



NEWSLETTER

of the Pacific Section

American Association of Petroleum Geologists

VOLUME 26

JANUARY, 1972

NUMBER 1

GUEST EDITORIAL . . .

Continuing Education as a requirement for license renewal: Is it desirable for the geologist? If so, what form should it take?

During the 1971 session the State Legislature passed bills (AB 877, 1442, 2790) requiring some form of continuing education every two years for dentists, dental hygienists, optometrists and pharmacists as a requirement for license renewal. The State Senate (see below) has now adopted a resolution whereby all licensing boards in California are requested to file a final plan for continuing education with the Senate by June 1, 1972. This is a short fuse!

The California Section AIPG has offered and the State Board of Registration for Geologists accepted a proposal whereby the AIPG would consult with the various geologic associations in California and present to the Board around March a plan of continuing education acceptable to the geologic fraternity (or a recommendation that no plan is necessary with *Damn good reasons which would be accepted* by the State legislature). We are setting up a committee now to accomplish this task.

I strongly recommend that every geologist and geologic group in California do some fast soul searching and communicate ideas and comments to: California Section AIPG, P.O. Box 1832, Bakersfield, CA 93303.

TED OFF
President
California Section
American Institute of
Professional Geologists
* * *

CALIFORNIA
SENATE
RESOLUTION

By SENATOR GEORGE DEUKMEJIAN
RELATIVE TO
CONTINUING EDUCATION

WHEREAS, It is in the best interests of the citizens of California to be served by licensed professionals who have kept

abreast of new professional developments in the fields for which they are licensed; and

WHEREAS, At the present time, licensed professionals need only pay a license renewal fee in order to keep their licenses in effect and need not present any evidence of having up-to-date knowledge of new professional developments in their fields; and

WHEREAS, In order to safeguard the health and safety of the public, continuing education is necessary; and

WHEREAS, Professional associations have had extensive experience in the ad-

(Continued on Page 3)

From the President

(HESTER, THAT IS . . .)

We have a real live legal problem concerning the NEWSLETTER name change — it apparently has to be done with a constitutional amendment and there is neither authority nor time to do it before the announcement of next year's officers.

Notwithstanding the fact that a presumed majority of members approve of the name change, the legal fact of election of officers rests upon the legal name, i.e., Pacific Petroleum Geologist — as spelled out in the constitution.

I suggest a simple solution of putting "Pacific Petroleum Geologist" in small print — in parenthesis or italics or quotes — or whatever, in the masthead under the line American Association of Petroleum Geologists. That way you can stay legal with the least fuss. *Now, let me make this perfectly clear.* Please remember we do not have any legal choice. I for one do not prefer having next year's board of officers illegally elected.

The tone and format of the NEWSLETTER and contents are great and I really appreciate the amount of work which is necessary to put this thing together.

I attended a very interesting AIPG Ex-Com. meeting by invitation. These

(Continued on Page 2)

Alaska

By the time this arrives that fat reindeer drover with the weird beard and red rompers will be back in snow country from his annual sock stretching and billfold flattening flyer, and many New Year's resolutions will be as broken as an old maid's heart. We might even know who owns most of the "Great Land" and whether Alyeska is a pipeline company or just has 900 miles of 48 inch fence posts.

The Alaska Geological Society is still in business through every 2nd and 4th Thursday at noon in Anchorage Westward — usually. For the benefit of the late hang overs and Bowl game losers we cancelled the regular January 13th noon meeting. Instead, A.A.P.G. distinguished lecturer Thomas H. Nelson will speak on "Plate Tectonics and Mainstream Mantle Convection" Friday, January 14, 1972 at 7:00 p.m. at Grant Hall, Alaska Methodist University in Anchorage. For those desiring a head start or quick freeze, the same lecture will be given Friday morning (Jan. 14) at the University of Alaska in Fairbanks. That hoss is going to be busier than a one-armed paper hanger with the itch, smoking Bull Durham cigarettes.

The regular meeting January 20 will feature Chet Zenone U.S.G.S. speaking on the remote sensing aspects of the Earth Resources Technology Satellite (ERTS) to be launched about the end of March.

The Alaska Geological Society sponsored symposium on "Alaska Geology and Related Subjects" on April 4, 5 and 6, 1972 is scheduled as follows:

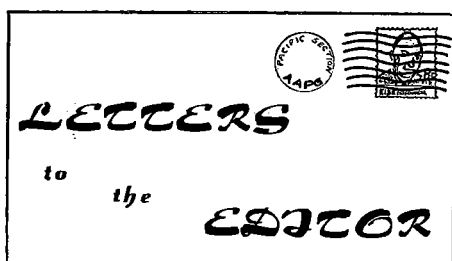
April 4—Social Hour at Anchorage Westward, 5:30-7:30 p.m.
Wives invited.

April 5—Luncheon at Anchorage Westward, 11:30 a.m. Speaker Mr. A. A. Meyerhoff U.S.G.S., Tulsa.

Technical session, 7:00-10:00 p.m., Grant Hall, A.M.U.

April 6—Technical sessions, 1:30-5:00

(Continued on Page 3)



Dear Editor:

A topic dear to my heart is the release of well information. In any oil State in the U.S. except California well logs and histories become public knowledge within a reasonable length of time, either by custom or law. In this time of energy shortage and restrictive legislation on the west coast, isn't it time for California to join the rest of the oil fraternity?

TED OFF
Ventura

Mr. Stanley E. Karp
Editor, The Newsletter
Pacific Section, A.A.P.G.
at Bakersfield College,
Bakersfield, California

Dear Stan:

The above address may be correct, but that doesn't make it right! And, before we go further, I am strongly resisting the inclination to point out that I am not "karping" at you, either. So there now!!

So now I get one more "Newsletter" which word arouses very little enthusiasm. I already get — and pay for — News Letters (the usual spelling) from four state mining associations. I receive three more from other geological societies who supplement their supposedly more scientific serials with information sheets to the members. I receive innumerable efforts from trade organizations, Chambers of Commerce, Zinc, Mercury, Lead, Tin, Tungsten and Lord knows what other cartels, institutes, etc. and they are all purportedly Newsletters, and they are all from Dullsville, Man!!

So I am sorry to see your journal aligned with the above noted array of mailings, because I sort of thought that "Pacific Petroleum Geologist" reflected a bit of individuality. It certainly reflects the Pacific Section of the American Association of Petroleum Geologists as their news organ for their first benefit. If it conveys information to the "affiliated societies," fine and dandy, but it is, essentially, supported by and maintained for Pacific Section people. As I understand it, other geologists, soil mechanics, engineering types and water gaugers who have the requisite \$3.50 or \$5 or whatever we stand for currently,

are welcome to subscribe. This doesn't require that the journal needs to change its name whatever. To whom were you listening?

I cannot say that I am a petroleum geologist, or geophysicist, or hard-rock man — it depends upon which particular Handbook I reach for when I am perplexed which is generally. But I will definitely align myself with my friends Martin, Ian and Tom and their stated sentiments and you may mark us as old "fussbudget fundamentalists" but we did take pleasure in reading the old "Pacific Petroleum Geologist", as we have indicated. And hope that we may again do so.

Just because you've gone to typesetting and photo-cuts I hope we haven't given up the Thurber-like cartoonist. His "Gol-darnedest field-trip I was ever on" after the Czechoslovakia trouble was indeed a highlight. In general, keep up the good work, and pleasant holidays (anyway!).

And I might say "Individually Yours" in closing!

Sincerely,
W. B. BEATTY
(AIPG No. 601,
among other things)

Reading the telephone book doesn't excite me either, but calling it "The Western Registry of Communication Patrons" hardly makes it racy reading.

Dear Editor:

I note with interest the cloud of c--- returned to you on the subject of the name of the Newsletter. If the objectors to the name change have any doubt as to the dangers of narrow specialization, let them consult the back files of the Epistomological Journal of the American Association of Cretaceous Dinosaurs. Geologists should know better.

Sincerely yours,
R. L. LANGENHEIM, JR.
Professor of Geology,
University of Illinois,
Urbana
Card-carrying member:
Pacific Section AAPG

From The President

(From Page 1)

reciprocal invitations to each other's executives have been rewarding in goodwill and understanding of our mutual problems.

Our nominating committee has been appointed and a joint effort will be maintained with AIPG in Sacramento to monitor forthcoming legislation concerning our profession.

RICHARD L. HESTER

Shot down in a sea of flames by the bloody Red Baron. My head may be bloodied but it's unbowed. Well, there goes the "Letters to the Editor" column.

CALENDAR for January

S	M	T	W	T	F	S
						1
10.	BAKERSFIELD COLLEGE—Biostratigraphy Seminar. 7:30 pm Room 56. Dr. Benjamin M. Page, Stanford University. "Ocean Crust Remnant on Land Near San Luis Obispo."					
12.	COAST GEOLOGICAL SOCIETY — Thomas H. Nelson, AAPG distinguished lecturer, "Plate Tectonics and Mainstream Mantle Convection. See Coast Section for details.					
14.	ALASKA GEOLOGICAL SOCIETY — Thomas H. Nelson, AAPG Distinguished Lecturer, "Plate Tectonics and Mainstream Mantle Convection". See Alaska for details.					
19.	LOS ANGELES BASIN GEOLOGICAL SOCIETY — Noon Luncheon, Roger Young Auditorium, 936 W. Washington Blvd., Los Angeles. Dr. Bill Morris of Occidental College will speak on his recent excavations for dinosaurs in Baja, California.					

February

S	M	T	W	T	F	S
		1	2	3	4	5
4.	USC FALL LECTURE SERIES—Stauffer Science Lecture Hall 100. Noon. Louie Marincovich, USC, "Internal Morphology of the Rudistid clam <i>Coralliochama</i> " and Fritz Teyer, USC, "Late Tertiary and Quaternary Biostratigraphy of Cores from South of Australia and The Tasman Sea."					
7.	BAKERSFIELD COLLEGE — Biostratigraphy Seminar. 7:30 p.m., Room 56, Jay Phillips, U.C. Berkeley "Miocene Biofacies in the Salton Shale and Whiterock Bluff Shale of Caliente Mountain."					

COMING SOON

MARCH 9-10

Pacific Section Convention — Bakersfield. "Pacific Coast Geology—Basis for New Exploration."

MARCH 11

Pacific Section Field Trip — "Geology and Oilfields of the West Side Central San Joaquin Valley."

APRIL 1

Sasquatch Convention (National)—Tumwater, Washington. Papers to be announced.

APRIL 4-6

Alaska Geological Society — Anchorage. "Alaska Geology and Related Subjects."

APRIL 17-19

National AAPG Convention—Denver.

Alaska

(From Page 1)

p.m. and 7:00-10:00 p.m.
Grant Hall, A.M.U.

Other speakers so far include George Plafker, D. L. Jones and Roland Von Hueme of the U.S.G.S. Menlo Park, and David Stone from the University of Alaska. I also understand that Chairman Bill Decker has received a very definite *maybe* from that noted expert on "Related Subjects" such as "Bruins and Bruntons" and "Fly rod Geology"—Jean B. Sentuer de Boue. Announcements and registration forms will be mailed out in early January. The sock-it-to-me is \$18.00 for sourdoughs and cheechakos and \$5.00 for students. Youall come. Meanwhile.

Maynak Christmalek
suli

Koveanak tok Newtaak Opeak
DICK E. ATCHISON
Alaska Correspondent

Northwest

NO REPORT.

Sacramento

NO REPORT.

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NEWSLETTER of the Pacific Section—American Association Petroleum Geologists is published monthly by the Pacific Section.
Material for Publication and requests for previous copies should be addressed to STANLEY E. KARP—GEOLOGY DEPT., BAKERSFIELD COLLEGE, BAKERSFIELD, CALIF. 93305.
Material received by the 15th of each month will be included in the following issue.

CHANGE OF ADDRESS, subscription and membership inquiries should be directed to MEMBERSHIP SECRETARY, PACIFIC SECTION AAPG, P. O. Box 17486, FOY STATION, Los Angeles, Ca. 90017.

Northern California

On November 19, Dr. Richard H. Jahns presented a very interesting talk on the geological investigations carried out during the Apollo 15 Moon Flight. This mission was especially significant because the Astronauts were able to supplement geologic sample data with observations and key photographs which have assisted greatly in making geological interpretations outside areas actually traversed. Of special significance was the recovery of a sample of anorthosite which has been subsequently dated as 4.6 billion years.

Dr. David W. Scholl, U.S.G.S., is scheduled to discuss Leg 19 of the JOIDES Project which investigated the Bering Sea and North Pacific area at 3:00 P.M. January 21, 1972 at the auditorium in the Topographic Building of the U.S.G.S. on Middlefield Road, Menlo Park.

Mr. J. Herbert Sawyer was appointed Secretary-Treasurer of the Society at the November meeting.

Los Angeles

The annual Christmas Dinner-Dance of the Los Angeles Basin was held aboard the S. S. Princess Louise, Port of Los Angeles, on December 4, 1971. Eighty-four geologists, wives and friends enjoyed an excellent dinner and the entertaining music of "The Moonlighters". Chairman Bob Lindbloom reported no one was lost overboard! A delicious arrays of hors d'oeuvre and cocktails were donated by the following generous contributors. The Society wishes to thank them for their help in making the event such a success.

Baker Oil Tool
Burns Geological Exploration Inc.
Borst and Giddens Logging Service
Core Lab
Custom Control Co.
Comet Reproduction Service
Dresser Industries, Inc.
Geological Exploration Inc.
Go-International
Julian Well Logging
IMC Drilling Mud
Munger Oil Information Service, Inc.
O'Meara and Rogers Construction Corp.
Reese Sales Co.
R. F. Smith, Corp.
Schlumberger Offshore Services
United Directional Services

PAGE 3

Urban Drilling Control
Welex

The Los Angeles Basin Geological Society new officers for the calendar year 1972 are as follows:

President — R. W. (Bob) Wagner
(Mobil)

Vice President — E. L. (Ed) Berg
(Humble)

Secretary — G. L. (Butch) Brown
(Union)

Treasurer — W. (Bill) Polski (Shell)

Delegates and Alternante Delegates to the National AAPG were also elected for a two year term commencing July 1, 1972.

DELEGATES

R. W. (Roy) Turner (Pennzoil
United)

J. B. (Jim) Anderson (Pauley)

J. D. (Doug) Traxler (Signal)

G. G. (Jerry) Cooper (Mobil)

ALTERNATE DELEGATES

D. E. (Don) Hallinger (Pacific
Lighting)

(Continued on Page 4)

Senate Resolution

(continued from Page 1)

ministration of continuing education programs and licensing agencies have not had such experience; now, therefore, be it

RESOLVED BY THE SENATE OF THE STATE OF CALIFORNIA, That the Board of Accountancy, the Board of Registration for Geologists, (29 other professional boards listed in the Resolution have been omitted here) and the State Bar Association are hereby requested to file a preliminary report on continuing education, as soon as practicable, with the Senate Committee on Business and Professions describing the approach or plan it would be prepared to adopt for its licensees; and be it further

RESOLVED, That in developing such a program, each licensing agency is requested to take into full consideration the views and experience of the professional associations on the subject; and be it further

RESOLVED, That each licensing agency is requested to file a final plan with the Senate Committee on Business and Professions no later than June 1, 1972; and be it further

RESOLVED, That the Secretary of the Senate transmit a copy of this resolution to each of the above-named licensing agencies.

This is to certify that the above resolution was adopted by the Senate on October 18, 1971.

DARRYL R. WHITE
Secretary of the Senate

Los Angeles

(From Page 3)

T. W. (Ted) Ehring (Signal)
G. B. (George) Pichel (Union)

Two new additions to the McCulloch Oil Corporation staff in Los Angeles include Adrian Maaskant as Chief Geologist and Carroll Hoyt, Geologist, Administration Department.

Mr. and Mrs. Bob Lindblom proudly announce the arrival of their 14 handicapper Eric Robert on Dec. 14 (which happens to be Bob's birthday). Eric weighed in at 7 lbs. 10 oz. and has already received a set of irons and woods.

Bob—When Arlene asked for a spoon for the baby, she didn't mean a 3 wood.

A warm welcome to Rod Colvin who joins our staff as Associate Editor of the L.A. Basin. Please keep Rod posted on what's cooking around town. Without doubt — we've got a bang-up staff — The Editor ain't much, but the rest of the crew is great.

San Joaquin

Mr. John Carver, general chairman of the Pacific Section's 47th annual meeting which is to be held in Bakersfield on March 8-11, 1972, reported that satisfactory progress in planning and arrangements for the meeting is being accomplished and it appears that an excellent meeting will result. The theme for the convention is "Basis for New Exploration" and outstanding papers and talks are to be presented, ranging geographically from Alaska to Baja, California. The key noter will be Mr. Michel T. Halbouty of Houston, Texas, and his keynote address is on "Petroleum and the Energy Crunch."

The convention's social functions will begin with Basque Night and will end with the annual Dinner Dance. The ladies have a full schedule for their enjoyment and relaxation.

Coast

January's speaker will be Thomas H. Nelson, Research Associate with Esso Production Research, Houston, and AAPG distinguished lecturer. His topic will be "Plate Tectonics and Mainstream Mantle Convection." The dinner will be Wednesday, January 12, at the Admiral's Table; happy hour at 6:00; dinner at 7:00; cost \$5.50 per person. Call

Jack Durrie at (805) 643-2154 for reservations.

Pat Ames, paleontologist with CONOCO in Ventura is being transferred around the first of the year. He'll join CONOCO's Geological Research Group in Ponca City, Oklahoma.

CLEAN ENVIRONMENT ACT

On June 6, Californians will go to the polls to vote on the "Clean Environment Act". The following are portions of this blunderbuss bill that pertains to the energy production in California. Comments anyone?

Section 6. No one has the right to a hearing to determine the propriety of the issuance of a shut down order. The people find and declare that the critical problem of air pollution requires emergency action as provided by this Section.

Section 10. 24399. No one appointed to any air pollution control board, advisory board, or regional pollution board, or appointed as an officer of any such board, defined or provided in Division XX of this Code, shall have any interest in, be employed by, or own any shares in any company or corporation which emits or discharges any air contaminants into the atmosphere, or which manufactures, distributes, or sells motor vehicles, or engines or motors for such vehicles, or which produces, refines, or distributes or sells petroleum or petroleum products.

Section 12. 6870. (a) Notwithstanding any other provision of law to the contrary, no leases shall be let or renewed for the extraction of oil and gas from coastal tidelands or submerged lands in state waters, or from onshore areas within one mile of the mean high tide line.

(b) It is hereby declared to be a nuisance and it shall be unlawful for anyone to drill exploratory core holes, or to pump or extract oil, gas or other hydrocarbon substances in the tidelands or submerged lands, or on onshore areas within one mile of the mean high tide line.

(c) Any activity prohibited by paragraph (b) which commenced prior to the effective date of this Section is exempt from paragraph (b).

Section 13. 6828.1. Whenever, as determined by the commission, any operation conducted under lease issued pursuant to this Chapter constitutes an ultrahazardous activity, such operation shall cease upon order of the commis-

sion and shall not commence until such time as the commission determines that the operation no longer constitutes an ultrahazardous activity. As used in this Section, "ultrahazardous activity" means an activity which poses an imminent threat to the health, safety, and welfare of the public, including, but not limited to, substantial damage or destruction to lands and marine and coastal wildlife and pollution of state waters by the escape of oil or gas.

Section 16. 25711. It shall be unlawful for any person to manufacture or construct an electric generating plant which is powered by atomic energy from nuclear fission during the five year period next succeeding the effective date of this Section.

SEPM

SEPM TECHNICAL SESSIONS — March 9-10.

The Miocene biostratigraphy of California will be reviewed. New data on radiometric age dating, megafossil successions, planktonic and benthonic foraminifera, radiolaria, diatoms and nanofossils including pollen and spores will be integrated and related to support the original stages and zones or to suggest revisions.

SEPM DINNER TALK — March 9 — 7:30 P.M.

GEOLOGIC HISTORY OF THE PACIFIC

The biostratigraphy of microfossils found in deep sea drilling is used to outline sedimentary facies patterns which reflect motion of the Pacific plate in respect to the equatorial zone. These data compared with trends and ages of fossils in seamounts may infer direction of movement in the asthenosphere.

