hawaii and reports that the topless bathing suit went out of style in the islands some eighty or ninety years ago and, unfortunately, has not made a comeback.

Jerry Fletcher (Richfield, L.A.) has recently passed his exams for housepeeper first class. Jerry's wife and children have just returned from a one-month visit to Canada. Fletch reports he dirtied only one fork, glass and plate during the entire time.

Jack Van Amringe (Union, Santa Fe Springs) reports that the hiking and camping in the Trinity Alps area this year is tops. Also he reports he has left the trout population practically intact for anyone else who plans to vacation there this summer.

Neal Hurley, Richfield's celebrated bachelor from Long Beach, has pulled off the deal to end all deals. It seems Neal had to be in Europe on business this summer and has been contemplating marriage for some time. As a result, Neal has parlayed a business trip into a honeymoon. Congratulations are in order on both "deals".

Al Hansen (Tidewater, Ventura) was last seen standing all alone on Signal Hill trying to hitch a ride to Iowa to start his vacation. But nobody has to go to Los Angeles the Friday before vacation starts!!!

The S.P.A.-N.C.P.R.T. Bar-B-Que/Golf Tourney and the S.G.S. Mt. Diablo Field Trip were both rousing successes! Sincere thanks are extended to all the hard workers who organized these functions.

Joe Ernst won the S.P.A., N.C.P.R.T. Golf Tourney; using borrowed clubs, naturally. To still the rumors--Joe does not plan to go on tour in the near future.

Leon Williams slowed his foursome to a crawl in the same tourney. It seems that he just refused to give up any of his $1.35 golf balls as lost. Paying $1.35 for a bass plug is sensible; but for a golf ball??

Two Schlumberger transfers pertain to the Sacramento office. Bud Marchette will soon be leaving for Alaska, and Bob Arnold should arrive from Coalinga any day now.

Exploration Logging has been working Charlie Lundgren so hard that the only way he could use some of his overdue vacation time was to get the mumps.

The Sacramento Petroleum Association has presented its awards for the best talks of the year. The winners were: Sargent M. Reynolds - The Midland Fault Zone; and Joe Parmenter - Review of Natural Gas Task Force Report.

The new officers for the Sacramento Geological Society are: President, Dalton Pollard
V-President, Burt Amundson
Secretary, Chuck Guidotti
Treasurer, Robert Evanson

The annual river floating season in the west was recently opened by a group of hardy floaters containing the Chuck Orcutt family (Richfield, Long Beach) and Marlene Shaford (Richfield, Anaheim). The group cruised down the Yampa and the Green Rivers in Colorado and Utah observing the Dinosaur National Monument en route.

There is a story making the rounds regarding Doug Traxler (Signal, L.A.) during his recent trip to London. It seems Doug took a wrong turn one dark evening and ended up on the inside of the Buckingham Palace fence. Luckily, Doug made it out before being arrested for trespassing. I guess that Basses Ale is really as strong as advertised.

Word is out that Les Brockett (Richfield, L.A.) recently had a run in with the Sheriff of Nottingham on a recent trip from London to Leeds. It seems the Sheriff mistook him for Friar Tuck for whom they have been looking for quite some time.

Members should be advised that only a few copies (450 +/-) copies of the Directory remain to be sold. Prompt action on your part can secure your copy of this handy book before the edition is completely sold out. A serious effort will soon be made to update and correct the Directory.

Signal, Los Angeles, has lost touch with their wandering geologist, Art Huey. If his whereabouts are known, please contact the home office.

A good portion of the Texaco Anchorage exploration office is now temporarily situated in Long Beach. It is hoped the group will not be inconvenienced by the long, hot summers experienced in this remote area.

NURSERY NEWS

Mr. and Mrs. Robert Ottensein, a daughter, Christina Lucile, born May 29, 1964 --their first child.

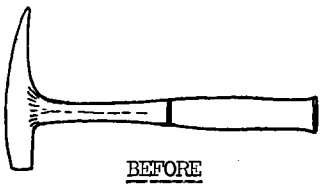
Mr. and Mrs. L. J. Parkinson, a second girl, Margaret Jean, born June 23, 1964.

The W. D. Poynor's (Richfield, Ojai) welcomed their second child, a boy, on June 9th.

With proper salesmanship, these proud fathers can be influenced to display pictures of the young additions.

CALENDAR

The Coast Society will not meet for dinner during July and August.



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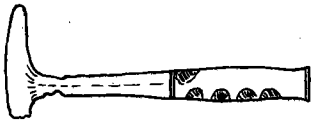

AFTER

Pacific Section Directory

For the convenience of those members who were not able to buy the Pacific Section A.A.P.G., S.E.G., S.E.P.M. Membership Directory at the Annual Meeting, the directory may be ordered by mail from the following companies:

Pacific Log Exchange
11515 E. Washington Blvd.
Whittier, Calif.

Price's Blueprint
1600 "G" Street
Bakersfield, Calif.

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Pacific Section AAPG
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BIBLIOGRAPHY OF RECENT PUBLICATIONS

U.S. GEOLOGICAL SURVEY

Professional Paper 360: Geology and quicksilver deposits of the New Almaden district, Santa Clara County, California, by E. H. Bailey and D. L. Everhart $9.25

Professional Paper 374-G: Foraminifers from the northern Olympic Peninsula, Washington, by W. W. Rau $1.00

Professional Paper 443: Quaternary geology of the Kenai Lowland and the glacial history of the Cook Inlet region, Alaska, by T. N. V. Karlstrom $2.75

Professional Paper 505: Philmont Country, the rocks and landscape of a famous New Mexico ranch, by G. D. Robinson, A. A. Wanek, W. H. Hays and M. E. McCallum, illustrated by J. R. Stacy $3.75

Bulletin 1129: Geology of Lost River mine area, Alaska, by C. L. Sainsbury $2.50

Bulletin 1141-J: Geology of the French Gulch quadrangle, Shasta and Trinity Counties, Calif., by J. P. Albers $ .55

Water Supply Paper 1419: Geologic and hydrologic features of the San Bernardino area, California, with special reference to underflow across the San Jacinto fault, by L. C. Dutcher and A. A. Garrett $4.00

Water Supply Paper 1620: Geology and ground water of the Umatilla River basin, Oregon, by G. M. Hogenson $1.50

MAPS:

GP-197: Aeromanetic map of the Kerby and part of the Grants Pass quadrangles, Josephine and Curry Counties, Oregon, by J. R. Balsley, R. W. Bromery, E. W. Remington, and others (reprinted 1964) $ .50

I-284: Preliminary map of landslides in the Pacific Palisades area, city of Los Angeles, Calif. by J. T. McGill, 1959 (reprinted 1964) $ .50

I-425: Geologic map and sections of the Philmont Ranch region, New Mexico, by A. A. Wanek, C. B. Read, G. D. Robinson, W. H. Hays, and Malcolm McCallum $1.50

MF-280: Geologic map of the Husum quadrangle, Washington, by R. A. Sheppard $ .50

Circular 491: Alaska's Good Friday earthquake, May 27, 1964--A preliminary geologic evaluation, by Arthur Grantz, George Plafker and Reuben Kachadoorian, 35 pages Free

OPEN FILED REPORTS (Inspection only.)
Exploration targets in north-central Nevada, by Ralph J. Roberts, 10 pages, 12 figures & maps.

OIL AND GAS JOURNAL:

Vol. 62, no. 17, April 27, 1964-
Canadians flock to the new center of interest, by Frank J. Gardner
Iran oil picture still looks good for drillers.

Vol. 62, no. 18, May 4, 1964
Rockies area requires much wildcatting to find reserves.
Offshore bids top $60 million at Louisiana sale.

Vol. 62, no. 19, May 11, 1964
Arizona's North Kaibab area slated for first wildcat.
Permian basin may get biggest gas play, by Robert J. Enright.

Vol. 62, no. 20, May 18, 1964
It takes many dry holes to open the window needed to successfully locate new oil and gas fields, by J. R. Rensch.

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PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION
AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 18 | August, 1964 | Number 8

ASSOCIATION ACTIVITIES

IN DEFENSE OF RATIONAL STRATIGRAPHIC NOMENCLATURE

By Harold H. Sullwold, Jr.
George H. Roth and Associates

One of the greatest contributions to the California geologist's tool kit to come along in recent years is the series of Selected Papers put out by the San Joaquin Geological Society. The papers in these volumes are full of valuable information, reflect the status of exploration thinking in certain active areas of the state, and represent a great deal of effort on the part of editors and authors. I congratulate them all heartily.

Yet, the latest issue (vol. 2, April 1964) contains some stratigraphic usage and recommendations which violate accepted terminology and rules to such an extent that I feel obliged to complain and to plead for greater conformity to the rules of stratigraphic nomenclature. I refer to the papers by Calloway, Hoffman, and Teitsworth and the editor's forward (Edmondson) in the following particulars.

On page 4 a correlation chart is presented as a joint four-man effort. The editor's forward on page 3 states that this chart has used commonly accepted formation names when possible, but that new names are introduced for certain hitherto unnamed portions of the section, and that it is hoped these will serve as a basis for formational terminology in future papers in the Northern San Joaquin Valley. This is a fine objective. Yet nowhere are these new formations identified as such and adequately described or defined. The implied plan to establish formational terminology for future use falls far short of the requirements as set up in the Code of Stratigraphic Nomenclature. Furthermore, it is justifiably questionable whether there is sufficient basis for some of these units, for the authors of the chart are not in agreement in their separate papers, as for example in the Amerada FDL No. 1 (15, 2S-5E), which appears on cross-sections of all three authors:

Calloway (p.8)	Teitsworth (p. 22)	Hoffman (p.33)
In Main Tracy sd	Sawtooth sh	Sawtooth sh
Basal Main Tracy sand	no name sd	Winters sd
Sawtooth sh	no name sh	E zone sh
Winters sd	no name sh	Top of Lathrop sands
No name sh (In E zone)	Top Lathrop sd	In Lathrop sds
Top Lathrop sds	400' below top	900' below top

and in Occidental Lathrop B-1 (5, 1S-6E):

Garzas sd	not on section	Blewett sds
Tracy sand		Tracy sand

It's no sin to disagree over a correlation.. but in the same publication which purports to establish its validity?

The chart uses the term Delta Shale for the exact same interval that has been clearly and formally named the Winters sands and shales (I would prefer Winters Formation) on AAPG correlation section 13 (1960). The term Delta Shale got into the literature in the fine article on the West Thornton area by John Silcox (1962) without any effort at formal naming or definition, and he has since admitted to me that he merely used his company's nomenclature. The correct name for the unit is unquestionably Winters, not Delta, and it is unfortunate that the chart under discussion has lent an air of legitimacy to an unnecessary duplication.

Other formations in commonly accepted use which were summarily thrown out are the Meganos and Martinez Formations north of the Stockton Arch. Certainly a change of such magnitude requires a thorough discussion backed by a body of convincing evidence.

Another trend noticeable in these and other recent papers is the tendency to use Goudkoff's zonal terminology rather loosely. For example, the much-cored Richfield East Stockton No. 1 (5, 1N-8E) was figured and dated by Goudkoff thus becoming somewhat a standard for the E and F-1 zones. This same well appears on Calloway's section (p. 8) with the zones located as much as 1300 feet different from Goudkoff's determinations. Furthermore, the Sacramento shale is shown as E zone on the chart, whereas Goudkoff clearly designated it F'-1 in the Richfield well.

But the most remarkable situation exists with respect to the E and/or F zones south of the Stockton fault. Goudkoff (1945, p. 991) says, "The best foraminiferal material characteristic of the F-1 zone has been obtained from the Amerada Petroleum Corp. FDL No. 1 (sec. 15, 2S-5E) between depths of 6,900 feet and 8,900 feet. A good faunule of the F-2 zone has been found in samples from the same well between the depths of 8,900 feet and 9,431 feet." For all practical purposes, this well is thus the type locality for the F-1 zone and to a lesser extent for the F-2 zone. AAPG Correlation Section 10N (1958) follows Goudkoff with minor variations. Yet all three authors (Calloway, Hoffman, and (by inference) Teitsworth) place this entire section in the E zone! Query (1963, fig. 5) does likewise, and Owens (1963, correlation chart) implies absence of F zone in this well. While these writers undoubtedly have good reason for their belief it is clearly their duty as responsible scientists to offer factual evidence to substantiate

such gross changes in the established biostratigraphic sequence. Goudkoff's widely used nomenclature is in danger of becoming useless, in whole or in part, through either (1) scientific proof of its uselessness, or (2) careless and unsubstantiated use of his terminology for rocks of unknown or incompatible fossil content. If (1) is true, then clearly Goudkoff's zonation needs a critical published review in the light of the many new wells in the Valley with their new fossil range data. This may possibly culminate in a whole new biostratigraphic framework with Goudkoff relegated to the archives. If (2) is true, it is not too late to save Goudkoff by more careful adherence to the rules in the future, and by a published explanation for the gross departures referred to above.

I heartily recommend the Code of Stratigraphic Nomenclature to all geologists, especially those who write for publication and, most importantly, to those who aim to tinker with the nomenclature. California nomenclature is fouled up enough as it is, what with the earlier confusion between rock-, bio-, and time-stratigraphic units. This is a plea to refrain from compounding the confusion by going into print precipitously with new names arbitrarily announced, inadequately defined, and without regard for the rules, well intended though the effort may be.

These remarks are aimed solely at certain stratigraphic usage and in no way are meant to detract from the fine geologic contribution of the papers involved. Calloway, Teitsworth, Hoffman, and Edmondson have done an excellent piece of work. They just happened to be the latest in a series which has been building my steam up.

REBUTTAL

We, editor and authors, having read the remarks made by Harold Sullweld, Jr. in the foregoing article offer the following comments in rebuttal. We shall first answer the specific allegations of error and/or misuse and secondly discuss the problems involved in strict adherence to the code of stratigraphic nomenclature.

1. Disagreement among the cross sections by the three authors on pages 8, 22 and 33.

The major element of disagreement between these three sections exists between that of Callaway (page 8) and the other two (pages 22 and 33). This disagreement is the result of an unfortunate error in the drafting for final presentation of Callaway's section resulting ir incorrect lines of correlation between the three wells of the left (west) side of the section. A corrected copy of that portion of the section is herein included. Reference to this corrected section should remedy a significant portion of the discrepancies noted.

2. Use of the name Delta Shale in lieu of Winters sands and shale.

The name Winters sands and shales is only loosely defined on AAPG cross-section 13 (1960). As defined in that section the Winters sands and shales embrace several different units and contains within it what many geologists consider a significant unconformity. A breakdown into more definitive formational entities as was done in the Selected Papers, Vol. 2, is considered to be an improvement in meaningful and useful terminology.

3. Omittance of the use of the Meganos and Martinez as formation names north of the Stockton Arch.

The Meganos and Martinez formations are indeed present north of the Stockton Arch but their presence as distinct, recognizable units is limited, for the most part, to areas west of the Midland fault; the correlation chart on page 4 of the Selected Papers, Vol. 2, pertains only to areas east of the fault, as stated at the top of the chart.

The Capay shale has long been accepted terminology for the uppermost portion of the Meganos formation. East of the Midland fault a thick sand body underlies the Capay shale. This sand body has often been placed in the Meganos and/or Martinez even though it rarely (if ever) carries a good definitive fauna. It can now be demonstrated that the lower portion of this sand is Upper Cretaceous. Any formational designation (that carries implied age) for the upper portion would be hazardous in view of the lack of known definitive paleontological data.

4. Top of F-1 Zone in Richfield "East Stockton 1" section 5 1N/8E.

Other paleontologists who have worked this well concur in the top of the F-1 Zone as shown by Callaway. Furthermore, paleontological reports on several subsequent wells in the nearby area confirm the position of the F-1 Zone as shown by Callaway.

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PERSONAL ITEMS

John L. Harper, (Standard Oil, Oildale), and the former Joan Franklin, Data Processing Instructor at Bakersfield College, were married on June 27th at Cromwell, Connecticut.

Mrs. Milt Zeni became ill on her return from vacation in Wisconsin. Latest reports are that she is recuperating nicely at St. Joseph's Hospital, Wichita, Kansas. We wish her a speedy recovery.

News Flash! General Motors announced a billion $ profit for the first six months of 1964. They never would have made it if George Webb, Standard Oil's last of the Big-Time Spenders, hadn't decided to buy a new Buick (with 1963 colors). This little extra was just the amount G.M. needed to achieve their billion $ profit. Fondness for the faithful, friendly but forlorn 50 Ford forced Fearless George to forego a fair trade-in. (Beverly now has her own car.)

George Pichel (Union, L.A.) has recently been placed in charge of Union's Alaskan exploration. George has been visiting the northernmost state recently to get the feel of the place.

Bob Linablom (Standard, Oildale) celebrated the 4th by liberating an unusual amount of funds from his golfing partners, Bob Ortalda and John Tucker. Bob shot a front nine 33 and a back nine 38 at the North Kern Course in Bakersfield.

The usual boring ride up the Santa Ana freeway took on a TV western aspect recently when Don (Hoss) Grinsfelder (Richfield, L.A.) corraled a stray mustang one morning last month. Hoss was assisted by his two sidekicks, Jerry "Wishbone" Fletcher and Harry "Mushey" Jamison.

The Richfield Palynology laboratory in Long Beach is currently playing host to Mr. and Mrs. Eloz Salas, Petroleos Mexicanos, Mexico City. Mr. & Mrs. Salas are acquiring experience in palynological methods in the California area.

Art Huey (Signal, L.A.) has finally returned to home base. Art decided it was time to return after having persistent nightmares involving english boiled dinners and thick juicy blood-rare corn fed steaks.

Jack West (Signal, L.A.) leaves next week for a golfing vacation in Minnesota. Seems like a long way to go to get a decent starting time.

Harry Jamison (Richfield, L.A.) has recently been struck down by a strange tropical malady called dengue fever. This sickness, spread by mosquitos, is making the rounds in Southern California this year. Local well wishers surmise Harry picked up this bug in the Santa Ana River lowlands area.

A couple of Richfield's wandering foreign geologists touched home base last month on their long leaves. Local friends greeted Dale Duley and family (ex-Richfield, Ojai) who have just returned from Casa Blanca, Moracco.

Darren Wales (ex-Richfield, Long Beach) and family have just returned from Sidney, Australia. Darren will be seen lingering around Southern California this next month while Gen and kids are visiting in Canada. It seems Darren is obtaining his final citizenship papers and a U.S. passport before leaving again for Australia. This is a rather complex operation, and Darren himself should be consulted for a lucid explanation of the entire operation. A good opening question is to ask him what the FBI has to do with all this.

Your Pacific Section President, Spence Fine, has recently returned from a pack trip into the High Sierras. Spence and Bob Paschall and wives report this type of camping borders on the luxurious side. The guide packed in everything but a telephone and a TV set for them. Fishing was reported to be excellent. The only casualty reported was a broken tooth by Spence. Who baked the buscuits that morning?

There is a rumor making the rounds that Tom Rothwell (Richfield, Long Beach) spent part of his vacation taking lessons in water color paintings. Tom's friends are of the opinion he should be giving lessons instead of taking them.

Hal Lian (Union, L.A.) is currently feeling his age. It seems Hal lifted an oversize box of AAPG bulletins and something gave in his back. We always thought that was pretty weighty stuff put in the bulletin. This is the proof we needed.

5. Inclusion of the Sacramento Shale in the E Zone.

Goudkoff did not identify or refer to the Sacramento shale in his paper and his intentions relative to its age must be inferred from data presented in his article. Though Goudkoff shows the Sacramento Shale of the East Stockton #1 to be in the F-1 Zone, he shows it to be in the E Zone for wells in 4N/6E, 7N/6E and 10N/4E (Goudkoff page 976).

Goudkoff placed a sand body (now named the Kione Sand) and the shale immediately below this sand body in his E Zone (see Goudkoff pages 972, 973, 976 and 977). Since the Sacramento shale can be clearly demonstrated to overlie the Kione sand (see AAPG cross section 13, 1960) one must place the Sacramento shale in the E Zone if consistency with Goudkoff's work is to be maintained.

6. Absence of F Zone Fauna in Amerada "F.D.L. #1" section 15 2S/5E.

Recent examination of data from this well by paleontologists shows that it did not reach formations which contain the F Zone fauna as defined by Goudkoff and that the fauna in the bottom portion of the well is a very good E Zone fauna, as E Zone is defined by Goudkoff. It has been concluded by one of the most respected paleontologists in this state that the statements concerning this well in Goudkoff's paper probably represent an editorial error.

7. Misuse of Goudkoff's terminology.

In view of what we have stated above there has not been any misuse of Goudkoff's terminology in the Selected Papers Vol. 2. Goudkoff's paper was an outstanding contribution and his terminology will always be the standard for the Upper Cretaceous of the Great Valley. It is not, however, totally free from error; nor should one expect it to be. If a qualified paleontologist would publish a revision that would rectify the discrepancies present (as revealed by subsequent data) in Goudkoff's work, it would indeed be a worthy contribution. The final product, we are sure, would still bare the indelible stamp of Goudkoff's fine original work.

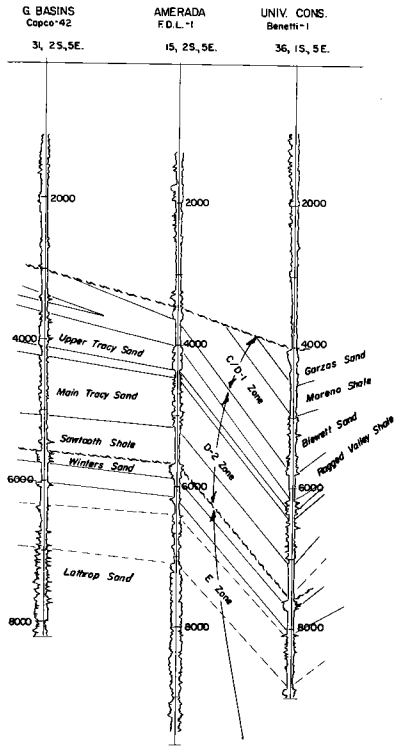
8. Proper Use of Stratigraphic Nomenclature

Upper Cretaceous formational names used in the sub-surface of the Northern San Joaquin Valley have not, for the most part, been properly introduced. Those which are commonly accepted have become so through long time use by those who have published on the area.

If strict adherence to the code of stratigraphic nomenclature relative to pre-emption by use elsewhere and priority of publication was used in arriving at a list of formation names for this area, the resulting terminology would be confusing though technically correct. For example, the names Sacramento shale and Ragged Valley silt would have to be dropped, and the Forbes would not apply to the F Zone section but rather to the unit now called Dobbins shale. Other similarly unfortunate changes would also be necessitated, the net result of which would probably be total confusion and non-acceptance by most geologists working the area.

The use of commonly accepted formation names has worked very well in enabling geologists to communicate ideas to each other, and this we believe to be the primary purpose of publication. Strict adherence to the code is perhaps desirable, but not always practical in sub-surface geologic work in California.

W. F. Edmondson
D. C. Callaway
R. D. Hoffman
R. A. Teitsworth



Correction of cross-section on page 8 of San Joaquin Geological Society Selected Papers, Volume 2.

A.A.P.G. TAX STATUS

With respect to the current A.A.P.G. proposed plan of voluntary self certification now being voted upon there is a recurring, erroneous opinion being stated in the press and elsewhere to the effect that the plan may endanger A.A.P.G.'s present tax status.

A.A.P.G. is acting upon advice of counsel. This was one of the first points cleared in Tulsa by our tax attorney. There are two types of tax exemptions, designated as 501 (c)3 and 501 (c)6. Organizations with a 501 (c)3 tax exempt status are described as "scientific and educational" and are, therefore, eligible for National Science Foundation Grants, as is A.G.I. A.A.P.G. has a 501 (c)6 tax-exempt rating as a "business league". The A.A.P.G. Research Fund is rated separately as 501 (c)3. We have been assured by legal counsel that self certification will in no way jeopardize A.A.P.G.'s present tax status.

