

# PACIFIC PETROLEUM GEOLOGIST

1959

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"Sedimentology and Oceanography of Mexican Coastal Lagoons" By Dr. Fred Phleger and Dr. Gifford Ewing
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"Theoretical and Practical Considerations of Lateral Faulting" By Dr. R. F. Walters  
"Possible Petroleum Provinces in Alaska" By Dr. Max Birkhauser  
"Problems of Fault Nomenclature" By Prof. John C. Crowell and Mason L. Hill
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"Lateral Faulting in California" Clarence H. Hall, Jr. and Donald E. Lamar
- April "Mass Sediment Transport in Submarine Canyons" By T. K. Chamberlain  
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- June "History of Development in Elwood Oil Field and Vicinity" By San G. Dolman  
"Capitan Field" By John F. Cronin  
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- July "Sedimentary Trends in Lower Pliocene Sandstones in the Los Angeles Basin" By B. L. Conrey  
"Antarctic" By Rev. Daniel Linehan, S.J.
- August "Cretaceous Stratigraph and Nomenclature in California" Dr. W. P. Popenoe
- October "Sedimentary Basins of The Netherlands and the History of Dutch Reclamation of Sea Floor and Lake Bottom Lands" By Dr. Anthony Pannekoek  
"The Pacific Section Cross-Section of the Santa Maria Basin" By John Curran  
"Sediments and Marine Life Of Monterey Bay, California" By Edwin H. Stinemeyer
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- December "The Geologist in World Oil" By Mr. Henry Carter Rea  
"Depletion" ? By Mr. Hiestand

# PACIFIC PETROLEUM GEOLOGIST

Part 2

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

### ASSOCIATION ACTIVITIES

Vol. 13

January, 1959

No. 1

#### FORUM MEETING

It was a rewarding evening for those attending the November Forum meeting in Los Angeles at which Art Huey, of Hancock Oil Company, presented "Oil and Views of Venezuela". A well organized presentation described the oil basins of Venezuela with particular reference to the geology of the Maracaibo basin which produces 70 percent of Venezuela's oil.

Venezuela produces about 2,700,000 barrels per day, almost three times California's rate, and about 90 percent of all the production for South America. Venezuela ranks number one among the oil-exporting nations of the world.

All mineral rights under land or water belong to the government. About 16 million acres are presently under lease to private oil companies. There are two types of concessions granted. Exploration concessions are good for three years, at the end of which time up to 1/2 of the acreage may be retained by converting to exploitation. Exploitation concessions are for forty-year terms. There are no drilling requirements, but generally a company will have bid enough millions in bonus to obtain a concession so that the economic incentive to drill is fulfilled. The basic royalty is 16-2/3 percent or higher, but profits are taxed so that the government nets 50 percent or higher. During 1956 and 1957 the government awarded 89 new concessions totalling over 2 million acres for a total take of 685 million dollars. The top price of \$2800 per acre was paid by Superior for some choice acreage in Lake Maracaibo. The blue-chip concessions in the lake have already rewarded most of the venturesome companies. Among the newcomers Superior is now producing 65,000 barrels per day, the Sun group is averaging about 30,000 b/d, and the Signal group is producing 17,000 b/d.

Oil occurs in a variety of types of traps in the Maracaibo basin. The Bolivar Coastal fields, which extend along the east shore for a distance of 50 miles, produce principally from Miocene sands in a homoclinal section under conditions of stratigraphic trapping. The big central lake accumulations are in fault-traps involved in a north-south trending arch and producing from upper and lower Eocene sands under an important basal Miocene unconformity. The west side fields produce from fractured Cretaceous limestone and basement rocks in faulted asymmetric anticlines.

Most of the talk was built around a fine set of color slides showing oil operations in Lake Maracaibo, scenic views of Caracas, and the picturesque Dutch island of Curacao where Shell has a large refinery.

#### NOTICE

The annual dues of the Pacific Section of the AAPG are the only dependable form of revenue we receive each year. From approximately 1200 members we receive about \$3,000 with the present dues of \$2.50. The Pacific Petroleum Geologist Newsletter, which provides absolutely no income and cost about \$4,200 in 1958, is the major financial burden of the Pacific Section. The steadily increasing cost of publication will necessarily result in either an increase in the annual dues or a decrease in the number of issues of the Pacific Petroleum Geologist per year.

#### PALEONTOLOGICAL BIOSTRATIGRAPHY SEMINAR

Dr. Fred Phleger and Dr. Gifford Ewing, both with Scripps Institute at La Jolla, spoke at the December meeting of the Seminar at Bakersfield College. The title of their talk was "Sedimentology and Oceanography of Mexican Coastal Lagoons".

Dr. Phleger discussed the physical aspects, depositional environments and origin of three lagoons located about half way down the west shore of Baja California. The largest of these, Scammon Lagoon, was described in the greatest detail. The area is extremely arid. Steep-sided sand dunes border the lagoons, and salt beds are being deposited in back of the low barrier of sand. One of the characteristic features of the tidal flats is the algal pads covering large barren areas next to the salicornia growth. The lagoon channels are steep-sided and as deep as 40'. The tidal range in the lagoons is 7-1/2' with tidal velocities at the channel entrances up to 3 knots. The fine sand forming the barrier reef is 95 percent quartz. The waves wash the sand onto the beaches, and the prevailing winds carry it inland and form dunes. Because of the arid climate, the water in the upper reaches of the lagoon and tidal flats is more saline than normal ocean water. The sand barrier is believed to have been built on a low, shallow strand area of older rocks and has subsequently been built up with the rise in sea level. The foraminifera living in the various environments of the lagoons were found to be of specialized types and characteristic of these conditions the world over.

Dr. Ewing, who assisted Dr. Phleger and piloted the Grumman Widgeon used in the lagoon studies, spoke briefly on the importance of rare flash floods which may not occur more than once in a hundred years but make important changes in the landscape. He also

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PACIFIC PETROLEUM GEOLOGIST

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Editor	Thomas R. O'Neill
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Activities	Warren O. Addicott
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NEXT DEADLINE JANUARY 30, 1959

pointed out that a large fresh water lake may have existed in the Salton Sink in the past as evidenced by the large Indian population once living on its shores. A carbon 14 determination indicated the possibility of a lake as recent as 300 years ago.

A series of very interesting slides and movies were used to illustrate the lecture.

Plans are being made to publish the results of this investigation.

NOTICE

For general information the following is the membership requirements as appears in the Constitution of the American Association of Petroleum Geologists.

Any person having qualified and been accepted as a candidate for a master's or higher degree in geology by a reputable institution of collegiate or university standing is eligible to junior membership, provided at the time of his application for membership he shall be engaged in geological studies or teaching in an institution of collegiate or university standing, or shall be engaged in petroleum exploration or geological research. One or more years of experience in petroleum geology or in the application of geology to problems involving exploration, development, research, or other phases of petroleum technology may be considered in lieu of complete fulfillment of the scholastic requirements.

SAN JOAQUIN GEOLOGICAL SOCIETY

Members of the San Joaquin Geological Society turned out en masse at the El Tejon Hotel in Bakersfield to hear Karl F. Dalmus, distinguished lecturer for the A.A.P.G., give his talk on "Mechanics of Basin Evolution and its Relation to the Habitat of Oil". Mr. Dalmus' paper was summarized in last month's issue of the "Newsletter".

NOTICE

The following are Committee Chairmen for 1959, Pacific Section, American Association of Petroleum Geologists:

Forum Chairman: Thomas J. Newbill

Distinguished Lecture Chairman: Frank B. Carter

Projectionist: John C. Kirkpatrick

Alternates: John H. Van Amringe  
Robyn L. Badger

Publicity Chairman: Harrison C. Jamison

Picnic Chairman: Richard D. Stewart

General Chairman, Annual Meeting - 1959: Andrew J. Macmillan

Program, Annual Meeting - 1959: Robert L. Johnston

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Trust Fund Project Committee: Everett W. Pease

Directory Chairman: Hal L. Case

Cross Sections Sales Chairman and General Sales Chairman: J. D. (Doug) Traxler

Chairman of Committee on Ladies Participation: Elizabeth J. Johnston

Pacific Cross Section Chairman: Kenneth F. Krammes

Christmas Dance Chairman - 1958: Dick Haines

Christmas Dance Chairman - 1959: George H. Feister

Luncheon Speakers Program: Irving Schwade

Local Geological Society Employment Counseling Committee: To be appointed

Boy Scouts Program: Ben C. Lupton

Finance Counselor at Summer Camps:

(Note: These two Committees have been combined)

Subcommittee on Basement Rocks: Tennant J. Brooks

S.E.P.M. OFFICERS

Newly elected officers of the Pacific Coast Section of the S.E.P.M. are Charles W. Cary of Union Oil, president, and Alvin A. Almgren with Superior is secretary-treasurer.

We are informed that a very interesting spring field trip is being planned in the Boulder Creek area of the Santa Cruz Mountains, so watch for further announcements.

## COAST GEOLOGICAL SOCIETY

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Karl F. Dallmus, A.A.P.G. distinguished lecturer and former Chief Research Geologist of Creole Petroleum Corporation spoke before the Coast Geological Society monthly dinner meeting on December 5. The abstract of his paper on "Mechanics of Basin Evolution and its Relation to the Habitat of Oil in the Basin" appeared in the December Pacific Petroleum Geologists Newsletter.

### NOTICE

The Coast Geological Society has elected officers for 1959. They are:

President - Arthur A. Weller (Shell)  
Vice-President - Donald A. Henriksen  
(Richfield)  
Secretary - Carroll Hoyt (General  
Petroleum)  
Treasurer - Andrew Vidos (Newhall  
Land and Farming Co.)

For the San Joaquin Geological Society

President - Thomas A. Roy (Ohio)  
Vice-President - B.G. Winter (Superior)  
Sec'y-Treas. - Lee K. Jordan (Kern Oil)

## PERSONAL ITEMS

It seems that Henry Clark, General Petroleum's Bakersfield scout, has hit a new low in scouting techniques when he was recently seen at the Geological Society luncheon table pumping Don Davis' son for all he was worth. It appears that Don and son had just returned from Artnell's well in the Vallecitos area and Henry wasn't missing any bets.

Kenny Krammes, with Intex in Bakersfield, is on a six-week vacation trip to New Zealand where he did geological exploration work many years ago.

Fred G. Knight is Ohio's new District Geologist in Bakersfield. Fred, his wife, Rosalou, and two children were transferred here from Lafayette, Louisiana.

Dave Shoemaker is back in the fold at Shell's Bakersfield office after a two months' stay in the Los Angeles office.

Shell's Christmas party at Shell Park on the Kern River was a roaring success as far as all the children were concerned, but the grownups spent several anxious minutes waiting for Santa to arrive. It seems he got lost on the way down from the North Pole and landed at Hart Park, which is directly across the river from Shell Park.

The state of single blessedness was dealt one of its more serious blows when Warren Hagist (Superior's aging bachelor) was married to Marjorie Burke, on December 6 at the Santa Barbara Mission. His friends are waiting eagerly to see how he ranks skiing and marriage after accumulating some experience with the latter.

For sale, cheap: one pair of Head skis and accessories. See Warren Hagist, Superior, Los Angeles.

The Bob Schupps, Shell, Durango, Colorado, are vacationing in sunny California during the holidays. We hope Bob bet on the right horse at Santa Anita.

The Standard Gang in Seattle had a Christmas party on December 12, and a good time was had by all.

The Linn County Oil Development Barr #1 in Oregon must have caused quite a stir in the oil business as there were twenty different representatives present. George Webb and Jack Barr (no connection) of Standard, Seattle, must have been misinformed because they arrived a day late for formation tests.

Humble geologist, John Beeson, Eugene, transferred to Los Angeles. The flying weather is pretty smoggy, John!

Humble scout, Dick Vivion, became part of the floor show when he arrived late at the recent opening of the Olympia Elk's Club.

Shell scout, Ivor McCray, Olympia, will be a Seattle resident the first of the year; the bachelors in Seattle can expect some real competition now.

The Schindlers, Shell, Bakersfield, stopped in Olympia on vacation to show off their new arrival to their friends; Stan no longer feels that a VW is a family car.

Shell Northwest Division had a bang-up Xmas party, and the floor show was provided by Bob Elder with his impersonation of a gal getting up in the morning.

Peder Grimstad, Shell, Olympia, planned to help Santa during his stay in Alaska over the holidays at Humble-Shell Bear Creek #1.

The following Tidewater personnel have transferred from San Francisco to the shiny new office on Wilshire Boulevard:

H. H. Neel, Manager of Foreign Exploration  
J. B. Maebius, Senior Geologist  
W. S. Knouse, Staff Geologist  
Robert Dyk, Chief Geologist

The following Tidewater Western Division personnel were transferred to Los Angeles:

F. H. Wilson, Divisional Exploration Mgr.  
A. S. (Ike) Holston, Division Geologist  
H. H. Nixon, Staff Geologist.

Stan Siegfus and Robert Scott moved from the Pacific Electric Building to the new Wilshire office.

Tom Barrow, of Humble, Los Angeles, has been transferred to Houston as Staff Geologist. John Frich, presently District Geologist in Chico, will take over Tom's job as Area Exploration Geologist in Los Angeles. Abe Phillips, from the Houston office, will take over in Chico. J. R. Jackson is returning to Los Angeles after a five-year absence, and will be the Assistant Area Geologist in Los Angeles.

Howard Level of Union's Santa Paula office has considerable spare time now that he no longer manages weekly football pools.

Jim Eke, paleontologist and Bob Carlson, geologist, both of Union's Orcutt office, have been transferred to Bakersfield.

Don Henrikson, Richfield's Ojai office, after a quiet trip to Oregon spent Thanksgiving holidays with his family in San Francisco.



Ivor McCray, with Shell in Olympia, changed from field clothes to tails and presented his sister to society recently at Beverly Hills.

John Griffiths, with Shell in Olympia, is building a boat in a lower floor room of his house. When completed, John will have the famous problem of making the boat narrower, or the door frame wider.

Roy Farnsworth, with Shell in Los Angeles, has found a new route from his home in Whittier to the Los Angeles office. Roy uses a DOG map of the Montebello oil field, and, by devious roads and more mileage, avoids traffic and stop signs.

Doyle Graves, formerly with Union in Los Angeles, is now on special assignment with Union in Caracas, Venezuela. His family has joined him and they can be reached at: Apartado #10,664, Sabana Grande, Caracas, Venezuela.

Dave Martin, a recent U.C.L.A. graduate who has been doing summer field work in Alaska for General Petroleum, has now been assigned to the Bakersfield office to thaw out.

The recent Central California Oil Scouts Association annual Christmas party, under the able direction of Les Herndon, Pat Wright, Jim Miller, Barney Barnard, Ken Jensen, Ray Alexander and many others, produced numerous amusing incidents; but everyone's memory is apparently too hazy to recall or else they are too fearful of reprisals to report them.

John Reckamp, formerly in Bakersfield with Western Gulf, reports from Turkey that his taste for adventure has dimmed somewhat since being overturned by his Turkish jeep driver and held at gunpoint by bandits hiding out in the hills.

Jesse Parsons, Texas Company in Bakersfield, has been waiting impatiently for two years to get a new company car. He recently came back from vacation to find that they had traded in two old cars, one of which was his, for only one new one. Guess who missed out! The reason given for the shortchange was there is no resale value to a Parsonized car.

A recent survey at the Bakersfield office of The Texas Company revealed that all Cal Tech graduates carry moth-infested pinch purses. The theory was almost discarded when Paul Harris arrived without pinch purse, but it was soon discovered that the only reason he didn't have one was because Schlumberger had not sent him one, free. Send additional statistics on this important research program to Bill Bedford.

It has been announced that J. P. Wagner is the new golf champ for the San Joaquin Valley Division of Union Oil.

It has been reported that Cutler Webster, with Honolulu in Bakersfield, has graduated from shooting and eating robins, since he managed to bag a domestic goose on his last duck hunt.

The Standard Oil exploration group, with wives, and guests, had their annual Christmas party at the Bakersfield Elk's Club recently. Carl Helm, Jr., was chairman of the affair and George Starke took charge of the Budweiser keg.

Don Bruce, D.O.G. in Santa Maria, has been transferred to Woodland.

R. G. Menard and Jack Leach, with Sunray in Los Angeles, are becoming famous, due to their appearance in various trade journals reporting on Sunray's desert minerals program. Any TV offers from "Death Valley Days"?

Les Roth, with Amerada in Los Angeles, reports that the skiing at Alta was poor, but the sheeing magnificent. Can it be true that airline stewardesses are as friendly on the ground as in the air?

Bob Jennings, of Amerada's Los Angeles office, spent his vacation in the Bay area with his family. His subsequent off-again on-again office schedule suggests a slow readjustment to the working life.

Ray Pearson, with Richfield in Los Angeles, will be a weekly commuter from Bakersfield until he can find a house in Los Angeles which is near the beach, out of the smog, close to the office, and has no traffic problem. If you find your house, Ray, please let us know.

Harry Jamison, with Richfield in Los Angeles, recently visited Richfield's Caspar office. He reports that John Wiese's new T-Bird has been garaged since the day of its purchase, which exactly coincided with the arrival of the first heavy snows. Don't be bitter, John; the snow will be gone by mid-May.

Tom Rothwell, Regional Paleontologist for Richfield in Long Beach, discovered that it was possible to lower a sail while raising it. This contradictory situation can be achieved if your sailboat is upside down in Newport Bay.

Mark (could you please speak a little louder?) Latker, with Western Gulf in Ventura, returned from a flying trip to Puerto Vallarta, Mexico, with a keener appreciation of tropical fungi.

Reports from Anchorage reveal that local geologists are groaning about the long-before-dawn to long-after-sunset working hours. Further investigation determines that daylight is about four hours long at this season, from 10 A.M. to 2 P.M.

Ottmar F. Kotick is now offering consultation on Alaskan petroleum matters at 1382 Wright Avenue, in Sunnyvale, California.

The NEWSLETTER received an inquiry as to whether the new Pacific Section Treasurer owns a necktie. We feel sure that - well, er, .... does anybody know the answer to this question?

C. J. Blom, geologist with Standard in Ventura, is being transferred to La Habra.

W. G. McCombs, ex Seaboard scout, has been transferred to the Texas Co Ventura office. He replaces Ralph Carver who was moved to Long Beach.

Jeff Jefferys, Shell in Ventura, thinks he will buy a new car. After checking them all out Nash came out on top because of . . . . . well, it's pretty clear.

Carroll Hoyt, General Petroleum's Ventura scout, has decided to take his wife along on all out-of-town functions. This keeps him from evil companions and on the straight and narrow.

Jerry Long, Signal Oil and Gas, has been transferred to Ventura as their new Coastal Division scout.

Dick Lyon, Union in Santa Paula, took a Boy Scout group into the desert for Thanksgiving

holidays. The temperature was low but not as low as in the 49th State so Dick didn't complain.

With all the transfers occurring in the Ventura Basin, "Dirty Ernie Bush", the used car dealer, has now entered the real estate appraisal business.

Don Hagen, Bill Cass, Ed Hudson, and Sam Brown all of T. T. Co., have been seen passing in and out of the Ventura Basin.

Roy Turner, Intex in Ventura, spent a wild vacation visiting his wife's relatives in San Francisco.

#### NURSERY ITEMS

George and Adrienne Rudkin, with Ohio in Bakersfield, just had their second boy on November 22. His name is George Thomas and he weighed 8 lbs., 5 oz.

Gene Tripp and his wife, Marge, have welcomed a new girl into their household. Paula Giselle was born on November 26, and weighed 7 lbs., 14 oz. Gene is with The Texas Company in Bakersfield.

Harry Williams and his wife, Alpha, received their new Christmas present on December 19. John Leo weighed in at 9 lbs., 15 oz. This is the second boy for the Williams'. Harry is Shell's Bakersfield scout.

Nick and Joan Nixon, Tidewater in Los Angeles, added an 8 lb. 11 oz. daughter named Eileen Marie to their household on November 6. No one in the Nixon family was quite sure whether the new addition would arrive in San Francisco, Los Angeles, or along the way, since Nick was involved in the big TWA move.

## CALENDAR

January 8, 1959: Thursday 12 Noon, SEG Luncheon Meeting, Roger Young Auditorium, 936 West Washington Boulevard, Los Angeles, "Oil Exploration in Turkey", Dr. Ekrem Goksu, Professor of Geology, University of Ankara.

January 8, 1959: Thursday, 12 Noon, AAPG Luncheon Meeting. Roger Young Auditorium, 936 West Washington Boulevard, Los Angeles, Mr. Max Birkhauser, Shell Oil Company, will present an illustrated talk on "Possible Petroleum Provinces in Alaska". The talk will be followed by a Humble Oil Co. sound movie titled "Operations Alaska".

January 13, 1959: Tuesday, 7:30 PM Sacramento Geological Society regular monthly meeting, Board Room of Public Works Building, 1120 N. Street, Sacramento, California. Speaker to be announced.

January 13, 1959: Tuesday, 7:30 PM, Coast Geological Society Dinner Meeting, Miramar Hotel, Santa Barbara, California. Dr. Ekram Goksu will speak on "Geology and Sedimentary Basins of Turkey". Emphasis will be on petroleum geology.

CORRECTION Contrary to the announcement at the December 5th meeting, the Coast Geological Society mixed meeting is planned for February, not January.

January 14, 1959: Wednesday, 6:30 PM, Dinner Meeting of the Junior Group, Society of Petroleum Engineers, A.I.M.E., Candlewood Country Club, 14000 Telegraph Road, Whittier, California. "Standard-Humble Summerland Platform No. 1", Mr. William Fischer, Standard Oil Co. A 30 minute color movie will be shown.

January 16, 1959: Friday, 6:00 PM, Dinner Meeting, Northwest Geological Society, Poodle Dog Cafe, Fife, Washington. "Natural Gas in Pacific Northwest", by Robert B. Sheppard, Superintendent, Industrial Gas Sales for Pacific Northwest Pipe Line.

January 19, 1959: Monday, 7:00 PM, AAPG Forum Meeting, Union Oil Center Auditorium, Boylston Street between 4th and 5th Streets, Los Angeles, "Problems of Fault Nomenclature"; to be presented in two parts, Part I "Basic Concepts", Dr. John C. Crowell, U.C.L.A., Part II "Proposal for a Dual Classification", Mason L. Hill, Richfield Oil Corp.

January 20, 1959: Tuesday, 8:00 PM, A.P.I., Los Angeles Basin Chapters, Shell Recreation Hall, 2080 Obispo Avenue, Long Beach, "Standard-Humble Summerland Platform No. 1", Mr. Dave Goodwill, Standard Oil Co., a 30 Minute color movie will be shown.

January 20, 1959: Tuesday, 6:30 PM, San Joaquin Geological Society Dinner Meeting, El Tejon Hotel, Bakersfield. "Theoretical and Practical Considerations of Lateral Faulting", Dr. R. F. Walters, Humble Oil and Refining Company.

January 26, 1959: Monday, 12 Noon, A.I.M.E. Petroleum Forum Luncheon, Roger Young Auditorium, 936 West Washington Boulevard, Los Angeles. "Oil Exploration in the Arctic", Mr. Gene Davis, Monterey Oil Co.

February 2, 1959: Monday, 7:30 PM, Bakersfield College Paleontological Biostratigraphy Seminar, Room 56, Science and Engineering Building, "Mesozoic Vertebrates in California and Nevada", Dr. Charles Camp, U.C.

February 5, 1959: Thursday, 12 Noon, AAPG Luncheon Meeting, Roger Young Auditorium, 936 West Washington Boulevard, Los Angeles, Tentative program: "Oil Fields on Demand, Through Nuclear Energy", Mr. Manley L. Natland, Richfield Oil Corp.

## BIBLIOGRAPHY OF RECENT PUBLICATIONS

#### United States Geological Survey

- |                  |   |
|------------------|---|
| Bulletin 1000-H: | Geochemical prospecting studies in the Bullwacker mine area, Eureka district, Nevada, by Alfred T. Miesch & Thomas B. Nolan. \$1.15 |
| Bulletin 1042-R: | Geology of the Ord mine, Mazatzal Mountains quick-silver district, Arizona, by John N. Faick. \$1.00                                |
| Bulletin 1053:   | Geology and coal resources of the Centralia-Chehalis district, Washington, by   |

- Parke D. Snavelly, Jr.,  
R. D. Brown, Jr., Albert  
E. Roberts, and W. W. Rau,  
with a section on micro-  
scopical character of  
Centralia-Chehalis coal,  
by J. M. Schopf. \$2.25
- Bulletin 1061-D: Quaternary geology of  
Boulder Mountain, Aquarius  
Plateau, Utah, by Richard  
F. Flint and Charles S.  
Denny. \$1.00
- Bulletin 1070-B: Lead-alpha ages of the  
Mesozoic batholiths of  
western North America, by  
Esper S. Larsen, Jr., David  
Gottfried, Howard W. Jaffe,  
and Claud L. Waring.
- Bulletin 1071-B: Geologic reconnaissance of  
San Clemente Island, Calif-  
ornia, by F. H. Olmstead.  
\$.75
- Bulletin 1072-B: Barite resources of the  
United States, by D. A.  
Brpbst. \$.40

Map I-269: GROUND CONDITIONS AND SURFICIAL  
GEOLOGY OF THE KENAI-KASLOF AREA, KENAI  
PENINSULA, SOUTH-CENTRAL ALASKA, by  
Thor N. V. Karlstrom. \$.50

MAP I-273: MAP OF A PART OF THE PRINCE WILLIAM  
SOUND AREA, ALASKA, SHOWING LINEAR GEOLOGIC  
FEATURES AS SHOWN ON AERIAL PHOTOGRAPHS,  
by William H. Condon and John T. Cass. \$.50

#### California Division of Mines

New list of available publications, November  
1958. (This is not a catalog.) Single copies  
free; multiple copies, \$.25 ea.

#### Geological Society of America

Memoir 75: Selected bibliographies of  
hydrothermal and magmatic  
minerals deposits, by  
John Drew Ridge, November  
1958.

#### Arizona Bureau of Mines

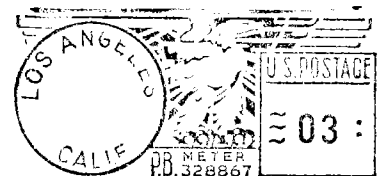
Geologic map of Maricopa County (scale of 6  
miles to the inch and printed in color). \$.75

Geologic map of Yavapai County. \$.75

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Vol. 13

No. 1



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Denver, Colorado

BS

# PACIFIC PETROLEUM GEOLOGIST

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

### ASSOCIATION ACTIVITIES

Vol. 13

February, 1959

No. 2

#### COAST GEOLOGICAL SOCIETY

Dr. Ekram Gorksu, assistant professor of geology at the Technical University in Istanbul, and presently with Western Gulf on a National Academy of Science fellowship, was the featured speaker at the Coast Geological Society monthly meeting January 13. Dr. Gorksu presented a well organized talk on geology and sedimentary basins of Turkey.

#### Stratigraphy:

Pre-Cambrian: There is no fossil evidence. Three crystalline massives are considered pre-Cambrian age:

1. Istrandja massive (in Thrace); mica-schist and gneiss.
2. Menderes massive (Western Anatolia); granite, marble, mica-schist, gneiss.
3. Kirsehir massive (Central Anatolia); crystalline schists, marble.

Cambrian: There is no proven Cambrian in Turkey.

Silurian: The oldest rocks with fossils, at Bosphorus (Istanbul) only; sandstone, quartzite, reef limestone.

Devonian: Resembles European Devonian. More limestone (marble) than schist. During Upper Devonian, Anatolia was under water and connected with Western Europe. Schist, marble, graywacke are common.

Carboniferous: During Lower Carboniferous, Anatolia, with the exception of Zonguldak-Amasra (the only coal district of Turkey), was under the sea. Limestone, schist and graywacke.

Permian: Lower Permian cannot be distinguished from upper Carboniferous. Limestone, arkosic sandstone.

Triassic: Triassic facies and fauna resemble the southern Alpine Triassic more than the Northern Alpine. Conglomerate, sandstone, black schists, dolomite.

Jurassic: Most of Anatolia was under the sea. Contains abundant fossils, especially Ammonites. Sandstone and limestone.

Cretaceous: Covers largest area in Turkey. Lower Cretaceous consists mostly of limestones. Flysch facies predominate in Middle Cretaceous. The upper Cretaceous consists of: (1) chalky

limestone and marls, (2) flysch, (3) limestone, (4) schists and sandstones. Limestones predominate in Southern Turkey.

Eocene: Is difficult to separate from Paleocene. Mostly limestone, flysch and some gypsum. Eocene fauna are very much like Italian, Syrian or Egyptian fauna.

Oligocene: Of terrestrial origin in Central Anatolia. Gypsum is very common.

Miocene-Pliocene (Neogene): During Neogene there were two different seas, one in Northern Anatolia and Thrace, the other in Southern Anatolia, at the Mediterranean Sea. The subsidence of the Aegean Sea had not yet taken place.

Quaternary: The Quaternary is represented by a few glacial depositions on the mountains, above 10,000 feet, and lake and river deposits.

Volcanic Activities: There was considerable volcanic activity during the Cretaceous. During the Eocene, Miocene, and Pliocene basaltic, andesitic and dacitic lavas covered large areas of the country.

#### Sedimentary Basins:

Tertiary and Cretaceous sedimentary basins, with active oil exploration, are in: (1) Southeast Turkey, where Iranian and Iraq sedimentary basins continue northward into Turkey, although with the productive Miocene horizons in Iran and Iraq missing due to erosion. The producing zone at Ramandag (Turkish oil fields) is orbitoidal limestone of Upper Cretaceous age (46000'). (2) Adana-Hatay basin with thick Miocene formations over 12,000 feet. (3) Central Anatolia, around Tuz Gölü" (Salt Lake). (4) Thrace, a relative small but very deep trough of over 10,000 feet Tertiary deposition.

#### Oil Activities:

The Turkish petroleum law of 1956 enabled the foreign companies to explore Turkish soil. There are some 19 oil companies in Turkey with a total licensed area of 35,628 square miles (out of 296,500 square miles total). American Overseas was the first company to find commercial oil in southeast Turkey. There is considerable oil exploration activity and big hopes for the future in Turkey. The Turkish crude oil production now is 7,000 B/D with a refinery of equal capacity at Batman near Ramandag oil fields.

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PACIFIC PETROLEUM GEOLOGIST

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NEXT DEADLINE FEBRUARY 27, 1959

NOTICE

The slate of new officers elected by the Northern California Geological Society for 1959 are:

President:	J. Thomas Llewellyn (Honolulu)
Vice-President:	Stanford L. Rose (Standard)
Sect'y-Treas:	L. A. Tarbet (Standard)

NORTHWEST GEOLOGICAL SOCIETY

Robert B. Sheppard, Supervisor, Industrial Gas Sales for Pacific Northwest Pipe Line, presented a twenty-minute film on the construction of the Scenic Inch Pipeline. This pipeline gathers gas from the San Juan gas fields and terminates 1400 miles away at Sumas, Washington and Trail, British Columbia. Mr. Sheppard discussed the gathering and distribution problems, as well as the various users, and the optimistic future of the natural gas industry in the Northwest. A very interesting discussion period followed the lecture.

SAN JOAQUIN GEOLOGICAL SOCIETY

The San Joaquin Geological Society met for their regular meeting on January 20th at the El Tejon Hotel in Bakersfield to hear an interesting paper on faulting by Dr. R. F. Walters of Humble Oil and Refining Company. The title of Dr. Walter's talk was "Theoretical and Practical Considerations of Lateral Faulting". An abstract of his paper is presented below:

The purpose of this discussion is threefold: (a) To present a mechanical analysis of stresses which lead to lateral faulting and a discussion of the conclusions forced by this analysis; (b) to cite some examples of lateral faulting outside of California together with the criteria used for their recognition; and (c) to suggest a few steps which might be taken toward the eventual solution of displacements in the Calif-

ornia fault system and the San Andreas fault in particular.

Lateral faulting can occur only under a limited set of conditions resulting in horizontal compression in one direction and in horizontal extension in a perpendicular sense. Additional compressive stresses result in the development of thrust faults, whereas normal faulting will occur when extension increases beyond certain limits. These limits are illustrated mathematically and graphically.

Criteria are cited which led to the recognition of strike-slip displacement on several well known lateral faults, including the Great Glen, Osburn and West Bay faults.

In conclusion, some recommendations are put forward which would facilitate compilation and evaluation of critical data relative to displacement on the San Andreas Fault.

LUNCHEON MEETING

An interesting talk on "Possible Petroleum Provinces in Alaska" was presented by Dr. Max Birkhauser, Senior Geologist with the Shell Oil Company.

In an area where we know very little about the geology of oil it may prove useful to begin with a study of the various drainage areas. The Yukon River, because of its size and location, should be considered first. The drainage area of the Yukon River is extensive, covering a large portion of Alaska, Yukon Territory and British Columbia. The present pattern of streams suggest that certain changes took place during Quaternary time. The abrupt constriction at the mouth of the Yukon River is anomalous when compared with the area to the east where the drainage basin is broad and open and a possibility is suggested that perhaps during Tertiary time the Yukon River may have had an entirely different course, at least in its lower part.

The U.S.G.S. map of possible petroleum provinces was shown. A second map was introduced by Dr. Birkhauser who believes the size and number of prospective areas should be more restricted. Localities which look most favorable include the Kenai Peninsula, the Copper River Basin, the Arctic Slope and the Yakutat area.

A hydrographic map of Katchemak Bay was introduced and contours on the ocean floor were added. The map shows the northern shoreline to be relatively straight and the northern inland area to be relatively flat, dotted with small lakes. The southern shoreline, however, is deeply indented by fiords and the inland area contains rugged topography. This abrupt change in physiography suggests the presence of a large fault beneath the bay, separating the two geomorphic provinces. This fault may be located relatively accurately by the submarine contours.

The remainder of Dr. Birkhauser's talk was illustrated by color slides taken at the various areas of interest and include Icy Bay, Johnson Creek and Katalla on the Gulf of Alaska, Homer and Ninilchik on the Kenai Peninsula, and the Bear Creek structure on the Alaska Peninsula.

Slides were shown of the Katalla oilfield which was discovered in 1922. Approximately

LOS ANGELES GEOLOGICAL  
FORUM MEETING

150,000 bbls. of oil were produced from a depth of 800' to 1700'. The field was abandoned in 1932 after the surface installations were destroyed by fire. A photograph of the old Katalla Hotel, also abandoned in 1932, reminded Dr. Birkhauser of a harrowing encounter with a Kodiak bear at 3:00 A.M., just outside the front door of the hotel.

A number of slides were devoted to the Bear Creek structure. This large dome is being drilled by the Humble Oil and Refining Company. The slides showed the excellent exposures of the flanks of the dome, which originally attracted interest in the area.

The talk concluded with the presentation of a slide showing a possible correlation between the stratigraphic section in the Humble well and the section exposed between Cape Kekurnoi and the eastern bank of Puale Bay.

Following Dr. Birkhauser's talk, the Humble Oil and Refining Company presented their color movie "Operation Alaska". The film depicted the immense problems of planning and supply which the Company encountered in drilling the Humble-Shell Bear Creek No. 1 on the Alaska Peninsula. The logistics of procuring, stockpiling and loading for water transportation approximately 15 million pounds of necessities resembled a military operation. The equipment was loaded aboard eleven barges at Seattle and sent 2500 miles along a coastal route to the Humble base at Island Bay. Five trips were required by the barges before all of the equipment arrived. Considerable preparation at the base camp was necessary before the barges could be unloaded. A slip had to be dredged in the nearshore mud flats. Heavy construction equipment dredged the slip at low tide and worked on the road to the wellsite at high tide. The film concluded with scenes showing the setting up of the base camp, the arrival of the drilling equipment and the spudding of the well.

S.E.P.M. FALL MEETING

Plans are being made to expand the technical session of the S.E.P.M., for this year's fall convention (November 11, 12) to two one-half day meetings. Chuck Cary, President of the S.E.P.M., is requesting economic workers, university teachers and students to consider preparation of papers for this meeting. The papers should not be over 30 minutes in length.

Please send in your titles to program chairman, Weldon W. Rau, U.S.G.S., 4 Homewood Place, Menlo Park, California.

S.E.P.M. MEMBERSHIP

The membership roll of the Pacific Section, S.E.P.M., is being brought up to date for 1958-1959. All workers, students and others interested in paleontology and mineralogy are invited to join. Anyone desiring membership should send his name, address and \$1.00 for annual dues to A. A. Almgren, Secretary-Treasurer, S.E.P.M., c/o Superior Oil Company, P.O. Box 1031, Bakersfield, California. All members who have not paid their dues are urged to forward payment before February 15.

Members attending the January Forum meeting held in the Union Oil Auditorium enjoyed a well illustrated talk on "Problems of Fault Nomenclature". The basic concepts were presented by Professor John C. Crowell, U.C.L.A., followed by a proposed dual classification by Mason L. Hill, Richfield Oil Corporation.

These talks pointed out the failings in most geologists' inherited concepts of fault terminology. It is recognized that proper classification is essential for progress in all scientific fields and Crowell indicated our lack of progress in fault classifications since 1913 (Reid and Committee, G.S.A. Bulletin). Presently used fault classifications are completely inadequate and the speakers proposed that fault nomenclature be corrected and brought up to date as soon as possible.

Crowell presented a systematic discussion of significant classification characteristics of faults and illustrated geologic criteria which may be used to analyze displacements on faults.

Hill proposed a dual classification based on the difference between fault slip (actual relative movement) and fault separation (apparent relative movement).

Crowell's slides depicted geologic situations showing offset lines as opposed to situations which only involve the offset of planar rock units. He emphasized that, in the first case fault slip is determinable, whereas in the latter case only fault separation can be known.

Hill's classification is as follows (see A.A.P.G. Bulletin, January 1959):

Apparent Relative Movement (separation)	Fault Type
Dip separation (measured in dip of fault)	Normal Reverse Thrust
Strike separation (measured in strike of fault)	Right-lateral Left-lateral
Dip and strike separations (measured in both dip and strike of fault)	Named after principal separation or appropriate combined term (e.g., normal left-lateral fault of diagram)
Actual Relative Movement (slip)	Fault Type
Dip slip (measured in dip of fault)	Normal slip Reverse slip Thrust slip
Strike slip (measured in strike of fault)	Right-lateral slip Left-lateral slip
Oblique slip (measured in fault surface)	Named after principal slip component or appropriate combined term (e.g., reverse left-lateral slip fault, 1 of diagram)

ANNUAL HOLIDAY DINNER DANCE

The eighth annual Holiday Dinner Dance sponsored jointly by the A.A.P.G., S.E.G., and S.E.P.M., was held on December 27th at the Oakmont Country Club, Glendale. A capacity turnout of 148 couples danced to the music of Tony Ferraro and his orchestra.

The clubhouse was decorated in a gay holiday motif, while overhead in the ballroom a myriad of tiny twinkle lights blinked down on the dancers. The drawing for two door prizes added a pleasant surprise to the affair. The dance committee consisting of Dick Haines, Doug Traxler, Bob Patterson, and Klaas van der Weg can take credit for a job well done.

An excellent cocktail party preceded the dinner dance which was sponsored by the many service company friends of the A.A.P.G., S.E.G., and S.E.P.M. Those companies who generously contributed to the success of the party are as follows:

Baker Oil Tools, Inc.  
Baroid Well Logging  
B. J. Service, Inc.  
California Well Logging Company  
Economy Blueprint & Supply Company  
Fairchild Aerial Surveys, Inc.  
Formation Logging Service Company  
Geophysical Service, Inc.  
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Macco Corporation  
Mercury Oil Tool Company, Inc.  
Pacific Towboat & Salvage  
Petroleum Information  
Petroleum Technologists, Inc.  
Rapid Blue Print Company  
Read & Company  
Robert H. Ray Company  
Schlumberger  
Seismic Explorations, Inc.  
Seismograph Service Corporation  
United Geophysical Corporation  
Welex, Inc.  
Western Geophysical Company

S.E.P.M. FIELD TRIP

The S.E.P.M. is having a field trip April 24-25, 1959 in the Boulder Creek area, Santa Cruz Mountains north of the city of Santa Cruz. Earl Brabb (Geology Dept., Stanford University, Stanford, California) is chairman. There is no pre-registration required; however, housing reservations are being handled by the Brookdale Lodge, Brookdale, California. Personal cars to be used and a syllabus at an estimated cost of \$2.50 will be available. The Tertiary section is the subject of the trip and Franciscan and granitic rocks will not be included.

NOTICE

The following are changes and additions to the list of Committee Chairmen for 1959, Pacific Section as published last month.

Classification Committee: Albert F. Woodward

Local Geological Society  
Employment Counseling  
Committee:

Henry H. Neel

PALEONTOLOGICAL BIOSTRATIGRAPHY SEMINAR

Dr. Alfred Loeblich of California Research Corporation at La Habra spoke on the "Use of Planktonic Foraminifera in Stratigraphy" at the January meeting of the Seminar at Bakersfield College.

In his talk before the Seminar group, Dr. Loeblich emphasized the importance of the pelagic species of foraminifera in stratigraphic zonation, interregional correlation, and age determination.

He pointed out that their value was due to their rapid evolution in time and their world-wide distribution. Also, these fossils may occur in abundance in formations where no other fossils are present. A number of charts showing ranges of species through the Cretaceous and Tertiary were shown. Charts and excellent illustrations of these species may be seen in Bull. 215 of the U. S. National Museum titled "Studies in Foraminifera" by A. L. Loeblich and collaborators, published in 1957.

The widest use of pelagic species is presently being made in South America and the Caribbean. Similar use elsewhere has been delayed or hampered by a lack of knowledge of the pelagic species, or because good results have been had with benthonic species.

He expressed the belief that zones based on pelagic species would be much more reliable in our Eocene correlations and would probably eventually replace the currently used or suggested stages.

NOTICE

A full-color geologic map of Death Valley and the southern Owens Valley areas, the first of a new series to cover the entire State, has been issued by the California Division of Mines and Geology. This map is available for \$1.50 plus 3 percent sales tax at Room 402-B, State Office Building, Los Angeles 12, or at the Ferry Building, San Francisco.

PERSONAL ITEMS

John Loofbourow, Regional Foreign Geologist for Richfield, recently posted a portrait of himself on the bulletin board. He was immediately swamped with offers of free coffee, cookies, and even meals, because of his emaciated condition revealed in the picture (chest X-ray).

Mel "Hardrock" Swinney, Richfield Research Geologist in Los Angeles, has moved his office to the Roosevelt Building. Apparently all the talk about getting oil out of the ground in the old fashioned way was too much for Mel to bear.

Mason Hill, Manager of Exploration for Richfield, gave a talk on fault classification at the forum meeting. An interruption occurred when Mase had to retrieve a dime which fell to the floor through a hole in his pocket. There was much learned discussion as to whether this was a "normal slip" or a "reverse left lateral slip". At any rate it gave everyone quite a "wrench".

James R. Trottes, formerly with Tidewater Oil Company, has a new mailing address of 64 Solimar Beach Drive, Ventura, California.

Ron Ackley, Exploration Logging in Sacramento, laid aside his local duties for a couple weeks trip in Alaska. It could only be business to go up there this time of the year...Brrr.

Bill Strong, Schlumberger engineer in Sacramento, has fished weeks in hopes of catching the big one. That he did --- it was a striped bass and weighed in at 42 pounds. The prize --- a new spinning reel.

Joe Harvey, General Petroleum in Sacramento, recently transferred to Durango. They tell us all is well except their family of pups. Mama dog sized up the area, and obviously not satisfied -- she destroyed her litter. Hmmm.

Bill McEachin and family, have been transferred from Sacramento to Bakersfield. Bill has been promoted to Bakersfield Zone Landman for the Western Gulf Oil Company. The Petroleum Wives bridge club had a farewell party for them and a tea was held for Jo McEachin.

Roland Bain, with The Texas Company in Sacramento, has purchased a new home in Foothills Farm area north side of Sacramento.

Exploration Logging, Sacramento, established a new department, Research and Instrumentation, and this comes under the direction of Chuck Dobson.

We learned that Bill Cunningham, with Brazos in Isleton, when goose hunting the other day, sighted his gun in on a couple of geese flying over, however, he held off shooting in anticipation of the big flock coming over. You guessed right -- the big flock didn't show up.

Charles Lundgren, exploration logging geologist in Sacramento, has been transferred to Alaska, and in charge of their unit up there.

John Elliott and Andy Marianos, of Humble Oil in Chico have been transferred to Castaic Junction. Rex Olson, of Humble in Chico, replaced Andy.

Walt Howe, of Shell Oil in Sacramento, is Rambler--ing around in a new station wagon.

The Northern California Petroleum Round Table has elected officers for 1959. They are:

President	- Swiss Holmes (Shell)
Vice-President	- Charles Guion (Humble)
Secretary-Treas.	- Bill Wagner (Texas)
Editor	- Hans Vandenberg (Standard)

Gordon Chase, geophysicist with Shell in Ventura, was transferred to Sacramento.

Clifford N. Jarman, seismologist assistant, Shell, is new in Sacramento, transferred from Bakersfield.

Heard this about the New Year's party of the petroleum group in Sacramento -- Stewart Chuber's wife insisted he make the rounds of kissing each wife present.

William A. Adent, geologist, formerly of Los Altos and Bakersfield, is to open an office soon at 926 J Street, Sacramento.

Len Kendle, of Texaco, has been assigned to duty in Long Beach as scout, replacing Ralph Carver who resigned.



## DRILL-STEM TEST

Mr. D. H. Scott, formerly chief geologist for Hancock Oil Company announces he is opening a consulting practice in Los Angeles. Mr. Scott was former chief geologist for Signal Oil and Gas Co., and exploration superintendent for Caltex in Australia. He also served with the Texas Company for many years as geologist, division geophysicist of the Pacific Coast Division, and as head of the gravity department for the U. S. and Canadian operations of the Texas Company at Houston.



Shell Oil Company in Ventura should establish an open account at an auto body and fender shop for their scout, Gene Johnson. Gene has been having a streak of bad luck. In his latest misfortune his car was viciously attacked by a mad vacuum truck.

Neil Rosser, Amerada in Ventura, and wife Marilyn, spent a week skiing at Alta, Utah. They reported the snow was dandy but the crowds horrible.

Don Hagan of the Texas Co. also spent a week at Alta maintaining his high standard of social activity. Yes sir, anybody that doesn't like that skiing..

According to a friend, a successful executive is one who delegates responsibility, shifts all blame, and appropriates all credit.

Harold Lian is being transferred from Union's Santa Paula office to Anchorage. He is trying to corner the mukluk market as a means of beating the high cost of living.

Recent sightings of an abominable snowman at Sun Valley, Idaho, have been explained. Lum "Adonis" Lovely, the Valley casanova spent a week of debauchery there. Meanwhile, back at Santa Paula, Lum is looking for oil possibilities in Idaho.

Harold Level, Union in Santa Paula, is recent recipient of a coveted golden trophy by vote of his co-workers. No details were given.

Ed Hall recently completed an addition to his house and somehow managed to con the spouse into all painting chores. Parties interested in home decoration the effortless way can contact Ed at Union's Santa Paula office.

Anybody receiving postage due letters from Standard's Ventura office can point the finger to Bob Erickson. It seems the P.O. Department wants 4¢ rather than 1¢ per letter.

James R. McIntyre, geologist, has been transferred from American Overseas Ltd. in Libya to Standard's Ventura office.

John Wilson of Standard in Ventura is leaving in February for seismic school at Bakersfield.

Jed Maebuis, Senior Non-Divisional Geologist with Tidewater in Los Angeles, has been transferred as Exploration Manager to the Central Division at Tulsa, Oklahoma.

Correction from last month's issue: H. H. Neal of Tidewater, is the Manager of Exploration, not the Manager of Foreign Exploration as previously reported. Robert Dyk is the Chief Geophysicist, not the Chief Geologist. Our apologies.

Dick Haines, Bill Osborn, and Roger Dungan, with Continental, are currently in Anchorage, surveying the local icy scenes. Osborne and Dungan may be permanently transferred to Anchorage.

Don Herring, Senior Geologist for Texaco, has returned to Los Angeles from a special assignment in Africa.

Dick Vivion, Humble scout, Olympia, spent a week in Houston attending a "charm" school.

Ivor McCray, six years Shell scouting Oregon, Washington, and Alaska the last two years, has resigned as of January 23. Ivor will remain in Olympia and expects to keep current with the oil business in the Northwest, but has no immediate plans.

Sigmund Snellson, a recent PhD from University of Washington, joined Shell's Northwest Division, Alaska District. He will join the trek of the midnight-summers this year. Don't let them make a sourdough out of you, Sig!

The lunchtime domino game takes on new import in the Shell Northwest Division as the domino championship tournament gets underway. Bob Elder has developed a smooth-running schedule for the play-off.

Earl David, Shell scout, Chico, has been transferred to Seattle to replace Ivor McCray. Earl, a native Washingtonian, claims it feels good to have the webs between his toes back in operation again.

R. E. "Doc" Stewart, Oregon State Dept. of Geology and Mineral Industries, is recovering at home after surgery. Glad to hear that you are doing fine, Doc!

Congrats to Jerry Herndon, senior draftsman, Shell, Olympia, on his recent marriage to Shirley Winne of Shelton, Washington.

It is rumored that "Dryhole" Jim Tanner is going to spend the next several years in Montana trying to bring in a gusher. Jim plans to keep his Washington address, but Billings will be his home away from home.