SEPM MIOCENE SYMPOSIUM — March 10 — PM.

Methods for establishing time stratigraphic references for correlation through the use of biogeochronology will be presented. The Middle Tertiary boundaries and facies problems will be discussed, with the roll of microfossils in clarifying and redefining subdivisions. The Moderator-Panel method will be used to promote questions and answers. Differences will be discussed and evaluated.

E. H. STEINMEYER

DID YOU KNOW . . .

Hoover Dam provides Southern California Edison 1.1% of their energy needs. Thermal (fossil fuel) plants create 82.5% of the electricity consumed by L. A.

GEOLOGICAL REVIEWS

Stratigraphy and Sedimentation of the Tejon Formation, San Emigdio Mountains, California*

TOR H. NILSEN

The type Tejon Formation of California is exposed in the San Emigdio Mountains, and consists of conglomerates, sandstones and shales that contain marine megafauna and microfauna of middle and late Eocene age. The sediments were deposited primarily on a continental shelf, and record a major transgression eastward across the range beginning in middle Eocene time followed by a major westward regression in late Eocene time. Thus, the Tejon Formation comprises (1) a basal nearshore conglomerate—sandstone that grades up into (2) finer-grained sandstones and shales deposited farther offshore, and (3) overlying sandstones with some interbedded conglomerates and shales deposited near a regressing shoreline. Paleocurrent data indicate dominant transport of sediments in an offshore or westward direction.

In its eastern exposures, the marine Tejon is overlain by the nonmarine Tecuya Formation of Marks (1943) and also grades laterally eastward into nonmarine redbeds inseparable from and thereby also assigned to the Tecuya Formation. No unconformity was found in outcrop between the two formations, which suggests that the oldest beds of the Tecuya should also be late Eocene in age. To the west, the Tejon is overlain by the marine San Emigdio Formation of Wagner and Schilling (1923), which is of late Eocene and Oligocene age; this formation contains a basal shallow marine sandstone that interfingers to the east with redbeds of the lower part of the Tecuya Formation.

The basal unit of the Tejon is the Uvas Conglomerate Member, a thin (0-400'), discontinuous basal conglomerate and sandstone that rests unconformably on a very irregular erosion surface on the pre-Tertiary basement complex. It contains locally abundant megafauna, boulder beds and breccias, beach-type sandstones, and grade laterally eastward into the Tecuya Formation. The Uvas is overlain by the Liveoak Shale Member (0-2000'), which is generally sandier in its lower and upper portions, and grades eastward from a deep-water shale to shallow shelf-type silty shales and eventually wedges out into the shallow marine transgressive and regressive sandstones. The regressive upper unit is the Metralla Sandstone Mem-

ber (0-2000'), which is locally conglomeratic and contains abundant shallow marine megafauna in its eastern exposures, but which grades laterally westward into more finer-grained and thinner-bedded sandstones characterized by a lack of megafauna, abundant syndimentary slumps and some flysch-type sedimentary structures. The Metralla is locally overlain by a thin (0-200') silty shale unit, the Reed Canyon Siltstone Member. It locally contains a shallow marine megafauna as well as thin layers of coal and other carbonaceous debris; it was probably deposited in a variety of shallow marine and brackish-water environments, including lagoons behind offshore bars or islands.

The Tejon Formation thickens steadily westward from the zero isopach line near Tunis Creek to more than 4,000 feet near Pleito Creek in the central part of the San Emigdio Mountains; from there westward, it thins to approximately 1,000 feet near Santiago Creek, although overlying units may be unconformable on the Tejon in the western portions of the range, so that its original thickness might have been greater. The westward facies change in the Liveoak Shale and Metralla Sandstone Members to deeper-sea, probable slope deposits corresponds to a change in basement type from granitic (continental) in the east to gabbroic and ultramafic (oceanic) in the west. This suggests that the older pre-Tertiary ocean-continent boundary persisted into the late Eocene as a paleogeographic element, and that a major submarine slope formed the boundary between the shelf-type Tejon deposits and the continental borderland deep-sea fan deposits of the middle and late Eocene Point of Rocks Sandstone to the northwest in the Temblor Range.

Publication authorized by the Director, U.S. Geological Survey.

*Abstract of paper presented to Bakersfield College Biostratigraphy Seminar, November 15, 1971.

An Ancient (Late Paleocene) Submarine Canyon and Fan: The Meganos Channel, Sacramento Valley California*

PETER J. FISCHER
San Fernando State College,
Northridge, CA.
ABSTRACT

An ancient submarine canyon, the Meganos Channel, is exposed in the homoclinal sequence of Mesozoic to Cenozoic sediments that form the northern flank of Mount Diablo. Within this outcrop belt, the Meganos Formation comprises a narrow belt, ten miles long and one-half mile wide.

Scouring and subsequent filling of this canyon are postulated to have oc-

curred within a four million year period of early(?) to late Paleocene time. Sediments that fill the canyon are divided into two facies: (1) a late claystone channel fill sequence; and (2) an early submarine fan facies of coarser clastic material. The submarine fan facies is particularly well exposed from its basal contact, resting upon the early Paleocene Martinez Formation, to the overlying channel fill facies. Within this basal sequence small channel-fills of conglomeratic sandstones are analogous to the fan valleys of Recent submarine fans.

A series of high angle normal faults, trending nearly due north are dated as Maestrichtian or earliest Palocene to middle Eocene. Restoration of Paleocene units demonstrates uplift to the east during this time, which in conjunction with the faulting controlled the position of the submarine canyon. Deposition of the submarine fan facies is also strongly structurally controlled.

A minimum depth of the submarine canyon in the vicinity of the fan is estimated to have been 3,700 feet. The submarine fan is 1,500 feet thick and the overlying claystone of the channel fill facies was at least 2,200 feet thick.

*Paper presented to Bakersfield College Biostratigraphy Seminar, December 13, 1971.

Some Case Histories in California Using Magnetometer Profiling for Fault Delineation*

BY ARTHUR S. HUEY
ABSTRACT

The use of the magnetometer today is mainly airborne and is employed over land or water areas as a reconnaissance tool to find the depth of basement and to determine the volume of sediments in new basins. Boat-drawn magnetometers are also widely used as a part of a three-fold survey involving gravity and seismic reflection. The use of the ground magnetometer in oil exploration today is limited. In this report some interesting case histories in California show that magnetometer profiling can be a useful and low-cost exploration-tool to locate and delineate faults that might be important in field extensions or wild-cat plays.

The first case shown include some profiles at the north end of the Long Beach Oil Field showing the magnetic profile across the Cherry Hill Fault, a major right-lateral shear originating in the basement. Other profiles in this area disclosed a fault that branched obliquely from the Cherry Hill Fault that sheared a 12" concrete water pipe during the 1933 Long Beach earthquake.

Immediately after the discovery of
(Continued on Page 6)

Geological Reviews

(From Page 5)

oil in South Cuyama some magnetometer profiles were run to find and delineate a major fault that was believed to control the Lower Miocene accumulation. Results of later development drilling confirm the location of the controlling fault as suggested by the magnetometer reconnaissance profiles.

In the Livermore Valley area of central California magnetic profiles along a major fault trend show strong contrasting magnetic values from the mineral content of the involved sedimentary formations.

Magnetic profiles are open-ended surveys with stations generally taken at 100-foot intervals. The length of the profile varies with the problem but would average two miles in length and the profiles may be spaced a mile apart. Fault delineation by the magnetometer profile may reflect: 1) basement faulting or relief, 2) offset of sedimentary formations with contrasting magnetic response from the contained mineral grains, and 3) possibly offset of the paleo-magnetic lines of force set in the sedimentary formations or basement rocks. The low-cost and speed with which these profile surveys can be run make this type of reconnaissance a useful exploration-tool for fault delineation especially for independent oil companies and consultants.

*Paper presented to the San Joaquin Geological Society December 14, 1971.

MARCH 11 FIELD TRIP

"GEOLOGY and OILFIELDS OF THE WEST SIDE CENTRAL SAN JOAQUIN VALLEY."

Guidebook will be a companion copy to 1968 Volume. Trip is limited to 220, so make your plans now.

Route will be thru Dagny Gap, McClure Valley, Big Tar Canyon and Kettleman Hills,

Two new innovations will be tried this year. Coffee and donuts will be served at the first stop as we are orientated to the field trip area, and each participant will receive a free set of diagnostic fossils of the area, mounted and identified.

At least 10 prominent geologists and paleontologists will speak at the various stops. This field trip is shaping up to be one of the "Best in the West."

Recommended Reading

U. S. GEOLOGICAL SURVEY

Professional Paper 434-F: A flood-frequency relation based on regional record maxima, by P. H. Carrigan, Jr. 40¢

Professional Paper 502-B: Hydrology and geochemistry of Abert, Summer and Goose Lakes, and other closed basin lakes in south-central Oregon, by K. N. Phillips, and A. S. Van Denburgh \$1.75

Professional Paper 546: The Alaska earthquake, March 27, 1964: Lessons and conclusions, by E. B. Eckel (reprinted 1971) 75¢

Professional Paper 658-D: Geology of northern Nellis Air Force Base Bombing and Gunnery Range, Nye County, Nev., by E. B. Ekren, R. E. Anderson, C. L. Rogers and D. C. Noble .. \$2.00

Professional Paper 658-D: Mesozoic stratigraphy of the Sierrita Mountains, Pima County, Ariz., by J. R. Cooper 50¢

Professional Paper 684-B: Plutonic rocks of the Klamath Mountains, Calif. and Oregon, by P. E. Hotz. 35¢

Professional Paper 703: Stratigraphy and paleontology of the revised type section for the Tahkandit Limestone (Permian) in east-central Alaska, by E. E. Brabb & R. E. Grant 50¢

Bulletin 1354-A: Changes in stratigraphic nomenclature by the U. S. Geological Survey, 1970, by G. V. Cohee, R. G. Bates, and W. B. Wright 30¢

MAPS

GQ-921: Geologic map of the Waucoba Spring quadrangle, Inyo County, Calif., by C. A. Nelson \$1.00

GP-957: Geologic map of the Kipuka Pakekake quadrangle, Hawaii, by G. A. Macdonald \$1.00

HA-422: Flood of January 1969 near Carpinteria, Calif., by F. W. Fenzel and McGlone Price \$1.00

HA-424: Flood of January 1969 near Azusa and Glendora, Calif., by F. W. Giessner and McGlone Price \$1.00

GEOPHYSICAL ABSTRACTS:

Publication of Geophysical Abstracts will be terminated with the December 1971 issue; an index for Geophysical Abstracts for 1971 will be published as soon as practicable after Jan. 1, 1972. No further subscriptions to the journal will be accepted. Single copies of the remaining 1971 issues may be purchased for 45 cents each; price of the index to be announced later.

ABSTRACTS OF NORTH AMERICAN GEOLOGY:

Publication of Abstracts of North

American Geology will be terminated with the December 1971 issue. No further subscriptions to the journal will be accepted. Single copies of the remaining 1971 issues may be purchased for 75 cents each.

REPORTS AVAILABLE ONLY THROUGH NATIONAL TECHNICAL INFORMATION SERVICE, U. S. Department of Commerce, Springfield, Virginia 22151:

PB2-02100: Principal facts for gravity stations in the San Francisco Bay area, California, by G. M. Grave and W. G. Clements (28 pages) \$3.00

PB2-02569-U: A system of regional agricultural land use mapping tested against small-scale Apollo 9 color infrared photography of the Imperial Valley (California), by C. W. Johnson, L. W. Bowden and R. W. Pease. (107 pages) \$3.00

PB2-02779: An evaluation of enhancement of light intensity differences on color aerial photographs and thermal infrared imagery for the Ozette Island-Cape Alava area of the Olympic coast of western Washington, by R. J. Janda. (34 pages) \$3.00

WASHINGTON DIVISION OF MINES AND GEOLOGY (P. O. Box 168, Olympia, Wash. 98504):

Bulletin 63: Geology and mineral resources of King County, Washington \$4.50

Information Circular No. 46: Directory of Washington Mining Operations, 1969-70 Free

OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRY (1069 State Office Bldg., Portland 97201)

Bulletin 71: Geology of selected lava tubes in the Bend area, Oregon, by Ronald Greeley (47 pages) \$2.50

OREGON STATE UNIVERSITY PRESS (Corvallis, Oregon)

Oregon State University Monograph, Studies in geology no. 10: Fossil mollusks of coastal Oregon, by Ellen James Moore (64 pages) \$2.00

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 82, no. 9 September 1971

Plate tectonics and magmatic evolution, by James Gilluly.

Distribution and age of high-grade blueschists, associated eclogites, and amphibolites from Oregon and California, by R. G. Coleman and M. A. Lanphere.

Morphology and sediments of redondo submarine fan, Southern California, by Barbara E. Haner.

Clay mineralogy of soils development from Quaternary deposits of the East-

(Continued on Page 7)

Change of Address

- ERWIN W. CLARK
P.O. Box 5355
Oildale, Cal. 93308
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c/o Roy M. Huffington, Inc.
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Indonesia
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- EUGENE C. TRIPP
9500 Glory Avenue
Tujunga, Cal. 91042
- GORDON J. WELSH
Sun Oil Co.
4151 Southwest Freeway
Houston, Texas 77027

D.O.G. MAPS

New maps of the Santa Barbara channel have been prepared by the State of California, Division of Oil and Gas and are now available. The series includes four maps (Scale: 1" = 2,000') showing the location and status of all producing wells and coreholes drilled on state tidelands together with the locations and status of many of the coreholes drilled on Federal O.C.S. lands. Blue-line prints are \$2.00 each, obtainable over the counter at Coastal and Bakersfield district offices of the Division of Oil and Gas, or order from Room 1316, 1416-9th Street, Sacramento, California 95814.

Recommended Reading

(From Page 6)

- ern Sierra Nevada, California, by P. W. Birkeland and R. J. Janda.
- Late Pleistocene-Early Holocene geomorphic history of Lake Mojave, California, by H. T. Ore and C. N. Warren.
- Origin of patchy zoning in plagioclase from grabbrock rocks of Southwestern Oregon, by David M. Jorgenson.
- Delta: Term and concept, by G. T. Morre and D. O. Asquith.
- GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 82, no. 19, October 1971
- Climatic changes and the evolution of landforms in the Eastern Province of Saudi Arabia, by Randolph W. Chapman.
- Pattern of climate change in the North Pacific using ice-rafted detritus as a climatic indicator, by D. Kent, N. Opdyke, and M. Ewing.
- Wall rock decarbonations and forcible emplacement of Birch Creek Pluton Southern White Mountains, Calif., by C. A. Nelson and A. G. Sylvester.
- Seismic body waves observed in the vicinity of Mount Katmai, Alaska, and evidence for the existence of molten chambers, by Tosimatu Matumoto.
- Mesozoic granitic rocks in northwestern Nevada: A link between the Sierra Nevada and Idaho Batholiths, by J. G. Smith, E. H. McKee, D. B. Tatlock and R. F. Marvin.
- Newport-Inglewood zone and Mesozoic subduction, California, by Mason Hill.
- JOURNAL OF GEOLOGY, vol. 79, no. 5, Sept. 1971
- An Upper Miocene diatomaceous rock unit on the Oregon Continental Shelf by G. A. Fowler, W. N. Orr, and L. D. Kulm.
- JOURNAL SEDIMENTARY PETROLOGY, vol. 41, no. 3, Sept. 1971
- Budget of calcium carbonate, Southern California continental borderland, by S. V. Smith.
- Depositional structures and processes in the non-barred high-energy nearshore, by H. Edward Clifton, Ralph E. Hunter and R. Lawrence Phillips.
- Petrology and geochemistry of the Duzel (Ordovician) and Gazella (Silurian) formations, northern California, by K. C. Condie and S. Snasieng.

BOOKS:

ANTARCTIC

Research in the Antarctic, edited by Louis O. Quam. American Assoc. for the Advancement of Science, 1515 Mass. Ave. N.W., Washington, D. C. 20005 non-member \$24.95
AAAS member 19.95

Did You Know

The Branner Geological Society of Southern California recently celebrated its 50th anniversary. Wayne Loell, one of the original thirty-four founders, and Art Huey, the club president, shared the honor of cutting the anniversary cake. A highlight of the club's activities during the year was a field trip to Death Valley over the weekend of Nov. 5-7. A group of thirty-three members and wives explored places of geologic interest in the valley. For 1972 Tom Baldwin, consultant, was named president and other officers include Doug Traxler, Signal Oil, as vice-president and Lucy Birdsall, U.S.G.S., as secretary-treasurer.

* * *

In response to a recommendation by the Pacific Section, the Executive Committee of AAPG has voted to contribute a complete set of AAPG Memoirs published to date to the Allison Center Library at San Diego State College, in memory of Dr. Allison. The books will be shipped under separate cover from Headquarters in Tulsa.

In taking this action, the Executive Committee took special note of the fact that the Allison Library is one of three libraries in the United States known to have been named after an AAPG member.

* * *

That the American Geological Institute offers Lecture Notes for \$10 each from: Publication Sales, AGI, 2201 M St., NW, Washington, DC 20037, on the following short courses:

Recent Advances in Paleocology and Ichnology by James D. Howard, James W. Valentine, and John E. Warme, 268 pages.

The Estuarine Environments: Estuaries and Estuarine Sedimentation by J. R. Schubel, D. W. Pritchard, and M. O. Hayes, 337 pages.

A new price list of AGI publications is now available. Request from Publication Sales, AGI, 2201 M St., NW, Washington, DC 20037.

* * *

The geology of the U.S. Atlantic Coastal Plain and Continental Shelf—encompassing a 450,000 square-mile area from southern Florida to the Grand Banks of Newfoundland—is the subject of a just-published report by the U.S. Geological Survey, authored by John C. Maher, Menlo Park.

(Continued on Page 8)

Did You Know

(From Page 7)

The report is intended to establish a "stratigraphic framework" within the large mass of sedimentary rocks beneath the Atlantic Coastal Plain and Shelf, and to assess the petroleum possibilities of this unexplored province. The report represents an updated version of a preliminary draft placed on public open file in October 1967.

The 98-page report, supplemented with a pocket containing 17 maps, diagrams, well and exploration data on geological and geophysical parameters of the area, is titled "Geological Framework and Petroleum Potential of the Atlantic Coastal Plain and Continental Shelf." Published as USGS Professional Paper 659, the report may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D.C. for \$6.75 per copy.

According to the report, the Continental Shelf offers more promise as a potential petroleum province than the Coastal Plain "because it has a thicker sedimentary column with better source beds and 'trapping' possibilities."

The Atlantic Coastal Plain and Continental Shelf of North America is represented by a belt of Mesozoic (up to about 230 million years old) and Cenozoic (less than 65 million years old) rocks, 150 to 285 miles wide, and 2,400 miles long, extending from southern Florida to the Grand Banks off Newfoundland. This belt of rocks, encompasses an area of about 400,000 to 450,000 square miles, more than three-fourths of which is covered by the Atlantic Ocean.

The oldest rocks recovered from the sea bottom along the Atlantic coast have come from the Paleozoic (more than 225 million years old) granitic pinacles at a depth of about 30 feet on Cashes Ledge near the middle of the Gulf of Maine.

* * *

For 1970 — San Diego Gas and Electric added 35,827 new customers—24,296 electric and 11,531 gas (natural gas that is).

* * *

That the Nixon Administration has set up a prototype program to start Commercial development of oil shale on Federal lands in Colorado, Utah and Wyoming. The leasing plan will offer six 5120 acre tracts for competitive bid in late 1972. Each plant and mine could cost more than \$150 million to develop.

* * *

Strip mining accounts for nearly 40% of US coal output.

* * *

The average Los Angeles resident used 2715 kilowatt hours of electricity in 1960. That same resident used 5240 kilowatt hours in 1970.

* * *

The US used 75% more water in 1966 than in 1955.

* * *

By 1985 western Europe will be consuming an estimated 1.3 billion tons of crude oil per year. (Approx. 320 million barrels — and that's less than one tenth of what the US will use.)

* * *

San Diego Zoo tour busses now operate on L N G.