Ed Hall (Union, L.A.) has just been put through the mill so-to-speak. It seems Ed was transferred to Union's research group in Brea about a month ago; this transfer was subsequently rescinded and Ed was returned to L.A., but not before he bought a house in Tustin. Fortunately, Ed was not able to sell his house in La Canada and was able to locate a buyer for the Tustin house after a couple of uncomfortable weeks of search.

Dick Stewart (Union, Bangkok) has returned to Thailand after a couple of months of work in Southern California. Dick said he felt cooled off enough to take some more of that overseas duty.

Bill Bazley (Richfield, Bakersfield) has just returned from a Bodega Bay vacation.

Bob Morrison (Richfield, Bakersfield) has returned from a 2 weeks vacation in Washington, D.C.

Hal Read (Richfield, Bakersfield) spent a week at Newport Beach, sailing his boat.

Joe Ernst and his son, Dave, Dennis Weeden and Ed Lacey (all of Sacramento) and Gene Tripp and Jack Pepper (of the Bakersfield, Texaco office) took a fishing trip over the 4th of July in the High Sierras. Everything went fine; they caught a lot of fish, and then they read their time table wrong. Two other members of the party, Walt Harris and John Eke, were to meet the group with the car when they came down. After patiently waiting until 10:30 p.m., our fishermen finally arrived, tired, hungry and bedraggled--but happy.

Gene Tripp and family spent their vacation at San Diego, and visited the Bill Bedfords on their way back.

Joe Johnson and family flew up to Portland, Oregon for a week and visited relatives. They flew back by way of Idaho and visited old neighborhood friends from Bakersfield. Joe reports that Kitty, his wife, is gradually becoming an expert co-pilot.

NURSERY NEWS

Mr. and Mrs. Donald Hartman (Texaco, Anchorage) announce the arrival of their third son, Douglas Michael, born May 18th.

Mr. & Mrs. J. L. (Pete) Fish (Standard Oil, Oildale), a daughter born July 14th, Mary Sharon, who joins a brother and sister.

CALENDAR

Sept. 3, 1964: Thursday, noon. Los Angeles Basin luncheon at the Rodger Young Auditorium, 936 West Washington Blvd. Speaker to be announced.

Sept. 17-19, 1964: Third Williston Basin Symposium, Saskatchewan Museum of Natural History, Regina, Saskatchewan.

BIBLIOGRAPHY OF RECENT PUBLICATIONS

U. S. GEOLOGICAL SURVEY

Professional Paper 282-A: Ephemeral streams--Hydraulic factors and their relation to the drainage net, by L. B. Leopold and J. P. Miller. $ .45

Professional Paper 474-F: Water content of micas and chlorites, by M. D. Foster. $ .45

Professional Paper 501-B: Geological Survey research 1964. Chapter B. $2.00

Bulletin 1161-H: Geology of the Cosio Knob and Espinosa Canyon quadrangles, Monterey County, Calif. by D. L. Durham. $2.00

Bulletin 1181-L: Stratigraphic reconnaissance of the Matanuska Formation in the Matanuska Valley, Alaska, by Arthur Grantz. $ .20

Water Supply Paper 1535-I: Sources of mineral constituents in water from granitic rocks, Sierra Nevada, California and Nevada, by J. H. Feth, C. E. Roberson, and W. L. Polzer. $ .60

Water Supply Paper 1600: Geology and ground-water conditions of Clark County, Washington, with a description of a major alluvial aquifer along the Columbia River, by M. J. Mundorff. $3.00

Water Supply Paper 1664: Geology and ground water of San Antonio Creek valley, Santa Barbara County, California, by K. S. Muir. $2.00

Water Supply Paper 1758: Surface-water hydrology of coastal basins in northern California, by S. E. Rantz. $1.50

Water Supply Paper 1779-Z: Selected bibliography on laboratory and field methods in ground water hydrology, by A. I. Johnson. $ .15

Geophysical Abstracts 210: July 1964, by J. W. Clark, D. B. Vitalinao, V. S. Neuschel, and others. $ .35

Maps

GP 464: Aeromagnetic map of the Long Beach-Santa Ana area, Los Angeles and Orange Counties, Calif., by G. E. Andreasen, J. A. Pitkin, and F. A. Petrafeso. $ .50

GP 465: Aeromagnetic map of Eastern Los Angeles, California, and vicinity, by G. E. Andreasen, J. A. Pitkin, and F. A. Petrafeso. $ .50

GP 466: Aeromagnetic map of Western Los Angeles and vicinity, California by G. E. Andreasen, J. A. Pitkin and F. A. Petrafeso. $ .50

GP 447: Aeromagnetic reconnaissance of the East-Central Tanana Lowland, Alaska, by Gordon E. Andreasen, Clyde Wahrhaftig, and Isidore Zietz. 50

I-407: Preliminary map of the geology of the Iliamna quadrangle, Alaska, by R. L. Detterman and B. L. Reed. $ .50

I-423: Preliminary geologic map of the McCarthy C-4 quadrangle, Alaska, by E. M. MacKevett, Jr., H. C. Berg, George Plafker, and D. L. Jones $ .50

MR-38: Placer gold occurrences in Alaska, by E. H. Cobb. $ .50

MR-39: Oxidized zinc districts in California and Nevada, by A. V. Heyl and C. N. Bozion. $ .75

Open File Reports (Inspection only)

TEI 838: Chemistry and movement of ground water, Nevada Test Site, by Stuart L. Schoff and John E. Moore.

Bouger gravity anomaly map of Clark County, Nev. and Gravity observations and Bouguer anomaly values for Clark County, Nevada, by M. F. Kane and J. E. Carlson. 36 p., 1 map, 34 tabular pages.

Semiquantitative spectrographic and chemical analyses of rocks from the lower plate of the Roberts Thrust, northeentral part of the Cortez quadrangle, Nevada, by R. L. Erickson, Harold Masursky, A. P. Marrazino, Uteana Oda, and W. W. Janes. 5 p. 2 sh.

U. S. Bureau of Mines (purchase from Government Printing Office, Washington, D. C.)

Information Circular 8221: Analyses of natural gases of the United States, by Richard D. Miller and Geraldine P. Norrell. 148 pp. 1 fig. $ .70

Nevada Bureau of Mines (Mackay School of Mines, University of Nevada, Reno, Nevada.)

Map 21: Cobalt-Nickel-Platinum occurrences in Nevada, by Laurence H. Beal. $ .75

Map 22: Beryllium occurrences in Nevada, by Laurence H. Beal. $ .75

Map 23: Turquoise and variscite occurrences in Nevada, by J. B. Murphy. $ .75

Map 24: Metal mining districts of Nevada, by John H. Schilling. $ .75

Map 25: Hot springs, sinter deposits, and volcanic cinder cones in Nevada, by Robert C. Horton. $ .75

The Ore Bin, vol. 26, no. 6, June 1964

Geologic adventures on the Lower Illinois River, Southwestern Oregon, by Len Ramp.

Geotimes, vol. 9, no. 1, July-August 1964

A look at the mantle, by Anton L. Hales.

AAPG debates its certification plan, by J. A. Taylor and Martin Van Couvering.

Journal of Geology, vol. 72, no. 4, July 1964

Geochronologic studies in the eastern Mojave Desert, California, by Marvin A. Lanphere.

Stability relations of carbon mineral assemblages in the Southern California batholith, by Robert F. Mueller and Kent C. Condie.

Economic Geology, vol. 59, no. 4, June-July 1964

Is geologic field work obsolete? by C. F. Park, Jr.

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PACIFIC PETROLEUM GEOLOGIST

News Letter of the Pacific Section
American Association of Petroleum Geologists

VOLUME 18 — September 1964 — NUMBER 9

40th Anniversary

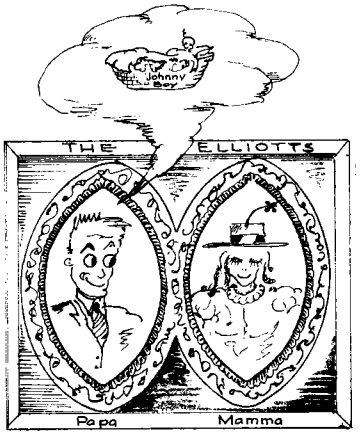
LOOKING BACK AT OUR OFFICERS

Pres. -Spencer Fine

"Gentlemen, in regard to the 1964 Pacific Section Presidential Election---".

Vice-Pres. -Gordon Bell

"Who cares, I'm going fishing."



Sec. -John Elliott

"Don't fret, I'll be there."

Treas. -R. "Norris" Hacker

"You can never scrutinize these books too carefully."

MEMORIES

1924! Ah! Them were the days. Rough necks had silk shirts, drillers had beaver hats and all tool pushers rated Cadillacs with Grüss shock absorbers and front wheel brakes.

Santa Fe Springs, Long Beach and Huntington Beach had been discovered three years before, however, drilling in all these fields was still at peak performance. Dominguez Hills and Torrance had just been discovered and the rotaries were buzzing there at a great rate.

This was the era of the "Unit", and also certain common stocks. Julian was in the Unit class at this time and Julian Petroleum was yet to be organized. Other units were Twin Bells, White Star, Bellvue, California Cooperative Syndicate No. 2 and many others. They issued units against a drilling well. If the well got oil, the units soared. In some cases, the management of the unit who had worked "so hard and diligently" cabbaged a fair share of the cash. Others put the money in a trust, and I know a lady in Ventura who, even today, gets 69 cents a year from the trust department of a Long Beach bank. So, some were honest.

On the National scene, Walter Teagle was President of Standard Oil Co. (New Jersey), the Bank of Italy reported resources of $301,963,000. Now it is 14 billion. William S. Hart and Harold Lloyd were box office attractions and Hollywood was at its height.

Washington and Navy tied at 14-14 in the Rose Bowl, and Jack McKeon was president of Head Drilling Company.

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Northwest	Ralph Rudeen
Sacramento	Sargent T. Reynolds
San Francisco	Gordon Oakeshott
San Joaquin	Orrin Wangsness
Membership Secretary	Pat Metcalf

Next Deadline -September 28, 1964

The California Petroleum Corporation had as its subsidiaries: Petroleum Midway Co., Ltd., American Oil Fields, American Petroleum Co., Midland Oil Fields Co., and Niles Lease Co.

Robert J. Pritchard and Howard Kegley were oil editors of the Los Angeles Times.

Reed Bush was State Oil & Gas Supervisor. Thomas O'Donnell was president of the American Petroleum Institute. Kolb and Dill were at the Mason. The Doheny trial in regard to the Tea Pot Dome was on. On January 29th the John D. Archibald cleared Wilmington with 148,290 barrels for Bayonne. Union Oil Co. was drilling their Rosecrans No. 1 and had set pipe and the year was to end, and the 14th cement job was over and completion was not in sight.

Dave Smith's Marine Oil Co. at Willow & Orange in Long Beach was drilling and, ere the year's end, was to be one of the big oil producers at "The Hill".

Also, at "The Hill" Shell Alamitos No. 11 came in for 4500 bbls/day from 5050' and Pan American Anderson was completed for 5000 bbls/day.

E. G. Lewis erected a steel derrick in the Sunset Field and Standard contracted for two steel derricks at Wheeler Ridge.

George Kammerer was District Supt. for Union Oil Company in the Los Angeles Basin.

Twenty-nine tankers cleared Los Angeles Harbor in the week ending February 24th with a total of 2,184,000 barrels of crude.

Associated Oil Lloyd 8 was completed at Ventura from 4367' for 4000 bbls/day.

Dr. William Von Holst Pellekaan of the Shell organization was at the Ambassador.

Petroleum Midway spudded its Miller & Lux well near Gilroy and it was still drilling as the year ended.

Balloon tires were introduced by the Goodrich Rubber Company.

United Oil had 6 wells drilling on its Haas lease at Long Beach and United floated $1,500,000 first mortgage, 5 year convertible 7 percent gold bonds.

Shell Oil Company prepares to drill Reyes No. 1 in the Compton Field, the field name being changed to Dominguez Field ere the year end.

Davis and McMillan No. 7 at the corner of Temple and Catalina in Long Beach was completed from 5080' for 2500 bbls/day.

The Arcade Building between Broadway & Spring Streets was opened.

The Salt Lake Field, out Wilshire Blvd. was being abandoned a/c encroaching high land values.

The Shell Oil Co. leased the Virginia Country Club for $150,000 and 1/6 royalty.

The General Petroleum Co. buys the Midway Oil Co. for 3 million dollars.

The Western Gasoline Company organized to manufacture casing head gasoline by the absorption method.

W. R. Broomfield has returned from Tulsa.

Perkins Process for cementing oil wells was upheld by courts.

R. E. Bering has acquired the O.C. Fields gasoline plant at Lomita. He is also president of the Signal Gasoline Co., the California Gasoline Co., and the Southwest Gasoline Co.

The Chamber of Mines & Oil banquet was held at the Biltmore. W. R. Guiberson was toast master and A. C. McLaughlin addressed the assemblage on "The Year Past and The Future". The Wildcat Committee presented "Let The Rest of the Wells Go Dry".

Tom Crumpton of the California Petroleum is taking a two-month vacation in New York.

Bardeen Oil Co. in the Puente Hills was completed from 1970' for 10 barrels per hour.

W. E. Snell appointed traffic cop in Kern County.

Standard Oil Co. reports showing of oil in its Los Angeles Investment No. 1 in the Baldwin Hills.

The Union Oil Co. have taken over the Potter well northwest of their Rosecrans No. 1 and will deepen. Chester Brown reports cores similar to those at Dominguez.

Ring Petroleum strikes showing in South Mountain in Ventura County.

"Three Weeks", by Elinor Glyn was showing at the California theater.

Henderson Petroleum Co. pays 50 cents per share to 300 stockholders.

Shell Reyes No. 2 in Dominguez blew in wild and capped in 3 days.

Vic Wilhelm appointed deputy State Oil & Gas Supervisor at Coalinga to fill vacancy created by resignation of R. M. Barnes. Emil Huguenin appointed deputy at Taft, and H. A. Goode deputy at Santa Paula.

Pan American Petroleum goes into retail gasoline business with nineteen service stations in Los Angeles.

Union Oil, Callendar No.2 came in wild at Dominguez flowing at rate of 3000 bbls/day over derrick.

Ernest W. Marland of Ponca City is in Los Angeles traveling in his private pullman. He intends to go to San Francisco where F. G. Kenny is in charge of his California operations and is headquartered.

Dominguez Hills extended 3 miles to East by completion of Shell Childs No. 1.

Santa Fe Springs operators are considering prospecting for oil below the Meyers zone. The Shell Slusher No. 6 is not considered deep enough.

W. S. Farrish, president of Humble Oil & Refining is in Los Angeles.

I. W. Fuqua, president of California Petroleum denies that recent visit of Jersey officials was to buy Cal Pet.

Calvin Coolidge defeats Hiram Johnson in California primary election.

Union Oil Co. completes its Athens No. 1 for 1000 bbls/day.

C. C. Julian running his famous ads in newsprints "Oh, boy, Something Nice is Going to Happen" and "You Make Me Laugh".

Owens River acqueduct is blown up.

Shell Oil Co. now drilling their Loomis Community in the Bell District.

L. B. Chase has abandoned its wildcat in west extension of Dominguez Hills below 5000 feet.

Julian Petroleum Co. now selling two shares preferred and one and one-half common for $100.00.

Scientific Oil has abandoned its La Mirada well at 4172 feet.

Associated Oil to lay a line on bed of Ocean at Ventura, seaward for 2000 feet. Also planning a line from Ventura Avenue field to storage near beach.

Barnsdall opens field offices on the O'Day lease at Rosecrans.

Union Oil Co. changes the name of its Bank of Italy lease at Rosecrans to its Trust lease.

Pan American Petroleum to drill its Bluffs No. 1 east of Bakersfield.

Bayceite introduced to relieve automobile engines of carbon.

Associated Oil spuds its De Francis No. 1 at Dominguez, to blow wild later in the year.

Pan American Petroleum starts work on its Crompton lease in the Elk Hills.

Union Oil Chandler No. 1 in the Rosecrans Field came in flowing wild.

Shell Oil Co. commences construction of its field office at Dominguez. O.P. Yowell will be in charge.

Associated Oil spuds its McNally wildcat southeast of Santa Fe Springs.

General Petroleum spuds its well in the Kettleman Hills in Kings County.

Marland Oil Company starts a well on Jacalitos Dome in Fresno County.

Pan American Petroleum has completed its Terminal at Los Angeles Harbor by loading 75,000 bbls. on Union Oil tanker Uta Carbon which cleared for Balboa.

Standard Oil starts to drill on San Emidio Ranch in Kern County.

In July, California was leading the nation with 620,000 bbls/day. Oklahoma was 2nd with 478,000.

M. H. Lewis & Co., Los Angeles brokers, recommends purchase of Union Oil Common at $132 per share, to yield 5.45 per cent. Paul N. Boggs has been named assistant general manager of Union Oil Co., according to E. W. Clark, executive vice-president.

Hamburgers Department store changed to The May Co.

Shell Oil Co. shuts in 7000 bbls/day of its Coalinga production.

Bredford, Pennsylvania operators discover that water flooding from five spot well will increase production.

Bank of Italy changes its name to Bank of America.

Mary Pickford and Douglas Fairbanks return to Hollywood.

Pop Warner named head football coach at Stanford.

Superior Oil Co. completes Maxwell No. 1 at Rosecrans for 2100 bbls/day of 42° gravity oil.

General Petroleum abandons their Gardner 2, White 1, White 2 and Austin 1 at Dominguez.

Boats to Avalon on Catalina Island crowded.

Standard Oil Co. leases 620 acres from Clara Baldwin Stocker for $166 per acre and has staked Stocker No. 1.

Richfield Consolidated Oil Co. claims a deeper discovery in the Richfield Field but are having water trouble.

United Oil Co. completes its Henderson No. 1 at Dominguez for 1500 bbls/day, 31° gravity oil.

Associated Oil Co. completes Higgins No. 1 at Rosecrans for 800 bbls/day of 40.3° gravity oil.

Associated has acquired the Wanka Lease at Rosecrans.

The Union Oil Co. completed its Gray No. 1 in the Rosecrans area for 1225 bbls/day of 41.4° gravity oil, from 4149'.

Wm. C. McDuffie of the Shell Oil Co. has gone to the Pacific Northwest on vacation.

Standard Oil Co. has transferred a considerable portion of its field and office force at Santa Fe Springs to the Murphy lease in the Coyote Hills.

Secretary of Commerce, Herbert Hoover, says radio has passed the experimental stage and is now a public utility.

Union Oil Co. enters Fort Collins area in Colorado.

Shomolene Oil Co. is drilling on the Jacalitos Dome in Fresno County.

Petroleum Midway completed its Mattern Twin No. 2 for 2000 bbls/day at Santa Fe Springs.

Pacific Oil Company is drilling in the Baldwin Hills.

Calvin Coolidge and Charles Yates Dawes elected president and vice-president of the United States.

Henderson Petroleum Co. acquires Northern part of Dominguez Homestead, known as Del Amo lease.

Pan American Petroleum to test its Pacific Southwest well near El Segundo. It is 5200' deep.

Italo-American completed a well at Signal Hill for 500 bbls/day from 4309'.

Associated Oil Co. completed its 2nd well in the Rosecrans area, Wanka No. 1, for 500 bbls/day.

Miley Petroleum completed Pacific Electric No. 2 for 2500 bbls/day at Huntington Beach.

Marland Oil Co. completed its Bixby No. 3 at Seal Beach for 2200 bbls/day.

Standard Oil Co. is rigging up for San Gabriel No. 4 at Seal Beach.

Net profit of California Petroleum Co. for nine months ending Sept. 30th was $5,413,000 or $694,000 over corresponding period a year ago.

Standard Oil Co., New Jersey, increases its dividend by 50 per cent.

Marland Oil Co. stakes 6 wells at Seal Beach.

Temescal Petroleum operating on the Doheny Ranch above Piru is building rig for its 4th well.

United Oil Co. has completed its Haas No. 8 at Long Beach for 2000 bbls/day.

Chanslor-Canfield Midway Oil Co. is to test its Olinda No. 96--the world's deepest well. It's depth is 8046'.

Miley Petroleum Exploration Co. discovers 45° gravity oil 12 miles west of Goleta in Santa Barbara County in Tecolote Canyon.

Associated Oil makes a discovery in its Cypress well near the Potrero County Club.

Four complete back-fields are employed by Knute Rockne.

Marland Oil Co. moves from 200 Bush Street, San Francisco, to Subway Terminal Bldg., Los Angeles.

Shell Oil Co. completes Edison No. 10 at Ventura Avenue for 2800 bbls/day from 6600'.

Associated Oil and Union Oil introduce Ethyl gas.

Geologists contend that Athens area will be larger than Rosecrans area.

Lieutenants Lowell Smith and Eric Nelson complete their round-the-world junket.

Union Oil Co. renames its Athens-on-the-Hill lease. Now known as Howard Park.

Standard drilling wildcat in Lomita area, known as Weston No. 1.

Marland Oil completes its No. 1 in the Dominguez Hills for 2000 bbls/day 20.3° gravity. H. A. Goode, vice-president, came down from San Francisco to witness completion.

Shell Bixby well at Seal Beach started flowing oil and water.

Associated Supply Co. has completed its store at Rosecrans.

Thirty-three tankers cleared Los Angeles Harbor with 2,200,000 barrels during the week ending December 21st.

Chamber of Mines & Oil held a get-together at Alexandria Hotel. E. J. Miley was toastmaster.

Rumored oil showings in Hesperia well near Victorville.

Geologists' dinner at Alexandria Hotel had Joseph Jensen as toastmaster. Committee in charge included C. R. McCollum, R. E. Collum, J. A. Taff, S. H. Gaster, J. B. Case, Robert B. Moren and E. D. Nolen. 200 were in attendance. Papers were given by G. D. Hanna, Bruce L. Clark, R. D. Reed, W.S.W. Kew, A. J. Tieje, G. D. Louderbeck, F. Witfield and Lester W. Keim.

Union Oil Company has spudded its Newhall Saugus No. 1, one mile north of Saugus with cable tools, "which have reputation of being better for wildcatting".

Washington meets the Giants in opener of Big Series. Walter Johnson to pitch opener.

Pan American Petroleum to test its Pacific Southwest well near El Segundo. It is 5200' deep.

Orders issued that Perkins Oil Well Cementing Company are to cement all Union Oil wells after Oct. 1st.

Fay L. Wright, Chief Geologist for Superior Oil Co. has returned from a trip through oil fields of Texas.

General Petroleum completes its first well at Rosecrans, Vaughn No. 1 for 1000 bbls/day.

Standard Oil Co. completes its Los Angeles Investment No. 1 in the Baldwin Hills for 175 bbls/day. Los Angeles Investment stock active in Los Angeles Exchange.

E. J. Miley has leased 3000 acres of the Casitas Ranch from Mrs. Effie Hobson and Mrs. Edith Hoffman.

Shell Oil locates Bryant No. 2 at Seal Beach.

Marine No. 7 in the Lovelady Pool at Long Beach has now produced two million dollars worth of oil and is still making 2000 bbls/day.

Shell is building pipeline from Watson Tank Farm to Ventura Avenue.

City of Huntington Beach opens up area east of 17th Street for oil development.

Shell and Union try Marietta process at Dominguez by drilling 5 spot well and introducing gas to aid production.