Bob Ottenstein, Standard, Seattle, will consider any skiing offer for the winter Olympics after his warmup at Alta.

Whitey Wesh, Standard, Seattle, tried all the sports cars, but couldn't find one sporty enough and finally bought a Fury. Detroit iron, Whitey?

Dave Given, Standard, Seattle, hasn't been able to repeat his skiing accident so far this year, - but he keeps trying.

Walt Wolf, Standard, Seattle, woke up in the wee hours and thought he heard it raining; instead it was his hot-water heater getting ready to blow. Too bad it couldn't have happened the night of your open-house party, Walt, because the extra help would have been handy.

Last fall one unfortunate Humble, Eugene, geologist paid a \$29.50 fine for skinning a pheasant in the field while hunting in eastern Oregon. Sort of ruins a fellow's day, doesn't it?

No one can figure out why Ed Larson, Humble, Eugene, is suffering from the lack of snow when he has a new, blue M.G. to travel back and forth to the slopes. What misery!

Its getting so that a person can't go in the Humble Eugene office without having his pocket change carefully scrutinized. The numismatic bug was introduced by George Thomas, and finally has infected the entire staff.

A. H. Masiran, Producer-Operator Oil & Gas, recently left his office in Hoquiam, Washington

to once again open for business in Sacramento. His new address is 1716 "O" Street, Apt. 205, Sacramento, California.

A Nominating Committee for General Chairman of the new special publication of the A.A.P.G. entitled "Geology of Natural Gas" has been selected, and they are:

Bill Bauer (Texas Company, Sacramento)  
Bob Reedy (Western Gulf, Sacramento)  
Ray Sturdevant (Shell Oil, Sacramento)

What Tidewater District Geologist, who is known for going to sleep while sitting in the front row at burlesque shows, maintained his reputation for relaxation by dozing off long before midnight at a recent New Year's Eve party?

Gordon Hornaday and Ted Barr, both paleontologists with Standard Oil Company in Bakersfield, have decided to forsake the security of a steady income for the academic honors of a Ph.D. Gordon is going to U.C. at Berkeley to study and Ted to Scripps at LaJolla in the near future.

Standard's basketball team, led by Doug Waterman and Bill McKay, have a rousing record of one game lost so far in the Bakersfield City League - probably just lulling the opposition into complacency before showing their championship caliber.

Harold Deane came out like a rose on his return flight from a 2 week vacation to Booneville, Indiana. It seems that in all the confusion of the recent airlines' strike, he got bounced off of his tourist flight onto one of those first class champagne and caviar flights.

When Schlumberger's Don Swiers decided to paint his house in Bakersfield, he first filled all the exterior cracks, as all good painters should. Unfortunately, the subsequent paint job didn't hide the crack filler and Don now has a house that looks like a crazy e-log - what some service companies won't do for publicity.

Bill Haney, paleontologist for Tidewater in Bakersfield, recently returned from a week at Alta, Utah, and reports that skiing and sheeplike conditions there are very good - lots of fresh powder.

#### NURSERY NEWS

Mike and Margaret Jager, Richfield in Ojai, now have three. The latest, Jeanine, arrived the 27th of December, and weighed in at 7 lbs. 4 oz. Good planning for a tax deduction.

Don and Marilyn Rogers, with Humble in Chico, welcome the first boy into their household. Grayson Kent was born on November 7, 1958, and weighed 6 lbs., 13-1/2 oz.

Bob and Dolores Hoffman, Tidewater in Bakersfield, have a new girl in the house. Diana Elaine was born on January 13, weighing 7 lbs., 4 oz. This makes three girls for the Hoffmans.

Jim and Phyllis Mercier had their first baby, a girl, Kimberly Ann, on January 23, 1959. Jim is Tidewater's geophysicist in Bakersfield.

## CALENDAR

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February 11, 1959: Wednesday, 6:30 p.m. Jr. Group Society of Petroleum Engineers of AIME, Dinner Meeting, Candlewood Country Club, 1400 Telegraph Road, Whittier. "Engineering Aspects of Water Disposal Plants" by E. Randolph Smith, Petroleum Engineering Consultant.

February 12, 1959: Thursday, 7:30 p.m. Dinner Meeting and ladies night, Coast Geological Society, Miramar Hotel, Santa Barbara. "River Rattling Down the San Juan and Colorado Rivers" by Bob Herron, Signal Oil and Gas Co. and Otto Hackel, Intex Oil Co.

February 12, 1959: Thursday, 12:00 Noon. SEG Luncheon Meeting, Roger Young Auditorium, 936 W. Washington Blvd., Los Angeles. "Geological and Geophysical Exploration in Turkey" Dr. Ekram Goksu, Professor of Geology, Technical University, Istanbul.

February 16, 1959: Monday, 7:00 p.m. AAPG Forum Meeting, Union Oil Auditorium, Boylston St. between 4th and 5th Streets, Los Angeles. "Strike-Slip on the Whittier Fault", Donald E. Lamar, UCLA and "Displaced Molluscan Provinces along the San Andreas Fault", Clarence A. Hall, Jr. UCLA.

March 2, 1959: Monday, 7:30 p.m., Bakersfield College, Paleontological Biostratigraphy Seminar, Room 56, Science and Engineering Bldg. "Coccolithophorids", Dr. M. N. Bramlette, Scripps, La Jolla.

March 2, 1959: Monday, 12:00 Noon, AIME Petroleum Forum, Roger Young Auditorium, 936 W. Washington Blvd., Los Angeles, "Canadian Operations" Mr. C. E. Ensley, Richfield Oil Corp.

March 9, 1959: Monday 12:00 Noon, AAPG Distinguished Lecturer Luncheon Meeting, Roger Young Auditorium, 936 W. Washington Blvd., Los Angeles, "The Future of American Petroleum Geology" Dr. Frank B. Conselman, Consultant, Abilene, Texas.

March 10, 1959: Tuesday, 7:30 p.m., Sacramento Geological Society -- meeting place to be announced. "Land Mammal Stratigraphy in California with Emphasis on Cuyama Valley District", Dr. Don E. Savage, U.C.

March 12, 1959: Thursday, 12:00 Noon SEG Luncheon Meeting, Roger Young Auditorium, 936 W. Washington Blvd., Los Angeles. A sound and color movie entitled "Construction and Installation of the Standard-Humble Platform at Summerland" will be shown.

April, 1959: Branner Club meeting.

## BIBLIOGRAPHY OF RECENT PUBLICATIONS

### California Division of Mines and Geology

Geologic Map: Death Valley sheet, scale 1:250,000, colored edition. \$1.50

Special Report 50: Plants as a guide to mineralization, by Donald Carlisle and George B. Cleveland. \$ .50

Journal: Mines and mineral resources  
of Contra Costa County, by  
Penelon F. Davis and Harold  
B. Goldman, volume 54,  
No. 4, October 1958. \$1.00

United States Geological Survey

Professional Paper  
282-A: Ephemeral streams--hydraulic  
factors and their relations  
to the drainage net, by L.  
B. Leopold and J. P. Miller  
(reprint) \$.45

Bulletin 1061-E: Vegetation of northwestern  
North America, as an aid  
in interpretation of geologic  
data, by R. S. Sigafos. \$.75

Water Supply Paper  
1444: Surface water supply of  
the U. S., 1956, Part 10 -  
The Great Basin. \$1.00

Water Supply Paper  
1486: Quantity and quality of  
surface waters of Alaska,  
October 1953 to September  
1956. \$1.00

Map MF-204: Geologic map of the Boron  
quadrangle, Kern and San  
Bernardino Counties,  
California, by T. W.  
Dibblee, Jr. \$.50

Map I-284: Preliminary map of land-  
slides of the Pacific  
Palisades area, City of  
Los Angeles, California,  
John McGill. \$.50

Circular 411: Geochemical prospecting  
with heavy-mineral  
concentrates used to  
locate a tungsten deposit,  
by P. K. Theobald, Jr.,  
C. E. Thompson. Free

Open-file report: Coal resources of south-  
western Washington, by  
Helen M. Beikman and  
Howard D. Gower.  
(Inspection Only)

Open-file report: Progress report, Land-  
subsidence investigations,  
San Joaquin Valley, Calif-  
ornia, through 1957, by  
Inter-agency Committee on  
Land Subsidence in the San  
Joaquin Valley, J. F.  
Poland, Chairman.  
(Inspection Only)

American Association of Petroleum Geologists,  
Bulletin:

Concepts of facies, by Curt Teichert.  
Bulletin, vol. 42, No. 11, November 1958.  
Paleozoic rocks of north-central Nevada,  
by Ralph J. Roberts, Preston E. Holtz,  
James Gilluly, and H. G. Ferguson.  
Bulletin, vol. 42, No. 12, December 1958.  
Recent studies of south Persian salt plugs,  
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December 1958.  
Sedimentary reflections of depositional  
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California, Mexico, by Harris B. Steward,  
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Stratigraphy of Cuyama Valley-Caliente Range  
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A. Carlson, and Thomas W. Dibblee, Jr.,  
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So you are thinking about Alaska, by Irene  
E. Ryan, vol. 31, No. 1, January 1959.

Utah Geological and Mineralogical Survey

Outline of the geologic history and strati-  
graphy of Utah, by William Lee Stokes  
and Edgar B. Heylman (Salt Lake City) \$.75

Washington Division of Mines and Geology

Archeology in Washington, Information  
Circular No. 31, by Bruce Stallard. \$.50

Book

Bibliography of theses in geology, prepared  
by John Chronic and Halka Chronic; Pruett  
Press, 1942-20-th St., Boulder, Colorado.  
\$15.00

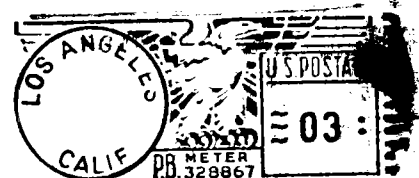
PACIFIC PETROLEUM GEOLOGIST  
PACIFIC SECTION, A.A.P.G.  
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LOS ANGELES 13, CALIFORNIA

Vol. 13

No. 2

Richard L. Hester  
Signal Oil & Gas Co.  
1025 Petroleum Club Bldg.  
Denver, Colorado

BS



# PACIFIC PETROLEUM GEOLOGIST

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

### ASSOCIATION ACTIVITIES

Vol. 13

March, 1959

No. 3

#### NORTHWEST GEOLOGICAL SOCIETY

Featured speaker at the January meeting of the Northwest Geological Society was Dr. R. L. Laudon. Dr. Laudon presented an interesting talk on "Paleotectonic History, Western North America".

Paleotectonic, modified isopach maps have been prepared for all systems from Cambrian through Jurassic. The data have been taken from four summers field work in the western United States and Canada plus a massive survey of the literature. Incomplete sections, faulted sections, and eroded sections have been eliminated wherever possible, and an attempt has been made to develop only the broad regional pattern.

Tectonic land welts, volcanic land island areas, and permanent land areas have been pinpointed and located on maps by extensive use of primary features in sediments. The gradual evolution of all of western North America, from a submerged geosynclinal area to a permanent land area, has been developed.

Almost without exception, each system of rocks shows a shallow cratonic shore zone characterized by mixed limestones and clastic rocks, a thick bioclastic miogeosynclinal lens of limestone deposited on the continental slope and a deeper water, off-shore, silt-mud zone that interfingers abruptly with the miogeosynclinal carbonate facies. Cascadia as such is essentially non-existent, but rather, the whole area was flooded again and again by the sea, but so remote from a source area that whole systems may be represented by a few feet of mud deposition.

First indications of tectonic response to sedimentation are recorded in angular mud and siltstone conglomerates, often silicified, and commonly mistakenly called chert conglomerates. The rising tectonic welts next become volcanic and thick sections of various volcanic rocks, usually andesitic, sediments cannibalized from the volcanic rocks, and interbedded clastic rocks accumulate. The maximum, compressive, deformation period follows the volcanic interval, followed or accompanied by the gradual isostatic rise of the granitized sediments and mobile granites.

#### NOTICE

Warren O. Addicott, General Petroleum Corp., has been appointed editor of the Pacific Petroleum Geologist effective this month replacing Tom O'Neill who has been transferred to Shell's Ventura office. The new editor's address is c/o General Petroleum Corp., P.O. Box 2488, Santa Fe Springs, California.

#### MALLORY VOLUME PUBLISHED

The long awaited "Lower Tertiary Biostratigraphy of the California Coast Ranges" by V. Standish Mallory has been published by the American Association of Petroleum Geologists. The cloth bound book, a companion volume to "Miocene Stratigraphy of California" by R. M. Kleinpell, contains 416 pages, 7 line drawings (maps and correlation chart), 42 plates of foraminifera, and 18 tables. Dr. Mallory, Associate Professor of Geology at the University of Washington, received a sizeable grant from the Revolving Fund of the Pacific Section which helped to finance the illustrations of Foraminifera. "Lower Tertiary Biostratigraphy..." can be ordered from the American Association of Petroleum Geologists, P.O. Box 979, Tulsa, Oklahoma. The price is \$11.00 to A.A.P.G. members or \$12.00 to non-members.

#### COAST GEOLOGICAL SOCIETY

Coast Geological Society held its annual ladies night and dinner meeting February 12th, at the Miramar Hotel, Santa Barbara. The audience was entertained by an excellent combination of geology and river ratting down the San Juan and Colorado Rivers.

Bob Herron, Signal Oil and Gas, handled the explorer-tourist side of the trip with Otto Hackel, Intex, interspersing geologic comments. As the two rubber life rafts drifted lazily up section, the Powell-devotees checked out the geologic column formed by Penn. Hermosa fm.; Permian Rico and Cutler fms.; Triassic Moenkopi, Shinarump, Chinle and Wingate fms.; and the Jurassic Kayenta fm. and Navajo ss. When the hardy voyageurs weren't boozing, swimming, or harassing Boy Scouts, they could view such tectonic elements as Monument upwarp, Comb Ridge monocline, Balanced Rock anticline, Kaiparowits Basin, East Kaibab monocline, and Kaibab upwarp.

Although the wives and/or girl friends were probably confused by the geologic terms, the colored slides and wit of the speakers furnished everyone an enjoyable evening.

#### NOTICE

The 1958 list of California Fields and Pools compiled by the A.A.P.G. Conservation Committee is now available. Copies may be obtained by contacting A.F. Woodward, Union Oil Center, P.O. Box 7600, Los Angeles 54 or by phoning Huntley 2-7600.

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AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

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PACIFIC PETROLEUM GEOLOGIST

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Editor	Warren O. Addicott
Assistant Editors:	
Activities	Dwight J. Laughlin
Personal Items	Edward J. Taylor
Selected Bibliography	Lucy Birdsall
Calendar	Allan M. Rupprecht
Cartoonist	Mort Kline
	Harold Sullwold
Coast Correspondent	James J. Williams
Los Angeles Correspondent	Frank A. Exum
Northwest Correspondent	Maurice Price
Sacramento Correspondent	James E. Young
San Francisco Correspondent	Ken Edwards
San Joaquin Correspondent	E. L. Marier

NEXT DEADLINE MARCH 27, 1959

NOTICE

Vern Jones, Exploration Logging in Sacramento, has been selected as General Chairman for the new special publication of the A.A.P.G. entitled "Geology of Natural Gas".

SACRAMENTO GEOLOGICAL SOCIETY

Mr. Edwin H. Stinemeyer, Shell Oil Company paleontologist of Bakersfield, was the featured speaker at the Sacramento Geological Society monthly meeting in February 1959. He spoke on "Sediments and Marine Life of Monterey Bay, California". His study was based on work which has been started some years before.

Mr. Stinemeyer began his talk by presenting the setting of Monterey Bay in regard to geography, geology, and present climate of its surroundings. He discussed the features of the Bay itself; bottom topography, distribution of sediments, chemistry of bay waters, and relationship to the waters and currents of the ocean proper.

In the second half of his talk he dealt with the Foraminifera found in the various ecologic zones associated with the Bay. He showed a number of slides and Kodachromes which illustrated many of the points discussed.

S.E.P.M. ELECTS HONORARY MEMBER

The Research Committee of the Society of Economic Paleontologists and Mineralogists has unanimously nominated and the Society's Council has elected to honorary membership HENRYK B. STENZEL. Dr. Stenzel is a consultant for Shell Development Company, Houston, Texas. He is presently engaged in exploration and production research, chiefly Tertiary stratigraphy. An honorary membership certificate will be formally presented to him at the Society's 33rd Annual Meeting in Dallas, Texas, on Tuesday, March 17, 1959.



IN MEMORIAM

The many friends of Robert L. Sitzman were saddened to hear of his untimely death on February 16, 1959, by electrocution at his place of business. He was 40 years old at the time of his death.

Bob was born in Iowa and received his early schooling there. He later attended Long Beach Junior College where he completed a pre-engineering course.

Bob was employed by the Richfield Oil Company in their paleontological laboratory in 1937 and was later promoted to scout for the Ventura and Los Angeles Basins. He served five years in the United States Air Force between 1942 and 1947 in both the European and Pacific theaters. During this time he rose from private to captain, and was also awarded the Distinguished Flying Cross. He rejoined Richfield after the war and in 1953 left to become the Los Angeles Basin scout for Western Gulf Oil Company, which position he held until last year. Since leaving Western Gulf, Bob had purchased the Pacific Log Exchange and it was in the shop of his new business that the tragic accident occurred.

Bob was a junior member of the AAPG, and was a founding member of the Pacific Coast Oil Scouts & Landmen' Association.

Bob was known by all his friends and acquaintances as a very diligent worker, a staunch friend and a trusted confidant. He was especially helpful to newcomers and gave generously of himself for their benefit. At work or play he was always respected for his integrity and valued for his companionship.

Bob is survived by his wife, Catherine; two young daughters, Shaula and Betty Joe; his mother, Minnie; brothers, Charles and Howard; and sisters, Leona, Amy, Josephine, Leta May, Hope and Alice.

NOTICE

The San Joaquin Geological Society is planning a spring field trip to a very interesting portion of the west side of the San Joaquin Valley - the Carneros Creek-Chico Martinez area. According to Brad McMichael, field trip chairman, the area is easily accessible by automobile and the usual box lunch and liquid refreshments will be available. A tentative date of May 2 has been set, and more details will be announced as plans progress.

PUBLICATIONS AVAILABLECross Sections

Detailed cross sections prepared under the direction of the Cenozoic Sub-Committee on Geologic Names and Correlations:

No. A.A.P.G. SECTIONS

- |      |   |      |
|------|---|------|
| 1    | Sacramento Valley - South (2 sheets)<br>North side of Sacramento Valley<br>through Rio Vista, Thornton and<br>Lodi Gas Fields, including Mt.<br>Diablo-South Sacramento<br>Correlation Chart.                                     | 1951 |
| 2    | Ventura Basin - East (1 sheet)<br>Basement North of Oak Canyon Oil<br>Field to Aliso Canyon Oil Field.  | 1952 |
| 3    | Los Angeles Basin (1 sheet)<br>Palos Verdes Hills to San Gabriel<br>Mts.  | 1952 |
| 4    | Salinas Valley (1 sheet)<br>San Antonio River northerly to<br>San Andreas Fault, through San<br>Ardo Oil Field.   | 1952 |
| 6    | Sacramento Valley - North (2 sheets)<br>A. From T.23N. R.1W. through<br>T.16N. R.1E., and<br>B. Correlation Chart   | 1954 |
| 7    | Ventura Basin - Central (1 sheet)<br>From Santa Ynez Fault north of<br>Ojai to Western Santa Monica Mts.,<br>through Ventura Avenue and West<br>Montalvo Oil Fields.  | 1956 |
| 8    | San Joaquin Valley - South (1 sheet)<br>From San Andreas Fault to Sierra<br>Nevada Foothills, passing through<br>Belgian Anticline, McKittrick,<br>Elk Hills, Coles Levee, Fruitvale,<br>Kern River and Round Mountain<br>Fields. | 1957 |
| 9    | Central San Joaquin Valley - (1 sheet)<br>From San Andreas Fault to Sierra<br>Nevada Foothills, and passing<br>through Coalinga, Gujarral Hills<br>and Riverdale.   | 1957 |
| 10 N | Central San Joaquin Valley (1 sheet)<br>From Rio Vista to Riverdale<br>through Rio Vista, McDonald<br>Island, Tracy, Chowchilla, Gill<br>Ranch, Raisin City, Helm and<br>Riverdale Fields.  | 1958 |
| 10 S | Central San Joaquin Valley (1 sheet)<br>From Riverdale to Tejon Ranch<br>through Riverdale, Trico, Wasco,<br>Rio Bravo, Greenley, Strand, Ten<br>Section, Paloma, Wheeler Ridge,<br>Grapevine and Tejon Ranch Fields.             | 1958 |

PRICE: \$1.50 each plus \$ .50 mailing and handling charges for each mail order.

Guidebook - "Los Angeles and Ventura Regions"

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

PRICE: \$7.00 postpaid

Note: All of the preceding material may be purchased from Mr. J. D. Traxler, Signal Oil and Gas Company, Box 17126, Foy Station, Los Angeles 17, California. Checks for the Cross Sections and the Guidebooks should be made payable to the Pacific Section, A.A.P.G. and sent with the order.

NOTICE

Huey Ban, that mysterious, peripatetic geologist who is giving a travelogue of Japan, Hong Kong, and Thailand to the San Joaquin Geological Society as this Newsletter is going to press, wishes to announce that for the next two weeks the Bakersfield Library will have a display of various artifacts and curios he has collected on his travels.

BEST PAPER IN JOURNALS AWARD

Recipients of the awards for the Best Paper in the Journal of Paleontology and the Journal of Sedimentary Petrology for 1957 have been announced by Gordon Rittenhouse, President of the Society of Economic Paleontologists and Mineralogists.

ALFRED R. LOEBLICH, JR., and HELEN TAPPAN (Mrs. Alfred R. Loeblich, Jr.) will receive the award for their paper entitled "Correlation of the Gulf and Atlantic Coastal Plain Paleocene and Lower Eocene Formations by Means of Planktonic Foraminifera," published in the Society's bi-monthly Journal of Paleontology, Volume 31, November 6 (November, 1957). Mr. Loeblich is the Senior Research Paleontologist for the California Research Corporation at La Habra, California. Mrs. Loeblich is a lecturer in geology at the University of California at Los Angeles. She is also micropaleontologist for the U. S. Geological Survey, Alaskan Branch.

RAYMOND SIEVER, a Professor of Geology at Harvard University, Cambridge, Massachusetts, will receive the award for his paper entitled "Pennsylvanian Sandstones of the Eastern Interior Coal Basin," published in the Society's quarterly publication, the Journal of Sedimentary Petrology, Volume 27, Number 3 (September, 1957).

These Best Papers are the fifth to be presented by the S.E.P.M. They consist of a certificate given to the author whose paper appearing in the Journals during the second preceding year is judged by the Research Committee to be the most outstanding contribution of that year. The honors will be awarded at the 1959 Convention of the S.E.P.M. at Dallas, in March.

BEST PAPER AT CONVENTION AWARD

An award for the "Best Paper Presented at the Convention" was inaugurated last year at the Los Angeles Meeting of the Society of Economic Paleontologists and Mineralogists. A committee of five was appointed to judge all the papers presented, the basis of selection being on content, organization, originality, and presentation.

The committee accorded first place to PATRICK H. MONAGHAN for his paper, "The Solubility of  $\text{CaCO}_3$  in Salt Water". The award, a book of the recipient's choice, will be presented to Mr. Monaghan at the Dallas, 1959, Convention of the S.E.P.M.

LOS ANGELES GEOLOGICAL  
FORUM MEETING

Lateral faulting in California was the subject of papers presented at the Los Angeles Geological Forum on February 16 by Clarence H. Hall, Jr., and Donald E. Lamar of U.C.L.A.

Dr. Hall, Assistant Professor of Geology at U.C.L.A., spoke on "Displaced Miocene molluscan provinces along the San Andreas fault". An interesting new line of evidence for large lateral movement based on the distribution of late Miocene water temperatures inferred from the geographic distribution of certain molluscan genera was presented.

Assuming that present day temperature and other ecologic requirements for molluscan genera and species are generally the same for most taxa that lived in the past, and that organisms are critically limited in distribution by minimum temperatures, then some thermal limits may be inferred for the Late Miocene molluscan faunas in the Coast Ranges of California. By plotting the present positions of Late Miocene paleo-molluscan provinces and isotherms, provincial and temperature differences are apparent on either side of the San Andreas fault at the same latitude. The distance between the same isotherm or provincial boundary on opposite sides of the fault is approximately 120 miles. Because of the subjectivity of locating the Late Miocene molluscan provinces and isotherms, this means of measuring the amount of separation along the San Andreas fault gives only an approximate order of magnitude; the minimum and maximum separations are 50 and 150 miles, respectively.

Mr. Lamar, fellow in geology at U.C.L.A., presented arguments for right-lateral movement of lesser magnitude on the Whittier-Elsinore fault in a paper entitled "Strike-slip on the Whittier Fault?".

The Whittier fault zone, which trends N 70° W along the southwestern edge of the Puente Hills, is one of the major structural features of the Los Angeles basin. On the northeast edge of the Santa Ana Mountains the Whittier fault zone curves into the Elsinore fault zone, which continues southeast perhaps as far as the Mexican border. In the northeastern Santa Ana Mountains and southeastern Puente Hills the Whittier-Elsinore fault zone averages a mile in width and consists of several distinct breaks which divide the area into numerous fault blocks and slivers. The geology is further complicated by several cross faults striking north to northeast and by east-west trending folds and reverse faults.

Recent right-lateral strike-slip along faults within the Whittier-Elsinore fault zone is indicated by horizontal offset of drainage lines in the Puente Hills (e.g., Brea and Carbon Canyons), the northeastern Santa Ana Mountains, and the Murrieta area in which 1000 feet of offset was noted by J. F. Mann.

In the northeastern Santa Ana Mountains, Upper Cretaceous, Paleocene, and middle Eocene marine and non-marine strata are exposed and have been found in wells along and within the Whittier-Elsinore fault zone. Abrupt changes in thickness and lithology of equivalent rock units occur across the fault zone and across individual faults within the zone. Lithology, sedimentary structures, and paleontologic data indicate that the rocks to the southwest of the fault are predominately non-marine and shallow-water marine, and that the rocks to the northeast are predominately marine and were deposited in deeper water than equivalent

rock units to the southwest. These relationships may be explained by 10 to 15 miles of post-middle Eocene strike-slip along the Whittier-Elsinore fault zone, or by a rather abrupt change in the trend of the early Tertiary and late Cretaceous shorelines at the fault zone, and a steep basinal slope to the northeast. Study of the Paleocene Silverado formation along the fault zone and to the southwest (Woodring and Popenoe, 1945) suggests that post-Paleocene strike-slip is the most reasonable explanation for the distribution of marine Paleocene.

NOTICE

The Junior Group of the Society of Petroleum Engineers of A.I.M.E. March 1959 meeting:

Chairman:	Jim Flinn
Vice-Chairman:	Murray McKinnon
Date:	March 11, 1959
Time:	6:30 P.M.
Place:	Candlewood Country Club, 14000 Telegraph Road, Whittier \$3.50 members, \$3.75 non-members
Dinner:	
Subject:	Symposium on new or improved techniques in Well Logging
Speakers:	a) Leon Williams, Special Service Engineer, Schlumberger Well Surveying Corp., "Wire Line Formation Tester" b) Edward Pierce, Logging Engineer, "A New Temperature Logging Technique" c) Dennis Lynch, Manager of Logging Services, Lane- Wells Pacific Coast Division, "Cemoton Log" d) H. A. Woodard, California Division Manager, Welx, "Forxo Log" e) Herman E. Schaller, Coordinator of Logging, McCullough Tool Company, "Improved Neutron Log"
Reservations:	Please call Murray McKinnon, Hemlock 7-8377 or Fred Govreau, Huntley 2-7600

The A.I.M.E. is fortunate to have these experts each give a 20 minute talk. We will hear the theory and application of these new logging devices. Afterward a twenty to thirty minute session will welcome questions from the floor.

LUNCHEON MEETING

An interesting talk on "Travels in the Middle East" was presented by Mr. Henry H. Neel, Manager of Exploration for the Tidewater Oil Company.

The talk consisted principally of comments on color slides taken in three countries, Pakistan, Turkey, and Lebanon, during the course of several trips to the Middle East in 1957.

The first group of slides consisted of scenic views in western Pakistan, including aerial scenes of the Baluchistan area where Tidewater is just beginning geological exploration. The aerial views, combined with the spectacular outcrop geology, revealed many interesting structures, of which the most impressive was a "textbook" example of a faulted fold. Tidewater began its investigations in Pakistan in 1956 and signed license agreements with the Pakistan Government in early 1958.

The second group of pictures was taken in southeastern and southern Turkey and showed the general setting of the area in which Tidewater and several other American countries are actively exploring for oil. Here the pictures were primarily of geographical rather than geological interest. Tidewater began negotiations and geological work in Turkey late in 1955 and now holds licenses in several different districts. Both surface geology and geophysical techniques have been employed in the exploration program. Tidewater's first drilling effort has recently been abandoned and the company is now drilling its second test.

The third group of slides was taken in various parts of Lebanon and included scenes of the ancient temple of Baalbek and the city of Byblos, one of the oldest continuously inhabited cities in the world. Although Tidewater is not engaged in exploration in Lebanon, most of their personnel traveling to and from the various active areas pass through the city of Beirut, an inviting stopping-place for travelers and the crossroad of the Middle East.

## PERSONAL ITEMS

Tom O'Neill, Shell geologist from Long Beach, has been transferred to Ventura with a promotion to District Geologist of the Ventura District.

Roy Turner, Intex in Ventura, will be out of the state for several weeks doing field work.

Most of Shell's Ventura exploration department spent Washington's birthday weekend at Ensenada. They were able to keep fishing at a minimum due to rain, but such rainy day activities as beer, skin shows, tequila, etc. etc.. kept the boys in trouble.

Adrian Maaskant has been transferred from Shell's Ventura office to Sacramento. He is replaced by Tom O'Neill, formerly of Long Beach.

Howard Level, geologist with Union in Santa Paula, is currently in San Diego cheating the government out of two weeks pay as a U.S.N.R. officer.

Lee Rhodes is with John Schroeter in Ventura after a stint with Cal Well Logging in Columbia.

Lowell Redwine, Honolulu in Santa Barbara, recently tried to obtain prices on current models of paralex ladders for photo geological use. He sent several letters to government agencies receiving this reply from one of them. "Your letter regarding paralex ladders has been referred to us for reply. Our laboratory is a research organization doing research on wood and wood base materials; we do not manufacture items for sale nor do we generally maintain current prices. We have done considerable work on wood ladders and their use but are not familiar with the ladder you refer to as paralex ladder. If any of our publications relating to ladder and ladder use would be helpful we would be glad to send you copies. We regret we cannot be more helpful."

We understand that John Castano has turned antisocial and has been harboring a pet skunk in his private building in back of Shell's main office in Bakersfield. The situation went from bad to worse when it came time to fumigate. It seems that the combined smell of six different deodorants was more potent than the skunk's.

Grant Valentine, District Geologist, Shell, Olympia, has been helping his son, Brent (age 12), construct a 2/3-scale 1906 Model N Ford. This snappy number has a convertible top, and the powerful 2 H.P. engine propels the vehicle up to 15 m.p.h. No assemble-line production is planned.

Fellow Olympians are cautioned about bowling with Don Ford, State of Washington, Natural Resources, as he was observed taking bowling lessons at the Tumwater Lanes.

The Standard Seattle bunch has reached a new low for activities this winter - all except George Webb, who claims there is more sunshine in Anchorage than in Seattle.

Several paleontologists and geologists, who were scattered to the four winds during Superior's recent storm have now settled down again in the following locations: Bill Binkley is transferring to Alaska with Superior; Al Almgren went to Union's lab in Bakersfield; "Nick" Nicholeris is moving to Denver for Superior; Bob Hutcheson is still working for Superior in Bakersfield on a consulting basis; Dave Day has joined Kern County Land Company in Bakersfield; and Bill Madill is recovering from a recent back operation.

All the brass of the Pacific Coast Section S.E.P.M. is situated in Union's paleo lab in Bakersfield now that A.A. Almgren, Secretary-Treasurer, has joined Chas. W. Cary, President. If this doesn't result in better management of Society affairs, it will, at least, concentrate the confusion.

Ed Marks, paleontologist for Union, has recently been transferred from Bakersfield to Houston.

Dave Costello, recently resigned from Tidewater to join the F.J. Costello insurance firm in San Francisco. All these years in the oil business trying to sell plays to management should have taught him a great deal about persuasion and patience that will be useful in his new venture. We wonder if he'll come up with a dry hole insurance for unlucky geologists!

Jack Kappeler, a recent Tidewater transferee from Ventura, has already established his reputation in Bakersfield. As Jack tells it, he was checking out of his motel and went back to his room to search for possible forgotten baggage. He opened the door of what he thought was his room, and lo and behold! there was a piece of nude baggage prancing around the room looking at herself in the mirror and singing soprano at the top of her voice. Needless to say, Jack displayed his usual savoir-faire by stumbling over his protruding eyeballs and making some witty remark such as "I think I have the wrong room". Subsequent events appear quite cloudy and will not be reported because the witness is considered unreliable under emotional stress! Shortly after this event, Jack went on an ulcer diet and his sole nourishment now consists of 6 oz. of milk every three hours.

Jack Gilboe, who suffered a stroke about a year ago, has recently retired from Shell in Bakersfield. Jack felt well enough to host a very large group of Shell employees at his home on the occasion of his retirement.

Frank Exum, Jerry Williams and Rich Rowland of the Ohio Oil Company have just returned from a week's vacation at Aspen, Colo. where they were introduced to the wonders of Rocky Mountain stratigraphy the hard way -- on skis.



Another geologist slipped from the dwindling ranks of bachelorhood when Don Sanders, with Continental in Bakersfield, married the former Miss Shirley Peters of Bakersfield.

The Standard Oilers basketball team, managed by Doug Waterman, finished in the No. 2 spot in the Bakersfield City B League. We weren't able to determine if more than two teams were active in the league, however.

Tom Rodgers has transferred from Standard's Salt Lake City office to Bakersfield.

Standard's Exploration Department bowlers, led by high average men Keith Berry and Bert Hale, have placed three teams in the Bakersfield City Beverage League. The Oilers, Explorers and Turkeys finished 3rd, 5th and 13th, respectively. How an oil company got into the Beverage League is still a matter of conjecture!

Bob Orwig has been transferred from Bakersfield to General Petroleum's office in Los Angeles. His new title is General Superintendent of Exploration.

Bill Bedford, with The Texas Company, has further endeared himself in the hearts of some of his good friends in Bakersfield by sending out very nasty valentines. We understand that Don Frames, of General Petroleum, is so mad that he's not going to ask Bill to dance around the May pole this year!

Don Barrett and family, General Petroleum in Rock Springs, Wyoming, formerly of General Petroleum, Sacramento, were here recently visiting with old acquaintances.

Fritz Loomis, District Geologist with Shell Oil Company in Sacramento, is to transfer to their Area Office in Los Angeles. Adrain Maaskant of Ventura will take his place.

Transfers can be a headache. We have learned John Frick, District Geologist in Chico, recently transferred to Los Angeles, and in making his final trip to Los Angeles with his family in his personal car, arrived as far south as Tulare, where his car threw a rod.

Harry Porter, an engineer with General Petroleum in Taft, will transfer to their Willows office. There he will join Will Griffin, G.P.-Willows engineer for several years.

Must be something attractive about new sports cars. Tom Wooten, Geologist with Shell Oil, recently bought a new M.G., and is now reconditioning it to suit his fancy. Don Gladden, Division Landman for Western Gulf, has a new Impala Chevrolet convertible, and likes it as is. Who is next?

Bob Lindbloom, Geologist with Standard Oil Company in Bakersfield, formerly in Sacramento with the same company, was through the Capital City, and the grapevine has it he was there bidding goodbye to his girl friends before isolating himself in his new post in Alaska.

Dee Trent, with Amerada in Los Angeles, is to spend a few weeks skiing in Austria, and will follow-up with visits to Norway and Denmark, much to the envy of his skiing acquaintances.

Paul H. Dudley, Consultant, is leaving February 12th for Australia on a consulting job for Victorian Oil, N.L. The work involves detailed geologic appraisal of a 640,000-acre block that is in the southeastern part of the continent and in the State of Victoria.

Marshall T. Huntting, President, Northwest Geological Society, is back at the daily grind after a quick trip to the hospital to get rid of a balky appendix.

The Shell Northwest Division championship dominoe tournament is well underway. John Griffiths has set a new record for low scores - must be the result of poor Ventura training.

Jerry Herndon, Senior Draftsman Shell, Olympia, bounced his TR-3 out of the ruts in the snow and into the ditch. The car flipped and trapped Jerry inside. Damage - one bashed-in front end and one stiff neck. Jerry says he will be glad to write an unsolicited testimonial for the use of safety belts.

The Shell Olympia office has two housewarming parties to look forward to. Hank Tomko, geologist, and Ed Harris, draftsman, have both signed on the dotted line.

Jim Hamill, in charge of Texaco's Los Angeles paleo lab, has elected to take early retirement, effective March 1st, following 30 years of service with The Texas Company.

George Wheatley and Warren Hagist, with Superior in Los Angeles, are joining the cheechakos heading north to Alaska. Hal Nelson and Al Rupprecht are being transferred to Calgary. The out-of-town newspaper stands in Los Angeles report a run on the Calgary Herald. Maria Spencer and John Kirkpatrick will be handling Superior's geological operations in the Los Angeles and Ventura Basins.

Dean Morgridge, with Humble in Los Angeles, has been transferred to the Anchorage office. Dean just completed escrow on a house in Temple City, so if anyone wants a house in that area, let Dean know.

Jack Haight, Paul Dudley, Jr., Wayne Jones, and John Elliott (all with Humble in Los Angeles) have returned from a "charm school" session in Houston, on the fundamentals of supervision.

H.D. Hobson has been named Manager of Exploration for General Petroleum Corporation succeeding V.H. King, who becomes Exploration Manager of Mobil International Oil Co. in New York.

Latest word from General Petroleum's Santa Fe Springs Athletic Club is that activities may be further curtailed as a result of a back injury sustained by Q. Moore while reaching for a spinning ping pong ball. Q. joins Ed Goodrich, on the disabled list, who sustained a crippling ankle injury at volleyball but is now getting around sans cast and crutches.

Someone who looks a good deal like George Brown with The Ohio Oil Co. at Sacramento was seen sitting on the edge of his seat and cheering the girls at a local burlesque house.

#### NURSERY ITEMS

Wally and Mary Fung, Geologist with Exploration Logging in Sacramento are happy to announce the arrival of a new baby girl. Her name is Laura, and she was born on February 16th, and weighed in at 7# 10 oz.

Word has been received that John and Edna Stoddard have a new girl in the family. Diane Lea was born on January 22 and weighed in at 6 lbs. 10 oz. John was formerly with Standard in Bakersfield and is now in Denver with The Fremont Petroleum Company.

Martin and Kathie Reiter, with Shell in Bakersfield, recently had their first baby. Susan Ann weighed an even 7 lbs. at birth.

Frank and Dorothy Weagant have adopted a brand new baby boy. Mark Edwin was born on December 30 of last year. Frank is with Franco Western in Bakersfield.

Ray Waggoner and wife Dorothy, Texas Company, are the proud parents of a 10 pound baby girl, Mary Ann, who arrived on February 22. The Waggoner's already have two boys.

Jim Saunders and wife, Tidewater, Los Angeles, welcomed 7 pound 6 1/2 ounce Annette Louise Saunders at 5:08 PM on Friday the 13th of February.

Frank Palen and wife Rita, Humble, Los Angeles, added a second girl to their family. Mary Ellen weighed 8 pounds 9 ounces, and arrived on January 22nd.

Mr. and Mrs. Les Schultz, General Petroleum in Ventura, have welcomed a new boy into their household. Eric William was born on February 20th, and weighed 8 lbs. 2 oz.

John Wilson and wife, Standard in Ventura, had their third child who weighed in at 9 lb. 9 oz. on January 29th, which happens to be Mrs. Wilson's birthday.

## CALENDAR

March 9, 1959: Monday, 12 Noon, AAPG Distinguished Lecturer Luncheon Meeting, Roger Young Auditorium, 936 W. Washington Blvd., Los Angeles, "The Future of American Petroleum Geology" Dr. Frank B. Conselman, Abilene, Texas.

March 12, 1959: Thursday, 7:30 P.M., M. King Hubbert of Shell Development Company, Houston, Texas, will speak on "Role of Fluid Pressure in Mechanics of Overthrust Faulting" at Coast Geological Society monthly dinner meeting, at the Miramar Hotel, Santa Barbara.

March 13, 1959: Friday, 6:15 PM, Northwest Geological Society, Ladies Night, dinner at the New Yorker, Tacoma. College of Puget Sound, 8:00 PM, film on the 1955 eruption of Kilauea; lecture by Gordon A. Macdonald, former Director, U.S.G.S. Hawaiian Volcanic Observatory.

March 17, 1959: Tuesday, 8:00 PM, Los Angeles Basin Chapter of API. "Fire Flooding", Dr. A.J. Ramey, General Petroleum Corp. A sound and color movie on sport fishing in Alaska entitled "Fish On" will also be presented. Shell Recreation Bldg., 2080 Obispo Avenue, Long Beach.

March 30, 1959: Monday, 12 Noon, AIME, Petroleum Forum, Roger Young Auditorium, 936 W. Washington Blvd., Los Angeles. "How to Make Important Career Decisions" Mr. Thomas B. Birch, Hergenrather Associates.

April 1, 1959: Wednesday, 6:30 PM, San Joaquin Geological Society Dinner Meeting, El Tejon Hotel, Bakersfield, "Tectonic Control of Microfacies", Dr. Albert V. Carozzi, University of Illinois.

April 2, 1959: Thursday, 7:30 P.M., monthly dinner meeting of Coast Geological Society, Miramar Hotel, Santa Barbara. Dr. Albert V. Carozzi, Associate Professor of Geology at the University of Illinois and A.A.P.G. distinguished lecturer will speak on "Tectonic Control of Sedimentation".

April 6, 1959: Monday, 7:30 PM, Bakersfield College Paleontology Biostratigraphy Seminar, Room 56, Science and Engineering Bldg. "History of Eocene Stratigraphy" Frank Tolman, Richfield Oil Corp., Los Angeles.

April 8, 1959: Wednesday, 6:15 PM, Branner Club Dinner meeting, Athenaeum, California Institute of Technology, Pasadena, "Lineations on the Sea Floor off Western United States", by H.W. Menard, Scripps Institute of Oceanography

April 14, 1959: Tuesday, 12 Noon, AAPG Distinguished Lecturer Luncheon Meeting, Roger Young Auditorium, 936 W. Washington Blvd., Los Angeles, "Crustal Structures of the Earth as Revealed by Gravity and Seismic Studies with Isostatic Implications", Prof. George P. Wollard, University of Wisconsin.

April 14, 1959: Tuesday, 7:30 PM, Sacramento Geological Society --- Meeting place to be announced. "Glaciology in the Canadian Rockies", Dr. Don O. Emerson, University of California, Davis.

April 24-25, 1959: Friday and Saturday. Pacific Section, SEPM, Annual Spring Field Trip, Boulder Creek area, Santa Cruz Mountains, California.

## BIBLIOGRAPHY OF RECENT PUBLICATIONS

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Professional Paper 305-F: Test well, Meade Kaolak area, Alaska, by F.R. Collins, with Micro-paleontology of Meade test well 1 and Kolok test well 1, northern Alaska, by H.R. Bergquist.....\$1.25

Bulletin 1028-H:      Geology of Little  
                          Sitkin Island, Alaska,  
                          by G.L. Snyder...\$1.00

Bulletin 1052-E:      Physical behavior and  
                          geologic control of  
                          radon in mountain  
                          streams, by A.S.  
                          Rogers.....\$.40

Bulletin 1058-D:      Geology and coal  
                          resources of the Little  
                          Susitna District,  
                          Matanuska Coal Field,  
                          Alaska, by Farrel F.  
                          Barnes and Danile  
                          Sokol.....\$1.00

Bulletin 1074-B:      Reconnaissance for  
                          radio active minerals  
                          in Washington, Idaho,  
                          and western Montana,  
                          by T.L. Weis, F.C.  
                          Armstrong, and Samuel  
                          Rosenblum. 1952-1955\$.35

Geological Society of America

Special Paper 65:      The floors of the oceans.  
                          1: The North Atlantic,  
                          by B.C. Heezen,  
                          Marie Tharp, M.W.  
                          Ewing. March, 1959

Oil and Gas Journal

Paleozoic oil prospects look good in eastern  
 Nevada, by E.G. Johnson. Vol. 57, No. 7, Feb. 9,  
 1959.

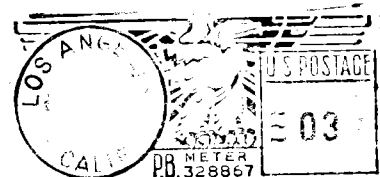
PACIFIC PETROLEUM GEOLOGIST  
 PACIFIC SECTION, A.A.P.G.  
 799 SUBWAY TERMINAL BLDG.  
 LOS ANGELES 13, CALIFORNIA

Vol. 13

No. 3

Richard L. Hester  
 Signal Oil & Gas Co.  
 1025 Petroleum Club Bldg.  
 Denver, Colorado

BS



# PACIFIC PETROLEUM GEOLOGIST

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

### ASSOCIATION ACTIVITIES

Vol. 13

April, 1959

No. 4

#### LOS ANGELES GEOLOGICAL FORUM

Members and guests attending the March Forum meeting held in the Union Oil Auditorium enjoyed two well-illustrated talks concerned with turbidity current deposits. The modern transport of sand in a submarine canyon was presented by T. K. Chamberlain of Scripps Institute of Oceanography. Harold H. Sullwold, Jr., consultant, described features of the "fossil" Tarzana Fan exposed in the Santa Monica Mountains.

Mr. Chamberlain's talk, "Mass Sediment Transport in Submarine Canyons", described the accumulation of sand in the head of La Jolla Canyon and its disappearance down-slope toward the San Diego Trough. Detailed underwater observations of Scripps Canyon, the north branch of La Jolla Canyon, were made down to depths of 180 feet with the use of underwater breathing apparatus. Scripps Canyon heads in two principal branches located a few hundred feet offshore from land canyons.

An underwater movie showed the ripple-marked sand bottom extending out to the canyon heads. The canyon is incised into flat-lying beds of Eocene sandstone and siltstone. A constricted zone with sheer walls occurs near the canyon heads. Masses of brown kelp lodge in these "narrows" and form a barricade behind which sand collects. The canyon floor is free from encrusting organic material and is sometimes smooth and polished, where not covered with sand. The upper portion of the walls are inhabited by crab and lobster populations. Periodically large blocks break away from the canyon walls and fall to the canyon floor.

A contour map on the bedrock surface made from soundings and jetting operations in nearshore areas showed that the canyon continues shoreward beneath an overburden of fine and medium grained sand. The source of sand is principally from streams to the north. Longshore currents transport the sand southerly along the coast and, during the fall and winter, sand is deposited along the beach opposite the canyon heads. A longitudinal section drawn down the axis of the canyon showed that movement of sand from the beach out into the canyon heads occurred after a storm last winter. The sand thus collected behind the kelp dam has considerable void space compared to nearshore deposits and is similar to quick sand. It contains rounded pebbles up to 10 cm. in diameter and angular rock fragments from the canyon walls. Following an earthquake, a few weeks later, a significant loss of sand was recorded from the upper reaches of the canyon. Losses as great as 30 vertical feet have been recorded after these slides. The triggering mechanism may be earthquakes or decomposition and failure of the kelp dam.

Changes in bottom configuration measured by F. P. Shepard over a period of eight years indicate

that sand removal, measurable in vertical footage above the bedrock surface, is cyclic. Slides occur during the winter months. Large slides occur in intervals of approximately two years.

A diagram depicting the nearshore sand regimen illustrated that calculated yearly additions by streams to the system appear to be balanced by sand loss down the canyon and out into the San Diego trough. The southern branch of La Jolla Canyon is sand starved, indicating that longshore littoral drift of sand is effectively pirated by the northern branch of Scripps Canyon. Therefore, after determining the rate of longshore sand transportation to the north and to the south of a submarine canyon, the difference must indicate the amount of sediment trapped by the canyon and lost from the system to the adjoining basinal floor.

The second paper was entitled, "The Tarzana Fan, a Deep Submarine Delta of Late Miocene Age," and was concerned with the outcrop of the Modelo formation on the north flank of the Santa Monica Mountains. Mr. Sullwold showed slides illustrating many syngenetic sedimentary structures that are considered to be characteristic of turbidity currents deposits (turbidites) and presented laboratory results showing that the sands are poorly sorted, graded, have an exceedingly high feldspar content, and have angular grains. Furthermore, foraminifera in the enclosing shales suggest that deposition took place in water depths of about 3000 feet.

Some of the syngenetic sedimentary structures are oriented by the depositing current. Cross-bedding proved to be the most useful oriented feature, and current direction was established on 300 different beds. The results showed the currents emanating from a point source in the vicinity of Tarzana. Furthermore, the entire body was shown to be lens-shaped in cross-section. He concluded that this rapid dumping in deep water from a point source must have been in the form of a delta at the mouth of a submarine canyon. Mineralogy of the sand grains and pebbles was compared to possible crystalline bed-rock source areas and the most probable source area was selected in the San Gabriel Mountains east of the anorthosite body. The exact location of the submarine canyon under the San Fernando Valley has not yet been verified.