CONTINUING EDUCATION

The Department of Geological Sciences of the University of Southern California offers an evening course in Mineral Resources.

The class will meet Wednesday evenings from 6 to 9 p.m. and will involve lecture and discussion of the following topics.

1. Mineral deposits and mineral economics.
2. Ore classifications and structural control.
3. Exploration techniques: Geophysical, geochemical, and remote sensing techniques in mineral exploration.
4. Examination and evaluation of minerals prospects.
5. Studies of ore genesis:
 - A. Chemical and physical methods in the study of ore genesis.
 - B. Studies of individual ore deposits.
6. Resources for the Future from land and sea.

Text Books: *Ore Deposits*, by Charles Park and Roy MacDiarmid, Freeman and Company, San Francisco; and, *Structural Methods for the Exploration Geologist* by Peter Badgley, Harper Brothers, New York.

Prerequisites: Structural Geology, Mineralogy, and Petrology, or the permission of the instructor.

Catalog Number: Geology 458L; four units.

Instructor: Donald Palmer, Assistant Professor of Geology, phone 746-2717.

NEWSLETTER

Pacific Section A.A.P.G.

P.O. Box 17486 Foy Station
Los Angeles, California 90017



NEWSLETTER

of the Pacific Section
American Association of Petroleum Geologists

VOLUME 26

FEBRUARY, 1972

NUMBER 2

GUEST EDITORIAL...

Today's concern about protection of the environment gives geologists a prime opportunity and a professional responsibility to make full use of their unique perspective of the evolution of ecology in geologic time. Rightful and long-overdue interest in man's effect on the Earth and beyond has unfortunately received most of its stimulation from politicians, cranks and would-be "dogooders", who, for the first time, are not more occupied with earning bread or fighting wars.

Environmental management and earth resource use planning should not be left to politicians, preservationists, or irresponsible developers. It must reflect the vast knowledge and experience of the scientific community and must include the sense of time and effect only available from understanding events in the perspective of geologic time. Man's daily impact on the Earth will not be noticed when compared to great cataclysmic events of nature or even the normal processes of erosion, but the extinction of a species without cause is senseless.

Thank God for the reduction of military manpower, but take heed of the rapidly growing bureaucracies expanding to regulate, investigate and manage our environment. The pendulum is swinging in the right direction, but each and every earth scientist must make a special effort to jump on it and add the balance.

Get up and be heard! Don't be afraid

San Joaquin

After more than 21 years working as a petroleum geologist (for the past 13 years with KCL-Tenneco), Bruce Robinson has begun a new career in the field of Real Estate.

His new affiliation is with:

Bakersfield Investment & Realty Co.
930 Truxtun Ave., Suite 109
Bakersfield, Calif. 93301.

to tell your bosses when unjustified environmental damage may be avoided and don't be afraid to stand up to anyone for planned resource development that causes temporary or acceptable, calculated and understood environmental impact.

E. W. WELLBAUM

Mr. Wellbaum is a vice president of Alyeska Pipeline, Bellevue, Washington.

GEOLOGICAL REVIEWS

Plate Tectonics and
Mainstream Mantle
Convection*

T. H. NELSON

Esso Production Research;
Research Associate,
Geologic research worldwide

The divergent and convergent movement of lithospheric plates is apparently driven by a system of migrating convection cells within the earth's upper mantle. These convection cells upwell beneath the ridges of the Pacific, Atlantic and Indian Oceans. The history of the sea-floor spreading is recorded by the linear magnetic anomalies paralleling ridges axes, by both the active and inactive scars of transform faults which originate between offset ridge segments, and by the increase in age of sediments, on basement away from ridge axes as determined by the JOIDES deep-sea drilling program.

If a zone of primary convective upwelling develops beneath a continent, there forms first a narrow trough, such as the Red Sea, characterized by extensional tectonics and, in places, thick evaporite sequences. Eventually a major ocean basin such as the Atlantic develops, with the spreading ridge preserved in a mid-ocean position.

Because the earth is not expanding in

(Continued on Page 4)

Los Angeles

Be it often said "adapt or perish" in this day of ever increasing tempo of change. The Los Angeles Basin Geological Society is an enigma with a long and a short heritage. "Long" in the sense of being the founding rock of the Pacific Section AAPG in 1925. It has been the fountainhead of professional geological stature, epitomized by the innumerable distinguished petroleum geologists of our country that have filled and are at present a part of, its membership rolls. The "short" heritage stems from just a few years back, when in 1967, effort was made to separate the Los Angeles "clutch" of the Pacific Section AAPG into its own society on a representative par with the other Geological Societies that evolved on the Pacific Coast, to wit, the San Joaquin, Coast, Northern California, Sacramento and Alaska. The Society is now a firm reality.

The Los Angeles Basin Geological Society has just elected a new Executive Committee headed by Mr. R. W. "Bob" Wagner. Bob and his fellow officers deserve the support and cooperation of each and every "DA" and "DS" name on the membership rolls — all 525 of them. The new Executive Committee is "bright eyed and bushy tailed", eager to further the interests of the geologists in the Los Angeles area. In their plans, they have enlightening programs, entertaining activities, and interesting field trips awaiting our participation. Let us all adapt to this challenge by setting aside our hectic city environment. Lift ourselves out of the routine and mundane. Tear down the imaginary cross-town fences and consider seriously uniting under very able leadership by participating in our Society functions at every possible opportunity!

RODNEY G. COLVIN

Assoc. Editor,

L.A. Basin G.S.

* * *

Attention all geologists in the Long Beach vicinity. If you desire just plain

(Continued on Page 3)

MEMORIAL

DR. LEO GEORGE HERTLEIN

Dr. Leo G. Hertlein, Associate Curator of the Department of Geology California Academy of Sciences, San Francisco, California, a specialist in the Cenozoic Paleontology of the Pacific Coast and author of over 130 titles on Geology and Paleontology, died in San Francisco Jan. 15, 1972 following an unexpected illness and emergency operation. He would have been 74 years old Feb. 9. Dr. Hertlein received his B.A. degree from the University of Oregon in 1922, his M.A. from Stanford University in 1923 and his Ph.D. in 1929. He was associated with the California Academy of Sciences from 1926 to the present except for infrequent leaves as Assistant Paleontologist, Associated and Pacific Oil Cos., 1925; Geologist, Henry L. Doherty & Co., Mexico, 1926; Geologist, Hudson's Bay Marland Oil Co., 1929; Geologist, Hudson's Bay Oil and Gas Co., 1930; and Geologist, U.S.G.S., Alaska Branch, 1954. One of his major projects has been a study of the marine Pliocene of San Diego of which Part 1 on the Geology was published in the Memoirs of the San Diego Society of Natural History as vol. 1, pt. 2, Aug. 30, 1944 with Dr. U. S. Grant IV as co-author. Part 2 of this work was completed and in the process of being proof read. Dr. Grant is also co-author of Part 2 of this work which deals with the fossils.

Dr. Hertlein was a Fellow in the California Academy of Sciences and member of the American Malacological Union and the Southern California Academy of Sciences. He was not a member of the A.A.P.G. and very rarely attended their meetings but was a completely dedicated research paleontologist of outstanding ability whose published works will stand as a monument to his devotion to the science of Paleontology. He is survived by his devoted wife, Margaret.

C. C. Church
Jan. 16, 1972

Alaska
NO REPORT.

MEMORIAL

MR. CARLTON M. (KIT) CARSON

Mr. Carlton M. Carson, a Geological and Paleontological consultant in Ventura, California for the past twenty years, died in Ventura on the morning of Jan. 7, 1972. He was 73 years old.

Mr. Carson (better known to his friends as 'Kit'), had retired from active work following a severe illness a few years ago and had been making a slow but satisfactory recovery when he unexpectedly passed away.

Mr. Carson graduated from Stanford University with a B.A. degree in 1922 and M.A. in 1924. He was Paleontologist for the Marland Oil Co. in Los Angeles in 1928 and for the Richmond Petroleum Co. of Venezuela from 1929 to 1932. In 1934, following his return from South America, he was employed by Tidewater Associated Oil Co. as Paleontologist at the field office in Ventura. He held this position until 1952 when he resigned to engage in private practice as a consultant.

Kit was considered as an authority on the micropaleontology of the Ventura - Santa Barbara coastal area and was the author of a number of papers on Geology and Paleontology.

His wife, Elody, preceded him in death a number of years ago. Those left to mourn his passing are three daughters and a number of grandchildren. Kit was a well-known personage among his fellow geologists and will be greatly missed by his many friends in the profession.

C. C. Church

New Members

GLEN E. CAMPBELL

5813 Akers Rd.
Bakersfield, Cal. 93307

JOHN P. HACKETT, JR. -

Texaco Inc.
3460 Wilshire Blvd.
Los Angeles, Cal. 90005

DOW D. MITCHELL

22111 Calvert, No. 416
Woodland Hills, Cal. 91364

DAN PASQUINI

2117 Oriole
Bakersfield, Cali. 93309

LETTERS

to the
EDITOR

Dear Editor:

My congratulations to you on the excellent Newsletter of the Pacific Section. I got quite a kick out of the brouhaha about the name of the Newsletter.

I am making every effort to get each section to start a similar newsletter and perhaps to establish membership in sections as you have done in the Pacific Section. I have also made many attempts to have Affiliated Societies start small newsletters such as our Four Corners Society has done. Perhaps in the next newsletter you might point out that the President of the Association does not appoint delegates as inferred in Volume 25, Number 12, December, 1971. The delegates are elected by the Affiliated Society. That news note about the distribution of members in your section who are to be delegates and others who are members of committees and chairmen of committees was inaccurate in the statement that the President of the Association appoints delegates. I am sorry for that error in the news release.

Keep up the good work; I look forward very much to attending your Section Meeting in Bakersfield. In fact, I hope you will give five to ten minutes of program time at the opening session.

Very truly yours,
SHERMAN A. WENGERD
President

Your kind words make up for the lumps from the dissenters. We are pleased that you will join us in Bakersfield, and time has already been set aside for you at the opening session.

Dear Editor:

I notice that the Pacific Petroleum Geologist Newsletter has picked up the format from the Los Angeles Times and the Popular Mechanics of continuing your articles to page such-and-such (check Volume 26, Number 1, front page). As you have inferred, my right elbow has not recovered from the Picon Punnch research project and I am unable to turn the pages left-handed as dexterously as before. You are to be congratulated on your efforts to liven up the rag — keep up the good work!

By the way, would you inform our good membership secretary, Judy Hughes, of the fact that Wildrose Station is now out of business and my ad-

(Continued on Page 4)

Los Angeles

(From Page 1)

geological fellowship, come to the Elks Club for luncheon on the 2nd Wednesday of every month. No reservation is necessary, 12:00 Noon, buffet lunch \$1.60, Willow Street just west of Lake-wood Blvd.

Northam Station in La Mirada will not be available after the Spring of 1972 to the Los Angeles Basin Geological Society. Use of this facility has been graciously donated to the Society by the Standard Oil Company for the past few years. A sincere "thank you" is hereby extended by all who have enjoyed the great dinners and fine fellowship in its hallowed halls.

Our Bar-B-Ques and "less formal" geological paper presentations need a new meeting place. If you have any leads or suggestions, contact R. W. "Bob" Wagner, Mobil Oil Corp., Los Angeles.

The next meeting will be a Bar-B-Que at Northam Station, featuring the Time-Life documentary film "The Drifting of the Continents". Save the date of Wednesday, February 16, 1972. Watch for your mail-out notices.

Among the newly elected officers of the Los Angeles Basin Geological Society, please add to your roster under Alternate Delegates to the National

AAPG Mr. E. G. Edwards, Pauley Petroleum Inc.

In accord with his recent transfer from Los Angeles, Bob Scott, Signal geologist, is reportedly trying out his snow skis on the dusty slopes of Midland, Texas. Other Signal geologists are watching with considerable interest the progress of the sale recently announced for the Signal Oil & Gas Bldg. in Los Angeles.

R. L. "Dick" Wood, Mobile Los Angeles, likes to tear up Kharmann Ghias. We thought living in Bunker Hill Towers eliminated all driving.

Richard Schweickert, Ph.D. from Stanford, has joined the ranks of Texaco, Inc. He is assigned to the Bakersfield District of the Exploration Department in Los Angeles.

Gene Tripp, Texaco Los Angeles, involuntarily made a substantial donation to the longshoremen strike fund when his car arrived at the Los Angeles Harbor dock minus its tires, wheels, radio, transmission, etc.

Tom and Jane Menara, Signal, are now the proud parents of a baby girl. Her husky three brothers will ensure the enforcement of a woman's lib rating in the near future.

Rex Young, Cities Service, Inc, has a good used VW camper for sale after his recent trip to Canada accompanied by his wife, four daughters and esteemed mother-in-law. The valve job in Utah did it!

Northwest

NO REPORT.

COMING SOON

APRIL 1

Sasquatch Convention (National)—Tumwater, Washington. Papers to be announced.

APRIL 4-6

Alaska Geological Society — Anchorage. "Alaska Geology and Related Subjects."

APRIL 17-19

National AAPG Convention—Denver.

APRIL 26

Los Angeles Geological Society (Tentative) — Roger Young Auditorium. Noon luncheon. Dr. Robert Berg. "Identification of Sedimentary Environments in Reservoir Sandstones".

PAGE 3

Northern California

Ken Crandall's talk was the "Eighth World Petroleum Congress" held in Moscow in early June. These Congresses are held every four years, the 7th was held in Mexico City and the next one is scheduled for Tokyo in 1975. Meetings cover all phases of the industry from exploration to manufacturing. The speaker also gave his general impressions of life and living conditions in the Soviet Union and supplemented his talk with Kodachrome slides of Leningrad, Moscow, Tashkent, Samarkand, Bukhara, Alma Ata and Irkutsk. The standing-room-only audience was sufficient proof of the interest in the subject.

A warm welcome to Herb Sawyer as Northern California Associate Editor. Herb's phone number will be listed in the staff section. Bay Area members may contact him by mail at 816 Amber Lane, Los Altos, Ca. 94022.

CONVENTION PRAYER

Now I lay me down to rest
In hopes that I may meet the test
Of Basque Blast-Off and Picon Punch
Of "Petroleum and the Energy Crunch"
Alumni lunches and the Dinner Dance
Technical papers that may perchance
Grant The Basis For New Exploration
From west to east across our nation
Exhibits to see and friends to greet
Further stress to my aching feet
But before I join mans bioherm
Please let me gaze upon the oil worm.

Author Unanimous

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(805) 399-2961
Recommended Reading.....LUCY E. BIRDSALL

NEWSLETTER of the Pacific Section—American Association Petroleum Geologists is published monthly by the Pacific Section.

Material for Publication and requests for previous copies should be addressed to STANLEY E. KARP—GEOLOGY DEPT., BAKERSFIELD COLLEGE, BAKERSFIELD, CALIF. 93305. Material received by the 15th of each month will be included in the following issue.

CHANGE OF ADDRESS, subscription and membership inquiries should be directed to MEMBERSHIP SECRETARY, PACIFIC SECTION AAPG, P. O. Box 17486, FOY STATION, Los Angeles, Ca. 90017.

Sacramento

NO REPORT.

Reviews . . .

(From Page 1)

proportion to the rate of spreading, lithosphere capped primarily by oceanic crust is being reincorporated into the mantle along convergent plate boundaries or subduction zones. Active subduction zones are characterized by intermediate and deep focus earthquakes (Benioff zones), oceanic trenches, and compressional tectonics. The history of subduction is recorded in orogenic belts which differ in character depending upon the composition of the crust in the overthrust and underthrust plates and the direction of lithospheric underthrusting.

From present crustal relationships it appears that when underthrusting is westward, fragments of the overthrust plate break off and form island arcs that have young sea floor behind them. In contrast, when underthrusting is eastward, the margins of the overthrust plate remain intact and under general compressional stress.

This difference in crustal response to westward versus eastward underthrusting along active subduction zones has led us to conclude that an eastward-flowing globe-encircling mainstream is present within the earth's upper mantle. Coupled to convection cells beneath the oceanic ridges, the mainstream forms a pattern of primary and secondary mantle upwelling which, in a kinematic model, indicates (1) that a form of asymmetric sea-floor spreading has created the small ocean basins behind island arcs associated with westward underthrust subduction zones; (2) that the depth to the base of convection varies systematically eastward from ridge to ridge, being shallowest beneath the East Pacific ridge and deepest beneath the Indian Ocean ridge; (3) that secondary zones of mantle upwelling are located along the leading edges of eastward migrating convection systems and underlie such features as the East African rift system; and (4) that plates descend into the mantle along subduction zones in response to the removal of material from below.

*Abstract of paper presented to the San Joaquin Geological Society Jan. 11, 1972. The paper was also given to the Coast Geological Society and the Alaska Geological Society at later dates as part of the A.A.P.G. Distinguished Lecture Tour.

Letters . . .

(From Page 2)

dress will be changing back to the old Tidewater and Hancock station restrooms in Bakersfield for the Spring Convention coming up soon. I want to take that Westside Field Trip and look for my red and yellow jeep that I lost over one of those 1,000-foot cliffs often found in the vicinity of Tulare Lake.

JEAN B. SENTEUR DE BOUE

Ah mon ami. But you do know how to live.

Dear Editor:

Please don't feel too badly over what "the Red Baron" may seem to have done to you. Thus it is that I want you to know that there are "fringe benenfits" coming out of what may have seemed disaster to you.

A couple of the interesting articles in your January issue inspired me to write to some friends concerning the points brought out (these have nothing whatsoever to do, I hasten to add, with name, or name-changes, in the periodical). And in writing to these friends, it was very nice to be able to give the reference as "PPG", knowing that in each case, the recipient of the letter would know immediately what periodical I was citing. For those of us who have to do our own typing, the economy of PPG over Newsletter of the Pacific Section, AAPG, is really something!

All best wishes for the New Year to you and to PPG!

Sincerely,

IAN CAMPBELL

Thanks for your letter but, gee whiz, you could have said best wishes to you and to the PPG NEWSLETTER. It appears that oil (domestic crude of course) has been spread on troubled waters. What are some of those "fringe benefits" again?

Dear Editor:

I think you have fallen into that inescapable quagmire of conversion of barrels a day to long tons a year. Your "Did You Know" goodies referring to 1985 Western Europe Crude oil consumption as 1.3 billion tons just happens to be what the National Petroleum Council November 1971 forecast gives for the United States in 1985 if you assume 30° API gravity as an average weight. This is a sizeable increase over the 735 million tons (at 30° API or 7.3 bbls/ton) the United States used in 1970. Without doing research to give

you a really good source, I think Western Europe used about 540 million tons of crude oil in 1970. Maybe you can clear up the forecast.

If there is a point to all this, at least it shows that some of us up here in the Northwest do read the whatever-you-call-it.

Best regards,

E. W. WELLBAUM

You're right. It also proves that I've got my head screwed on backwards. According to my unimpeachable sources — Oil & Gas Journal and Jean B. Senteur de Boue, the U.S. consumed 14.3 million barrels per day and Western Europe used 12.7 million barrels per day in 1970. Certainly this is not less than one tenth as stated in the "goodie". However — converting the above figures with my genuine imitation decoding abacus, the U.S. used 728 million tons of oil in 1970 and Europe consumed 635 million tons. The OGI predicts that Europe will pass the billion ton mark in 1980. Let's wait until '85 to see who is right.

Board of Registration

Please refer to our letter of October 29, 1971 — (*Notice appeared in December issue of the Newsletter*) — notifying you of the proposed change in Section 3041 of the Rules and Regulations of the State Board of Registration for Geologists.

This change was adopted by the Board on December 2, 1971, and the regulation now reads:

"Have a minimum of *three* years' experience" as specified in Section 7842(a) of the Code. . . .

This change in the regulation will affect a number of registered geologists who were denied certification in the specialty of engineering geology during the "grandfather" period because they did not have the requisite 48 months experience at that time, but did have 36 months of engineering geology work.

The Board will review the applications of those registered geologists who had the 36 months experience *when a written request for a review is submitted to the Board. (Editors italics).* Please note the three years' experience must have been acquired prior to November 13, 1969. Experience gained after that date will not be applicable.

Please contact this office if you have any questions regarding this matter.