George F. Becker is drilling a deep test at the Summerland Field.

Julian Petroleum to drill in Southeast part of Inglewood, near Associated Cypress No. 1, now standing cemented.

Associated Oil Co. completes Bryant No. 1 for their first well at Seal Beach, with 2000 bbls/day.

General Petroleum acquires the Boston Pacific Oil Co. and Balboa Oil Co. in the Midway Field.

James A. Talbot, president of Richfield Oil Co., announces that their first dividend of 25 cents a share plus 15 cents extra will be paid Jan. 5, 1925.

Rio Grande Oil Co. has suspended drilling on Canet No. 1 north of Ventura Avenue.

Pop Warner brings Big Red Machine to Rose Bowl to meet Alabama.

Associated Oil Co. completes McGonigle No. 1 in east end of Ventura Ave. anticline for 2600 bbls/day.

Shell Oil Co. prepares to drill at Half Moon Bay in San Mateo County.

Petroleum Securities has rigged up an electric rotary east of 17th Street at Huntington Beach.

J. Paul Getty completes his 12-2 at Huntington Beach for 750 bbls/day.

And so, in this whirlwind of activity was born the Pacific Section.

-Homer Steiny
Past President, Pacific Section

REMINISCENCES OF 1924, AND THE BEGINNINGS OF THE PACIFIC SECTION

By
Martin Van Couvering
Past President - Pacific Section A.A.P.G.

On Friday evening, Sept. 26, 1924, at the Alexandria Hotel in Los Angeles, the Pacific Section of AAPG was born, and christened "The Pacific Society of Petroleum Geologists". This was obviously a preliminary step. "Preparation of a petition to the American Association of Petroleum Geologists for admission as a regional section of that association was authorized."

Frank S. Hudson had been elected temporary chairman and had appointed a committee on organization, consisting of R. E. Collom, Chairman, J. B. Case, G. C. Gester, Robert Moran and N. L. Taliaferro. They offered a draft of a constitution, which was adopted. It is noteworthy that, of the above-named committee, not one is alive today.

S. H. Gester was elected chairman and R. R. Morse secretary-treasurer of the newly-formed society. One-hundred and one people were present at the founding dinner. Joseph Jensen acted as toastmaster.

A. E. Morgan, President of Antioch College, gave the principal address. E. G. Gaylord spoke on shyster geologists.

J. M. Sands reviewed the history of AAPG, which was then only seven years old. It was organized Feb. 10, 1917, as the Southwestern Association of Petroleum Geologists. The present name was adopted February 16, 1918. AAPG was incorporated in Colorado, April 23, 1924, only five months before the meeting at the Alexandria Hotel in Los Angeles. It was "domesticated" in Oklahoma February 9, 1925, a month before the Pacific Section was chartered.

The founding dinner was the climax of a two-day technical meeting, probably the first of its kind. Although forty years have passed, the program does not sound quaint - at least to this writer. More interesting, to those who knew them, is the list of speakers, many of whom are no longer with us. It is a little shocking to think, not only of the departed, but that the survivors are all forty years older than they were then. The complete list of speakers includes: G. D. Hanna, Bruce L. Clark, R. D. Reed, W. S. W. Kew, A. J. Tieje, George Cunningham, G. D. Louderback, C. D. Hanna, H. L. Driver, A. A. Curtice, Paul S. Henderson, Chase Palmer, N. L. Taliaferro, F. S. Hudson, L. C. Uren, J. L. Chase, F. W. Hild, and Lester H. Keim.

The purpose of the present offering is to provide information for the many readers who were not around in 1924, as well as to titillate the recollections of the old-timers.

What was the state of the art (petroleum geology) in 1924?

In the program, referred to above, only the first four papers were of the familiar geological type, limited to exploration - correlation, faulting, unconformity, structural problems, and the like. The other twelve were concerned with oil fields. About half a dozen treated of subsurface geology, at least in part - including core samples and analyses of oil-field waters. Five of the sixteen papers had little, if anything, to do with geology; they were on well-spacing, emulsion-breaking, and drilling equipment.

This program reflected the interests of California geologists of that time. Then, as now, there was no clear line of demarcation between petroleum geology and "petroleum engineering". Men frequently crossed from one field into the other.

On Page 653, of the 1924 AAPG Bulletin, E. G. Gaylord and J. A. Taff say: "Some companies designate these men as resident or field geologists, others as petroleum engineers, but whatever their designation,

their duties are identical....The development geologist has become one of the most important members of the producing organization in some of the larger companies in California."

Probably, the most effective way to recall what concerned petroleum geologists forty years ago is to see what they were publishing. The best example of that is the AAPG Bulletin for 1924. Because of limitations of time and space, the present article is mainly a study of that publication.

One of the first things to catch the writer's attention was that the Bulletin was then a bi-monthly publication - six issues a year. Raymond C. Moore was the editor.

It had started in 1917 with one issue for the year, published by the Southwestern Association of Petroleum Geologists. The name was changed the next year, but that year and in 1919, there was still only an annual issue. By 1920, the increase in membership and income made three issues possible. From 1921 to 1924 there were six each year, in 1925 nine, and in 1926 twelve. The membership grew from 87 in 1917 to 543 in 1920.

In the first issue, all but one of the eight principal papers were by California authors - Joseph Jensen, John B. Stevens, S. H. Gester, Walter A. English, Walter Stalder, W. W. Orcutt, and Robert B. Moran.

This reflects the spotlight California then occupied in the drama of petroleum. The spectacular town-lot fields of Huntington Beach, Long Beach and Santa Fe Springs were near their peaks of drilling and producing activities and were creating an oil boom, the "likes" of which California has never seen before nor since.

California was the leading oil-producing state, having not yet been surpassed by its nearest competitors, Texas and Oklahoma. In 1924, California produced more oil than any foreign country.

This town-lot boom of the twenties completely changed the complexion of California's oil industry. In general terms, it marked the end of the leisurely era of cable-tool drilling. Whereas it had been common practice to take a year to drill a well and to use ten-acre spacing, this came to an abrupt end with the hectic competition of town-lot drilling, accompanied by prolific production and the widespread use of rotary drilling and new techniques.

As the year 1924 progressed, California was discussed less frequently in the Bulletin: Number II had three articles on California number III had none, Number IV had two, Number V had two and Number VI one.

In addition, three articles by California authors appeared but they were not about California in particular.

In the course of the year, each of the three principal town-lot fields, Huntington Beach, Santa Fe Springs, and Long Beach, was discussed in a separate article. The authors were, respectively, (1) S. H. Gester, (2) R. R. Templeton and C. R. McCollom, and (3) A. T. Schwennesen, R. M. Overbeck and H. H. Dubendorf.

But the rest of the "oil patch" was not neglected. John B. Stevens wrote "A Comparative Study of the San Joaquin Valley Oil Fields", and "The Oil Fields of Ventura County" was authored by N. L. Taliaferro, F. S. Hudson and W. N. Craddock.

Returning to Huntington Beach, Mr. Gester states that, in the cliff north of Newport Beach, the basal sands of the Fernando formation are impregnated with tar. There was also inflammable gas in shallow water wells near Huntington Beach. The surface topography suggested the presence of a structural high under the city of Huntington Beach. These things led Standard Oil Company to drill, and the first well was located near the high point of the topography. It was the discovery well of Huntington Beach oil field, completed August 3, 1920.

The top of the producing zone was at a depth of 1914 feet. Three years later, 212 wells produced an average of 541 barrels per day.

In the fall of 1923, Santa Fe Springs was producing more than ten million barrels per month. This represented about one-sixth of the production of the United States, and it was coming from only 1500 acres of land and from the heretofore-un-heard-of depth of nearly a mile.

Union Oil Company's "Meyer".3 was spudded Feb. 12, 1917 and completed at a depth of 4,595 feet Oct. 3, 1919. During this period of two years and eight months, the rotary was replaced twice by cable tools. This well did not cause much excitement, although it flowed at a 3000-barrel rate for a few hours.

A month earlier, Sept. 7, 1919, the same company spudded "Bell" No. 1, a mile and a half to the northwest. This well also required more than two years, but finally came in at a depth of 3,788 feet, flowing 2000 barrels a day. By this time, the discovery at Signal Hill also had been made, and the excitement was on. On June 7, 1923, 249 wells were reported drilling at Santa Fe Springs.

Nine gas wells had blown out from about 2,000 feet, completely wrecking four of them.

"With the developmemt of the Meyer zone the core barrel came into high favor" for the purpose of determining the top of the zone for water-shut-off points. Because the coring was intermittent, many mistakes were made.

By the end of June, 1923, Santa Fe Springs had produced 42,215,534 barrels of oil.

In 1916 a dry hole was drilled in the western part of what is now Long Beach oil field, but missed a discovery by not going deep enough. It was abandoned at 3,449 feet.

With a rotary, it was possible in 1923 to finish a well for production at 5,500 feet in about 120 days. The first few wells were drilled with rotary to the cementing point and then finished with cable tools. Since then, all the drilling had been done with rotary tools because only one-fourth the time was required.

It had been learned that, in general practice, mud of a specific gravity of 1.13 gave the best results.

The Perkins method was used in cementing.

The discovery well at Long Beach was completed June 25, 1921, at 3,114 feet, with an initial production of 500 barrels per day.

The Black and Drake well blew out in January, 1922, and produced at an estimated rate of 10,000 barrels per day.

At the end of August, 1923, there were 222 operators, 700 active rigs, 630 wells completed and drilling, and 270 wells producing. There was an average of one well to two acres. One ten-acre tract had 18 producing wells, and five wells drilling. Another 10 acres had 20 active wells. A five-acre tract had 11 producers and one driller. It was not unusual to find three wells on one half-acre. Some wells were on strips only 30 feet wide.

The field of 1200 acres contained 630 wells - 390 more than necessary. At an average drilling cost of $75,000, this meant a waste of $29,000,000.

The article on the Ventura County fields is the longest of all 41 pages. Most of the first half is devoted to regional geology, with no particular references to 1924. I was impressed with how well-written it is.

In the section devoted to the oil fields, the article says that oil from seepages was refined by the Mexicans for illuminating purposes in the missions as early as 1850.

"There are a very large number of entirely separate oil fields in Ventura County but most of them are very small; at the present time three fields -

Ventura Avenue, South Mountain, and Montebello - yield fully 95 per cent of the total daily production of 10,000 barrels".

Speaking of South Mountain oil field, F. S. Hudson says that production began in 1916. By the end of 1922, the field had produced 4,655,000 barrels of oil from 41 wells. All drilling had been by cable tools. Power was obtained from steam generated by burning gas. Power for pumping was either from steam or gas engines.

The interpretation of the geology was substantially the same in 1924 as now.

In Ventura Avenue field, top water and heavy gas pressures were problems from the beginning. The top gas zone was discovered in 1903 at less than 800 feet and a small commercial gas field established.

"Both the cable tool and rotary method of drilling have been used with equal success. The rotary method has been more generally used during the past two years, although, even with improved rotary methods, there will undoubtedly continue to be considerable cable-tool work in this field."

Mr. Stevens' article on the San Joaquin Valley fields is a strictly geological one showing correlations between fields, both graphic and verbal. A cross section from Point Concepcion to Oil Center, near Bakersfield, is included.

In "Oil Shale in Santa Barbara County, California", F. D. Gore stated that it is different, both physically and chemically, from the oil shales in other parts of the United States and abroad, and that the oil produced in the Santa Maria, Casmalia and Lompoc oil fields came from this "brown shale". He added a quaint touch by saying: "The major portion of deposits which would justify exploitation are easily accessible by wagon roads and are an average distance of 2 miles air line from the railroad station of Schumann." He shows a picture of such a wagon. (Most of us, who were old enough in 1924, owned automobiles and no longer used wagons. However, "wagon roads" were often used by cars.)

The "railroad station of Schumann" does not appear on his map, but must have been on the now-abandoned Pacific Coast Railroad, which passed between the oil fields he mentioned. Perhaps a few of my readers can remember riding that railroad through that area, as I can. It terminated at Los Olivos, the headquarters being in San Luis Obispo. It was said to antedate the Southern Pacific Railroad in that area - in fact it was reputed to be the first railroad in California.

Considering the current interest in oil shale, Mr. Gore's article is worth reading. He discusses the extraction process in detail. He was the Deputy State Oil and Gas Supervisor in Santa Maria. I substituted for him a few days in 1921 or 1922, and can remember taking several automobile trips with him. They were memorable.

It is of interest to note that one of the stations on the Pacific Coast Railroad was named "Orcutt", after W. W. Orcutt, Union Oil Company's first geologist and the author of the seventh article in the 1924 AAPG Bulletin. Later Mr. Orcutt, who is now deceased, lost an arm in an automobile accident.

The above-mentioned article, by this distinguished geologist, is particularly timely because it takes a backward look, as does the present one and that is the reason for the present publication. Mr. Orcutt's article is entitled "Early Oil Development in California". As he was a careful chronologer and a meticulous student, complete reliance may be placed upon his account.

It is entertaining to read that, in 1510, the novelist Ordonez de Montalvo (after whom the California town was named) gave the name "California" to a mythical island in the Pacific, lying "to the right of the Indies and very near the quarter of the terrestrial Paradise".

We also read that, in 1833, gold was discovered, in the hills near Newhall, by Don Abel Stearns of Union Oil Company's "Stearns" lease near Brea. "The gold discovered was sent to the mint in Philadelphia where it was coined and then returned to the discoverer."

As the author points out, "the number and extent of the oil seepages and brea beds in Ventura and Los Angeles Counties had become a matter of common knowledge" by the time of the Civil War.

In 1864, Professor Silliman of Philadelphia interested his fellow-townsman Thomas Scott, in the Ojai Ranch. Scott was a man of means, connected with the Pennsylvania Railway System. He formed a syndicate that bought the Ojai Ranch and other properties in Ventura County.

"In the early part of 1865, they secured in New York City the first drilling equipment ever sent to California." He also sent his young nephew, Thomas R. Bard, after whom Bardsdale was named. Later Bard was a long-time President of Union Oil Company also a U. S. Senator.

In those days, wooden barrels, with a capacity of forty-two gallons, were used, thereby determining the unit of volume still in use in the American Oil industry.

Scott's syndicate drilled the first well in 1866, to 500 feet, five miles north of Ventura along Ventura River. It was unsuccessful. The second well went to 520 feet, five miles farther north, but was also unsuccessful, though finding a little oil.

The next move was to Sisar Creek, north of Sulphur Mountain, east of Ojai and north of Santa Paula, where heavy oil still seeps from the hillside. Here Numbers 3 and 4 were abandoned at about 300 feet. No. 5 was drilled on the oil seep with a spring pole. Enough oil was found, at less than 100 feet, to fill six wooden barrels per day.

No. 6 was drilled to 550 feet with the machinery from New York, producing fifteen to twenty barrels per day of good oil. It was a consistent producer for many years. Though Mr. Orcutt did not say so explicitly, the context indicates that this was California's first commercial well. The property was later named the "Silver Thread". Many of you know it. The expenditure of $200,000 and four years of time was unprofitable because of the limited market. This apparently brings us to 1868 or 1869.

While Scott's syndicate was drilling for oil, Leland Stanford tried another approach - on the other side of Sulphur Mountain, where seepages and brea beds also occur over a length of about 16 miles.

Having made a fortune from mining, he decided to mine for oil. An eighty-foot tunnel was completed in 1866. It was inclined, so that the oil flowed by gravity. Tunneling was continued for 25 years, the longest tunnel was 1600 feet long. The production ranged from one to twenty barrels per day of good oil. Mr. Orcutt does not tell us how profitable the operation was. Evidently it ceased to be attractive many years ago.

The Pico Canyon oil field is generally recognized as California's first successful field. It started with a 75-foot well drilled with a spring pole by C. A. Mentre, in 1875. It produced five or six barrels a day of 32-gravity oil.

The California Star Oil Company was formed in 1876 and took over Mentre's holdings. In 1879, the Pacific Coast Oil Company was organized. This became the nucleus of Standard Oil Company's holdings in California.

In 1883, Lyman Stewart and W. L. Hardison came to California from Pennsylvania, and drilled four dry holes east of Pico Canyon. A fifth well, west of Pico Canyon, was so successful that Hardison and Stewart were able to recoup their losses on their first four wells by selling it to the Pacific Coast Oil Company. When Mr. Orcutt wrote, it had been producing for forty years. That was forty years ago. I have no information on its present status nor its identity.

Stewart and Hardison then moved to Ventura County and soon made it the center of the California Oil industry. Later they founded Union Oil Company.

Mr. Orcutt's articles continues with very interesting accounts of the early pipeline, refineries and shipping.

He takes up the subject of "gushers" and says "it is only in the last twelve or fifteen years" that they were of sufficient volume "to attract the attention of the world".

He seems to have been impressed with the "Blue Goose" well at Coalinga, with a maximum flow of 1,500 to 2,000 barrels per day in 1898 or 1899. This was a famous well in its day but was much smaller than many wells at the time he was writing.

However, some of the wells he mentions later were more impressive. "Hartnell" No. 1 in the Santa Maria field, produced 12,000 barrels per day for ninety days in 1904 and a total of three million before being put on the pump.

The "Lakeview" No. 1 at Maricopa was the biggest well in the history of California oil fields. It came in on March 15, 1910, for 15,000 barrels a day but reached 68,000 on May 18. On July 12, it started to decline. It produced nine million barrels in 18 months. Finally the hole caved in, and the well was dead, never to be revived.

Mr. Orcutt claimed to have collected the first fossil bones that led to the discovery of the fabulous collection of fossil vertebrates in what is now Hancock Park. After several years, he sent his specimens to Stanford University after consulting his college classmate, F. C. Anderson. Professor J. C. Smith referred them to Professor John C. Merriam, later Director of the Smithsonian Institute in Washington, D.C., who initiated the systematic collection of these fossils.

In 1893, E. L. Doheny discovered the old Los Angeles oil field with a hand-dug well, 150 feet deep, near the intersection of Glendale and Beverly Boulevards.

Mr. Orcutt diverted this story from 1924, by more than 400 years, to the origin of the name "California" in 1510. Now let us return to an interval of only forty years from the present.

Editor's Note: The above article is being presented in two installments. The editor feels that the presentation by Martin Van Couvering is of such interest that a condensation would do it great injustice and the length of the article does not allow printing the complete work in this issue.

Nursery News

Mr. and Mrs. John M. Nisbet, Jr. (Richfield, Long Beach) are proud to announce the arrival of their first son, John Selby, born August 4th. John Selby joins two sisters in the Nisbet home.

Mr. & Mrs. James Trotter, a son, James Wentworth, born May 11, 1964 on his dad's birthday! First child.

Calendar

The usual meeting place of the Northern California Geological Society for the regular Monday luncheons has been changed from Lambros' to the Iron Duke at 132 Bush Street, only a block from the Standard Oil Building. Lambros' has been taken over by the Domino Club and is undergoing remodeling.

Sept. 16-19, 1964: 13th Annual Field Conference of the Intermountain Association of Petroleum Geologists. Registration will be held at the Vernal Hotel, Vernal, Utah. The field trip area and theme will be the Uinta Basin "Utah's Hydrocarbon Storehouse".

Sept. 28, 1964: 7:00 p.m., Los Angeles Forum Meeting, Mobil Building. Speaker Robert S. Yeats "A Pliocene Sea Knoll at South Mountain in the Ventura Basin".

Sept. 30, 1964: 28th Annual Field Conference of the Kansas Geological Society. Registration will be held at the Western Hills Lodge at Wagoner, Oklahoma. Field trip will study the Mississippian reefs, the Ordovician, Cambrian, and Pre Cambrian Systems.

Oct. 10, 1964: San Joaquin Geological Society, El Tajon Hotel, cocktail hour 5:30 p.m., dinner at 6:30 p.m., Speaker W. F. Edmondson "The Meganos Gorge".

Personal Items

"Buzz" Ivanhoe has just returned from 2-1/2 months as an oil exploration consultant in Israel and South Africa and points enroute. South Africa is "American" rather than "European" and is like the American Southwest populated by "Canadians".

Bob Knapp has just returned from a 4-week trip wandering through the wine cellars and gourmet establishments of France, Germany, Italy, England and Holland. Apparently his wife kept pretty close tab of him as we haven't heard a single word about the famous French gals or SHOWS!

A few recent Standard transfers include:

Jack Sheehan -From Exploration at La Habra to the Petroleum Engineering office at Huntington Beach on loan for 2 years.

Claude Fiddler -Exploration, La Habra, transferred to the Reservoir Engineering section of the Production Department at La Habra.

Bob Lindblom -"Mr. Golf" of the Oildale Exploration office of Standard has been transferred to La Habra, but in his present assignment aboard the WODECO III he's had a hard time finding a good putting green. Doubtless, the next tournament will reflect the effects of "sea-duty".

Ed Dryden -Ventura Country Club, sometimes known as Standard's Ventura office, relieved Bob Knapp in La Habra but found regular office hours and white shirts and ties a little hard to adjust to.

Paul Schnurr has returned to La Habra from a stint of duty in the Pacific Northwest this summer. Welcome back, Paul.

Jim Trasker, has taken up residence with the geophysical group at La Habra after a tour of duty in Anchorage.

Gregg Calkins, returned to La Habra after being on loan to the geophysical group in Seattle for several months.

Jim Blom, Geophysicist from Oildale office is now house-hunting near the La Habra office, too.

Jim Payne has been transferred from Seattle to Oildale.

Norm Jokerst assumed duties as Northern Division Geophysicist on Sept. 1st. He recently transferred from the La Habra office.

W. J. Lewis, Paleontologist, transferred from Oildale to Seattle. Bill is a native son of the San Joaquin Valley and had to be told that all that green stuff up north is grass.

Bob Stephens joined Standard at Oildale from Fullerton. Bob attended New Mexico Institute of Mining and Technology, Socorro, New Mexico.

Linn Adams has been transferred from La Habra to the San Francisco office.

Praise Be! Union Oil Co. is reversing the trend of most other companies today. They have recently hired three newly graduated geologists, namely Jerry Weber, Jim Scott, and Dave Hill.

Max B. Payne is looking for new employment connections since Norris Oil Co. has decided to discontinue their geological department. Max may be contacted at 1613 Country Club Drive, Bakersfield, California.

Lowell Redwine has joined Richfield's Production Research Department in Anaheim.

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NEWS LETTER OF THE PACIFIC SECTION
AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 18 | October, 1964 | Number 10

ASSOCIATION ACTIVITIES

CONCLUSION

Reminiscences of 1924, and the Beginnings of the Pacific Section

By
Martin Van Couvering
Past President - Pacific Section A.A.P.G.

The opening article of the 1924 AAPG Bulletin is by Joseph Jensen, now Chairman of the Metropolitan Water District, but then Chief Petroleum Engineer for Amalgamated Oil Company, a subsidiary of the Southern Pacific Railroad. It is entitled "A Study of the Present California Oil Situation".

Considering the present large importation of oil into California, it is interesting that Mr. Jensen's article was concerned with overproduction, and the problem of storage it entailed. "When will the consumption of California and the western seaboard equal or exceed the production of California?"

He correctly concluded that California had reached its peak production in 1923. He figured that there would be no surplus in the latter part of 1924.

At that time, much of the production in the old fields was shut in because of the flush production in the big, new, town-lot fields. In Coalinga, 543 wells, out of 676, were shut down. There is a tabulation of statistics about the older fields. From the point of view of forty years later, it is interesting to see that they include the following: Kern River, Midway-Sunset, Coalinga, Newhall and Ventura County, Fullerton, Santa Maria, Los Angeles City, Montebello-Whittier, Lost Hills-Belridge, McKittrick, Salt Lake, Richfield, Summerland, Coyote, Elk Hills, and Watsonville.