Sullwold pointed out that very little work of this sort has been published in California and he feels that by proper recognition and use of turbidity current deposits the paleogeography of California can be worked out in much finer detail, resulting in greater efficiency in oil exploration. The talk was the summary of a Ph. D. dissertation at U.C.L.A. and has been submitted to the A.A.P.G. Bulletin for publication. A brief preliminary is also included in the 1958 A.A.P.G. Guidebook of the Los Angeles and Ventura Regions.

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PACIFIC PETROLEUM GEOLOGIST

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NEXT DEADLINE APRIL 29, 1959

NORTHWEST GEOLOGICAL SOCIETY

The Northwest Geological Society ladies night and dinner meeting March 13 was held at the New Yorker Restaurant, Tacoma. After dinner the group went to the auditorium of the College of Puget Sound to enjoy a film on the 1955 eruption of Kilauea; Gordon A. Macdonald, former Director, U.S.G.S. Hawaiian Volcanic Observatory, narrated the film.

At the observatory, continuous seismic recording indicates any increased seismic activity. A pending eruption is indicated by an increase of seismic activity, and tremors increase above normal to as high as 700-800 per day. The possible eruption area is determined, and the local inhabitants are moved out. Surface cracks appear, followed by steam and then superheated gases.

The gas increases in volume and is followed by ejecta and then lava. The lavas from the various fissures coalesce and form lava flows. The leading edge of the flow progresses downhill at a 2-3 mph rate, but the fluid lava feeding the flow may reach a speed of 30 mph on steep slopes.

The members and wives, and/or girl friends, thoroughly enjoyed the spectacular color movies of this "quiet" eruption, and the excellent narration by Mr. Macdonald gave everyone an "on the spot" impression.

NOTICE

The Fourth Annual Mining, Minerals and Petroleum Conference will be held in Anchorage, April 3, 4, and 5. The conference will be sponsored by the Alaska and Southwest Alaska Section of the AIME and the Yukon Section of the Canadian Institute of Mining and Metallurgy. Many interesting papers concerning geology, mining and the petroleum industry will be presented. Mr. Michel T. Halbouty, Consulting Geologist, Petroleum Engineer, Independent Producer and Operator will be Guest of Honor at the Main banquet held Saturday night, April 5.

SAN JOAQUIN GEOLOGICAL SOCIETY

The mysterious Huey Ban, who appeared on the announcement cards as the featured speaker of February's dinner meeting, turned out to be none other than Tennant Brooks with Ferguson and Bosworth in Bakersfield. Tennant gave an interesting, beautifully illustrated travelogue on his travels through Japan, Hong Kong and Thailand, which he made during the course of his consulting work for the Thailand government. Since this was ladies' night, the colored slides showing his collection of oriental silk, statuary and other object d'art undoubtedly provoked considerable envy in the audience. Tennant explained that the Thailanders gave him the name Huey Ban for reasons that become obvious when the translation is known .... it means babbling brooks!

The meeting also had political overtones, as Glenn Ferguson brought up the subject of the proposed State severance tax on all oil produced in California. A motion was made, seconded and unanimously passed that a petition be drafted expressing opposition to what was felt to be an unfair and very harmful tax measure. The petition was made up and circulated through the various oil company offices in the area for signatures.

NEW PALEONTOLOGY TEXTBOOK

Dr. Ruben A. Stirton, Director of the Museum of Paleontology at the University of California, has written a general introductory text in Paleontology, "TIME, LIFE AND MAN The Fossil Record", John Wiley & Sons, New York. The 559 page book covers the history of Paleontology, the evolution of life from its inception in Precambrian time, and presents a simplified classification of fossil plants, vertebrates, and invertebrates. Dr. Stirton has led paleontologic explorations into Central and South America and Australia and has lectured in the United States, Europe, and India.

COAST GEOLOGICAL SOCIETY

Dr. King Hubbert of Shell Development Company, Houston, Texas, spoke at the March meeting of the Coast Geological Society. Dr. Hubbert's paper, "Role of Fluid Pressure in Mechanics of Overthrust Faulting" appears in the February, 1959, Bulletin of the Geological Society of America.

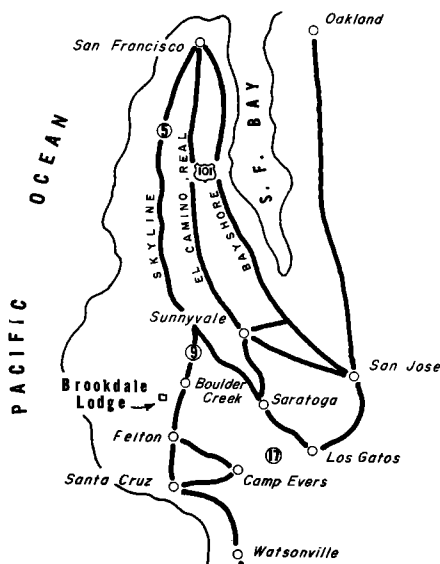
Since their earliest recognition, the existence of large overthrusts has presented a mechanical paradox that has never been satisfactorily resolved. When the coefficient of friction of rock on rock and the maximum stress which rock can sustain without failure are considered, the pushing of a thrust block 30 km. or more in length along a horizontal surface appears mechanically impossible.

It is therefore necessary to somehow reduce the frictional resistance to sliding the upper fault block over the lower to a small fraction of that which was previously assumed.

This is done by a consideration of the influence of the pressure of interstitial fluids upon the effective stresses in rocks. Hence, given sufficiently high fluid pressures, very much longer fault blocks could be pushed over a nearly horizontal surface, or blocks under their own weight could slide down very much gentler slopes than otherwise would be possible. That the requisite pressures actually do exist is attested by great pressures being observed in deep oil wells in various parts of the world.

The Annual Pacific Coast Section S.E.P.M. Spring Dinner Meeting and Field Trip will be held April 24-25, 1959, in the Big Basin area, Santa Cruz Mountains, California. The Dinner Meeting will be Friday, April 24, 6:30 P.M. in the world-famous Brookdale Lodge. Following the dinner, Earl Brabb of Stanford University will talk on the Stratigraphy, Paleontology and Structure of the Big Basin Area.

The Field Trip is Saturday, April 25. The caravan will assemble at 7:45 A.M. and will depart at 8:00 A.M. sharp. The Field Trip, covering the Tertiary section of the area, will be led by Earl Brabb and will take five hours and 15 minutes. Trip will be conducted rain or shine.



Brookdale Lodge is located on State Highway 9, midway between Ben Lomond and Boulder Creek, 10 miles south of Big Basin State Park, 12 miles north of Santa Cruz, and 68 miles from San Francisco, via Skyline or Santa Cruz Highway. The Lodge is famous for the natural brook, complete with trout, which runs through the glass enclosed dining room. Each person must make arrangements for his own accommodations. Send \$5.00 deposit (per person) to Brookdale Lodge, Brookdale, California, attention "S.E.P.M. Lodging" not later than April 3. Indicate if you desire to share a room. In addition, notify Ted Bergen, Shell Oil Co., P.O. Box 999, Bakersfield, Calif., not later than April 10, of your intentions for dinner reservations, and choose Roast Beef or Broiled Trout at an approximate cost of \$3.50.

#### SAN JOAQUIN VALLEY FIELD TRIP

The San Joaquin Geological Society is planning a field trip through the Chico Martinez Tertiary section on the west side of the San Joaquin Valley, Saturday, May 9th. The Chico Martinez Creek contains a beautifully exposed and easily accessible section of the upper, middle and lower Miocene producing beds of the San Joaquin Valley. The conducted portion of the tour will end adjacent to the type Zemorrian section in Zemorra Creek and near the top of the upper Eocene Point of Rocks section, which may also be seen and sampled, if one desires.

The syllabus committee of Stan Beck, Bob Ortalda and Jack Bainton of Standard and Ed Stinemeyer of Shell promise an excellent and detailed guide book which will be available at approximately \$1.50. Free beer and soft drinks will be included in the price, with participants asked to bring their own box lunch.

Announcement cards are being sent out with details regarding starting time and place.

The Annual Spring Meeting of the Pacific Coast Section of the Society of Exploration Geophysicists will be held in Bakersfield, California, April 14, 1959. The Technical session will begin at 10:00 A.M. in the Fiesta Room of the Hacienda Motel, South Highway 99 at Terrace Way. Reservations for the noon luncheon and the joint dinner with the San Joaquin Geological Society are requested. The program is as follows:

- 10:00 A.M. The Prediction of Lightning: Its Relation to Seismic Operations by Dr. Paul MacCready, Meteorological Research Inc., Pasadena, Cal.
- 11:00 A.M. Some Preliminary Results of a Gravity Survey in the Copper River Basin, Alaska by David F. Barns, Geophysicist, U.S.G.S. Menlo Park, Calif.
- 12:00 Informal luncheon
- 2:00 P.M. Faulting in the Ocean Floor off the California Coast as Revealed by Magnetic and Topographic Studies by H. W. Menard, Marine Geologist, Scripps Institute of Oceanography, La Jolla, Calif.
- 2:30 P.M. Techniques for Improving Seismic Interpretations by R. S. Finn and R. W. Mossman (Mr. Mossman will present paper) Seismography Service Corp., Tulsa, Oklahoma
- 3:00 P.M. Coffee Break
- 3:30 P.M. Proton Free Precession Magnetometers by Lee Langan, Varian Associates, Palo Alto, Calif.
- 4:00 P.M. Review of Turkish Geological Exploration by Dr. Ekrem Goksu, Assistant Professor of Geology, Technical University, Istanbul, Turkey, presently with Western Gulf Oil Co. on a National Academy of Science fellowship.
- 6:30 P.M. Social Hour
- 7:30 P.M. Dinner - Jointly with San Joaquin Geological Society
- 8:30 P.M. Crustal Structure of the Earth as Revealed by Gravity and Seismic Studies, with Isostatic Implications by Dr. George P. Wollard, University of Wisconsin, AAPG-SEG Distinguished Lecturer

#### ADDITIONAL OIL COUNTRY TAXES ?

A proposed 2% severance tax on oil and gas produced in California was introduced February 4, 1959 to the lower legislative house in Sacramento as Assembly Bill 1174.

Many groups in various sections of the State have gone on record as strongly opposing such a tax. The San Joaquin Geological Society formed a resolution which was approved by the membership, and forwarded to Sacramento with 150 signatures.

The Executive Committee, Pacific Section of the A.A.P.G., in a regular meeting on March 26, 1959, unanimously adopted and will forward the following resolution to Sacramento:

WHEREAS, there has been introduced into the California State Legislature a bill calling for the enactment of a severance tax at a rate of two percent (2%) on all oil and gas produced in the State of California, and,

WHEREAS, a severance tax of this nature will fail in its primary purpose of raising additional revenue for the State of California because:

1. The amount of money collected by this tax will necessarily be subtracted in part from the exploratory program of all oil producing companies doing business in the State of California.
2. Since 1954, exploration for new reserves in California has been reduced approximately twenty-five percent (25%) (from 632 exploratory wells in 1954 to 476 in 1958) due, among other things, to these factors:
  - i) Increasing depths which must be drilled to find new reserves. In 1954, in the San Joaquin - Salinas - Sacramento valley areas, exploratory wells which discovered new production were drilled to an average depth of about 4600 feet. In 1958, this average depth had increased to about 8800 feet. At the same time, proven acreage per new pool and field discovery, where found, has decreased from about 120 acres per discovery in 1954 to about 70 acres in 1958.
  - ii) Increasing exploration and drilling costs. These costs are squeezing many operators from the California exploration scene, with the consequence that other States and foreign areas are appearing more inviting. A severance tax at this time on State oil and gas production could hardly be more inappropriately timed to further reduce California's lagging oil and gas reserves.
3. In the absence of new discoveries, normal depletion will take its toll, and the amount of money anticipated from this tax will be reduced proportionately each year.
4. The tax base for all industries dependent upon oil exploration will necessarily suffer as exploration is further curtailed.
5. The early abandonment of marginal producing leases operating at a bare minimum of profit will become an economic necessity, and the tax derived from this source will be lost completely. Incidentally, much of this marginal property is operated by many "old-timers" who might otherwise be unable to find a source of livelihood.

WHEREAS, a severance tax on oil and gas would be self defeating and would adversely affect the economy of the State of California for the reasons listed above,

NOW, THEREFORE, be it resolved that the Executive Committee, Pacific Section of the American Association of Petroleum Geologists, after careful study of all the problems involved, does hereby go on record opposing the enactment of Assembly Bill 1174 or any legislation which might otherwise impose a severance tax on oil and gas produced within the State of California.

The Executive Committee, Pacific Section of the American Association of Petroleum Geologists, being comprised of the undersigned individuals and having

July met at the call of the President of said Section on March 26, 1959, at which meeting a quorum was present, did unanimously adopt the foregoing Resolution.

In view of this proposed 2 % severance tax and the adverse effects such a tax could have on exploration for future reserves in the State of California, it is urgently requested that all members of the Pacific Section consider writing individually a letter of protest. Address these letters to your Assemblyman and your State Senator.

#### GEOSCIENCE ABSTRACTS

In January 1959 the American Geological Institute began publication of a new abstract journal, GeoScience Abstracts, replacing Geological Abstracts which had been published by the Geological Society of America for the Member Societies of the AGI. The reorganized and expanded journal is now being published monthly. It is organized into fifteen subject sections, with monthly author index and annual subject index. Coverage of GeoScience Abstracts will be as complete as possible for all North American literature in geology including geologic maps and guidebooks.

#### Specifications for GeoScience Abstracts

##### General Specifications

The abstract should be a non-critical, informative condensation of the essential parts of the paper, not merely a list of the subjects covered. It should be suitable for publication apart from the paper, and specific reference must be made to all information suitable for indexing. The abstract should be written in complete sentences, as simply and concisely as possible, with a maximum length of 250 words.

##### Contents Outline

1. State purpose, nature and scope of paper; orient it in place and in geologic time. Do not repeat any information contained in the title, but amplify title if necessary.
2. Indicate treatment of the subject, i.e., brief, exhaustive, theoretical, etc.
3. State methods used (laboratory, field techniques); give basic principles of new methods or techniques, their uses and qualities, their degree of accuracy. Note new apparatus and its intended use.
4. Summarize major points and significant results of paper, including such information as: new or verified data of permanent value, new minerals, fossils, new classifications, distribution records, theories, interpretations, evaluations, and local stratigraphic names located in the general geologic column. Omit such items as: references, figures, tables, detailed descriptions, long lists of names, and additions, corrections, or any information not contained in original published paper.
5. Summarize conclusions and applications; show correlation with earlier work (if important).
6. Note any special features.
7. Sign abstract with full name.

##### Abbreviations (In the text of the abstract)

In general, avoid abbreviations except as follows: abbreviate or symbolize common units of weight and measure if preceded by numerical amounts, numbers (except at beginning of a sentence), chemical elements, names of months, points of compass; if a word is used repeatedly in the same abstract it should be spelled out the first time, followed immediately by the abbreviation or symbol in parentheses - thereafter use the abbreviation.

### Key Words for Indexing Purposes

If authors or editors underline, or otherwise indicate in the text of the abstract, important words for subject indexing, it will be of great help to the Abstracts editors.

### Maps

With each map add a paragraph or two (not more than 150 words) giving salient contributions made by the map to the geology of the area.

### Bibliographical Information

#### 1. Journals.

- a) Name of author (s) as it appears on title page.
- b) Full title of paper.
- c) Full name of journal (do not abbreviate).
- d) Volume and number (v. and no.); part and series (pt. and ser.)
- e) Pages (p.), inclusive.
- f) Illustrations (illus.), maps (note geol. maps). Indicate if maps or plates are in pocket or under separate cover. For important maps include the scale.
- g) Month and year (month, day and year for weekly publications). Indicate actual year of publication if this differs from the year accompanying the volume number, e.g. v. 10, no. 3, p. 220-24, Oct. 1957, pub. 1958.
- h) Bibliography or list of references. Please indicate number.

#### 2. State and Federal Survey and other serial publications.

- a-b) Same as in 1. above.
- c) Name of issuing body, e.g. Calif. Division of Mines.
- d) Name and number of publication (also v. and pt. if any), e.g. Report of Investigations, no 8; Annual Report 1954.
- e) Number of pages.
- f) Illustrations, maps, as in 1. f) above. When a map is an important part of a publication, give map scale, e.g. U.S. Geological Survey, Prof. Paper, 132 p., illus., geol. map 1:320,000, 1955.
- g) Date of publication.
- h) Bibliography as in 1. h) above.

#### 3. Books and monographs not in series.

- a-b) Same as in 1. above.
- c) Place of publication.
- d) Publisher or issuing body.
- e-h) Same as in 2. above.

#### 4. Maps.

- a-b) Same as in 1. above.
- c) Issuing body, e.g. U.S. Geological Survey.
- d) Name of series and number of map., e.g. Geologic Quadrangle Map GQ 55.
- e) Scale, e.g. 1:24,000
- f) Notes on special features such as sections, descriptive material on map sheet.
- g) Date

### A.A.P.G. SPRING PICNIC

Friday, June 5, has been selected as the date for the annual A.A.P.G. Spring Picnic according to Dick Stewart, General Chairman. Bob Nesbit, Golf Chairman, is making arrangements for the Golf Tournament to be held at the new Las Posas Country Club, on the north side of the Camarillo Hills. Watch for more details in the next issue of the P.P.G.

## PERSONAL ITEMS

Russ Simonson and Ernie Lian, Ohio Oil in Los Angeles, attended the A.A.P.G. Convention in Dallas.

Marshall W. Marrs, Continental, formerly of Olympia but now in Maracay, Venezuela, announces to one and all that he is ready to give up the joys of bachelorhood and splice the knot with Miss Mariann Taylor of Maracay.

Bob McCollom, Standard, Seattle, a recent Stanford grad, will join the local brush-beaters here in the Northwest.

Larry Kuenzi, Standard, Seattle, is afflicted with a severe case of housemaid's knee as the result of a do-it-yourself concrete sidewalk.

There is a daily luncheon dash by Messrs. Wolf, Nance, Hastings, and Kirshner, Standard, Seattle, to the nearest boat dock to examine the bargains. Anybody have a good buy on rowboats?

Dick Vivion, Humble scout, Olympia, had to make like a plumber when something went wrong at the old homestead.

Conspicuous by their absence were the Standard and Shell Seattle office personnel and their wives at the last NGS meeting. The only ladies night the society has had - - bashful, fellows?

Ralph Rudeen, Shell, Olympia, is having a difficult time giving away seven pup daws ---- says they all have papers - he writes them himself.

Howard (Twinkletoes) Kinzey, Shell, Olympia, was presented a certificate of dance accomplishment by Dick Vivion, Humble scout. Now Howard has a valid excuse to cha-cha down the hall.

J. D. Moore, Shell, Olympia, the Northwest A.A.P.G. representative, returned very tired from what he called a "reasonable" convention in Dallas, Texas.

Hal Dunn, Geologist with General Petroleum has arrived from Rock Springs to assume new duties in their Sacramento office.

The Northern California Petroleum Round Table group are now holding seminar every other week at Scheidel's just before lunch. Speakers have been George Strother, Baroid, who spoke on "Use of Drilling Fluids - Sacramento Valley", and Dick DeLapp, Schlumberger, who gave a talk on "Sonic Logging". Other interesting talks are scheduled.

John Forman, General Petroleum, has returned to Los Angeles after a brief stay in Anchorage looking for housing. John was all-shook-up after someone quoted him the monthly rent - he thought it was the purchase price.

Harold Lian, Union geologist recently transferred to Anchorage, has moved into his new home at Turnagain Bay The Sea

George Wheatly, Warren Hagist and Bill Binkley with Superior, are now attempting to take up residence in Anchorage. Warren has had his problems with housing as has every geologist transferred to Alaska.

Dean Morgridge, recently of Los Angeles, is a new addition to Humble's geologic staff in Anchorage.



There have been a lot of comings and goings out at the Standard office in Oildale lately. Jack Cunningham and Bob Lindblom are going up to Alaska to play hopscotch on the tundra for the summer. Tom Rogers and Norm Stark moved from Salt Lake to Bakersfield. John Silcox has been traded by the San Francisco club to bat at Oildale, and Chuck Fulmer was visiting from Seattle for the past few weeks.

Ray Kline, Shell in Ventura, returned from the Dallas Convention mumbling something about the women there are even better than the Texans claim.

Jeff Jefferies, with Shell in Duncanville, after several days in the hospital, is on the road to recovery at Laguna Beach. He is probably selling booze to high school students who are there on Easter vacation.

Bob "The Great Profile" Paschall received rave notices while playing there in an Ojai theater production of the Tender Trap. All he actually did was act like himself. Such prominent, out-of-town, 3rd nighters present were Bob Herron and Tennant Brooks of Bakersfield.

Ted Off, with Ojai Oil Company, seems to be spending most of his time wiring a new home and conning Oilfield Electric into supplying discount parts and instructions on do-it-yourself.

Sam Tate, Humble scout in Ventura, suggests that when prowling around somebody else's rig, always scoop samples off the shaker with your left hand as somebody may want to shake the right.

Ernie Bush, General Petroleum, is leaving Santa Maria to become a permanent resident of Alaska.

Anyone interested in free passes to the Ojai Valley Tennis Tournament, contact Don Henriksen, Richfield, and co-chairman of linesmen committee.

Recent weekend visitors to Mountain and Desert spas from Union's Santa Paula office were Ed Hall and family to the Salton Sea and southward; L. C. Lovely, Jr., skiing at Mammoth Mountain, where he can stand still in his green stretch pants looking like the fastest man on the hill; Dick Lyon and Ray Martens, both playing games in Las Vegas; Howard Level, sick at home.

Mary Blakeslee, Pam Exendine, Margaret McKenzie, and Marlene Hyde, all with Richfield in Los Angeles, recently took a geological (?) field trip in the Death Valley area. The girls are gradually recuperating from the strenuous activities, such as shuffleboard, but it is reported that the town of Shoshone will never recover and will soon be just another desert ghost town.

Mason Hill, manager of exploration, Richfield, on a recent foreign trip, had a pleasant (?) four-day rest in quarantine in Iran. It seems that Mase did not have a cholera shot and was incarcerated as a result of the oversight. (He didn't get cholera.) This item will refute all the rumors that the four days were spent in jail.

Darren Wales, with Richfield in Long Beach, will become an Alaska hand for the summer. Anyone want to rent a house in Long Beach for three months?

Bob Scott, Tidewater, Los Angeles, has been whizzing around the Newport area in a new 15 foot out-board, propelled to near sonic speeds by a 35 hp Evenrude. Only one suggestion, Bob: water skiing is commonly conducted on, rather than beneath, Balboa Bay.

John Terpening has succeeded Bob Orwig as General Petroleum's Northern Division Superintendent of Exploration in Bakersfield.

We have word that Jess Parsons' constant griping about the company car situation in the Texas Company's Bakersfield office has finally paid off. He was offered a dog team complete with sled, mukluks and ear muffs. It's difficult to imagine the utility of such a rig in Bakersfield, so we assume that a transfer must go with the offer.

Dave Shoemaker is recovering from a recent operation resulting from a severe case of valley fever. Dave is located in Bakersfield with Shell Oil Company.

All birds and flying saucers take notice and beware: Those daring young men as Shell in Bakersfield, Joe Johnson, Russ Basye, Al Marsan and Ken Moore, have banded together in a corporation called Aer-O-Sport and purchased a red and white airplane. Joe has already soloed and is prepared to challenge anything from a seagull to a jet!

The Ohio Oil Company geological staff in Bakersfield waved a fond adieu to another one of their members being transplanted to Alaska. Anchorage-bound Tom Wilson was toasted with tear-diluted hi-balls on the eve of January 23. Tom, unlike Rick Shoemaker, who recently preceded him to Alaska, stayed to help the last celebrant home from the Bakersfield Inn. Tom received going away gifts of stereo-tapes for his recorder and dog team tokens for transportation from the airport to downtown Anchorage.

Barry Koch, geophysicist with Tidewater Oil, is enjoying the climatic change that came with his recent transfer from Casper to Bakersfield.

The Tidewater Exploration Department in Bakersfield walked away with more than a fair share of the honors in the recent Western Division golf match held at Buena Vista Park Golf Course. Jack Kappeler captured the Western Division perpetual trophy with a low net of 64 and also took the low gross prize for a score of 74. John Woffington won the second low gross trophy by shooting a 78. You can sure tell where these boys spend their time when they say they are going out to check a well!

Of all the exciting places to be stuck, George Rudkin, with Ohio in Bakersfield, picked "downtown" Pumpkin Center to get stranded in a recent dust storm while on his way out to a well.

Roger Dungan and Bill Osborn, Continental geologists are now settled in Anchorage. Roger was transferred from Houston and Bill from Los Angeles. They still have cold feet, but everyone says spring is just around the corner.

Everyone in Alaska is looking forward to an active summer field season. They will probably have trouble distinguishing the helicopters from the mosquitos.

Tom McCrodin, Standard in Ventura, had such a slug and snail invasion that he was forced to borrow Minda Carson's pet duck to eat them. The duck is getting fat, the molluscan fauna is rapidly being displaced, and reportedly there is a waiting list for the duck's services.

Fred Knight, Ohio's District Geologist in Bakersfield, recently returned from a business trip to the southlands of Mississippi and Louisiana.

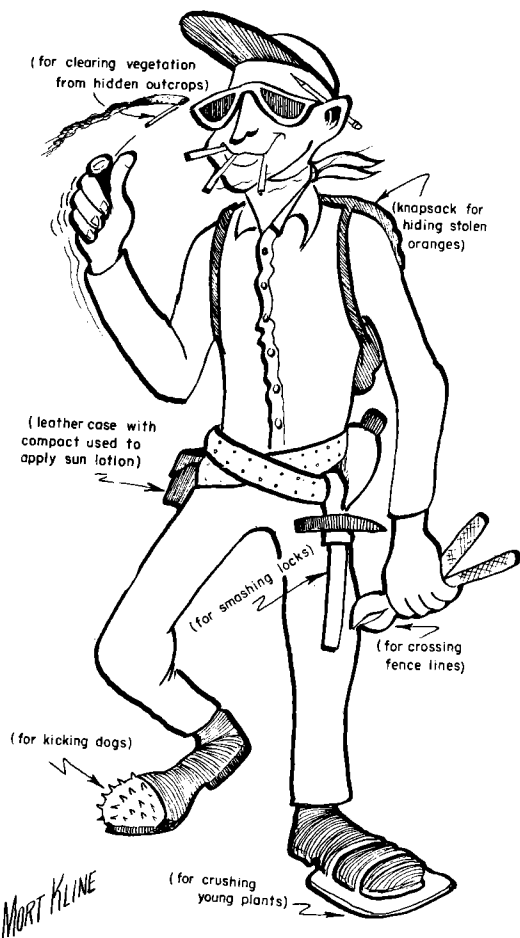
Don Sorgenfrei, geophysicist with Superior, has been transferred from Bakersfield to Calgary.

Western Gulf Oil Company in Sacramento announce some new personnel title changes: namely, Bob Reedy is now Area Exploration Manager, and Jim Wylie, Area Geologist, and Don Gladden, Area Landman.

National Association of Geology Teachers - Far Western Section, gathered at University of California, Davis Campus, March 14th, for their annual meeting. During the course of the meeting, an interesting panel discussion, "Polar and Continental Displacement", was held. Panel members consisted of several professors from over the country.

Ike Holston, Tidewater's Divisional Geologist, was recently seen in a salt mine near Grand Saline, Texas, with a gleam in his eye. Tidewater geologists may anticipate a change in work methods.

## FIELD GEOLOGIST AS SEEN BY A RANCHER



### NURSERY ITEMS

Bill McKay, with Standard in Bakersfield, and his wife, Jean, have a new baby girl in their household named Tammy Marie.

Betty and George Owens had their second child on March 14. Mark Steven weighed in at 9 lbs 2 oz. George works for Shell in Coalinga.

Norm and Marion Greenman, of Shell in Ventura, announce the arrival of Todd Martin, born March 8th, weighing 6 lb, 6 oz.

Dale and Elinore Duley had their fourth, the third girl, on March 22.

Joe and Marilyn Peline, with Humble in Los Angeles, welcomed the arrival of Jeffrey Joseph on March 15th. Jeffrey is the first child and weighed in at 7 lbs, 4 oz.

## CALENDAR

April 8, 1959: Wednesday, 6:15 P.M., Branner Club Dinner meeting, Athenaeum, California Institute of Technology, Pasadena, "Lineations on the Sea Floor off Western United States", by H. W. Menard, Scripps Institute of Oceanography.

April 13, 1959: Monday, 7:30 P.M., Coast Geological Society dinner meeting, Miramar Hotel, Santa Barbara. "Crustal Structures of the Earth as Revealed by Gravity and Seismic Studies with Isostatic Implications", Prof. George P. Wollard, University of Wisconsin.

April 14, 1959: Tuesday, 12:00 Noon, AAPG Distinguished Lecturer Luncheon Meeting, Roger Young Auditorium, 936 W. Washington Blvd., Los Angeles. "Crustal Structures of the Earth as Revealed by Gravity and Seismic Studies with Isostatic Implications" Prof. George P. Wollard, University of Wisconsin.

April 14, 1959: Tuesday, 7:30 P.M., Sacramento Geological Society --- Meeting place to be announced. "Glaciology in the Canadian Rockies" Dr. Don O. Emerson, University of California, Davis.

April 14, 1959: Tuesday, S.E.G. Meeting, Hacienda Hotel, Bakersfield. Technical papers start at 10:00 A.M. and extend through the afternoon; luncheon at 12:00 Noon, dinner meeting with AAPG-SEG Distinguished Lecturer at 7:30 P.M., "Crustal Structures of the Earth as Revealed by Gravity and Seismic Studies with Isostatic Implications", Dr. George P. Wollard, University of Wisconsin. Reservation cards being sent out to Pacific Section members SEG and AAPG.

April 24-25, 1959: Friday and Saturday. Pacific Section, SEPM, Annual Spring Field Trip, Boulder Creek area, Santa Cruz Mountains, California.

May 2-3, 1959: Annual field trip, Sacramento Geological Society. Trip is planned for above dates and to take place in the general area of Livermore, Santa Clara Valley, and Hollister.

May 4, 1959: Monday, 7:30 P.M., Bakersfield College Paleontology Biostratigraphy Seminar, Room 56, Science and Engineering Bldg., "Cretaceous Stratigraphy-Nomenclature of California", Dr. W. Popenoe, University of California, Los Angeles.

May 9, 1959: Saturday, San Joaquin Geological Society Field Trip Chico Martinez Creek area, San Joaquin Valley, California.

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| Bulletin 1052-G: | A comparison among caliper-log, gamma-ray, and other diamond drill-hole data ..\$ .15 |
| Bulletin 1058-B: | Geology and ore deposits in the Reid inlet area, Glacier Bay, Alaska.\$ .65           |

Bulletin 1088: Problems in the disposal of acid aluminum nitrate high-level radioactive waste solutions by injection into deep-lying permeable formations .....\$ .40

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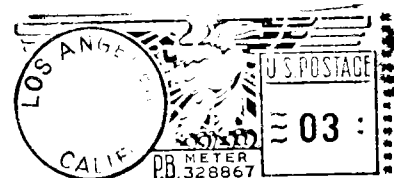
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# PACIFIC PETROLEUM GEOLOGIST

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

### ASSOCIATION ACTIVITIES

Vol. 13

#### A.A.P.G. EVENING MEETING

The featured speakers at the April A.A.P.G. evening meeting, held at the Union Oil Building, were Carl H. Savit, Western Geophysical Company of America and Roger G. Alexander, Jr. of Standard Oil of California. The history and cost of California offshore operations were emphasized by both speakers.

#### Offshore Operations - Seismograph, by Carl H. Savit.

Seismograph operations off the California coast have largely been conducted in the period 1948 to 1956 with most of the 110 or so crew months of work having been concentrated in the period 1952 to 1955. Virtually all of this work has been done using similar techniques.

Each marine crew is equipped with one master or control boat, usually 110 feet in length, which tows a pair of seismograph cables. The cables are maintained as approximately straight lines perpendicular to each other by powerful tug boats at the far ends. A fourth boat serves to carry explosives to the shooting point and to shoot the charge. Still another boat carries the State of California Fish and Game Inspector into the area of the shot.

Instruments used are especially adapted to marine operations. The seismometers which were first used were maintained in streamlined floats and suspended from gimbals so as to maintain a suitable orientation at all times. In the later stages of the work, pressure-sensitive instruments were substituted. Recording amplifiers and associated electronic equipment had to be adapted to continuous operation. Cameras and photographic procedures were modified to handle records at the rate of one every two minutes.

Problems peculiar to offshore operations and interpretation were solved one by one until today, techniques are available for obtaining reliable and complete offshore subsurface information as required by the oil industry. So much so that operators have been willing to gamble many millions of dollars on the basis of information so obtained.

Offshore seismic operations in California differ from most other offshore operations in several respects. First, by reason of California's steep dips, line and cross control must be available at each shot point, hence the two seismic instrument cables which are towed behind the control boat. One of these cables is roughly parallel to the line of survey while the other must be towed broadside.

Secondly, the State of California requires the use of black powder as an explosive. The cost of explosives is thereby increased several fold while at the same time the effectiveness of the survey is appreciably decreased. Black powder is required on the basis that the killing of even

May, 1959

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one fish as a result of seismic operations is to be avoided. The necessity of protecting fish also gives rise to the requirement that a marine biologist, representative of the State, be present on every field crew and be provided with a suitably sea-worthy and fast boat so that he may examine all areas for the presence of fish. He is empowered to halt operations at any time a dead fish is found or when he believes that there is danger of killing fish.

Interpretation and data reduction in California are complicated by the necessity of calculating the positions and orientations of the spreads, discounting the effects of reflected refractions and multiple reflections, and, of course, the complex California geology. Large crews of highly trained interpreters are absolutely necessary in order to produce adequate cross-sections on a current basis.

As a result of these conditions peculiar to California, marine seismic exploration has varied in cost over the years from \$4,000 to \$6,000 per day. Some 70 percent of these costs are attributable to boats and explosives. Changes of spread length and other factors combine to make the per-mile cost quite variable but a rough average cost of \$800 per mile of survey line is generally applicable for much of the surveying performed in the past ten years.

#### California Offshore Exploration, by Roger G. Alexander, Jr.

There has been considerable activity in the California offshore from Newport Beach on the southeast to Point Conception on the northwest. Regarding this activity, much publicity has highlighted recent drilling, possibilities for new production, and novel exploratory and development methods being used. The oil industry can take pride in its willingness to explore such an area with its inherent operational problems and high operational costs and in its being able to develop the new techniques for carrying this out.

There are, however, three elements of this activity which are not usually emphasized. First, the industry has been involved for nearly twelve years in what could be termed a "modern cycle of exploration" (that cycle involving areas, not wholly adjacent to onshore producing fields). Second, it is estimated that the industry has spent over \$150,000,000 for exploration, leasing, and initial drilling on leases obtained as the result of this modern cycle. Third, it is estimated that the expenditure of these moneys has resulted in development of leases from which less than 5,000,000 barrels of oil have been produced. An estimation of the component parts and their costs for this twelve-year exploration cycle has been made, based on estimates of industry activity and appropriate monthly costs for these activities at the time they took place.

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NEXT DEADLINE MAY 28, 1959

During the period 1948-1955, the largest bulk of the offshore seismic surveys were carried out, nearly all the punch and jet coring was completed, a start was made at rotary coring, and the first extensive bidding on State leases involving bonuses took place. (The method used in conducting the seismic surveys was described in the talk by Mr. Carl Savit.) During the years 1948-1955, it is estimated that the industry spent approximately \$9,850,000 in direct charges for these seismic operations. Using separate boats or one of those involved in the seismic surveys, the industry carried out at least 111 months of jet or punch coring for a total expenditure of \$5,600,000 (direct costs varied from \$20,000 to \$60,000 per month). In these operations, short cores of the bedrock immediately beneath the ocean bottom or beneath varying amounts of overburden were obtained by over-the-side methods. Near the end of the 1948-1955 period, the development of over-the-side rotary coring took place, and boats were put into operation using rotary rigs to obtain geologic information from greater depths than had earlier been possible. It is estimated that the industry spent \$2,600,000 during 45 months of operations (direct costs for this work were in the neighborhood of \$50,000 to \$60,000 a month). Bonuses for State leases in 1955 totaled \$5,184,000. At the end of the first part of the modern exploration cycle, therefore, it is estimated that direct costs to the industry totaled over \$22,250,000.

An accelerated period of activity took place during the years 1956-1959, during which time there was the activation of many rotary coring programs for geologic information, there was the addition of some additional seismic surveys, there was increased drilling commenced from the water and upland sites into leases obtained from 1955 on. At the end of 1956, there were ten core boats of one kind or another in operation at the same time. During this period, new designs for core boats permitted gathering geologic data from greater depths with greater safety.

This design work included both the mounting of larger rigs on larger vessels, the use by many of the practice of drilling through a well in the center of a ship, and the use of the most efficient safety equipment on the ocean floor. It is estimated that costs varied from \$50,000 to \$200,000 a month for various operations during some 221 months of industry rotary coring activity. Bonuses to the State for leases obtained during this accelerated period amounted to nearly \$63,000,000. Initial drilling into leases obtained during the latter part of our twelve-year period was commenced in earnest, and to the present time, is estimated to have cost over \$8,500,000 (monthly costs here varied from \$105,000-\$300,000 per month).

For the entire twelve-year period being considered total direct costs are estimated to be as follows:

Seismic	\$ 11,860,000
Punch and jet coring	5,620,000
Exploratory rotary coring	18,100,000
Bids for State leases	68,065,000
Initial wells and core holes on leases	8,500,000
	<u>\$112,145,000</u>

These figures do not include expenditures for skin divers, the purchase and equipping of specialized coring vessels or moneys paid for municipal leases. For these additional items, the industry has spent something in excess of \$40,000,000. Adding these moneys to those listed above as direct costs, there results a total of at least \$150,000,000

Slides were shown of the Monterey-Texas drilling island at Belmont and the Richfield drilling island at Rincon, to point out to what lengths the industry has gone to solve the need for production facilities. A movie was shown of the building and erection of the Standard-Humble platform at Summerland to further illustrate this.

In summary, time, money, and many man years have been expended by the oil industry for returns yet to be proven economic.

1960 NATIONAL COVENTION

The 1960 annual meeting of the American Association of Petroleum Geologists will be held in Atlantic City, April 25-28. According to F. J. Pettijohn, Chairman, the Technical Program Committee for the 1960 meeting is planning symposia on "Geometry of Sandstone Bodies", "Sedimentary and Tectonic Framework of the Atlantic Coastal Region" and "Frontier Regions in World Oil Exploration".

While participation in these special sessions is by invitation, volunteer papers on topics not related to the several special sessions are welcome. Papers worthy of a place on the national program should be of general character, and be concerned with principles or concepts of exploration, with regional studies, and with geologic history and its bearing on known and possible petroliferous trends. Papers on local areas or field studies are acceptable only if they can be tied to the regional picture and provide some critical insight into relationships likely to be found in other areas. The Technical Program Committee will welcome and scrutinize all contributions offered but reserves the right to refer any offering to the S.E.P.M. program committee, if this seems appropriate, or to a regional A.A.P.G. meeting. The deadline for a place on the program of the national meetings is October 1, 1959.



WILLIAM D. KLEINPELL

In Memoriam

William D. "Bill" Kleinpell died suddenly on April 21, 1959, from a heart attack, while on a fishing trip in Las Cruces, Baja, California.

Those of us who knew him well, and so many of us did, realize that Bill's passing is a great loss. But we also know that he left us just as he would have planned it - surrounded by a group of his good friends while having a lot of fun.

Bill was born in New York on April 9, 1898. His early life was spent in Chicago, and he received his primary education in the schools of that city. Following a move to California, he finished his secondary education in Los Angeles and then went on to Stanford to graduate in geology in 1921. His early professional life carried him into Mexico and South America. Later, back in California, as a member of the geological staff of the Union Oil Company, he carried out various assignments in different parts of the State and finally settled in Bakersfield late in the 1920's. He established his own office as a consulting geologist in 1931, and continued to operate in this capacity until his death.

He became a member of the Association in 1925 and devoted much of his time in recent years to its affairs - enjoying nothing better than attending the various meetings and conventions to meet and visit with his innumerable friends.

He was a member of the Board of Directors of the Kern County Land Company and of the Intex Oil Company. He also acted in an advisory capacity to several smaller companies and operators.

Bill loved to hunt, particularly dove and ducks, and on several occasions has flown home from his spot on the beach in front of the Out-rigger Club in Honolulu, to be out in the field on the opening day of the season.

Bill is survived by his lovely wife, two daughters, Jean (Mrs. Donald Horton) of Honolulu and Kaye (Mrs. Harold Rosoff) of Pasadena, his two grandchildren, Jill and Sue Rosoff, and two brothers, Robert M. ("Bob" to all of us) of Berkeley and Willke (his twin) of Pasadena.

A simple, but beautifully eloquent, memorial service was held on Saturday, April 25th, at the First Congregational Church in Bakersfield, where a host of his friends and associates gathered to bid him goodbye. He was buried in Greenlawn Cemetery, Bakersfield, California.

Yes, Bill will be missed by the entire oil fraternity, but it certainly was great to have known him.

S.E.P.M. SPRING FIELD TRIP

The annual spring field trip of the Pacific Coast Section S.E.P.M. took place as scheduled on April 24-25. The pre-field trip dinner meeting was held at the picturesque Brookdale Lodge near Boulder Creek in the heart of the Big Basin area of the Santa Cruz Mountains.

Approximately 150 members and guests were present to hear Earl Brabb, field trip leader and Stanford University student, give a very interesting after-dinner talk on "Geologic History and Oil Possibilities of the Big Basin Area of the Santa Cruz Mountains", which is summarized as follows:

"Tertiary sandstones, interbedded mudstones and organic shales reach a composite thickness of over 33,000 feet in the central part of the Santa Cruz Mountains. They were folded and faulted in at least four periods of diastrophism, resulting in numerous structural traps. A shoreline was present west of the Big Basin area during most of the early Tertiary, resulting in conditions favorable for stratigraphic traps.

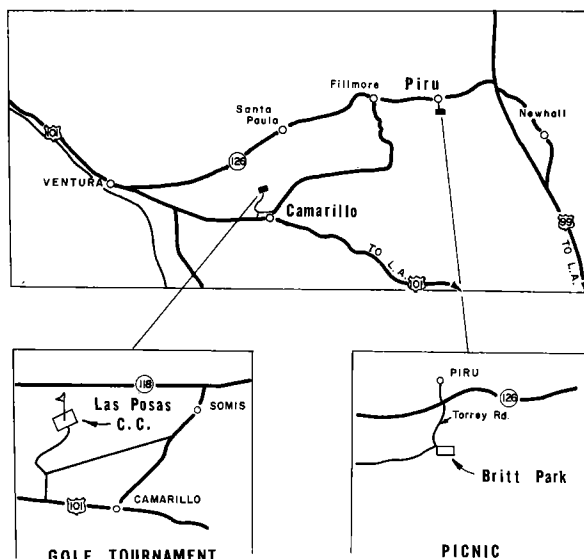
The Big Basin area is practically unexplored for oil. Two of the five wells drilled on the periphery of the region found oil shows in late Eocene rocks. Deeper horizons have never been penetrated. The best prospect is Paleocene sandstone, presumed to occur at relatively shallow depths in the northwestern part of the region. The Butano sandstone may produce oil at shallow depths in the southeastern part. The nearshore equivalents of the San Lorenzo formation of Eo-Oligocene age may contain oil beneath the cover of Monterey mudstones. The presence of bitumen in a late Miocene (Delmonian?) "Monterey" sandstone suggests that oil is trapped in structures at depth."

Charles W. Carey, S.E.P.M. President, gave thanks to all of the field trip committee, who did an excellent job on organizing the trip and preparing the guidebook. However, Chuck forgot to offer a prayer to old J. Pluvius, and J. P. took revenge the next day by letting loose with the first heavy rain storm the area has had for 2 months. Regardless of the poor weather, all 150 of the intrepid geologists and paleontologists showed up for the very interesting field tour, and refused to let the rain dampen their spirits.

The trip had a happy ending when everyone returned to the Brookdale Lodge for lunch and free beer.

Britt Park, across the Santa Clara River from Piru, will again be the scene for the AAPG Annual Picnic. The date is Friday, June 5, 1959. Come early and stay until your cash has taken its 27 1/2 % depletion.

Chairman Dick Stewart and Committee are looking forward to a dry summer, so are preparing to neutralize this dryness with something else. Stewart, reports Jack Wood, has laid in an ample supply of choice eastern beef; Jerry Long is obtaining contributions; Homer Steiny will be at his usual stand, handling ticket sales; Ralph Cahill is grounds chairman. Bob Nesbit has arranged for the golf tournament to be held at the new Las Posas Country Club in the Camarillo Hills. Dick Triplett will again prepare the salad. Doug Traxler will handle the directions, and Sam Tate will provide smokes, cards and dice. Bring your own luck.



Now let's turn back a few pages. Bob Moran and Harry Johnson had been brought up under the guise that a geologist was supposed to ferret out the contact of the Tulare and Etchegoin from horseback, and at sundown, stop, make camp, and cook for yourself, your horse and a pack animal; then crawl into your highly perfumed sleeping bag and wait for break of day, to do the same thing and start out on the contact again. The coming of the horseless carriage, when everybody drove back to the Fox Hotel and quaffed up a dram or so of XXX after their half day's field work, sort of irked Bob and Harry and so their fertile minds conceived the AAPG picnic. The theory behind this picnic was to bring your own food and drink and bedroll and simulate the early efforts of J. F. Newsom, J. P. Smith, Ray McLaughlin, Ralph Arnold, Chester Haramore and many, many others. So the start was made in the early 20's. For those of you who were just born yesterday, the 20's were characterized by home made gin, demijohns of red wine, needle beer and Scotch whiskey from the Mission that boasted access to a stable. These brandless drinks and oft times the mixture of two and sometimes more, created an atmosphere at these early outings that also belongs to the '20's. For example, the bullfight in the Lockhardt Ranch in Eaton Canyon that was staged by Bart Gillespie and Glen Ruby was a classic that would make modern day Tijuana bull fighters look like a cream puff at a garden party. Then there was the big debate up on the Henley Ranch in Sespe Creek as to whether those red outcrops were Navajo or Wingate,

no word entering into the discussion about the carboy of red grape juice standing in the middle of the party. Glen Ruby, who by this time had had an early touch of the Argentine, took it upon himself to heat up a few sheep skins on green sticks around a wind blown sage brush fire near Triunfo. This was yclept an "asada" and so confounded the name that some years later and at Pico Canyon, the Argentine government sent up some of their best men to cook a real asada and at their own expense, in order to clear the bad name that Ruby had inexpertly injected into the local literature.

On one occasion, the red wine was so effective and in such generous volume, that soldiers were going to sleep out in the sage brush. Just to show that the Morans and the Johnsons were in complete control, they authorized Duke Curtis to cover them up with blankets just where they lay. This same practice has been copied by Fidel Castro in his recent march through Cuba.

As with all customs, there has been changes. Bob Moran started bringing out frying pans, then he had some heavy wire grills made and instead of the beans being cooked in heavy pans on the Moran Family Stove, large boilers full were cooked at a regular beanery. Then the switching of locale was abandoned and the Standard Oil lease in Pico Canyon became standard practice. Slowly and year by year, water, then gas, then tables, then a barbeque pit, appeared. About this time, the Democrats got back into power, and real beer, Tom Hardy, and Three Feathers became the rock hounds' mellow. All this time a favorite sport had been galloping dominoes and draw poker, first by Coleman lanterns, then gas light at Pico Canyon and now, at Britt Park, it is real electricity. It seems too bad to see things in such first class shape. However, the writer is quite sure that a nice 10 gallon demijohn of red wine set out in the middle of the present day picnics could produce results just as of which the bards sang of yore. So show up -- June 5th and see for yourself.

H. E. Steiny

#### S.E.P.M. FALL MEETING

Plans are being made to expand the technical session of the S.E.P.M. for this year's fall convention (November 12, 13) to two one-half day meetings. A request is made for members to consider preparation of papers for this meeting. The papers should not be over 30 minutes in length.

Please send in your titles to program chairman Weldon W. Rau, U.S.G.S., 4 Homewood Pl., Menlo Park, California, as soon as possible. Abstracts should be no longer than in previous years; i.e., a maximum of about 400 words. Refer to an older program for style, etc. Aug. 1, 1959, is the deadline for abstracts.

#### ALASKAN SCIENCE CONFERENCE

The Tenth Alaskan Science Conference, organized to promote the exchange of information among investigators concerned with scientific research in Alaska and the Arctic, will be held in Juneau, Alaska, August 25-28, 1959. The Conference is sponsored by the Alaska Division of the American Association for the Advancement of Science whose purposes are: "... to further the work of scientists, to facilitate cooperation among them, to encourage research in all branches of science, basic and applied, to spread knowledge, and to foster the scientific spirit among the people of Alaska ..."

Individuals desiring to present papers should submit title to Charles V. Fulmer, Geology and Geography Section Chairman, Standard Oil Co. of California, Box 7-839, Anchorage, Alaska, before June 1, 1959. Abstracts, of approximately 250 words, should be provided by July 1. Correspondence by air mail is requested.