JOHN E. WOLFE
Executive Secretary

CALENDAR for February

S | M | T | W | T | F | S

4. USC FALL LECTURE SERIES—Stauffer Science Lecture Hall 100. Noon. Louie Marinovich, USC, "Internal Morphology of the Rudistid clam *Coralliochama*" and Fritz Teyer, USC, "Late Tertiary and Quaternary Biostratigraphy of Cores from South of Australia and The Tasman Sea."
7. BAKERSFIELD COLLEGE — Biostratigraphy Seminar. 7:30 p.m., Room 56, Jay Phillips, U.C. Berkeley "Miocene Biofacies in the Salton Shale and Whiterock Bluff Shale of Caliente Mountain."
7. CALIFORNIA STATE COLLEGE, LOS ANGELES — Geology Speakers Forum. Science 273, 4 p.m. Dr. Joel Arem, Smithsonian Institution, "The Rock Forming Minerals — Smithsonian Style."
14. CALIFORNIA STATE COLLEGE, LOS ANGELES — Geology Speakers Forum. Science 273, 4 p.m. Dr. David Lawson, Jet Propulsion Laboratory. "Dating by Thermoluminescence". (Ed. *Sounds like this might be good material for an "X"-rated movie — Sorry for the pun.*)
- 14-18. UCLA SHORT COURSE — "Earthquake Engineering: State of the Art". Further information — P.O. Box 24902, University Extension, UCLA, Los Angeles, 90024.
16. LOS ANGELES GEOLOGICAL SOCIETY Northam Station, La Mirada. Bar-B-Que and free beer. Fellowship after work, dinner 7:00 PM. Time-Life Documentary film "The Drifting of the Continents".
- 16-18. GEOTHERMAL RESOURCES COUNCIL CONFERENCE, El Central, Calif. See "Hot Stuff" for details.
28. CALIFORNIA STATE COLLEGE, LOS ANGELES — Geology Speakers Forum. Science 273, 4 p.m. Dr. Richard Fisher, U.C. Santa Barbara. "Volcanic Base Surge: The Deposits — and Speculations."

March

1 | 2 | 3 | 4
S | M | T | W | T | F | S

6. CALIFORNIA STATE COLLEGE, LOS ANGELES — Geology Speakers Forum. Science 273, 4 p.m. Dr. Wolfgang Berger, U.C. San Diego. "History of the Atlantic Ocean."
6. BAKERSFIELD COLLEGE — Biostratigraphy Seminar. 7:30 p.m. Science Engineering Room 56. Dr. Ivan P. Colburn, California State College, Los Angeles. "The Trench As A

Model for the California Cretaceous Basin of Deposition."

- 9-10. BAKERSFIELD PACIFIC SECTION CONVENTION — A.A.P.G., S.E.P.M. and S.E.G. Theme — "Pacific Coast Geology — Basis for New Exploration."
11. PACIFIC SECTION FIELD TRIP — "Geology and Oilfields of the West Side Central San Joaquin Valley." Area covered will be Dagney Gap, McLure Valley, Big Tar Canyon and Kettleman Hills.
22. LOS ANGELES GEOLOGICAL SOCIETY (Tentative) Roger Young Auditorium. Noon luncheon. Dr. Donald Miller, AAPG Distinguished Lecturer. "Exploration for Future Energy Sources".

Change of Address

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San Francisco, Cal. 94119

ANDY CLINE

by Sullwold



BAKERSFIELD
CONVENTION — MAR. 8-11

THANK GOD FOR THE NAME TAGS

(THANKS TO
MARY HUGHES, TOO)

SELECTED PAPERS

The San Joaquin Geological Society has completed Volume 4 of "Selected Papers" presented to the Society at Bakersfield. The publication is presently in press and will be available for purchase at the Pacific Section Convention in March. The following abstracts and/or conclusions were taken from this latest volume, edited by Harold Sugden.

FUTURE POTENTIAL OF THE SACRAMENTO VALLEY GAS PROVINCE

By Robert R. Morrison—Occidental Petroleum Corporation, Chairman; Willis R. Brown—Buttes Gas and Oil Company; William F. Edmondson—Consulting Geologist; John N. Thomson—Consulting Geologist; Rex J. Young—Cities Service Oil Company, May 1969.

ABSTRACT

The Sacramento Valley is the north half of the Great Valley of California and lies between the Sierra Nevada and Coast Range geomorphic provinces.

This gas province produces from Upper Cretaceous and Tertiary sand reservoirs deposited in a miogeosynclinal basin. Four tectonic episodes provided structural and stratigraphic complexi-

ties that form gas traps today. The discussion is illustrated by a regional structure map, a regional isopach map, and three cross sections.

Economic conditions tied to the regulated status of the gas market have controlled the rate of new field discoveries in the past and will in the future. Cumulative production is 4,267,000 MMcf and proven gas reserves are 2,445,000 MMcf. Economic conditions are expected to improve due to market demand, thus providing renewed incentive to explore.

The basin appears to be near the midpoint in its productive life. Many new fields can be expected in present producing formations, but there is less hope for major accumulations in younger or older rocks. Major structural trends have been delineated, and deeper production is expected on these trends along with more subtle structural and stratigraphic traps.

Graphs are presented that show the distribution of cumulative production, proven reserves, and major discoveries through time; the produced and proven reserves by formation; and cumulative production, proven reserves, undiscovered reserves, and the totals by formation. New discoveries are anticipated for the next twenty-five years, with production into the next century.

The estimate of undiscovered recoverable reserves, based on an analysis of presently producing formations is 4,658,000 MMcf. Assuming an average recovery factor of 80 per cent, the volume of undiscovered gas in place is estimated to be 5,822,000 MMcf. The potential of the vast thicknesses of older rocks is now largely unknown, and it would be a mistake to either ignore this section or assign large volumes of reserves based on the small amount of knowledge that we now possess.

GEOLOGIC EFFECTS PRODUCED BY COMPACTION OF THE MEGANOS GORGE FILL

By William F Edmondson

ABSTRACT

The Meganos Gorge is a large fossil channel of late Paleocene age present in the subsurface of the southern Sacramento Valley, California. Regional isopach maps show anomalies in the area of the gorge that indicate considerable compaction of the Gorge Fill relative to surrounding formations. Compaction actually began before all of the Gorge Fill was deposited.

For clean shale, compaction is estimated at 40 per cent of the original thickness. Compaction decreases rapidly with increasing silt and sand content and those portions of the Gorge

Fill which are all sand show no compaction.

The geologic effects of compaction can lead to five types of errors. 1. False interpretations of seismic closure in areas near the edge of the gorge. 2. Mapping faults that do not exist. 3. Anticipation of anticlinal features at depth beneath compaction induced anticlines. 4. Failure to recognize correct productive limits for fields. 5. Failure to recognize faults.

SHERMAN ISLAND GAS FIELD

By Clark C. Ditzer
The Dow Chemical Co.

CONCLUSION

The fault trapped Sherman Island gas accumulation has recoverable gas reserves which approximate 32-40 Billion Cubic Feet. The unique geographic configuration of the hydrocarbon entrapment (3 miles long and ± 1500 feet in width) defied exploration geologists for several years until Signal's, Upham No. 1 resulted in discovery in 1965.

Exploration geologists active in the Sacramento Valley should become more aware of the possibilities of numerous Sherman Island type accumulations in the Delta Area. This area has advanced to a stage of exploration "maturity" and only precise and detailed subsurface geologic studies followed by the absolute test of drilling will determine the number of "Sherman Islands" remaining to be discovered.

RESUME OF GROUND WATER HYDROLOGY IN THE SOUTHERN SAN JOAQUIN VALLEY

By John C. Manning
Professor of Earth Science
California State College—Bakersfield

CONCLUSION

Huge quantities of water have been withdrawn from the underground reservoir of the southern San Joaquin Valley during the past 4 decades — water that had been stored for many thousands of years. Now, water will be returned to underground storage at an accelerated rate, far greater than natural recharge rates. As in other aspects of resource use and environmental change brought about by human activities, this will create problems which are only dimly perceived at this time. Effective management of the total water resource in the southern San Joaquin Valley will provide at least as much of a challenge during the remainder of this century as did the challenge of a growing water shortage during the last half century.

MARCH 11 FIELD TRIP

"GEOLOGY and OILFIELDS OF THE WEST SIDE CENTRAL SAN JOAQUIN VALLEY."

Guidebook will be a companion copy to 1968 Volume. Trip is limited to 220, so make your plans now.

Route will be thru Dagney Gap, McClure Valley, Big Tar Canyon and Kettleman Hills.

Two new innovations will be tried this year. Coffee and donuts will be served at the first stop as we are orientated to the field trip area, and each participant will receive a free set of diagnostic fossils of the area, mounted and identified.

At least 10 prominent geologists and paleontologists will speak at the various stops. This field trip is shaping up to be one of the "Best in the West."

20 YEARS AGO IN THE PPG

LOS ANGELES FORUM

One of the largest attendances in recent months turned out January 21 to hear a panel of experts discuss "New Areas Open for Exploration" or "The Role of the Geologist in Selling the Oil Industry to the Public". The panel assembled by Tom Folsom, forum chairman, included Dr. Cordell Durrell, Mr. Howard Pyle, Mr. Joseph Jensen and Mr. Basil Kantzer. Mr. Don Sweeney acted as moderator.

It was Dr. Durrell's thesis that the field geologist is the ambassador of the oil industry. His conduct in the field should be exemplary as often he is the only contact between the land owner and the employer. Subsequent leasing is often facilitated by good will created by the field geologist.

Mr. Pyle and Mr. Jensen reaffirmed the necessity for geologists to get behind the effort to sell the industry to the public and speak out for free enterprise. For instance, surveys have shown that over 50 percent of the public do not believe the oil industry is competitive.

Mr. Kantzer discussed the Oil-Information Committee, an organization formed to help strengthen the faith of the American people that their best interest as well as those of the nation in peace or in war are best served by competitive, privately managed oil businesses.

The O.I.C. has made available several means for oil men to further their efforts as ambassadors of the industry. A panel of speakers from many fields is available for public or club meetings. Movies on many phases of the oil industry and publications for science courses in schools also are available for distribution. Information may be secured from Western Oil and Gas Association, 510 W. 6th Street, Los Angeles.

S.E.P.M. MEETING

Three interesting papers were presented at a meeting of the S.E.P.M. on January 14 at U.S.C.

Dick Stone of U.S.C. gave an illustrated talk on the classification of playa lakes of southwest California. Playas may be classified on the basis of their surface character and the depth to the water table as follows: 1) Dry with water table below 10 feet; 2) Moist; 3) Compound; 4) Crystal body; and 5) Artificial.

The surface features of playas include mud cracks, salt surfaces, playa scrapers and furrows. The type of sedi-

ments, Ph, lime content and soluble salt content of playas were also mentioned.

Bill White of The Texas Company described the stratigraphy of the Capistrano formation exposed in the Capistrano embayment between Dana Point and San Clemente. The Capistrano formation may be divided into two lithologic units separated by a disconformity. The upper member is a yellow-brown siltstone carrying a fauna of upper-lower Pliocene age correlative with upper Repetto beds. The lower unit is a dark brown sandstone containing limestone beds and concretions. Foraminifera, although rare and limited to thin zones, carry a fauna of upper Miocene Delmuntian age. This member resembles the Malaga mudstone of the Palos Verdes Hills. Faulting and Pleistocene terraces obscure the nature of the contact between the mudstone and underlying formations in the area studied.

Mr. Jack Holzman of Shell Oil Company discussed Cortes and Tanner Banks located 90 nautical miles west of San Diego, California. The Banks have a minimum depth of $2\frac{1}{2}$ fathoms in an area of 230 square miles. There are no greater depths than 150 fathoms. An extensive terrace was cut in the middle Miocene sediments of the bank at a time when the sea stood at a relatively lower level. Presumably this occurred during the Pleistocene glacial epoch. The characteristics and distribution pattern of the thin veneer of recent sediments are controlled by the topography, depth of water and current activity. They indicate that there is little or no present-day sediment accumulation on the bank. Sampling reveals several topographic provinces which extend above the terrace level to be composed of basalt porphyry. No material of the Franciscan series was recovered from the area.

SURVEYING IN THE PERSIAN GULF

Mr. R. B. Moran, Jr., of Moran Instrument Co., described at the first luncheon of the new year a method of surveying that has been in use for over a year in the Persian Gulf area.

The new survey equipment is similar in some respects to Shoran and other precision radar systems which were developed by the military during the last war.

BAKERSFIELD MEETING

At the regular meeting of the San Joaquin Geological Society on January 8th, John H. Wiese of Richfield Oil Corp. discussed "The Search for oil in Nevada", illustrating his talk with Kodachrome slides. The meeting was held at the El Tejon Hotel in Bakersfield.



February's speaker will be Mr. Paul Mikolaj of the Department of Chemical and Nuclear Engineering, University of California at Santa Barbara, speaking on "Natural Oil Seepage at Coal Oil Point, Santa Barbara." The date, Tuesday, Feb. 15, at the Admiral's Table, Ventura; prefunction at 6:00, steak dinner at 7:00; cost \$5.50 per head; call Jack Durrie at (805) 643-2154 for reservations, by Monday the 14th.

Our belated thanks to Mr. Howard Level for an interesting talk on his "European Odyssey." Thanks also to Mr. Bob Burns of Burns Geological Exploration, who augmented the usual potables raffle with six bottles of fine California viniferous goods.

The Coast Society Christmas dinner dance was a great success. Chairman Nick Nicholeris and all who attended extend thanks to all involved, including the industrial contributors.

Sixty-five avid "drifters" were in attendance for Thomas N. Nelson's talk on plate tectonics. It was a fine presentation of a most current subject.

R. L. STEWART

HOT STUFF

GEOHERMAL RESOURCES COUNCIL (G.R.C.) EL CENTRO CONFERENCE

The G.R.C. will hold its first conference in El Centro, California, on February 16, 17 and 18, 1972. The first two days of the conference will be held at the Imperial Valley Country Club in the morning and at the Imperial Valley College in the afternoon. The third day will consist of a field trip to the Cerro Prieto steam field in Mexico. Lunch for that trip will be provided by the Comision Federal de Electricidad, Division Baja California, Mexico.

If your company would like to put an exhibit on display at the conference, contact: Sam Dermengian, Business Education Department, Citrus College, Azusa, California 91702, (213) 335-0521.

Details of the conference may be obtained from:

Geothermal Hot Line
Division of Oil and Gas
1416 - 9th Street, Room 1316-35
Sacramento, California 95814

Recommended Reading

U. S. GEOLOGICAL SURVEY

Professional Paper 599-I: Geology of the Lunar Crater volcanic field, Nye County, Nevada, by D. H. Scott and N. J. Trask 75¢

Professional Paper 677: Postglacial lahars from Mount Rainier volcano, Washington, by D. R. Crandell. \$2.00

Professional Paper 687: Cataclastic rocks, by M. W. Higgins \$1.75

Professional Paper 695: Review of Ordovician pelecypods, by John Pojeta, Jr. \$1.50

Professional Paper 750-D: Geological Survey Research Chapter D, 1971 \$2.50

Bulletin 1343: Tertiary marine mollusks of Alaska: An annotated bibliography, by W. O. Addicott 25¢

MAPS

I-665: Geologic map of the Owyhee quadrangle, Nevada-Idaho, by R. R. Coats \$1.25

I-667: Geologic map of the Swales Mountain quadrangle and part of the Adobe Summit quadrangle, Elko County, Nev., by J. G. Evans and K. B. Ketner \$1.00

I-703: Geologic map of the near side of the Moon, by D. E. Wilhelms and J. F. McCauley \$1.00

Atlas of volcanic phenomena, by U. S. Geological Survey. 1971. 20 sheets. \$4.25

OPEN FILED REPORTS

(Inspection only)

Aeromagnetic data from S. W. Naval

Petroleum Reserve, Alaska, by the U. S. Geological Survey. 4 sheets (3 at scale 1:250,000; 1 at 63,360)

Active faults and preliminary earthquake epicenters (1969-70) in the southern part of the San Francisco Bay Region.

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 82, no. 11, November 1971

Tectonics of the Mendocino Triple Junction, by Eli A. Silver

Evolution of a plutonic complex, Okanogan Range, Washington, by M. J. Hibbard

Chaos and Turtleback Dome, Mineral Ridge, Esmeralda County, Nevada, by Stephen A. Kirsch

Terraces and Pediment terraces in the Southwest: An interpretation, by C. F. Royse, Jr., and D. Barsch

Detection of active faulting using oblique infrared aerial photography in the Imperial Valley, California, by Elkanah A. Babcock

Redistribution of geothermal heat by a shallow aquifer by Keros Cartwright Sandstone dikes and sills in the Moreno Shale, Panoche Hills, California, by N. B. Smyers and G. L. Peterson

Age of the Mesozoic oceanic crust in the California Coast Ranges, by Marvin A. Lanphere

Tertiary volcanic stratigraphy in the Goldfield and Superstition Mountains, Arizona, by J. S. Stuckless and M. F. Sheridan.

Crustal low-velocity layer and regional extension in Basin and Range Province, by D. H. Shurbet and S. E. Cebull

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 82, no. 12, December 1971

Pliocene-Pleistocene history of the Per-

ris Block, Southern California, by A. O. Woodford, J. S. Shelton, D. O. Doehring, and D. K. Morton

GEOLOGICAL SOCIETY OF AMERICA BULLETIN, vol. 83, no. 1, January 1972

Significance of supratidal dolomitization in the geologic record, by Donald H. Zenger

Tectonics of the Intermountain Seismic Belt, Western United States: Micro-earthquake seismicity and composite fault plane solutions, by M. L. Sbar, M. Barazangi, J. Dorman, C. H. Scholz, and R. B. Smith.

Name and age of the Proterozoic basalts in the Eastern Grand Canyon, by T. D. Ford, W. J. Breed, and J. G. Mitchell

Growth of a talus cone in the Western Chugach Mountains, Alaska, by S. H. B. Clark, H. L. Foster, and S. R. Bartsch

NEVADA BUREAU OF MINES AND GEOLOGY (Reno, Nevada)

Map 42: Geologic map Index of Nevada, 1955-1970, by Ira A. Lutsey \$1.00

DID YOU KNOW . . .

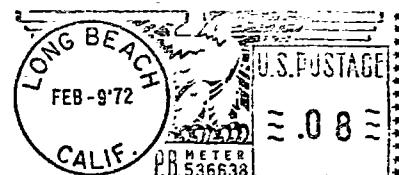
Lecture notes from the 2 AGI short courses given in October, 1971 prior to the GSA meeting are available from AGI. The short course notes are entitled *Recent Advances in Paleocology and Ichnology* by James W. Valentine, James D. Howard and John E. Warme and *The Estuarine Environment* by Jerry R. Schubel, D. W. Pritchard and Miles O. Hayes. Order from Publication Sales, AGI for \$10.00 each.

NEWSLETTER

Pacific Section A.A.P.G.

P.O. Box 17486 Foy Station

Los Angeles, California 90017



J. L. TRAXLER, DA-AM
15510 FRIENDS ST.
PACIFIC PALISADES, CAL
90272



NEWSLETTER

of the Pacific Section
American Association of Petroleum Geologists

VOLUME 26

MARCH, 1972

NUMBER 3

CONVENTION ISSUE

PRE-REGISTER NOW
47th ANNUAL MEETING

Pacific Sections AAPG - SEPM - SEG
"PACIFIC COAST GEOLOGY —
Basis for New Exploration"

BAKERSFIELD, CALIFORNIA

MARCH 8-11, 1972

SCHEDULE OF EVENTS

WEDNESDAY, MARCH 8

- 2:00 p.m. Registration, Civic Auditorium
6:30 p.m. "Basque Night" Icebreaker Party, Civic Auditorium

THURSDAY, MARCH 9

- 8:00 a.m. Registration, Civic Auditorium
9:00 a.m. AAPG-SEPM-SEG Joint Technical Session
Opening Remarks — AAPG President
General Interest Papers
12:15 p.m. Joint AAPG-SEPM-SEG Luncheon
Speaker — Michael T. Halbouty
2:30 p.m. AAPG, SEPM, and SEG Technical Sessions
7:30 p.m. SEPM Dinner Meeting at Freddie's Town House
Speaker — Dr. Edward L. Winterer, Scripps Institute of Oceanography: "Historical Geology of the Pacific"

FRIDAY, MARCH 10

- 8:00 a.m. Registration, Civic Auditorium
8:00 a.m. SEPM Technical Sessions
9:00 a.m. AAPG and SEG Technical Sessions
12:15 p.m. Alumni Luncheons
2:30 p.m. AAPG, SEPM, and SEG Technical Sessions
SEPM — Miocene Symposium, with panel discussion
7:00 p.m. Dinner Dance — Western Theme, Bakersfield Inn

SATURDAY, MARCH 11

- 8:00 a.m. Field Trip to Westside San Joaquin Valley, Blackwells corners to Kettleman Hills

WOMEN'S ACTIVITIES

FEATURED ACTIVITIES WILL BE:

Thursday, March 9, 1972

Hospitality room from 9:00 to 5:00

Champagne Luncheon and Fashion Show at the Valley Plaza Town Hall at 11:30 a.m. Ticket price \$4.25.