I have listed them in the order of the number of producing wells, as shown in the table. The old Los Angeles City field is credited with 322 producing wells, Salt Lake field (north of Hancock Park) with 276, and the abandoned Summerland field, with the old piers over the ocean, near Santa Barbara, with 135.

Mr. Jensen says "There are three fields in the making, namely, Wheeler Ridge, Torrance-Redondo, and Compton". The latter is now known as "Dominguez". Because it occupies a prominent geologic structure, he thought it would "unquestionably be a companion to Huntington Beach and Signal Hill". He overlooked the fact that it was not largely a town-lot field. It was developed much more conservatively and scientifically. It was a model of efficiency in its day. But it lacked the volume of oil of the two beach fields and Santa Fe Springs.

Mr. Jensen points out that it took more than a year to bring each of the three big fields to a production of 100,000 barrels a day - two years and a half for Huntington Beach. He estimated at least two years for each of the three new fields to reach its peak of production.

Later, Mr. Jensen wrote another article in conjunction with his assistant, Glenn D. Robertson. It was entitled "New Development Problems and their Solution in Southern California Oil Fields". There is not much geology in this article - but there is some of the "petroleum engineering" variety.

Core drilling was in its heyday and much of the article is devoted to that subject. "Up to the middle of 1921, core drilling in oil fields was only in the experimental stage. By fall of the same year it had become established practice." Most of the core barrels were simply lengths of pipe, with saw teeth cut into one end. Provisions for cooling the bit were inadequate, the mud being introduced from three to twenty feet above the bit. As a consequence, the bits, the cores, or both, were sometimes fused from the heat of friction in drilling.

Still, "The average driller learns how to take core samples after three to five attempts, and coring has become so universal that most drillers are now successful in getting good samples. One company operating in the Huntington Beach field obtained 153 cores without a failure".

"The great number of operators, both large and small, in all of the southern California fields, recognize that without the aid of core sampling, the location of cementing points for water strings and completion depths in the wells would be so different that water troubles would probably have been much more serious than they now are."

Not much is said about the double core barrel, invented by J. E. "Brick" Elliott. This tool, designed to dissipate the heat of friction, was also widely used. It incorporated a "core catcher" - a separate container for the cores.

It should be borne in mind that the electric log was unknown in the oil fields in 1924. Before the advent of coring, correlations between wells depended entirely upon the logs made by the drillers, most of whom were more interested in "making hole" than in keeping logs. Hardly any of them were capable of interpreting the formations penetrated by the bit, except as disclosed by changes in the speed of drilling or by oil and gas showings "on the ditch". It was a common practice to save up "overhole" during periods of easy drilling to compensate for the poor progress made in hard formations.

A saving factor, in correlating wells, was the density of drilling. In this way, the first oil shows from many wells could be correlated into a convincing pattern, thereby enabling the drillers to anticipate the depths at which the oil sands would be encountered in new wells.

Since rotary drilling, itself, was comparatively new, and many modern devices had not appeared, it was much more common than at present to drill through an oil sand (or a water sand) without knowing it.

The directional survey had not come into use, so it was common practice among engineers and geologists to assume that all holes were vertical despite considerable evidence to the contrary. In many instances, serious misinterpretations of structural conditions resulted.

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Deeper drilling resulted from the use of rotary tools. "Three years ago a 4200-foot hole was considered a good depth for rotary tools." Mr. Jensen reports that "The deepest hole in California, and probably the deepest rotary hole in the world . . . is now drilling at 7,154 feet".

He was impressed with the effectiveness of new chemicals in speeding up the setting of cement. He cites an example in which 244 days were required on 61 jobs where a chemical was used. If the chemical had not been used it would have taken 854 days. He also makes a point of the value of combining the use of mud in drilling with large quantities of cement, in shutting off water. A part of the article is devoted to the locating of water sands, another to sand control, and it concludes with production control.

A somewhat-related article is "California Oil Production and Reserves" by R. E. Collom and R. M. Barnes. They say the principal producing oil fields lie in Fresno, Kern, Santa Barbara, Ventura, Los Angeles and Orange Counties, and that the geographic distribution has not changed greatly in the past 25 years.

This article contains so much of interest that it is hard to resist the temptation to make extensive quotations from it.

It includes numerous statistical tables and graphs. Table I shows that Los Angeles Basin's share of the State's production increased from 28 per cent in 1920 to 80 per cent in June, 1923.

"The oil fields of California produced 1,720,838,000 barrels of oil to July 1, 1923; an average production of 29,250 barrels per developed acre. On July 1, 1923, there were 113,449 acres of proved oil land in California, a little over half of which has been developed by some 14,242 wells drilled to an average spacing of 4.1 acres per well. At the same date the three gusher fields of the Los Angeles basin, covering 5,471 proved acres, or 5 per cent of the state's total, were producing 72 per cent of the total oil output, with 6 per cent of the total number of producing wells. The average daily production per well for these three fields in July, 1923, was 1,057 barrels. The average daily production per well for all other fields of the state, excluding Huntington Beach, Long Beach, and Santa Fe Springs, was 25 bbls. for 8,345 producing wells. In December, 1920, the average daily production per well for the 9,600 producing wells of the state was 33 barrels. In the spring of 1922 it became necessary to shut in some of the producing wells in the older fields of the state to make way for the flush production of the Los Angeles basin. It is estimated that on July 1, 1923, a total of 2,000 producers in older fields had been shut in, representing at the time of shut-down a total average daily production of 100,000 barrels."

A large section of the report is devoted to the "Quality of California Oil", and begins with a statement that, before 1913, more than half the production was heavier than 20° Baume'. (The slightly different API gravity scale had not yet come into general use.) And that, until quite recently, California had been, preeminently, a fuel-oil-producing State. The flush production of the 1910-1915 period brought the price down to 30-35 cents per barrel.

According to Tables VIII and IX, production of heavy oil reached a peak for the State, as a whole, and in San Joaquin Valley in 1911: in the coastal counties in 1919, and in Los Angeles Basin in 1921. It is interesting to note that the production of light oil first exceeded that of heavy oil in San Joaquin Valley, and in Los Angeles Basin in 1914. In the coastal counties, light oil always predominated, except in the first half of 1923. For the State, as a whole, light oil production exceeded that of heavy oil prior to 1895 but did not reach that status again until 1913.

The last part of the article is devoted to oil reserves, and dwells on the problems involved in estimating them. It summarizes earlier estimates in Tables X and XI and extends Table XI to July 1, 1923 with the author's own estimates in Table XII. The latter places the ultimate production for California at 3,544 million barrels and the proven acres at 106,843, giving an ultimate production, per acre, of 33,100.

The 1924 AAPG Bulletin has two articles about geologists. The first is by Robert B. Moran, and is entitled "The Role of the Geologist in the Development of the California Oil Fields". This article is partly historical and partly a justification of the use of geologists by oil companies.

"As early as 1888 the report of the State Mineralogist devoted attention to the Oil Fields of California, Bulletin 3, by W. L. Watts, 'Oil and Gas Yielding Formations of Central California' was published in 1894."

In discussing the influence of seepages on early oil exploration, Mr. Moran says that the tar and brea at McKittrick were used for paving before the discovery of the oil field, and that the Southern Pacific Railroad built a line from Bakersfield to Asphalto on this account. A new oil field, recently discovered in Asphalto, has created much excitement and activity, as has the still more recent discovery at nearby Railroad Gap.

Union Oil Company (in 1899) was the first to establish a geological department. W. W. Orcutt, previously mentioned in this article, was placed in charge. He had been a classmate of Herbert Hoover in the first class to graduate from Stanford University.

"In 1898 the Southern Pacific sold a number of sections of railroad lands at Coalinga for $2.50 an acre. One of these sections subsequently produced 35,000,000 barrels of oil. Prior to this time the Southern Pacific Company had organized a geological department which was doing work in Texas and Mexico. When the value of these lands began to be realized, reconnaissance work was started in California. In

1903 the Kern Trading and Oil Company was organized to operate on the grant lands. At the same time the geological department established a branch office in San Francisco, and started the systematic work of classifying the railroad lands.

"From the start this company was controlled by technical men, for E. T. Dumble, geologist, was the manager and M. E. Lombardi, a mining engineer, was superintendent of development. This organization has always taken the lead in the matter of technical management. As early as 1907 they put resident geologists at each of the fields where they were operating and started the study of subsurface problems. The question of the water shut-off and finishing of wells was studied by means of cross-sections and these problems were handled in a manner considerably in advance of the practice of the times.

"In 1908 the Associated Oil Company organized a geological department and began a series of extended field investigations, which were related chiefly to the acquisition of new properties and had nothing to do with the operating problems at the properties under development.

"At about the same time the Standard Oil Company organized a geological department which handled the acquisition of new properties and had but little to do with the producing department in the problems of oil development."

Reference is made to the reports of the U. S. Geological Survey on various California oil districts, published in 1905 to 1910, of which Ralph Arnold was co-author in each case. His associates were John H. Eldridge, Robert Anderson, and Harry R. Johnson, respectively.

Much credit is given to the State Department of Oil and Gas, formed in 1915 under the direction of R. P. McLaughlin, State Oil and Gas Supervisor. He had been the author of Bulletin 69, published by the State the previous year. It covered the geology of all the oil fields, besides discussing aspects of oil-field operations. The Department is credited with being the most important factor in the evolution of oil-field practices.

After discussing the discovery of sixteen fields and showing that twelve of them were found by companies employing geologists, he considers the prospects for new fields, and remarks: "The Kettleman Hills and the Inglewood Hills both have resulted up to the present time in deep dry holes." The drilling in Kettleman Hills was not deep enough; in Inglewood (Baldwin) Hills, it was in the wrong place. However, Mr. Moran did not have long to wait for these discoveries. Both have very prominent anticlinal structures.

The second article about geologists is entitled "Geological Organization of an Oil Company" and is by E. G. Gaylord of Pacific Oil Company and J. A. Taff of Associated Oil Company, both in San Francisco. Because they were employed by large companies, their article reflects that point of view.

The article is concerned with the work of the development geologists and, despite the improved equipment and techniques, is basically as appropriate today as forty years ago.

At that time, the alignment of oil fields between Beverly Hills and Newport was attracting much attention. Dominguez oil field had just been discovered, following Huntington Beach and Long Beach a few years earlier. Inglewood, Seal Beach, Athens-Rosecrans and others were still in the future. Hence, "Dynamics of Oil-field Structure in Southern California", by R. N. Ferguson and C. G. Willis, was quite timely, because it dealt with this alignment.

At that time, fifteen fields had been developed in Los Angeles Basin, according to these authors.

They call attention to the generally accepted theory of a fault in the basement, along which the southwestern component has moved, and is still moving, northwest, causing the folding of the overlying strata into en echelon structures, with axes oriented in a northwesterly-southeasterly direction.

With this in mind, it was hoped that more concealed structures could be found.

Two articles discuss correlation by two different methods. F. G. Tickell has written about "The Correlative Value of the Heavy Minerals". The research, leading to it, had been done in conjunction with Ralph D. Reed, later a president of AAPG and now deceased.

"In the region south of Coalinga it was found that the Tejon (Eocene) beds can readily be differentiated, microscopically, from the overlying Miocene formations."

The article is illustrated by twelve microphotographs.

Walter English contributed a short article entitled "Some Planetable Methods". It is not pertinent to the present discussion, since the subject has no particular relevancy to 1924.

In the field of pure geology, Walter Stalder contributed an article on the Monterey shale in Pine Canyon, Monterey County. He was attracted by many evidences of petroleum. Pine Canyon is directly southwest of King City. So far, no oil fields has been found there.

The final article, about California, in the 1924 AAPG Bulletin, is of only minor interest to geologists and is more appropriate for members of the refinery business. It is by Paul W. Pautzman, and is entitled: "Chemical Characteristics of California Petroleums". The article goes into considerable detail in analyzing the differences between California crudes.

He says there are at least four distinct classes, of which the first two make up almost the entire production. They are:

(1) Asphaltic crudes free from wax.
(2) Asphaltic crudes containing wax.
(3) Paraffin crudes almost identical with certain typical Pennsylvania oils.
(4) Heavy crudes free from both asphalts and paraffin.

In Number II of the 1924 Bulletin, we learn that: "William S. W. Kew, associate editor of the Bulletin for the Pacific Coast, has resigned from the United States Geological Survey. After February 10, he is to be associated with Mr. Hoyt S. Gale in work in California, with headquarters in Los Angeles.

"Walter English has recently arrived in Denver to be in charge of a geologic force for the Standard Oil Company of California, with offices in the Patterson Building.

"E. Call Brown has gone to New Zealand to study the oil geology of the island for the New Zealand Government.

"W. W. Rubey, M. N. Bramlette, and N. W. Bass, of the United States Geological Survey are in Kansas where the U.S.G.S. is cooperating with the Kansas Geological Survey on a number of projects.

"F. E. Vaughan, geologist of the Roxana Petroleum Corporation with Houston headquarters, is in charge of the investigations that the Roxana is now conducting on the Gulf Coast with the torsion balance."

"Willard W. Cutler spent part of February in Washington, D. C.

"Joseph T. Singewald, Jr., is in South America. His classes at Johns Hopkins University are being carried by a group of men from the Geological Survey, including D. F. Hewett, H. G. Ferguson, E. Sampson, F. L. Hess, and K. C. Heald."

Number III has the following personal items:

"P. S. Houry, formerly with the California Mining Bureau and recently located at Dallas, Texas, announces the opening of an office for consulting work in petroleum engineering and geology, Room 5 Odd Fellows Bldg., Taft, California.

"W. W. Rubey and M. N. Bramlette left Kansas in June to resume investigations for the United States Geological Survey of oil possibilities in the Black Hills region.

"Ben K. Stroud, of the National Tube Company, Los Angeles, California, visited Shreveport, La., late in March.

"Robert V. Anderson of Menlo Park, California, returned to this country from Africa early this year. During most of last year he was in North Africa engaged in geological work. Anderson recently resigned his position as director of the Whitehall Petroleum Corporation, Ltd., of London (same as S. Pearson and Son, Ltd.) in order to make his home in California and engage in research work. He will continue to supervise the geologic work of the Whitehall Petroleum Corporation, Ltd., on a part-time basis.

"R. M. Barnes, recently resigned his position as deputy state oil and gas supervisor for California, with headquarters at Coalinga and has a position as subsurface engineer on the geological staff of the Marland Oil Company of California, with offices at 200 Bush Street, San Francisco.

"Reed D. Bush, formerly superintendent of operations for Empire Gas & Fuel Company at El Corado, Kansas, is now State Oil & Gas Supervisor for California, succeeding Roy E. Collom, resigned. Bush was formerly connected with the department of petroleum and gas, which he now heads, as chief deputy under R. P. McLaughlin.

"Carl H. Beal has been recently made first vice-president of the Marland Oil Co., of California, with headquarters at 200 Bush Street, San Francisco. Beal has been closely identified with Marland Operations for some time, having recently completed an extended geological survey along the west coast of Mexico and Lower California.

"G. C. Gester, chief geologist of foreign department of the Standard Oil Company of California, is on extended exploration trip in South America.

"Ralph D. Reed recently completed his advanced work at Stanford University and received his doctor's degree. Reed is now engaged in geological field work for the Marland Oil Company of California.

"Walter Stalder, consulting petroleum geologist, of San Francisco, has been appointed chairman of the minerals committee of the Commonwealth Club of San Francisco and through this committee has initiated an investigation of various problems related to conservation of petroleum and gas in California."

In Number IV R. G. Reese is mentioned as being with Mexican Sinclair in Tampico.

The only Californians mentioned in Number V are the following:

"T. E. Swigart has resigned his position as superintendent of the Bureau of Mines at Bartlesville, Oklahoma, to accept a position with the Shell Company, of California, with office in the Higgins Building, Los Angeles.

"M. J. Kirwin, who has long been associated with the Bureau of Mines, has been appointed superintendent of the Bartlesville station to succeed T.E. Swigart."

In Number VI, Californians are back in strength:

"William S. W. Kew has recently built a new home at 1215 North Howard St., Glendale, California, and will move there from Los Angeles.

"R. M. Overbeck, for some two years geologist for the Shell Company of California, left in October for La Paz, Bolivia, where he will be chief geologist for the Caracoles Tin Company.

"R. R. Templeton recently assumed the position of chief petroleum engineer of the Union Oil Company, Los Angeles, California. Formerly he was subsurface geologist.

"Earl B. Noble has recently been appointed geologist in charge of the San Joaquin Valley and coastal districts for the Union Oil Company of California.

"Harold W. Hoots has been engaged this summer and fall in detailed mapping of the southern part of San Joaquin Valley, including Wheeler Ridge, for the U. S. Geological Survey.

"C. F. Tolman, professor of geology at Stanford University, is on leave this quarter from the university and is engaged in field work in Santa Barbara County, California, for an oil company.

"During the past year the Gulf Corporation has been conducting geological investigations in California, with headquarters in the Union Oil Building, Los Angeles, under the direction of Hoyt S. Gale. Associated with him are E. L. Ickes, W. S. W. Kew, Lot Bowen, and T. W. Koch. A. E. Wallace, previously with the Gypsy Oil Company at Tulsa, Oklahoma, has been in Los Angeles for a somewhat longer time engaged in keeping the eastern offices informed as to the oil situation in California. No lands have yet been leased by the company, the work being mainly to determine the prospects for future production in this state.

"R. P. McLaughlin has been quite ill with Scarlet fever.

"M. G. Edwards, until recently connected with the geological department of the University of California, has joined the geologic staff of the Shell Company of California.

"Ralph D. Reed, who received his Doctor's degree from Stanford University recently, is working for the Marland Oil Company of California making a detailed study of the coast range region in the Coalinga and Sunset districts.

"R. W. Clark has recently returned from Michigan, where he spent the summer. Mr. Clark received his Ph.D. degree in June from the University of Michigan.

"Martin J. Gavin, with the U. S. Bureau of Mines at San Francisco, stopped in Denver recently on his way to Washington, D. C.

"Guy E. Miller, geologist for the Shell Company of California, with headquarters in Los Angeles, spent his vacation in the vicinity of Denver and Canon City, the latter being his former home.

"A. T. Schwennesen, who has been in charge of geologic work for the Royal Dutch Shell interests in the Rocky Mountain region for the past six months, has been transferred to Houston, Texas, to look after Gulf Coast work for the Roxana Petroleum Corporation.

"C. B. Osborne, Consulting geologist of Los Angeles, has made two recent field trips to Colorado and Rocky Mountain territory on geological examinations."

In reminiscing, the temptation has to be resisted to explore the many avenues of information that are revealed as the project develops. A sizeable book could be written about the events of 1924. Using only the AAPG Bulletin, I found too much for the space available. I hope the reader will be tolerant of an "old-timer" returning briefly to the stirring events of which he was a witness and a participant.

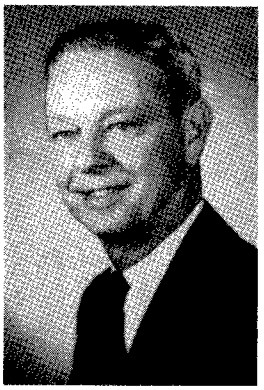
COAST GEOLOGICAL SOCIETY

The Coast Geological Society ended summer vacation with a very successful "Ladies Night" dinner at El Cielito Restaurant in Santa Barbara on the evening of September 8th.

Dr. Gary Ernst, U.C.L.A. Geology Department, presented an interesting discussion of igneous and metamorphic petrology in his talk entitled "A Geologist in Japan". After perhaps five minutes, the subject changed to the observations of an American family living in Japan for six months. Dr. Ernst's slides of both geology and the people and places in Japan were excellent. He was ably assisted by Mrs. Ernst in commenting and answering questions.

Consensus of opinion indicated that this was the most enjoyable Ladies Night ever. Our thanks to Dr. and Mrs. Ernst.

A.A.P.G. ANNOUNCES 1964-1965 OFFICER NOMINATIONS



ORLO E. CHILDS, President of the Colorado School of Mines, Golden, Colo., and JOHN T. ROUSE, District Exploration Superintendent, Mobil Oil Company, Pittsburgh, Pa., nominees for president of The American Association of Petroleum Geologists, head the slate of officer nominations submitted by the organization's Nominating Committee, as announced by A.A.P.G. President GROVER E. MURRAY, Louisiana State University, Baton Rouge. Other officer nominees are: vice-president, MERRILL W. HAAS, Humble Oil & Refining Co., Houston, Texas, and JOHN M. PARKER, Kirby Petroleum Co., Denver, Colo.; for secretary-treasurer, incumbent, GEORGE C. HARDIN, JR., Hardin and Hardin Consulting Geologists, Houstin, Texas; for editor, incumbent, JOHN C. HAZZARD, Union Oil Co. of Calif., Los Angeles, Calif.

The 1964 nominating committee was headed by chairman ROBERT E. RETTGER, Dallas, Texas, a former A.A.P.G. President.

CALIFORNIA SECTION OF AIPG

Elmo Adams, California Co-ordinator for AIPG, has arranged a meeting at Los Angeles for Saturday, October 17, for the purpose of organizing the California Section of AIPG. It will be held at the Mobil Auditorium from 10:00 a.m. to 5:00 p.m. At this meeting, the Nominating Committee will report its nominations for officers of the Section, and a Delegate to the national Advisory Board will also be elected. The Advisory Board will convene at the AIPG Annual Meeting, which will be held at Golden, Colorado, on Nov. 13-14.

The Texas Section of AIPG was established on Sept. 26. Michel T. Halbouty was elected President; A. Wayne Wood, Vice-President; J. A. Wheeler, Secretary Treasurer; and Howard Rothrock, Delegate to the Advisory Board. A founding meeting has been scheduled in October for the Colorado Section.

All interested geologists are invited to attend the Los Angeles meeting. Further information can be obtained from Elmo Adams in Burlingame; John Kilkenny, Art Spaulding, or Martin Van Couvering in Los Angeles; Wes Bruer in Bakersfield; Vern Jones or Bob Paschall in Sacramento; Kit Carson in Ventura; Paul Witherspoon in Berkeley; and Dick Threet in San Diego.

Charter members and applicants represent all fields of geology and include members of every AGI society. Applications have been received from 40 States, as well as from foreign countries. The high calibre is indicated by the fact that among the members or applicants to date are three past presidents of AGI, at least 9 past presidents of member societies (including 5 past presidents of AAPG), and the current President, Vice-President and Secretary-Treasurer of AAPG. Charter Membership in AIPG closes with the Annual Meeting in November, so any geologist wishing to be in this category should file his application without delay.

AAPG - SEPM - SAN JOAQUIN GEOLOGIC SOCIETY FIELD TRIP, OCTOBER 23 & 24, 1964

The above organizations will sponsor a field trip along the San Andreas fault zone from the Temblor Mountains to Antelope Valley on October 23 and 24. Those participating in this activity will have an opportunity to observe fault landforms, crushed rocks, and complicated structure at first hand. Particular emphasis will be placed on the similarities and contrasts in the geologic histories recorded in rocks on either side of the fault. The distribution of Miocene stratigraphic units especially has significance with regard to the magnitude and sense of displacement on the fault zone and will no doubt afford grist for vehement field discussions. Other units, and especially basement rocks, will be observed and their tectonic significance discussed.

The trip will be led primarily by John C. Crowell, Professor and Chairman of the Department of Geology, UCLA. He has been laboring intermittently in the region for 17 years and for this field trip has prepared a new geologic map of the whole region. John Vedder, Research Geologist, USGS, C. J. Miller, Shell, and R. Pierce, Richfield, will comment at selected stops. General Chairman for this event is A. A. Almgren, Union.