#### TREASURER RECOMMENDS DUES INCREASE

The following letter from Treasurer, Hal Fothergill, shows the possibility of the Pacific Section operating in the red. The Executive Committee feels it important to call to the attention of the membership inasmuch as a recommendation to increase the annual dues of the Pacific Section will be made in the near future.

#### EXPENSES

"I have just completed a study of normal income and expenses for the Pacific Section for the past five months with the following results:

Cost of printing & mailing the P.P.G.	\$ 841.47
Cost of printing & mailing notices of all meetings	550.00
Cost of Distinguished Lecturers (pro-rated)	400.00
	<u>\$1,791.47</u>
Average monthly expenses	\$ 352.30
Total estimated annual expenses (not counting July and August)	\$3,523.00

#### INCOME

Total paid up members as of May 1, 1959 (1,093 at \$2.50 each)	\$2,732.50
Estimated excess of expenses over income (deficit)	(\$ 790.50)

In view of the above, it would seem warranted to increase the annual dues of the Pacific Section from \$2.50 to \$3.50 to make the organization self-supporting with a small cushion against future inflation."

#### ANTARCTIC EXPLORER WILL LECTURE

The Reverend Daniel Linehan, S. J., internationally renowned geophysicist and explorer, will speak on "Recent Expeditions to the Antarctic" at a dinner meeting on May 27, 1959, at the Union Oil Company Center, downtown Los Angeles. A top sirloin steak dinner at \$3.00 per plate will be served, cafeteria style, at 6:30 P.M. sharp.

The A.A.P.G. Distinguished Lecturer will report on geological and geophysical work of three expeditions conducted by the United State Navy in Antarctica. The lecture, which is in part a beautifully illustrated travelogue of Antarctica, should prove to be interesting for wives and guests who are cordially invited. Father Linehan, Chairman of the Department of Geophysics at Boston College, will discuss topography, geography, climatology, fauna, equipment, construction, living conditions and methods of travel in the South Polar regions. For his work, he has been awarded the Distinguished Public Service Award, highest honor the Navy can grant a civilian.

Dr. Frank B. Conselman, Consulting Geologist from Abilene, Texas, presented a Distinguished Lecture Series talk on Monday, March 9th before a large group at Rodger Young Auditorium. The subject of Dr. Conselman's address was "The Future of American Petroleum Geology".

The profession of petroleum geology has been in a continuing status of evolution since its inception a half century ago, and many more changes are to be expected in the years to come. They will undoubtedly influence the careers of the majority of geologists now engaged in professional work, and presumably revise the orientation of newly trained personnel.

Petroleum and natural gas are unique among the mineral resources in that the various applications of the law of capture have called for a highly competitive exploratory effort. This has been responsible for a constant search for new and improved techniques, as the more obvious structural discoveries are made and the more obscure stratigraphic accumulations are sought. The abundance of geological prospects in this continent has made petroleum exploration a typically American specialty, but changing geographic factors are now coming into play, as emphasis shifts from the United States to foreign areas. These have economic, strategic, diplomatic and political ramifications, as well as personal and professional.

The future of petroleum geology is inextricably tied to the future of petroleum and natural gas as commodities. Technological changes within the industry will have a marked influence. They include refinery balance, increased use of natural gas and LPG products, fuel and power plant changes, automation, and competition from atomic and solar energy, and from hydroelectricity, chemical and "exotic" fuels, as well as others not yet apparent but inevitable.

Petroleum geology is now the dominant field of geological application, in terms not only of jobs, but college enrollments, faculty assignments, investment opportunities, and administrative requirements. Changing economic factors will vitally affect the present balance and distribution of specialties and types of employment or sponsorship. Among other things, commercial geological emphasis will shift in part from oil finding to the geologically neglected phases of oil development and secondary recovery. Natural gas in this country will receive an increasing amount of attention as oil is sought more cheaply abroad.

As the profession comes of age, it will evidence its maturity by a decided improvement in its professional standards, as regards breadth and quality of training (including post academic refresher courses), ethics, public relations, and intra-professional communication.

#### A.A.P.G.-S.E.G. JOINT MEETING

The annual spring meeting of the Pacific Coast Section of the S.E.G. was held in Bakersfield on April 14. Several interesting papers were given throughout the day, and a joint AAPG-SEG dinner meeting was scheduled for the evening. Dr. G. P. Wollard, Distinguished Lecturer, was slated to speak but was forced to cancel his tour because of illness. Woody Wilson, SEG Northern Division Vice President, quickly rounded up an able replacement, Dr. Claire Patterson of the California Institute of Technology, who spoke on



the "Age of the Earth". Dr. Patterson stated that the age of the earth is now known with some certainty. It is computed to be 4.5 billion years. The dating of the earth's origin is obtained by comparing the lead isotopes from meteorites with those found in rocks of the earth.

#### ROCY MOUNTAIN CRETACEOUS SYMPOSIUM

The Rocky Mountain Association of Geologists is planning a Symposium on the Cretaceous sedimentary section in Colorado and adjacent areas to be presented this fall in guidebook form. The purpose of the Symposium is to stimulate a better understanding of the complete Cretaceous sedimentary section as to time and facies relationship.

A field trip will be held in conjunction with the Symposium, October 7-10, 1959. This trip will begin at Saratoga Inn, Saratoga, Wyo. and will end on McClure Pass, between Grand Mesa and White River National Forests, near Carbondale, Colorado. Emphasis will be placed on field examples in the Piceance and Sand Wash Basins of west central and northwest Colorado, with a tie-in to the Washakie Basin Cretaceous exposures in south central Wyoming. The field trip will be of a caravan type and will be designed to handle a maximum of 200 people. Robert L. Kretz, Alpine Oil Company, is General Chairman of the Symposium and Field trip Committee.

#### SAN JOAQUIN VALLEY FIELD TRIP

The spring field trip of the San Joaquin Geological Society will visit the Chico-Martinez Creek area along the west side of the San Joaquin Valley on Saturday, May 9, as announced in last month's "Newsletter".

Assembly time will be 8:00 A.M. sharp at the intersection of State Highway 33 and Lokern Road, which is about 11 miles due west of Buttonwillow and 7 miles NNW of McKittrick. For you well plotters, this location would be approximately at the NE corner of section 24, T. 29 S., R. 22 E., M.D.B. & M., Kern County, California.

The price of the guidebook will be \$1.50, which will include liquid refreshments. Bring your own lunch. The guidebook will be available on the field trip or advance copies can be secured approximately one week before the trip from Lee Jordan, Kern Oil Company, Ltd., P.O. Box 248, Oildale, California.

### PERSONAL ITEMS

Doug Andrews, Bud Johnson, and Dick Gayle, with Tidewater, Los Angeles have returned from two years of duty in Ankara, Turkey, and are now on a well-earned vacation. While in Turkey, Andrews and Johnson were out in a jeep and ran into a road block north of Mardin. They got out to investigate and bandits began shooting up the jeep. Doug and Bud jumped into a ditch and didn't say a word when the bandits rode out on horseback and helped themselves to the jeep's contents.

Bill Pemberton is recuperating nicely at St. Vincent's Hospital from an operation for a broken hip which resulted from a fall after a Branner Club meeting at Cal Tech about a month ago. Friends and well wishers can find him in Rm. 511.



"It takes a *real* pusher to keep this crew together."

Bill Saunders, with Intex in Bakersfield, and Cutler Webster, with Honolulu, are attending a one week course in aerial photo interpretation in Menlo Park. From now on, they plan to buy their girlie magazines in stereo pairs in order to get full effect of the surface topography.

Tom Wilson, president of the San Joaquin Geological Society, wasn't too upset when one of the Society's checks, signed by Lee Jordan, Treasurer, came back from the bank marked "Insufficient Funds". However, when he found out that Lee was out of town on vacation, he really began to wonder. Lee got back and explained the whole affair before the F.B.I. was called in, however!

What company submitted the high bid on a 30 x 18 foot frame building at Umiat on the Alaska North Slope, for use as a base for summer field work, only to learn, via a frantic call from a competitor in Fairbanks, that they had leased the only indoor plumbing facilities within 300 miles? It is understood that this company now boasts of having the northernmost Registered Rest Room facilities in the U.S.A., and that they are considering installing turnstiles to capitalize on the anticipated rush of business.

Cutler Webster, with Honolulu in Bakersfield is looking forward to strenuous summer work in Alaska as party chief of a one man reconnaissance crew. We understand that Cutler has more fishing gear packed than geological equipment.

It is rumored that Don Swiers, District Manager for Schlumberger in Bakersfield, has given up fishing as a hobby since two of his recent guests on Lake Isabella, George Starke and Ted Ehring managed to hook nothing better than the lobe of Don's ear. Don has now purchased a set of flashing white teeth and a wig of thick wavy hair to go with his piano lessons. So far, he has not been able to find anyone to act as his brother in order to complete the picture.

When the transmission of Vince Finch's car let go on the Freeway, Dick Vivion, Humble scout, Olympia, came to the rescue of Shell's Seattle Exploration Manager and pushed him back into town. Just goes to show ya - one never knows where those dern scouts are liable to be!

J. D. Moore, Shell, Olympia, claims he has lost all faith in humanity since he got skinned in a game of "dollar" or "liar's" poker with his "friends".

Congratulations to Dave Given and Bob Ottenstein, Standard, Seattle, and Max Greene, Shell, Olympia, for making it through the skiing season with nothing more than aching muscles.

Ed Larson, Humble, Eugene, is looking for new worlds to conquer after his skiing vacation at Sun Valley.

John Griffiths, Shell, Olympia, launched his homemade yacht with a bottle of champagne and cheers from the gathered multitude. One incident, however, marred the festive occasion - the paint on the handles of the oars for the 12-foot boat wasn't quite dry.

Paul E. Schmurr, a recent transfer from Salt Lake, and Robert V. Shull, a recent Cal Tech grad, will join the midnight sunners from the Standard Seattle office. Good luck, boys - and don't forget your headnets.

The Shell Seattle office welcomes back Stan Schindler from Bakersfield. Poor Stan is now on the potential home-owner's merry-go-round.

Chuck Kirshner and J. D. Nance, Standard, Seattle, have purchased small cabin cruisers with which they hope to be able to get away from it all. How's your navigation, fellows?

George Webb, Standard, Seattle, will call Bakersfield his home from now on. All of your friends are sorry to see you go, George, and wish you good luck.

Spence Reber and Bill Barnwell, Standard, Seattle, are going to have to give housewarming parties, now that they have become homeowners.

Friends of E. Carl Johnson, Shell in Ventura, will be happy to hear of his promotion from scout to agent (road agent). This follows Carroll H. Hoyt's promotion from scout in G.P. Ventura office to industry geological analyzer. (This is a man who passes out other companies' E-logs.)

Don Henrikson added a few more gray hairs as the Ojai Tennis Tournament, which he was a committee of, was nearly rained out as per schedule.

There are some nasty stories in Ventura concerning Lew Nelson of Ohio who is always going home at noon - for lunch.

Eric Lindvall, Richfield in Ojai, is eagerly awaiting his transfer to Alaska where he can spend another summer in this fog-bound, wind swept country. He considers it good self-discipline as it eliminates his present obsessions of girls, golf and beach ratting.

Newly elected officers of the Cordilleran Section of the Geological Society of America are Gordon B. Oakeshott, President, Peter H. Misch, Vice President, and V. L. Vanderhoof, Secretary.

We understand that The Texas Company has rescinded its purchase order for Jess Parsons' dog sled and plane ticket to Alaska. Jess, being a big man with Texas, is too valuable to lose, and they were afraid that with a white shirt, he might get shot for a polar bear. Jess is now headed for the main office in Los Angeles, so at a recent farewell party, he was given a large, thick, leather patch to sew on an appropriate place on his trousers in order to prevent serious injury when being chewed out!

Jerry Ganapole was feted at the same gala affair, and he is on his way to Anchorage to open an office for The Texas Company. Jerry was gifted by his many friends with a heavy knit, one armed sweater for the cold country.

When the new telephone directories were distributed through The Texas Company office in Bakersfield, Gene Tripp requested that all the old copies be saved for him. It seems that Gene has a rather primitive desert retreat near Mojave, and he claims the paper used by the P.T. & T. is much superior to the Sears catalogue for his intended purpose. Judging by the stack of books he has collected, Gene is well prepared for all emergencies for some time to come.

John Terpening solved the recent cut back of company cars in General Petroleum's Bakersfield office by buying himself a new, red TR-3.

Bruce Brooks, formerly with Superior in Bakersfield and Casper, has come back to sunny California to work for Brazos Oil and Gas in Isleton.

Jim O'Neill and Dave Calloway, formerly with Producing Properties, Inc., have both been frightened off by the prospect of moving from Bakersfield to Los Angeles. Jim has resigned to accept a position with Casey and Montgomery, Inc., and Dave is going to join the staff of Richard S. Rheem, Operator.

Jeff "gutless" Jefferies is back in Shell's Ventura office after a serious operation.

Neil Rosser, ex-Amerada geologist in Ventura, decided to get out of the domestic oil game and into foreign imports - frozen seafoods, that is.

C. Arnold Richards is now the City Geologist under the City Oil Administrator. His job will consist of geological evaluation of city lands, and perhaps a little political kick. He was formerly with the State Lands Commission.

Jim Saunders, Tidewater, Los Angeles, will be transferred to the Ventura office as Area Exploitation Geologist as a result of the closing of the Santa Fe Springs Production office. Personnel from the Santa Fe Springs office have been transferred to Bakersfield and Ventura.

Ward Abbott, Shell, transferred from Paso Robles to Ventura, and Jim Jackson was transferred from Ventura to Long Beach.

#### URSERY ITEMS

John and Parry Kirkpatrick, Superior, Los Angeles, are the proud parents of a 6 lb. 10 oz. boy, Robert Earl, who arrived on April 15, 1959.

Dr. & Mrs. Hoyt Rodney Gale, 1775 Hill Dr., Eagle Rock, Los Angeles 41, Calif., are proudly announcing the final adoption of a son born April 23, 1958 who came to them when just 9 days old. The baby has been christened Allan Rodney Gale. Dr. Gale is a consultant and teacher at Pasadena City College.

## CALENDAR

May 12, 1959: Tuesday, 12:00 Noon, S.E.G. Luncheon Meeting, Roger Young Auditorium, 936 W. Washington Blvd., Los Angeles. "Liquid Core of the Earth", Dr. Leon Knopoff, University of California, Los Angeles.

May 12, 1959: Tuesday 7:30 P.M. The Coast Geological Society dinner meeting at the Miramar Hotel, Santa Barbara. John Cronin, Shell Oil Co., will speak on the Capitan field and Sam Dolman, consultant, on the Elwood field.

May 13, 1959: Wednesday, 6:30 P.M., Dinner Meeting, A.I.M.E. Junior Petroleum Group, Michael's Restaurant, Washington Blvd. and Santa Ana Freeway, Los Angeles. "Effect of Import Restrictions on Oil Production in California", Stark, Executive Vice President of the Oil Producers Agency of California.

May 25, 1959: Monday, 6:30 P.M., Dinner Meeting, Northwest Geological Society, Poodle Dog Cafe, Fire, Washington. "Engineering and geological problems of three hydroelectric dam sites", by Dr. Howard A. Coombs, Chairman, Department of Geology, University of Washington.

May 25, 1959: Monday, 12:00 noon, Roger Young Auditorium, 936 W. Washington Blvd. "Petroleum Microbiology", Dr. Joseph Michaelson, Applied Biological Sciences Laboratory.

May 27, 1959: Wednesday, A.A.P.G. Distinguished Lecture and Dinner Meeting, Union Oil Co. Cafeteria and Auditorium, Boylston St. between 4th and 5th Sts., Los Angeles. "Recent Expeditions to the Antarctic", Rev. Daniel Linehan, S.J., Boston College. Dinner at 6:30 P.M.; lecture at 7:45 P.M.

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## BIBLIOGRAPHY OF RECENT PUBLICATIONS

### United States Geological Survey

Bulletin 1058-C: Geology of Geikie Inlet area, Glacier Bay, Alaska. by James Seitz .. \$ .65

Bulletin 1084-A: Nautil radioactive disequilibrium of the uranium series, by Jone N. Rosholt, Jr. ... \$ .15

Map I-271: Glacial features and surficial deposits of the Malaspina district, Alaska, by George Plafker and Don J. Miller \$ .75

Professional Paper 314-E: Classification delineation and measurement of non-parallel folds, by John B. Mertie, Jr. \$ .30

Open File Reports: Geology of the Rogers Lake quadrangle, Calif. by T. W. Dibblee, Jr. (1 map) Inspection only.

Geology of the Rosamond quadrangle, Calif. by T. W. Dibblee, Jr. (1 map) . Inspection only.

List 11. Electric logs of wells drilled in northern Alaska by Wenonah E. Bergquist. 12 pp. (Washington D.C.)

### American Association of Petroleum Geology

Habitat of Oil, a symposium including papers presented at the 40th annual meeting of the Association at New York, March 28-31, 1955, and some additional papers. Members: \$ 9.00, Non-members: \$11.00.

### Fortune

Geochemistry: The Prospector's new tool, by Herbert Solow. February, 1959.



# PACIFIC PETROLEUM GEOLOGIST

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

### ASSOCIATION ACTIVITIES

Vol. 13

June, 1959

No. 6

#### COAST GEOLOGICAL SOCIETY

Featured speakers at the May dinner meeting of the Coast Geological Society, held at the Miramar Hotel, Santa Barbara, were Sam Dolman, consultant, and John Cronin, Shell Oil Co.

#### History of Development in Elwood Oil Field and Vicinity

by San G. Dolman, Consultant

Lavigia fault bounds the Elwood oil field on the north. Proceeding west along the Lavigia fault from the City of Santa Barbara, the first point of interest is the Mesa oil field.

The hydrocarbon sequence found at the Mesa oil field begins with a gas cap, then 14 gravity oil which increases down structure to the oil-water interface where oil is 21 gravity.

The second area of interest is La Goleta gas field, a gas storage reservoir chosen because of favorable structural conditions and the porosity of the Vaqueros sand.

The discovery of oil at Elwood in July, 1928, was the first oil field in California developed in Vaqueros sand. Most of the production came from the structure beneath the ocean that necessitated building piers from which wells were drilled. In twenty years' time, the piers had been so weakened by corrosion from ocean spray that the wells were abandoned rather than the piers repaired.

The Elwood oil field has produced over 98 million barrels of oil and 87 billion cubic feet of gas and will exceed 100 million barrels of oil in ultimate production. This twice the amount of total production necessary for a "Class A" rating by Lahee's classification.

#### Capitan Field

by John F. Cronin, Shell Oil Co.

The discovery of the Elwood field on the coast line just west of Santa Barbara in 1928 led to the discovery of oil in the nearby Capitan anticline a year later by General Petroleum Corp. and Shell Oil Co. The Capitan field has since produced some 17 million barrels, most of it from marine lower Miocene and continental Oligocene beds.

The field is on the north flank of the Ventura basin and the south flank of the Santa Ynez anticlinal arch. It is a gently folded anticline plunging to the southeast and bounded on the north by the north-dipping Orella fault, an apparent normal fault. No production has ever been found north of the Orella fault.

The Vaqueros formation (lower Miocene), producing from depths less than 2,000 feet, is the shallowest productive zone of the field. It is 425 feet thick, 90% of which is sand. Texture of productive intervals ranges from fine grained and well consolidated to coarse grained and very soft. The upper 30 feet is impermeable - occasionally there are other thinner, impermeable lenses. Pelecypods are not uncommon. The contact of the Vaqueros and the overlying Rincon shale (lower Miocene) is a transition zone of interbedded glauconitic silts and sands. The contact of the Vaqueros and the Sespe (Oligocene) is unconformable with a slight change in dip and strike. Permeability of the productive intervals ranges from 400 to 6,000 md.; the average is 2,500 md. Average porosity is 21.5%.

To date the Vaqueros has produced 11 million barrels of 21° gravity oil, 85% by pump. Production is by water drive only. Recovery has been 450 barrels per acre foot - more than twice that of the Pliocene of the Ventura field.

The Sespe formation (Oligocene) is approximately 2,300 feet thick, 1,300 feet of which is productive. It is a series of interbedded shales, silts and sands of varying shades of red, green and gray. The sands are either arkoses or high-rank graywackes. In the Capitan field, and to the east of the field, the Oligocene is entirely nonmarine. The first marine fossils appear about 3 miles west of Capitan. The upper 700 feet of the Sespe is a gas zone, the next 350 feet are the Erburu 8 and Erburu 10 zones and the final 1,250 feet is the Covarrubias zone. The lateral extent of production from the Erburu zone is similar to that of the Vaqueros, about 250 acres, but the Covarrubias oil is confined to about 100 acres. Productive intervals of the Sespe are thin sands 1 to 15 feet thick. All zones are depletion-type reservoirs.

	Air Permeability Max.	Effective Porosity Av.	Gravity
Erburu 8	605 md	120 md	18% 41° - 44°
Erburu 10	88 md	25 md	
Covarrubias	3500 md	750 md	24% 39°

The Covarrubias zone was not discovered until 1945, and although it is only half as widespread as the Erburu zones, it became the more profitable and the more productive portion of the Sespe.

	Cum. Prod. (1/1/58)	B/A/Ft.
Vaqueros	10,826,000 Bbls.	450
Erburu 8 & 10	2,392,000 "	170
Sespe		
Covarrubias	3,594,000 "	220

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NEXT DEADLINE June 25, 1959

The Coldwater formation (upper Eocene) is approximately 1,250 feet thick, marine, and mainly interbedded sands and shales. The sands are cross bedded. Production was discovered in 1945 in the upper 40 feet of the Coldwater by Shell Covarrubias 1-36. Initial production was 1,480 B/D, 18% cut, of 38° gravity oil. Ten years later production had declined to 15 B/D, 98% cut. Most of the Eocene oil, 350,000 barrels, has been from the discovery well. Permeability of Coldwater sands ranges from 16 to 1,000 md., the average is 270 md. The average porosity is 19%.

Oil sands of the basal part of the Coldwater were cored and tested in Shell Covarrubias 1-51. The sands were noncommercial. It is interesting to note that the gravity of the oil recovered in the basal Coldwater was 52°, the highest in the field. The lowest gravity oil (21°) is that of the Vaqueros, the youngest producing measure.

Shell Covarrubias 1-51, the deep test of the Capitan field, was drilled in 1955 to a depth of 10,216 feet. The top of the Cozy Dell shale (upper Eocene) was reached at 5,060 feet and the top of the Matilija formation (upper Eocene) at 6,545 feet. Sandstones of the Matilija were hard, poorly sorted arkoses and high-rank graywackes having considerable calcite cement. Permeability ranged from 0 to 18 md. in 155 samples with an average of less than 1 md.

Thirty four per cent by volume of some thin-sections of Matilija sandstone was calcite cement. All thin-sections showed some replacement of detrital grains with calcite. Deformed vein calcite was prominent along the several shear zones of the Matilija and may indicate mitigation of calcium carbonate solutions during deformation. Although strong compaction effects were observed, such as sutured grain contacts, concave-convex contacts and interpenetration of

grains, there was no progressive decrease in permeability and porosity with depth. Altogether the Matilija formation is a singularly unattractive prospect as a reservoir rock in the vicinity of the Capitan field.

SAN JOAQUIN GEOLOGICAL SOCIETY

Dave Calloway, with Richard Rheem, Operator, in Bakersfield, was the featured speaker at the San Joaquin Geological Society's dinner meeting on May 18. Calloway gave a very interesting and provocative talk on "Distribution of Upper Miocene Sands and Their Relation to Production in the North Midway Area, Midway Sunset Field, California":

The Upper Miocene sands in the North Midway area are members of two formations: Reef Ridge (Delmontian) and Antelope (Mohnian). Paleontological control is hampered in the Reef Ridge by a complete lack of a diagnostic faunal assemblage. The Antelope has diagnostic faunas but extreme sandiness in the upper part of the formation has resulted in poor definition of the top of the Antelope.

Correlation by electric logs in this area is excellent. The resistivity curve is easy to correlate for the Reef Ridge while "pseudo-porosity" kicks on S. P. curves correlate in the Antelope. These electrical correlations enable the geologist to closely define the many sand members within the Upper Miocene.

The Lower Antelope has two closely related sand members, the Williams sand and the slightly younger Republic sand. Both sands are deltaic deposits. The Williams sand is static with regard to time while the Republic sand is time transgressive due to adjacent uplift during deposition.

The next younger Antelope member is the Spellacy sand, a "dump" type deposit confined between the Buena Vista Hills and the San Andreas Fault. Continuing uplift to the southwest brought about erosion of part of the Spellacy and the deposition of a group of Upper Antelope channel sands, the "555", "Orloff", "Sub-Lakeview", "Lakeview", etc. A pronounced period of overall uplift and erosion marked the end of Mohnian time. Local rapid uplift to the west again subjected the Spellacy to erosion and the Delmontian Potter sand was deposited as a channel sand along with the "33-B" and "42-9" bar deposits. Continued uplift to the west subjected the Potter to erosion at the end of the Delmontian.

In every case, assuming the rapid formation and migration of oil, production is related to structural high areas developed shortly after the deposition of the various sands.

The types of traps are structural closure, truncation, pinchout, and tar seal and/or surface cementation."

LOS ANGELES LUNCHEON MEETING

Irv. Schwade of Richfield, our genial Vice-President, gave Pacific Section members a treat this month, with a special showing of about 200 Kodachrome slides taken in all parts of Peru during a three year sojourn there. He appeared before the monthly luncheon group in Los Angeles, when the regularly scheduled speaker was unable to return to Los Angeles in time for the program.

Interesting shots included views of oil-mining operations, showing the first well in the world to use regular mine cars for hoisting material to the surface. Also, there were several pictures of dry-gas seepages as they occur in Peru.

Schwade made this area appear to be a fisherman's paradise, with pictures of 500-pound marlin and huge deep-sea bass, also an action shot of a manta ray which measured about 5 feet across.

The archaeological ruins in the Trujillo area were especially interesting. Many historic finds were made here prior to 1938, when a heavy earthquake obliterated the structures. Views in and around Lima showed the representative colonial architecture.

A trip over the Andes passes and into the Amazon plain beyond was followed by an interesting tour of the experimental rubber plantations, and the methods used to coagulate and refine the rubber. Geologists were shown using dugout canoes on the rivers, and wading through snake-infested country. Close-up views of a boa constrictor added color.

The very interesting trip concluded with a visit to Cuzco, in southeastern Peru, a tourist center because of its proximity to the ancient Inca ruins, including a house presently occupied, which was built 1400 years ago.

LOS ANGELES JUNIOR A.I.M.E. MEETING

Mr. William McCoy, Assistant City Administrative Officer in charge of Petroleum Administration addressed the Junior A.I.M.E. Society of Petroleum Engineers on April 15, 1959, on the subject of "Oil Exploitation within the City Limits of Los Angeles". The City Administrative Officer is appointed by the Mayor and he is exempt from the jurisdiction of the Civil Service. His task is to coordinate problems and seek their solution as they arise between the oil industry, the citizens, and the City. The City Council must approve any oil lease extending five years or more. The City has designated oil districts into two types: 1) the Non-urbanized Districts such as Wilmington, 2) Urbanized Districts such as Signal Oil and Gas Company's Rancho and Hillcrest acreage. The Urbanized Districts must be a minimum of forty acres in area and have a minimum five acre well spacing. Los Angeles has some 18 Urbanized Oil Districts. Some 40 City officials must study and approve each application for a district. About 9 months is the length of time required for approval. Mr. McCoy thought the industry was doing a fine job of conducting their operations in the urbanized sites. The City Oil Administrator, we are reminded, advises the City Departments that have the authority to act. The Administrator's authority is limited.

In conclusion, Mr. McCoy welcomed questions from the floor and an interesting discussion period followed.

FULMER NEW ALASKAN CORRESPONDENT

Charles V. Fulmer, with Standard in Anchorage, has kindly consented to be the first Alaskan Correspondent for the Pacific Petroleum Geologist. At last report Fulmer declared that this time of the year is rather slow from the standpoint of news inasmuch as the bears and geologists have been cooped up all winter. We are hopeful of carrying news of our members located in the 49th state. Anyone having news items for the Newsletter should contact Fulmer, c/o P. O. Box 7-839, Anchorage, Alaska.

SAN JOAQUIN VALLEY FIELD TRIP

About 150 geologists who turned out for the recent San Joaquin Geological Society Field Trip in the Chico-Martinez Creek area along the west side of the San Joaquin Valley were rewarded by a very educational and entertaining tour. The stratigraphic section examined consists of quite a thick and complete sequence of Miocene sediments from the Delmontian Belridge diatomite to the Zemorrian Salt Creek shale. In this area, the Pleistocene Tulare unconformably overlies the Belridge diatomite, and the basal Miocene Salt Creek shale unconformably overlies the upper Eocene Point of Rocks. Many of the productive horizons of the nearby oil fields were well exposed along the course of the trip.

Bob Ortalda, of Standard, conducted most of the geological discussion during the stops, and Ed Stinemeyer, of Shell, gave a thorough review of the paleontology. Ed was assisted by some excellent, large scale foram illustrations that were drawn by Bill Polski, also with Shell.

The trip was climaxed by free beer and chips dispensed by Bob Critchlow.

Copies of the excellent guidebook are still available for \$1.50 from Jack Bainton; P. O. Box 278, Oildale, California

PALEONTOLOGICAL BIOSTRATIGRAPHY SEMINAR

The last meeting of the Seminar for the academic year was held at the Bakersfield College on May 4. Dr. W. P. Popenoe, of UCLA spoke to a very large group of "Cretaceous Stratigraphy and Nomenclature in California".

Dr. Popenoe presented a very excellent outline of the subject, which included a discussion of the past history of development of Cretaceous stratigraphy and nomenclature, the present status of our knowledge, present and future projects on the subject by various institutions and individuals, past and future time-stratigraphic classifications and biostratigraphy from the megafaunal viewpoint.

NORTHWEST GEOLOGICAL SOCIETY

Dr. Howard A. Coombs, Chairman, Department of Geology, University of Washington, discussed engineering geology problems of three hydroelectric dam sites in Washington at the Northwest Geological Society meeting on May 25.

Each dam site presented a problem that is different from those usually encountered in dam construction. Engineering geology was used to solve many of the problems encountered in the preparation of the dam sites and reservoirs. Colored slides and sketches illustrated the problems involved and their solution.

## PERSONAL ITEMS

Arch Warne, Fred Sierveld, Jack Nesbit, and Warren Stoddard gave talks on the geology of various areas at the Richfield annual field trip, and Arch led the bleary-eyed group on the 3 hour jaunt. Some of the old-timers were superciliously recalling previous trips where everyone attempted to follow Tom Dibblee on foot up and down cliffs and mountains, through brush and in between rattlesnakes. The present day generation of geologists, just as superciliously, leaned back in their company cars, sipped cold drinks, and offered prayers of thankfulness for being born ten years too late.

John Bell, who has been Area Manager for Humble in Los Angeles has gone to Houston as Division Production Manager for the Gulf Coast Division. Dick Faggioli, who has been the Area Geologist, moves up to be acting Area Manager. Jack Jackson, who has been the Assistant Area Geologist, moves up to be acting Area Geologist. Charley Delancey, who has been in charge of the offshore group in Los Angeles, goes to Houston as Staff Geologist.

Bob "J. Pierpont" Morrison, boy entrepreneur with Richfield, is opening a self-service laundromat in Ojai.

Due to foul weather, some geologists in Alaska are spending one out of four days in the field. The rest of the time is spent in camp watching high powered poker games between the cook, pilots and geophysicists. The geologist, being lowest paid in a field party, cannot compete financially with the others.

After 8 1/2 years in Ventura, Lee Freeman with The Texas Company, is being transferred to Ardmore, Okla. The Quachita Mountains aren't particularly well known for fine ski resorts so Lee will have to find new fields to conquer.

Lowell Redwine, Honolulu in Santa Barbara, has decided to slow down a bit. Consequently, he is having part of his thyroid removed.

Bob Paschall, Signal Oil & Gas in Ventura is resting uncomfortably after undergoing a common posterior operation.

Western Gulf is shutting down its Ventura Office. Bob Nesbit, an expert at closing offices, is going to Bakersfield, to be Area Exploration Manager for the San Joaquin & Coastal areas. John Gates is being transferred to Los Angeles. John wants to stay close to the coast so he can beach it up on the weekends and reminisce on how tough surf boarding was in the old days. Mark Latker, Lowell Garrison, Herb Skolnik and Ekram Göksu are also making the move to Bakersfield.

Bob McMullen, Standard in Seattle, is trying to change his golf game after being transferred from Ventura. The Ventura Municipal, with its cement-like fairways and greens, will give the ball a pretty good roll when compared with the sponge quality courses in the wet north.

Lum Lovely, Union, in striving for gold and glory in the organization, is taking a permanent transfer from Santa Paula to Anchorage.

Dick (lover boynik) Lyon, Union's renowned minstrel and poet laureate, was last seen leaving the Santa Paula office with a harmonica and book of poems singing dirty lyrics of the Yukon country.

Sixteen members of Union's Exploration Department spent a recent weekend in virgin Sierra country fishing and relaxing. George Feister and Chuck Cary, organizers of the affair, report that everyone limited out except Vern Rutherford. Apparently, no one told Vern that you can't catch 8 inch trout with the same gear that's used for 8 foot tuna!

J. P. Wagner, with Union in Bakersfield has finally solved his backyard landscaping problem by putting in a swimming pool. J. P. wishes to announce that free family membership cards are available to husbands with wives who meet his strict specifications.

George Clark has left Richfield's Bakersfield office to work in Venezuela.

Howard Samsel, with Union, has been seen studying plans for cyclone cellars since receiving word of his transfer from Bakersfield to Tulsa.

George Rudkin, Ohio Oil, Bakersfield, narrowly averted arrest in Mexico recently while on vacation. George is currently brushing up on Spanish traffic terms for his next trip south of the border.

Dale Kline, from Standard's Bakersfield office, has packed his liquid snake bite kit for a summer of field work in the Basin and Range.

Bob Ortalda, District Geologist for Standard, is taking a dose of geophysics at Standard's Bakersfield school for bound-up geologists.

Henry Clark, General Petroleum's venerable Bakersfield scout, has a hurt look in his eyes since the name of his new Japanese Toyopet has been corrupted and is now known as Henry Clark's toilet.

The truth is finally out about Texaco's latest exploration methods. The oil news column in the local Bakersfield paper let the cat out of the bag when they reported a dowser's prediction of "plenty of oil within a radius of 1/4 mile" from Texaco's "K.C.L. San Emidio" No. 1. We hear that Bill Bedford keeps a fresh supply of willow sticks on hand in hopes of being appointed Texaco's first Chief Dowser!

Charles Johnson, M.S. from UCLA, June, 1959, was recently hired and assigned to Union's Santa Paula office.

Lummie Lovely has been transferred from Santa Paula to Union's Alaska Division.

Howard Samsel has been transferred from Bakersfield to the Oklahoma Division at Tulsa.

Donald Scanlin has been transferred from Santa Paula to Sacramento.

The numismatic bug of the Humble, Eugene office, is moving north and has infected Grant Valentine, Hank Tomko, Ralph Rudeen, and Peder Grimstad of Shell, Olympia. Everyone suspects Dick Vivion, Humble Olympia scout, to be the carrier.

The Richfield geological department's annual field trip was held again this year at San Emidio Ranch. Among those who caught colds and thereby exhibited no tolerance for late hours, gambling, and beer were Mason Hill, Ray Pearson, Howard Stark, Don Henriksen, Tom Brady, Stan Carlson, Barney Barnard, and Harry Jamison. Either these men need to get out more or the rest of the department needs to stay home more!

Dave Shoemaker, with Shell in Bakersfield, would probably not offer a very good testimonial for the healthful climate in the San Joaquin Valley since shortly after he returned to work following a very serious bout with valley fever, his wife contracted the same malady and is now taking her turn on the sick list.

Capt. Ed Miller, with Ohio in Bakersfield, recently spent two weeks of reserve duty at Travis Air Force Base near Sacramento. Ed, who leaves flying to the youngsters, provided valuable assistance to the Air Force, however, his duties must be kept secret for security reasons . . . Miller's security, that is!

Bill Edmondson, who recently resigned from Superior, has gone into consulting with Howard Reynolds. Bill will open an office in Bakersfield.

Tom Brady, from Richfield's Bakersfield office, is joining the migration to Alaska for the summer.

Most popular fellow at the recent San Joaquin Geological Society's Chico-Martinez field trip was Honolulu's Bob Critchlow. Bob thoughtfully waited at the mouth of Zemorra Creek drawing cold Coors for all the thirsty, foot-weary individuals who walked out the creek bed geology.

The request for new photos for the Directory has been a boon for the amateur photogs in the Shell Olympia office. Conrad Howard has a slight edge because he has a portrait lens - and is meeting and beating all competition.

John Griffiths, Shell Olympia, has been accused of going Hollywood because of wearing dark sun glasses - John claims he injured his eyeball when he was cutting some brush.

Herb Mann, District Geologist, Shell, Seattle, has just returned from a week of "charm school" in Los Angeles.

The VW bug has bitten the Shell Seattle office - Mahlon Kirk has a Karman Ghia and Bob Smith a plain ole "Vokes".

Shell's Seattle Exploration Manager, Vince Finch, drilled a dry-hole - looking for water on his own property.

Bob Beaty, Geologist with General Petroleum Corp., has returned once again to duty in Alaska.

Art Hawley, formerly with Western Gulf Oil in Sacramento, and most recently Area Exploration Manager in Bakersfield, has returned to Sacramento to do consulting work. His present office is in his home at 3537 El Ricon Way Sacramento, Phone: IVanhoe 7-3612.

Keith Jones, Western Gulf Oil Co., in Sacramento, tells us of a recent overnight field trip with 5 others from the same office. They toured the Eureka area, and camped out at Richardson Grove.

Rumored that Western Gulf Oil and Union Oil are to merge. Further it is learned they will call the company Western Union, and feared company cars will be taken away, and uniforms and bicycles furnished.

Joe Le Conte, Richfield Offshore District Geologist in Long Beach, has recently returned from an extended trip to Peru. He is now an expert on Inca ruins, game fish of Peru, and expense account procedure.

Art Hawley has resigned from Western Gulf and is opening a consulting office in Sacramento.

Fritz Loomis, former District Manager for Shell Oil Company in Sacramento, has recently resigned to work as a Consulting Geologist. His present office is at 6424 Oakridge Way, Sacramento 22, Calif., Phone: Garden 8-4402.

Jeff Watts, formerly with Pacific Gas & Electric in San Francisco, has resigned to do consulting work. His office is at his home: 180 Mountain Ave., Piedmont, Calif. Phone: Olympic 3-1879.

#### NURSERY ITEMS

Fred Sierveld and his wife, Bonnie, had their first baby on May 2. Gregory tipped the scales at a husky 8 lbs., 5 oz. Fred works for Richfield in Bakersfield.

George LaPerle, with Richfield in Bakersfield, and his wife, Wilma, evened the score with 2 boys and 2 girls when their newest son, John, was born on April 23.

Pauline and Jim Taylor, with Shell, Ventura, announce the birth of their third son, Bruce Eric, weight, 6 lbs., 13 oz.

#### CALENDAR

June 9, 1959: Tuesday, 7:30 P.M., Coast Geological Society dinner meeting, Miramar Hotel, Santa Barbara, "Pliocene Correlation in the Ventura Basin". Mr. William H. Holman, Standard Oil Company.

June 10, 1959: Wednesday, 6:30 P.M., Dinner Meeting, A.I.M.E., Union Petroleum Group, Michael's Restaurant, Washington Blvd. & Santa Ana Freeway, Los Angeles. "New Techniques in Well Stimulation", a symposium by Bob Fernandes, Western Gulf, and Jack Vollmer, Standard, and Waheed Ghauri, Shell.

June 22, 1959: Monday, 12:00 Noon, A.I.M.E. Petroleum Forum. Roger Young Auditorium, 936 West Washington. "Cause and Prevention of Drill Pipe Failures in the Slip Area". Mr. W. B. Reinhold, Abegg & Reinhold Company.

June 25, 1959: Thursday, 6:30 P.M., Dinner Meeting, Los Angeles Geological Forum, Roger Young Auditorium, 936 W. Washington Blvd. "Sedimentary Trends in Lower Pliocene Sandstones in the Los Angeles Basin", by Dr. Bert L. Conrey, Long Beach State College.

#### BIBLIOGRAPHY OF RECENT PUBLICATIONS

##### United States Geological Survey

##### Professional Papers

302-A: Phosphate deposits in northern Alaska, by William W. Patton, Jr. and John J. Matzko ----- \$ 1.00

302-B: Vegetation of the Arctic slope of Alaska, Exploration of Naval Petroleum Reserve No. 4 and adjacent areas, northern Alaska, 1944-53. Part 2: Regional studies, by Lloyd A. Spetzman ----- .50



- 305-G: Test wells, Titaluk and Knifeblade area, Alaska. Part 5: Subsurface geology and engineering data, by Florence M. Robinson ----- 1.00
- 305-I: Core test, Sentinel Hill area, and test well, Fish Creek area, Alaska, Exploration of Naval Petroleum Reserve No. 4 and adjacent areas, northern Alaska, 1944-53. Part 5: Subsurface geology and engineering data, by Florence M. Robinson and Florence Rucker Collins ----- 1.00
- 314-G: Succession and speciation of the Pelecypod Aucella, by Ralph Imlay .60
- 316-A: Regional geophysical investigations of the Uravan area, Colorado, by H. R. Joesting and P. Edward Byerly 1.25
- 317: Geology and mineral resources of Paraguay - A reconnaissance (by Edwin Eckel) with a section on igneous and metamorphic rocks (by Charles Milton and E. Eckel) and soils (by Pedro Sulsona) ----- 1.75

#### Bulletins

- 1028-I: Geology of the Delarof and westernmost Andreanof Islands, Aleutian Islands, Alaska, by G. D. Fraser and H. Frank Barnett ----- 1.25
- 1028-J: Geologic reconnaissance of Gareloi Island, Aleutian Islands, Alaska, by Roberts R. Coats ----- .65
- 1045-D: Core logs from Bristol, Cadiz, and Danby dry lakes, San Bernardino County, California, by A. M. Bassett, D. H. Kupfer, and F. C. Barstow .55
- 1045-E Core logs from Searles Lake, San Bernardino County, California, by David V. Haines ----- 2.00
- 1046-P: Uranium deposits in the Dripping Spring quartzite, Gila County, Arizona by H. C. Granger and R. B. Raup 1.25
- 1084-B: Rapid analysis of chromite and chrome ore, by Joseph I. Dinnin ----- .20

#### Maps

- OM 195: Geologic map of the eastern Puente Hills, Los Angeles basin, California, by D. L. Durham and R. F. Yerkes .75
- I-213B: Geographic map of the northwestern Rub'Al Khali quadrangle, Kingdom of Saudi Arabia, by Richard A. Bramkamp and Leon F. Ramirez -- 1.00

#### Water Supply Papers

- 1460-F: Geologic reconnaissance and test-well drilling, Camp Irwin, California, by Fred Kunkel and F. S. Riley .60
- 1461: Geology, hydrology, and chemical character of ground waters in the Torrance-Santa Monica area, California, by J. F. Poland, A. A. Garrett and Allen Sinnott ----- 5.25
- 1473: Study and interpretation of the chemical characteristics of natural water by John D. Hem ----- 1.50
- 1260-F: Summary of floods in the United States during 1952 ----- .20
- 1465: Quality of surface waters for irrigation, Western United States, 1955 ----- 1.00

#### California Division of Mines and Geology

- Alturas Sheet, Geologic map of California - 1.50
- Bulletin 177: Geology and mineral resources of Santa Ysabel quadrangle, San Diego County, California, by Richard Merriam ----- 1.50
- Special Report 53: Igneous and metamorphic rocks of parts of Sequoia and Kings Canyon National Park, California, by Donald C. Ross ----- .75

#### Nevada Bureau of Mines

- Bulletin 56: Geology of the Candelaria mining district, Mineral County, Nevada, by Dr. Ben M. Page ----- 2.10  
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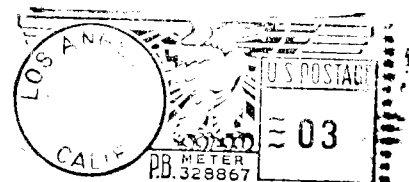
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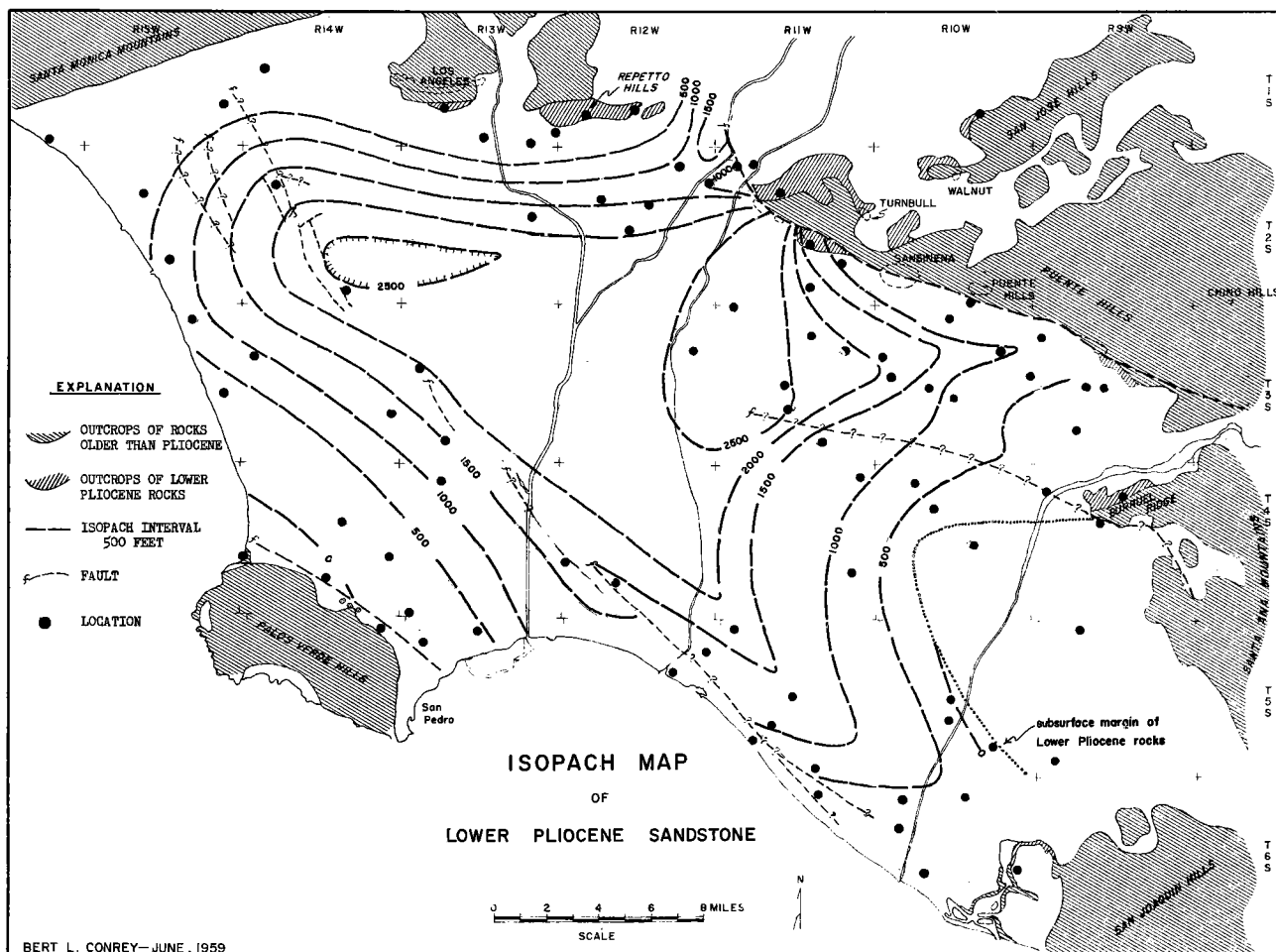
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## ASSOCIATION ACTIVITIES

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### LOS ANGELES FORUM MEETING

The final forum meeting of the season was held at Rodger Young Auditorium on June 25th. The Speaker, B. L. Conrey of Long Beach State College, discussed "Sedimentary Trends in Lower Pliocene Sandstones in the Los Angeles Basin", part of a study undertaken in 1953 and concluded this year as a dissertation for his Ph.D. at the University of Southern California. Eighty-eight control points consisting of outcrop sections and cored intervals in exploratory wells formed the basis for the study.

The lower Pliocene strata in the Los Angeles Basin have an areal variation in thickness ranging from 0 to more than 5,000 feet. The strata consist principally of conglomerate, sandstone, siltstone, and silty shale. In addition, minor amounts of limestone, bentonite, chert, and volcanic ash occur among the dominant rock units.

The clastic rocks display distinct areal variations in thickness, texture, and composition that provide evidence as to their depositional environments, source areas, and modes of transportation.

Sandstones appear in greater abundance in the lower Pliocene strata than do any other rock units. They display distinct patterns in areal distribution and thickness. In particular, (1) a thick lobe extends into the basin from its northcentral margin, and (2) a thick concentration occurs in the center of the basin. The thickest sandstone unit, 400 feet plus, was sampled at the north-central margin of the basin. Textural studies demonstrate a general areal change in size class from medium sandstones along the eastern and north-eastern portions of the basin to very fine sandstones at its western (coastal) margin. Most of the sandstones are well sorted; however, those in the northeastern por-

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tion of the basin display poorer sorting than their counterparts to the southwest. The sand-size grains are uniformly angular; only the granule and coarser fractions display higher degrees of roundness. The sandstones are classified as arkose; however, there is a mappable areal variation in the composition of light minerals, heavy minerals, and rock fragments.