Friday, March 10, 1972

Hospitality room from 9:00 to 5:00

Brunch in the Mardi Gras East Room of the Hill House, 700 Truxtun Ave. from 9:30 to 11:00 a.m. Ticket price \$3.00.

Bear Mountain Winery Tour, Arvin, and Wine Tasting Room, 2309 Panama Lane. 1:00 to 4:00. Ticket price \$2.00. Transportation will be by bus to and from the Civic Auditorium.

Pacific Section Who Shall Lead Us?

Choose you this day whom ye will serve (*Jos. 24.15*) sayth the Committee. Choose a man for yourselves and let him (*1 Sa. 17.08*) lead us from the Valley of Continuing Education. Choose wisely, one who will pass among you and prepare for the gathering of the faithful. Select one to write an orderly account for you (*Lk. 1.03*) — (*and let the loser be Editor of the Newsletter*).

He that hath no money (*Is. 55.01*) among you, cast thy lot with the money changer who may reduce thy dues. Be not afraid, but follow the dictates of thy heart and the will of thy spouse. Let him who is without sin among you (*Jn. 8.07*) fail to cast thy vote.

PRESIDENT

Rod Colvin — Mobil Oil Corp., Los Angeles.

Art Spaulding — Petroleum Administrator, City of Los Angeles.

VICE PRESIDENT

Bill Edmondson — Reynolds & Edmondson, Bakersfield.

Tom Redin — Union Oil, Santa Fe Springs.

SECRETARY

Charles Lee — Continental Oil, Ventura

Jim Weddle — Division of Oil & Gas, Sacramento.

TREASURER

Cliff Gray — California Div. of Mines, Los Angeles.

Louis Villanueva — Getty Oil, Bakersfield.

In keeping with recent Pacific Section policy, President Hester appointed a nominating committee which would be representative of the major portion of the Pacific Section membership. Those members serving on the committee were:

J. Douglas Traxler, L. A. Basin

(Continued on Page 2)

Pacific Section

(From Page 1)

James M. Saunders, Coast
James L. O'Neill, San Joaquin
Robert R. Knapp, Northern California
Wesley G. Bruer, Sacramento
John F. Curran, Chairman

Ballots will be mailed to paid-up active members of the Pacific Section approximately two weeks after the postmark of the March issue of the PPG Newsletter. Ballots will be counted in mid-April and the results announced in the May issue of the PPG Newsletter.

* * *

1972 Pacific Section Spring Picnic

The following preliminary report from J. M. Saunders to Dick Hester illustrates the many hours of behind the scenes work required to put together the Spring Picnic. Your attendance and good time make it all worth while.

FIELD TRIP

Drove over proposed route on Friday, Feb. 4 with Field Trip Chairman Donald Weaver. Selected probable stops along old San Marcos Pass Road, El Camino Cielo Road, Refugio Pass Road and Alisal Road. Don will detail road log on tape in near future and we will provide him with a rough draft typed copy from tape. After editing, will print locally (probably off-set) and assemble in spiral book form. Expect 100 to 125 on trip. How many Guide Books? Stopped at Nojoqui Falls County Park and reserved picnic spot for June 2 date.

BARBECUE

Visited Dos Pueblos Ranch with Barbecue Chairman Charles Lee on Monday, Feb. 7 and met Ranch Mgr. Al Newcomer. Reviewed barbecue facilities, picnic tables available, etc. Met Bob Norton and arranged for No Host tours thru Orchid Plant.

GOLF

Contacted Don Hillis who in turn talked with Golf Pro at Montecito C.C. Pro said he could handle 100 golfers, but final decision would rest with Club Manager, who is out of town until 21st. Don Hillis is member of new exclusive Birnam Wood C.C. in Santa Barbara. If we have overflow crowd at Montecito, Birnam Wood would handle up to 50 — but must be a member of some C.C. Golf Chairman Barney Yaucey has contacted last year's chairman, Bill Castle, and is squared away with necessary registration forms, etc.

CALENDAR for March

S	M	T	W	T	F	S
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6. CALIFORNIA STATE COLLEGE, LOS ANGELES — Geology Speakers Forum. Science 273, 4 p.m. Dr. Wolfgang Berger, U.C. San Diego. "History of the Atlantic Ocean."
6. BAKERSFIELD COLLEGE — Biostratigraphy Seminar. 7:30 p.m. Science Engineering Room 56. Dr. Ivan P. Colburn, California State College, Los Angeles. "The Trench As A Model for the California Cretaceous Basin of Deposition."
9. COAST GEOLOGICAL SOCIETY — Noon Luncheon. Swedish Kitchen.
- 9-10. PACIFIC SECTION CONVENTION, A.A.P.G., S.E.P.M. AND S.E.G., BAKERSFIELD — Theme — "Pacific Coast Geology — Basis For New Exploration."
11. PACIFIC SECTION FIELD TRIP — "Geology and Oilfields of the West Side Central San Joaquin Valley." Area covered will be Pyramid Hills, McLure Valley, Reef Ridge, Big Tar Canyon and Kettleman Hills.
14. SAN JOAQUIN GEOLOGICAL SOCIETY American Legion Hall. Edward J. Zellar. "Comparative Geology of the Inner Planets."
16. COAST GEOLOGICAL SOCIETY — Noon Luncheon — Casa de Soria.
20. NORTHERN CALIFORNIA GEOLOGICAL SOCIETY — (See Sectional News for details).
22. LOS ANGELES GEOLOGICAL SOCIETY (Tentative) — Roger Young Auditorium. Noon Luncheon. Dr. Donald Miller, A.A.P.G. Distinguished Lecturer — "Exploration for Future Energy Sources."
23. COAST GEOLOGICAL SOCIETY — Noon Luncheon. Dave's Deli.

April

S	M	T	W	T	F	S
						1

1. SASQUATCH CONVENTION — CANCELLED — Unable to locate Key-Note speaker.
- 4-6. ALASKA GEOLOGICAL SOCIETY SYMPOSIUM — "Alaska Geology and Related Subjects." (See Jan. 1972 issue of the Newsletter.)
10. BAKERSFIELD COLLEGE — Biostratigraphy Seminar. 7:30 p.m. Science-Engineering Room 56. Mr. J. J. Williams, Occidental Petroleum Corp., Bakersfield. "Intisar "A" Reef and Oil Field, Sirte Basin, Libya."
11. SAN JOAQUIN GEOLOGICAL SOCIETY

Northern California

The January meeting was held Friday afternoon, January 21 at one of the conference rooms of the U.S.G.S. in Menlo Park. Following a short business meeting Dr. David W. Scholl gave a talk illustrated with color slides titled "Discussion of Leg 19 of the JOIDES Project."

Dr. Scholl was one of two Chief Scientists on the drillship Glomar Challenger the summer of 1971 when it sailed from Kodiak to Yokohama on Leg 19 of the Deep Sea Drilling Project. During this part of the project 11 sites were drilled in the Bering Sea and the North Pacific Ocean primarily to investigate the Cenozoic and Late Mesozoic history of sedimentation and biostratigraphic development of the North Pacific and deepwater regions of the Bering Sea. Dr. Scholl gave an interesting and detailed account of the project which also included operational comments about the Glomar Challenger and the continuous coring done at each site.

FEBRUARY MEETING:

During the fourth week of February Dr. Manley L. Natland, AAPG Distinguished Lecturer, is scheduled to present a lecture titled, "New Classification of Water-Laid Clastic Sediments". Tentatively it will be a luncheon meeting near the San Francisco Airport on either the 23rd or 24th. Details will be confirmed to members as soon as available.

The March meeting of the Northern California Geological Society will be held at 12:00 noon on March 20th in Room 315, Standard Oil of California Building, 225 Bush Street, San Francisco. The paper to be given is titled "Stratigraphic and Tectonic Development of the Cook Inlet area, Alaska" by C. E. Kirschener and C. A. Lyon.

American Legion Hall. Robert E. Stevenson — "Gross Transport of Suspended Sediments over Continental Shelves as Analyzed from Gemini and Apollo Space Photographs."

17-19. NATIONAL A.A.P.G. - S.E.P.M. CONVENTION — Denver.

26. LOS ANGELES GEOLOGICAL SOCIETY (Tentative) — Roger Young Auditorium. Noon Luncheon. Dr. Robert Berg — "Identification of Sedimentary Environments in Reservoir Sandstones."

Sacramento

The following have been elected officers of the Sacramento Petroleum Association for 1972:

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Sacramento, California
95814

VICE PRESIDENT

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(805) 399-2961

Recommended Reading.....LUCY E. BIRDSALL
NEWSLETTER of the Pacific Section—American Association Petroleum Geologists is published monthly by the Pacific Section.

Material for Publication and requests for previous copies should be addressed to STANLEY E. KARP—GEOLOGY DEPT., BAKERSFIELD COLLEGE, BAKERSFIELD, CALIF. 93305. Material received by the 15th of each month will be included in the following issue.

CHANGE OF ADDRESS, subscription and membership inquiries should be directed to MEMBERSHIP SECRETARY, PACIFIC SECTION AAPG, P. O. Box 17486, FOY STATION, Los Angeles, Ca. 90017.

LETTERS

to the EDITOR

Dear Editor:

First, my compliments on the appearance of the "Newsletter," "PPG," or whatever it's being called.

Will you please note the following in your personnel columns: After a tour as Chief Geologist, Gulf & Western Indonesia, Inc., I have returned to consulting practice with headquarters in Singapore. I can be reached at Holland Park D-1, Singapore 10, phone 641035, cable GRIBEX.

To save on my postage, could you pass on to the circulation department that the correct address for mailing the PPG is Box 984, King City, California 93930.

Sincerely,
EDWARD A. GRIBI, JR.

Good to hear from you Ed. Sorry to put this in the "Letters" portion. We would start an "International" section if there were enough of you "Ferners".

Dear Editor:

Geologists of all types have always been most active in the field of Continuing Education via conventions, seminars, field trips, journals, etc. etc. I feel that any attempt to formalize a continuing education for geologists would be needless regulation of our profession. As a consultant, I have little enough time without having to convince some bureaucrat that I am in fact keeping up with developments in my field.

Yours truly,
S. T. REYNOLDS

CONTINUING EDUCATION

"San Francisco Bay-Delta Water Quality" will be the subject of the ninth short course in the Water Resources Engineering Education Series (WREES) presented by Continuing Education in Engineering and the College of Engineering of the University of California, Berkeley. The three-day course is scheduled for March 7-9 at the University Extension Center, 55 Laguna St., San Francisco with a registration fee of \$125. Further information may be obtained from Continuing Education in Engineering, University of California Extension, 2223 Fulton St., Berkeley, CA 94720.

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San Joaquin

Ed Borglin would like a concentrated effort on the Continuing Education program. Please send or telephone your ideas to him

c/o Union Oil Company
2700 F Street
Bakersfield, CA. 93301
Phone: 324-6571

Los Angeles

NO REPORT.

GEOLOGICAL REVIEWS

Summary of a New Classification of Water-Laid Clastic Sediments*

DR. MANLEY L. NATLAND

*Abstract of paper presented to the San Joaquin Geological Society Feb. 8, 1972. Dr. Natland is presently on the A.A.P.G. Distinguished Lecture Tour.

My study of sedimentary processes and their respective deposits, both recent and ancient in both the stratigraphic column and experimental sedimentation tanks, together with the data being supplied by today's oceanographers, indicates that there are four major sedimentary processes at work in both shallow and deep water. These four processes may also interact to produce further variations, but each process is controlled by its particular set of conditions and creates a deposit recognizable by certain distinctive features.

At present, sediments are classified by particle size, such as clay, silt, sand, etc. Such terms do not identify the process which deposits the rock, and some processes create good oil reservoirs while others produce formations that are poor for oil migration and entrapment. For example, one process may deposit a very permeable sandstone whereas another may develop a sandstone similar in appearance to the first but with permeability too low for oil accumulation. Therefore, identification of sedimentary rocks by depositional processes would be very useful in evaluating the oil potential of a formation and in drilling the wells. Such an identification system should be based on the mode of transport because this controls deposition of sediments and their lithologic characteristics in the stratigraphic column.

Gravity is the driving force of sedimentation, but in some of the processes, gravity acts directly on the sediments while in others it energizes an agent which moves the particles. Although many variations may exist, there are four principal processes of aqueous sedimentation which produce distinctive deposits that I call tractionites, gravitites, turbidites, and hemipelagites.

A *tractionite* is a bed of progressively sorted, winnowed clastics of sand size or larger deposited by moving water which sweeps or bounces them along the bottom. Although their source material can

contain a complete range of sediment sizes from clay to silt to boulders, tractionites preserved in the stratigraphic column are in general of sand size or larger because they are transported more slowly in grain-to-grain contact as they are swept or bounced along while the silt-clay fraction is rapidly carried off in suspension by the moving water. The preserved tractionite, therefore, is usually clean with no primary matrix or a negligible amount. Because moving water tends to produce a strong linear pattern, a tractionite is characterized by this type of bedding. Grading is generally poor to none, although, under the proper conditions, a gradually diminishing current velocity can produce excellent grading. However, such a graded deposit will also exhibit features characteristic of a tractionite, such as strong linear patterns, and clean matrix-poor sand, as contrasted with the massive matrix-rich sand of a turbidite. Vertical or local sorting is poor while lateral sorting is good, with particles in general becoming progressively smaller as the

MEMORIAL

MR. RICHARD (DICK) L. PIERCE

Mr. Richard L. Pierce, Geologist (Paleontologist) for the U.S.G.S. Branch of Paleontology and Stratigraphy for the past 6 years, died on January 24, 1972, in the Stanford Medical Center, following two heart transplants and subsequent complications. He was 49 years old, and is survived by his wife, Alice, his daughter Alissa, 17, and his son, Mark, 13.

Mr. Pierce, (better known to his friends as Dick), was born in Palacios, Texas. He attended High School in Bointon Beach, Florida. During World War II he served 4 years in the U.S. Marine Corps as a Propellor Specialist Instructor. He graduated from the University of Miami in 1950 with a B.S. degree, and in 1956 he received his M.S. degree from U.S.C.

Dick was employed in 1952 in Long Beach as a paleontologist by Richfield Oil Corporation. In 1957 he was transferred to Bakersfield as the District Paleontologist. He was employed in this capacity until 1966 when he elected to accept employment with the U.S.G.S., where he served until his death.

His work with the U.S.G.S. included study of the Mohnian Stage and Pliocene boundary, correlations across the San Andreas fault, Cretaceous and Tertiary foramin-

ifera in Alaska and the Pacific Region, and Tertiary fish scales.

Dick was active in the Professional Societies, and was a Certified Professional Geologist. In addition, he belonged to the National A.A.P.G., Pacific Section A.A.P.G., Paleontological Society, Paleontological Research Institute, the National S.E.P.M., and the Pacific Section of the S.E.P.M. He was Secretary-Treasurer of the Pacific Section S.E.P.M. in 1956, Vice-President in 1962, and President in 1964.

Dick was both a devoted family man and a dedicated paleontologist. He contributed heavily to the 1961, 1962, 1963 and 1964 A.A.P.G.-S.E.P.M. field trips, and was Editor of the Santa Cruz guidebook in 1959, the Kern River to Grapevine guidebook in 1965, and Co-Editor of the Gabilan Range guidebook in 1967. Dick has published several papers and was considered an expert in the micro-paleontology of Southern California. He was also well known for his work with fish scales.

Dick was well known and held in high esteem by California paleontologists. His untimely passing is a tragic loss to the profession.

R. L. Hickernell

sediments are carried farther from their source. Moving water also orients particles. For example, bivalve shells preferentially orient themselves with round bottoms up when being moved in traction flow because this position gives them maximum stability and resistance to being moved by the water. Large clastics, such as cobbles, can become imbricated or tilted into a sandy bottom by a current unable to move the cobble but deflected by it so that sand is moved from beneath the cobble on the up-stream side and the cobble tilts into the hole dug by the current. Tractionites are prevalent in river beds, beaches and offshore marine areas where bottom currents are strong enough to move coarse sediments. Ripple marks and other current-produced features are common.

The main feature of a traction flow is that the moving water supplies all the energy, and the sediments play a passive—even a resistant—role. They do not cause the current to be gener-

(Continued on Page 5)

Geological Reviews

(From Page 4)

ated; they take energy from the flow regime but contribute none; and if the water movement stops, they just sit there until another current comes along to set them in motion again. In other words, in a traction flow the motivating power lies in the moving water.

A *gravitite* is a bed of unsorted clastics, which can range from clay size to boulders, deposited by a sedimentary flow actuated by gravity alone. The sediments move down a slope of sufficient gradient at speeds from slow creep to great momentum. Bedding is internally massive with no grading, sorting, or orienting of particles because the sediments are in grain-to-grain contact which prevents sorting. Fossils, if present, are randomly oriented and scattered throughout the heterogeneous mass. A gravitite may be clean (matrix-free), muddy (matrix-rich), or intermediate between these extremes. The most familiar form of a gravitite is a landslide bed.

The main features of a gravity flow are that the motivating power is supplied by gravity acting directly on sediments which have become unstable through oversteepening, overloading, or undercutting and that the sediments move in grain-to-grain contact which prevents sorting. Sediments on an incline have potential energy, which gravity can convert into kinetic energy to power a sedimentary flow, when their angle or repose is exceeded or their stability disturbed. The ability of gravity to move a given particle downslope varies directly with the slope angle, but other factors, such as bed roughness, angularity of the fragments, lubrication or lack of it, can affect gravity flow. In general, clastics of sand size or larger must be elevated to an angle of about 33° or greater before they will move in gravity flow, whereas lubricated fine sediments can become unstable even on a level plane if they are overloaded. In short, a gravity flow is powered by the kinetic energy of unstable sediments responding to gravity, and their movement in grain-to-grain contact produces a random, chaotic arrangement of the particles in the bed.

A *turbidite* is a well-graded sedimentary unit deposited rapidly from a suspended load of a turbidity current, and includes all of the intervals resulting from a single flow, grading upward from coarse particles in a silt-clay matrix at the bottom, to a pelitic interval of silt and clay at the top. When the suspended load includes a wide range of particle sizes, a "complete" turbidite is formed with at least three distinct divisions: the graded sand interval at the base, followed by the current-bedded in-

terval, and the pelitic interval. Turbidites are well graded because particles flowing in suspension are able to respond hydrodynamically and to settle out according to size and weight. However, the graded sand interval is poorly sorted because the matrix required to maintain the sand in suspension is entrapped between coarse particles. A turbidite is characterized by features indicating suspension flow, such as hydrodynamically sorted particles, oriented megafossils, and silt-clay matrix in the graded sand interval. For example, bivalve shells float and settle from suspension with round bottoms down (as contrasted with round bottoms up in a traction flow) and are found preferentially oriented that way in turbidites in the Ventura basin in California. The exact amount of matrix required to maintain various sand sizes in suspension is not known, but fine and mixed with a 3% silt-clay by weight was carried out to four feet by a turbidity current in an experimental tank with a level bottom. In general, the greater the distance and the larger the particle, the greater the amount of fine material that is required. If faunas are present in turbidites, they are reworked faunas. Foraminifers are also hydrodynamically sorted, with the larger, heavier forms settling out with clastics of corresponding size.