Guidebook

This Guidebook is an outstanding contribution to the geology of the San Andreas fault zone. Dr. Crowell has compiled a detailed descriptive geologic road log with accompanying strip maps, a new regional geologic map at a mile-to-the-inch scale, and has written an informative discussion of the general geology of the San Andreas fault zone and the many associated faults in this area. Several selected papers by other authors are also included. Price of Guidebook will be $4.50 per copy.

AGENDA

October 23 - Hacienda Motel -Bakersfield (Hwy 99 at Terrace Way).
4:00-7:00 p.m. -Registration ($1.50) and no host social hour.
7:00 p.m. -Dinner Meeting ($4.00)

October 24 - Field Trip - 8:30 a.m. .
Assemble at Capitola Park, 3.5 miles southwest of Junction of Hwy 33 and Hwy 399, Maricopa. Box lunch furnished on trip ($1.50).

Barbeque at Frazier Park at conclusion of the trip ($3.50). Free beer and soft drinks at lunch and barbeque.

Each individual must arrange for his own motel accomodations. Be sure and be prepared for cool weather!

USC NEWS

USC announces the appointment of Nikolas Christensen to the faculty. He received his Ph.D. from Wisconsin in 1963 and spent the past year in the Hoffman lab at Harvard as a postdoctoral fellow working with Francis Birch. His dissertation was on structural control of basic intrusives in Connecticut. His present research is directed toward laboratory measurements of elastic constants of crystals and the velocities of elastic waves in rocks. As a combination geologist and physicist, Dr. Christensen will teach mineralogy, crystallography, and optical techniques as well as graduate work in geophysics at USC. Nick is married and has a son.

"Attention - '65 Convention"

PETROLEUM GEOLOGISTS ESTABLISH CERTIFICATION PROCEDURE

The American Association of Petroleum Geologists announces the introduction of a certification procedure. The program is an expression of the modern petroleum geologist's instinctive pride in his profession and his sense of responsibility to the public to maintain and further improve the long-established high standards of his predecessors.

Certification is stimulated by a pattern set by other leading professions and long practiced by some. Interest in self regulation of ethical standards and professional qualifications is reflected in a trend of recent years for professional scientists to accept an increasing sense of responsibility in guiding the public and governmental agencies in their investments in scientific projects.

Under the sponsorship of A.A.P.G., the world's largest geological organization, the certification procedure will provide a review of the qualifications of the geologist coupled with an evaluation by his colleagues. The seal of the "Certified Petroleum Geologist" should become a hallmark of professionally qualified petroleum geological endeavor and counsel.

The introduction of the certification procedure is the culmination of the efforts of many individuals and groups within the A.A.P.G. for a number of years and this affirmative action by the membership clears the way for its effective implementation.

The announcement is made by A.A.P.G. President, Grover E. Murray, L.S.U., Baton Rouge, La.

LOS ANGELES FORUM MEETING

On Monday evening, September 28, Robert S. Yeats, Shell Oil Company, Ventura, presented a very interesting and well-prepared talk entitled "A Pliocene Seaknoll at South Mountain in the Ventura Basin, California"

Abstract:

Extensive drilling in the southern Ventura basin in the last decade has provided useful data about Pliocene basin floor topography. The prebasinal Miocene Modelo Formation, mainly siliceous shale, limestone, and organic shale with a bathyal microfauna, underwent extensive undersea tilting and faulting resulting in a surface of high relief upon which the deep-sea Plio-Pleistocene Pico Formation was deposited. Among the land forms of this surface was a seaknoll at South Mountain.

Seaknoll features preserved include relatively uneroded fault scarps exceeding 40° in slope, a thin veneer of glauconite sand locally containing a talus of marine-bored Modelo limestone fragments from the scarps, and, near the seaknoll summit, a small clam biostrome in a shelly glauconite sand matrix. The steep fault scarps at South Mountain are in contrast to bevelled fault scarps at nearby Berylwood anticline and the Oxnard Plain, on the site of a pre-Pico submarine slope eroded in Modelo Formation.

The Pico Formation has onlapped and buried the seaknoll and the submarine slope. The Pico contains graded sands interbedded with siltstones with indigenous bathyal and displaced neritic microfaunas. The sands shale out toward the seaknoll, suggesting that the seaknoll was mildly positive during sand deposition.

The submarine slope was scoured by bottom currents laden with sediment from subaerially eroded highlands to the south and east. The seaknoll was unaffected by such currents because it was separated from highlands by deep-sea channels; hence its scarps were relatively unscoured by sediment-laden currents. Both submarine slope and seaknoll remained below sea level until buried.

Erosional submarine unconformities of the Berylwood and Oxnard Plain submarine slope type are believed to be relatively common in basins where sedimentation and deformation have occurred simultaneously. In these unconformities, the immediately overlying sediments are deep-sea rather than shallow-water and transgressive. The argument for submarine origin of the Mio-Pliocene unconformity in the southern Ventura basin, even where extensively eroded, is strengthened by the presence of the seaknoll, locally preserved from turbidity current scour, on which fault scarps and a glauconite-rich veneer have been preserved.

"Bakersfield in '65"

SAN ANDREAS CROSS-SECTIONS

The AAPG San Andreas Cross Sections #8 and #9 will be ready for sale about October 10, 1964 at Pacific Log Exchange, 11515 E. Washington Blvd., Whittier and at Price Blue Print and Supply, 1600 "G" Street, Bakersfield at $2.00 each. These two Cross-Sections are being made available especially for the Field Trip along the San Andreas Fault on October 24, 1964.

There has been some criticism expressed in regard to the size of the Cross-Sections. The Committee for Cross-Sections learned that most of the cost of printing is in the set-up and decided to put both East side and West side Cross-Sections on the same chart because of the savings. The press we could afford to use, prints maximum dimensions of 41" x 57" but in making Cross-Sections of this size the Committee saved AAPG members one-half the cost of the Cross-Sections. It was felt that members would probably want to cut the Cross-Sections and slide the East & West sides as they desired. The Committee believed the membership would appreciate the savings.

The membership is reminded that Cross-Sections #2, #3, #4, and #7 are available at the above addresses. Cross-Sections #5 and #6 and #10, 11 & 12 will be available within the next month from the Mexican Border northward to San Francisco Bay. The Cross-Section from San Francisco Bay northward to the Pacific Ocean will probably be available about the first of the year.

C O R R E C T I O N

GEOLOGIC SOCIETY OF SACRAMENTO GUIDEBOOK FOR THE FIELD TRIP TO MT. DIABLO, 1964: The following correction should be made in the "Register of Foraminiferal Localities on Mt. Diablo Representative of P. P. Goudkoff's Upper Cretaceous Zones" by A. A. Almgren, pp. 42-47. -- page 42, Locality #2 should read:

Locality #2 (=1PC-460)
Location: 1400 feet East, 500 feet South from Northwest corner Section 2, T.1S.,R.2E.
Fossils: Bulimina triangularis, Nodosaria spinifera, Globotruncana arca, Eponides goudkoffi.
Locality #3 should read:
Locality #3 (C. C. Church coll.)
Location: 1500 feet East, 2100 feet South from Northwest corner Section 2, T.1S.,R.2E. (There is a possibility that the coordinates for this locality may not be correct.)

page 44, Locality #6
Location: 1800 feet West should read 1400 feet West.

"Save Now - Bakersfield '65"

CANDIDATES FOR DISTRICT REPRESENTATIVES

The following are candidates for AAPG District Representative offices. From the following candidates, four will be elected and will assume their duties after the 1965 annual meeting.

Richard S. Ballantyne
John H. Fackler
John A. Forman
Rex M. Grivetti
Jack D. Nair
Louis J. Simon
Milton T. Whitaker
John H. Wiese

BULLETIN ARTICLES AVAILABLE

Articles from the Bulletin and special publications of the Association are available at the cost of Xerox copy service. Up to 25 pages - $.20 per page, 26 pages or more - $.15 per page. Orders may be sent direct to AAPG Headquarters, Box 979, Tulsa 1, Okla.

PERSONAL ITEMS

Ed Miller, formerly with Marathon in Bakersfield, has been transferred to Marathon's Denver Research Center in Denver, Colorado.

Ward Abbott and Pete Fisher, Shell Oil, Bakersfield, are working in the Houston Exploration and Production Laboratory for two weeks.

J. G. Parker, Shell Oil, Bakersfield, called by his fellow workers "The Little Old Man from Pasadena", cracked up his "Hot Rod" the other day. Happy to report only slight injuries.

John Weidmann, geologist with Richfield in Bakersfield, has just returned from the North Slope after three months of field work.

Mike de Laveaga, formerly with Great Basin Petroleum Co., is now doing Geological Consulting. Mike's office is located at 945 Fairway Drive, Bakersfield, California.

Dick Brenan has just been transferred from the Olympia, Washington office of Union Oil Co. to Santa Fe Springs.

Jim Bloom of Standard Oil has been transferred from Bakersfield to the La Habra office.

Norm Jokerst has been transferred from La Habra to Bakersfield Standard Oil office as District Geophysicist.

The Central California Oil Scouts held their annual Golf Tournament and Bar-B-Que at the Kern County Park and Golf Course September 18, 1964. W. P. Winham, retired Standard Oiler, won the low gross with a score of 76. Bob Hoven, new owner of Price Blueprint Co., won second low gross with a 77, and Bob Lindblom of Standard Oil won third with a 78. Low net was won by Nick Greene, Humble Oil and Refining Corp., second low net was a tie between Bob Anderson, Swiss Holmes, and Dick Atchison. Omer Humble of Humble Oil won honors for the "Highest Score" with a 143.

Richfield Oil Corporation fielded a foursome which won some "questionable" honors. They averaged 127 between the four of them.

114 golfers took part in the event and 208 were served at the Bar-B-Que.

San Joaquin Geological Society heard an excellent paper on September 8, 1964, by J. W. "Bill" Bedford, on "Alaska's Great Earthquake". The extensive damage in the Anchorage area was well documented with colored slides, maps, and diagramatic cross sections. A lively discussion followed the presentation.

Mr. & Mrs. L. B. Graff (Standard Oil Scout, Oildale) are enjoying the post-tourist season in the Alps. They are visiting their daughter who is employed in Europe. With Lanny's briefcase of tradeable E-logs and his daughter's facility in communicating in German, we will soon be able to distinguish between the flysch and the molasse. They also plan to be in Munich for the opening of the Bock Beer Festival.

Bob Ortalda (Standard) recouped some of his golf losses at the Scout picnic's galloping dominoes table. He had his own dice along.

Middle age has caught up with Bob Johnston, Standard Development Geologist. He sustained a 7-G fall off a low-flying Bongo Board. Moments later, after being grounded, he sustained a sprained ankle in a vigorous game of ping-pong. There is evidently no truth to the rumor that Bob sprained his ankle while rescueing a little old lady from an attack by a young purse snatcher.

M. Polugar, Standard's pelagic paleontologist deluxe, suffered a severe strain lifting one of the little floaters from a ditch sample. He objects violently to the phrase: "Assume the position".

Wes Porter, District Geologist, Trico Oil and Gas Co., Bakersfield, was a visitor at the regular Monday luncheon of the Northern California Geological Society at the Iron Duke on Bush Street in San Francisco on September 21. Wes thoroughly enjoyed himself talking to old geological friends while his wife toured the San Francisco shops.

The Northern California Geological Society has acquired a new member in the person of Ralph Brodek, Manager of Oil Exploration for Kern County Land Co., in San Francisco. Ralph was formerly District Manager based in Bakersfield. Welcome to the San Francisco club, Ralph!

Friends and visitors are reminded that the regular Monday luncheon meetings of NCGS are now taking place at 12:00 noon at the Iron Duke, 132 Bush St., San Francisco.

Copious congratulations have been received for Lou Canut, your PPG Editor and the "old timers" who contributed to the 40th Anniversary Issue of PPG last month.

The word has gone out to wives, mothers, grandmothers and sweethearts to destroy all old pictures and negatives immediately.

It has been rumored that all AAPG noontime committee meetings will henceforth be held at the Shilelagh Restaurant on Figueroa Street. Our executives say the atmosphere there is more businesslike.

Bela Csejtey, Richfield, Long Beach, is a recent transfer to Richfield's Rocky Mountain division in Salt Lake City.

Marie Clark, Richfield's lady geologist in Los Angeles, is currently enjoying a month-long vacation in Europe. Rumor has it that this is one of a very few European trips not financed by the company.

L. M. Kuenzi has joined the Standard Oil staff in Ventura after over ten years in their Seattle office. Larry is out looking for "Webb and Gill Remover" as the climate's a little dryer down here.

Bruce Black, a new Shell Oil geologist from the University of Arizona, is on a temporary assignment in Shell's Ventura office.

Due to the sharp eyes of Jack Leach, Los Alamos Scientific Lab, New Mexico, the Executive Committee heading next month will read American Association of Petroleum Geologists instead of Geologist. "Jack, the Ornithologists of America need men like you."

Joe Ernst spent his vacation digging a cesspool for his cabin in Humboldt County. In spite of all the recent activity in that area, Joe reported "no significant shows". T.D. was 7', or so.

Bruce Brooks, an ardent Democrat, has seen the light of truth, justice, reason, etc. His front lawn now carries a glowing testimonial to the powers of Best fertilizers - a "Goldwater" sign in 6' high letters. Bruce's comments about the whole thing were very interesting, but definitely non-political.

News from Continental: Bob Kelly is now selling real estate in the Whittier-La Habra area. Jim Laughlin is an engineer with the Whittier Dept. of Water. A.T. "Andy" Anderson is teaching at Napa College, Napa, California. Roger Dungan, who was Continental's L.A. Division Manager, is Division Manager of Exploration for Conoco at Lafayette, Louisiana. Bill Osborn is now in Billings, Montana for Conoco.

If you are ever in Ventura on a Thursday, geologists eat together at a predesignated place on a rotating basis.

Ed Gribi (Consultant, King City) has added a new phone number. His old number (408) 385-5207, is still in use and, in addition, Ed can be reached at (408) 385-3239.

The L. A. Area Geologists are staying away from the Forum Meetings in droves, as witnessed by the attendance of only 38 persons at the last meeting.

Mobil, L.A., has recently acquired a new Exploration Manager. Mr. Richard (Dick) Howe is a Dartmouth grad and has been with Socony and Mobil since 1947 when he accepted a job with them in Colombia. He comes here from New York and replaces Dave Hobson, who has been made senior Division Geologist in this area. We understand Dave is scheduled to retire in 1965.

Mobil, L.A., announces two transfers into their Pacific District (offshore)-Chuck Cline from Durango, Colorado, Senior District Geologist, and Bob Wagner from Wichita Falls, Texas. Bob is an old University of Washington grad who has finally returned to the West Coast after a long foreign assignment in Texas.

Mobil announces the acquisition of a new geologist in their L.A. office in the person of Edmund B. Asihene. Edmund is a native of Ghana. He graduated from UCLA in 1961 and has worked 2 years with the Ghanian Geological Survey. He is currently going through the process of becoming an American citizen. Ed is married to an American girl and has 4 children.

Ted Ehring has resigned from Texaco, Bakersfield, and has accepted a position with Signal, Los Angeles.

Gyula Kiss and Don Dailey, Richfield, Long Beach, have both forsaken the oil business to return to the University of British Columbia and University of California (Berkeley) to study for their Ph.D. degrees. Gyula will continue in Palynology and Don continues in Paleontology.

Humble Oil has recently closed their exploration office in Chico. This area will be handled in Bakersfield in the future. Jim MacDonald and Rex Olsen have transferred to Bakersfield. Abe Phillips, former district geologist, is currently on the move to Sidney, Australia. Bob Ottman received a transfer to Houston, Texas.

Mandy Touring, Humble, L.A., area geologist has been transferred to Houston, Texas. He will be replaced by J. B. Coffman who transfers here from Houston.

Dick Wilson, Humble, L.A., has been transferred to Bakersfield to take Tod Harding's job. Tod has been transferred to Houston, Texas also.

Humble, Los Angeles, these days is full of new faces. They recently have hired four new geologists: Hugh Crouse from Billings, Montana; Hollis Green from Enid, Oklahoma; Swede Larsen from Houston, Texas; Ed Sabatka from Salt Lake City, Utah.

Ernie Cook, Signal, London, has been transferred back to Los Angeles. By now, Ernie should be a real authority on Smog.

Jack West, Signal, L.A., is currently putting out some story about being run down by a truck backing down the grade while he was doing geology from the car window on a recent trip up north. Fortunately, his only casualties were a wrecked grill and a sprained thumb. Fortunately also, his accident report has not been made public.

Glen Ledingham, Gulf, L.A., has been transferred to the Netherlands (Holland) where he will be associated with Gulf's North Sea exploration efforts.

Union Oil of California has recently hired four new geologists: Graydon Laughbaum, a recent University of Oklahoma grad is now in Santa Fe Springs, Gerry Weber, a recent MS grad from University of Texas, Jim Scott, a recent grad from University of Houston and Dave Hill, a recent grad from University of Washington and currently working in Bakersfield.

Jack Van Amringe, Union, Santa Fe Springs, has been transferred to New Orleans as Assistant District Geologist.

Mobil Oil announces they are moving their Pacific district (offshore) office from downtown to Santa Fe Springs this month. They will open business with a new district exploration Superintendent, Del B. Ringena, a recent transfer from Oklahoma City.

If you would care to become more active in association affairs, how about offering your services to one of the new committee chairmen? Or call any of your local officers; they will welcome your interest.

PACIFIC SECTION - A.A.P.G.
Total Membership as of September 28, 1964 - 977

"Over the ridge and down the hill
Bakersfield '65 will be a thrill"

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PO Box 606
La Habra, Calif. 90633

CALENDAR

October 13, 1964: Tuesday Evening, El Tejon Hotel, Bakersfield, San Joaquin Geological Society. "Meganos Gorge" -W. F. Edmondson, Consulting Geologist. Cocktail Hour 6:30 p.m. - Dinner Hour 7:30 p.m.

October 19, 1964: Monday Evening, Mobil Auditorium, Los Angeles Section Geological Forum, "After Effects of the Good Friday Alaska Earthquake" -Arthur Grantz, U.S.G.S., Meeting 7:00 p.m.

October 23-24, 1964: AAPG - SEPM - San Joaquin Geologic Society Field Trip. (See announcement).

October 28-30, 1964: Fourteenth Annual Meeting, Gulf Coast Association of Geological Societies, Corpus Christi, Texas.

November 10, 1964: Tuesday Evening, El Tejon Hotel, Bakersfield. San Joaquin Geological Society, "The San Andreas Fault -Predominant Lateral or Vertical Displacement?"-Gordon B. Oakeshott, Deputy Chief, California Division of Mines and Geology. Cocktail Hour 6:30 p.m. - Dinner Hour 7:30 p.m.

BIBLIOGRAPHY OF RECENT PUBLICATIONS

U. S. GEOLOGICAL SURVEY

Professional Paper 429-B: Ecology of benthonic species, by P. B. Smith $1.00

Professional Paper 440-L: Data of geochemistry, sixth edition, Phase-equilibrium relations of the common rock-forming oxides except water, by G. W. Morey.

Professional Paper 474-D: The 1961 eruption of Kilauea Volcano, Hawaii, by D. H. Richter, W. U. Ault, J. P. Eaton, and J. G. Moore $ .35

Professional Paper 497-B: Removal of water and rearrangement of particles during the compaction of clayey sediments--review, by R. H. Meade $ .25

Water Supply Paper 1535-J: Chemical composition of snow in the northern Sierra Nevada and other areas, by J. H. Feth, S. M. Rogers and C. E. Roberson $ .50

Water Supply Paper 1736: Compilation of records of surface waters of the U. S., October 1950 to September 1960 -Part 12: Pacific slope basins in Washington and upper Columbia River basin $2.25

Water Supply Paper 1754: Preliminary results of hydrogeologic investigations in the valley of the Humboldt River near Winnemucca, Nevada, by Philip Cohen $3.25

Water Supply Paper 1773: Geology and ground-water resources of the Anchorage area, Alaska, by D. J. Cederstrom, F. W. Trainer, and R. M. Waller $1.75

Water Supply Paper 1779-P: Geology and ground water of the Luke area, Maricopa County, Arizona, by R. S. Stulik and F. R. Twenter $1.00

Geophysical Abstracts 221, August 1964, by J. W. Clarke, D. B. Vitaliano, V. S. Neuschel and others $ .35

Circular 459: The story of ground water in the San Joaquin Valley, Calif., by R. H. Dale, J. J. French, and H. D. Wilson, Jr. (Free)

Circular 484: Exploratory laboratory study of lateral turbulent diffusion at the surface of an alluvial channel, by W. W. Sayre and A. R. Chamberlain (Free)

Maps: GP-464, Aeromagnetic map of the Long Beach-Santa Ana area, Los Angeles and Orange Counties, Calif., by G. E. Andreasen, J. A. Pitkin and F. A. Petrafeso $ .50

GP-466, Aeromagnetic map of western Los Angeles and vicinity, California, by G. E. Andreasen, J. A. Pitkin and F. A. Petrafeso $ .50

MR-32, Lode gold and silver occurrences in Alaska, by E. H. Cobb $ .75

Open Filed Report (Inspection only):
TEI-849, Geologic map of Scrugham Peak quadrangle, Nye County, Nevada, by F. M. Byers, Jr. and David Cummings. 1 map, scale 1:24,000
Preliminary geologic map of the Charley River quadrangle, east-central Alaska, by Earl E. Brabb and Michael Churkin, Jr.

THE ORE BIN, vol. 26, no. 7, July 1964: The Port Orford meteorite, by E. P. Henderson, and Hollis M. Dole.
THE ORE BIN, vol. 26, no. 8, August 1964: Miocene stratigraphy of the Yaquina Bay area, Newport, Oregon by P. D. Snavely, Jr., W. W. Rau, and H. C. Wagner.

CALIFORNIA DIVISION OF MINES AND GEOLOGY

Special Report 76: Recent volcanism at Amboy Crater, San Bernardino Co., Calif., Ronald B. Parker $1.00
Special Report 81: Geology of the Lockwood Valley area, Kern and Ventura Counties, Calif., by Max F. Carman, Jr. $2.00
Special Report 82: Short contribution to California Geology by Charles W. Chesterman, Ray C. Treasher, James K. Mitchell, John L. Burnett and Edward D. Ghent $1.00
Special Report 83: A geologic reconnaissance in the Southeastern Mojave Desert, California, by Allen M. Bassett and Donald H. Kupfer $1.50
Bulletin 180: Sand and gravel in California, Part B--Central Calif., by Harold B. Goldman $2.00
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Age of the Roberts Mountains Formation (Silurian?) in the Great Basin, by David L. Clark and Raymond L. Ethington.

JOURNAL OF SEDIMENTARY PETROLOGY, vol. 34, no. 2, June 1964:

Grain orientation and imbrication in Miocene turbidity current sandstones, California, J.H. Spotts.
Algae, contributors to the formation of calcareous tufa, Mono Lake, Calif., David W. Scholl and William H. Taft.
Orthoclase distribution and authigenesis in the Franciscan Formation of a portion of western Marin County, California, by Harold J. Gluskoter.
A new system for the cataloguing and storage of sedimentary rocks based on lithologic and genetic characteristics, by J. E. Bever and W. D. Martin.
Petrographic classification and method of description of carbonate rocks of the Bird Spring Group in southern Nevada, by Mark Rich.
Sedimentation of an alluvial fan in southern Nevada, by Brian J. Bluck.
Amino acids in basin sediments by K. O. Emery, Clyde Stitt, and Paul Saltman.

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 75, no. 6 June 1964 -Crystalline klippen in the Index district, Cascade Range, Washington, by Robert S. Yeats.

WORLD OIL, Vol. 159, No. 1, July 1964: Geology and oil potential of southewest Utah, by Robert N. Hacker.