A summary of information gained in studying these lower Pliocene sandstones suggests derivation from several source areas. These upland areas and the particular lines of evidence that may indicate a source are tabulated below:

1. Santa Monica Mountains

- a) Apparent greater angularity of grains as mountains are approached (few samples).
- b) A thickening of total sandstone isopachs in the north.
- c) Increase in the quartz: feldspar ratio and the potash feldspar: plagioclase ratio.
- d) A southward decrease and disappearance of granules and pebbles of diatomaceous material.

2. San Gabriel Mountains

- a) A thick lobe of medium-grained sandstone extends southwest beyond Montebello and Santa Fe Springs.
- b) Low ratio of quartz: feldspar and potash feldspar: plagioclase in a tongue extending into the Basin from the northeast.

- c) Concentration of fragments of metamorphic rock (Pelona schist ?) in granules and pebbles at Montebello.
- d) Concentration of magnetite in the heavy mineral suite of lower Repetto sandstones extending into the Basin as a tongue from the northeast. A similar concentration of magnetite was observed in Recent stream deposits from the San Gabriel Mountains and San Jose Hills.
- e) Concentration of quartzo-feldspathic material among granules in a lobe-shaped deposit extending into the Basin from the northeast. This is paralleled by a similar concentration in some of the Recent San Gabriel gravels.

3. Puente Hills

- a) Slight concentration of sandstone in the east.
- b) A lobe-shaped deposit in which granules are dominantly subrounded extends west from the Puente Hills. This may indicate a source from the reworking of upper Miocene conglomerates.
- c) A concentration in the east of granules of quartz-feldspar porphyry probably derived from the Puente Hills.

4. Santa Ana Mountains

- a) Basinward extension of a lobe of medium-grained sandstone.
- b) Westward decrease from the Santa Ana Mountains in the heavy mineral suite magnetite-sphene.
- c) Concentration of metamorphics among granules of the east side.

5. San Joaquin Hills

Nothing definite, only sedimentary breccias to suggest a southern source.

6. Palos Verdes Hills

- a) A concentration of material in the granule size derived from a metamorphic terrane.
- b) A concentration of chlorite among the heavy minerals like that in the outcropping schist.

In concluding, Conrey emphasized that study of the sandstones was only one approach, and that work on the shales and conglomerates was also important.

COAST GEOLOGICAL SOCIETY

Featured speaker at the June dinner meeting of the Coast Geological Society held at the Miramar Hotel in Santa Barbara was William H. Holman, Senior Stratigrapher, Standard Oil Co.

Mr. Holman's subject was "Tertiary Correlations in the Ventura Basin". In his talk, he elaborated on his article, "Correlation of Producing Zones of Ventura Basin Oil Fields", published in the 1958 A.A.P.G. National Convention Guidebook.

LOS ANGELES DINNER MEETING

Rev. Daniel Linehan, S.J., Distinguished Lecturer and Chairman of the Department of Geophysics, Boston College, spoke on the Antarctic before a large gathering of Pacific Section members and wives at a dinner meeting held at the Union Oil Center in Los Angeles on May 27th. His comments and colored slides dealt mainly with the U. S. Navy expeditions of which he was a member between 1954 and 1958. During this time Rev. Linehan served as a chaplain and geophysicist. His observations in the latter capacity were part of the program carried on by the United States and twelve other nations in occupying Antarctic bases and collecting data during the International Geophysical Year. Stations in the Antarctic are especially well situated for studying the magnetic pole, the geomagnetic pole, glacial fields, and oceanographic phenomena.

In 1954 on his first visit, Rev. Linehan accompanied a Navy survey team looking for bases to use the following year. Satisfactory sites in the Ross Sea area due south of New Zealand were found and occupied in 1955 and subsequent years. Aircraft and ice breakers from Port Lyttelton, N.Z. moved personnel and supplied the bases located at Ross Island and elsewhere. The first landing strips were made on shelf ice in the Ross Sea, but proved undependable because of the periodic breakup of the ice. Later an ice-free onshore site was graded and used as a permanent landing base.

Rev. Linehan outlined the explorations of Scott and Shackleton in the early 1900's, and showed slides of their camp sites. Some of these were in good repair and still stocked with usable provisions including frozen meat a half century old.

Land life in the Antarctic is not at all abundant, due largely to the extreme cold occasioned by location of the polar area in a large continent without moderating influence of the sea. Temperatures as low as  $-102^{\circ}\text{F}$  have been recorded at an American base, and  $-124^{\circ}\text{F}$  at a Russian base. By contrast the north polar area is much warmer due to the location of the pole in mid-ocean. The sparse flora of the Antarctic includes only lichens, a few grasses, and a few mosses; the fauna: 4 species of seals, 2 species of penguins, and a single gull. The sea fauna on the other hand is exceedingly abundant, and includes two mammals: the blue whale (largest in the world at 100 feet or more), and the killer whale.

The immensity of the Antarctic Continent can be realized by comparing its size with the U.S. and Europe, an area of some 5 million square miles. The surface lies at an average elevation of 5000 feet; the Polar Plateau averages 10,000 feet. Scattered peaks rise as high as 16,000 feet. Great thicknesses of ice cover most of the continent, ranging from as little as 600 feet near the coast to 3000 and even 9000 feet farther inland. At the South Pole reflections indicate 5000 to 8000 feet of ice. As the Pole lies at elevation 9200 feet, it appears that land at least 1000 feet above sea level exists in this region.

Scattered geologic outcrop information shows great areas of volcanic rock including Mt. Erebus and Ross Island. The latter is composed entirely of kenite, an alkali trachyte with phenocrysts of anorthoclase, and known only from Mt. Kenya in East Africa and from this locality. Fifty-five miles west of Ross Island at Marble Point metamorphosed carbonates and schists of Precambrian age crop out. At other places in this

region rocks of Devonian and upper Cretaceous age are known. No seeps or other surface evidences of oil are known from the Antarctic.

U.S.G.S. TOPOGRAPHIC DIVISION MOVES

The Topographic Division of the U.S. Geological Survey is moving from Sacramento to the new Topographic Building in Menlo Park. Future requests for aerial photographs, or Advance Prints should be forwarded to: Topographic Division, U. S. Geological Survey, 4 Homewood Place, Menlo Park, California

Geological Society of Sacramento

The Sacramento Geological Society's annual dinner-meeting was held on May 26th at the American Legion Hall. Members and wives heard Rev. Daniel Linehan, S.J., A.A.P.G. Distinguished Lecturer, present an outstanding talk on "Recent Expeditions to the Antarctic". This lecture is reviewed elsewhere in the Newsletter.

The last meeting of the current year was held on June 9. The following members were elected officers for the 1959-1960 term:

Keith Jones, Western Gulf, President

Bob Thronson, State Dept. of Water Resources,  
Vice President

Bill Bull, Groundwater Branch, U.S.G.S.,  
Secretary

Chuck Marek, State Division of Highways, Bridge  
Dept., Treasurer

Glen Ware, Texaco, was named chairman of the 1960 field trip committee.

Two talks were presented during the meeting. The first, "Potable Water Supply for the Republic of Sudan", was presented by Cole McClure, geologist with the Department of Water Resources. Cole spent January and February of this year in Sudan surveying the status of water development. The shortage of potable water in most of the country was emphasized. Certain aspects of the regional geology were introduced and discussed. The talk was well illustrated with color slides.

Fritz Loomis, consultant, described the purpose and functions of the Sierra Club. The highlight of the talk was a Sierra Club movie of the northern Cascade Ranges in Washington.

NOTICE

The following Geological Society of Sacramento field trip guidebooks are still available:

1 - 1959 "Coast Ranges, Livermore Valley to Hollister Area"

2 - 1958 "East Side Sacramento Valley - Mother Lode Area, California"

3 - 1957 "The Cretaceous and Associated Formations of the Redding Area, Shasta County, California" (limited number)

Copies of the above guidebooks may be obtained from C. Marek, 1300 Keeney Way, Sacramento, California. The price per guidebook is \$2.00, plus 8¢ postage.

1960 A.A.P.G.-S.E.G.-S.E.P.M. DIRECTORY

The Directory Committee reports that assembly of the new 1960 A.A.P.G.-S.E.G.-S.E.P.M. Directory is well under way. The directory will be scheduled for distribution at the fall convention in November.

Anyone who has not filled out and returned his data card should do so right away. All material and any late changes must be received by the committee by a deadline of September 1. Any changes in address, telephone number, company affiliation, etc., should be reported to Hal Case, 609 South Grand Ave., Los Angeles 17, phone MADison 5-8216.

Members are reminded that the book is a PICTURE DIRECTORY, and that a picture must be made available to the committee if they are to be included.

Space is available in the advertising section of the directory. If you desire advertising space or know of someone who does, please contact Rex Smith, Humble Oil & Refining Company, 612 South Flower Street, Los Angeles 17, phone MADison 6-7701.

BEST PAPER AT FALL CONVENTION AWARD

The Executive Committee of the Pacific Section announces that a best paper award will be made at the 1960 Fall Convention in Los Angeles, November 11 and 12. Papers will be judged primarily on the basis of quality of presentation including delivery and illustrations. A committee will be appointed to judge all papers presented and a suitable award will be presented to the winner.

NEW SACRAMENTO CORRESPONDENT

Roland J. Bain, Texaco, has been appointed Sacramento correspondent for the P.P.G. Newsletter replacing Jim Young, Schlumberger, who has resigned. The new correspondent's address is c/o Texaco, 2849 Fulton Ave., Sacramento 21, phone IV 3-0485.

PACIFIC SECTION PUBLICATIONS AVAILABLE

The Guidebook "Los Angeles and Ventura Regions" contains 204 pages, maps, cross sections, stratigraphic charts, road logs and descriptions of the oil fields discovered since 1952. Price \$7.00 postpaid. Make checks payable to Pacific Section A.A.P.G. and mail to Harry Stuvelling, Pacific Log Exchange, 2110 Cherry Ave., Long Beach 6, California.

**PERSONAL ITEMS**

Dave Pfeiffer with Standard also has left Los Angeles and can now be found in the fair city of San Francisco. For four of the past five years, Dave has driven about 30 miles to the office and, when the new office in La Habra was completed, it cut his travel time to about 20 minutes. Now, once again, he will be traveling about one hour, because he has purchased a home in Marin County. Happy car pool ulcers, Dave.

Bill Cunningham, Brazos in Isleton, pulled himself away from the bar at "Al the Wop's" long enough to vacation in Vancouver, B.C.

To illustrate what a shrewd bargain hunter Jess Parsons is, the boys at Texaco like to tell about the lawn mower he recently bought from Bob Scott for \$115. This is the same mower Scott purchased from MacMillan 3 years ago for \$100. To top it off, the thing blew up the first time Jess used it!

Tennant Brooks, with Ferguson & Bosworth in Bakersfield, is off on another trip ... this time it's to Kentucky for about 3 months.

The boys at General Petroleum in Bakersfield are planning a double-barreled Independence Day celebration, since Henry Clark's retirement date falls on July 4th. All seismologists in the western states had better take steps to prevent instrument damage from the high magnitude reverberations expected to emanate from the Bakersfield area on that date. Specially prepared liquid explosives are being concocted for the event.

Don Frames, who recently added a VW to General Petroleum's imported car lot in Bakersfield, is presently trying to figure a way to get his wife and seven whippet dogs into the cab and still see out the rear view mirror!

Dick Vaughan and Bob Critchlow, formerly with Franco Western and Honolulu respectively have joined Gene Reid Drilling Company's newly formed exploration staff in Bakersfield.

Frank "Slamming Sam" Yule, General Petroleum in Ventura, tied the Montalvo Golf Course record of 62 at a Kiwanis tournament. They say to shoot that kind of golf one must be either neglecting his wife or his job.

John Gates, Western Gulf; Bob Paschal, Signal Oil & Gas; Art Weller, Atch Curry and John Carter, Shell at Ventura, spent a few days at Bahia San Quintin, 100 miles south of Ensenada. Most of their time was spent repairing outboard motors and skin diving for sharks. They were looking for used watches.

Jeff Jeffreys, Shell, is in the Foster Hospital in Ventura. All of his friends wish his immediate recovery.

Jim Vernon, Texaco in Ventura, spent two weeks in the San Francisco area cheating the government out of two weeks' Navy pay.

Dale Duley, Bob Morrison and Spence Fine, Richfield Oil Corp. in Ventura, claim they caught several large trout while trekking down Sespe Creek. The whole thing sounds phoney as they only brought a couple of minnows out with them.

Gentleman farmer, Pete Hall at Richfield, always violates the child labor laws this time of year. His seven boys harvest apricots on their acreage while Pete goes sailing at Santa Barbara.

John Wilson is back in Standard's Ventura office after several months' absence. It won't be the same for a while though, John can't listen eagerly to tales told by bachelor Billy "Stud" Reed, who is away three months with the Air Force.

Stew Chuber, General Petroleum in Sacramento, and his wife Ann journeyed to Bahia de Los Angeles (Mexico) in their Piper "Tripacer" for a week's vacation during early June. Stew reports excellent skin-diving conditions.

"Fat" Frank Smith (Standard Oil Co.) has left the smog-bound plains of Los Angeles for the fresh sea air of Ventura.

The morning the news of the proposed Texaco-Superior merger hit the Bakersfield newsstands, Bill Bedford and Ivan Scherb of Texaco swept past the startled Superior receptionist and burst unannounced into Horace Harrington's office. Armed with measuring tape, pad and pencil they proceeded to measure the room, depth of rug pile, and inventory the furniture. All this went on without a word to Horace while he sat in wide-mouthed amazement, unaware of the proposed merger.

Michael Trapesonian, former paleontologist with Shell Oil Co. in Sacramento and Grand Junction, has recently resigned and is living at 636 Orange Grove Avenue, San Fernando.

Male traffic has all but stopped between Union's Santa Paula office and the local Gas Company since certain personnel departed for Alaska.

Lum Lovely, Union wellsite geologist and recent transfer to Alaska, is becoming an authority on Alaskan Cesspool Construction. He recently fell in.

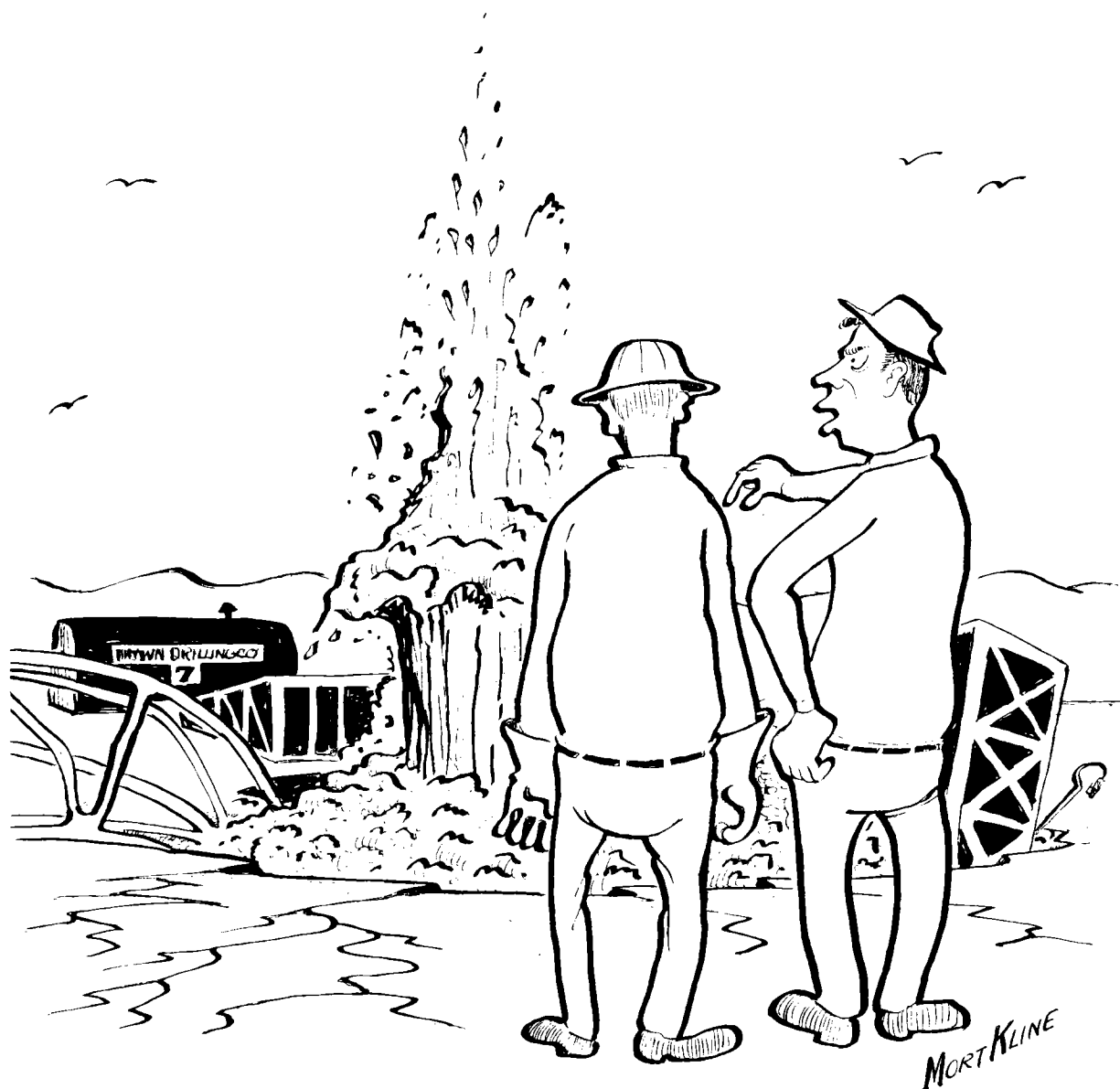
Bill Bauer, Texaco in Sacramento, was recently spotted spearing cigarette wrappers on the beaches from Carmel to Huntington Beach. Results ..... a new Winston lighter.

Dick Hester, Signal's Denver office, was vacationing at the A.A.P.G. Spring Picnic and renewing acquaintances at Laguna Beach.

Bill Bowen has left Signal's L.A. Office and is now working for Pacific Log Exchange in Bakersfield.

Paul Dudley, Sr. has just returned from another consulting job in Australia, and reports that the fall colors were wonderful this year. It was starting to get cool, and he saw the first snows a day before leaving.

Tom Rothwell, Richfield Regional Paleontologist in Long Beach, recently returned from a short field season in Alaska. Tom is now a full-fledged sourdough-beat generation hipster with his beard and remarks like, "Those Alaska bugs really bug me, Daddy-O!"



"That was a brand new bit!"

Irv Schwade, Regional Exploration Manager for Richfield, returned from Reverend Linehan's Distinguished Lecture and discovered that his car had been stolen from the Richfield lot. Several of Irv's domino cronies accused him of financing a replacement by virtue of their losses. This is manifestly untrue because the car has been recovered.

Richfield's intrepid girl geologists, Marlene Hyde and Margaret McKenzie, are planning another trip, this time down the Colorado in rubber rafts. Riding the freeways in a VW just doesn't have enough thrills any more.

Max Greene, Shell, Olympia, has deserted the ranks of the VW lovers, and purchased an Austin Healey.

Chuck Newell, Shell, Olympia, helped make the Portland Rose Festival a bang-up success --- someone stove-in the right front wheel of his brand new Morris Minor.

Recent transfers Cliff Barkell and Stan Cheney, from Salt Lake City, have joined the Shell Seattle office as Division Geologist and Division Geophysicist, respectively.

"Billy" K. Reed of Standard's Ventura office has said goodbye to the "grandmothers" of Ventura for a short stint with Uncle Sam's Air Force. Don't worry, Bill, all the girls will be waiting for your return as a ninety-day wonder.

The question of the month is, "In whose bathtub did Mick McKnight sleep?" when he attended the National Scouts and Landmen Association Convention in San Antonio. Mick claims the weather was hot and humid, but we understood all the bars were air-conditioned.

H. T. Anderson stopped by the La Habra office to renew his acquaintances after spending two years in Iran. Howard has signed up for another two-year hitch after his leave in the States.

Bill Barlow, Standard Oil Co., has left Los Angeles to return to the paleo lab and girls of Bakersfield.

Rumor has it that Joe Schweitzer, Standard Oil Co., has already gained 14 pounds at the buffet tables of the Hacienda Motel in Bakersfield where he is spending a 4-month vacation trying to find out what makes the lines so wiggly on seismic records.

Humble's recent consolidation from three floors to one has occasioned fierce grabs for pictures, better wall maps, and softer swivel chairs. The ultimate in one-upmanship is the possession of a three-drawer filing cabinet, rather than the mundane two-drawer variety. Nothing like musical chairs for the relief of summer doldrums.

Sam Brown and Don Hagen, with Texaco in Alaska, survived without injury last month when their helicopter crash-landed on the beach at Katalla. Don Sides, of National Helicopters, was the pilot. There were no personal injuries, but the helicopter was wrecked when it turned over.

Humble's Charley Guion, Sacramento, and spouse were given a rousing send-off on their prize-winning trip to New York. Those red marks on Charlie's face were the result of well wishers from the contingent of Petroleum wives on hand to see him off.

J. P. Bailey, Standard Oil Co., spent almost a month in the hospital and is now resting at home. Last reports indicate he had gained about five pounds and was feeling better.

#### NURSERY ITEMS

Jim and Erna Brown, General Petroleum at Santa Fe Springs, announce the arrival of a new baby, their second girl, born May 13, 1959. Catherine Mary weighed in at 7 lbs., 7 oz.

Dia and Bill Adent (Consultant, Sacramento) announced the arrival on June 13th, of Nathan Peter. Nathan tipped the scales at 6 lbs., 12 oz.

Paul S. Day and his wife Helen Sue proudly announce the arrival of Sandra Joanne on June 18th at 5:00 p.m., weighing 7 lb., 14 oz. This is their third; they have a girl 3, and a boy 1 1/2.

#### CALENDAR

July 8, 1959: Wednesday, 6:30 p.m., A.I.M.E., Junior Petroleum Group, dinner meeting, Michael's Restaurant, Washington Blvd. & Santa Ana Freeway, Los Angeles. "Application of Gas Lift in Ventura Avenue Field" Mr. Bruce Watkins, Shell Oil Co.

July 9, 1959: Thursday, 12:00 noon, S.E.G. luncheon meeting, Roger Young Auditorium, 936 W. Washington Blvd., Los Angeles. "Radiation Surface Surveys for Finding Faults" Dr. V. L. Vanderhoof, Director, Museum of Natural History, Santa Barbara.

July 14, 1959: Tuesday, 7:30 p.m., Coast Geological Society, dinner meeting, Miramar Hotel, Santa Barbara, "Cretaceous Stratigraphy" Dr. Willis P. Popenoe, University of California, Los Angeles.

July 25, 1959: Saturday, 3:00 p.m., Coast Geological Society, Annual Barbeque, Lagomarsino Ranch, Ventura. Send reservations to R. J. Newton, Standard Oil Co., Ventura.

July 27, 1959: Monday, 12:00 noon, A.I.M.E., luncheon meeting, Roger Young Auditorium, 936 West Washington Blvd., Los Angeles. "Oil Recovery from Oil Shales by Atomic Explosions" Dr. Richard S. Crog, Research Supervisor, Union Oil Co.

August 25-28, 1959: Tuesday through Friday, Tenth Alaskan Science Congress, Juneau, Alaska.

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##### American Association of Petroleum Geologists Bulletin

Ghawar Oil Field, Saudi Arabia, by Arabian-American Oil Company staff, vol. 43, No. 2, pp 434-454, February, 1959

Position of Oil Fields of Southwest Iran with Respect to Relevant Sedimentary Basins, by N. L. Falcon, vol. 43, No. 2, pp 484, 1959

Investigations in Radioactivity-dating of Sediments, by S. S. Goldrich, H. Baadsgaard, G. Edwards, and C. E. Weaver, vol. 43, No. 3, part 1, pp 654-662, March, 1959

Continental Sediments of Miocene Age in Puget Sound Lowland, by D. R. Mullineaux, L. M. Gard, and D. R. Crandell, vol. 43, No. 3, part 1, pp 688-696, March, 1959

Lower Paleozoic Rocks of Northern Williston Basin and Adjacent Areas, by J. W. Porter and J. G. C. M. Fuller, vol. 43, No. 1 pp 124-189, January, 1959

Exposures of San Onofre Breccia on Anacapa Islands, California, by D. W. Scholl, vol. 43, No. 1, pp 222-223, January, 1959

Ventura Basin Edge Environment, by Herbert Skolnick and Robert E. Arnal, vol. 43, No. 2, pp 477-483, February, 1959

Geologic Architecture of Circum-Pacific, by Lewis G. Weeks, vol. 43, No. 2, pp 350-380, February, 1959

Compaction of Sediments, by J. Marvin Weller, vol. 43, No. 2, pp 273-310, February, 1959

#### University of California Press

Geochemical Methods of Prospecting and Exploration for Petroleum and Natural Gas, by A. A. Kartsev, Z. A. Tabasaranskii, M. I. Subbota, and G. A. Mogilevskii; English translation edited by Paul A. Witherspoon and William D. Romey ----- \$12.50

#### United States Geological Survey

Professional Paper 260-W: Lower Eocene Phosphatized *Globigerina* ooze from Sylvania Guyot, by E. H. Hamilton and Robert W. Rex ----- \$ .60

Professional Paper 327: Geology and Mineral Resources of Paraguay -- A Reconnaissance (by Edwin Eckel) with a Section on Igneous and Metamorphic Rocks (by Charles Milton and E. Eckel) and Soils (by Pedro Sulsona) ----- \$ 1.75

Bulletin 1052-H: Dielectric Constant and Electrical Resistivity of Natural-State Cores, by G. V. Keller and P. H. Licastro \$ .20

#### Maps

OM 201: Map of Arizona Showing Oil, Gas and Exploratory Wells, Pipelines, and Areas of Igneous and Metamorphic Rocks, by T. F. Stipp and H. M. Beikman ----- \$ 1.50

I 204-B: Geographic Map of the Northwestern Hijaz Quadrangle, Kingdom of Saudi Arabia, by G. F. Brown, R. O. Jackson and R. G. Bogue ----- \$ 1.00

I 213-A: Geology of the Northwestern Rub' Al Khali Quadrangle, Kingdom of Saudi Arabia, by R. A. Bramkamp and L. R. Ramirez \$ 1.00

I 217-A: Geology of the Asir Quadrangle, Kingdom of Saudi Arabia, by G. F. Brown and R. O. Jackson ----- \$ 1.00

Geologic Map of the State of Idaho, compiled by C. P. Ross and J. D. Forrester, 1947. Reprint, 1959 ----- \$ 2.50

Indexes to Topographic Mapping in California, Utah, Alaska, and Nevada ----- Free

#### State of Oregon--Department of Geology and Mineral Industries

Guidebook to Geology Along Oregon Highways, Bulletin 50, by W. D. Wilkinson, Editor ---- \$ 1.50

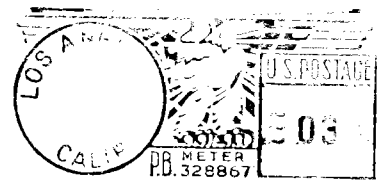
Lode Mines of the Central Part of the Granite Mining District, Grant County, Oregon, by George S. Koch, Jr. ----- \$ 1.00

#### New Mexico Geological Society (in cooperation with Arizona)

Guidebook of the Black Mesa Basin, Northeastern Arizona ----- \$ 8.75



PACIFIC PETROLEUM GEOLOGIST  
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# PACIFIC PETROLEUM GEOLOGIST

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

Vol. 13

August, 1959

No. 8

### ASSOCIATION ACTIVITIES

#### COAST GEOLOGICAL SOCIETY

The highlight of the July 14 meeting of the Coast Geological Society was a most informative and interesting talk by Dr. W. P. Popenoe, professor at UCLA, on "Cretaceous Stratigraphy and Nomenclature in California". Dr. Popenoe divided his talk into three parts, suitably labeled by UNDE VENIMUS - (Where have we been?), UBI SUMUS - (Where are we now?) and WUO PROPERAMUS - (Where are we going?).

The first published work on Cretaceous strata in California was by John D. Trask in 1856. He described the fauna of the fossiliferous strata found at Chico Creek, however, he concluded that they were Miocene in age. The following year W. P. Blake collected and sent East various fossil assemblages, some of which were identified as being of Cretaceous age. From 1864 to 1869, William Gabb of the California State Geological Survey published many papers on the Cretaceous. Although Gabb incited a widespread interest in California Cretaceous stratigraphy, some of his published work was so inferior that problems were created which still exist today. Gabb was often careless in the field, and fossil collections from two or more sections would occasionally become mixed or mislabeled. T. W. Stanton later re-collected many of Gabb's sections, and through his work both older and younger rocks were separated from many of Gabb's Cretaceous Sections.

Knowledge of California Cretaceous stratigraphy was greatly enriched in the early 1900's by the work of F. M. Anderson who made the first good biostratigraphic separations; previous workers had been concerned principally with stratigraphy. Earl L. Packard made valuable contributions to knowledge of the Cretaceous faunas in Southern California by his publications on the Santa Monica Mountains in 1916 and 1922. During the late 1920's Ralph Stewart organized and published for the first time many of Gabb's holotypes, collecting localities, etc.

Although several critical geological publications on Cretaceous stratigraphy and faunas were published between approximately 1910 and 1930, interest lagged somewhat during these years. F. M. Anderson revived this interest and was the leader of renewed Cretaceous activity until about 1945. Supplementing Anderson's contributions were important publications by Taff on the Upper Cretaceous in the Mt. Diablo area, Taliaferro in the Central Coast Ranges, Kirby in the western Sacramento Valley, Popenoe on Cretaceous faunas in So. California, Goudkoff's subdivision of the Cretaceous based on Foraminifera, and others.

The considerable effort put forth during recent years or being undertaken at the present time involving Cretaceous stratigraphy includes the following projects:

1. The first of a series of papers on the Cretaceous ammonites in California was published in late 1958 by Dr. Matsumoto of Japan. Dr. Matsumoto became interested in Cretaceous problems on the West Coast and spent most of 1958 in California making collections and assimilating information from the various universities and colleges, the USGS, oil companies, individuals, etc. He hopes to contribute a workable classification of the Cretaceous based on ammonites.
2. The USGS is actively engaged in work on the Cretaceous stratigraphy in the Sacramento Valley.
3. Both Stanford and UCLA have programs of graduate research on the Cretaceous throughout the State.
4. Ned Allison, Department of Paleontology, University of California, has been studying the Cretaceous megafauna of Baja California for several years.
5. The importance of the Cretaceous gas fields in the Sacramento Valley has prompted much detailed stratigraphic work by major oil companies.
6. A correlation chart of the California Cretaceous by W. P. Popenoe and R. W. Imlay will be published within a year.

The projects presently under way will help solve many of the stratigraphic and biostratigraphic Cretaceous problems. Dr. Popenoe pointed out several factors which greatly handicap our present knowledge of the Cretaceous.

1. Although much gross mapping has been done and the general distribution of the Cretaceous is well known, few of the many formations have been adequately defined and mapped in detail in publications.
2. Subdivision of formations and members is not far advanced.
3. Zonation on the basis of megafossils is generally lacking.
4. Larger time-stratigraphic classifications have been attempted but not too successfully.
5. Goudkoff thus far has the only workable stage and zone classification, based on the microfauna.

Several attempts have been made in the past to apply a time-stratigraphic classification

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NEXT DEADLINE: August 27, 1959

to the Cretaceous throughout California. These have been generally unsuccessful for various reasons. A Series classification has been neither necessary nor practicable on a local scale while Stage and Zone classifications are important and useful locally, but often lose significance when applied outside of their original locality. Examples of this are revealed in the confusion that has arisen in attempts to extend the use of Taliaferro's Pacheco and Asuncion groups to other widespread areas. Also, the term "Chico" has been applied in so many different senses that its value as a stage name is losing significance. Within a few years stratigraphers should have available workable classifications of the Cretaceous based on ammonites, foraminifera, and pelecypods - gastropods. These can be used as three-fold bases for local stage and zone classifications.

Dr. Popenoe concluded his talk with excellent slides of the more important pelecypods and ammonites found in the Cretaceous formations. A discussion followed with Dr. Popenoe presenting his ideas on major stratigraphic and biostratigraphic problems.

The consensus of the audience was that Dr. Popenoe should be commended for one of the best talks ever presented to the Coast Geological Society. His presentation was excellent, the material was especially well organized and his charts were most helpful in clarifying many problems of Cretaceous correlation in California.

NEW COASTAL CORRESPONDENT

Dale H. Duley, Richfield, has been appointed Coastal Correspondent for the P.P.G. Newsletter to replace Jerry Williams who has recently been transferred from Ventura to Alaska. Duley's address is c/o Richfield Oil Co., Route 1, Box 150-R, Ojai, California, phone Santa Paula 1500.

MAJOR ISSUES

At a recent meeting of the Executive Committee of the Pacific Section, it was decided to initiate a program designed to bring to the membership's attention items of A.A.P.G. business and policy which are of particular importance to the membership. It is intended that this program will emphasize and supplement the reports and material published in the Bulletin in order to encourage discussion and comments from the Pacific Section membership. It is hoped that the members will then make known to the Executive Committee of the Pacific Section, to District Representatives, or, in the case of membership requirements, to the Pacific Coast members of the Membership Advisory Committee, their feelings on important issues in order that the membership may be more adequately represented by the District Representatives at periodic business and annual meetings of the Association. It is also expected that response on these issues will enable the planning of more effective business discussions at the fall meetings of the Pacific Section. We expect to summarize opinions received on the following issues for publication in the P.P.G.

Code of Ethics

Currently important issues before the membership include the proposed Code of Ethics recommended for adoption by the Committee on Code of Ethics. The recommended Code is set forth in the June, 1959, Bulletin, Pages 1477-1479, along with the Committee's additional recommendations, including one for the requirement of a specific pledge on the part of an applicant for membership to follow and adhere to the standards of the Code as adopted. Article III, Sections 9 and 10, of the Constitution of the Association (August, 1955, Bulletin, Page 1684) sets forth the current "Code." The proposed amendment to Section 9 is indicated on Page 1479 of the June, 1959, Bulletin.

Here on the Pacific Coast there have been expressed some rather widely divergent attitudes toward these proposed additions and changes. Many members feel such a code is long overdue and absolutely essential toward maintaining and improving the standard of the petroleum geological profession. Others feel that the setting forth of a code is desirable but should be stated in general terms rather than in the considerable detail set forth. Some members are very concerned about what they feel are highly restrictive limitations (e.g. Article III of the recommended Code) placed on the interchange of information which could, in their interpretation, be very damaging, economically, if followed literally by many geologists, particularly individuals in business for themselves.

What do you think about the Code? Your opinions will be helpful and necessary in order that the proper feeling of the Pacific Section may be effectively expressed on a National Association level. A phone call or post card to your District Representative will do the trick. Richard Faggioli, District Representative, Humble Oil & Refining Company, 612 South Flower Street, Los Angeles 17, Calif. telephone MADison 6-7701, has been charged with coordinating and tabulating the replies.

The Tenth Annual Alaskan Science Conference will be held at the Juneau Douglas High School on August 25-28, 1959. The schedule for the Geology and Geography Section, according to Chairman Charles V. Fulmer, Standard, Anchorage, is as follows:

August 25	1:00 pm	Registration
26	9:00 am	Registration
	1:00 pm	General Session
27	9:00 am	Geology & Geography Section
28	1:00 pm	Geology & Geography Section

A complete program will not be available until August 25, however, the following list of papers will be presented at the Geology and Geography Section.

REGIONAL GEOLOGY OF THE COOK INLET AREA, ALASKA  
by Marshall G. Ayres

STRUCTURAL CONTROL OF QUICKSILVER ORE AT THE RED DEVIL MINE, ALASKA, by H. C. Berg and E. M. MacKevett, Jr.

SOME RECENT OBSERVATIONS OF GLACIER BEHAVIOR IN ALASKA, by William O. Field

THE BEDROCK GEOLOGY AND PETROLOGY OF THE JUNEAU ICE FIELD AREA, S.E. ALASKA, by Robert B. Forbes

POST-WISCONSIN GLACIAL CHANGES IN SOUTHEAST ALASKA, by Richard P. Goldthwait

GEOLOGIC FACTORS AFFECTING PROPOSED NUCLEAR TEST NEAR CAPE THOMPSON, NORTHWEST ALASKA, by Reuben Kachadoorian, C. L. Sainsbury and R. H. Campbell

CERTAIN PHYSIOGRAPHIC CHANGES ASSOCIATED WITH THE SOUTHEASTERN ALASKA EARTHQUAKES, by James N. Jordan and Merrill Cleven

THE CONTRACTION THEORY OF ICE-WEDGE POLYGONS, by Arthur H. Lachenbruch

TYPES OF URANIUM-THORIUM DEPOSITS NEAR BOKAN MOUNTAIN, PRINCE OF WALES ISLAND, ALASKA, by E. M. MacKevett, Jr.

MUMMIFIED SEAL CARCASSES IN THE MC MURDO SOUND REGION, ANTARCTICA, By Troy L. Pewe, Norman R. Rivard, and George A. Llano

THE ORIGIN OF AAPA-MOORS (STRANG-UND RINGMOORE) by Erwin Schenk

SCUBA DIVING OBSERVATIONS ON THE ALASKAN SHELF AND UNDER ICE IN THE POLAR SEA, by George Shumway and John A. Beagles

COMPARATIVE STUDY OF SHALLOW WATER SEDIMENTS IN THE VICINITY OF BARROW, ALASKA, by Marian A. Werner and Marshall Schalk

Individuals attending this Conference are asked to make their own reservations. The following hotels are accepting reservations for the Science Conference: Baranof, single room, \$12.00 & up per day, Gastineau, single room, \$9.00 & up per day, Juneau, single room, \$11.00 & up per day.

SEPTEMBER 1 DEADLINE FOR 1960 AAPG DIRECTORY

The 1960 AAPG-SEG-SEPM Directory will be going to press soon. Be sure to have your picture included in this directory along with your current address and affiliation. Pictures

and last minute changes should be sent to Hal Case, 609 S. Grand Ave., Los Angeles 17, phone MADison 5-8216, before the end of this month.

Advertising space is still available in this directory. For information, contact Rex Smith, Humble Oil & Refg. Co., 612 South Flower St., phone MADison 6-7701. Anyone desiring advertising space should submit the material by September 1, 1959.

1960 AAPG NATIONAL OFFICER NOMINATIONS

Gordon I. Atwater, consulting geologist, New Orleans, Louisiana, and Ben H. Parker, Frontier Refining Co., Denver, Colorado, head the slate of officer nominations submitted by the AAPG nominating committee, as announced by President Lewis G. Weeks, consulting geologist, Westport, Connecticut. Other 1960 officer-nominees include, for vice-president, Frank B. Conselman, consulting geologist, Abilene, Texas, and Mason L. Hill, Richfield Oil Corp., Los Angeles, California, for secretary-treasurer, George V. Cohee, U.S.G.S., Washington, D.C., and Louis H. Lukert, Texaco, Inc., Houston, Texas, and for Editor, Grover E. Murray, Louisiana State University, Baton Rouge.

Balloting will be by mail, and the new officers will be formally installed April 28, 1960, on the last day of the 45th annual meeting of the Association, to be held in the Chalfonte-Haddon Hall Hotel, Atlantic City, New Jersey.

The 1960 AAPG nominating committee includes past-president Graham B. Moody, consulting geologist, Berkeley, California, Donald L. Blackstone, Jr., University of Wyoming, Laramie, A. Rodger Denison, Amerada Petroleum Corporation, Tulsa, Oklahoma, Vaughn C. Maley, Standard Oil Co. (N.J.), New York, N.Y., and Gordon Rittenhouse, Shell Development Co., Houston, Texas.

1960 PACIFIC SECTION CANDIDATES

The Nominating Committee, Pacific Section, A.A.P.G., has selected the following slate of candidates for 1960 offices according to U. S. Grant, Chairman:

For President:

Thomas A. Baldwin, Monterey Oil Co.

John C. Hazzard, Union Oil Co.

For Vice President:

Orville F. Bandy, U. S. C.

George H. Feister, Union Oil Co.

For Secretary:

Gordon R. Bell, Western Gulf

Robert J. Hindle, Sunray Mid-Continent

For Treasurer:

Richard B. Haines, Continental

Quentin M. Moore, General Petroleum

Members of the Nominating Committee are: Harvey W. Lee, Union, E. Harold Rader, Standard, Thomas A. Roy, Ohio, Arthur R. Weller, Shell, and U. S. Grant, U.C.L.A.

STANLEY R. JEFFRIESPACIFIC SECTION PUBLICATIONS FOR SALEIn Memoriam

Stanley Rex "Jeff" Jeffries died in Ventura on July 12, 1959, after an illness of several months.

Jeff was born in London, England, in 1916, and came to Southern California when a small boy. He attended the University of Southern California, where he received a B.A. degree in geology in 1938, and an M.S. degree in 1940. Following two non-geologic jobs, he became a geologist for Shell Oil Company in 1944, and worked for Shell since that time, in Sacramento, Bakersfield, and Ventura. In Ventura he served one year as Secretary for the Coast Geological Society, and lent a helping hand in numerous Society activities. He is survived by three sons, a sister, and his parents, Mr. & Mrs. Albert Jeffries of Laguna Beach.

Those are the statistics about Jeff. We who knew him are more apt to recall that he was a gentle and loveable man, with a kindly outlook on humanity. Jeff was devoted to singing, and his clear tenor was a happy addition to many a barber shop quartet. He was also an ardent beach boy, with a lifelong dedication to ocean fishing and diving, and was an early member of Laguna Beach's Blue Fin Club.

He is gone now, but forever after, when we yearn for close harmony, Jeff Jeffries will be the first to our minds.

Membership Requirements

Your A.A.P.G. headquarters Executive Committee is pursuing the matter of overhauling membership requirements. In line with this, a special Membership Advisory Committee has been appointed to study the matter and make recommendations at the next annual business meeting of any changes they believe are in the interest of our organization. This committee includes Andrew Alpha, Earl Noble, and Irv Schwade as Pacific Coast members.

Recently a mail ballot was submitted to members for a vote on three items, among which was one changing the entrance requirements of Junior Members to a Bachelor's degree, plus one year of experience in geology or acceptance as a candidate for an advanced degree. Previously a student could qualify for Junior membership with as little as 30 hours in geology. This issue passed by an overwhelming majority. This substantial upgrading of Junior Membership qualifications has put them almost on the level of the old Active Membership requirements -- which are a degree, plus 3 years of experience -- and a change would appear to be in order for Active members.

Your Pacific Coast members of this Committee have their ideas on how the other membership requirements should be changed. But in the desire to be responsive to the thoughts of the members in our area, we welcome any constructive ideas that may bring the other membership requirements into proper relationship to the newly-adopted Junior Membership requirements.

Drop any ideas to Irv Schwade at Richfield Oil Corporation, 555 South Flower Street, Los Angeles 17, and he will see that Andrew Alpha and Earl Noble are advised of your thoughts.

The following cross sections prepared under the direction of the Cenozoic Subcommittee on Geologic Names and Correlations and the 1958 Los Angeles and Ventura Basin Guidebook may be purchased from Mr. Harry G. Stuvelling, Jr., Pacific Log Exchange, 2110 Cherry Avenue, Long Beach 6, California. Checks for the cross sections and Guidebook should be made payable to the Pacific Section, A.A.P.G., and mailed with the order.

<u>No.</u>	<u>A.A.P.G. Cross Sections</u>	<u>Publ. Date</u>
1	Sacramento Valley - South (2 sheets) North side of Sacramento Valley through Rio Vista, Thornton and Lodi Gas Fields, including Mt. Diablo-South Sacramento Correlation Chart.	1951
2	Ventura Basin - East (1 sheet) Basement North of Oak Canyon Oil Field to Aliso Canyon Oil Field.	1952
3	Los Angeles Basin (1 sheet) Palos Verdes Hills to San Gabriel Mts.	1952
4	Salinas Valley (1 sheet) San Antonio River northerly to San Andreas Fault, through San Ardo Oil Field.	1952
6	Sacramento Valley - North (2 sheets) A. From T23N, R1W through T16N, R1E, and B. Correlation Chart.	1954
7	Ventura Basin - Central (1 sheet) From Santa Ynez Fault north of Ojai to Western Santa Monica Mts., through Ventura Avenue and West Mon- talvo Oil Fields.	1956
8	San Joaquin Valley - South (1 sheet) From San Andreas Fault to Sierra Nevada Foothills, passing through Belgian Anti- cline, McKittrick, Elk Hills, Coles Levee, Fruitvale, Kern River and Round Mountain Fields.	1957
9	Central San Joaquin Valley - (1 sheet) From San Andreas Fault to Sierra Nevada Foothills, and passing through Coalinga, Guajarral Hills and Riverdale.	1957
10 N	Central San Joaquin Valley (1 sheet) From Rio Vista to River- dale through Rio Vista, McDonald Island, Tracy, Chowchilla, Gill Ranch, Raisin City, Helm and Riverdale Fields.	1958
10 S	Central San Joaquin Valley (1 sheet) From Riverdale to Tejon Ranch through Riverdale, Trico, Wasco, Rio Bravo, Greeley, Strand, Ten Section, Paloma, Wheeler Ridge, Grapevine and Tejon Ranch Fields.	1958

Price: \$1.50 each plus mailing and handling charges for each order.

Guidebook: "A Guide to the Geology and Oil Fields of the Los Angeles and Ventura Regions", Pacific Section, A.A.P.G., Los Angeles, 1958. 204 pp., maps, cross sections, stratigraphic charts and road logs supplementing the 1952 Guidebook, includes excellent summaries of fields developed since that time. Price: \$7.00 postpaid.

#### JOHNSON NEW ASSISTANT EDITOR

Brad Johnson, Ohio Oil Co., has accepted the position of Activities Editor for the Newsletter replacing Louis Canut, Texaco, in Long Beach, who has resigned. Johnson will edit news articles from the Anchorage, Sacramento, San Francisco and Los Angeles Correspondents. His address is c/o Ohio Oil Co., 550 S. Flower St., Los Angeles, 17, California.

### PERSONAL ITEMS

Ralph Moberly, Jr., is leaving Standard in Ventura at the end of August to accept a teaching position at the University of Hawaii where he will teach geology and oceanography.

Setting a new record for rapid departure from the Ventura area recently was Jerry Williams of Ohio Oil. Jerry was called at 11:00 am, left for Los Angeles by noon, finished all company business that afternoon, wound up all personal business the following day and left for Alaska the next afternoon. He was last seen on the North slope attempting to fulfill the three requirements for becoming a sourdough.

Phil O'Rourke, Division Manager for Phillips in Anchorage, Alaska, was transferred to Bartlesville, Oklahoma. Don Buelow from Billings will take over Phil's duties. Keith Calderwood, formerly of Bartlesville will also take up residence in Anchorage. It is expected that these transfers will take place about August 1.

Larry Kuenzi, Standard, is making a fast recovery from a direct hit by a bolt of lightning which struck his shoulder while working in the Arctic. Fortunately Larry was not seriously injured and has nearly recovered from his shocking experience.

It has been reported by an unusually reliable source that George Starke, Standard, will soon report to the Anchorage Office for well site experience.

Hank Neel has been elevated to the position of Manager of Exploration and Production for foreign operations in Tidewater Oil Company.

Tom Steiny, Union Oil Co., in Bakersfield, has resigned from the Company and the oil business. Tom is moving to Arkansas and plans to enter real estate with emphasis on recreational area development.

Herb Johnson, Humble, who has been working on the Los Angeles Basin subsurface staff, has resigned and will go to New Orleans to work for the Tennessee Gas Transmission Company.

Tom Kelliher has been promoted to Manager of Exploration for domestic activities in Tidewater. Mr. Kelliher was formerly the company Manager of Exploration, Southern Division, in Houston, Texas.

E. G. Dobrick, formerly of Oildale, Calif, will replace Walt Wolf, Standard, Seattle, who was transferred to Salt Lake.

J. G. Barr transferred to the Calif. Research Corp. at La Habra, California. Now you can dry your feet out, Jack.

R. C. "Doc" Stewart, Dept. of Geology and Mineral Industries, State of Oregon, announces his retirement. "Doc", says he will keep busy trying to solve some of the unanswered questions that have come up over the years and will continue to live at 4075 N. Castle, Portland, Oregon.

Tom Wilson of Ohio and Lum Lovely of Union recently purchased Balboa yacht caps for their trip down the Yukon River.

Union's field party on the North Arctic slope were recent heroes in the rescue operations involving two Fish and Wildlife biologists who were victims of an air crash.

It has been reported by a usually unreliable source that a British-American geologist recently lost his brunton down Sinclair's one holer on the Porcupine. Tom Edwards was able to take a reliable strike and dip on the way out.

Ray Johnson has been named the Standard, Seattle, Division Scout.

Harry Jamison, Richfield staff geologist, is spending two weeks doing field work in the Rocky Mountains while his wife paints their home.

Nolen Webb, Richfield geophysicist, went down in a helicopter with five others in western Alaska, suffering minor bruises, dislocated pride, and a very late dinner after being rescued by another helicopter.