A turbidity current is a flow of turbid water containing the *proper mixture* of suspended sediments which respond to gravity and cause the denser turbid liquid to move along the bottom of a standing body of water. The current is generated by some energy source, such as an earthquake, capable of suddenly placing in suspension a large amount of the proper sedimentary mixture.

The problem in moving coarse sediments considerable distances is how to prolong their suspension so that they may continue to respond to gravity which converts their potential energy into kinetic energy. The silt-clay particles by their resistance to settling are able to prolong suspension of the coarse sediments which must move down through them to be deposited. Their main function is to inhibit settling of

coarse sediments. Flume experiments have demonstrated conclusively that clean sand without matrix stirred into suspension settles immediately and will not generate a turbidity current.

The two critical ingredients in a turbidity current mixture are matrix and water. If there is too little fine material, there will be no turbidity current because the sand cannot be maintained in suspension. If there is too much matrix in relation to water in the mixture, there will be a mudflow instead of a turbidity current, and there will be no hydrodynamic sorting of particles. If there is too much water in the mixture, the fine material is too dilute to inhibit settling of the coarse material, and no turbidity current will occur. If there is too little water, the matrix is so concentrated that hydrodynamic sorting is prevented.

If a gravity flow with the proper amount of matrix can be mixed with additional water either by great velocity of movement or by falling over a terrace through water, it may form a suspension mixture capable of generating a turbidity current. Although slope does affect the velocity of a turbidity current, it is not the fundamental motivating power of the flow. The prime motivating power of a turbidity current is the density differential between the turbid water with its suspended load and the clear water which it encounters. Therefore, a turbidity current once generated can move along a bottom with no slope at all.

The distinctive feature of a turbidity current which sets it apart from other underwater flows is that the sediments are *in suspension* and, consequently, are almost as responsive to gravity as water alone, even on a gentle slope or on no slope at all. Suspension plays another vital role by enabling the particles to respond hydrodynamically and to form graded bedding not found in deposits from non-suspension flows. The power of a turbidity current lies in the potential energy of the suspended sediments which gravity can convert into kinetic energy.

A *hemipelagite* is a layer of marine debris formed by the slow accumulation on the sea floor of a biogenic material and fine terrigenous particles. The terrigenous constituents are both air-borne sediments, such as dust and volcanic ash, and water-borne sediments, such as silt and clay discharged by rivers into the ocean. When a stream delivers its load of sediments to the sea, its traction load is dumped at the beach. Its suspended load is discharged in the wave action zone as an overflow of fresh wa-

(Continued on Page 6)



John F. Curran, Immediate Past President of the Pacific Section received second degree burns as a result of a fire at his home Feb. 9th. John was injured putting out the flames that erupted in his living room at 2 a.m. We've heard of hot plays before, but none like this, John. We are thankful that it wasn't worse.

Geological Reviews

(From Page 5)

ter laden with silt and clay which spread seaward until they reach water quiet enough for them to settle out and form hemipelagite. The biogenic constituents consist of planktonic organisms continuously raining down and the normal benthonic material developed on the sea floor. Consequently only hemipelagite contains indigenous faunas, and only a sample from this interval can be used for reliable age and paleoecologic determinations. While a hemipelagite deposit usually caps a turbidite, the hemipelagite is not part of the turbidite but actually marks an interval of quiet between turbidity current flows. The thickness of the hemipelagite is a function of the length of time during which this type of sedimentation is able to occur without interruption. In the Ventura basin during Pliocene time turbidite deposition was so frequent that only thin beds of hemipelagite could develop. However, during much of Miocene time, great thicknesses of hemipelagite were being deposited, and there are middle Miocene hemipelagites several hundred feet thick with little, if any, coarse sediments derived from upland areas.

Alaska

NO REPORT.

Northwest

NO REPORT.

So You'd Like To Teach

As the oil industry adjusts to our changing society many geologists have been faced with uncertain futures. Some have expressed a desire to enter the profession of teaching. The following selections from one professors quiz papers may provide "some second thoughts".

Q. Other than the study of earthquakes, what is one use of seismology?

A. *Oil expiration.*

Q. What structural feature is shown by the Devil's postpile?

A. *Lumber rock.*

Q. Name a specific example of where the use of an engineering geologist might have saved lives or money.

A. *Dam it.*

Q. What is meant by the Principle of Uniformitarian?

A. *Uniformitarian means that given enough time, a geologist can explain anything.*

Q. What can we do to improve our environment?

A. *Vote the dum politicians out of office.*

Q. What evidence was seen on the field trip for the Edison Fault?

A. *Road sign.*

Q. What is meant by absolute time as used in geology?

A. *A period of time, fairly good.*

Q. Which earthquake wave is the fastest.

A. *Microwave.*

Q. Which earthquake wave cannot travel through a liquid?

A. *Cosmic wave.*

Q. What is meteoric water?

A. *Any water found on a meteor or meteorite.*

Q. What is meant by connate water?

A. *The area where water has been*

RECOMMENDED READING

Geological Excursions in Southern California, 181 p. with fold-out maps, published by the Museum of the University of California, Riverside. \$4.50 payable to "UCR Bookstore." Order from the University of California Bookstore, P.O. Box 5800, Riverside, CA. 92507.

U.S. GEOLOGICAL SURVEY

Professional Paper 684-C: Preliminary geologic investigations of western St. Lawrence Island, Alaska, by W. W. Patton, Jr., and Bela Csejtle, Jr. 40c

Professional Paper 711-A: New late Mississippian ostracode genera and species from northern Alaska, by I. G. Sohn 70c

Professional Paper 715-A: Combined ice and water balances of Gulkana and Wolverine Glaciers, Alaska, and South Cascade Glacier, Washington, 1965 and 1966 hydrologic years, by M. F. Meier, W. V. Tangborn, L. R. Mayo, and Austin Post. \$2.50

Professional Paper 718: Recognition on space photographs of structural elements of Baja California, by Warren Hamilton 45c

Professional Paper 778: Embudo, New Mex., birthplace of systematic stream gaging, by A. H. Frazier and Wilbur Heckler 45c

stoned for a long period of time.

Q. Name two types of weathering.

A. *Good and bad.*

Q. Which type of weathering is more destructive?

A. *Bad.*

Q. What Italian word is used for the small ejecta of volcanoes?

A. *Bombeeno's.*

NEWSLETTER

Pacific Section A.A.P.G.

P.O. Box 17486 Foy Station

Los Angeles, California 90017



NEWSLETTER

of the Pacific Section

American Association of Petroleum Geologists

VOLUME 26

APRIL, 1972

NUMBER 4

CONVENTION
REPORT

I arrived at the convention center too late for the opening ceremonies and missed the Welcoming Address. It really didn't matter because I had paid my dues and I knew I was welcome anyway.

Just as I sat down the first speaker finished. His talk probably wasn't much because they generally put the worst speaker first. Soon after the second paper started, that fourth cup of coffee began to create an uncomfortable feeling and I had to leave in the middle of the talk to relieve the hydrostatic head. By the time I found the right room, the third speaker was well into his paper and I wanted to hear that one.

As I was returning to the lecture room, I ran into Hess Dickter, whom I hadn't seen for several years. He filled me in about his new job and I missed the fourth paper. That was OK because he promised me the log on their deep test up north.

When I sat down for paper five, I

(Continued on Page 5)

DIRECTORY
REVISION

Don Hallinger will lead a campaign to "stamp out" out-dated Membership directories. The plan calls for change of addresses to be printed on perforated adhesive paper. The stamps can be moistened and placed over the old address in the directory. For each 36 changes received, a full sheet of stamps will be included in the Newsletter and mailed to all paid up members.

We will be working from the February 1971 revised directory and will bring these inserts up to date. If you have an older directory you will be short several hundred names.

Please purchase the newest filler from Don E. Hallinger, Pacific Lighting Service and Supply Co., 720 W. 8th Street, Los Angeles, CA 90017. Phone (213) 689-3649.

1972 Convention In Summary

The 1972 Convention with the theme "Pacific Coast Geology — Basis for New Exploration" started with a "Basque Night" ice breaker party on Wednesday, March 8th and concluded with a field trip to the west side of the San Joaquin Valley on Saturday, March 11, 1972.

I wish to make my remarks (sprinkled with a few statistics on the convention) in thanks to the many people who helped to make the convention a success.

Thanks go to:

JIM O'NEILL — Vice Chairman, who was excellent at trouble-shooting particular problems — and who also makes a great punch!

BILL EDMONDSON — Technical Program Coordinator, who was an idea man and kept the pressure on the three societies to get their almost 60 papers in order.

HENRY ENGMAN — SEG Program Chairman, who, in spite of moving out of town, was able to follow through with a stimulating program.

OTTO HACKEL — AAPG Program Chairman, who put together a fine, balanced program consisting of 23 talks.

EDWIN "ORGANIZATION" STINEMEYER — who, along with BOB BLAISDELL, had put practically their whole program together comprising 21 papers, prior to our first general committee meeting in January of 1971.

DANNA GRANNELL — Program Editor, who did an excellent job of assembling and editing the abstracts for publication.

ED KARP — Field Trip Chairman, who along with his highly motivated committee composed of CLIFF CHURCH, ERNIE RENNIE, DON FRAMES, WARREN ADDICOTT, PHIL RYALL, TOM DIBBLEE, BOB HICKERNELL, HENRY WALROND, FRED GREEN, BOB STANTON, LARRY HOOVER, BOB STEINERT, and ED STINEMEYER made the trip interesting and controversial enough to be very stimulating. The trip was unique in that we could actually see the distant

outcrops the speakers were discussing. The 230 guests seemed to enjoy the route, weather and food. And let's not forget DAVE PREWETT and CECIL PEEL who put together those fossil packets that proved to be so popular.

BOB MORRISON — Preprint Editor. As a committee, we asked ourselves why we had been unable or unwilling to have preprints of the convention papers in the past. We were unable to effectively answer the question so we decided to go ahead with a preprint. Bob was able to round up 18 separate papers and behold, we had a preprint with papers which would have otherwise been lost to the literature.

HAROLD SUGDEN — Projection Chairman, who got a very professional crew together.

CARL HELMS — Operating Coordinator, who operated and coordinated all over the place.

JACK CLARE — Finance Chairman, who did a great job of organizing the budget, keeping us within the budget and now has to sort out the whole mess.

DON REYNOLDS — Printing Chairman, whose expertise in negotiating with the printers was invaluable.

GARDNER PITTMAN — Publicity Chairman, who saw to it that we got just enough publicity to get about 850 registrants and not so much as to bring in G.O.O.

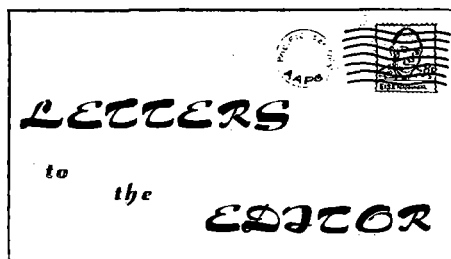
DARRELL HELMUTH — Program Advertising Chairman, who saw to it that the cost of printing the program was paid for by the advertisers. We also wish to thank the many advertisers who supported the program.

SAM BROWN — Housing Chairman, who did a fine job even though he did put Ted Bear in Motel 6. Oh well, no one's perfect!

BUD REID — Contributions Chairman. I rather hesitate to thank Bud since he is the one who stuck me with this job! However, he did do a remarkable job of raising money. A special thanks to all the contributors.

STAN ESCHNER — Convention Site

(Continued on Page 4)



Dear Sir:

In Berg and Gangi (1971) their objection to the use of the term Bubnoff unit (1mm/1000 years) as a time-distance rate was based on the use of a personal name for a unit. The authors' appeal for clarity had, as an example, their objection to the use of hertz for cycles per second. I must remind the authors that it is within the province of the physicists to separate themselves from the lay masses by the use of 'in' names, for concepts that might otherwise be understood. How else is it that geologists can approach the stature of the legal or medical profession if we don't speak in a language that only we, and not other scientists and lay masses, can understand. The following is an example unit usage in geologic writing.

Oil entrapment in the Kern River Field has taken place at the rate of 160,930 Bubnoffs (B's) Fischer (1969), or 0.16093 'megaboobs' (MB's) Berg and Gangi (1971). This makes the field a classic Bubnoff accumulation or Bubnoff trap. Armed with this new concept, how many new accumulations in the 'megaboob' range will be added to the list of booby traps?

Fischer, A. G., 1969, Geological time-distance rates: the Bubnoff unit: Geol. Soc. America Bull., V. 80, p. 549-552.

Berg, R. R. and Anthony F. Gangi, 1971, Bubnoff Unit: An Objection: Geol. Soc. America Bull., V. 82, p. 3475-3476.

JEAN B. SENTEUR DE BOUE

Geologic Philosopher
Trona

I see nothing wrong with "Bubnoffs". I presume two "microboobs" equal one "twiggy" and two "megaboobs" amount to one "mansfield". I've made some colossal "megabooboos" myself — just check the last seven issues of the Newsletter.

While we're at it why not a unit of measure "donyander" — a unit longer than "downtheroadapiece" and some what shorter than a "firpiece". The units would certainly apply to the San Andreas Fault.

I note with interest that you have abandoned "Mad" magazine for the GSA Bulletin. We will supply the old Tidewater and Hancock station restaurants with back GSA issues so you can

catch up on your reading when you are here in Bakersfield.

Dear Sir:

As you have requested comments from Pacific Section members, I would like to offer my own on the implications of the California Clean Environment Act Initiative. If the Clean Environment Act Initiative succeeds, its implementation will severely restrict the activities of professional petroleum geologists and the oil companies in California. If we, as professional geologists, consider this as a bad thing, then we had better entrench our forces and prepare to fight. If we consider the change to be good, then now is the time for us to begin working for the Initiative. For myself, I feel that neither alternative is good. Compromise is needed, but few are willing to make the tough decisions needed to achieve an appropriate compromise. For instance, all Californians must recognize the necessity for some limitations on the consumption of fuel and the use of motor vehicles in order to achieve significant reduction in the smog level in California. Reductions in the rate of fuel use and in the usage of other resources we consume are called for, but the average citizen seems to be unaware or unwilling to face this reality. At the same time, the corporate policymakers in the energy companies seem determined to keep the public ignorant of this fact, or, when it is known, prevent the public from ever facing it realistically.

During the last 25 years, I have watched smog grow steadily worse in California. Growing evidence indicates the new smog standards will be impossible to meet by 1975; the appropriate technological advances once predicted to solve the problem will apparently not do the job. The continued increase in California's population plus the increase in the rate at which we are burning fuel are additional burdens that are not being faced realistically.

High-cost advertising campaigns by the oil companies, auto manufacturers, and related organizations have urged the public to burn more fuel and to buy more and bigger cars. What is needed, from a strategic and environmental standpoint, is a reversal of these two trends. These companies, instead of being forced to recommend frugality in the use of our resources, continue to encourage a profligatory squandering of our inherited natural resources with more regard to their own profits than to the well-being of future generations. I, as a professional geologist, am willing to take the responsibility in pointing out the wrongness and irresponsibility of such a policy.

The Clean Environment Act Initiative is expression through legal channels of

the dissatisfaction, frustration, and disillusionment of a growing number of Californians regarding past attempts to solve the smog problem, as well as other environmental problems. In the past, the petroleum industry has successfully undercut legislation similar to the Clean Air Initiative by expensive advertisements and utilizing clever public relations techniques. These techniques, in my opinion, misled the public; the campaign by the oil companies waged against Prop. 18 is a case in point. If the petroleum industry is allowed to maneuver a similar campaign against the Clean Air Initiative, with no alternative for guaranteeing the public rapid relief from the problem, then further erosion of public confidence in the petroleum industry can be expected. This loss in confidence may energize repeated initiative efforts, and the public may, by this process, gradually strip away by initiative action the options open to professional petroleum geologists in California. This unfortunate result would be due to the petroleum industry's spending too much effort in manipulating the public's will instead of devoting corporate effort towards solving a problem of major concern to the public.

The real challenge posed by the Clean Air Initiative to us as professional geologists is this: Whether we, as professional resource finders, will work voluntarily to ensure that resource consumption is confined to the essential needs of our society. The permissive, whimsical, and excessive consumption of these resources is especially deplorable when it is accompanied by both environmental and strategic detrimental side effects. How do we differentiate the essential need from the whimsical demand? That is a distinction we professionals now should be helping to make. If we fail to take the leadership on this issue, others, through initiative action, will take it.

Sincerely yours,
IVAN P. COLBURN

Professor of Geology
California State College, Los Angeles

I agree that what you say needs to be said but I can't blame the oil companies for destroying our environment. The oil companies didn't defeat Prop. 18 — the voters did. I went into the voting booth alone. When John Q. is ready to give up some of his luxuries and is willing to pay more for a clean environment, then we will begin to have one.

Dear Sir:

I feel it is my professional responsibility to point out the geologic inaccuracies in February's Guest Editorial by E. W. Wellbaum. Wellbaum states; "Man's daily impact on the earth will

(Continued on Page 3)

Letters . . .

(From Page 2)

not be noticed when compared to great cataclysmic events of nature or even the normal processes of erosion, . . ." This just isn't true.

Most geologic processes act *slowly* and may, under some conditions, take thousands of years to effect noticeable changes upon the landscape. The acts of man, especially the alteration of normal landforms, can result in rapid and quite often catastrophic changes in short periods of time. Cataclysmic events in nature are the exception not the rule. The most rapid and disastrous changes are almost always the result of the interferences of man.

In the context of "geologic time" mans effects on the earth are small as compared with geologic processes, but it isn't possible for people to "wait around" the thousands or millions of years it will take for natural processes to repair the damage to the environment done in just a few hours. Consider that the development and accumulation of liquid hydrocarbons has been an on going process for 600 million years (\pm a few million) and that in the United States in only 100 years of usage we have probably consumed between 40 and 50% of the total recoverable reserves of the United States. The rate of usage is 2 to 3 million times the rate of petroleum formation. In this case as

in most others the geologic processes operate far too slowly to have a chance to catch up with and repair the damage done by man. In the context of the time of mans existence his impact is cumulatively far greater than the episodic cataclysmic events referred to by Wellbaum.

It seems ironic that Wellbaum should speak out for professional responsibility when he represents the Alyeska Pipeline. His company has been very indignant about the responsible geologists that questioned the safety of their pipeline, and demanded careful engineering and a consideration of geologic hazards — specifically permafrost and the effect of building roads across the tundra. I think it was a fine example of professional responsibility; a few geologists taking the extra effort to make certain the pipe line was not built hastily and incorrectly.

It seems that there is still, even among geologists, a lack of understanding as to the basic interaction of man and the earth he lives on. Till we all (politicians included) come to realize the nature of this interaction there will be little progress toward solving our environmental and "natural resource" problems.

Sincerely yours,

GERALD E. WEBER

Geologist-Graduate Student

University of California, Santa Cruz

I am a firm believer in "Catastrophic Uniformitarianism". It is the landslides, mudflows, volcanic eruptions, faulting, floods, storm damage, etc., that are preserved in the geologic record. The day to day geologic processes tend to destroy these phenomena. As for the pipeline, it is my understanding that we would have to abandon California if our state had to meet the stringent engineering requirements imposed on the pipeline. It still goes back to consumption. Without the pipeline we are going to be hard pressed for energy. How about getting the gang up there to burn their credit cards instead of their draft cards. That would make national news.

Did You Know

Kenneth H. Crandall of Piedmont, Calif., former vice president of Standard Oil Co. of California and president of AAPG in 1969-70; and John E. Kennedy of Los Angeles, Calif., Geologic Coordinator of Union Oil Co. of California and former vice president of AAPG will receive honorary memberships to AAPG at the Annual Convention in Denver.