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SCIENCE
Vol. 144, no. 3625, 19 June 1964: Petroleum hydrocarbons, Generation from fatty acid, by J. W. Jurv and E. Eisma.
Vol. 144, no. 3626, 26 June 1964: Reversals of the earth's magnetic field, by Allan Cox, Richard R. Doell and G. Brent Dalrymple.
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Dome-shaped volcanic gas vents in Arizona, by R. A. Laidley and R. L. DuBois.
Vol. 145, no. 3629, 17 July 1964: Alaskan earthquake of 27 March 1964, Remote Seiche stimulation, by William L. Donn.

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NEWS LETTER OF THE PACIFIC SECTION
AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Volume 18 | November, 1964 | Number 11

ASSOCIATION ACTIVITIES

Los Angeles Luncheon Meeting

Mr. James C. Ingle, Jr., Phd. candidate at the University of Southern California spoke before the Los Angeles Luncheon Meeting on October 1, 1964. The title of Mr. Ingle's interesting talk was "Late Tertiary History of the Capistrano Embayment, Orange Co., California".*

Abstract:

The Capistrano Embayment comprizes a distinct geologic unit of the Southern California area. As defined in this paper the embayment includes the area west of the Santa Ana Mountains, south of Newport Beach, and north of San Onofre, California. Variations in thickness, sediment character, and paleobathymetry of Miocene through Lower Pleistocene marine units within the embayment indicate it has had a different structural history than the Los Angeles Basin to the north. Marine invasion of the area began in the Paleocene with maximum subsidence occurring during Middle Miocene through Lower Pliocene time. The embayment was essentially filled by the close of the Lower Pleistocene. This study was based on detailed analyses of sediments and microfaunas within two sections of Miocene through Pleistocene sediments exposed at Newport Lagoon and the Dana Point-Capistrano area.

Analogy between ecologic niches of living benthonic Foraminifera and fossil forms encountered indicates that middle bathyal depths were attained by the Middle Miocene. By Late Pliocene time the embayment was filled to shelf depths.

Variation in abundance and coiling ratios of cool and warm water planktonic Foraminifera indicates three periods of distinctly cool surface temperature occurred between Late Miocene and Late Pliocene time. Increase in radiolarian (Spumellina) diameter provides evidence of cool surface temperatures in upper Miocene mudstones barren of Foraminifera.

Peak radiolarian abundance suggests that the deepest point in basinal evolution occurred during the Early Pliocene at which time water depth was approximately 1750 meters.

Correlation of the two sections is based on: (a) a Mohnian horizon of Globigerina pachyderma which coil sinistrally, (b) the uppermost point of abundant radiolarian tests, (c) the uppermost point of the radiolarian Prunopyle titan, and (d) the horizon of peak radiolarian number. These mutually corroborative planktonic criteria demonstrate the time transgressive relationship of existing stages based upon benthonic Foraminifera. Repettian faunas, for example, appear much earlier in the more rapidly filling southern end of the embayment than in the northern deeper area.

A restricted, oxygen-deficient, closed-basin system, characterized by laminated diatomaceous sediments, originated during a period of Early Miocene diastrophism. Closed-basin conditions allowed only a marginal benthonic foraminiferal fauna to exist, analogous to the existing fauna of the oxygen-deficient Santa Barbara Basin. Restricted basin-plain conditions with accompanying deposition of annual couplets of diatomaceous laminae prevailed until the end of the Miocene.

Instantaneously deposited coarse sediments (turbidites) emphasize pulses of structural activity in the Middle Miocene, Late Miocene, and Middle Pliocene. Sediments provide evidence of a land mass to the west and south of the embayment. Turbidites are recognized on the basis of displaced Foraminifera, plant material, and sedimentary structures. A particularly striking sequence of breccia and arkosic sand, bracketed by shales containing bathyal microfaunas, is exposed at Dana Point and may represent a submarine canyon or fan deposit.

Paleoecologic and sedimentary analyses delineate a characteristic basin filling sequence in the Capistrano Embayment, similar to events taking place today in the Gulf of California and off southern California. The western half of the embayment was downfaulted in the Pleistocene and now lies offshore, consequently, the western boundary of the embayment is not known. An identical sequence of Miocene through Pliocene sediments to those found onshore during this study has recently been found on Lasuen Bank, 26 kilometers southwest of Dana Point, California.

Los Angeles Forum Meeting

On Monday evening, October 19, Arthur Grantz, U.S.G.S., Menlo Park, presented a very interesting talk entitled "Tectonic Setting and Geologic Effects of Alaska's Good Friday Earthquake".

Abstract:

The Good Friday earthquake of March 27, 1964, caused damage in an area of 50,000 square miles, cracked lake and river ice in an area of about 100,000 square miles, and was felt by people in two-thirds of Alaska.

Epicenters of most of the numerous aftershocks that occurred during the first month after the earthquake lie in a belt 500 miles long and 80 to 140 miles wide that trends southwest from Prince William Sound to the continental shelf south of Kodiak. At least half of this belt was uplifted several feet, and locally as much as 33 feet. An adjacent belt to the northwest sank as much as 6 feet. These belts are parallel to the Aleutian volcanic arc, and are thought to be genetically related to it. Faulting was local, dominantly vertical, and apparently subsidiary to the changes in land level.

Many rockslides, landslides, and avalanches were triggered by the earthquake, greatly damaging parts of Anchorage, and the highway and railroad systems. Widespread submarine landsliding and related sedimentation occurred in Prince William Sound, and such slides carried away the waterfronts of Seward and Valdez. Waves caused by the submarine slides further damaged these cities, as well as Whittier and other smaller communities. A tsunami struck the coast about 30 minutes after the main shock, bringing destruction to many communities between southern Kodiak and the Copper River.

Next Deadline - November 27, 1964

Holiday Dinner Dance

The Annual Holiday Dinner Dance for the Pacific Section of AAPG, SEG and SEPM will be held at the Regency Room of the Sheraton-West Hotel, located at 2965 Wilshire Blvd.

Festivities will begin at 7:00 P.M. on Saturday, December 12th, 1964. This should be the best event of the Holiday Season, so let us all get in the spirit and meet at the Sheraton-West on December 12th!

Reservations can be made by contacting D. D. Dhonau, Humble Oil & Refining Co., 612 So. Flower St., Los Angeles 17, California. The price this year is $15.00 per couple, so make reservations early.

Correction On Cross-Section #8 & #9

During the preparation of the AAPG San Andreas Cross-Sections #8 and #9, the title block was enlarged for easier reading, but the scale of the graphic-log in the block was not preserved and is therefore incorrect. Cross-Sections presently being sold are being corrected with a rubber stamp. In case members receive copies without the correction stamp, the proper scale is as follows:

READ SCALE

Horizontal	1" = 5000'
Vertical	1" = 1000'

The Cross-Sections are available at Price Blue Print and Supply, 1600 "G" Street, Bakersfield and at Pacific Log Exchange, 11515 E. Washington Blvd., Whittier, at $2.00 each.

Coast Geological Society

The Coast Geological Society met on the evening of October 13th at the Jet Room in Ventura.

The report of the nominating committee for 1965 Society Officers was presented and the recommended nominees were elected. New officers are:

President:	James M. Saunders, Tidewater Oil Co.
Vice-President:	Willard J. Classen, Jr., Standard Oil
Secretary:	Dr. Donald W. Weaver, U.C. of Santa Barbara
Treasurer:	Harold W. Bertholf, D.O.G., Santa Paula

The annual Coast Society dinner dance will be held in Santa Barbara on November 21st, at the University Club, 1332 Santa Barbara Street. Dance Chairman Harry Nagle expects the festivities to get underway at 7:00 P.M. A detailed announcement will be sent out soon.

The evening's speaker was Mr. Arne Junger, Shell Oil Company consultant, who spoke on the "Tectonics of the Canadian Rockies". Mr. Junger presented an interesting discussion which was well illustrated by an outstanding set of color slides showing examples of the surface geology, structural geology and their relation to topography. He pointed out the similarity between the Rocky Mountain foothill belt and the Appalachian area and indicated that geophysical data is necessary for a better understanding of the complex structural relationships in the thrust belts. In the Foothill Belt the sole plate of the major thrusting appears to lie on top of the Paleozoic section whereas in the mountain area the sole plate lies on top of the basement rocks. Production in the Foothill belt depends in part on an exception to this general rule in that accumulations occur where the Mississippian rocks have been involved in thrusting. The Laramide orogeny appears to be late Paleocene to early Eocene in age in this region. He is of the opinion that Foothill Belt thrusting does not involve basement rocks. Reflection seismic work has provided data to strengthen this conclusion.

Harold Sugden showed some recently taken undersea colored slides to round out the evening.

A LANGUAGE BARRIER
Contributed by L. F. Ivanhoe

1964 AAPG-SEPM-San Joaquin Geologic Society Field Trip

The segment of the San Andreas fault zone from the Temblor Mountains to the Antelope Valley was covered by the 1964 field-trip of the Pacific Sections of the A.A.P.G. and S.E.P.M. and the San Joaquin Geological Society. This trip was part of a study of lateral faulting, begun in 1961 by the "Committee for the Study of Lateral Faulting in California". Guidebooks covering previous trips to the Carrizo Plains area in 1962, and to the Salinas Valley area in 1963, may be obtained from Gardner Pittman, Secretary-Treasurer of the S.J.G.S., c/o Tidewater Oil Company, Route 1, Box 197-X, Bakersfield, California.

More than 34 geologists played an important role in preparing the 1964 guidebook and in conducting the field-trip. Dr. John Crowell deserves special thanks for his leadership and enthusiasm shown throughout the entire trip. Dr. Crowell was assisted in the field by Jack Vedder, Jack Miller, Dick Pierce, Tom Dibblee and others, at various stops along the way. Much credit for this successful field trip is due to the untiring efforts of the general chairman of all events, Al Almgren.

A pre-field-trip dinner meeting was held at the Hacienda Motel in Bakersfield, California. This meeting was attended by 238 geologists, including many students from a number of universities. Dr. Crowell gave a beautifully illustrated and highly informative talk about the spectacular features that would be seen on the field-trip the next day. Approximately 300 guidebooks were sold during the registration period and social hour. Remaining copies of this excellent guidebook may be obtained from the Treasurer of the Pacific Section of the S.E.P.M., Robert E. Steinert, c/o Shell Oil Company, Box 999, Bakersfield, California. Copies are $4.00.

Maricopa was chosen as the assembly point for the caravan of 107 cars containing over 300 people. The weatherman was very co-operative in arranging for an ideal day. Some of the Los Angeles geologists had almost forgotten what it was like to behold the blue sky and clean atmosphere.

The route followed is adequately illustrated by annotated strip maps and a large geologic map by Dr. Crowell and others. John Eke and John Pigg demonstrated ability to direct numerous vehicles into spaces designed for fewer cars. Thanks are also due to Hoss Wright and Les Herndon for an all-night preparation of a substantial and tasty lunch, including refreshments from the land of sky-blue waters.

In addition to the general geology of the Tejon region, the guidebook contains chapters on paleontology, earthquakes, engineering geology, and heavy mineral suites. Jack Gouty, Dick Pierce and Bob Steinert collected paleo samples ranging in age from Zemorrian to Pleistocene and placed them in boxes at the various stops. Dick also gave very interesting commentaries at each point of interest.

From the last stop, where chaotic conditions caused by faulting were observed at close range, 186 hardy souls backtracked to Kern County Park, at Frazier Park, California, for a barbecue. Jack Wood and Otto Hackel were master chefs in cooking a tremendous meal featuring thick, tender, juicy top sirloin that soon made everyone forget the cool breezes which had swept down the slopes with the approaching darkness.

The success of this annual event is due to numerous people and firms, by their efforts and donations. Many thanks are due to all who participated. If future trips prove as successful, a better understanding of the geological problems involved with faulting along the San Andreas and other major faults in California will be realized.

California Section - A.I.P.G.

The first meeting of the proposed California Section - American Institute of Professional Geologists was held on Saturday, October 17, 1964 at the Mobil Auditorium, Los Angeles. Thirty-six geologists representing all phases of geology from San Francisco to San Diego were in attendance.

The morning meeting agenda included a discussion modification and approval of the Section's Constitution and the election of the following officers:

Officers -	Art Spaulding	President
	S. Muessig	1st Vice President
	J. Kilkenny	2nd Vice President
	B. Troxel	Secretary-Treasurer
	E. Adams	Advisory Board Delegate

Representatives -		
	P. Witherspoon	Bay Area
	V. Jones	Sacramento Valley
	C. Carsen	Coastal Area
	W. Bruer	San Joaquin Valley
	H. Neel	Los Angeles Basin
	R. Threet	San Diego Area

Screening Committee -		
	G. Moody, Chairman	Bay Area
	W. Classen	Bay Area
	S. Totten	Bay Area
	R. Paschall	Sacramento Valley
	S. Reynolds	Sacramento Valley
	T. Bailey	Coastal Area
	J. Curran	Coastal Area
	P. Gester	San Joaquin Valley
	J. Benzley	San Joaquin Valley
	F. Weishaupl	Los Angeles Basin
	H. Sullwold	Los Angeles Basin
	J. Wiese	Los Angeles Basin
	Walker Klute	Los Angeles Basin

The afternoon meeting agenda included a discussion and approval of the Section's By-Laws and the adoption of yearly dues amounting to $5.00. The business portion of the meeting was followed by a very informative report of the A.I.P.G. development by Martin Van Couvering, President National A.I.P.G., and a report on California Registration and Legislation by Arthur O. Spaulding.

Two other states have organized Sections of the AIPG. The Texas Section was organized September 26, in a meeting held at Austin, and the following officers were elected:

Michel T. Halbouty	President
A. Wayne Wood	Vice-President
James A. Wheeler	Secretary-Treasurer
Howard E. Rothrock	Interim Past-President & Delegate

On October 15th, the Colorado State Section was formed in Denver, and its officers are:

Dr. William W. Mallory	President
Jack W. Knight	Vice-President
Keith M. Hebertson	Secretary-Treasurer
Dr. R. Dana Russell	Past President

From the President:

Many items of interest to members are handled by the Pacific Section Executive Committee. In this and future issues of the PPG we intend to improve our communication, hope to arouse your interest, and invite participation in association affairs.

The April, 1967 National A.A.P.G. meeting will be held in Los Angeles. The Pacific Section will host the meeting. Irv Schwade has accepted General Chairmanship. Bob Knapp will be General Vice-Chairman. John Kilkenny is Technical Program Coordinator; and J. R. Jackson, Program Chairman. Irv has gotten the plans off the ground by selecting many of the committee chairmen. Themes under consideration (more than one of which might be selected) include Quantification of Factors in Oil Exploration, Continental Shelves of the World, Channel Sand Oil Fields, Australia , and new exploration techniques. Even though the convention is 2-1/2 years away, Irv reports little enough time remains to do all that is necessary. Several committees have openings. Irv invites volunteers.

Pacific Section membership is approximately 1000, down approximately 200 compared with a few years ago. The drop mainly is due to non-payment of dues, as there are approximately 350 on the inactive list. Also, we find many national A.A.P.G. members with southern California addresses who are not Pacific Section members. We intend to solicit all of these people in the near future. You can help our cause by encouraging eligible or interested non-members to join. No registration form is needed. Simply send $3.50 (checks made out to Pacific Section, A.A.P.G.) to our official address with your name and address. Pacific Section members who are also members of the National A.A.P.G. are "active" members. Others are Pacific Section "subscribers", admitted by approval of the executive committee, but without voting rights.

The Pacific Section has initiated an Earth Science Teachers Liason Committee in cooperation with an A.A.P.G. headquarters program. The A.A.P.G. is vitally interested in the furtherance of our profession and attracting men of the highest standards. The committee's aims are part of the program to acquaint and interest the public with the field of geology. Bill Lee, former geologist with Petrobras, now Physical Science Teacher at Granada Hills High School, will head this committee. If you're interested in this worthy project, why not offer him your services?

. . . . . Spence Fine

San Joaquin Geological Society

Mr. W. F. Edmondson, Consulting Geologist, presented a very interesting paper on the "Meganos Gorge" to the San Joaquin Geological Society, Tuesday evening, October 13, 1964. An interesting discussion followed the presentation of the paper.

Abstract:

The Meganos Gorge was cut and filled in lattermost Paleocene time. It is present in the subsurface in portions of Contra Costa, San Joaquin, and Sacramento Counties, California. Its axial length is 44 miles and it covers an area of about 200 square miles. Maximum thickness of Gorge Fill is in excess of 2500 feet and the volume of observed cut and fill is about 25 cubic miles. Average slope of the gorge surface varies from 5 to 16 degrees.

The Gorge Fill crops out on the north flank of Mount Diablo as Member C of the Meganos formation as defined by Clark and Woodford in 1927. Western continuation of the gorge is limited because of truncation by the Domengine. Cutting of the gorge was probably both subaerial (east of the Midland Fault) and submarine (west of the Midland Fault). The fill is entirely marine and dominantly shale. Fauna of the Gorge Fill is that of Laiming's D zone.

When first penetrated by wells on the east side of the Midland Fault the Gorge Fill was not recognized as such. As a result, dating of the section beneath the Capay shale and above the H & T shale was in part based on the age of the Gorge Fill and this unit was designated Meganos-Martinez undifferentiated. It is now believed that this unit is predominantly a near shore facies of the Uppermost Cretaceous with a couple hundred feet of massive Paleocene sand at the top.

At the eastern (inland) terminus of the gorge at Walnut Grove considerable sand is present in the Gorge Fill. This sand is concentrated in the central portion of the fill with shale on both sides. This shale traps gas at Walnut Grove in both the pre-gorge section and sands in the Gorge Fill.

Recent drilling at Brentwood has revealed the relationship of the gorge to surrounding formations and has given more information on the sequence of events during the Lower Tertiary. The Paleocene-Cretaceous contact lies immediately beneath the shale which separates the first and second massive sands of the Brentwood Field, at which point a major unconformity can be observed. Definitive Cretaceous fauna have been identified in the Hall shale between the second and third massive sands and Cretaceous megafossils have been reported from the surface outcrop of the third massive sand (Deer Valley formation of Colburn).

Lowermost Tertiary units include the first massive sand, Martinez shale, and Anderson sand. The Anderson sand is the subsurface equivalent of Members A and B of the Meganos formation and is also believed to be correlative to the Wagenet and Antioch sands. Deposition of the Anderson sand was followed by uplift and subsequent erosion centering a few miles southeast of the Brentwood Field. This was followed by resubmergence and deposition of the Meganos shale which has a fauna very similar to that of the Gorge Fill. The Meganos Gorge was cut and filled immediately after deposition of the Meganos shale. The Gorge Fill shale has very good electrical markers and between Brentwood and McDonald Island deposition was remarkably uniform. The Margaret Hamilton sand and Capay shale overlie the Gorge Fill west of the Midland Fault with a slight unconformity indicated at the base of the Margaret Hamilton sand. Truncation of the northerly dipping Paleocene and Cretaceous sands by the gorge surface at Brentwood accounts for entrapment of gas and oil in these sands.

Thickening of the Capay-Domengine interval in areas overlying the gorge is simply the result of early compaction of the Gorge Fill. In the Brentwood-Oakley area the axial trend of the gorge bears amazing coincidence to the trend of prior maximum uplift.

What is considered a sand free facies of the normally sandy section above the H & T shale in the Maine Prairie area may be considered by some to be a gorge fill section. If this proves to be a gorge it has no relationship to the Meganos Gorge because it is overlain by formations which pre-date the Meganos Gorge.

If conventions are appealing
And you like your programs live
Hit the road this coming springtime
It's Bakersfield in '65

AAPG MEMOIR 3--MARINE GEOLOGY OF THE GULF OF CALIF.

Edited by Tj. H. van Andel and
George G. Shor, Jr., of Scripps Institute of
Oceanography, La Jolla, California

Intensive studies of the Gulf of California were begun in 1957 by marine geologists from Scripps. They were joined by research workers from the Institute of Geophysics of the University of California and the Seismological Laboratory of the California Institute of Technology. Financial support came from the Office of Naval Research, the American Petroleum Institute, and the National Science Foundation.

The Gulf of California, previously neglected, was chosen for this study since it is a natural laboratory for research on many aspects of sedimentology and oceanography, in which the effects of various factors can ultimately be isolated. A knowledge of its structure and suggested origin is important also for interpretation of many major ancient tectonic features and of the present structure of continents and oceans.

Memoir 3 contains 16 articles of interest to geologists, geophysicists, marine zoologists, and oceanog--raphers. Comparisons are made between faunal assemblages, sedimentation rates, and carbon content in the Gulf and in other areas of the world. Nearly all the material is original and previously unpublished.

Anticipated Publication Date: Nov. 1, 1964.
408 pages, 16 papers, index. 2 bathymetric charts, in color, in pocket. PRICE: $12.50, $9.00 AAPG & SEPM members.

Correction

Due to an oversight by the editor, the "References" pertaining to "In Defense of Rational Stratigraphic Nomenclature" by Harold H. Sullwold, Jr., in the August 1964 issue were omitted. Attach the following to the subject article.

References

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Owens, L. D. (1963) Regional Geology of the Central Portion of the Great Valley of California, ibid., p. 88-97.

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USC NEWS

Orville Bandy spent the first part of the summer completing a study of foraminiferal trends in the mainland shelf area of Orange County. Later, for about two months, he was Chief Scientist aboard the ANTON BRUUN operating in the Indian Ocean off South Africa and Mozambique. Bottom sediment samples (trawls, cores, and grabs) were taken in a line of four profiles across the Mozambique Channel and the Natal Deep. We suspect that most of the floor of the Indian Ocean will soon come to rest in the halls of the Hancock Foundation.

Nikolas I. Christensen, a new staff addition this fall in crystal physics, mineralogy, and geophysics, spent June and July working with Francis Birch in Hoffman Laboratory at Harvard University. He and his family spent the latter part of the summer visiting relatives in Wisconsin on the way to Los Angeles from Boston. Nick's research interests are directed towards laboratory measurements of elasticity and seismic wave velocity in rocks and minerals, for the purpose of aiding in the interpretation of field measurements.

Gregory A. Davis instructed the U.S.C. summer field camp in the Mountain Pass area of San Bernardino County during June and July; Clark Burchfiel of Rice University, Houston, was co-instructor of the camp. Greg resumed his structural studies on thrust faulting in the Klamath Mountains of northern California during the latter part of the summer.

William H. Easton spent two months in Boulder, Colorado as a member of the Earth Science Curriculum Project's summer writing conference. This project is sponsored by AGI through funds provided by NSF. Forty-one members of the writing conference produced a textbook, teacher's guide, and lab manual for a ninth grade course in earth history. After rewrites in the next two summers, the materials will be published commercially and should be used by about 3 or 4 million high school students by 1970. For 60 percent of the population, this will be the first and only high school science course they take, so this will give an idea of the importance in the future that earth science teaching will have in our country and profession. Bill also served as a coordinator for the conference, having responsibility for production of 13 of the 30 chapters. After the ESCP tour of duty, he spent about two weeks in Hawaii drilling core holes through the fringing reef and mapping and collecting from type localities of ancient shorelines. These materials are being dated radiometrically. Back home there was even time to get some abalones before returning to paper shuffling.

The groundbreaking ceremony of the new geology-physics building will be on December 2. Friends and alums interested in attending may obtain parking space by calling RI-8-2311, X387.

Donn S. Gorsline was acting chairman of the second half of the summer session and spent the bulk of his remaining time as a sidewalk supervisor during the remodeling of and moving into new laboratory space in Hancock Foundation. These new labs will be primarily for Marine Geology and Sedimentology. Some space is currently being used by the geochemists until their new quarters are finished next year. Work continued on coasts, bays and beaches of the Gulf of Mexico and on canyons and basins off California.