Ivor McCray, former scout with Shell, Olympia, has opened the Olympia Blueprint and Copy Company here.

Max Greene, Shell in Olympia, is a booster for Canadian beer after his recent visit to Vancouver, British Columbia.

Mase Hill, Richfield exploration manager, who never takes a vacation, just returned from two weeks in Alaska on "business."

Jim Benzley, Western Gulf, is in the process of moving eight blocks to a new house which contains a billiard table on the second floor. Since Jim no longer has to make a living playing billiards for money, he is trying to figure a way to get rid of the table without removing the side of his house.

Bob Johnston, Western Gulf, is on his annual vacation junket to Mexico with his family. We understand Bob plans to lie on the beaches and "vegetate".

Bill Pemberton announces the removal of his office to 3887 Chevy Chase Drive, Pasadena, California, effective July, 1959.

Jim Alkire, General Petroleum, Sacramento, caught a record 19" Corbina on the beach at Capistrano while vacationing in Southern California. He claims a Corbina is a fish.

At the recent Sacramento Desk and Derrick club field trip, Shell's district geologist, Adrian Maaskant, wove such a spell with his "cute" accent, that the girls are clamoring to replace his secretary.

Bob Scott, Tidewater in Los Angeles, has been transferred to Bakersfield. He also goes from renting to the mixed joys of houseowning.

Warren Hagist, Superior, Anchorage, is rumored to have started breeding husky dogs in his spare time, and is said to have been encouraging his wife, Marge, to make mukluks and snowshoes to stock the rumored proposed "HAGIST'S FROZEN NORTH SPORTING GOODS STORE."

Pete Wygle, Standard in Ventura, and family recently visited relatives in Minnesota and in New York where he took in the stage play "My Fair Lady".

Just returned from a week's vacation at Mineralking is Frank Yule, General Petroleum in Ventura. Through enough facial growth to out Castro old-Fidel, office mates keep hearing Frank mumbling to himself about the trip down out of the Sierra: - steep downgrade - no hills like that in Wisconsin - no brakes on house trailer in tow - car brakes got hot -- car brakes caught fire - tow truck - tow bill, repair bill - \$52.00 - damn crooks, etc.

## CALENDAR

August 8, 1959: Saturday, 7:30 pm - 1:00 am, AIME, Junior Petroleum Group, Dinner-Dance, Semi-formal, Disneyland Hotel, Gourmet Room.

August 11, 1959: Tuesday, 7:30 pm, Coastal Geological Society, dinner meeting, Miramar Hotel, Santa Barbara, "Tarzana Submarine Fan". Mr. Harold Sullwold, Consultant.

August 24, 1959: Monday, noon, AIME, Luncheon Meeting, Roger Young Auditorium, 936 W. Washington Blvd., Los Angeles, "Oil Provinces - Turkey, Pakistan and Egypt", Mr. H. H. Neel, Tidewater Oil Company.

August 25-28, 1959: Tuesday through Friday, Tenth Alaskan Science Congress, Geology and Geography Section, Juneau, Alaska.

September 26, 1959: Saturday, 7:00 pm, Coast Geological Society, Annual Dinner-Dance, Ojai Valley Inn.

## BIBLIOGRAPHY OF RECENT PUBLICATIONS

### WORLD OIL

Seismic velocity effects may hide organic reefs, by Dr. DeWitt C. Van Siclen. Part 1: Vol. 148, No. 5, April, 1959. Part 2: Vol. 148, No. 6, May, 1959.

Continuous seismic profiler aids marine exploration, by Charles B. Officer. Vol. 148, No. 5, April, 1959.

Continuous velocity logger yields excellent results, by H. W. Hardy. Vol. 148, No. 5, April, 1959.

Permian basin east shelf has variety of prospects, by Frank B. Conselman. Vol. 148, No. 7, June, 1959.

New navigation technique will increase aerial survey accuracy in remote areas, by Harrison T. Brundage. Vol. 148, No. 7, June, 1959.

### GEOLOGICAL SOCIETY OF AMERICA

Overthrust Ordovician and the Nannie's Peak intrusive, Lone Mountain, Elko County, Nevada, by Donald W. Lovejoy. Bulletin, Vol. 70, No. 5, May 1959.

Eocene stratigraphy and paleontology, Orocochia Mountains, southeastern California, by John C. Crowell and Takeo Suzuki. Bulletin, Vol. 70, No. 5, May, 1959.

Re-evaluation of the salt chronology of several Great Basin Lakes, by Wallace S. Broecker and Alan F. Walton. Bulletin, Vol. 70, No. 5, May, 1959.

Upper Ordovician (?) and Upper Silurian formations of the northern Klamath Mountains, California, by Francis G. Wells, George W. Walker, and Charles W. Merriam. Bulletin, Vol. 70, No. 5, May, 1959.

Granitization, migmatization, and fusion in the northern Entiat Mountains, Washington, by Dwight F. Crowder. Bulletin, Vol. 70, No. 7, July, 1959.

Contact metamorphism of magnesian limestones at Crestmore, California, by C. Wayne Burnham. Bulletin, Vol. 70, No. 7, July, 1959.

Gravity anomalies off the west coast of North America, 1. Seamount Jasper, by J. C. Harrison and W. C. Brisbin. Bulletin, Vol. 70, No. 7, July, 1959.

Paleozoic and Mesozoic fossils in a thick stratigraphic section in the eastern Sierra Nevada, California, by C. Dean Rinehart, Donald C. Ross, and N. King Huber. Bulletin, Vol. 70, No. 7, July, 1959.

### OIL AND GAS JOURNAL

Pipeline costs, by Paul Reed and Geen Kinney. Vol. 57, No. 29, July 13, 1959.

### ATOMIC ENERGY COMMISSION - Technical Information Service

RME-2050 (Geology and Mineralogy) Notes on geophysical work at Marysville, Utah, by Ray E. Gilbert, price \$ .75.

### OREGON DEPT. OF GEOLOGY & MINERAL INDUSTRIES

Bulletin 49: Lode mines of the central part of the Granite Mining District, Grant County, Oregon, by George S. Koch, Jr., price \$1.00

Bulletin 50: Guidebook to geology along Oregon Highways, by W. D. Wilkinson, editor, price \$1.50

#### U. S. GEOLOGICAL SURVEY

Bulletin 1028-K: Geology of Segula, Davidof and Khvostof Islands, Alaska, by W. H. Nelson, price \$1.00

Water Supply Paper 1470: Geology and ground-water features of the Eureka area, Humboldt County, California, by R. E. Evenson, price \$1.00

Water Supply Paper 1415: Surface water supply of the United States, 1957, Part 10: The Great Basin, prepared under the direction of J. V. B. Wells, Chief, Surface Water Branch, price \$1.00

Map I-303: Progress map of the geology of the Juneau quadrangle, Alaska, by Ernest H. Lathram, Robert A. Loney, William H. Condon, and Henry C. Berg, price \$ .50

Circular 409: Water yield and reservoir storage in the United States, by W. B. Langbein.

Circular 410: Probability analysis applied to a water-supply problem, by Luna B. Leopold

Circular 412: Reports and maps of the Geological Survey released only in the open files, 1958, by B. A. Weld, E. S. Asselatine, and Arthur Johnson

#### BOOKS

Structural methods for the exploration geologist, by Peter C. Badgley. Harper and Brothers, New York, 1959, price \$7.50

The study of rocks in thin section, by W. Moorhouse. Harper and Brothers, New York, 1959, price \$8.00

Oil -- from prospect to pipeline, by Wheeler and Whited. Gulf Publishing Co., Houston, Texas, price \$2.95

### MORE PERSONALS

On the vacation scene, Howard Level, Union in Santa Paula, has just returned from a family vacation to North Dakota. Mike Jager recently took his family to Desolation Valley for a week at the family cabin. Mike Zaikowsky, Texaco in Ventura, is vacationing again this summer in Montana and it is hoped that he will finally bring back proof for those tall fish stories he relates annually.

Fellow geologists are consoling John Carter, Shell in Ventura, over his having to shoot a friend recently. It seems that John returned home within only two hours after deer season officially opened, with a three-point buck which he shot from the remarkable distance of only 15 feet, and using a telescope sight, no less. Everyone wonders how long John has had the poor deer tied up waiting for the season to open.

Robert Morrison, Richfield in Ojai, has just become an unwilling member of the Bloodshot, Bleary-eyed TV-Watchers' Assn. Nary a moth escaped from his penurious purse as his wife Phyllis was awarded a beautiful set while attending a TV program in Los Angeles.

Bob Dyk, Tidewater, had a little back trouble which might have been quite serious, according to Bob. He claims his present rapid recovery is due to his excellent physical condition which, in turn, is due to numerous golf outings. Ah, to be an executive and have that free time!

A. S. "Ike" Holston, Tidewater Division Geologist, recently checked out a company car for a four or five day business trip, then arrived back in town by plane a short time later. A red hot rumor hints that "Ike" had to get back for his 35th wedding anniversary to stay out of the proverbial dog house.

Two big spenders from Standard, rumored to be Bob Erickson and Tom McCroden, recently established new records in gallons per mile consumption while vacationing to spots such as Alberta, British Columbia, Wyoming and Montana. During refills at numerous service stations, both were requested to shut off their motors while refueling because the pumps were losing ground.

Frank Smith of Standard, a recent transfer from Los Angeles to Ventura, decided to show the country bowlers how the city leaguers do it. However, at an after-league game, (for money, of course), two of the local 50 handicap bowlers bowled over 200 scratch.

John Jacobson, Standard in Ventura, and family recently visited relatives in Minnesota and in New York where he took in the stage play, "My Fair Lady".

Bill Castle, Richfield in Ojai, journeyed with the family to visit relatives in Arizona and New Mexico, then returned to spend a week loafing at Bass Lake with Jerry Long and family, Signal in Ventura.

The annual barbeque of the Coast Geological Society was held in Ojai on July 25 and a wonderful time was had by the 61 members, wives, and guests. Sincere thanks go to Jack Wood again this year for barbequing the meat. Jack graciously accepts this task, and the excellent turnout each year is a tribute to his fine cooking. Among those seen assisting the hard working barbeque committee chairman, Ralph Newton of Standard, were: Can Thompson, Bill Barlow and Ed Dryden all with Standard, Dale Duley of Richfield and Art Weller of Shell.

Lum Lovely, summer adventurer to the Alaskan frontier from Union at Santa Paula, has been encountering a series of mishaps in his hazardous occupation. In attempts to better last month's cesspool adventure, this month he has fallen off a bike and wrecked a \$30 pair of slacks, lost his contact lens while water skiing, and in some unexplained adventure managed to lose the gold cap off a front tooth.

Gerry Knowles, Richfield geologist, expecting a new heir and to move into a new home, now has to find temporary quarters on account of plasterers' strike and to continue to wait for both home and child.

John Loofbourow, Richfield foreign exploration manager, bought a new Vauxhall in Los Angeles. Had he waited two weeks he could have bought it in Europe and brought it back.



Milt Zeni, Standard Oil Co. in Bakersfield, received his 10-year emblem. He had requested a Chevron chest tattoo, but his chest was too narrow for the word, "Chevron" and he settled for a conventional tie clasp. In spite of his horrible physical condition (which includes everything from pernicious dandruff to raging athlete's foot) Milt has managed to grovel his way to the "Ten-Year Mark" without taking a single day of sick leave!

Burt Amundson, with Standard in Bakersfield, was recently seen in a bathing suit doing a little water skiing. "Barrel-Chested Burt", as he was known in the "old days", has been a victim of Newton's Second Law and his barrel seems to have rolled down hill a bit!

Note to Draftees: When Fred Peters, of Formation Logging Service Company, recently joined the Army for a three-month stint, he carried along a box full of rags for polishing buttons, boots and assorted Army hardware. This foresight so impressed the brass that Fred was made a platoon sergeant forthwith, thus escaping the more ornery duties of Army life. Fred has now returned, speaking highly of the Army's ways, and now looks forward to an assignment by his company to the Philippine Islands.

Jim Young, Schlumberger, Sacramento, contracted pneumonia on his recent vacation trip in northern California, but managed to stay on his feet until his vacation was over. Following a hospital sojourn, he attempted to convalesce at home, but has now wobbled back to the relative quiet at the office and is reported to be doing well. Visiting hours may be obtained from the secretary.

Lowell Garrison has joined the Sacramento office of Western Gulf. His arrival from Bakersfield coincided with a breakdown of the office air-conditioning system and it is reported that he alone has felt no discomfort.

Bob Deacon, formerly with Texaco, has returned to the northwest. He is currently editing the Northwest Oil Report in Portland.

Bill Bauer, Texaco in Sacramento, is currently in the midst of his sixth move in as many years with the company. This record is unusual only in that all of his moves have been within the city limits of Sacramento. Bill admits that he may have stumbled onto the secret of how to avoid being transferred, but feels that there must be an easier way.

Hal Swoverland, who transferred to Schlumberger's Sacramento office on June 1st, was married June 20th. His wife's name is Marie. It is not true, as he claims, that his marriage is responsible for the burst of Sacramento Valley drilling activity which has kept Schlumberger engineers almost continually in the field.

Bruce Brooks, Brazos, Isleton, nearly invested in a vineyard near Lodi, but after investigating the amount of work involved, settled for a quarter-acre yard in Sacramento. Apparently it's easier to buy the stuff than to make it.

Maria Spencer, Superior Oil Co., Los Angeles, recently returned from a three-week trip visiting relatives and friends in Kansas, Oklahoma, and Midland, Texas.

Ed Taylor, Western Gulf geologist extraordinaire, took off for the woods of Maine on July 24th - for a vacation, that is. Ed said that he and his family will be "living it up" at a beautiful Maine lake - swimming, water skiing, sailboating, and lounging on the beach.

Ray Pearson, Richfield geologist, is spending 25 percent of his time for Richfield and 75 percent of his time building a home in Palos Verdes. Consideration is being given to installing a teletype machine in the contractor's shack so that Ray's secretary can handle his business calls.

Arthur S. Hawley announces the opening of practice as Geological Consultant at 1820 Ladino Road, Sacramento 25, California, phone IVanhoe 7-3612.

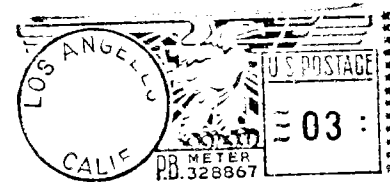
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Vol. 13

No. 8

Richard L. Hester  
Signal Oil & Gas Co.  
1025 Petroleum Club Bldg.  
Denver, Colorado

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# PACIFIC PETROLEUM GEOLOGIST

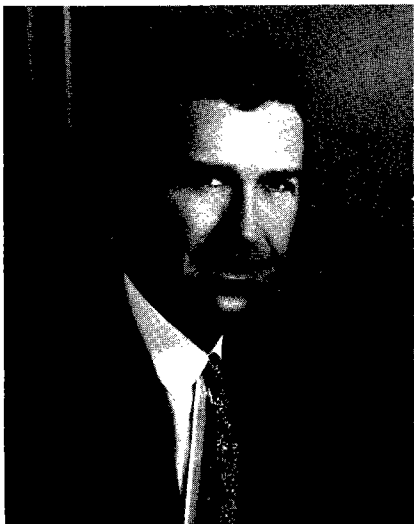
## NEWS LETTER OF THE PACIFIC SECTION AMERICAN ASSOCIATION OF PETROLEUM GEOLOGIST

### ASSOCIATION ACTIVITIES

Vol. 13

September, 1959

No. 9



#### BIOGRAPHY

John T. (Jack) Isberg, this year's president of the Pacific Section of the A.A.P.G. started his career in geology with the Ohio Oil Company following graduation from the University of Wyoming in 1937. Jack's employment with Ohio took him to many areas in the Rockies and the Colorado plateau, and finally to California where, in 1945, he began his present association with the Superior Oil Company.

Laramie, Wyoming, was Jack's home from the time of his birth on May 10, 1915, until completion of an M.A. degree in geology in 1937. At the University of Wyoming he was a member of the A.T.O. fraternity. Upon completion of his undergraduate studies, Jack's name was placed in the Geologic Honor Book as top student in the geology department.

His first assignment with Ohio was field mapping in the Red Desert of Wyoming. For the next year and a half, Jack worked throughout Colorado, Wyoming, North and South Dakota, Montana, and Utah, where he acquired varied experience in assignments such as company representative on a seismic crew, well sitting, field mapping, surveying company properties, and sub-surface geology. During this time, Jack estimates he established temporary residence in approximately 23 towns and wide spots in the road.

The next stop was Los Angeles, Calif., where Jack was based during 1939 while doing field work in the Santa Susanna and Newhall-Castaic areas. From late in 1939 through 1945

his time was divided between scouting, well-sitting, surface and sub-surface geology in Bakersfield, Hanford, Whittier and San Fernando.

In November 1945, Jack went with the Superior Oil Company as geologist in Bakersfield, and two years later was made District Geologist in the San Joaquin Valley. After the death of A. R. May late in 1948, Jack came to Los Angeles as Division Geologist in charge of the Rocky Mountains and California. In April, 1957, he was made Vice President in charge of exploration and shortly thereafter, in November 1958, he was also made responsible for the drilling and production activities for Superior, which position he presently holds.

Miss Margaret Lee occupied most of Jack's time between transfers in the Rockies, and in 1938 they were married in Newcastle, Wyoming. They now have three children. Christine is 18, and has just graduated from high school. John, Jr., 16, is a junior in high school and Sue, 11, is a sixth grader in elementary school.

Jack enjoys nearly all types of sports, but fresh water fishing in the Sierras ranks first. When time is available, he also likes to play golf, ride horseback, swim, play tennis, and bowl. His enthusiasm for riding is so avid that he is reported to have once forded the Los Angeles River on horseback at near flood stage.

#### COAST GEOLOGICAL SOCIETY

Members and guests attending the August 15 monthly dinner meeting of the Coast Geological Society enjoyed an interesting talk on "The Tarzana Fan, a Deep Submarine Delta of Late Miocene Age" by Dr. Harold H. Sullwold, Jr. consultant. Dr. Sullwold presented a most informative talk accompanied by excellent Kodachrome slides illustrating sedimentary structures considered to be characteristic of turbidity current deposits. The talk stimulated an enthusiastic discussion period afterward, with comments from many geologists who have worked in the area.

An abstract of Dr. Sullwold's paper was printed in the April issue of the P.P.G. Newsletter following his presentation of this talk before the Los Angeles Geological Forum.

#### COAST SOCIETY DINNER DANCE

The Annual Dinner-Dance of the Coast Geological Society will be held on Saturday evening, September 26, 1959 at the Ojai Valley Inn. Reservations should be made through Manuel Castro, Shell Oil Company, 196 South Fir Street, Ventura. Cards will be mailed out to members.

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PACIFIC PETROLEUM GEOLOGIST

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NEXT DEADLINE: SEPTEMBER 30, 1959

UNIVERSITY OF CALIFORNIA EXTENSION CLASS

A Popular Survey course in Geology for the layman and amateur scientist will be part of the University of California Extension fall program in the physical sciences, starting the week of September 21, 1959, in Los Angeles.

The geology course, open to any interested adult, will survey the landscape of scenic areas, natural resources, the history of the earth, and how landslides, floods, and earthquakes affect building sites. Dr. William C. Putnam, U.C.L.A. professor of geology, will use slides to illustrate his lectures.

Classes will meet weekly at U.C.L.A., with the first session scheduled from 7 to 9 pm on Wednesday, September 23, 1959. Registration and requests for information are now being accepted at the University Extension offices at U.C.L.A. (Bradshaw 2-6161, Ext. 721) and 813 South Hill Street (Madison 3-6123).

U. S. C. GEOLOGY NEWS

The geology summer field camp was held from June 22 to August 1 in White Pine County, Nevada. Headquarters were at Ruth and the camp was under the supervision of Drs. Easton and McFall who had 21 undergraduate students (two of whom were visitors from the University of New Mexico) and five graduate students. The undergraduates did their mapping between Hamilton and the north end of the Illipah Valley. The graduate students mapped thesis areas in the Robinson Range and at Limestone Peak. Field trips to the Hamilton Mining District, the Kennicott Copper Mine at McGill, the Roberts Mountains, and the Confusion Range of Utah were held in conjunction with the field mapping.

Dr. C. Carew McFall has replaced Dr. John F. Mann, Jr. on the geology staff. Dr. McFall did his undergraduate work at the University of Texas and received his Ph.D. in 1955 at Yale University. His graduate field work was in the Colorado Plateau and since his graduation, he worked for several years in the oil industry, principally in the Colorado Plateau and Cuba. Dr. McFall is teaching Petroleum Geology, Structural and Advanced Structural Geology, Economic Geology, and Maps and Aerial Photographs.

Dr. Mann resigned to enter into full-time consulting work in the field of ground water and has offices in La Habra and Santa Paula. However, he still teaches a graduate course in groundwater geology each year.

During the past year, Dr. Thomas Clements was the principal investigator on a Terrain Factor Mapping Project of the desert areas of the United States for the Army Corps of Engineers as well as being the Curator of Mineralogy at the Los Angeles County Museum. During the summer months he travelled throughout Mexico examining several mining properties and continuing his investigations of the possible source of Mexican jade.

Dr. William Easton recently completed a textbook on Invertebrate Paleontology and it is now in the hands of the publisher. Dr. Easton received a Guggenheim Fellowship to study corals in Europe and will also work in the National Museum in London while on sabbatical leave. He departed August 1, 1959 and will not return until September, 1960.

Dr. Kenneth O. Emery was on sabbatical leave from the University from February to September, 1959. He received a Guggenheim Fellowship to study the bottom sediments, current patterns, water character, and general limnology of the Dead Sea. While en route to Israel he attended two geological conferences and visited various Oceanographic Institutes in Europe. Prior to leaving he finished a soon-to-be-published text on the Marine Geology of Offshore Southern California.

During the past year, Dr. Orville Bandy worked on research grants for oil companies dealing primarily with foraminiferal ecology. He taught several geology courses in the Summer Session and is presently in the Philippine Islands on a consulting project for several Philippine oil companies.

Dr. Richard Merriam has continued an investigation of the Palos Verdes landslide problem for the Los Angeles County Engineers Office during the past year. He spent the summer working on a grant from the U. S. Public Health Service and in varied consulting activities.

Dr. Richard Stone has been working on a research project on the United States Deserts for the Army Corps of Engineers. He spent ten days in Vicksburg, Mississippi consulting with the Engineers on Desert Terrain factors.

Dr. Robert Stevenson who is associated with the department through the offshore work of the Hancock Foundation received a 15 month grant from the Office of Naval Research to study offshore weather conditions, currents, and shore phenomena in southern England.

Master's candidates doing field mapping for these were geographically widespread ---- five in the Ruth-Ely, Nevada area under the direction of Dr. Easton, three in the Mojave Desert in the Mountain Pass-Kelso region under Dr. Merriam, three in the Santa Ana Mountains, and two in the St. George, Utah area. Robert Leslie, a Canadian graduate student, spent the summer working for Texaco in northern Canada. He and a field assistant spent several months mapping within the Arctic Circle. Ian Kaplan, a graduate student from New Zealand, is attending the University on a two year fellowship. He is working towards a degree in Bio-Geo-Chemistry and specializes on research on organic sulfur and its isotopes and the sulfur cycle in sediments. He will teach a course in Geo-chemistry starting in September. Richard Terry received a grant from the California Division of Mines to bring the bibliography of geology related to the marine geology and oceanography of California up-to-date. He is being considered for a grant to make current the entire bibliography of geology for California. Johanna Resig is working on a United States Public Health Grant to determine the effect and general relationship of ocean outfalls on Foraminifera. James Ingle spent the summer mapping in the Colorado Plateau for the Shell Oil Company and Jerry Fowler worked in Oregon mapping for a major oil company.

Dr. Richard Tibby replaced Dr. Stevenson during the absence of the latter as Director of the California State Offshore Project. The Offshore Project is a five year investigation to determine the effects of sewage on the flora and fauna of the near shore areas of the California coast from Point Dume to the Mexican Border. In August he and three other members of the project presented papers at the First International Convention of Waste Disposal in the Marine Environment at Berkeley, California.

Dr. Jobst Hulesman from Germany has been working for the past year under Dr. Emery on a research grant to investigate laminations in sediments in offshore basins.

#### 1960 DIRECTORY - FINAL NOTICE

Anyone wishing to have his name, affiliation, and picture included in the new 1960 AAPG-SEG-SEPM Directory will have to contact Hal Case, 609 S. Grand Ave., Los Angeles 17, phone MADison 5-8216, immediately as the Directory is scheduled to go to the printers during the first part of this month.

#### NOTICE

The California Division of Mines and Geology will open their new offices in the Orbach Building at 312 West 5th Street, Los Angeles, on September 10, 1959. The offices were previously housed in the State Building

#### U.S.G.S. CHANGES WEST COAST ADDRESS

The U.S. Geological Survey, Alaskan Geology Branch, Topographic Branch, and all west coast offices, has changed its mailing address from 4 Homewood Place to 345 Middlefield Road, Menlo Park, California.

#### PALEONTOLOGICAL BIOSTRATIGRAPHY SEMINAR

The Paleontological Biostratigraphy Seminar, under the auspices of the Bakersfield College Adult Education Program, will begin its Fall and Spring Lecture Series on October 5, 1959. Meetings are normally held on the

first Monday of every month from October through May in Room 56, Science and Engineering Bldg., Bakersfield College. The program is arranged by an advisory committee of local geologists and paleontologists. Richard Pierce of Richfield is committee chairman for this year. All interested parties are invited to attend.

The first meeting on October 5th will be addressed by Dr. Helen Loeblich of the University of California, Los Angeles, on the "Mesozoic of Alaska". Subsequent lectures will be announced in the Calendar Section of the Newsletter.

#### S.E.P.M. DINNER MEETING

The S.E.P.M. wishes to remind everyone of their Dinner meeting which will be held Thursday evening, November 12, during the forthcoming A.A.P.G.-S.E.P.M. Pacific Section Convention in Los Angeles. The speaker will be Dr. Donald E. Savage, Dept. of Paleontology, University of California, Berkeley, who will talk on "Bones, Rocks and Speculation". The talk will be semi-technical and wives are invited to attend. Dr. Savage is an excellent speaker, and his talk is expected to be interesting, humorous and informative.

#### UNIVERSITY OF OREGON NEWS

Dr. Ewart Baldwin is on a Fulbright to East Pakistan for the current academic year (1959-60), and is teaching at the University of Dacca. He plans to return via the International Geologic Congress in Denmark next summer.

The department is looking forward to occupying new quarters in the fall of 1961 when the additional wing on the Science Building is scheduled for completion.

The staff has been increased for the coming academic year by the appointment of Dr. Vernon McMath to teach structural geology and related courses. The staff for the coming year will consist of Dr. Lloyd Staples, Professor and head of the Department, Professors Ewart Baldwin (on leave) and Walter Youngquist, Associate Professors Ernest Lund and James Stovall, and Assistant Professors Vernon McMath and Elmar Walter (replacing Dr. Baldwin for the year).

Early this spring, the "Geology of Oregon" by Ewart Baldwin was published and the first edition of 1,500 copies is about sold out. It is being reprinted and can be obtained from the University of Oregon Co-op, Eugene, Oregon, for \$2.00 plus 20 cents postage.

#### PERSONAL ITEMS

Bob Patterson ( Pacific Oil Well Logging ) returned recently from a six week trip to South America, and had to depart almost immediately for a two and one half week trip to Cuba. Bob was in Las Vias Province, and reports that the area is thick with sixteen year old revolutionary soldiers, all armed with loaded and ready tommy guns, which they wave carelessly in all directions. Bob's friends will be glad to know that he avoided being gun perforated, after this period of fiddling with Fidel.

Hal Rader was honored at a luncheon recently on his 25th anniversary with Standard. It was necessary, however, to present two younger men at the same time with their 10 year pins to they could help "old man Rader" to the table.

Union Oil's "Special Exploration Group" probably has the record for the worlds longest grapevine. Sometime about May, John Hazzard disappeared in the direction of Africa about the same time that Bill Moran vanished in the direction of Australia. Sometime later, Stan Wissler took off for Alaska. 'Tis said, on the usually "reliable authority" that there has been an amazing series of dispatches circumnavigating the globe in all directions. 'Tis also said that a certain sign with reference to Los Angeles which may have originated in Anchorage, arrived in Sidney by way of Madrid. Bill Moran was seen around Los Angeles for about a week recently but has since disappeared again. It's all very mysterious.

Lou Taylor, Tidewater, Los Angeles, the perennially optimistic scout, is moving into a new house out in Whittier, hoping that all the Edgewater transfers are complete.

Stan Siegfus, Tidewater, Los Angeles, went to the Pacific Northwest on his vacation, and included a deep sea fishing trip for salmon. Stan returned ashore with only a sea bass, while the daily jackpot was won by a little old 90-pound lady, who caught a 30-pound salmon.

John Griffiths and Max Greene, Shell, Olympia, both caught large salmon when fishing out of Westport. They claim it is skill rather than beginner's luck.

Visitors from the Southland claim that Vince Finch, Shell Northwest Exploration Manager is as much a hazard as those other one-armed bandits in Las Vegas!

Congratulations to Jack Adriance, Landman, Shell, Olympia, on his marriage to Barbara Newbury of Portland.

Ed Wellbaum has been appointed District Geologist for Kern Oil's California District Exploration Office in Bakersfield. Ed replaces Lee Jordan, who recently resigned.

Ed Karp, formerly with Western Gulf, has joined the Kern Oil Company staff in Bakersfield.

Jack Clair recently resigned from Superior's Billings Office and is back in Bakersfield enjoying the sunshine.

They all laughed when Wes Bruer sat down to lunch at the Bakersfield Petroleum Club and said that he felt an earthquake through the seat of his pants. However, the sneers of ridicule quickly changed to looks of admiration when the seismologists at U. C. confirmed the sensitivity of Wes' posterior by reporting a slight shock that barely registered on their seismograph. Anyone wishing to use Wes' special talents should be warned that it takes a minimum of two beers to sensitize the instrument.

Two Tidewater geologists, Bob Scott, owner and skipper of a new boat, and Lou Villanueva, his chief observer, have suddenly become avid water ski enthusiasts after spending a day viewing the scenery at the local Bakersfield lake. Lou hasn't actually tried the skis yet, but he says he intends to as soon as he gets his eyeballs back in place.

Bus Ivanhoe and his son Roddy climbed to the top of Mt. Whitney on the night of August 15 - to watch the sun rise. When the icy winds were blowing down his neck at the top of the peak just before daybreak, Bus decided that he had climbed the mountain in a moment of weakness and resolved that he will henceforth rest on his laurels as a mountaineer. He highly recommends the trip to all men since they owe it to themselves to make their lives complete.

Ten laying hens were recently sent to Union's Kamishak Bay Camp in Alaska to provide fresh eggs for the crew. It was understood that the original request was for -- ten, twenty-year-old chicks.

Bud Oakes has been transferred from Union's Santa Fe Springs office to the Rocky Mountain Division and will be working out of Cut Bank, Montana.

Mick McKnight "Boy Scout" of Standard has finally fallen off the gravy train, and many of his friends will be relieved to know that they will no longer lose their money to him on those so-called scouting trips. Mick is being transferred to Ventura in October and will be doing subsurface and field geology. This is to notify all who desire to get in line and try and recoup some of their losses before he leaves for the north country.

Claude Fiddler of Standard has returned from a summer in Alaska, "unclaude" by bears and full of the usual "psuedo sour dough" stories generated by geologists in Alaska.

John Ruth, with Standard, has just completed his new home, and his sore back attests to the fact that he is out of shape as far as pulling weeds is concerned. If you think they are bad now, John, just wait until the first rains come this fall.

John Mann of Standard is making a complete check of his thesis since the earthquake in West Yellowstone.

Bill Brandon, formerly Los Angeles Basin Scout with Richfield, has resigned to accept a position with Petroleum Information in Denver.

So dedicated to his offshore work is Jim Vernon, Texaco in Ventura, that he couldn't get away from it even for a few weeks. Jim took his family to Gaviota beach for their vacation.

A spectator at this year's Gold Cup Races in Seattle was Carroll Hoyt, G. P. in Ventura. Another vacationer to the Northwest was Spence Fine, Richfield in Ojai, who traveled to Victoria and into interior B.C.

Balancing out the recent addition to the freeway traffic problem in L. A. by Franklin "Roy" Cline's transfer from the Shell office in Ventura is Mick McKnight's transfer from Standard's L. A. office to Ventura. Mick's former duties as scout will now be exchanged for those of geologist.

Recent Alaskan correspondence from former Ventura geologists found Dick Lyon of Union on the North Slope in one foot of snow waiting for helicopter parts. Eric Lindvall of Richfield reports that a summer of fieldwork in the Aleutian Islands really isn't so bad. Don Hagen has returned to Texaco's office in Santa Maria after finishing his second summer season in Alaska.



Sam Tate is being transferred to Los Angeles from the Humble scouting office in Ventura. Rumors via the grapevine say that Sam's replacement, Charlie Lilly, formerly of Louisiana, realizes his challenge. His plans to continue as Humble's representative in local oil scout endeavors include a pool table in his living room, a poker table in the den, a basement bowling alley and several horse-shoe pits in the back yard. Charlie is supposedly going to exclude Sam's painted lines and circles on the bathroom floor used for occasional coin-lagging practices.

Howard Level of Union in Santa Paula, the kingpin of gambling activities in Ventura County, is eagerly awaiting the collegiate football season. (No slight is intended to close runner-up Frank Yule of G. P.) Howard's weekly ON-THE-LEVEL-football pool will again hit the circuit as soon as he has devised a method to combat the consistent winning of the secretaries by the emmy-menny-minny-mo guessing method.

A big question in Ventura parts these days --- "Why did the Ventura Oil Scout's bowling team only place second in the Summer League, with all that practice during the week, etc.?"

Bob Reedy (Western Gulf--Sacramento) and sons recently travelled the John Muir trail in the Sierras. The group packed in to the Golden trout country near Rose Lake.

Swiss Holmes (Shell--Sacramento), just back from his vacation in the Russian River country, is desperately seeking a solution to his falling hair problem. Someone suggested 30° crude but there just isn't any to be found in the Valley.

Humble's Charlie Guion won't get out of his car now that he has an air-conditioned seat pad (made in Texas by Texans, \$15.00). He's trying to find a way of strapping it to his back while he's out golfing.

Lee Diehl, Exploitation geologist with Shell, has been transferred from Bakersfield to Houston.

Bruce Martin, formerly with Shell in Bakersfield, has resigned to work on a Ph.D. in Oceanography at U.S.C.

Bill Johnson, Field Geologist for Shell in Bakersfield, recently shocked the cattle population in the south end of the valley by doing a fast trip tease without music. It seems that a tarantula hawk crawled up Bill's trouser leg and stung him six times before he could get rid of the beast.

Ed Stinemeyer, Shell's Senior Paleontologist in Bakersfield and part time Lt. Colonel in the Army, recently returned from a two week tour of duty at Ft. Mac Arthur.

Hollis Bertrand, Honolulu's District Scout in Bakersfield, has been aiding his recovery from a recent coronary occlusion by chasing the nurses up and down the hospital corridors. When the doctor told Hollis he could resume a normal life in a few weeks, the doctor was obviously under-estimating the vigorous activities involved in a scout's life, especially Hollis'.

The ranks of the geological profession in the Ventura area will be further depleted by the closing down of the Honolulu Office in Santa Barbara. Wayne Estill, John Thompson, John Curran and Loel Redwine will attempt to vacate the Santa Barbara office by October 1, after which all will be working in Bakersfield. In a shifting of responsibilities, John Curran will henceforth be in charge of all California exploration south of the Sacramento Valley, and Loel will be in charge of all exploration in the Great Basin, from Idaho to the Mexican Border.

The team representing the geological department in the four-team baseball league of Shell's Ventura office is rumored to be relying too heavily on older players with a lack of young talent. They are competing against teams from the engineering and treasury departments composed mainly of young well-conditioned players. The geological team is further handicapped by injuries to nearly everyone in the geological department and the present incapacitated list is headed by Manuel Castro with a fractured forearm, and "Hobbl'n" John Cronin with numerous leg injuries.

Lloyd Daugherty, Shell in Ventura, is back at work after having failed in an attempt at the Matterhorn. Lloyd supposedly violated a few regulations at Disneyland when using his geology pick to chip souvenirs off the mountain.

On the vacation scene at Texaco in Ventura, Roy Miley is reported roughing it at Big Sur while Stu Keesling is reported to be living it up at Laguna with the Beatniks, Mike Zaikowski didn't make it this year to his usual camping place just below Hebgen dam in Montana.

At the August meeting of the Coast Geological Society a giganto-stupendous celebration was held in honor of a member's birthday. Whose birthday it was has been lost in the confusion, but the possibilities have been narrowed down to the only two celebrants, Bob Hacker of Lloyd Corp., and Charlie Booth of Shell.

Dave Robbins (Exploration Logging -- Sacramento) has sent his police dog back to obedience school. Trained to keep competitors out of the logging trailer, the dog recently goofed by taking a chunk out of the boss' (Ron Ackley) arm.

Roland Bain (Texaco--Sacramento) and family spent their vacation golfing and water skiing at Hayden Lake, Idaho.

Barney Barnard, Richfield Northern Division scout, is now commuting between Los Angeles and Bakersfield as he handles both areas. Barney is getting signatures for a petition to establish a monorail system along Highway 99.

Dick Malloy, with Richfield in Long Beach, is commuting to Los Angeles on an assignment connected with Richfield's Well History Control System (IBM punch cards). In two weeks he will have from the computer an answer to his question, "How can I beat the traffic?"

John Wiese, Richfield Rocky Mountain Division Geologist, was in Los Angeles on a business trip. Spence Pine, Southern Division Geologist for Richfield, was also in Los Angeles on business, by coincidence. Their last coincidental meeting occurred in Las Vegas. Why does this never happen in McKittrick or Needles or other scenic spots?

Ray Pearson, Regional Geologist with Richfield in Los Angeles, has finally moved into his new home in Rolling Hills. Ray is now a connoisseur of garage door decorative patterns after having to remove one prior to getting architectural clearance to move in. A true artist would have kept the design and resisted conformity by doing without water, gas, and electricity.

#### NURSERY ITEMS

Jerry Knowles and his wife, Isabella, welcomed their first baby, Diane, on August 10th. Jerry is with Richfield's foreign exploration in Los Angeles.

Harry Jamison, with Richfield in Los Angeles, and his wife, Joy, had their sixth on August 12th, with the arrival of Nancy. This makes three of each for the Jamisons.

A recent arrival to Shirley and Frank Webster, Shell in Ventura, was a second child, first daughter, Ann Marie. She was born on August 3, and weighed 8 lbs, 2 oz.

Lee Diehl, Shell in Bakersfield, and his wife Marilyn, had their first boy (third child) on June 4. John Andrew weighed 8 lbs., 14 oz.

The Standard Seattle office was near a state of nervous collapse awaiting the belated arrival of Robert Woodward Barnwell on June 20.

Bob and Martha Zavadi (Western Gulf Los Angeles) are the proud parents of a 9 lb. baby boy, Matthew Joseph, who arrived on August 13, 1959. This was the Zavadi's third boy and fifth child.

John Galloway (Western Gulf, Los Angeles Landman) and his wife, Laura, proudly announce the arrival of their first son and third child. John David, born July 10th, weighed 7 lb., 3 oz.

## CALENDAR

September 10, 1959: Tuesday, 12 noon, S.E.G. Luncheon Meeting, Roger Young Auditorium, 936 W. Washington Blvd., Los Angeles. "Underwater Closed Circuit Television and Motion Picture Cameras," Mr. Jon Hall, Sampson-Hall Underwater TV.

September 15, 1959: Tuesday, 8:00 pm, Los Angeles Basin Chapter, A.P.I., Shell Recreation Hall, 2080 Obispo Ave., Long Beach. "Richfield Rincon Offshore Island", Mr. Robert Falaherty, Richfield, and a color movie entitled "African Journey".

September 15, 1959: Tuesday, 7:30 pm, Coast Geological Society, monthly dinner meeting, Miramar Hotel, Santa Barbara. "Pacific Section Cross-Section of the Santa Maria Basin", Mr. John Curran, Honolulu Oil Corp.

September 21, 1959: Monday, 6:30 pm, San Joaquin Geological Dinner meeting, El Tejon Hotel, Bakersfield. "Sediments and Marine Life of Monterey Bay, California", Mr. Edwin A. Stinemeyer, Shell Oil Company.

September 22, 1959: Tuesday, 7:30 pm, A.A.P.G. Dinner meeting with wives. Roger Young Auditorium, 936 W. Washington Blvd., Los Angeles. "Struggle Against the Sea in the Netherlands", Prof. Anthony J. Pannecock, Holland.

September 26, 1959: Saturday, 7:00 pm, Coast Geological Society, Annual Dinner-Dance, Ojai Valley Inn.

October 5, 1959: Monday, 7:30 pm, Paleontological Biostratigraphy Seminar, Room 56, Science and Engineering Bldg., Bakersfield College, Bakersfield. "Mesozoic of Alaska", Dr. Helen Loeblich, U.C.L.A.

October 15, 1959: Thursday, 7:30 pm, Coast Geological Society, monthly dinner meeting, Miramar Hotel, Santa Barbara. "Principles of Petroleum Occurrence", Mr. Lewis G. Weeks, A.A.P.G. President.

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### BIBLIOGRAPHY OF RECENT PUBLICATIONS

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special reference to the watertightness of  
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No. 9

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# PACIFIC PETROLEUM GEOLOGIST

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

### ASSOCIATION ACTIVITIES

Vol. 13

LOS ANGELES DINNER MEETING

October, 1959

No. 10

Dr. Anthony Pannekoek, Professor of Geology, University of Leyden, spoke before a dinner meeting of the Pacific Section at Rodger Young Auditorium on September 22. Dr. Pannekoek discussed sedimentary basins of The Netherlands and the history of Dutch reclamation of sea floor and lake bottom lands.

Outcrops over most of the country are Pleistocene and Recent; only near the borders are older rocks at the surface. The sedimentary rocks are therefore known mainly from well records and from outcrops in neighboring countries. During Paleozoic and nearly Mesozoic times the locus of deposition shifted northward across The Netherlands, until in the Jurassic and Cretaceous the pattern of sedimentation changed, and two depositional basins were formed: one in the east and another in the west. Both of these later Mesozoic basins contain productive oil sands in near shore facies. Tertiary sediments accumulated in two basins in the NE and SW, and Pleistocene to Recent sediments over almost the entire country. These latter deposits were laid down after glaciation during the rise in sea level. In front of these transgressing seas there formed extensive peat deposits of great present day economic importance to the Dutch.

Dr. Pannekoek went on to discuss more recent changes in sea level, citing a relatively low stand during Roman times and a great rise about 1300 A.D. By the year 1200 A.D. the Dutch had begun to build dikes; this was followed by compaction in the Recent sediment landward from the dikes and subsidence of reclaimed lands to a level considerably below the sea. Two-fifths of the land is now protected from sea invasion by dikes. This protection is even more necessary now than originally because of the compaction and the subsidence of the reclaimed land.

A second phase began in the 17th century with the use of windmills and dikes to drain the inland fresh water lakes. The problem of lakes has been compounded by large-scale removal of peat which has created new lakes and new drainage programs.

In the early 1900's following a great storm, the draining of the Zuider Zee was begun. Another severe storm in 1953 resulted in considerable loss of life and inundation, but caused the Dutch to undertake an ambitious dike project in the southwest. Dr. Pannekoek pointed to the desirability of a final large reclamation project in the north of Holland, and hoped it might be undertaken without the impetus of a disastrous storm to start it. When and if completed, this final string of dikes would give the country a relatively smooth coastline free of embayments and relatively safe from the sea.

In the question and answer period at the conclusion, Dr. Pannekoek stated that the central government undertakes the large dike-building reclamation projects, though in earlier centuries reclamation was financed by subscription to a private corporation. Reclaimed land is sold only to highly recommended and competent farmers; cultivation begins two years or less after the draining of the sea water. Natural leaching of ocean salts by rain water renders the soil arable in this short time.

### 1959 PACIFIC SECTION CONVENTION

Mr. John T. Isberg, President of the Pacific Section of the American Association of Petroleum Geologists, has announced that the thirty-sixth annual joint meeting of the A.A.P.G., S.E.P.M., and S.E.G. will be held at the Biltmore Hotel, Los Angeles, California, Thursday and Friday, November 12 and 13, 1959.

The Convention will be attended by more than 1,000 members of the participating Societies and numerous guests. No specific theme for the more than twenty-five papers to be presented has been chosen, but stress has been placed upon obtaining subjects of interest to all who attend.

The featured speaker for the joint luncheon on Thursday, November 12, will be Dr. Jack Greene of the Aero-Space Laboratory, Missiles Division, North American Aviation, who will speak on the "Geology of the Moon". Dr. Greene will present a comparison of the observed photographic evidence for lunar geology with known geologic occurrences on the face of the earth and will illustrate his talk with slides.

Mr. A. J. Macmillan, Jr., (Texaco), General Chairman of the Annual Meeting, has announced the following committee heads:

Program Chairman	Robert L. Johnston (Western Gulf Oil Co.)
Asst. Program Chairman (San Joaquin Valley)	James L. O'Neill
Asst. Program Chairman (Coastal)	Roy W. Turner
Asst. Program Chairman (L. A. Basin)	Thomas L. Macleod
Asst. Program Chairman (Sacramento Valley)	William N. Schlax
Arrangements	Ray E. Pearson (Richfield)
Exhibits	William S. King (Wm. Ross Cabeen & Assoc.)

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AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

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PACIFIC PETROLEUM GEOLOGIST

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NEXT DEADLINE October 28, 1959

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Finance	Harold L. Fothergill (Union)
Womens' Activities	Elizabeth J. Johnston (c/o Graydon Oliver)

Special facilities for geologists' ladies and lady geologists will be provided at this year's meeting and may include a get-acquainted luncheon on Friday, November 13.

COAST GEOLOGICAL SOCIETY

The featured talk of the September 15 meeting of the Coast Geological Society at Santa Barbara was by John Curran of Honolulu Oil Corporation speaking on "The Pacific Section Cross-Section of

the Santa Maria Basin". Curran, chairman of the cross-section committee, presented an outline of the talk which he will deliver at the November Pacific Section Convention in Los Angeles.

The cross-section was drawn up by the coordinated efforts of personnel from several companies; Walter Harris and Don Six of Texaco supplied the sub-surface geologic interpretation of the southern part, extending from the basement outcrop near La Honda Creek, southeast of Lompoc, north through the Lompoc field to the Union-"Harris" #A-2; Vern Rutherford and Bill Whidden of Union contributed the interpretation for the central part of the cross-section, extending from the Union "Harris" #A-2 north through the Orcutt field to the vicinity of the Union-Gulf "S.S.T." #25-11, immediately northeast of Orcutt; Rod Colvin of General Petroleum provided the interpretation for the northern part of the cross-section, extending north from the vicinity of the Union-Gulf "S.S.T." #25-11 to the outcrop section in the Nipomo Hills, southeast of Nipomo.

Curran discussed the various stratigraphic units and the correlation problems involved in completing a cross-section of this magnitude. It was pointed out that this is the third attempt at providing a reasonable cross-section across the Santa Maria Basin. The first such attempt was about 1940 during a period of considerable exploration, and most companies were unwilling to release information. The second attempt, during 1954, was handicapped during its progress by the transfer of several key persons.

A twenty minute break was announced during which all persons present examined a preliminary draft of the proposed cross-section. This was followed by a period of discussion. The proposed cross-section was offered for criticism and several changes were suggested which will be incorporated into the final draft. Few strong criticisms of the proposed cross-section were voiced and the general opinion was, "if that isn't the true geologic picture, then that's the way it ought to be."

The cross-section is now in the final drafting stages and copies will be available for purchase at the Pacific Section Meetings of the AAPG in Los Angeles, November 12 and 13, 1959.

NEW ADDRESSES:

U.S.G.S. and Division of Mines

The California Division of Mines and Geology has moved to:

Room 800, Ohrbach Building  
312 West Fifth Street  
Los Angeles 13, California  
Phone: MADison 6-1515, Ext. 2210

The U. S. Geological Survey, Pacific Region Offices are now located at:

345 Middlefield Road  
Menlo Park, California  
Phone: DAVenport 5-6761 (Palo Alto exchange)

ABOUT THE DUES INCREASE

Ballots for the election of 1960 Pacific Section officers mailed out to the membership on October 4 include an amendment to the Constitution to increase the annual dues to \$3.50 or \$4.00. An expense forecast by Treasurer Hal Fothergill published in the May Newsletter clearly indicated that the present level of Pacific Section activities

cannot be supported by the income from yearly dues of \$2.50. Accordingly, the amendment has been submitted to the membership.

Principal services of the Pacific Section involving significant expenditures are the monthly P.P.G. Newsletter, sending A.A.P.G. Distinguished Lecturers to the various societies, and mailing announcements of local meetings to the membership. Other services underwritten by the Pacific Section are the Fall Convention, Spring Picnic, Annual Dinner Dance, publication of cross-sections and special membership directory, and forums and luncheons.

The Newsletter costs about \$165-170 per issue including printing and mailing. Distinguished lecturers are paid \$50 for each appearance. The cost of mailing notices of meetings averaged \$110 per month during the first half of 1959.

In addition to the fact that expenditures for services are exceeding the income from dues, at the rate of nearly \$800 per year, the Pacific Section is charged with the responsibility of underwriting the 1962 National A.A.P.G. Convention in San Francisco. In the past, conventions held away from major oil producing centers have gone into the red.