San Joaquin

Nominees for San Joaquin Geological Society Offices for 1972-1973 are as follows:

PRESIDENT

- 1) Rod Nahama — Consultant
- 2) Bob Hoffman — Consultant

VICE-PRESIDENT

- 1) Ben Leverett — Consultant
- 2) Bill Scheidecker — ARCO

SECRETARY

- 1) Dennis Shea — Consultant
- 2) Don Taylor — Tenneco

TREASURER

- 1) Les Hill — D.O.G.
- 2) Tip Tobias — Standard Oil

PACIFIC SECTION

REPRESENTATIVE

- 1) Don Reynolds — Union
- 2) Jim Benzley — Gulf

NATIONAL AAPG DELEGATE

- 1) Lou Villanueva — Getty
- 2) Henry Walrond — Norris Oil

Northern California

The Northern California Geological Society continues to have problems getting geologists to attend the monthly meetings. Because of the wide geographic distribution of the membership monthly meetings are now planned alternately in 1) San Francisco, 2) near the San Francisco Airport and 3) somewhere in the area of Stanford University and the U.S.G.S. Despite good programs and speakers the results have not been encouraging. We had an excellent turnout in December in San Francisco with a SRO audience. The turnouts for the January and February meetings, held at the USGS and near the Airport respectively, were poor. Attendance doesn't do justice to the speakers nor show appreciation for the work done by the program chairman in lining up a program.

The February meeting of the N.C.G. Society was held on February 23 at the El Rancho Motel and Restaurant in Millbrae, not far from the San Francisco Airport. After lunch, Dr. Manley L. Natland, AAPG Distinguished Lecturer presented to the assembled members his paper titled "New Classification of Water-Laid Clastic Sediments". The paper created considerable interest and a number of questions were asked.

J. H. SAWYER

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San Joaquin.....LEON J. EARNEST
(805) 399-2961

Recommended Reading.....LUCY E. BIRDSALL

NEWSLETTER of the Pacific Section—American Association Petroleum Geologists is published monthly by the Pacific Section.

Material for Publication and requests for previous copies should be addressed to STANLEY E. KARP—GEOLOGY DEPT., BAKERSFIELD COLLEGE, BAKERSFIELD, CALIF. 93305.

Material received by the 15th of each month will be included in the following issue.

CHANGE OF ADDRESS, subscription and membership inquiries should be directed to MEMBERSHIP SECRETARY, PACIFIC SECTION AAPG, P. O. Box 17486, FOY STATION, Los Angeles, Ca. 90017.

Coast

A new geologist with Union in Santa Paula is JOHN HAMITER. John has a B.S. from Cal Lutheran in Thousand Oaks, and is a native of that fair burg. John is presently in the Ventura office for part of his training.

March's speaker was Ted Bear, Consultant, from Los Angeles. Ted brought us up to date on "Recent Petroleum Activity in South Africa."

With the departure of Frank Reynolds for Houston, Jack Durrie of Getty assumed the office of president of the Coast Geological Society. The other officers have each moved up a notch: Nancy Stehle is vice-president, and Vern Hill is secretary. Bob Hindle of Sun in Newhall was elected treasurer.

Well, about the time Jack got accustomed to the reins of office, he got word of a transfer to Getty's International Exploration Division in Los Angeles, effective March 16. Plans are that Jack will remain as president of the three months or so remaining of the term.

Our thanks go to Dr. Paul Mikolaj of UC Santa Barbara for a most interesting talk on the submarine oil seeps at Coal Oil Point. These seeps are the object of study by him and his students. They accounted for an estimated 50-70 BOPD of 10-15° API oil in 1969. Seeps are measured by noting their width, velocity, and thickness. The rate at Coal Oil Point has been found to vary by as much as a factor of 10. Trace element chemical analysis shows oil from this source to be a significant component of beached oil accumulations from Jalama to Point Mugu. With the exception of the period immediately following the Platform "A" blowout, very little, if any, oil from the seeps near the Dos Cuadras Field has been deposited on the beaches. This is due, in part, to the considerably smaller volume of oil emanating from this source and possibly also to the ocean current regime which does not normally seem to carry this oil ashore.

As much as 90% of the identifiable oil on Channel beaches has been chemically identified as being from Coal Oil Point. It and other natural seeps occurring from Point Conception eastward, are the major source of beached oil. Dr. Mikolaj hopes to be able to study these other seeps in greater detail in the future. Other objectives of his study include a greater understanding of the mechanisms by which oil travels

on the water's surface and accumulates on the beaches.

A new geologist with Union in Santa Paula is John Hamiter. John has a B.S. from Cal Lutheran in Thousand Oaks and is a native of that fair burg. John is presently in the Ventura office for part of his training.

R. L. STEWART

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- D. N. HELMUTH
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Cities Service Oil Co.
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Thousand Oaks, Cal. 91360
- BRADFORD K. JOHNSON
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Chevron Oil Co. of Madagascar
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1412-17th St.
Bakersfield, Cal. 93301

Summary . . .

(From Page 1)

Coordinator who, along with making arrangements for the convention site activities, had time to prepare and present a paper (co-authored by Keith Scribner) that won the A. I. Leverson Best Paper Award.

BILL SCHEIDECKER — Convention Site Chairman, who was the field general at the convention site seeing to it that everything ran smoothly.

BOB SANEM and LANE HOWELL — Exhibits Chairmen who, in spite of reluctance on the part of some exhibitors, was able to line up 11 exhibitors.

GENE POLLOCK and BOB STEINERT — Registration Chairmen, who initiated the idea of pre-registration, carried it out superbly, pre-registering about 375 and then following through with a smooth registration of the remaining 485 registrants. Thanks go particularly to Gene's secretary, Karen Williams, who organized and supervised the registration crew.

LEON EARNEST — Entertainment and Catering Chairman, who quietly put together a committee that put on a well-attended Ice Breaker (642), Joint Luncheon (363), and Dinner Dance (248). Incidentally, that attendance is a record for a Convention Dinner Dance.

JOE DUNWOODY — Alumni Chairman, who arranged for 160 people to have six separate alumni lunches.

RITA RENNIE — Ladies' Entertainment Chairman, who arranged for a complete program of activities for 153 ladies, and in addition, assisted in decorating for the dance.

The SPEAKERS and AUTHORS, obviously the people who make the whole convention possible (please see your program for the names of about 80 authors and co-authors).

The 848 REGISTRANTS without whom all this preparation would have been useless and who picked up most of the tab.

And a special blessing to all the wives who kept our dinners warm, received our phone messages and who understood our short tempers when things weren't going right. Thank you.

Sincerely,
JOHN A. CARVER
General Chairman
1972 Convention

We don't want this to sound like a "mutual admiration society", but much of the success of the Convention was due to John's leadership. The mark of a good leader is one who can delegate authority and let a man do his job. John did just that. We never felt that we were working FOR John, but rather WITH him. We thank YOU John for a job well done.

Los Angeles

The Los Angeles Basin Geological Society Bar-B-Que held at Northam Station in La Mirada on February 16 was a blast with over 100 in attendance. The Time-Life documentary film "Drifting of the Continents" was shown, to supplement the good food and fellowship that prevailed. A great job was done by our hosts, the Shell Exploration Staff. A new meeting place for this activity has yet to be decided upon. Anyone with suggestions should contact a member of the L. A. Basin Geological Society Executive Committee.

* * *

Ron Everett (ex-Humble) and Brad Johnson (ex-Marathon) have joined McCulloch's Exploration Department in Los Angeles.

* * *

Don Taff, Mobil, Los Angeles, will soon be putting on his swim fins for offshore work with Mobil in New Orleans.

* * *

Don Hallinger was elected Delegate for the LABGS to attend the AAPG Convention in Denver in April.

* * *

Humble's exploration staff in Century City, Los Angeles, are reportedly preparing to leave their Avenue of the Stars for the mile high clean air of Denver. August 15, 1972, has been mentioned as a possible departure date.

Best wishes are extended to Glen W. Ledingham, Sr. and Yaiko Sano who were married February 1, 1972 in Tokyo, Japan.

* * *

Latest additions to McCulloch Oil Corporation, Exploration Staff in Los Angeles, include our esteemed proxy Richard L. (Dick) Hester and Siegfried H. (Sig) Haman, formerly with THUMS.

* * *

Tom Redin, Union, has abandoned the quiet suburban halls of Santa Fe Springs and has joined the early risers and freeway commuters for "downtown L.A." duties.

* * *

A warm welcome to Rick Dreessen, formerly with Amerada in Denver, who has joined the staff of the DOG in Inglewood as a field engineer.

* * *

Ron Schmala has recently been hired by Texaco, Inc. at Los Angeles. Ron hails from Portland State.

* * *

D. E. Van Arsdale, Jr., Exploration Manager for Pennzoil United Inc., in Century City, is at home recuperating from major surgery performed the last part of February. We all wish him a speedy recovery.

HOT LINE Subscription Deadline

The February issue of the "Hot Line" (Vol. 2, No. 2) will be the last free issue! If you have not sent in \$3.00 for your 1972 subscription by March 1, 1972, your name will be removed from the mailing list. In order to avoid errors and delays in receiving your "Hot Line," be sure to include the *exact* address and name of the person (or company, etc.) who is to receive the subscription. **DON'T DELAY, DO IT TODAY!**

Direct all correspondence to:
Geothermal Hot Line
Division of Oil and Gas
1416 - 9th Street, Room 1316-35
Sacramento, California 95814

Geology Teachers

The Department of Geology and Geography of the University of the Pacific will host the second meeting of the section for the 1971-72 year of the FAR WESTERN Section — National Association of Geology Teachers.

SATURDAY, APRIL 22.

The day program will feature:

1. Speakers on topics such as Plate Tectonics and Remote Sensing.
2. Seminar sessions in Structural Geology, Paleontology — Historical Geology and Earth Science in The Secondary and School.
3. A Geography video tape program titled "Operation Translation — The Concept Location."

There will be an evening banquet with a guest speaker discussing salt water intrusion into the fresh water environment.

SUNDAY, APRIL 23.

All-day field trip on ground water resources.

CREDIT DUE

The photo appearing on the first page of the 1972 Guidebook — West Side Central San Joaquin Valley was taken by John Shelton, Encyclopedia Britannica Films, Inc. of Hollywood. John's other picture of Reef Ridge on page 81 compounded our error of omission. We asked John to provide us with air photos of the field trip area but we failed to give him credit for those outstanding pictures.

For those of you who have not purchased your guidebook, John Shelton is a geologic photographer *par-excellence*. Proof of that statement may be found in his excellent book "Geology Illustrated" W. H. Freeman, San Francisco.

S.E.P.M. HONORS

Long overdue honors from the Pacific Section SEPM were conferred upon Bob Kleinpell, University of California, and Ed Stinemeyer in the form of Honorary Life Membership to SEPM.

Convention . . .

(From Page 1)

noticed everyone around me had name tags and I felt embarrassed because I hadn't registered yet. I hated to leave but this one guy with an "official" badge kept giving me a dirty look. He must have given the same look to a lot of guys because there was a long line at the registration desk. I didn't have enough cash with me to register and I had to go back to the motel for my checkbook. I hurried as fast as I could but when I returned the morning session was over.

They tell me the luncheon speaker was great. I got the last seat in the corner. The menu called for chicken with peas. I got the bird all right but the peas must have rolled off the plate enroute to my table. My chair was facing the wrong way so I couldn't see the speaker. Couldn't hear him either, all I could hear was this guy next to me mumbling about something.

When the afternoon session began, I realized that I had not seen the exhibits. I had planned to see all the exhibits but LaVerne's display was too good to miss. I didn't get around to the rest of them. She had something to do with computers — at least she had the figure for it. I missed the afternoon session because it took several hours for LaVerne to show me the equipment. It was worth the time because I learned a great deal — her phone number and address.

Friday was about the same — more friends, coffee and parking problems. I purchased the pre-prints and some day I'll sit down and read them and find out what went on.

The field trip was the true highlight of the Convention. I hadn't realized that we had so many women geologists. I'm not sure what wine making has to do with geology but the guide said something about soil and diatomite so I guess there is a connection. The ladies were so happy after the tour, I didn't think it would be polite to question the route. Did see some happy worms but I don't think they had anything to do with oil.

With out a doubt, that was the best convention I had ever been to.

END OF REPORT

Jean B. Senteur De Boue

P.S. Convention expenses amounting to \$199.98 is included on separate form.

CALENDAR for April

S	M	T	W	T	F	S
						1

4. USC SPRING LECTURE SERIES — Stauffer Science Lecture Hall, Noon. Dr. James Ingle, Stanford. "Late Cenozoic Marine History of the Gulf of California: Foraminiferal Evidence."
- 4-6. ALASKA GEOLOGICAL SOCIETY SYMPOSIUM — "Alaska Geology and Related Subjects." See Sectional News for details.
10. BAKERSFIELD COLLEGE — Biostratigraphy Seminar. 7:30 p.m. Science-Engineering Room 56. Dr. A. E. Fritsche, San Francisco Valley State College. "Miocene Paleogeography of the Central Sierra Madre Mts., Santa Barbara Co."
11. SAN JOAQUIN GEOLOGICAL SOCIETY American Legion Hall, Robert E. Stevenson — "Gross Transport of Suspended Sediments over Continental Shelves as Analyzed from Gemini and Apollo Space Photographs."
11. USC SPRING LECTURE SERIES — Dr. H. O. B. Wilson, University of Manitoba. "Ore Deposits of Archean Shields." (Society of Economic Geologists Visiting Lecture Series.)
- 17-19. NATIONAL A.A.P.G. - S.E.P.M. CONVENTION — Denver.
18. USC SPRING LECTURE SERIES — Dr. John Whetten, University of Washington: Scripps Institution. "Laboratory and Field Evidence for Graywacke Diagenesis."
22. SPECIAL LECTURES USC — "Paleontology in Oil Exploration" by Dr. Aureal T. Cross, visiting Professor from Michigan State University — 12:00 Noon — Science Lecture Hall, Room 200, University of Southern California.
- 22-23. NATIONAL ASSOCIATION OF GEOLOGY TEACHERS — University of the Pacific, Stockton. "Plate Tectonics and Remote Sensing." Field trip—"Soil Subsidence in Stockton Area."
25. LOS ANGELES GEOLOGICAL SOCIETY — Roger Young Auditorium. Noon Luncheon. Dr. Robert Berg — "Identification of Sedimentary Environments in Reservoir Sandstones."
25. USC SPRING LECTURE SERIES — Dr. Edward Ghent, University of Calgary; USGS. "Metamorphism in the Eastern Canadian Cordillera."

Alaska

Hope the sleet, snow and dark of night hosses umpshe pataka, and you get this in time for March publication (*Sorry, but it didn't make it in time. Had to get out the Convention Issue on time*) since this is my last chance to drum beat the Alaska Geological Society's Third Symposium on April 4-6 at Anchorage. Enclosed is a schedule of events. Presumably notices have or will be sent to Pacific Section members (I hope.). So you all pack your parka's and mukluk's, throw in a kosbuk for your wife and mush on up.

Sorry about hibernating through last month. To catch up briefly though, we had a little unusual wind and the AGS had likewise. When the wind snaps about 3 links an hour off of a spinning chain tied to the gin pole, that's known as a stiff breeze at Deadhorse, a full gale at Anchorage and calm to wispy in the Gulf. Anyway we had a 3 linker outside and about a link and a halfer inside at the AGS meeting on revision of by-laws. After enjoying about all of the constructive discussion they could stand — we wuz all invited to join the re-write committed during the next re-writing and before the re-reading. Seemed fair and logical to me.

Natural Resource Inventories from space by the Earth Resources Technology Satellite (ARTS) System was the subject very well illustrated and presented at the February 10 meeting by Chet

Zenone, of the U.S.G.S. The meeting of Feb. 24th, a B.B.C. prepared color film on Continental Drift was shown. On March 9, Ralph Migliaccio of R & M Engineering and Geological Consultants — Fairbanks presented some ideas on the registration of geologists in Alaska (seems like I've been on that street before).

I'll have to remember next year to let you all know earlier about the Fur Rendezvous in Anchorage. You can always tell Rondo time because girls legs go outa sight in granny dresses — lots of the more experienced crowd have more hair on their chin than their head, everybody is an overnight expert on lead, swing, and wheel dogs, and cheechakoes that don't know tanned from green or cased hides bid mink prices for muskrat. Some of the Eskimo events still seem sorta strange to me. For instance the two-legged high kick is just a might bouncy on your follow-thru, and seeing how high you can toss a girl on a blanket alters that sport entirely.

Should have more news next month after everyone Shickens out from behind the brush and we can tell who is missing.

Hasta la vista yuall,

DICK E. ATCHISON

Your meetings sound like some of our San Joaquin Society clam-bakes. We now require all members to check their guns, knives and cigars at the door.

P.S. Read the committee line-up for the Bakersfield all day singing and dinner on the ground and it sounded like ole home week.

The program for Alaska's Shivaree for April 4-6 is as follows:

Arthur A. Meyerhoff—A.A.P.G.

Plate Tectonics: "A Marathon of Errors"

Luncheon Talk: "Oil Production in the U.S.S.R."

George Plafker and David L. Jones—U.S.G.S.

"Tectonic History of Southern Alaska"

Part I: "History of Converging Plates—Gulf of Alaska."

Part II: "Stratigraphic History of Late Mesozoic-Early Cenozoic Rocks—Southeastern Alaska."

Roland von Huene—U.S.G.S.

"Outer Continental Margin Structure off Kodiak Island."

George Gryc—U.S.G.S.

"Highlights & Plans for Future Work in Alaska"

William Fackler—State of Alaska

J. J. Mulligan—U.S. Bureau of Mines.

Perry O. Roehl — Union Oil Research "Development of Carbonate Reservoirs."

David B. Stone — University of Alaska "Paleomagnetism in Alaska."

James Lee Wilson—Rice University "Depositional Facies Across Carbonate Shelf Margin."

May

S	M	T	W	T	F	S
	1	2	3	4	5	6

2. USC SPRING LECTURE SERIES — Stauffer Science Lecture Hall, Noon. Dr. Yu-Chia Chung, Scripps Institution. "Rn²²² and Ra²²⁶ in the Ocean: Potential Tracers for Mixing and Circulation Studies."
8. BAKERSFIELD COLLEGE — Biostratigraphy Seminar, 7:30 p.m., SE 56. Dr. Harry E. Cook, U.C. Riverside. "Geologic History of the Equatorial Pacific, Leg 9, Deep Sea Drilling Project, Tahiti to Panama."
9. USC SPRING LECTURE SERIES — Mr. James Gibson, U.S.C. "Foraminiferal Biostratigraphy of the Anita Formation, Western Santa Ynez Mtns., Santa Barbara Co., Calif." and Mr. Larry Doyle, U.S.C. "Some Tectonic and Paleogeologic Aspects of the Southern Half of the California Borderland."
16. USC SPRING LECTURE SERIES — Dr. Ivan Colburn, Cal. State, Los Angeles. "The California Cretaceous: Basin Analysis."

GEOLOGICAL REVIEWS

Miocene Biofacies In the Saltos Shale and Whiterock Bluff Shale of Caliente Mountain*

By JAY PHILLIPS

*Abstract of paper presented to Bakersfield College Biostratigraphy Seminar February 7, 1972.

The Miocene section on Caliente Mountain in SE San Luis Obispo Co. was deposited in a narrow, steep-sided basin where extreme lithofacies and biofacies changes occurred within short lateral distances. The present mountain is an anticline plunging to the NW, with its axis roughly parallel to the ancient basin. A number of stratigraphic sections were collected through the U-shaped outcrop belt around the nose of the anticline NW of the peak to give a 4-dimensional view of a portion of the basin over an aerial extent and through geologic time. Fossils were used to interpret bathymetry.

In general, the south side of the mountain contains a section deposited in the central portions of the ancient basin. Shales are highly biogenetic with abundant diatoms, fish scales, and foraminifers. Deposits on the north side are near the ancient shoreline and consist of siltstones with shallow-water foraminifers, sandstones with mollusks, and terrestrial deposits with fossil vertebrates. A number of subaerial basalt flows, the Triple Basalts and the Main Basalt, occur in the sandstone and red-bed portion of the section. The former have been radiometrically dated by Turner (1971, GSA Sp. Paper 124) at about 15 million years. Across the crest of the mountain the offshore deposits interfinger with the nearshore deposits. Through geologic time the basin quickly deepened, then gradually shallowed, with offshore deposits containing successively shallower foraminiferal assemblages, and with redbed deposition gradually covering larger areas.