Jack Green organized the symposium "Geological Problems in Lunar Research" at the New York Academy of Science in early June. In the later summer, he studied impact patterns of volcanic bombs on ash at Kilauea, Hawaii.

Randall E. Gresens, NSF Post-Doctoral Fellow at U.S.C., is beginning a two-year field, laboratory, and experimental investigation on the origin of metamorphic rocks in the Franciscan Formation. Randy recently earned his doctoral degree from Florida State University under the direction of George W. DeVore.

Rene Herb, Post-Doctoral Research Associate studying with Orville Bandy, is completing an ecological study of larger Antarctic Foraminifera as a part of U.S.C.'s Antarctic Research Program. Rene will soon return to his native Switzerland to accept a faculty position at the University of Bern.

J. Reid Macdonald spent the summer collecting vertebrate fossils on the Pine Ridge Indian Reservation in South Dakota for the Los Angeles County Museum. Several new ranges were established for Oligocene-Miocene mammals.

John Mann interrupted his consulting service in ground water for a vacation trip to Victoria and Vancouver, Canada.

Richard H. Merriam continued laboratory and field studies of sediments in the Colorado Delta area. Faults and related structures found in Upper Pleistocene (?) rocks in Northwest Sonora have proved especially interesting. Dick was acting chairman of the department the first half of the summer.

Richard O. Stone was on sabbatical leave during the spring semester and summer. He was associated with the Science Services Division of Texas Instruments, Inc. where he was concerned principally with a study of the optimum scientific measurements, observations and experiments to be performed on the APOLLO manned lunar landings. In April he undertook a one-week lecture tour for the American Geological Institute visiting schools in Louisiana and Mississippi. Dick also participated in the Student Cooperative program of Geophysical Services Incorporated in Dallas where outstanding earth science students throughout the country are invited for a week of orientation lectures prior to a summer of field work. His current research is to determine methods to select, certify and compare landing sites for the first lunar landings.

Society of Exploration Geophysicists

Thirty-Fourth Annual International Meeting

The 34th Annual International Meeting of the S.E.G. will take place at the Biltmore Hotel, Los Angeles, starting Monday noon, November 16th, and concluding on Thursday afternoon, November 19th. Activities will actually start at 10:00 a.m., Sunday, November 15th with an all-day Disneyland Tour which leaves from the Hill Street entrance of the Biltmore Hotel. Two field trips are planned, one to Jet Propulsion Laboratory Thursday afternoon and the other to Scripps Institute of Oceanography, La Jolla, all day Friday. Reservations for the three events must be received by Nov. 9, 1964.

The theme of the meeting is "Economic Exploration in the Space Age". Some 89 papers will be presented during the four-day session, and should prove to be one of the finest technical programs ever presented by the S.E.G.

Bakersfield's an easy drive
The year and the speed is '65

PERSONAL ITEMS

R. D. Wilson has been transferred from the Humble Los Angeles office and replaces Todd Harding at District Geologist with Humble in Bakersfield.

Todd Harding, formerly District Geologist with Humble in Bakersfield, has been transferred to Houston, Texas.

C. J. Blom (Occidental, Bakersfield) advises that the "news" that he is looking for a house in Whittier, as reported in the last PPG, is about six years old. Those Real Estate salesmen are a little slow.

Jack Van Amringe (Union, New Orleans) received a giant welcome from Hurricane Hilda as he was trying to move into his new house. Jack reports that he has now recovered all of his belongings and would welcome any stray California geologists that get lost in the swamps down that-a-way.

Doug Crawford (Union, L.A.) and wife, Margaret, returned from vacation recently via New Orleans, Jamaica, Puerto Rico and New York.

Don Bruce, Skelly Oil Co., Anchorage, has been elected President of the Anchorage Petroleum Club. While returning from a recent visit to the largest of the lower 48, Don got together with some of the ex-Alaska boys over a few beers at the airport between planes. Don appeared as healthy and robust as ever.

Tony Morris and Dick Hester are once more taking an extended Iranian vacation. Dick was so happy to get back to Teheran that he left fingernail claw marks only half way down the airport tunnel this time.

Bob Lindblom and Bob Ortalda, Standard Oil, won top golf prizes at the annual El Segundo-San Joaquin Valley Standard Oil Golf Tourney held at the Buena Vista course near Taft. Ortalda with a 16 (16---! !) handicap, won low net with a 64 and Lindblom shot 3 over par 75 to win low gross.

Mike Larrabee (A.B.'58) is the second Olympic gold medal winner produced by the Department of Geology at U.S.C. Mike, at the age of 30, has just astounded the world by winning the 400-meter dash. In 1932, Duncan McNaughton (A.B.'33, Ph.D.'50) won the high jump and set a world's record in doing so.

Shell geologists Ralph Rudeen, Joe Dickson, and Dick Cavin were recently transferred from Seattle to Ventura.

The surf fishing competition at the SOCAL Ventura office beach party was won by Doug Waterman's wife, Ruth. (She landed a fish which was more than the rest of the "fishermen" could do.)

Ike Holston, Tidewater Oil Company, retires November 30th after 42 years of service. He plans to reside near Santa Cruz. Ike has the remarkable record of not missing a day on the job due to illness.

NURSERY NEWS

Mr. & Mrs. Dick McCullough (Pauley) announce the arrival of a son, Patrick Thomas, born October 14th, while they were in Texas.

CHANGE OF ADDRESS FOR MEMBERS LISTED IN CURRENT DIRECTORY:

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1559 Oakdale
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John H. Van Amringe
Union Oil Company
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New Orleans, La. 70112

NEW MEMBERS

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California Exploration Co.
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San Francisco, California

Mathilda Fritzler
1814 W. Tedmar Avenue
Anaheim, California

John E. McCall
Standard Oil Co. of Calif.
225 Bush Street
San Francisco 20, Calif.

If you lack the lift for a balloon ascension
Try the SPRING of the '65 convention.

CALENDAR

U.C.L.A. Afternoon Meetings, Chemistry-Geology Lecture Hall 2276, 3:00 p.m.

Nov. 5, 1964: "Circum-Pacific Faulting" by Dr. Clarence R. Allen.

Nov. 12, 1964: "Precision and the Design of Experiments in Geochemistry" by Dr. Donald McIntyre

U.S.C. Noon Meetings, Building GB, Rm. 102, 857 W. 37th Street

Nov. 10, 1964: "Cyclic Cretaceous Deposits in San Juan Basin of New Mexico" by Dr. Floyd Sabins.

Nov. 17, 1964: "Cruise of U.S.Coast and Geodetic Ship Pioneer to Indian Ocean and Andaman Sea" by Kelvin Rodolfo.

Nov. 24, 1964: "Marine Geology Program of the Geological Survey of Canada" by Dale Buckley.

Dec. 1, 1964 : "Velocities of Compressional Waves in Rocks to 10 Kilobars", by Dr. Nickolas Christensen

Dec. 8, 1964 : "Triassic Stratigraphy of the Connecticut Valley" by Rosanne Leidy.

Stanford University Afternoon Meetings, Geology Bldg., Rm. 320, 3:45 P.M.

Nov. 9, 1964 : "The auxiliary point method of Electrical Sounding Interpretation" Dr. A. Zohdy, Research Assistant Dept. of Geophysics.

"Geology of Black Hills Area, S. Dakota", by Dr. Edward L. Tullis, visiting scholar, S. Dakota School of Mines.

Nov. 16, 1964: "Dislocation theory applied to Upper Mantle Materials", by Chapman Young, graduate student, Dept. of Geophysics.

Palynology at Stanford -A Report by Prof. Wm. R. Evitt, Dept. of Geology.

Nov. 23, 1964: "Te Vega expedition to the Maldive Islands" by Joseph Clark, grad. student, Dept. of Geology.

Nov. 30, 1964: "Magnetic properties of selected Volcanic Rocks, Southwestern Montana" by Dr. W. F. Hanna, visiting Ass't Prof. Dept. of Geophysics.

Nov. 10, 1964: Tuesday Evening, El Tejon Hotel, Bakersfield. San Joaquin Geological Society. "The San Andreas Fault -Predominant Lateral or Vertical Displacement", Gordon B. Oakshott, Deputy Chief, Calif. Div. of Mines and Geology.
Cocktail Hour 5:30 p.m. dinner hour 6:30 p.m.

Nov. 12, 1964: Thursday Noon, Rodger Young Auditorium, Los Angeles Luncheon Meeting. "The Role of Tectonic and Environmental Factors in the Origin and Distribution of Sediments" -Dr. D. E. Feray, A.A.P. G. Distinguished Lecturer, Texas Christian University, Fort Worth.

Nov. 16, 1964: Monday Evening, 7:00 p.m., Mobil Auditorium, Los Angeles Geologic Forum. "Canadian Rockies Orientation in Time and Space" by Dr. Ernest W. Shaw, A.A.P.G. Distinguished Lecturer, Imperial Oil Enterprises, Ltd., Calgary, Canada.

Dec. 2, 1964: Groundbreaking ceremony of the new USC Geology-Physics Building. Interested parties may obtain parking space by calling RI 8-2311, Ex. 387.

Dec. 7, 1964: Monday Evening, 7:30 p.m., Bakersfield College Campus, Science and Engineering Building, Rm. 56. "Vertebrates" by Dr. Donald E. Savage, University of California, Berkeley.

Dec. 8, 1964: Tuesday Evening, El Tejon Hotel, Bakersfield. San Joaquin Geological Society. "A Review of Oilfield Thermal Recovery Practices", Jack Gearhart, Engineer, Vulcan Oil Recovery Co.
Cocktail Hour, 5:30 p.m.; Dinner Hour 6:30 p.m.

BIBLIOGRAPHY OF RECENT PUBLICATIONS

U. S. GEOLOGICAL SURVEY

Professional Paper 303-G: Geology of the Killik-Itkillik region, Alaska -by W. W. Patton, Jr. and I. L. Tailleur $1.25

Professional Paper 383-B: Geologic factors that control the occurrence and availability of ground water in the Fort Rock Basin, Lake County, Oregon, by E. R. Hampton $1.50

Professional Paper 418-B: Middle Bajocian ammonites from the Cook Inlet rigion, Alaska, by R. W. Imlay $1.25

Professional Paper 452-B: Subsurface exploration and chronology of underfit streams, by G. H. Dury $1.00

Professional Paper 454-J: Geology of Bullfrog quadrangle and ore deposits related to Bullfrog Hills caldera, Nye County, Nevada, and Inyo County, California, by H. R. Cronwall and F. J. Kleinhampl $1.75

Bulletin 1161 E: Geology of the Christmas quadrangle, Gila and Pinal Counties, Arizona, by Ronald Willden $1.25

Bulletin 1161-F: Geology of the Bald Knob quadrangle Ferry and Okanogan Counties, Washington, by M. H. Staatz $1.00

Bulletin 1181-K: Surficial geology of the central Kobuk River valley, northwestern Alaska, by A. T. Fernald $1.00

Bulletin 1181-M, N: (Both in one vol.) $1.00
M: Geologic sketch of northwestern Oregon, by P. D. Snavely, Jr., and H. C. Wagner.
N: Geologic interpretation of reconnaissance gravity and aeromagnetic surveys in northwestern Oregon, by R. W. Bromery and P. D. Snavely, Jr.

Bulletin 1181-P: Character and distribution of nonclastic minerals in the Searles Lake evaporite deposit, California, by G. I. Smith, and D. V. Haines. $ .25

Bulletin 1196: Bibliography of North American geology, 1960, by J. W. Clarke, Margaret Cooper, G. D. Conant, and others $2.25

MAPS

I-418: Geologic map of the southern part of the Mule Mountains, Cochise County, Arizona, by P. T. Hayes and E. R. Landis $1.00

MF-279: Geology map of the Stanford quadrangle, Glenn, Colusa, and Lake Counties, Calif., by R. D. Brown, Jr. $ .50

MR-41: Industrial minerals and construction materials occurrences ih Alaska, by E. H. Cobb $ .75

OPEN FILED REPORTS (Inspection only)

TEI-850: Geologic map of the Silent Butte quadrangle, Nye County, Nevada, by E. B. Edren, R. E. Anderson, Paul P. Orkild, and E. N. Hinrichs

TEI-852: Geologic map of the Buckboard Mesa Quadrangle, Nye County, Nevada, by F. M. Byers, Jr., C. L. Rogers and S. J. Luft

TEI-853: Geologic map of the Timber Mountain quadrangle, Nye County, Nevada, by W. J. Carr and W. D. Quinlivan

Gravity observations and Bouguer anomaly values near Tucson, Arizona, by Donald Plouff, (30 pages tubular material).

CALIFORNIA DIVISION OF MINES & GEOLOGY (Mail orders: Ferry Building, San Francisco)

Bulletin 180: Sand and Gravel in California Part B: Central California, by Harold B. Goldman $2.00

Special Report 83: A geologic reconnaissance in the Southeastern Mojave Desert, California, by Allen M. Bassett and Donald H. Kupfer $1.50

GEOLOGIC MAP OF CALIFORNIA--NEEDLES SHEET, in envelope with explanatory data sheet $1.50 plus 6¢ tax

(Also: Geology not colored, unfolded, no data sheet or envelope): $ .50 plus 2¢ tax

PACIFIC PETROLEUM GEOLOGIST
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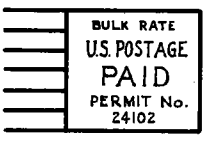

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Volume 18 | December, 1964 | Number 12

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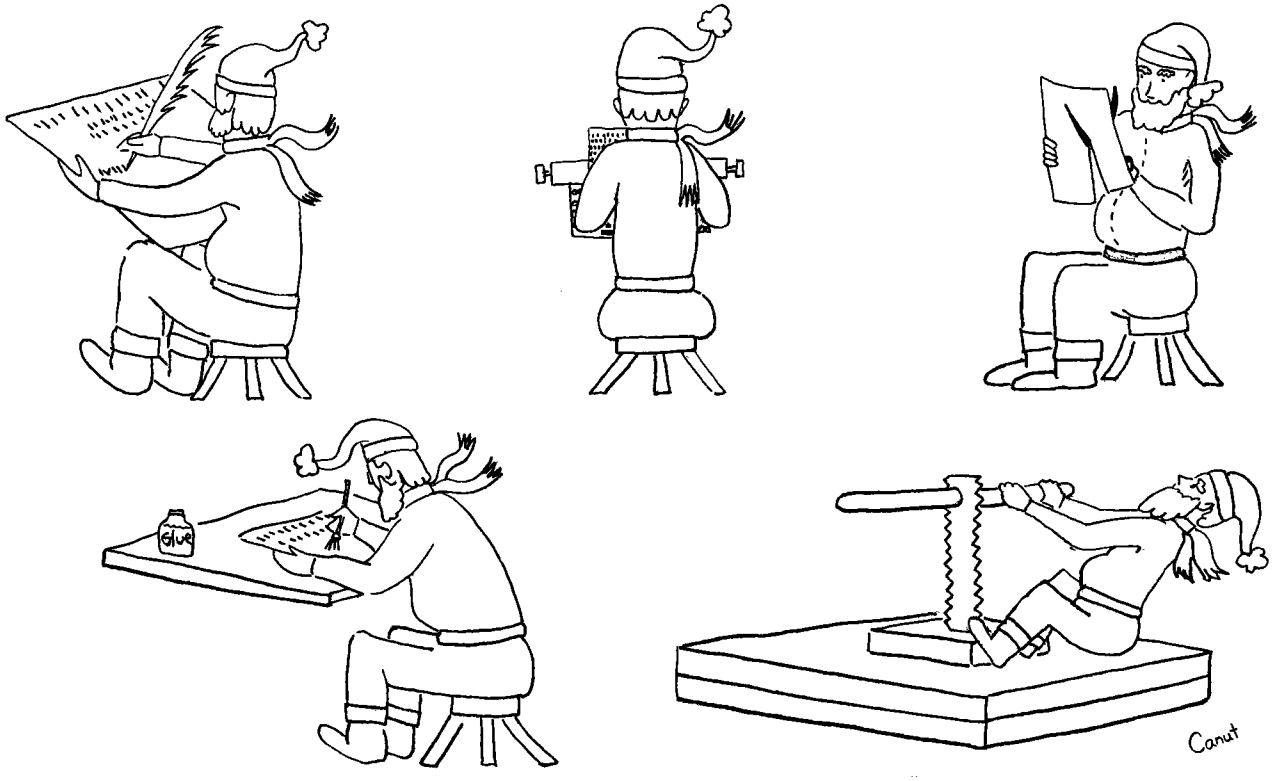

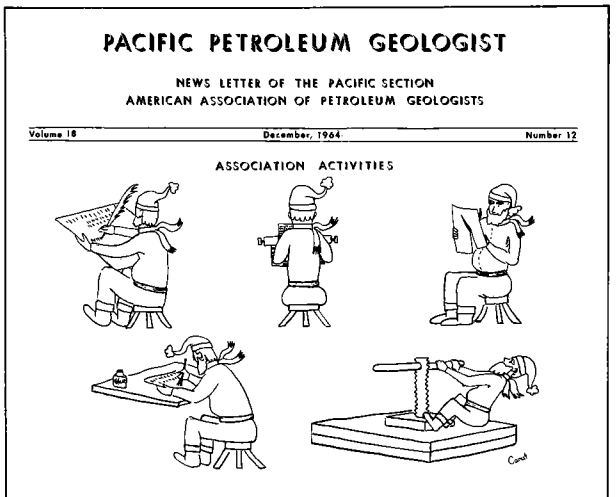

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- PACIFIC PETROLEUM GEOLOGIST -

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Next Deadline - December 28, 1964.

ALASKA GEOLOGICAL SOCIETY

Newly elected officers to the Alaska Geological Society for the 1964-1965 season are:

President: Bill Fackler, Phillips
Vice President: Joe Borden, Pure
Secretary: Marv Mangus, Atlantic
Treasurer: Tom Wilson, Marathon

The names of the new officers were announced at the October 15 noon meeting at the Harbor House. Included among the reports of the outgoing committee chairmen was Chuck Kirchner's report on the forthcoming roadlog guidebook. Chuck reports that the guidebooks on Matanuska Valley geology will be ready for printing about November 10.

Meetings of the Alaska Geological Society are at noon on the second Thursday of the month at the Harbor House.

CITY OF ANCHORAGE GEOLOGIC ADVISORY COMMITTEE

The City of Anchorage has appointed a geologic advisory committee to advise on urban geologic matters, both pertaining to post-quake reconstruction and future building. The Committee consists of Gerry Ganopole Darrell Helmuth, Ruth Schmidt, and Keith Calderwood. This group reports primarily to the Anchorage Planning Commission, but also advises the Mayor, the City Council, and the Department of Public Works.

Congratulations also to Ruth Schmidt on her excellent protrayal in the October issue of Geotimes of the post-quake mapping conducted in Anchorage.

"The grapevine is now an easy drive
for conventioneers in . . . . . '65!

SAN JOAQUIN GEOLOGICAL SOCIETY

From left to right- Sec. Raymond Knight, Pres. Rod Colvin, Vice-Pres. John Thomson, Treas. Gene Tripp.

The newly elected officers of the San Joaquin Geological Society for the 1964-65 term are as follows:

President	Rodney G. Colvin Mobil Oil Company PO Box 152 Bakersfield, California
Vice-President	John N. Thomson Consultant 520 Chester Ave. Bakersfield, California
Secretary	Raymond L. Knight Franco Western Oil Company PO Box 1176 Bakersfield, California
Treasurer	Eugene Tripp Texaco, Inc. PO Box 3027 Bakersfield, California

The above officers took over their positions on November 10, 1964 and will serve for a term of 18 mo's.

LOS ANGELES MONTHLY LUNCHEON

On Thursday, November 12, Dr. Dan E. Feray, Texas Christian University, presented a very interesting talk entitled "The Role of Tectonic and Environmental Factors in the Origin and Distribution of Sediments".

Abstract:

Ancient sediments (sedimentary rocks) are interpreted in light of evidence available from the examination of modern processes based upon the concept of uniformitarianism. Recent sediments models of the Bahamas, Florida Keys, Mississippi Delta and Northern Gulf of Mexico are reviewed as to their application to the interpretation of ancient sediments deposited in geosynclinal and stable shelf areas.

Puerto Rico, being in an area of active tectonic uplift and subsidence, demonstrates a variety of environmental conditions of diastrophism, physiography,

and climate related to a variety of sediment types including graywackes, subgraywackes, arkoses, fine grained terrigeneous clastics, bioclastic limestones, reef limestone, carbonate muds, and evaporites all in various facies relationships. Sources of sediments involve an orogenic belt of plutonic, volcanic, metamorphic and sedimentary rocks ranging in elevation from sea level to 4000 feet above sea level. The climate of the source area varies from tropical rain forest to desert. Depositional sites include fluvial, bay and lagoonal, littoral margin dunes, deltas, shelf basin-bank-reef complex, slope, and abyssal environments. The facies relationships between terrigeneous clastics and carbonates provides a recent sediment model of great significance when applied to evaluation of ancient sediments.

The sedimentary rocks of Pennsylvanian age in north-central Texas consist of a sequence of conglomerates, sandstones, shales and limestones exhibiting facies relationships representing fluvial, deltaic, lagoonal, littoral, and shelf environments of deposition. The shelf sediments involve both carbonate banks and reefs in a terrigeneous clastic sequence. The effects of sea-floor topography on sedimentation are significant both in regard to type and thickness. Evidence of deep water or continental shelf-slope relationships are absent indicating deposition of sediments in a subsiding shelf environment.

SAN JOAQUIN GEOLOGICAL SOCIETY

The San Joaquin Geological Society enjoyed a very interesting paper by Gordon Oakeshott, entitled "The San Andreas Fault: Predominant Lateral or Vertical Displacement?" at its November meeting.

Abstract:

Critical, objective re-evaluation of geologic mapping and the literature, and years of spot-checking important segments of the fault in the field favor predominantly vertical movement rather than large strike-slip displacement on the San Andreas fault in pre-Quaternary time. Extrapolation of historic behavior of the fault over geologic periods of millions of years is insupportable.

South Tejon Pass the fault breaks into a system of northwest-trending faults, but the San Andreas fault proper appears to terminate in a knot of faults in San Gorgonio Pass. Neither geologic nor geophysical evidence supports continuation of this fault zone south of the Salton Sea. Probable pre-fault distribution of pre-Cretaceous geologic units in the San Gabriel-Orocopia mountain belt does not require large lateral separation. The San Andreas fault zone, during Cenozoic time, was a locus of deposition of sediments; this has made measurement of lateral offsets of formations uncertain. Character of the sediments, however, offers convincing evidence of large, adjacent vertical uplift.

In central and northern California, matching of stratigraphy, structure, and geologic history across the San Andreas fault, from Late Cretaceous to Pleistocene time, leaves little room for large strike-slip displacement.

For a distance of 350 miles north of the San Emigdio Mountains, the San Andreas fault zone appears to separate Late Mesozoic ensimatic, eugeosynclinal Franciscan rocks from the Late Mesozoic sialic granitic rocks. Distribution of these two great rock units cannot be readily explained by large strike-slip movement, but does appear to require vertical displacements on the order of more than 10 miles.

THE AMERICAN INSTITUTE OF PROFESSIONAL GEOLOGISTS
First Annual Meeting, Denver, November 13-14, 1964

The Denver Hilton Hotel provided excellent convention facilities for the two-day program developed by W. A. Newton and his Denver committee. 120 registrants included representation from some 20 states. California was represented by Elmo Adams, Otto Hackel, K. B. "Pete" Hall, Everett Pease, Art Spaulding, Martin Van Couvering, F. J. Weishaupl, J. D. Weir, and Ken Wilson.