In view of the indicated deficit and the financial responsibility for the forthcoming National Convention, and as a cushion against inflation, the Executive Committee of the Pacific Section recommends an affirmative vote on the dues increase.

#### ACTIVITIES IN THE GEOLOGY DEPARTMENT AT University of California, Berkeley

Several changes in the staff of the Geology Department have occurred during the past year. Mark Christensen has been appointed to a new instructorship and will specialize in structural geology. Professor Hinds retired at the end of June and Dr. Clyde Wahrhaftig of the U.S. Geological Survey will take his place in September, 1960. W. S. (Bill) Fyfe accepted appointment in February as Associate Professor in Geochemistry. Frank Turner completed his turn as Chairman of the Department and has been succeeded by Charles (Gil) Gilbert.

Howell Williams again this summer doubled as a volcanologist-petroleum geologist in Central Nevada. "Tucky" located a duster in the San Antonio Valley and is now looking for another. "Chuck" Meyer has been awarded a Guggenheim Fellowship and will spend next spring and summer visiting mining districts in Africa, Spain, Yugoslavia, and England. Jack Evernden and Garniss Curtis keep very busy dating rocks of all kinds and ages from various parts of the world. Dick Hay is in Central Oregon again this summer working on the Clarno sediments under a National Science Foundation Grant. Lionel Weiss spent most of his summer visiting graduate students in the field from Alaska to Central Nevada, and with Frank Turner has signed a contract to write a book on Structural Petrology. Bill Quaide is the proud father of a baby boy.

The Summer Field Course was run this year in the Inyo-White Mountains east of Big Pine. Forty-four students enrolled and were instructed by "Gil", Jack, Curt, and Ted McKee. The course was run from a central camp on Westgard Pass and was served by a cook named Scotty who is so good he reminded us of Harvey Emerson in our pre-war camps. Scotty will be back next summer.

#### ACTIVITIES IN THE GEOLOGY DEPARTMENT AT University of California, Los Angeles

Page 3

During the past year, the Department of Geology, UCLA, has graduated the following numbers: AB degree - 29, MA degree - 23, Ph.D. degree - 3. The Ph.D. degrees were awarded to Carrol F. Knutson, with a thesis entitled, "An Investigation of Some Petro-physical Aspects of the Third Grubb Zone, San Miguelito Field, Ventura County, California"; to Harold H. Sullwold, Jr., with a thesis entitled, "The Tarzana Fan, a Deep Submarine Delta of Late Miocene Age, Los Angeles County, California"; and to Robert A. Zeller, Jr., with a thesis entitled, "The Geology of the Big Hatchet Peak Quadrangle, Hidalgo County, New Mexico".

The department, after numerous conferences, including some with members of the oil industry, has revised the requirements for the AB and Master's degrees. The essence of these changes has been to strengthen preparation in basic sciences without weakening the attention to the fundamentals of geology, especially field work, structure, stratigraphy, and petrology. New staff appointments for last year include Dr. John M. Christie, structural geology, Dr. N. Gary Lane, Paleozoic paleontology, Dr. Ronald L. Shreve, dynamical geology, Dr. Helen Tappan Loeblich, micropaleontology, and Mr. Ted L. Bear, petroleum geology. This year, Dr. William W. Rubey, distinguished geologist with the U. S. Geological Survey, will join the faculty at the end of the academic year. In February Dr. W. Gary Ernst of the Geophysical Laboratory in Washington, will join the staff in mineralogy and geochemistry. During the coming year, Dr. Cordell Durrell and Dr. Daniel I. Axelrod will be on leave. The remainder of the faculty, including Drs. W. P. Popenoe, W. C. Putnam, G. Tunell, K. D. Watson, D. Carlisle, J. C. Crowell, C. A. Nelson, C. A. Hall, J. L. Rosenfeld, and E. L. Winterer, will be in residence. Mr. Charles E. Corbato has been appointed as Acting Instructor. The Institute of Geophysics, with which the Department of Geology is closely associated, now includes a staff of D. T. Griggs, G. C. Kennedy, G. J. P. MacDonald, L. B. Slichter, L. Knopoff, and J. F. Gilbert, all of whom work in aspects of earth sciences of interest to petroleum geologists. Last year was marked by the retirement of Professors U. S. Grant and Joseph Murdoch, whose contribution to activities will be sorely missed.

The UCLA Geology Summer Camp was held near Pismo Beach in the Huasna Basin during the early part of the summer, and was attended by 35 students. The camp was directed by Dr. C. A. Hall, Jr., assisted by Dr. J. M. Christie, Dr. James Richmond of Los Angeles State College, and graduate students C. B. Raleigh and C. E. Corbato. Six undergraduates obtained experience under the auspices of the National Science Foundation Undergraduate Research Participation Program and worked with Dr. Carlisle in Vancouver Island and Dr. Winterer near Eureka, Nevada. Most of the rest of the staff were engaged in research projects during the summer, including several supported by the National Science Foundation.

The forthcoming academic year will be marked, among other things, by the completion of the extension to the building to house the Institute of Geophysics. This will allow the expansion of the Department of Geology into space now occupied by the Institute. This new space is sorely needed primarily to provide laboratory and research space for many of the 75 graduate students anticipated at UCLA in geology this year.

Political campaign fever is running high in Bakersfield with the nomination of the following candidates for San Joaquin Geological Society officers:

President: Harold Billman (Union)  
John Manning (Consultant)

Vice-President: Bill Le Roy (Reserve)  
Joe Dunwoody (Tidewater)

Secretary-Treasurer: Jim Bigelow (Gulf)  
Bill Bedford (Texaco)

So far, the hottest race seems to be between Dunwoody and Le Roy; however, their electioneering tactics appear somewhat unusual, since they are both out "thumping the tub" for the other person. Voting cards will be sent out in the near future.

SAN JOAQUIN GEOLOGICAL SOCIETY

Edwin H. Stinemeyer, Division Paleontologist for Shell Oil in Bakersfield, presented a very informative and thorough talk on "Sediments and Marine Life of Monterey Bay, California" at the September 21st dinner meeting. Ed added visual interest to his paper by showing an excellent selection of slides.

One hundred twenty-five bottom sediment samples collected from Monterey Bay in 1930, and 51 intertidal samples collected in 1958 were examined. The distribution and abundance of the species of Foraminifera, and their environmental relationships were plotted and analyzed.

Some of the bottom samples were collected with a clam shell dredge and the balance with a plunger type core barrel. The top centimeter of sample material was considered to contain Recent organisms. The 1958 samples were collected by hand in quart jars to which Rose Bengal stain had been added.

Six different types of sediments are found in the Bay and along its shoreline. Coarse sand on the average extends one half mile from shore. The grain size decreases with increase in depth of water. Very little mud is found above the 180' isobath. Biotite found in the shallow near-shore sediments grades to glauconite on the outer shelf. No phosphorites have been found in the sediments.

A total of 62 genera and 182 species of Foraminifera was identified from the depth range of intertidal to 2,640'. Twelve genera and 28 species were arenaceous with the deepest occurrence at 1,614'. Two planktonic genera were found and were most abundant in the bottom depth range of 180-540'.

Ten faunal changes were observed which seemed to be controlled mainly by depth, bottom type, and temperature variations.

The number and abundance of benthonic foraminiferal species increased away from shore to the mid-shelf and then decreased farther from shore. In Monterey canyon there appeared to be both downward and upward displacement of some benthonic species. The planktonic foraminifera were most abundant near the edge of the shelf and to the south of Monterey submarine canyon.

The character of the bottom influenced both the distribution and abundance of some species. Generally the greatest number of species and specimens was found in the fine sandy silts.

Fossil Foraminifera weathered out of marine sediments of the hydrographic basins and from sea cliffs, were found mixed with Recent assemblages near the estuaries associated with the major streams.

Currents, tides and storms caused some displacement of the remains of organisms and in the shallower water affected the sediment and biofacies distribution.

ACTIVITIES IN PALEONTOLOGY AT  
University of California, Berkeley

In addition to the normal undergraduate activities, 35 graduate students are currently enrolled in the Department of Paleontology. In view of the related space problems and crowding the Department and the Museum of Paleontology are looking forward to the occupation of their new quarters in the Earth Sciences Building now under construction which they will share with the Departments of Geology and of Geography and which is scheduled for completion in about another year and a half.

This year the Chancellor has asked Professor Alden H. Miller to be acting chairman of the Department of Paleontology for a limited time during a period of organizational study and staff recruitment. Dr. Miller is also Director of the Museum of Vertebrate Zoology and Professor in the Department of Zoology.

Dr. Charles L. Camp spent most of the summer in Berkeley. He finished his writing on a biography of Dr. Lorenzo Gordin Yates, who collected fossils in California in the early days, and he worked on the preparation of the next issue of the Bibliography of Fossil Vertebrates.

Dr. Ralph W. Chaney, Emeritus Professor of Paleobotany, is engaged in departmentally supported research on the Tertiary of Oregon with emphasis on the Mascall flora. He is leaving shortly for Japan where a National Science Foundation grant will support him and a number of Japanese assistants in paleobotanical research on the Cenozoic floras of Japan with special reference to relationships with corresponding floras of western North America.

During the past year and a half Dr. Robert M. Kleinpell has been acting director of the Museum of Paleontology. The research program on early Tertiary Foraminifera, under his direction, is still in progress. One recently finished product is Dr. V. Standish Mallory's book "Lower Tertiary Biostratigraphy of the California Coast Ranges", published by the A.A.P.G. Dr. Kleinpell was invited late last spring to participate in the annual field trip of the San Joaquin Geological Society to Chico-Martinez and Zemorra Creeks. He has been invited by the A.A.P.G. to be one of their Distinguished Lecturers on tour during the spring of 1960.

Dr. J. Wyatt Durham participated in scientific meetings and short field trips to the Inyo Mountains and Nevada during the summer. On June 16-17 he and Edwin C. Allison presented a paper on "Geological History of Baja California and its marine faunas" in a Symposium on the Biogeography of Baja California and Adjacent Seas held at San Diego State College. Durham and Allison also examined the echinoids from deep sea dredgings made by the Scripps Institute of Oceanography for future reports. Later in the summer Durham attended the first meeting of the International Oceanographic Congress in New York City, where he presented a paper on "The Tertiary Landmass and the Shallow Water North Pacific Molluscan and Echinoid Faunas".

Dr. Donald E. Savage was invited to the IV Cursillo Internacional de Palaeontologia in Sabadell, Spain, 1958, where he discussed the continental and marine paralic formations and faunas in the Caliente area of California which are currently being prepared and studied by Gideon T. James. While in Europe, Savage also studied fossil mammal remains in Sabadell, Lyon, Basel, Paris and London. During the past summer, Savage visited the Cretaceous Lance localities where William A. Clemens and others have washed out of the matrix the largest collection of Cretaceous mammals now known. Savage also collected potassium-argon samples from well known vertebrate localities in Wyoming, Nebraska, and South Dakota to be used by Drs. Garnis Curtis and Jack Evernden of the Geology Department in their potassium-argon dating studies.

Dr. Samuel P. Welles finished the description of his South American plesiosaurs. When the comparisons are written and the literature compiled, the paper will be ready for the press. The preparation of the Moenkopi vertebrates, as financed by a National Science Foundation grant, is well underway with six preparators on the project.

Dr. Zach M. Arnold spent the last year in England and France on leave. He worked on cultures of living foraminifera for seven months in England in an effort to determine the causes of variation within foraminiferan species. In France, Arnold worked at the University of Paris' Marine Laboratory at Banyuls on the Mediterranean, near the Spanish border. He arranged a display of living and fossil foraminifera for the XV International Congress of Zoology (Darwin Centennial) in London, 1958, which attracted considerable attention. At the meetings he presented a paper on "The Biological Versus the Paleontological Approach to Foraminiferan Taxonomy".

Dr. Wayne L. Fry spent the summer in Canada. Working with the Canadian Geological Survey he wrote a report on the mid-Mesozoic flora of southern British Columbia. One month was spent in the field in British Columbia. While in Canada, he served as a member of Committee on Paleobotany at the 9th International Geological Congress that met in Montreal.

Dr. William Berry, financed by a GSA grant, explored the Ordovician sequence in the Taconic Mountain area. There he was chiefly concerned with the graptolite faunas in the Schaghticoke and Deepkill formations, and in the Normanskill shale. At the First International Oceanographic Congress in New York, Berry participated in the session on Paleobiogeography and presented a paper, "Distribution of Ordovician Graptolites".

Dr. Rueben A. Stirton has another semester with the Miller Institute of Basic Research before returning to teaching and duties as Director of the Museum of Paleontology. Some of his projects which are nearly completed include: Speciation in the Pliocene genus *Eucastor*; The Flint Hill Miocene Fauna from South Dakota (with Joseph T. Gregory); The Fossil Mammals and the Stratigraphy of the Buloa Basin, New Guinea (with G. D. Woodard); A Marine Carnivore from the Clallam Miocene Formation, Washington (with notes on the stratigraphy by V. S. Mallory); A Review of the Tayassuidae; and Tertiary Marsupials and Continental Stratigraphy East of Lake Eyre, South Australia (with Richard H. Tedford).

#### ACTIVITIES IN THE GEOLOGY DEPARTMENT AT Fresno State College

Eugene G. Cserna joined the staff of the Geology department in February, 1959; he is from Idaho State College. We are pleased to have with us a man with two doctors degrees, his first being in political science at Budapest, the second in geology at Columbia University. Last summer Dr. Cserna took 11 of our geology majors on a 6 week field course near Bozeman, Montana.

Seymour Mack, who joined our staff in 1957 after completing his doctorate at Syracuse, participated this summer in the eight week program of the Summer Institute in Marine Geology at Florida State University.

Of the other staff members, C. N. Beard taught geology on campus this summer; Arch Addington spent some time to very good effect in painting, repairing and renovating some of the departmental equipment; G. M. Stanley is working on a report on the old shorelines of Lake Cahuilla in Salton Sea basin, with evidence on some much older stages in addition to the well recognized last high stage of the prehistoric lake, and on the cumulative diastrophic elevations of these, going backward in time.

#### ACTIVITIES IN THE GEOLOGY DEPARTMENT AT Oregon State College

The highlight of activities in the OSC Geology Department this year was a conference for geology teachers sponsored by the National Science Foundation, and directed by W. D. Wilkinson and J. C. Cummings. The conference, dealing with Mesozoic geology of the Pacific Coast, ran from June 15 to 27 and was attended by thirty teachers of geology from colleges and universities across the country. Lecturers included A. J. Eardley, R. W. Imlay, S. W. Muller, E. L. Packard, W. P. Popenoe, and H. E. Wheeler. The conference included six days of field trip, portions of which were led by D. A. Bostwick and W. D. Wilkinson of Oregon State, John Elliot Allen of Portland State College, and R. W. Imlay and T. P. Thayer of the U. S. Geological Survey.

The summer field geology camp, directed by W. D. Wilkinson and J. C. Cummings, was attended by thirteen students who mapped Paleozoic metamorphic rocks, Cretaceous sediments, and Tertiary volcanics in the vicinity of Mitchell in central Oregon. Graduate assistants were N. J. Maloney and E. M. Taylor.

Professor Ira S. Allison, Chairman of the department, continued his consulting work with the Oregon Portland Cement Company aided by graduate students, C. E. Wetherell and G. D. Johnson, who mapped limestone quarry sites in various parts of the Pacific Northwest.

In cooperation with the Oregon Department of Geology and Mineral Industries, Professor G. S. Koch continued his studies of the copper-bearing Clover Creek greenstone (Permian) and related rocks in the vicinity of Baker, Oregon, and Professor D. A. Bostwick initiated a survey of fossiliferous Paleozoic carbonate rocks throughout the state.

Professors Wilkinson, Bostwick, Koch and Cummings are supervising National Science Foundation sponsored research programs by four undergraduate geology majors who are investigating Cenozoic volcanics in the Dayville area and Paleozoic sediments in central and eastern Oregon.

D. O. Cochran handled the summer geology courses on the campus.

CODE OF ETHICS

Professor W. H. Taubeneck continued his National Science Foundation research project in the Wallowa Mountains. Dr. Taubeneck is on leave this year, studying at Pennsylvania State University on a National Science Foundation post-doctoral fellowship. Dr. Taubeneck's petrography classes this year are being taught by J. R. Snook, an ex-Oregon State student who is completing work for the Ph.D. degree at University of Washington.

Graduate students are presently engaged in research projects mapping sediments and intrusive rocks in the Wallowa Mountains, studying the Cretaceous system in central Oregon, and volcanic rocks in the southeastern part of the state. One student is beginning a study in marine geology off the coast of Oregon in cooperation with the newly created Department of Oceanography at Oregon State.

ACTIVITIES IN THE GEOLOGY DEPARTMENT AT  
University of California, Santa Barbara

Eleven geology majors were graduated from the Santa Barbara campus last June - the largest class to graduate from Santa Barbara to date. Of the graduating class, five have been admitted to graduate schools, three have gone to work in the oil industry, two have returned home to Iran, and one has become a salesman for a tobacco company.

Since a summer field course was not offered this year, senior students in geology attended various field courses at other schools. Six students went to the University of California, Berkeley, camp in the Inyo Range, three enrolled in the University of California, Riverside, summer course, also held in the Inyo Range, and two attended the UCLA summer field course in the Coast Ranges near Arroyo Grande. Two students did supervised field work in the Santa Ynez range near Santa Barbara.

Geology enters its final year as a part of the Physical Sciences Department; beginning July 1960, it will become an independent department.

Dr. Robert M. Norris directed a National Science Foundation Summer Institute in Marine Science for high school and college teachers on the campus. He taught a course in beginning Oceanography in the Institute, and at its conclusion, in August, went camping for a few weeks before coming back to finish a paper on the sand dunes of southeastern California.

Dr. Richard V. Fisher spent a profitable and interesting summer in the John Day area of eastern Oregon with the U.S.G.S. He found the area so interesting that he hopes to continue work there on his own, after finishing some work in the Sespe Gorge area of Ventura County he was engaged in during his sabbatical last spring.

Mr. Donald W. Weaver has been very busy finishing his dissertation on the biostratigraphy of the Santa Ynez Range. He has also been teaching paleontology.

Dr. Robert A. Roach, formerly with the Canadian Geological Survey, has joined the staff this year to take charge of our program in "hard rock" geology. Dr. Roach had his training at the University of Nottingham in England.

Dr. Robert W. Webb spent the early part of the summer teaching at Columbia University. He spent the latter part of the summer in relaxation at his Sierra cabin.

In the August 1959 P.P.G., comments from the Pacific Section membership were invited regarding the proposed A.A.P.G. Code of Ethics recommended for adoption by the Committee on Code of Ethics. The following summarizes the opinions expressed by the membership thus far.

While the total number of responses has not been large, some very thoughtful suggestions and comments have been received. All replies agree that a Code of Ethics is necessary and desirable, but there is considerable variance in thought as to the length and detail necessary. Some people felt that a simple statement, such as in Article I of the proposal, was adequate and that defining the activities of a legitimate professional man was uncalled for and belittling. Others applauded the detail, although suggested changes to help apparent ambiguities. We were reminded that a similar Code, which was probably used as a basis, had been accepted by many in 1928 and is still subscribed to by many members. There was defense of the detailed nature of the proposed Code, based on the premise that many "ethical" practices are not automatically obvious and need to be set forth, particularly for new, less experienced members. The restrictive aspects in the definitions included in Sections 2 and 3 brought considerable adverse comments. In general, a summary of the opinions received to date suggests the majority much in favor of revision of the Code but displeasure with what has been called an excessive wordiness in the proposed version.

We would appreciate receiving additional comments which the membership may have so that they may be passed along to the Pacific Section Executive Committee and to the National Committees involved. The recommended Code is set forth in the June 1959 Bulletin, Pages 1477-1479, and Richard Faggioli, District Representative, Humble Oil & Refining Company, 612 South Flower Street, Los Angeles 17, California, telephone MADison 6-7701, has been charged with coordinating and tabulating the replies.

INTERNATIONAL S.E.G. TO MEET IN  
LOS ANGELES, NOVEMBER 9-12

The 29th Annual International Meeting of the Society of Exploration Geophysicists will be held in Los Angeles, November 9 through 12, 1959 at the Biltmore Hotel. Dr. Roger Revelle, Director of the Scripps Institute of Oceanography, will address the opening luncheon meeting November 9, on the subject "Exploring the Deep Pacific". Dr. Revelle, one of the world's foremost authorities in the fields of oceanographic research and teaching is president of a special committee on oceanographic research of the International Council of Scientific Unions.

An attendance of more than 1,500 geophysicists is expected for the three and one-half day convention at which more than 50 papers on all phases of geophysical research will be presented. The general session on Wednesday afternoon, Nov. 11, will consist of six papers dealing with the increasing importance of electronic computers in petroleum exploration.

## PERSONAL ITEMS

Bruce Barron and Bob Burns, both originals with Pacific Oil Well Logging have resigned. Bruce is now working for Oil Well Research of Long Beach while Bob is starting a new well logging company, Geological Exploration.

Arthur O. Spaulding, formerly engineering and petroleum geologist with the City of Los Angeles, announces the opening of a private geological consulting practice specializing in petroleum and engineering geology at 453 California Terrace, Pasadena, Telephone, SYcamore 2-8931.

Homer Steiny, who has been the A.A.P.G.'s transportation adviser and arranger for many years recently returned from a railroad trip around the perimeter of the U.S.A. His pullman trip, with his wife, touched New Orleans, Washington D. C., New York City, Niagara Falls, Chicago, Seattle, Portland, and San Francisco.

John May, Exploration Manager for Intex, has returned to make Bakersfield his home after spending many years in Texas.

Lowell Garrison, with Gulf, has transferred from Ventura to Bakersfield to Sacramento, all in the last few weeks.

Ken Jensen, Tidewater's Bakersfield scout, has recently become famous as an artist's model, since his portrait was seen on the wall of a room in one of the more exclusive cabarets in town. Ken will gladly give further details to those interested in viewing this work of art.

The Ventura Scout's Association has lost one of its stalwart bowlers. Jerry Long of Signal has been transferred into the Sales Department at the Long Beach office.

Back from the summer Alaskan Oil Rush, are Jerry Williams of Ohio Oil, John Cass of Texaco, and Dick Lyon of Union in Santa Paula. Jerry will be in Los Angeles several weeks before returning to his former Ventura office while John is a recent transfer to the Ventura district.

The Exploration Department of Union's Santa Paula and Orcutt offices held an annual barbecue on September 26. Conflicting with the Coast Geological Society annual dinner-dance, the attendance was complete except for gambling czar Howard Level who chose the latter activity in hopes of drumming up more business for his weekly football pool.

John Curran has decided to continue the tranquil existence of a Santa Barbara inhabitant. John has terminated his employment with Honolulu Oil Corp. and will open a consulting office in Santa Barbara. All wish him luck in his new endeavor.

After the September P.P.G. Newsletter, an official request has been made by the Ventura Scouts Association to please discontinue any further publication of local scouting activities.

Frank Smith and John Jacobson, Standard in Ventura, are fighting it out in a "weight control" contest. This is the same Smith formerly known as "Fat Frank" in La Habra. So far, Frank is leading by two pounds toward a first prize steak dinner. Consolation prize will be a giant box of "Regimen" tablets.

At the last meeting of the Northwest Geological Society, Bob Deacon, of the Northwest Oil Report, felt certain he had won the raffle when the number was called. Unfortunately he had dropped both parts of his ticket in the box ..... sorry, Bob, no tickie - no bottle!

Jim Moore, Shell (Olympia), has received word of his transfer to Shell's Division office in Seattle. Since he has held the title of Division Stratigrapher for some time now, the move was not unexpected .... he will be missed by his fellow Olympians.

Keith Jones recently left Gulf Oil (Sacramento) to accept a position with the Mineral Resources Branch of the State Lands Commission in Los Angeles. Keith's departure necessitated his resigning as president of the Geological Society of Sacramento, a post he held since last June.

One of Humble's last bachelor strongholds is about to crumble. Andy Foraker, Landman in Chico, made public his intentions to wed Miss Mary Suzanne Johnson, also of Chico, on October 10. They will honeymoon in Carmel.

Now that his beard is gone, we can announce that the strange face in General Petroleum's Sacramento office belongs to Bob Beatie, recently returned from Alaska.

Andy Marianos, Humble's Division Paleontologist at Castaic, is soon to return from Greece with a new bride. It seems that Andy has been unable to find anything to suit him on the local market, so he is getting married, in the custom of the old world, to a girl who was pre-selected for him.

Bob McConville of Signal Oil & Gas has just been transferred to Calgary. The recent wind we had in Bakersfield was just Jack West heaving a big sigh of relief.

Tennant Brooks, with Ferguson and Bosworth in Bakersfield, has now qualified for a full-fledged membership in the executive group after undergoing an ulcer operation. Tennant is well on the road to recovery and is receiving visitors at his home.

Jack Bainton is on his way to Africa for a six month tour of duty with American Overseas. Jack is on leave from Standard's Bakersfield office.

The recent Central California Oil Scouts Association's annual Barbecue in Bakersfield was the usual roaring success. Ken Jensen, Tidewater scout and general chairman for the affair reports that everyone deported themselves in a gentlemanly manner typical of the scouting and geological fraternities. It was noted that Jack West was the only one present with eyeballs to match his sunburn. Also of interest was the fact that Bruce Brooks, with Brazos in Isleton, has apparently found the fountain of youth up in the Sacramento Valley. His hair, which used to be very gray and distinguished, is now a lustrous and youthful brown.

According to local workers out at Standard's Oildale office, it's getting difficult to differentiate between the apes and the geologists since Bob Lindblom, Jack Cunningham and Dale Kline returned from their Alaskan and Nevadan assignments sporting full growths of hirsute facial adornment. We are told geological subjects are being discussed, the ones that agree with you are geologists, the others are apes.



The Standard Oil Exploration group in Ventura recently enjoyed their first annual "Sand Dunes Frolic" at the beach one Saturday night. Jim Blom and his wife came up from La Habra accompanied by an Australian beer mug which held at least a liter. After a keg or more of beer had vanished with the sun, cooks Bob Erickson and John Wilson had a little trouble convincing everyone that it was really barbecued steak for chow in spite of appearances.

During a recent shore run from the CUSS I, Ed Dryden of Standard in Ventura was catching a few small bonita. In a rare burst of generosity, Ed handed the rod to Matt Carson who immediately hooked onto his first ocean fish - a choice yellow tail. Ed's still crying about "priority pole rights" and "only wanted him to hold it a minute", etc.

The aroma of the fine French wines are brought to mind as the evening sets on the Upper Ojai Valley, finding the local Richfield geologists happily plucking grapes in the vineyard of Pete Hall. In gleeful anticipation all await the squeezing of the grapes with 6'8" Don Henriksen most likely to finish off the chore. Any of the other connoisseurs would surely drown in the 300 gallon vat.

After viewing the many dancing couples at the annual dinner-dance of the Coast Geological Society at Ojai, it is recommended that anyone interested in dance lessons should contact either Joe Egan of Shell or Tom McCroden of Standard.

Dale Duley, Richfield (Ojai), has returned from a week's back-pack trip in the High Sierras. He and a friend managed to take in the first snow-fall of the year besides catching daily limits of golden trout.

The Coast Geological Society held their annual Dinner-Dance on Saturday, September 26, at the Ojai Valley Inn. Sixty-nine couples attended including several former Ventura geologists now residing in the Los Angeles and Bakersfield areas. Manuel Castro, Shell (Ventura), must be commended for the fine work of his committee in planning an excellent evening of dining and dancing.

Bill Ruehle, formerly geophysicist with General Petroleum in Los Angeles, has enrolled in the University of California at Los Angeles to begin work toward a doctorate in geophysics.

J. H. (Herb) McMasters of Honolulu in San Francisco has been promoted to Resident Manager, Northern Rocky Mountain Division and is headquartered in Billings, Montana. This move has necessitated Herb's resignation from the Chairmanship of the Finance Committee for the 1962 National A.A.P.G. Convention in San Francisco. Gordon Oakshott, General Chairman for the Convention, is beating the bushes to find someone at least half as well qualified to fill Herb's shoes.

J. T. (Tom) Llewellyn of Honolulu has been promoted to Manager of Exploration, Western Division and is moving from San Francisco to Bakersfield. Prior to this promotion and move, Gordon Oakshott had appointed Tom as Chairman of the Entertainment Committee for the National A.A.P.G. 1962 Convention in San Francisco, and Tom is hanging on to the Chairmanship for dear life. He figures that by 1962 he will be better qualified on San Francisco entertainment than any mere resident possibly could.

Louis Chappuis has moved his office from Guiberson Road in Fillmore, to the San Marino Oil Company Lease in Grimes Canyon, Fillmore, California. The telephone number, Fillmore 808, and mailing address, P.O. Box 236 Fillmore, California, remain unchanged.

Rufus Cook, on vacation from Arabia where he works for Iranian Oil Exploration and Production Company, was recently feted by his many friends in Bakersfield. Rufus has enough interesting film and stories in his collection to go on the lecture circuit when he tires of doing geology. The Cooks are taking a tour of Europe on their way back to Arabia.

Cutler Webster has returned to Honolulu's Bakersfield office from a summer of reconnaissance work in Alaska. It is reported that Cutler even found a little time to look at the geology, if the fishing stream happened to cut through an interesting section.

#### NURSERY NEWS

Lucy and Glen Ware, (Texaco, Sacramento), welcomed their second daughter, Lucy Anne, on August 31. Lucy Anne weighed 8 lbs., 10 oz.

Warren Gillies and his wife have welcomed a newly adopted boy into their family. Timothy Duncan weighed in at 6 lbs., 12 oz. Warren, who works for Texaco in Bakersfield, states that the youngster's first two initials, T.D., have no special significance.

Welcoming the arrival of the fifth member of a future family basketball team was Cal and Norma Thompson, Standard in Ventura. Daniel Clark, fourth boy of four children, was born on September 17 and weighed 7 lbs. and 4 oz.

#### CALENDAR

October 13, 1959: Tuesday, 7:45 p.m., Geological Society of Sacramento, first meeting of the 1959-60 year, Rm. 150 Personnel Board Bldg., 8th and Capitol Ave., "Montana Earthquakes of August, 1959", Messrs. Larry James and James Parsons, Calif. Dept. of Water Resources.

October 13, 1959: Tuesday, 6:30 p.m., San Joaquin Geological Society Dinner Meeting, El Tejon Hotel, Bakersfield, "A One Hundred Year Forecast of the World's Energy and Oil Requirements", Mr. Lewis G. Weeks, A.A.P.G. President.

October 15, 1959: Thursday, 7:30 p.m., Coast Geological Society, monthly Dinner Meeting, Miramar Hotel, Santa Barbara, "Principles of Petroleum Occurrence", Mr. Lewis G. Weeks, A.A.P.G. President.

October 22 & 23, 1959: Thursday & Friday, Fall Meeting of the Society of Petroleum Engineers of the A.I.M.E., Huntington-Sheraton Hotel, Pasadena.

November 2, 1959: Monday, 7:30 p.m., Paleontological Biostratigraphy Seminar, Rm. 56, Science and Engineering Bldg., Bakersfield College, Bakersfield. "Effect of Nile River Sedimentation in Israel", Dr. K. O. Emery, U.S.C.

November 12 & 13, 1959: Thursday & Friday, Pacific Section A.A.P.G., Annual Fall Meeting, Biltmore Hotel, Los Angeles.

November 17, 1959: Tuesday, 7:30 p.m., Coast Geological Society, monthly dinner meeting, Miramar Hotel, Santa Barbara, "The Geologist and World Oil" by Mr. Henry Carter Rea, A.A.P.G. Distinguished Lecturer.

November 9-12, 1959: Monday through Thursday, International Meeting of the Society of Exploration Geophysicists, Biltmore Hotel, Los Angeles

## BIBLIOGRAPHY OF RECENT PUBLICATION

### U. S. GEOLOGICAL SURVEY:

First Supplement to "Publications of the Geological Survey, May 1958" ..... Free

California Index Insert "Geologic and Water-Supply Reports and Maps, California, June 1959" . Free

Map I-219, "Preliminary geologic map of the Mojave quadrangle, California", by T. W. Dibblee, Jr. .... \$ .50

Map MF-213, "Reconnaissance geologic map of the southeastern Cochise County, Arizona," by John R. Cooper ..... \$ .50

Professional Paper 306-B, "Geology and paleontology of Canal Zone and adjoining parts of Panama, description of Tertiary mollusks (Gastropods: Vermetidae to Thaididae), by W. P. Woodring ..... \$1.25

Bulletin 1083-A, "Periodic heat flow in a stratified medium with application to permafrost problems", by A. H. Lachenbruch ..... \$ .75

Bulletin 1083-B, "Directional resistivity measurements in exploration for uranium deposits on the Colorado Plateau," by G. V. Keller ..... \$ .20

Bulletin 1083-C, "Dissipation of the temperature effect of drilling a well in Arctic Alaska," by A. H. Lachenbruch and M. C. Brewer .... \$ .20

Bulletin 1084-C, "Selenium content of some volcanic rocks from Western United States and Hawaiian Islands," by D. F. Davidson and H. A. Powers ..... \$ .15

Bulletin 1106-B, "Geophysical Abstracts 177, April-June 1959" ..... \$ .35

Water Supply Paper 1370-C, "Summary of floods in the United States, 1954" ..... \$1.00

Open-file report: "Geologic strip map of part of Kukpuk River, northwestern Alaska," by C. L. Sainsbury and R. H. Campbell .... Inspection only

### CALIFORNIA DIVISION OF MINES AND GEOLOGY:

San Luis Obispo sheet of the geologic map of California ..... \$1.50

### THE PETROLEUM ENGINEER:

Operation Mohole, by Willard Bascom, vol. 31, No. 9, August 1959

Awesome recovery promise ("Operation Flowshare"), by Carl C. Anderson, vol. 31, No. 9, Aug. 1959

### BULLETIN OF THE GEOLOGICAL SOCIETY OF AMERICA:

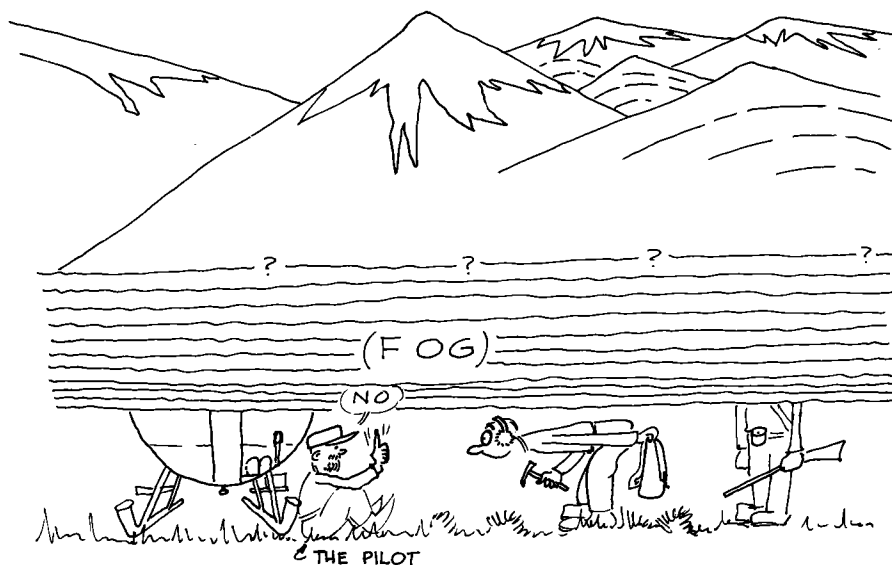
Geochemical table of the elements for 1959, by Jack Green, vol. 70, No. 9, September 1959

Devonian system in the Pahranaagat Range, southeastern Nevada, by Anthony Reso and Carey Croneis, Vol 70, No. 9, September 1959

### BOOKS:

The Great Oildorado, by Hildegard Dolson, published by Randon House, Inc. 456 Madison Ave. New York 221, New York ..... \$3.95

ANDY CLINE (IN ALASKA) by Sullivan



PACIFIC PETROLEUM GEOLOGIST  
PACIFIC SECTION, A. A. P. G.  
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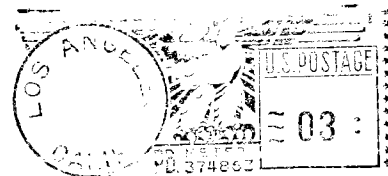
Vol. 13

No. 10

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Signal Oil & Gas Co.  
1025 Petroleum Club Bldg.  
Denver, Colorado

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# PACIFIC PETROLEUM GEOLOGIST

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

### ASSOCIATION ACTIVITIES

Vol. 13

November, 1959

No. 11

#### PACIFIC SECTION ELECTION

Results of the balloting for Pacific Section officers are as follows:

President: Thomas A. Baldwin, Monterey  
Vice President: Orville L. Bandy, Univ. of So. Calif.  
Secretary: Gordon R. Bell, Gulf  
Treasurer: Richard B. Haines, Continental

The Amendment to the Constitution certifying that the Pacific Section is a non-profit organization passed overwhelmingly. The Amendment proposing to raise the dues to either \$3.50 or \$4.00 did not pass, as neither the \$3.50 figure nor the \$4.00 figure received the necessary two-thirds majority vote. The members of the Pacific Section were, however, definitely in favor of a dues increase as 301 voted for a raise to \$3.50, 227 for a raise to \$4.00, and only 75 opposed a raise of any kind.

#### COAST GEOLOGICAL SOCIETY

The members and guests of the Coast Geological Society were most fortunate to have Dr. Lewis G. Weeks as the featured speaker at the October 15th monthly meeting. Dr. Weeks presented a brief summary of the unemployment problems current in the geological profession, further elaborating on his views published in the September issue of the GEOTIMES. Dr. Weeks followed this with an excellent talk on "Principles of Petroleum Occurrences".

Petroleum has its direct origin from live organic matter together with some dead organic matter. The physical and chemical properties of hydrocarbons may vary directly with the various types of organic source material. For instance, asphalt is an original constituent in many hydrocarbon accumulations. Basin sediments are usually very rich in organic material but the eventual supply of hydrocarbons from these sediments depends on several environmental factors existing at or immediately following the time of deposition. These include: bacterial action, water temperature, pH, redox potential, pressure, etc. Bacterial oxidation may destroy much of the organic matter, or at least the important parts, including the hydrocarbons.

The environmental conditions favorable for reservoir rock sedimentation is usually unfavorable for petroleum source sedimentation, and vice-versa. The major oil trends or belts are those areas with favorable source and reservoir facies in close juxtaposition, with the reservoir facies deposited on the flanks and highs, and the source facies deposited in the sinks. The Eocene "Midway" trend and the Arabian Jurassic "Arab Zone" are such examples of interfingering flank reservoir facies and basin source facies.

Oil migration evidently takes place very early after deposition, and compaction is the most effective mechanism. Structural or stratigraphic traps not existent at or soon after deposition are usually barren. However, not all early structures are oil-bearing. They may have been too high up the flank of the basin, etc.

The importance of unconformities in relation to petroleum occurrence is generally under-rated, and the frequency of unconformities is far underestimated. Every bed deposited must be terminated on its flanks by an unconformity. This accounts for the major importance of unconformity traps. Radioactive dating has shown that normal deposition is spasmodic and episodic rather than continuous, thus increasing the frequency of unconformities.

There are three important aspects of unconformities: (1) the time of the unconformity in relation to the time of migration (2) the angularity, and hence, the potential as a trap, and (3) the bringing into juxtaposition of two facies which may be vastly different. Physical conditions in various basins throughout the world suggest that the source facies is commonly located above the reservoir facies is commonly located above the reservoir facies, especially at an unconformity. Numerous large fields are characterized by limestone reservoirs immediately overlain unconformably by a thick shale source, particularly in the Middle East. In many reservoirs, it is difficult to account for a source other than from above the unconformity. An example of this is oil found in basement rocks below an unconformity.

Faulting plays a great role in petroleum accumulations although this role is too often credited with dual accomplishments. Surface seepages of oil along faults have been used to strengthen contentions that faults act as conduits for oil migration and, occasionally, a fault is credited with acting as a conduit during one interval of time and later as a trap during another interval of time. From world wide study it appears that faults rarely act as an agent in oil migration.

Dr. Weeks discussed the relative distribution of petroleum throughout the world by sedimentary basins, by age and by geography. The principal areas with large hydrocarbon reserves were mentioned with a brief discussion of respective geological history. Dr. Weeks' talk encompassed much of the material presented in review in the symposium "Habitat of Oil". His review is very comprehensive in scope and is highly recommended.

#### 1960 SAN JOAQUIN GEOLOGICAL SOCIETY OFFICERS

The voice of the people has been heard! Members of the San Joaquin Geological Society have chosen the following new officers for the 1960 year: President, Harold Billman (Union); Vice President; Joe Dunwoody (Tidewater), Secretary-Treasurer, Jim Bigelow (Gulf).

EXECUTIVE COMMITTEE, PACIFIC SECTION  
AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

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Paul H. Dudley, Jr.	Secretary
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PACIFIC PETROLEUM GEOLOGIST

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Activities	Brad Johnson
	Dwight J. Laughlin
Personal Items	Edward J. Taylor
Selected Bibliography	Lucy Birdsall
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Alaska Correspondent	Charles V. Fulmer
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Northwest Correspondent	Maurice Price
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San Francisco Correspondent	Ken Edwards
San Joaquin Correspondent	E. L. Marier

NEXT DEADLINE: November 25, 1959

A very large group assembled at the October 13 dinner meeting of the Society to hear AAPG President Lewis G. Weeks deliver his paper on Principles of Petroleum Occurrence. Mr. Weeks' topic was, naturally, of universal interest to everyone in the oil industry, and he provided a great deal of thought-provoking observations on the subject that can be utilized both on large-scale problems involving entire basins and on smaller, more localized investigations. Mr. Weeks prefaced his main talk with an interesting review of Association affairs and a discussion of his views on the geological manpower facing many companies, universities and individuals at the present time. A summary of Mr. Weeks' lecture appears elsewhere in this issue of the "Newsletter".

1960 S.E.P.M. NATIONAL OFFICER NOMINATIONS

William M. Furnish, Jr., professor of Geology, Iowa State University, Iowa City, Iowa, and William J. Plumley, California Research Corporation, La Habra, California are the nominees for the presidency of the Society of Economic Paleontologists and Mineralogists for the year 1960-1961. Other S.E.P.M. officer nominees include W. D. Keller, professor of Geology, University of Missouri, Columbia, Missouri, and Laurence L. Sloss, professor of Geology, Northwestern University, Evanston, Illinois, for the office of Vice President; Lewis M. Cline, professor of Geology, University of Wisconsin, Madison, Wisconsin, and John Imbrie, Professor of Geology, Columbia University, New York, for the office of Secretary-Treasurer.

NEW COAST GEOLOGICAL SOCIETY OFFICERS

Recently elected to office in the Coast Geological Society for the coming year were the following persons: Sam Dolman (Consultant) President, Frank Yule (General Petroleum) Vice President, Manuel Castro (Shell) Secretary, Lewis Nelson (Ohio) Treasurer.

GEOLOGICAL SOCIETY OF SACRAMENTO

The Geological Society of Sacramento held its first meeting of the 1959-60 period on October 13 at the Personnel Board Building. Messrs. Larry James and James Parsons, California Department of Water Resources, presented the featured talk, "Montana Earthquakes of August, 1959". Mr. James, Chief Engineering Geologist of the Department, presented the first part of the discussion.

The main shock of the earthquake occurred on August 17 in the West Yellowstone area. A Richter magnitude of 7.1 was recorded at the University of California, Berkeley, approximately 2 1/2 minutes after the initial shock at West Yellowstone. More than 200 after-shocks have since been recorded. The immediate results of the quake included the severe damage to Hebgen Dam, located at the north end of Hebgen Lake, and the large landslide which occurred approximately 5 miles southwest of the dam (downstream) along the Madison River. The great resulting damage was, in part, due to the high seismicity of the West Yellowstone area. Numerous earthquakes have occurred in the past in this area.

The Hebgen Lake area was subjected to a 4 hour period of intense shaking. Hebgen Lake itself is man-made having a dam 87 feet high across the north end. Crustal distortion created downwarping (approximately 20 feet) along the northern part of the lake and upwarping to the southeast. Hebgen Dam was constructed during the period, 1911 to 1914. The dam is earth-filled with a concrete core wall. Four tidal waves, reaching a maximum estimated height of 12 feet, washed over the dam causing extensive damage to the dam and the unreinforced concrete spillway, and resulted in downstream flooding.

Other visible evidence of surface deformation includes the pronounced fault scarps along a 30-mile long belt trending northwest-southeast immediately north of the lake. Vertical displacements ranging up to 20 feet have been measured.

Mr. Parsons, geologist with the Department, presented details on the Madison River landslide. A heavily forested slope underlain by weathered chlorite schist and dolomite was the source area of the slide. An estimated 5 million cubic yards of debris spilled across a large section of State Highway One and the Madison River valley. The damming action of the slide created serious drainage problems. Work commenced immediately to carve a spillway across the debris to permit adequate drainage.

During the past summer months, two officers of the Sacramento Society, Keith Jones (President) and Charles Merek (Treasurer), left the Sacramento area and, accordingly, tendered their resignations. Bob Thronson (Vice President), Department of Water Resources, was elected President at the October 13 meeting. Elections will be held during the November 10 meeting to fill the Vice President and Treasurer positions.

BRANNER CLUB MEETING

Branner Club will meet on Monday, November 30, 1959 at 6:30 p.m. promptly, at the Athenaeum at Cal Tech., in Pasadena. The speaker, Mr. Eugene M. Shoemaker, (U.S.G.S., Menlo Park) will discuss "The Geology of the Moon". Those interested in attending are urged to make reservations early, through the Secretary, Lucy Birdsall (RI 9-4711, ext. 1255).

LOS ANGELES DINNER MEETING

Mr. Peter H. Gardett, Consultant, addressed a large gathering of Pacific Section members and their wives on his recent trip to Moscow at a dinner meeting in Los Angeles on October 6, 1959. The title of Gardett's talk, "Moscow, Abacus to Aeroflot", summed up his observations of antiquated and insufficient methods and machines such as the abacus being used beside the most modern and streamlined techniques and equipment typified by the Aeroflot jet liners.

Although Gardett declined to comment upon a pointed question as to the purpose of his Russian visit, he did present a short resume of his impressions of Moscow and commented upon a series of colorful slides of buildings and places of interest in the City.

Education of geologists at the University of Moscow appeared to be excellent. In conversation with a Russian professor of Geology in the impressive 32 story University building, Gardett learned that the geology student must complete a five and one-half year program for a degree. The curriculum includes field experience with summer expeditions during the final three years of schooling. Development of the extensive natural resources of this huge country affords unlimited opportunities for these Soviet geologists. There are also technical schools comparable to our trade schools which graduate geologic technicians.

Oil production in Russia amounted to 750,000 B/D in 1950 and 2,200,000 B/D in 1958. The Russians hope to double the 1958 production by 1965. There were 10,000 exploratory wells drilled during 1958.

It was obvious that progress is being made in developing the tremendous resources of this vast and virile country and in improving the living standards of the people in the large cities. These people are constantly sold, through all means of communication, the achievements of their government - the communist party.

A serious determination on the part of the Soviet people to outdo the people of the United States was apparent everywhere. It is a sobering fact and axiomatic that time will be on the side of the country whose people put it to the best use.

NORTHWEST GEOLOGICAL SOCIETY

Dr. Y. R. Nayudu of the Department of Oceanography, University of Washington, presented an interesting talk on the "Sediments of Northwest Pacific". He discussed the distribution of Globigerina oozes and the various recent ash falls which took place along the Alaskan-Aleutian arc.

The Northwest Geological Society elected the following officers at its last meeting: President, Dr. Julian D. Barksdale, University of Washington. Treasurer, Dr. Stewart Lowther, College of Puget Sound. Secretary, Glen Boyd, Northern Pacific Railway.

Don Mullineaux of the U.S.G.S. presented a very interesting paper on the recent volcanic mudflows of the Northwest. Mt. Rainier mudflows have traveled as far as 60 miles, and cover hundreds of square miles. Some of the criteria used to distinguish mudflows are: surrounding old topographic high, hardness, poor sorting, voids in matrix, and thoroughly mixed appearance. Color slides were used to illustrate the various criteria.

PENINSULA GEOLOGIC SOCIETY

The program for the Peninsula Geologic Society is as follows: November 5, 1959, Room 320 Geology Building, Stanford University, Calif., 8:00 p.m. R. D. Brown, "Submarine slump deposits, West-Central Sacramento Valley, Calif.", W. S. Fyfe, "Experimental determination of equilibrium in mineral systems", S. N. Davis, "A search for air-field sites in East Greenland."

EXECUTIVE COMMITTEE REVIEWS CODE OF ETHICS

On October 22, 1959, the present and incoming Executive Committees of the Pacific Section reviewed the proposed Code of Ethics and the comments which have been received so far from the Pacific Section membership concerning the Code. Just prior to the meeting, it had been determined that the National Executive Committee planned to submit the ballot on the proposed Code of Ethics to the membership at the same time as the ballot for 1960 national officers. The Pacific Section Executive Committees directed the following telegram to be addressed jointly to Mr. L. G. Weeks, National President, and Mr. R. H. Dott, Executive Director in Tulsa, with copies to the affiliated geological societies:

"PRESENT AND INCOMING EXECUTIVE COMMITTEES OF PACIFIC SECTION FEEL STRONGLY THAT PROPOSED CODE OF ETHICS NOT BE PUT UP FOR BALLOT WITHOUT FURTHER COMMITTEE CONSIDERATION AND REVISION. SUBSTANTIAL OPPOSITION FROM MEMBERS PLUS OUR OWN DOUBTS ABOUT PHRASING AND CONTENT OF PROPOSED CODE WOULD NECESSITATE RECOMMENDING A "NO" VOTE TO 1,000 MEMBERS ATTENDING NOVEMBER PACIFIC SECTION CONVENTION."