Friday was devoted to business affairs of the Institute. The organized Sections, Texas, Colorado and California, were recognized and accepted. The first number of the AIPG newsletter, The Professional Geologist, edited by Frank Conselman of Abilene and intended as a bi-monthly publication, was distributed. Mr. Arthur Brunton was introduced as the newly employed Executive Secretary of the Institute.

It was reported that 611 applications for membership had been received through November 12th. The states with organized Sections account for about 140 in California, 95 Colorado, 65 Texas. Eleven other states have 10 or more applicants. Forty-two states are represented, plus some foreign residents. This response is remarkable for an organization a year old.

A number of modifications to the By-Laws were recommended by the Executive Committee and approved. These generally provide:

Charter Members shall be those whose application is received prior to January 1, 1965 and approved prior to March 1, 1965.

Officers and Executive Committee will continue in office until successors are elected for installation at the 1965 Annual Meeting.

Delegates: Each Section shall have one, with 51 members entitled to two, with 151 members - three, 251 members - four, and so on.

Sponsors: Applicants may continue to use any qualified geologist as Sponsor until the 1965 Annual Meeting (probably November) and thereafter may use only members of AIPG.

Warren Beebe, Chairman of the Legislative Coordinating Council, discussed the proposed "Model Law for Registration of Geologists". This is expected to be available for distribution prior to January 1, 1965. It is the result of extensive investigation and inquiry by the members of the Committee, among many geologists, organizations, and skills. In general, it follows the Engineers' Model Law. Critical help has been received from Milton Lunch, attorney representing the National Society of Professional Engineers and the National Council of State Boards of Engineering Examiners, and by other attorneys with considerable experience in the affairs of geological and other professional societies. It must be emphasized that this Registration Law is prepared for use only where needed. It is the general feeling of the Legislative Coordinating Council and of AIPG Executive Committee that self-regulation is preferable. This matter is discussed later.

The Honorable John M. Kelly, Assistant Secretary for Mineral Resources, U. S. Department of the Interior, a geologist by training and practice, spoke at our dinner Friday evening on "Federal Role in Development of U.S. Mineral Resources", and emphasized the Professional Geologist's responsibilities in connection with the full use of these resources in the best interests of the public.

Saturday morning Ben H. Parker, Frontier Refining Company, Denver, presided over a program concerning "future direction of growth and the geologic manpower requirements"" in several industries using Professional Geologists. Petroleum and natural gas were discussed by James D. Weir, Chief Geologist, Standard Oil Company of California, San Francisco. Metals were covered by James O. Harder, Manager of Operations, Home-stake Mining Co. at Lead, S. Dakota, and Engineering Geology by Richard H. Berry, Engineering Geologist, Alexandria, Virginia. William Thurston, Staff Geologist, Office of the Director, U.S. Geological Survey, Washington, D.C., reviewed projected uses of geological scientists in the Survey.

Several of these speakers emphasized that the body of geologic knowledge is currently many times more extensive than it was a generation ago. Advanced degrees and training in specialties are almost a requisite for geological usefulness to industry. It was pointed out, however, that men with special abilities are needed and will always find a place in the profession and industry. Imagination, initiative, enterprise, drive, administrative judgement, and ability to communicate effectively are all important. Future requirements for minerals and fuels are rapidly expanding. Geological scientists will be needed in increasing numbers to service these natural resources. In exploration, sophisticated techniques are needed to locate the more subtle deposits. A wide range of skills and specialties are needed to develop and exploit these deposits and to service the expanding use of geology in construction and other industries.

The Saturday afternoon program was devoted to an inter-professional conference on development and history of standards for professional practice. The AIPG audience was privileged to listen to the "old professionals" representing the American Medical Association, the American Bar Association, the American Institute of Architects, and the Chairman of the Colorado State Board of Registration for Professional Engineers speaking for Professional Engineers. Membership in all these organizations is voluntary. In a few states membership is required for practice. All of these professions are subject to licensing or registration in each of the states where they wish to practice. Reciprocity between states is usually cumbersome and difficult. Each profession has found it necessary to exercise a great deal of energy within the professional association to maintain high standards of education and professional practice, to prevent unethical and malpractice, and to direct the legal enforcement of laws governing practice within their profession. These organizations expressed warm welcome to the new AIPG and offered help in furthering their professional aims. The discussion following these presentations seems to point to the conclusion that self-regulation within the geological profession is preferable to licensing or registration.

-As reported by Elmo W. Adams, Nov. 18, 1964

To Geologize and/or Socialize
Try the spring convention on for size."

FROM THE PRESIDENT

Vice-President, Gordon Bell, at the present time, is drafting a policy for making a fair distribution of Pacific Section funds to distant members in the various cities where meetings are held. These cities are Anchorage, Seattle, Sacramento, San Francisco, Bakersfield and Ventura. The Geological Society at these locales may or may not be affiliated with the Pacific Section. Their objective usually is not limited to Petroleum Geology, but is broader in scope. Nevertheless, Pacific Section members in these areas deserve some measure of benefit to the extent that the available funds will permit.

The principle sources of income of the Pacific Section are the annual dues (which approximate the cost per member of the publication of our Newsletter), registration and the sale of exhibit space at the annual convention. Convention profits vary considerably, hence our income is likewise variable. Field trips and social functions usually are self-supporting, the deficits being off-set by the much appreciated contributions of the sales and service companies. Our directories, cross-section and guidebook projects require relatively large outlays -- money which may be invested for a year or more before sales return printing costs. Some of these worthwhile publications are in the red and never may break even.

Of course, every Executive Committee attempts to balance the budget. A possible threat to the present equilibrium is that the I.R.S. is taking a closer look at scientific organization "profits". Unfortunately, the principle criteria for taxation is how the income is derived -- not the yearly net. Thus, worthy profit may not be allowable as a deduction. Some scientific societies, I understand, have given up the non-profit status purposely and, therefore, no longer are concerned about the amount or source of income. We do not propose such a change but we should avoid new sources of income that may jeopardize our present state with the I.R.S.

A few years ago, the Executive Committee attempted to return an amount to societies proportionate to the respective Pacific membership in that area. This was only moderately successful in that the amount was too low to be of much benefit to the smaller societies. Also, it was an excessive burden to the Treasurer -- a bookkeeping headache. We expect to initiate a policy of a fixed yearly amount of renumeration to Pacific Coast societies, hopefully sufficient to support at least one distinguished lecturer per year and to cover a part of the respective societie's incidental expenses. If you have any suggestions, please contact Gordon Bell or me, as the Executive Committee will be voting a policy before long.

-Spence Fine

GUIDEBOOK AVAILABLE

The 1964 field trip guidebook "San Andreas Fault Zone - Temblor Mountains to Antelope Valley, So. California", sponsored by A.A.P.G., S.E.P.M. and S.E.G. is for sale, for $4.50/copy. Order through:

R. E. Steinert
PO Box 999
Bakersfield, Calif.

LOS ANGELES FORUM

Dr. Ernest W. Shaw, A.A.P.G. Distinguished Lecturer, Exploration Manager for Imperial Oil Enterprises Ltd. in Calgary, Canada, presented a very interesting talk, "Canadian Rockies Orientation in Time and Space", before the Los Angeles Forum on November 16, 1964.

Abstract

The Canadian Rockies are located between the Rocky Mountain trench on the west and the edge of the disturbed belt on the east, to the north they plunge out near the Yukon-British Columbia boundary and to the south they extend over 150 miles into Montana. The dimensions are 1,065 miles in length and an average width of 80 miles. Structurally, and thus scenically, they are unique as compared to the Mackenzie Mountains to the north and the central and southern Rockies to the south, this striking difference is principally due to an origin of extreme shortening by means of a series of flat, superimposed thrust faults as opposed to an origin dominated by vertical uplift both to the north and to the south.

The age of the Rocky Mountains has been determined as Eocene-Oligocene on the basis of very extensive studies of the derived sediments. By comparison, the age of the plutonization of the Western Cordillera is principally Jurassic-Cretaceous transition on the basis of recorded geological relationships or 100 ± 10 m.y. on the basis of extensive radioactive dating.

The Rockies are made up of shelf sediments aggregating 20,000 feet at their eastern edge, by contrast, the Western Cordillera is typified by extensive plutonization of the thick sediments and volcanics of a eugeosyncline.

Shortening of the shelf sediments across the southern part of the Canadian Rockies is probably in excess of 100 miles, which has been accomplished by stacking of sediments on a rather uniform system of superimposed thrust faults, but without disrupting the underlying shield to any known extent. The restoration of these sediments to their pre-Laramide position requires that the adjacent plutonized complex of the Western Cordillera must also be restored a somewhat similar distance to the west. Such a restoration sets back the indented western continental margin of Canada and the Alaska panhandle and puts it into alignment with the western continental margin of the United States. The realization of such differential movement along the western continental margin of North America in the Tertiary and the attendant tensional junctions explains many anomalous conditions in the North-western States and southern Alaska. The cause of such differential movement is much more speculative. An acceptable explanation appears to be that the rigid simatic Pacific plate has underthrust the continental margin of the United States, whereas it has pushed the continental margin of Canada ahead of it.

The eastern slope or "Foothills" of the Canadian Rockies has been an active exploration area for oil and gas since the turn of the century. Western Canada's "original" oil discovery of 1902 was made in Waterton National Park. The historic Turner Valley oil and gas field was Canada's first major discovery. Since then, more than 20 gas and condensate discoveries have made the Foothills one of Canada's main gas supply areas. And as a consequence of the more than 60 years of exploration, an unusual amount of factual, three-dimensional information can be applied to structural interpretation.

COAST GEOLOGICAL SOCIETY

The Coast Geological Society annual dinner dance, held November 21st at the University Club of Santa Barbara, was the best ever with over 50 couples enjoying dinner and dancing. Special thanks are due to the following contractors and service companies for their kind and generous support:

BAROID
BORST & GIDDENS LOGGING SERVICE
CAL PAN AM WELL LOGGING CO.
CORE LAB
GEOLOGICAL ENGINEERING SERVICE
GEOLOGICAL EXPLORATION, INC.
GLOBAL MARINE EXPLORATION CO.
JOHNSTON TESTERS
LANE-WELLS
McCULLOUGH TOOL CO.
PACIFIC OIL WELL LOGGING CO.
PETROLEUM TECHNULOG
PETROLOG
A. D. RUSHING, INC.
SCHLUMBERGER
SUN MARINE DRILLING CO.
TRI COUNTIES BLUEPRINT & SUPPLY CO.
WELEX
WESTERN OFFSHORE DRILLING & EXPLORATION CO.

PERSONAL ITEMS

The 7th annual Standard Oil Exploration (Oildale) Turkey Tourney was held at the Kern River Course November 21st. 25 golfers participated. Low gross was won by Merv Dubbers (75) and Low net was won by Norm Jokerst (69). Flight Winners included Merv Dubbers, Keith Berry (he took a record 11 on the 12th hole because of sand trap trouble --finally using a "hand" mashie), and Norm Jokerst. Bob Lindblom won the guest flight. Bob Ortalda (Big Julie on the Valley oil tour now) shot a par 35 on the back 9 to score low gross honors for 9 holes. Chairmen for the event were Merv Dubbers and Jim Payne.

Orrin J. Wangsness (Hoover Drilling Co., Bakersfield) is turning over the reins as San Joaquin Correspondent to Chet Rudel (Standard, Bakersfield). Orrin has done outstanding job keeping the P.P.G. informed about the San Joaquin area and a big THANK YOU to Orrin from all of us.

Robert S. Burns announces a new address for Geological Exploration Inc., at 1675 E. California Blvd., Pasadena, California, Telephone 793-8650.

Chuck Cary, Union Oil Co., will be transferred effective January 1, 1965, to the Southern District Office at Santa Fe Springs, and will be in exploration geology.

Wayne Felts, Texaco in Anchorage, recently visited the Southland and reports that it will be difficult to become lost for long in his new PINK airplane.

The position of "Supervisor of Mineral Reserves Engineer" for the State of California has not been filled and the date to file has been moved to Jan. 8, 1965. Interested persons may apply to Personnel Board, Sacramento, for an application.

Swiss Holmes is taking good care of his new T Bird. The other day, Swiss forgot that the parking brake release is automatic and he attempted to unlatch the gadget manually. He was successful. The car is now in the shop getting various and sundry parts reconnected.

Sarge T. Reynolds must be noted as the unluckiest hunter of the year. After putting in six weekends of work and shelling out a good $180 for pond rental and decoys Sarge has been hunting five times, and has fired exactly one shot (he missed). Sarge's advice to all who look up at a rainy sky and say "wish I was duck hunting" is "Forget it!"

Art Weller, South Alaska District Geologist for Shell in Seattle, has been transferred to the Los Angeles office. Stan Schindler will now be District Geologist for both north and south Alaska.

Stan Schindler and Jim Moore, Shell in Seattle, spent an uncomfortable five hours awaiting assistance when their car broke down halfway between Rawlins and Casper, Wyoming. John Castano, Shell Seattle, in another vehicle, unaware of his co-worker's plight, arrived safely in Rawlins, and was later accused of abandoning his colleagues in a snow drift.

Charles Fulmer, prominent aerospace geologist with the Boeing Co., when last seen was departing on a grand tour of the country on his way to the GSA meeting in Miami.

Bill Lewis, Standard in Seattle, recently transferred from Bakersfield, purchased a home a few doors away from departing Art Weller.

Peder Grimstad, Shell Seattle, has recently returned from a training course in Houston, Texas. We can all expect Peder to be an "expert" now.

Wedding Bells chimed out on Saturday, September 26, for Lum Lovely and his loverly bride, the former Miss Shirley Holden. They are making their home in Anchorage.

We really shook up Bill Fackler on his return to Anchorage after his Minnesota vacation when we said, "Congratulations Bill, you've just been elected President of the Alaska Geological Society!" Bills's address is Phillips Petroleum Co., Box 419, Anchorage, Alaska 99501.

Former co-workers of Al Schlottman, Phillips in Anchorage, report hearing from Al via a post card from Paris. It appears Al is well impressed with the Follies. He was transferred to Hanover October 1st.

Vern Vigoren, Phillips, was transferred from Amarillo to Anchorage, replacing Al Schlottman.

Leo Fay, Richfield, reports having a dramatic view direct from his office window of what happens to some of that oil that we oil hunters find --Poof! Up in smoke, following the tanker collision in the Port of Anchorage.

Reports have it that Earl David, Shell, scout in Anchorage, headed south for his vacation. Some place called "Spenard" we believe we heard him say.

Dr. James Donald Weir has joined our Monday luncheon group of the Northern California Geological Society in San Francisco. Don comes from Calgary, where he was chief geologist and later vice-president, exploration, for California Standard Company. He is assuming the duties of chief geologist, Standard Oil Company of California, here in San Francisco.

Graham B. Moody, Consulting Geologist in Berkeley, celebrated his 75th birthday on November 15. Graham graduated from the University of California in 1912 and has had a long and distinguished career in petroleum geology. He was geologist and chief reserves engineer with Standard Oil Company of California for many years before retiring to go into consulting in 1954. He has done much for the profession, including a term as president of AAPG. He was program chairman for the national convention of AAPG in San Francisco in 1962.

Now that Chuck Johnson,, Union Anchorage, has sold his house back in Santa Maria; we hear he's looking for a choice Turnagain bluff lot overlooking Knik Arm. Look out belo-o-o-o-o-o-o-o-ow!

And speaking of houses and such, Rick Shoemaker, Marathon, is now back living in his house, but at a new location--on ground somewhat more stable than his former land. With all that gravel Rick, how will you ever put in a lawn?

Why is it that former Alaska Geological Society Presidents always leave town immediately upon completion of their term in office?? Ernie Bush, 1963-1964 A.G.S. President, left October 23 for New Mexico, ostensibly to attend a week-long Sinclair sponsored field carbonate study. Following that, he'll be hiding out in the Pocono Mountains of eastern Pennsylvania for a couple more weeks. No need to hide, Ernie. You did an excellent job.

Congratulations to the new officers of the Petroleum Club of Anchorage: President Don Bruce (Skelly), Vice President John Sweet (Atlantic), Secretary Don Simasko (broker), Treasurer Ed Mees (British Petroleum).

Geologists and all their ilk
Imbibe in other things than milk ..??
Bakersfield - - '65

CHANGE OF ADDRESS FOR MEMBERS LISTED IN CURRENT DIRECTORY:

Wel Ellis
Geological Exploration
424 Milo
Buttonwillow, Calif.

Robert S. Burns
Geological Exploration
1675 East Calif. Blvd.
Pasadena, Calif.

Milton W. Lewis
Room 1241
612 S. Flower Street
Los Angeles, Calif.

ADDRESSES OF NEW MEMBERS:

Robert J. Bouman
Calif. Exploration Co.
320 Market Street
San Francisco, Calif.

John E. McCall
Standard Oil Co. of Calif.
225 Bush Street
San Francisco 20, Calif.

Charles F. Green
1222 Fairway Drive
Bakersfield, Calif.

Paul J. Fritts
4000 Glenbrook Ave.
Bakersfield, Calif.

E. W. Christensen
Standard Oil Co. of Calif.
1805 Cromwell Ct.
Bakersfield, Calif.

Edwin C. Allison
Dept. of Geology
San Diego State College
La Jolla, California

CALENDAR

December 7, 1964: Monday evening, 8:15 p.m., Beckman Auditorium, Pasadena, California. The Branner Club and The California Institute of Technology - "Cracked Clocks and the Measurement of Geologic Time", Dr. Leon T. Silver, Associate Professor of Geology, California Institute of Technology.

December 8, 1964: Tuesday evening, El Tejon Hotel, Bakersfield. San Joaquin Geological Society - "Review of Oil Field Thermal Recovery Practices", Jack Gearhart, Engineer with Vulcan Oil Recovery Co. Cocktail Hour - 5:30 p.m. Dinner Hour - 6:30 p.m.

USC Noon Meetings, Building GB, Rm. 102, 857 W. 37th St.
- Dec. 15, 1964: "Marine Studies Near Madagascar" by Ronald Echols.
- Jan. 5, 1965: "Alaskan Field Exploration" by A. Dan Horn.
- Jan. 12, 1965: "Carbonate Studies in Bermuda" by John Adshead.

January 12, 1965: Tuesday evening, El Tejon Hotel, Bakersfield - San Joaquin Geological Society. "Geology of Water Taxation in Kern County", William R. Horsley, Director of Water Resources, City of Bakersfield. Cocktail Hour - 5:30 p.m. Dinner Hour - 6:30 p.m.

February 1, 1965: Monday evening, 7:30 p.m. Bakersfield College Campus, Science & Engineering Bldg., Room 56 - "Planktonics" by Rances L. Parker, Scripps Institute of Oceanography, La Jolla.

NURSERY NEWS

Last February was a poor month.

BIBLIOGRAPHY OF RECENT PUBLICATIONS

U. S. GEOLOGICAL SURVEY

Professional Paper 305-L: Core tests, Simpson area, Alaska, by F. M. Robinson, with a section on temperature measurement studies, by M. C. Brewer. $2.00

Professional Paper 316-H: Geologic Interpretation of magnetic and gravity data in the Copper River Basin, by G. E. Andreasen, Arthur Grantz, Isidore Zietz, and D. F. Barnes. $1.25

Professional Paper 458-A: Regional geology of the Steamboat Springs area, Washoe County, Nevada, by G. A. Thompson and D. E. White $1.50

Professional Paper 501-C: Geological Survey Research 1964: Chapter C. $1.75

Geophysical Abstracts 214, November 1964. $ .35

Circular 488: Reports and maps of the Geological Survey released only in the open files, 1963, by B. A. Weld, M. S. Griffin, and G. W. Brett Free

Circular 490: Sedimentation in three small forested drainage basins in the Alsea River basin, Oregon, by R. C. Williams, 16 p. Free

TEI-851: Geology of the Cane Spring quadrangle, Ny County, Nevada, by F. G. Poole, D. P. Elston, and W. J. Carr - 1 map, scale 1:24,000.

TEI-854: Geologic map of the Mine Mountain quadrangle, Ny County, Nevada, by Paul P. Orkild - 1 map, scale 1:24,000.

OPEN FILED REPORTS (Inspection only)

Log for field trip through Caldecott Tunnel, Berkeley Hills, California, by Dorothy H. Radbruch - 3 p., 1 fig.

CALIFORNIA DIVISION OF MINES AND GEOLOGY

NEEDLES Sheet of the Geologic map of California, (scale L:250,000) - $1.50

ARIZONA STATE LAND DEPARTMENT (Tucson, Ariz.)

Water Resources Report No. 12-C: Geohydrologic data in the Navajo and Hopi Indian Reservations, Arizona, New Mexico and Utah. Part III: Selected lithologic logs, drillers' logs, and stratigraphic sections, by M. E. Cooley, J. P. Akers and P. R. Stevens.

NEVADA BUREAU OF MINES:

Map 26: Land status map of Nevada, by Roland V. Wilson $3.00

OREGON DEPARTMENT OF GEOLOGY & MINERAL INDUSTRIES

The Ore Bin, vol. 26, no. 10, October 1964-

Thrust faulting in the Roseburg area, Oregon, by Ewart M. Baldwin.

JOURNAL OF SEDIMENTARY PETROLOGY, vol. 34, no. 3, September 1964

Floating sand and pebbles near Barrow, Alaska, by James D. Hume

Ion-exchange capacity of sediments from the Experimental Hohole, Guadalupe site, by Dorothy Carroll.

Composition of sediments in cores from the Experimental Mohole Project (Guadalupe site), by K. J. Murata and R. C. Red.

JOURNAL OF GEOPHYSICAL RESEARCH, Vol. 69, no. 20, October 15, 1964

Consolidation characteristics and related properties of sediments from experimental Mohole (Guadalupe Site), by Edwin L. Hamilton

Comparative seismic noise on the ocean bottom and on land, by Hugh Bradner and James G. Dodds

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, Vol. 75, no. 9, September 1964

Wind-driven sand in Coachilla Valley, California, by Robert P. Sharp

Geochemical and structural studies in batholitic rocks of southern California: Part 1, Structural geology of the Rattlesnake Mountain pluton, by R. S. MacColl

Late Recent rise of sea level, by James M. Coleman and William G. Smith

SCIENCE, vol. 146, no. 3645, 6 November 1964

The Pleistocene Epoch in deep-sea sediments, by D. B. Ericson, M. Ewing, and G. Wollin

Infrared surveys of Hawaiian volcanoes, by W. A. Fischer, et al.

SCIENCE, vol. 146, no. 3647, 20 November 1964

Continental drift and the origin of mountains, by E. Orowan

Crustal uplift southwest of Montague Island, Alaska, by R. J. Malloy

OIL AND GAS JOURNAL, vol. 62, no. 44, November 2, 1964

Eagle Springs (Nevada) can't be a freak, by Frank J. Gardner

ENGINEERING AND MINING JOURNAL, vol. 165, no. 10, October 1964

Athabasca Tar Sands

Who owns the Continental shelf?

WORLD OIL, Vol. 159, no. 5, October 1964

Big hole drilling at Nevada test site, by Mel Hobbs

Significance of gravity for the geologist (Part 1) by John L. Bible

Projective well log interpretation (Part 3), by Sylvanin J. Pirson

Secondary recovery reduces California costs, by H. J. Struth

WORLD OIL, Vol. 159, no. 6, November 1964

Significance of gravity for the geologist (Part 2), by John L. Bible

Projective well log interpretation (Part 4), by Sylvain J. Pirson

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LOS ANGELES 17, CALIFORNIA
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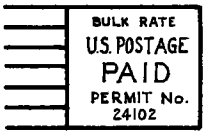

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