GEOCHEMICAL EXPLORATION METHODS TO BE REVIEWED

The A.I.M.E. Petroleum Forum will be addressed by Mr. Mortafa Karim of the University of Southern California on the subject "Geochemical Methods of Exploration for Petroleum" at a noon meeting on Monday, November 23, 1959, at Roger Young Auditorium, 936 West Washington Blvd., Los Angeles. Mr. Karim will note that while the United States slacked off in our development of geochemical methods of exploration in the 1930's, the Russians did not. They picked up where we left off and working intensively have found several oil fields by application of these methods. This has again become a topic of great interest on the part of industry and a subject of considerable research. Mr. Karim will describe this fascinating subject including the theory behind the methods as well as their practical application.

For reservations call Wesley Christensen, General Petroleum Corp., Madison 6-5711, Ext. 2533.

ALASKA GEOLOGICAL SOCIETY

Newly elected officers of the Alaska Geologic Society for the 1960 year are:

President: Thomas R. Marshall,  
Consultant  
Vice President: L. James Parkinson,  
Standard  
Lydia Selksegg,  
District Engineers

## PACIFIC SECTION PUBLICATIONS FOR SALE

The following cross sections prepared under the direction of the Cenozoic Sub-Committee on Geologic Names and Correlations and the 1958 Los Angeles and Ventura Basin Guidebook may be purchased at the Fall Meeting, November 12 and 13, 1959 at Los Angeles, or from Mr. Harry G. Stuvelling, Jr., Pacific Log Exchange, 2110 Cherry Avenue, Long Beach 6, California. Checks for the cross sections and Guidebook should be made payable to the Pacific Section, A.A.P.G., and mailed with the order.

Number and  
Publ. Date

### A.A.P.G. Cross Sections

- 1 (1951) Sacramento Valley - South (2 sheets)  
North side of Sacramento Valley  
through Rio Vista, Thornton and  
Lodi Gas Fields, including Mt. Diablo  
South Sacramento Correlation Chart.
- 2 (1952) Ventura Basin - East (1 sheet)  
Basement North of Oak Canyon Oil  
Field to Aliso Canyon Oil Field.
- 3 (1952) Los Angeles Basin (1 sheet) Palos  
Verdes Hills to San Gabriel Mts.
- 4 (1952) Salinas Valley (1 sheet) San  
Antonio River northerly to San  
Andreas Fault, through San Ardo  
Oil Field.
- 6 (1954) Sacramento Valley - North (2 sheets)  
A. From T23N, RLW through T16N,  
RLE, and B Correlation Chart.
- 7 (1956) Ventura Basin - Central (1 sheet)  
From Santa Ynez Fault north of  
Ojai to Western Santa Monica Mts.,  
through Ventura Avenue and West  
Montalvo Oil Fields.
- 8 (1957) San Joaquin Valley - South (1 sheet)  
From San Andreas Fault to Sierra  
Nevada Foothills, passing through  
Belgian Anticline, McKittrick, Elk  
Hills, Coles Levee, Fruitvale,  
Kern River and Round Mountain Fields.
- 9 (1957) Central San Joaquin Valley -  
(1 sheet) From San Andreas Fault  
to Sierra Nevada Foothills, and  
passing through Coalinga, Gujarral  
Hills and Riverdale.
- 10N (1958) Central San Joaquin Valley (1 sheet)  
From Rio Vista to Riverdale through  
Rio Vista, McDonald Island, Tracy,  
Chowchilla, Gill Ranch, Raisin City,  
Helm and Riverdale Fields.
- 10S (1958) Central San Joaquin Valley (1 sheet)  
From Riverdale to Tejon Ranch through  
Riverdale, Trico, Wasco, Rio Bravo,  
Greeley, Strand, Ten Section,  
Paloma, Wheeler Ridge, Grapevine and  
Tejon Ranch Fields.
- 11 (1959) Santa Maria Basin - (1 sheet) From  
Lompoc to Nipomo Hills through  
Lompoc, Orcutt and Santa Maria  
Valley Fields.

Price: \$1.50 each. For mail orders add  
\$ .50 for postage and handling.

Page 4

Guidebook: "A Guide to the Geology and Oil  
Fields of the Los Angeles and Ventura Regions",  
Pacific Section, A.A.P.G., Los Angeles, 1958, 204  
pp., maps, cross sections, stratigraphic charts  
and road logs supplementing the 1952 Guidebook, in-  
cludes excellent summaries of fields developed since  
that time. Price: \$2.50 students, \$4.50 members.  
For mail orders add \$ .50 for postage and handling.

Membership Directory: The new 1960 AAPG  
Pacific Section directory will be on sale at the  
November meeting for \$3.00. For mail orders add  
\$ .50 for postage and handling.

### STANFORD UNIVERSITY ACTIVITIES

The Journal Club meets in Building 320,  
Geology Corner, Stanford University on Mondays  
at 4:00 p.m. (Coffee at 3:45 p.m.) The schedule  
is as follows:

- Nov. 2 Julius Schlocker (USGS): The geology  
of the San Francisco area.
- Nov. 9 Richard C. Erd (USGS): The borate  
minerals.
- Nov. 16 John W. Harbaugh (Stanford): Present  
status of modern carbonate sediment  
studies in Florida and the Bahama Islands.
- Nov. 23 David Scholl (Stanford): Marine geology,  
bathymetry, and oceanography of nuclear  
test site in the Arctic.
- Nov. 30 Henry J. Moore II (Stanford): Specu-  
lations on the transportation of sulphides  
in hydrothermal fluids.

## PERSONAL ITEMS

Nolen Webb, geophysicist for Richfield,  
is in Alaska bedding down his Yakataga operations  
for the winter.

Harry Jamison and Don Henriksen, Richfield  
geologists, are en route to the Pacific Northwest  
to taste the clams, check on the salmon run, and  
look for pearls in oysters.

Mason Hill, Exploration Manager, Richfield,  
is en route to Wichita, Kansas, to officially throw  
his hat in the ring. Mase, in case you haven't  
heard, is running for Veep, A.A.P.G.

Jim Clinton, formerly with Western Geo-  
physical, is now on the Richfield staff and working  
out of Anchorage.

Irv Schwade and John Weise, Richfield  
geologists, are bumping down the dusty roads from  
Casper to Salt Lake looking for anticlines, no  
doubt.

Herb Skolnick, with Gulf in Bakersfield,  
recently returned from a New York vacation on  
one of Continental's last propeller flights. It  
was nip and tuck, but thanks to some high quality  
bailing wire and chewing gum, he made it back  
without any mishaps.

John Thrailkill, Conoco geologist, has recently returned to Bakersfield from a summer's field work in Alaska. John, like so many other Alaskan bushmen that have come back in recent weeks, decided to conform to the demands of civilized society and has shaved off his beard.

After three weeks of tea and crumpets in the afternoon while vacationing in Merry Olde England, Mark Latker is having difficulty adjusting back to the coffee break routine at Gulf's Bakersfield office.

Dr. Ekrem Goksu, who has been with Gulf in California for some time, is taking a three week driving tour to New York en route to his home in Turkey. For the many people that met Dr. Goksu while he was on the coast and may wish to correspond with him, his address will be I.T.U. Maden Fakultesi, Istanbul, Turkey.

Dick Clawson, geophysicist with Standard has been observed trying on gas masks in preparation for his transfer from Bakersfield to Los Angeles.

Chris Christensen, in Standard's Bakersfield office, is planning on an early retirement since his wife recently sold a song she had written some years ago.

Sam Brown recently joined Texaco's geological staff in Sacramento. Sam spent the past summer in Alaska and, prior to that, was attached to Texaco's offices in Santa Maria and Los Angeles.

Wedding bells will ring for Don Pitcher (Texaco, Sacramento) during early December. The bidding is expected to be heavy on Don's thick, cross-indexed black book.

Could it be that George "Stick" Brown (Ohio Sacramento) has been stung again? George was apparently recovering from possessing a "lemon" Ford. What does he do upon returning from his Nebraska vacation trip, during which his auto maintained its brilliant record ... why, of course, he traded it in for a new Ford. The noise developing in the transmission now has George studying mechanical heredity.

Ed Taylor is Gulf's new geologist in Sacramento. Ed and family moved to Sacramento from Los Angeles during the past month. While in Los Angeles, Ed served as Personals Editor for the Newsletter.

Charles V. Fulmer, Standard, has departed Anchorage for two weeks' vacation in Seattle. News of the temporary return of their old nemesis has reportedly caused considerable consternation in Standard's Seattle office. Anchorage, on the other hand, has never been so quiet -- no popping bones, no screams of anguish.

Warren Hagist, Superior, has been transferred from Anchorage to Denver as of October. Warren hopes to be in Denver long enough to unpack and use his skis.

John V. Thrailkill, Continental, is returning to Bakersfield with both feet planted firmly on the ground following a long cold summer in Alaska. John and Bill Osborn received an impromptu demonstration of auto-rotation this summer which totally destroyed the helicopter and visibly dampened their enthusiasm for this method of transport.

Dick Vivion, Humble scout, Olympia, caught his first salmon and won a three-horse outboard as first prize at the local Elk's fishing derby. Who says ya need skill?

Ed Hall, Union in Santa Paula, recently vacationed to Palm Springs to bask in the sun but gladly retired to an air conditioned room as temperatures soared to 105°.

Lloyd Daugherty, Shell in Ventura, has been transferred to Los Angeles.

Since arriving in Shell's Ventura office some months ago, Tom O'Neill has certainly created chaos with evening dinners. At least three evenings a week he entices his fellow geologists to the local Bavarian Inn for a pitcher or two of beer (apiece ?) after work. The rumor that the Inn must expand to meet the increased business is gradually being overshadowed by a suspicion that Tom is receiving a "kick-back".

A recent transfer to the Ventura G. P. office is Quentin Van Camp, who spent the summer in Alaska. Quentin reportedly spent all free moments gambling with the Indians in preparation for taking over the scouting duties of Carroll Hoyt.

In the "weight-reducing" contest at the Standard office in Ventura, John Jacobson treated "Fat Frank" Smith to a large steak dinner after being out-reduced by one-half pound.

A transfer from Standard's La Habra office to Ventura has not hampered in the least the wheeling and dealing of Mick McKnight. Mick has already "Organized" the noon card games and is reported to be making two house payments per month.

Rex Grivetti, Texaco in Ventura, recently vacationed in Montana visiting relatives.

Andy Vidos, N.L. & F. at Castaic, is considering an unlisted phone number. He seems to be bothered by persistent late phone calls from a local pub by Humble (?) geologists.

Mike Jager has terminated his employment with Richfield in Ojai and is entering into the building construction business in Los Angeles.

The squeezing of the grapes by the Richfield geologists in the Upper Ojai vineyards of wine maker Pete Hall has yielded several barrels of Vino Roco. As the wine appeared to be most superior in quality in this year of the great wines, it was decided to shorten the aging from three years to three weeks.

In a close race for CGS VICE-President, Frank Yule of G. P. edged Ted Off of Ojai Oil as members are aware that he is much more familiar with local VICE affairs.

Starting his marriage off in a rather unusual fashion was Ed Hudson of Texaco in Santa Maria. Ed has refused to divulge the reason for an operation just BEFORE the marriage.

#### NURSERY NEWS

Hank and Del Tomko, Shell, Olympia, welcomed their second daughter, Lisa Kay, on October 9, 1959.

Dr. & Mrs. Hoyt Rodney Gale have recently adopted a 9 month old daughter, Diana Sue, who is originally from Iran.

Lloyd and Barbara Owens (Standard, Bakersfield) have a new baby girl - Sara Scott, who weighed in at 7 lbs.

Colette and Lowell Garrison (Gulf, Sacramento) became the proud parents of Mark Lowell on October 18, 1959. Mark weighed 7 lbs., 7 oz.



## CALENDAR

November 3, 1959: Tuesday, 6:30 p.m., San Joaquin Geological Society Dinner meeting, El Tejon Hotel, Bakersfield, "A Geologist Discusses Depletion". Mr. Thomas C. Hiestand, Consulting Geologist, Denver.

November 5, 1959: Thursday, 8:00 p.m. Peninsula Geologic Society meeting, Geology Building, Rm. 320, Stanford University, Calif., "Submarine slump deposits, West-Central Sacramento Valley, Calif." by R. D. Brown; "Experimental determination of equilibrium in mineral systems" by W. S. Fyfe; "A search for airfield sites in East Greenland" by S. N. Davis

November 12, 1959: Thursday, 6:30 p.m., Junior Group, Society of Petroleum Engineers, AIME, Dinner meeting, Michael's Restaurant, Washington Blvd. and Santa Ana Freeway, Los Angeles. "Casing Corrosion", Mr. Fred Schremp, Research Engineer, California Research Corp.

November 12 & 13, 1959: Thursday, and Friday, Pacific Section A.A.P.G. Annual Fall Meeting, Biltmore Hotel, Los Angeles.

November 17, 1959: Tuesday, 7:30 p.m., Coast Geological Society and dinner meeting, Miramar Hotel, Santa Barbara. "The Geologist and World Oil". Dr. Henry Carter Rea, A.A.P.G., Distinguished Lecturer.

November 17, 1959: Tuesday, 8:00 p.m., L.A. Basin Chapter, A.P.I. Meeting, Shell Recreation Hall, corner of Hill & Obispo Sts., Signal Hill. "Problems of Oil Operations in the Arctic", Mr. Gene Davis, Consultant.

November 23, 1959: Monday, Noon, AIME Petroleum Forum luncheon meeting, Roger Young Auditorium, 936 West Washington Blvd., Los Angeles, "Geochemical Methods of Exploration for Petroleum". Mr. Mostafa Karim, University of Southern Calif.

November 30, 1959: Monday, Monday, 6:30 p.m. Branner Club meeting Antheneum, California Institute of Technology, Pasadena. "Geology of the Moon", Mr. Eugene M. Shoemaker. Call RI 9-4711, Ext. 1255 for reservations.

December 7, 1959: Monday, 7:30 p.m., Paleontological Biostratigraphy Seminar, Rm. 56 Science and Engineering Bldg., Bakersfield College, Bakersfield. "Radiolarians". Dr. W. R. Riedel, Scripps.

## BIBLIOGRAPHY OF RECENT PUBLICATION

### U.S. GEOLOGICAL SURVEY

Bulletin 1039-C: Haydite raw material in the Kings River, Sutton and Lawing areas, Alaska, by R. A. Eckhart and George Plafker. \$ .75

Bulletin 1052-I: Equation of continuity in geology with applications to the transport of radioactive gas, by A. Y. Sakakura, Carolyn Lindberg, and Henry Faul ..... \$ .15  
(Note: Results are applied to some selected data from the Texas Panhandle gas field)

Bulletin 1046-Q: Stratigraphy of Triassic and associated formations in part of the Colorado Plateau region, by J. H. Stewart, G. A. Williams, H. F. Albee, and O. B. Raup, with a section on sedimentary petrology, by R. A. Cadigan ..... \$ .65

Bulletin 1058-G: Geology of the Mount Katmai area, Alaska, by A. S. Keller and H. N. Reiser ..... \$1.00

Bulletin 1984-D: Geochemistry of uranium in phosphorites and black shales of the Phosphoria formation by R. P. Sheldon ..... \$ .20

Circular 419: The definition of known geologic structures of producing oil and gas fields, by E. A. Finley, 6 pp ..... Free

Map I-203-B: Geographic map of the Wadi al Batin quadrangle, Kingdom of Saudi Arabia, by R. A. Bramkamp and L. F. Ramirez ..... \$1.00

Map I-209-B: Geographic map of the Central Persian Gulf quadrangle, Kingdom of Saudi Arabia, by R. A. Bramkamp and L. F. Ramirez \$1.00

Map I-214-B: Geographic map of the NE Rub al Khali quadrangle, Kingdom of Saudi Arabia, by R. A. Bramkamp and L. F. Ramirez \$1.00

Map I-286: Reconnaissance geologic map of the Norton Bay quadrangle, Alaska, by J. T. Cass ..... \$ .75

Map I-287: Reconnaissance geologic map of the Candle quadrangle, Alaska, by J. T. Cass ..... \$ .75

Map I-289: Reconnaissance geologic map of the Ruby quadrangle, Alaska, by J. T. Cass ..... \$ .75

Map I-291: Reconnaissance geologic map of the Nulato quadrangle, Alaska, by J. T. Cass ..... \$ .75

Map I-297: Geology of the western part of the Big Delta (D-6) quadrangle, Alaska, by J. R. Williams ..... \$ .75

Map MF-214: Preliminary geologic map of the Paria Plateau NE quadrangle, Coconino County, Arizona, by R. G. Peterson and D. A. Phoenix ..... \$ .50

Map MF-222: Preliminary geologic map of the Alpine Butte quadrangle, California, by T. W. Dibblee, Jr. .... \$ .50

Map OM-179: Structure contour map on top of the middle member of the Piper formation of Middle Jurassic age in the Williston Basin and adjacent areas in Montana, North Dakota, and South Dakota, by Dorothy T. Sandberg ..... \$ .75

Map OM-199: Geologic map of the Lewiston area, Fergus County, Montana, by L. S. Gardner ..... \$ .75

Open-file reports:

TEI-545: Gravity and seismic exploration in Yucca Valley, Nevada Test Site--- January-April, 1959, by W. H. Diment, D. L. Healey, and J. C. Roller

TEI-678: Engineering geology bearing on harbor site selection along the northwest coast of Alaska from Nome to Point Barrow, by T. L. Pewe, D. M. Hopkins, and A. H. Lachenbruch

TEI-725: Summary of rock salt deposits in the United States as possible disposal sites for radioactive waste, by W. G. Pierce and E. I. Rich

TEI-976: Geology of the Ogotoruk Creek area, northwestern Alaska, by R. Kachadoorian, R. H. Campbell, C. L. Sainsbury, and D. W. Scholl

AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS

Pennsylvanian oil possibilities of San Juan basin, Four Corners region, by Sherman A. Wengerd, vol. 43, No. 9, September 1959

San Andres limestone and related Permian rocks in Last Chance Canyon and vicinity, southeastern New Mexico, by Philip T. Hayes, vol. 43, No. 9, September 1959

Statistics on natural gas discoveries -- 1953, by B. W. Blanpied, vol. 43, No. 9, September 1959

CALIFORNIA DIVISION OF MINES AND GEOLOGY

Special Report 55: Franciscan chert in California concrete aggregates, by Harold B. Goldman ...\$ .50

Special Report 56: Limestone and dolomite in the northern Gabilan Range, California, by Oliver E. Bowen, Jr. and Clifton H. Gray, Jr. .50

GEOLOGICAL SOCIETY OF AMERICA

Bulletin: Nomenclature of load deformation in turbidites, by Harold H. Sullwold, Jr., vol. 70, No. 9, September 1959

OIL WORLD

Alaska, A new oil frontier, vol. 52, No. 13, July 1959

WORLD OIL

Clay sedimentology can be useful exploration tool, by Dr. B. N. Rolfe, vol. 149, No. 5, October 1959

How to evaluate cuttings in air and gas drilling, by H. Fred Downs, vol. 149, No. 5, October 1959

ATOMIC ENERGY COMMISSION

RME-1068: Preliminary report on uranium deposits in the Gulf Coastal Plain, southern Texas, by S.R. Steinhäuser and E. P. Beroni ..... \$1.25

RME-2063 (Part I): Geology of the uraniferous bog deposit at Pettit Ranch, Kern County, California, by W. A. Bowes, W. E. Bales, and G. M. Haselton ..... \$1.00

U.S. COAST AND GEODETIC SURVEY (Department of Commerce)

Preliminary report: Hebgen Lake, Montana earthquakes, August 1959 (Sept. 10, 1959)

U. S. BUREAU OF MINES

Report of Investigations 5487: Evaluation of a California Bentonitic clay for use in oil-well drilling muds, by Quentin A. Aune, W. Hodge Caraway, Frank C. Morris, and George L. Gates ..... (USBM) Free

ECONOMIC GEOLOGY

Breccia pipes in the Shoshone Range, Nevada by Olcott Gates, vol. 54, No. 5, August 1959

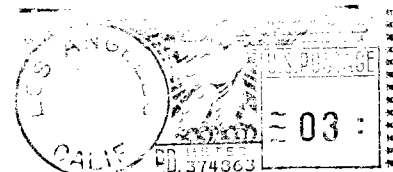
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Richard L. Hester  
8710 West 2nd Avenue  
Denver 26, Colorado

BS



# PACIFIC PETROLEUM GEOLOGIST

NEWS LETTER OF THE PACIFIC SECTION  
AMERICAN ASSOCIATION OF PETROLEUM GEOLOGIST

## ASSOCIATION ACTIVITIES

Vol. 13

December, 1959

No. 12



1960 PACIFIC SECTION AAPG OFFICERS. Left to right, Orville Bandy, Vice President, Richard Haines, Treasurer, Gordon Bell, Secretary, and Tom Baldwin, President.



RETIRING AAPG PACIFIC SECTION PRESIDENT Jack Isberg, left, congratulates incoming Prexy Tom Baldwin at Pacific Section convention held in Los Angeles November 12 and 13, 1959.



NEW SEG EXECUTIVE COMMITTEE. Left to right, M. C. MacMurrough, V. P. Northern District, Forrest Lambrecht, President, Tom Slaven, Secretary-Treasurer, Bill Basham, Editor, and Nolen Webb, V. P. Southern Dist.



1960 SEPM OFFICERS. Richard L. Brooks, Secretary-Treasurer, left, and Weldon W. Rau, President.

### ALBERTA SOCIETY OF PETROLEUM GEOLOGISTS

The Alberta Society of Petroleum Geologists will be host to the Western Canada Regional Meeting of the American Association of Petroleum Geologists in 1960. This meeting will be held in the Banff Springs Hotel in Banff, Alberta from May 25 to 28 inclusive.

Registration will take place on May 25, followed by two days of technical papers and a field trip Saturday, May 28. The theme of the convention will be "Frontiers of Exploration in Canada". The field trip will provide an excellent opportunity to study the stratigraphy and structure of the Rocky Mountains, in itself an exploration frontier.

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PACIFIC PETROLEUM GEOLOGIST

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Editor Brad Johnson  
Assistant Editors: Activities

Personal Items	Dwight J. Laughlin
Selected Bibliography	Darren Wales
Calendar	Lucy Birdsall
Cartoonist	Herschel H. Nixon
	Mort Kline
	Harold Sullwold

Coast Correspondent	Fred Green
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San Francisco Correspondent	Bill Winham
San Joaquin Correspondent	George Rudkin

NEXT DEADLINE: December 30, 1959

COAST GEOLOGICAL SOCIETY

At the November 17 meeting of the Coast Geological Society, the guest speaker was Mr. Henry Carter Rea, consultant, of Denver. Mr. Rea's topic was "The Geologist in World Oil."

The principle set forth in the old Roman Code that a landowner owned everything from the center of the earth to the zenith, as opposed to the Napoleonic Code whereby the State owned the minerals, was the incentive that led to the development of our natural resources. It was successful because the individual participated in the profits of development. This basic principle is important in evaluating the development of natural resources in other countries.

The present surge of petroleum exploration throughout the Western World in the face of an enormous over-supply can be attributed to the closing of the Suez Canal and the attendant disorders. These brought the realization that the Americas could not indefinitely supply the Western World's rapidly increasing demands for petroleum products.

In addition, and perhaps for different reasons, the communist countries are exerting themselves mightily to increase their petroleum production. It would be impossible for the Russians to expand industry and transportation systems to the point where they could utilize the supplies of their ambitious seven-year plan if it were successful. It appears that the production target is set more to obtain foreign exchange and for world-wide political purposes than for domestic consumption. Geologically, Russia certainly has the potential to produce the objective amount. That China has an oil potential there can be no doubt, as the Communists have demonstrated in the last few years by discovering several new fields. For several

reasons, however, it does not seem probable that China will, in the foreseeable future, be any threat to the world petroleum picture.

To consider world petroleum purely from the geological point of view would be unrealistic. Political considerations are often more important. It is obvious that France is not going to give Algeria her complete independence and leave that oil potential for some other power to control. Many parts of the world, including much of South America, are potentially prolific producers of petroleum, but with the exceptions of Turkey, Pakistan, Australia and the Philippines, the lack of exploration and development effort has been due directly to political considerations rather than unfavorable geology. History is replete with the failures of government attempts to develop a domestic oil industry. It is not unreasonable to assume that with time those countries of the world that have an oil potential that has not been developed will eventually change their political thinking and invite private enterprise in to do the job for them.

Geological exploration for oil is now highly mechanized. So long as the closed contour and anticline are revered as the sanctum sanctorum for the accumulation of oil, just so long will instruments, machines and mechanical techniques preclude the necessity for sound geologic thinking. If and when a mechanical device or method is perfected for finding oil that accumulates under unorthodox conditions, the demand for geologic thinking will be even less. However, so long as we have to depend on the development of natural resources for our way of life, there will always be a need for thinking geologists. It is not enough today to know "how to" but one must also be able to ask "why" and seek his own answers.

The nationals of other countries have at last realized that petroleum exploration and the finding of oil is not a specific and private province of the American geologist. Foreign geologists have proved to be just as competent as Americans; in addition they know the customs of the people and more often than not speak the local language, or very soon learn to do so. This means that the American geologist of today, if he is to compete, has to have some knowledge of the culture, history and heritage of the country in which he is working and that he must learn to speak the language.

With the continued rapid advancement in techniques, methods and instrumentation in the field of petroleum exploration, the need for sound geologic thinking and the assumption of responsibility by the individual in making decisions has never been greater. Geologists, in order to survive economically, will have to become stronger within themselves, become better geologists through independent thinking and have a broader outlook on life in general.

DUES INCREASE VOTED AT FALL CONVENTION

Pacific Section members in attendance at the Business Session of the Fall Convention in Los Angeles on Friday morning, November 13, 1959, voted unanimously to raise the yearly dues from \$2.50 to \$3.50. An amendment making the raise effective immediately after the Convention was also passed.

During discussion on the motion and amendment it was pointed out that members who attended the Convention were allowed to pay dues at the old rate of \$2.50 whereas those not in attendance would have to pay \$3.50. The apparent disparity in favor of those who attended the Convention, however, was corrected by an extra \$1.00 added to the normal registration fee of \$2.50. The Executive Committee wishes to make it clear that there is no discrimination against those who did not attend the Convention because in effect, all members will be paying dues at the new rate of \$3.50 for the year 1960.

#### COAST SOCIETY PUBLISHES OCCASIONAL PAPER

The Coast Geological Society announces the publication of its Occasional Papers Number One, consisting of representative talks on local subjects before the Society, during the past year.

Contents of the Number One issue are:

"San Gabriel Fault Problem in the Castaic Area", by Robert Paschall and Ted Off

"Tapia Oil Field", by Holmes Miller and Roy Turner

"Sespe Formation of the Ventura Basin", by Robert Paschall

The first paper named is a re-examination of the hypothesis presented over the past few years by Dr. John Crowell of UCLA.

The issue may be obtained for \$2.00 from Coast Geological Society, c/o Lewis Nelson, Ohio Oil Company, Box 3035, Ventura, California.

#### LOS ANGELES LUNCHEON MEETING

On November 23rd at the first noon meeting of the season, members of the A.A.P.G. were entertained by Rev. Verne E. Cameron who presented a talk on water-witching. In introducing the speaker, Pacific Section Vice-President Irv Schwade emphasized that his appearance before the membership was in no sense an endorsement of his ideas or methods.

Rev. Cameron demonstrated and explained his "aurameter", a modern development of a willow switch. According to the speaker this instrument can detect the "polarized cosmic rays ..... reflected by underground water". He also presented several new and, as yet, unverified theories having no foundation in fact, concerning the origin of salt domes, primary water in springs, and other geologic phenomena.

Regardless of theory, Rev. Cameron has had remarkable success in locating water well sites over the past 33 years. His success at the meeting was less spectacular however, as he attempted and failed to find one beaker of water out of six hidden beneath a tablecloth.

#### JOHNSON APPOINTED EDITOR OF NEWSLETTER

Brad Johnson, Ohio Oil Co., has been appointed editor of the Pacific Petroleum Geologist Newsletter for 1960 by Pacific Section president Tom Baldwin. Johnson will take over the editorship beginning with the January issue. The new editor's address is care of Ohio Oil Co., 550 S. Flower St., Los Angeles 17, Calif., phone MADison 8-3251.

#### ANNUAL HOLIDAY DINNER DANCE

The Ninth Annual Holiday Dinner Dance, sponsored by the Pacific Sections of the A.A.P.G., S.E.P.M., and S.E.G., will be held on Saturday, December 26, 1959, at the Oakmont Country Club, 3100 Country Club Drive, Glendale. Tickets to the gala affair will cost \$14.00 per couple according to Dance chairman George Feister.

Festivities will begin with a complimentary cocktail party at 7:30 p.m. to be followed by dinner at approximately 8:30 p.m. Music for dancing will be furnished by Ivan Scott and his orchestra from 9:30 p.m. to 1:00 a.m.

Helping Feister with arrangements for the Dance are committee members Bob Hindle (A.A.P.G.), Dick Brooks (S.E.P.M.), and Curtis Johnson (S.E.G.) Attendance will be limited to 300 persons.

In acknowledgement of the generous contributions toward the cocktail party at last year's Dance, two complimentary tickets are being issued to each of the following service companies:

Baker Oil Tools, Inc.  
Baroid Well Logging  
B. J. Service, Inc.  
Economy Blueprint & Supply Company  
Fairchild Aerial Surveys, Inc.  
Formation Logging Service Company  
Geophysical Service, Inc.  
Johnston Testers, Inc.  
Lane-Wells Company  
Macco Corporation  
Mercury Oil Tool Company, Inc.  
Pacific Towboat & Salvage  
Rapid Blue Print Company  
Read and Company  
Robert H. Ray Company  
Schlumberger  
Seismic Exploration, Inc.  
United Geophysical Corporation  
Western Geophysical Co. of America

#### SAN JOAQUIN GEOLOGICAL SOCIETY

Mr. Thomas C. Hiestand, Consulting Geologist from Denver, presented a talk entitled, "A Geologist Discusses Depletion" to the San Joaquin Geological Society on November 3, 1959, at the El Tejon Hotel in Bakersfield.

#### TAYLOR WINS BEST PAPER AT CONVENTION AWARD

James C. Taylor, Shell Oil Co., Ventura, was announced winner of the Best Paper Award at the recent Pacific Section convention held in Los Angeles November 12 and 13, 1959. Taylor's paper, "Saticoy Oil Field, Ventura County, California" was adjudged the best at the Convention upon the basis of context, delivery, and illustrations according to chairman of the judging committee, James C. Benzley. Presentation of the award, an engraved desk set, was made at the Coastal Geological Society meeting in Santa Barbara on November 17, 1959.

Taylor received a B.S. degree from the University of Wisconsin in 1949 and a M.A. from Claremont Graduate School in 1953. His present position with Shell is Production Geologist, Coastal Division with headquarters in Ventura.

Committee members who judged papers at the Convention were Everett Pease, Bill Corey, Aden Hughes, Dick Brooks, Bill White, and Quentin Moore.

In the near future, an issue of "Geo-Times" will carry an article by Mr. Hiestand dealing with these and other aspects of the depletion issue.

#### ABSTRACT

Landowners maintain adverse possession of their real property insofar as the length and breadth of their land surface is surveyed and fenced. But geologically real property has a third dimension, the vertical which extends downward to the center of the earth, almost 4,000 miles. If held aloft, it would be like a plug cut in a watermelon from which we could bite off its valuable contents and discard the undesirable parts. By means of shafts and wells the extractive, mining industries obtain the earth's valuable contents such as tile and cement, coal, salt, oil and gas, iron, aluminum and gold. Centuries ago in early English law these were established as capital assets and belonged with the title to the land.

Landowners today (jointly with any mineral interest owners) grant oil and gas leases and usually retain ownership of 12 1/2 percent of oil and gas produced, saved and sold. The lessee (jointly with overriding royalty interest owners) owns usually the 87 1/2 percent of oil and gas produced, saved and sold after bearing all cost and expense. Both lessor and lessee comprise the petroleum producer. Forty years ago the Supreme Court decision stated " ... the sale of oil results in reduction of a capital asset and ... this reduction must be considered in computing taxable income 'just as the cost of raw material must be deducted from gross income before the net income can be determined.'"

The owner of any interest whatsoever in real property to which oil and gas production and sale is attributable, is liable to declare the tax he owes on his share, division or fraction of the sales value accruing during his taxable year. Legality of depletion was established by the Supreme Court decision aforementioned. In 1918, a federal statute provided that depletion could be based upon a fair market value of a newly discovered pool instead of its actual cost. In 1926, after the Treasury Department had learned it was too difficult to pass on a fair discovery value rapidly enough to collect income taxes annually, another federal statute provided that 27 1/2 percent of annual sales value of oil and gas could be deducted but not to exceed 50 percent of the net income in lieu of establishing the fair market value of the newly discovered pool. The 1926 Act re-confirmed the intent of the 1918 Act, and alleviated work in computing tax returns so the tax could be collected annually.

Legality of depreciation had its origin in a federal statute in 1909, which provided " ... a reasonable allowance for depreciation of property". However, a Supreme Court decision prevented a group of mining companies from recovering taxes paid on ore sold from their properties because, as decided by the Court, "in no accurate sense can such exhaustion of the body of ore be deemed depreciation."

Gordon Jones, C.P.A. has ably presented the accounting theory by which the sales value of real property has to be taxed only on the basis of capital gain and loss. (In Great Britain capital gain cannot be taxed.) He calls attention to the fact that oil sold at the stock tanks and gas at the casinghead is completely

real property the same as when oil and gas are sold in the ground (when an entire property's title is transferred on the county records.) He cites a former Internal Revenue Service reviewing engineer's paper establishing 33 1/3 percent of oil and gas sales value as a reasonable and proper deduction on account of depletion. Jones advocates treating all capital gain on one common basis, deducting 50 percent of capital gain plus all capital loss, on account of depletion.

Depletion is legally established in America going back to 1909. And in accounting theory depletion was established centuries before an income tax was imposed on the nation. Depletion goes with the title to the land. It is a part of property rights which landowners must learn before their rights are usurped and confiscated. Corporations and associations cannot vote. Only through civic minded efforts as individuals can we preserve our property rights given to us proudly but with great sacrifice by our forefathers.

#### STANFORD UNIVERSITY GEOLOGY NEWS

During the past summer 22 students in Stanford's summer field geology course mapped two areas in California in detail under the direction of Professor William R. Dickinson. From mid-June to mid-July, the group mapped Cretaceous and Tertiary rocks in the Avenal Ridge area, about 30 miles south of Coalinga. From mid-July to mid-August the group mapped Igneous and metamorphic rocks in extreme northern California, in Seiad Valley, northwest of Yreka, Siskiyou County.

The School of Mineral Sciences, in conjunction with the International Cooperation Administration of the United States Department of State, is actively aiding the University of Chile in establishing a department of geology. Two Mineral Sciences faculty members, Hans E. Thalmann & Stanley N. Davis, will each spend 18 months at the University of Chile in Santiago. In addition to serving as advisers on curriculum, Professors Thalmann and Davis will teach, direct student research, and conduct independent research. Lectures will be given in Spanish.

Professor John W. Harbaugh is continuing a long-range study of Paleozoic carbonate sedimentary rocks in New Mexico and Kansas. He presented a paper dealing with origin of porosity in Pennsylvanian limestone algal banks in south-east Kansas at the Midcontinent Meeting of the American Association of Petroleum Geologists in Wichita in October.

Professor Arthur D. Howard, published a paper dealing with numerical systems of terrace nomenclature in the Journal of Geology early this year.

Professor Colin O. Hutton is continuing a long-range study of the minerals of New Zealand.

Professor Myra Keen presented two papers at the twelfth annual meeting of the American Malacological Union, Pacific Division, at Redlands, California in July, which dealt with observations made at the Colloquium on Taxonomy held in 1958 in London.

Professor Robert R. Compton has recently completed a long-range study of contact metamorphism in the Santa Rosa Range, Nevada.

Acting Dean Konrad B. Krauskoff spent part of July and August attending a conference in Duluth, Minnesota, sponsored by the American Geological Institute for the purpose of developing study materials to be used in earth science courses in high schools and junior high schools.

Professor Siemon W. Muller is continuing his research on Mesozoic invertebrates from California, Nevada and Oregon. He presented a paper in August at the International Oceanographic Congress, New York City, entitled "Triassic and Early Jurassic Paleo-biogeography".

Professor Ben M. Page has taken sabbatical leave for the academic year 1959-60 to study "gravity tectonics" in Europe. He is located in Florence, Italy, and is conducting the bulk of his work in the Apennines, which are conveniently reached from Florence.

Charles F. Park, Jr., dean of the School of Mineral Sciences, has taken sabbatical leave during the 1959-60 academic year. He is currently conducting a long-range investigation of the iron ore potential of the Pacific Coastal regions of both North and South America. Part of last summer was spent in examination of iron ore deposits in Alaska.

Professor Hubert G. Schenck has published papers dealing with the natural resources of Japan and Asia, and with the impact of science in East Asia.

Professor George A. Thompson is continuing his long-range research on crustal structure of Nevada, California and offshore California. During the summer additional gravity measurements were made in Nevada, and on the Farallon Islands, which lie offshore from the San Francisco Peninsula.

Professor Stanley N. Davis was a member of the Air Force Cambridge Research Center's expedition to East Greenland during July and August. His work included an evaluation of potable water supplies in the areas visited.

Professor William R. Dickinson has recently published an abstract of a paper dealing with his studies of marine pyroclastic deposits of Mesozoic age in east-central Oregon.

Professor Joseph J. Graham has been elected director of the Cretaceous Micropaleontological Research Committee, an organization designed to coordinate and stimulate paleontological research on Cretaceous deposits in California and adjacent states.

#### FLUID IN ROCKS CONFERENCE AT UCLA

A two-day conference on Fluids in Rocks, analyzing the movement of oil, gas and water in porous rocks and soils, will be held January 29 and 30 at the University of California, Los Angeles.

Discussion will center on the fundamentals and on new approaches and tools for solving water, oil, and gas problems, according to Dr. John C. Crowell, chairman of the UCLA geology department.

The conference, sponsored by the UCLA departments of geology and engineering and University Extension, will allow an exchange of views among petroleum, water and foundation geologists; reservoir, foundation and construction

engineers; and hydrologists and exploration geophysicists.

Speakers will include Gilman A. Hill, president of the Petroleum Research Corp., Denver; H. E. Skibitzke, U.S. Geological Survey; Robert Thomas, California State Department of Water Resources; Gerald W. Johnson, associate director of the Lawrence Radiation Laboratory; and UCLA professors Martin R. Huberty, George C. Kennedy and U. S. Grant.

Information and registration forms may be obtained from Engineering Extension, University of California, Los Angeles 24, (Bradshaw 2-6161, Ext. 307).

#### NEW PACIFIC SECTION PUBLICATIONS

Two new A.A.P.G. Pacific Section cross-sections, prepared under the direction of the Cenozoic Sub-Committee on Geologic Names and Correlation, were published during November, 1959: They are:

- 11 West Side San Joaquin Valley  
(1 sheet) 1959  
From Coalinga to Midway-Sunset  
and across San Andreas Fault to  
southeast Cuyama Valley.
- 12 Santa Maria Basin (1 sheet) 1959  
From Lompoc to Nipomo Hills  
through Lompoc, Orcutt and  
Santa Maria Valley Fields.

The price is \$1.50 each plus \$ .50 mailing and handling.

The 1960 A.A.P.G., S.E.G., S.E.P.M. Membership Directory containing names, addresses, pictures, and phone numbers of Pacific Coast Geologists may be purchased for \$3.00 plus \$ .50 mailing and handling charge.

These publications may be purchased from Mr. Harry G. Stuvelling, Jr., Pacific Log Exchange, 2110 Cherry Ave., Long Beach 6, Calif. Checks should be made payable to the Pacific Section, A.A.P.G. and sent with the order.

#### S.E.G. ELECTRIC LOG SYMPOSIUM PREPRINTS

The reprints of the Electric Log Symposium given at the national S.E.G. meetings in Los Angeles in November are out of print. No reprinting is contemplated at this time. The above papers on electric log interpretation will appear during 1960 in the bulletin "Geophysics", published by the Society of Exploration Geophysics.

#### PERSONAL ITEMS

Frank Parker, Signal in Los Angeles, is back on the job following a bout with pneumonia which landed him in the hospital and caused him to miss the recent Pacific Section Convention.

Anyone having a statistical summary of probabilities involved in matching, please send same to Walt Record, division exploration supervisor for Richfield in Los Angeles. Walt just can't believe the odds are that bad and he is beginning to mistrust his co-workers!



Don Bruce, until recently with the D.O.G. in Woodland, has accepted a position with the Alaska Division of Mines. Don and family attempted to drive to Anchorage. However, after encountering 40 below temperatures some 600 miles into Canada, a fast survey of the situation prompted Don to return to Seattle, ship the car, and fly up.

Earl Madsen, Humble in Chico, attended Humble's photogeologic school in Houston during the month of October.

Joe Dunwoody, after attending the joint luncheon at the convention, was heard to remark "the Geology of the Moon talk was real good. It fit my picture exactly."

Bill Polski, Shell at Bakersfield, recently returned from 3 months Army duty. Bill will be transferred this month to Shell's Sacramento office. This is farther afield than he was in the service, but the pay is better.

Honolulu Oil Corp. has reversed a current industry trend and hired a man. Art Richards, formerly with the AEC in Bakersfield, will be concerned with the Sacramento Valley geology for Honolulu.

Bert Marier, Tidewater, Bakersfield, was overheard saying that prospects looked "good" up near Corcoran. Nobody could find out whether he was talking about the Tidewater well up there or that girl in the labor camp.

Tenant Brooks, Ferguson & Bosworth, is in Kentucky. He is reportedly checking the authenticity of a track tip.

Milton A. Norton was hired Sept. 1 by Richfield Oil in Bakersfield. Milton attended Bakersfield College and the University of Calif. Riverside prior to his employment with Richfield.

Thirty-three Standard Oil golfers in Bakersfield touched 9 irons and came out fighting in the 3rd Annual Turkey Tourney on Sat., Nov. 21 at the Kern River course. When the divots had settled, turkeys adorned the Thanksgiving tables of Bob Lindblom, with a "cool 71," Brad McMichael, Bob Ortalda, Bob Goff, John Ticker, and Larry Malarin, who shot a "148", (was that one game or two?).

The Standard Oil "Gassers", a bowling team in the Petroleum League at Bakersfield, consisting of Bob Ortalda, Bob Lindblom, Jack Cunningham and Gil Hornung, have run out of gas with 15 straight losses.

A very successful dance was held near Tacoma by Shell's Northwest Division on November 6. Even K. Molenaar made it home to Eugene, Oregon, without mishap.

Tod Harding, Humble, has been transferred from Chico to Los Angeles. Tod is currently in charge of gathering and compiling information for the AAPG Sacramento Valley cross section.

Jim McDonald, Humble, has recently been transferred to Chico. Jim was in Humble's Los Angeles office for the past few years.

Dick Hester has resigned his position with Signal and is now working for Edwin W. Pauley with offices in Los Angeles.

Harry Jamison, geologist for Richfield in Los Angeles, a week prior to the game, dreamed that UCLA beat USC by seven points. Unfortunately (for him) he didn't have the courage of his dreams and didn't collect on any sure-shot wagers.

Mase Hall, Manager of Exploration for Richfield, returned in time for convention after doing some A.A.P.G. executive business in Pittsburgh and some politicking in Wichita. Mase is a candidate for vice-president of A. A. P. G.

If you see a picture of the old and new presidents of the Pacific Section (Jack Isberg and Tom Baldwin) shaking hands rather than passing the gavel, it's because Jack forgot to bring the gavel. Did you ever get it, Tom?

Wyane Elliott, micropaleontologist for Richfield, has been temporarily transferred to Talara, Peru. Tom Rothwell recently returned from Peru and he reports Wayne is doing fine and has a private instructress for his Spanish lessons. No, there are no more openings.

For a fellow who didn't attend the convention, Joe Arndt, technical assistant for Richfield in Long Beach, is really a sharp operator. Who else has been receiving phone calls from Shirley? Maybe she just wants to look at Joe's collection of shark's teeth!

Herb Mann, District Geologist, Shell at Seattle, spent a few days with the Shell people of Canada at Edmonton.

Recent visitors to the Northwest were Harry Jamison, Richfield at Los Angeles, and Don Henriksen, Richfield at Ojai. They were renewing old acquaintances.

On a hunting and fishing trip into eastern Washington, Vince Finch, Shell at Seattle, very graciously left all the big ones for his wife to catch - which she did.

Jim Tanner, independent, has been seen lurking about his old haunts in Olympia after several months stint in Montana.

Maurie Price, geologist, Shell, is in San Bernardino soaking up a winter's supply of sunshine before his return to Olympia.

Edward W. Scott of the Union Oil Company, formerly Geologic Coordinator, has been promoted and transferred to Canada as Manager of Operations for Union's Canadian Division. Ed's local squash and domino playing friends will miss him but not their contributions and markings! We expect soon to hear screams of one sort or another from Canada as the impact of Ed's arrival makes itself felt.

Doyle T. Graves, Union's representative in Caracas, Venezuela, was in Los Angeles the first of November, spellbinding his friends on the trials and tribulations of an American in Latin America.

Paul H. Dudley, Jr., with Humble in Los Angeles and outgoing Pacific Section Secretary, is being transferred to Texas effective in mid-January. Paul will be on a three month training tour in Houston after which he will work out of the Midland office.

## NURSERY NEWS

Jim and Jane Bigelow, Gulf at Bakersfield, are the beaming parents of a fine new baby girl, name, Nancy, born, November 11, 1959 (Veterans' Day).

Tom and Jane Brady, Richfield at Bakersfield, welcomed their 2nd little girl, Janet Elise, into the family on October 9, 1959 - weighing 7 lbs. 9 oz.

Ben and Betty Phillips, G. P. at Bakersfield, now have 2 girls and one boy. The latest addition was Miss Dana Louise, born Sept. 25, 1959

Hal and Nancy Reade, Richfield at Bakersfield, are excited over the arrival of their 1st child, Susan Claire, born Nov. 2, 1959. She weighed 7 lbs., 7 oz, which sounds like a lucky start!

Odetta and Bill Horsley, Richfield at Bakersfield, celebrated Columbus Day, Oct. 12, by discovering that all babies are not little girls. Steven William, at 5 lbs. 1/4 oz, is a little King to go with the 4 Queens.

Mr. & Mrs. Don Laswell added the fourth little girl to their family on Nov. 15, 1959. Her name is Marlene Annett, and she weighed 7 lbs. 8 oz, at birth.

Marge and Jim Wylie, Gulf at Sacramento, welcomed their new addition, James R., IV, on November 10. Young Jim weighed 7 lbs., 6 3/4 oz.

## CALENDAR

December 4, 1959: Friday, 3:00 p.m., Pacific Coast Oil Scouts and Landman's Association meeting, El Tejon Hotel, Bakersfield. Speakers: Mr. M. R. Gardner, Humble Oil & Refg. Co. and Mr. Glenn Ferguson, Ferguson and Bosworth.

December 4, 1959: Friday, 7:00 p.m., Central California Oil Scouts Association Annual Christmas Party, El Tejon Hotel, Bakersfield. Social hour beginning at 6:00 p.m.

December 7, 1959: Monday, 7:30 p.m., Paleontological Biostratigraphy Seminar, Room 56, Science and Engineering Building, Bakersfield College, Bakersfield, "Radiolarians" - Dr. W. R. Riedel, Scripps Institute.

December 9, 1959: Wednesday, 7:30 p.m., Coast Geological Society dinner-meeting, Miramar Hotel, Santa Barbara, "Trap Barriers, Hydrodynamic, Stratigraphic and Wettability" -- Mr. Gilman A. Hill, Petroleum Research Corporation, Denver, A.A.P.G. distinguished lecturer.

December 10, 1959: Thursday, 6:30 p.m., San Joaquin Geological Society, dinner-meeting, El Tejon Hotel, Bakersfield, "Trap Barriers, Hydrodynamics, Stratigraphic and Wettability" - Mr. Gilman A. Hill, Petroleum Research Corporation, Denver, A.A.P.G., distinguished lecturer.

December 10, 1959: Thursday, Noon, S.E.G. luncheon meeting, Roger Young Auditorium, 936 West Washington Blvd., Los Angeles. Mr. C. A. Desmond, Hercules Powder Co., will present a film entitled "Blasting Vibration - Cause and Effect."

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Bulletin 1094: Geology of possible petroleum provinces in Alaska, by Don J. Miller, Thomas G. Payne and George Gryc. With an annotated bibliography by Edward H. Cobb..... \$ 2.00

Bulletin 1097-B: Lead-alpha age determinations of accessory minerals of igneous rocks (1953-1957) by Howard W. Jaffee, David Gottfried, Claude L. Waring and Helen W. Worthing ..... \$ .30

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