The oldest unit considered is the Painted Rock Sandstone, a shallow water, massive sand with abundant mollusks. Overlying it is the Saltos Shale. Contemporaneously with earliest Saltos deposition on the south (basinward) side of the mountain, Painted Rock deposition continued on the north (shoreward) side. A sand bed taken as the top of the Painted Rock Sandstone on the north side can be traced around the nose of the anticline to the south side where it occurs as a sand lens 500 feet above the top of the Painted Rock Sand-

stone. Below the sand lens, the Saltos Shale, here a lateral equivalent to the Painted Rock Sandstone, contains a lower neritic faunule of upper Saucian *Uvigerinella obesa* Zone Age (lower Miocene). Common species are *Clavulina patens*, *Haplophragmoides* sp., *Nonion costiferum*, *Suggrunda kleinpelli*, *Bolivina marginata*, *B. tumida*, *Virgulina californiensis*, *Buliminella curta*, *B. subfusiformis*, *Siphogenerina transversa*, *Valvulineria williamsi*, and *Globigerina* sp.

For 200 feet above the sand lens, upper Saucian faunules are found on the south side of the mountain. These beds postdate all Painted Rock deposition in the area and contain a middle bathyal faunule which reflects a sudden deepening of the basin. Common species are *Siphogenerina transversa*, *Valvulineria williamsi*, *Buliminia alligata*, *Dentalina quadrulata*, *Robulus simplex*, *Marginulina dubia*, *Uvigerinella obesa*, *Bolivina marginata*, *Plectofrondicularia californica*, *P. miocenica directa*, *Nodogenerina advena*, *Gyroidina soldanii*, *Cibicides americanus*, and *C. floridanus*. On the north side, this interval marks the beginning of Saltos-type deposition, but the siltstones are of shallow water origin and contain no foraminifers. Along strike to the SE, outside the area studied, another sandstone, the Branch Canyon, lies directly upon the Painted Rock Sandstone. Further along strike, redbeds lie directly upon the Painted Rock Sandstone.

Lower Relizian strata in the area contain numerous siliceous limestone beds and are generally leached of foraminifers; the upper Saltos Shale is assigned to this time interval on the basis of stratigraphic position.

Upper Relizian *Siphogenerina branneri* Zone faunule occur on the south side in the lower Whiterock Bluff Shale which overlies the Saltos Shale. It contains a very rich lower neritic faunule with *Hemicristellaria beali*, *Nonion costiferum*, *Nonionella miocenica*, *Virgulina californiensis*, *Buliminella subfusiformis*, *B. curta*, *Bulimina ovata*, *Bolivina tumida*, *B. conica*, *B. marginata*, *B. advena*, *B. imbricata*, *Valvulineria californica obesa*, *V. californica apressa*, *V. depressa*, *V. ornata*, *Epistominella subperuviana*, and *Globigerina* spp. A *S. branneri* Zone faunule from near the top of the Saltos Shale at locality LSJU-1772 on the north side has previously been recorded by Kleinpell (1938, p. 73). In Abbott Canyon, 4 miles along strike to the SE from LSJU-1772, non-diagnostic, leached assemblages from shale stringers underlying the Triple Basalts are probably upper Relizian in age.

Luisian Age (middle Miocene) foraminifers occur in the upper Whiterock

PAGE 7

Bluff Shale which, in the area studied, crops out only on the south side and along the crest of the mountain to the NW. It contains an abundant neritic faunule with *Hemicristellaria beali*, *Robulus miocenicus*, *R. smileyi*, *Dentalina obliqua*, *Nonionella miocenica*, *Nonion costiferum*, *Bolivina advena striatella*, *B. salinasensis*, *B. imbricata*, *Bulimina ovula*, *Buliminella curta*, *B. elegantissima*, *B. subfusiformis*, *Valvulineria miocenica*, *V. californica californica*, and *Epistominella subperuviana*. Zonally diagnostic species are not present in these shallow assemblages. Luisian Stage assemblages persist to the gradational contact with the overlying Santa Margarita Sandstone, after which foraminifers are not found. An ash bed near the top of the shale at Whiterock Bluff is a potentially useful time-marker, but has not been located elsewhere. The ash seems to contain too few mineral grains for radiometric dating.

On the north side, Luisian strata are the Branch Canyon Sandstone, shallow water to subaerial, and the Caliente Redbeds; foraminifers have not been found in these units.

The vertical linear dimension is time, in millions of years before the present.

A. I. LEVORSEN MEMORIAL AWARD

Congratulations to Stan Eschner and M. K. Scribner of Occidental Petroleum for their excellent paper "Discovery and development of the Sawtelle Oil Field". The award is presented to the authors who display the highest standards of creative thinking in the field of Petroleum Geology.

Runner up to this coveted award was A. Eugene Fritche, Geology Department of San Fernando Valley State College, for his paper "Structure of Miocene Rocks in the Sierra Madre, Northeastern Santa Barbara County, California".

We think both papers merit distinguished lecture tours.

LIFE MEMBERSHIP

Frank Parker, consultant and Tom Dibblee, USGS were honored with Life Memberships to the Pacific Section at the Convention luncheon, March 9. Harold Hoots, Stanford University and John Hazzard received belated recognition for their membership honors of last year. We are the ones who are honored to have members of this quality in the Pacific Section.

20 YEARS AGO IN THE PPG

Art Huey, the former chairman and "father" of the Directory has received information that several other societies in the county are planning to publish a similar directory using the Pacific Section booklet more or less as an example. *(And its still going strong).*

* * *

T. V. FORUM

The night of Monday the 17th of March was marked by a television program originating in the studios of K.T.T.V. which was designed to acquaint the public with the functions of an exploration department of an oil company. Speakers on the forum were Mr. Frank Morgan of Richfield, Mr. Leo Newfarmer of the Shell, Mr. Henry Salvatori of Western Geophysical, Mr. Graham Moody of Standard, and Mr. Wilbur Rankin, consultant. Dr. Rufus B. von KleinSmid formerly of the University of Southern California was the Moderator for the program. Mr. Morgan opened the discussion by pointing out that before the eyes of the viewing public was assembled a typical oil finding team; that geologists were present, and that the principal science tools

which geologists use, namely, seismic and gravity surveys and paleontologic study were represented by Mr. Salvatori and Mr. Rankin. Mr. Morgan also described how the geologists usually employ these tools. Further discussion by Leo Newfarmer described in general the usual types of structural geologic traps that the geologist looks for. The discussion turned to an essential ingredient of the oil industry in this country: competition; and it was very strikingly brought out that the development of the oil industry here to supply the world's great demand is a result primarily of the competitive nature of the oil business. It was shown how Mexico has failed to develop comparable resources, although there is every reason to believe from geology that Mexico could be proportionately as greatly productive a state as is the United States. The case is similar as far as European nations are concerned. Mr. Moody made the very strong point that although demand continues to increase in the world for petroleum, the geologist, assisted by the geophysicist and the paleontologist had successfully increased yearly the found reserves, such that at any date in the last 10 years, more oil may be said to have been proven in the ground than has been demanded that year.

(20 years ago this was true for domestic production — but not today).

* * *

BAKERSFIELD MEETING

Some 65 members of the San Joaquin Geological Society gathered at the El Tejon, Bakersfield, February 19th to hear President Frank Morgan address the members on "The Business of Oil Finding".

"I believe the exploration geologist can do the job, but their work in the future will be progressively more diffi-

cult and correspondingly more expensive. The increasing difficulties of the oil finder will be offset to a large degree by technologic improvements," he asserted. "It is important that the industry, the government, and the consuming public be increasingly aware of the new cost thinking in oil finding. The business of running out of oil is an old story and I cannot understand why it is brought up so often by thinking people. They have always been wrong in the past for the reason that they have failed to give due weight to enterprise, determination, responsibility, and an ever increasing technology."

* * *

S.E.P.M. FIELD TRIP

An excellent summary of salient geologic problems was presented at various stations on the tour by John Crowell, Bill Corey, Otto Hackle, and Dick Jahns. Itinerary and summary geologic notes on the trip are again being printed and may be obtained from Jim Cowell, Shell Oil Company, Box 691, Ventura, for 50 cents.

(50 cents? — Those were the good old days).

New Members

GEORGE FUGATE

700 Sesnon St.
Bakersfield, Cal. 93309
FILIPINAS R. GONZAGA
Humble Oil & Refg. Co.
1800 Ave. of the Stars, Rm. 1073-B
Los Angeles, Cal. 90067

LEAMAN O. HARRIS

Humble Oil & Refg. Co.
1800 Ave. of the Stars
Los Angeles, Cal. 90067

W. CHARLES HEPPE

Getty Oil Co.
P.O. Box 194-X
Bakersfield, Cal. 93308

Sacramento
NO REPORT.

Northwest
NO REPORT.

NEWSLETTER

Pacific Section A.A.P.G.

P.O. Box 17486 Foy Station
Los Angeles, California 90017



NEWSLETTER

of the Pacific Section
American Association of Petroleum Geologists

VOLUME 26

MAY, 1972

NUMBER 5

GUEST EDITORIAL...

The Exploration Geologist as an Executive

As a member of the Pacific Section, I have noted the great number of younger geologists of high caliber as executives in the Section. These men and women of the Pacific Section show their capabilities not only in their companies, with universities, and as consultants, but also in the running of Section affairs. This was notably evident at the recent Section meeting in Bakersfield, where not only was the program excellent but all the arrangements were top-notch. Pacific Section has had a history quite different from our other AAPG Sections, and the early planning by now-older retired geologists such as Harold Hoots, Ian Campbell, Manley Natland, and many others, included establishment of a viable, comico-serious newsletter of wide distribution, a dues structure to support activities, and a centralized direction of highly active local affiliated societies. Although inequities may have appeared, right-thinking young geologists in the local societies, whether teachers, consultants, or company men, have worked as administrative teams for the social, scientific and economic benefit of all members of the Pacific Section.

The success of the Section's publication activities and the affiliated society guidebooks covering California's complex geology demonstrates the executive cooperation so necessary to scientific achievements, while welding the entire section together as a strong unit. I attribute this to the increased hard work by the younger executive-type geologists who have recognized the importance of cooperation for advancement of the profession. Other Sections of the Association are also making great strides in these same directions.

I believe we should establish a Council of Section Presidents or Executive Committees, financed somehow so they could all attend every Section meeting throughout the country (there are six Annual Section Meetings). This group

could provide important grass-roots input for consideration by the National House of Delegates, the Advisory Council, and the AAPG Executive Committee; and, further, they should beef-up the work of our National Committees such as Membership, Continuing Education, and Distinguished Lectures, as well as our entire publications program by working closely with the Publications Committee in attracting more and better practical petroleum papers.

So, when anyone tells me geologists are not good executives because they are theoretical scientists, I say, "Hogwash." Geologists are personally well-organized, and, being so, they must know how to delegate, cooperate, and

(Continued on Page 3)

QUESTIONNAIRE

Included in this issue of the *Newsletter* is a Questionnaire and Directory Revision. Beginning with the June issue of the *Newsletter*, we will include "stamps" of change of addresses and other pertinent information. These changes will bring the February, 1971 Revised Directory up to date. All members are urged to purchase this latest filler because of the many entries and we will print only those changes that are in conflict with the 1971 Directory. Please purchase the revised filler from Don E. Hallinger, Pacific Lighting Service & Supply Co., 720 W. 8th Street, Los Angeles, CA. 90017. Phone (213) 689-3649.

As long as we had space and you were going to send your Directory Information to us anyway, we thought you might like to tell us how you feel about a number of things. In the October, 1971 issue Dick Hester called for "new blood, new ideas" and an abolition of the "hard-nosed old-timers who ran a closed shop". Now is your chance. We will compile your answers and let you know the results.

Alaska

Getting this letter in on time (for a change) just proves that occasionally even a blind hog will find an acorn. Our A.G.S. Geoscience Symposium and Plate Tectonics donnybrook was a brush cuttin, gully washing, barn burner. At the risk of becoming a name dropper I'd like to tip ye olde coon skin to the following committee men: Bill Decker (Cities Service) Chairman; Al Sisson (Union Oil Co. of Calif.)—Registration; Benny De Benedetti (Union Oil Co. of Calif.)—Speakers; John Hultman (CONOCO)—Booze and Advertising; Harry Hixon (Mobil)—Announcements; Dennis Holmgren (Mobil)—Printing; Irv Palmer (CONOCO) Program; Grene Richards (ARCO)—Transportation; Ross Schaff (AMU)—Arrangements and a special "much oblige" to Linda Bratlie and the other Desk and Derrick girls for the added touch of beauty at the registration and refreshment tables. Over 50 of the 252 registered came from "outside" and the 30 University of Alaska and Alaska Methodist University students inclined to make some of the political, environmental, and ecological discussion a little more hairy.

There are some things the AGS does middlin, some tolerable, but for plain or fancy, catch-as-catch-can, grab ice, Ice Breaking we do well, which is how we started Tuesday nite April 4. Most participants being through ice-breaking by Wednesday noon, we enjoyed a luncheon meeting and "Comments about AAPG" by President-elect James E. Wilson. Followed by a very informative discussion of "Russian Arctic Petroleum Provinces" by Dr. A. A. Meyerhoff, AAPG Publications Manager (Hope I got it right this time Art.) With all of their hydrocarbon potential, seems like about the only chance that the U.S. has in energy competition is to export all of our more rabid environment and ecology faddists to Russia. This probably wouldn't help long though because most

(Continued on Page 5)

San Joaquin

The announcement of the 1972-73 officers for the San Joaquin Geological Society was made at the April 11, 1972 meeting. The new officers are:

President — Bob Hoffman, Consultant
 Vice President — Ben Leverett, Consultant
 Secretary — Don Taylor, Tenneco West, Inc.
 Treasurer — Les Hill, Division of Oil & Gas
 Delegate to Pacific Section AAPG — Jim Benzley, Gulf Oil Co.
 Delegate to National AAPG — Louis Villanueva, Getty Oil Co.

Volume 4 of the "Selected Papers presented to the San Joaquin Geological Society" will be distributed free to all San Joaquin Society members. This fantastic give away will take place May 9th at the regular dinner meeting. The shelf index for this publication is \$16 per inch which places it in the very respectable range of bargains. In other words non-SJGS members will get a good deal at \$2.00 per copy.

So you'll come

Dear Editor:

I would like to remind all the active members of the San Joaquin Geological Society of the important topic of discussion for the May 9th meeting. Besides the regular preliminary refreshments, cordiality hour, and steak feed, the Society will be discussing the proposed Constitution and Bylaws.

As most of you know by now, a great deal of time and effort has been spent in the preparation of this document. At least seven different state and national geological societies' constitution and bylaws were studied in the process of developing the final draft of the San Joaquin Geological Society document. After several interesting and lively discussions, the Committee for the present draft of Constitution and Bylaws was unanimous on 99% of its contents.

To expedite the matter, the Committee unanimously decided to present the document to the Society for review and discussion.

For those of you who are interested to know exactly what specific points the Committee found most difficult to resolve they should make sure to attend the next meeting and make inquiries. The areas of difficulty included the requirements for holding office and the payment of dues for special individuals.

The Committee hopes that all of you have read a copy of the draft and are well prepared for any discussion. If you do not have a copy of the document, please call me at 399-2961 and I will see that you get one.

The present plans are that the Constitution and Bylaws will be discussed at the May 9th meeting and if any changes are needed they will be made. The Society will then mail out a copy of the Constitution and Bylaws and a ballot for the voting and adoption of this document.

Hope to see everyone at the meeting.

Respectfully yours,

LOUIS F. VILLANUEVA

Cigars, knives and guns will be checked at the door prior to the meeting.

Los Angeles

William C. Gussow is now residing in Japan since his retirement from the Union Oil Company Research facility in Brea. Bill is a consultant to the Japan Petroleum Development Corporation, Sankaido Bldg. No. 9-13, 1-Chome, Akasaka, Minado-Ku, Tokyo.

Bryan Kimmel and John Randall, Union, Santa Fe Springs, received transfers this month. Bryan will be house hunting in Ventura, and John will do likewise in Bakersfield.

Welcome to Jim Niske, who has joined the exploration staff of Union at Santa Fe Springs. Jim has had some years with the U. S. Navy, some Alaska summers with Union, and attended school at West Washington University and the University of Wisconsin.

"Aloha" to John Forman and Lloyd Edwards for their recent attendance at the GSA Convention in Honolulu. Their joint paper presented was titled "Miocene Volcanic Reefs, Fisherman Cove Area, Catalina Island".

ROD G. GALVIN

MEMORIAL FUND

The Bob Patterson Memorial Fund has been closed with the final distribution of the fund balance of \$625 to the children's guardian for educational purposes. The children, Gary and Linda, now live in Reno. They are deeply grateful to Bob's many friends whose help came at a critical time of their lives.

ANTHONY E. L. MORRIS

Pacific Section

The March, 1972, Joint Annual Meeting of the Pacific Section AAPG-SEPM-SEG in Bakersfield was stimulating and technically rewarding. Financial success was assured by CASH donations to the convention by contractors and suppliers to the industry who identified their continued prosperity with education of explorationists. These firms listed below merit your esteem and consideration for future patronage.

- Aero Service Corporation
- Apex Equipment Company
- ** Beeline Drilling Company
- Big Chief Drilling Company
- Borst & Giddens Oil Well Logging Service, Inc.
- Core Laboratories, Inc.
- Dresser Industries, Inc. — Oil-field Products Division
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- ** United Geophysical Corporation (Bendix)
- Welex, A Halliburton Company
- Western Geophysical Company of America
- Western Oilfields Rental Company

**Denotes Three-figure contribution

Would you like to get that good feeling of accomplishment? Pick up the phone now and call two of the above friends and thank them for their support.

DID YOU KNOW . . .

The Employment Committee Chairman reports that a Junior and a Senior Geologist positions are available for Uranium exploration in the Rocky Mountains area. For specifics contact Mike Rector, 3100 Linden Avenue, Bakersfield 93305.

* * *

A Bakersfield Geologist would like to purchase a good used Petrographic Microscope. If you know of one that is available, please let us know at Bakersfield College.

ERRATUM

It has been brought to my attention that the coordinates of sample number 8, that we furnished on the field trip of March 11, are wrong. The identification slip read:

AAPG-SEPM Field trip 3/11/72
SPL # 8 Middle Eocene Shale just above Avenal SS has Laiming B-1 (Domengine) Fauna.
3100' S and 4000' W, NE Corner, Section 35, T.23S., R.17E., M.D.B. & M.

The Correct coordinates are:
1500' S and 1600' W from above corner.

EDWIN H. STINEMEYER

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(415) 948-8977

Northwest.....ROLAND J. BAIN
Sacramento.....(916) 481-6729
San Joaquin.....LEON J. EARNEST
(805) 399-2961

Recommended Reading.....LUCY E. BIRDSALL
NEWSLETTER of the Pacific Section—American Association Petroleum Geologists is published monthly by the Pacific Section.

Material for Publication and requests for previous copies should be addressed to STANLEY E. KARP—GEOLOGY DEPT., BAKERSFIELD COLLEGE, BAKERSFIELD, CALIF. 93305.
Material received by the 15th of each month will be included in the following issue.

CHANGE OF ADDRESS, subscription and membership inquiries should be directed to MEMBERSHIP SECRETARY, PACIFIC SECTION AAPG, P. O. Box 17486, FOY STATION, Los Angeles, Ca. 90017.

Change of Address

THOMAS T. OLDROYD

Sun Oil Co.
P.O. Drawer 38
Calgary, Alberta
Canada

E. H. VALLAT

P.O. Box 2026
Port Angeles, Wash. 98362

RICHARD E. FAGGIOLI

Std. Oil Co. (N.J.)
1251 Ave. of the Americas
New York, N.Y. 10020

GERALD E. MARRALL

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Denver, Col. 80203

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WILLIAM C. GUSSOW

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9-13, 1-Chome, Akasaka
Minato-Ku, Tokyo, Japan

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439 Mavis Dr.
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GORDON R. BELL

4824 Pico Ave., #A-4
Bakersfield, Cal. 93306

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EUGENE F. REID

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Bakersfield, Cal. 93303

FRANK E. WEAGANT

602 - H. Street
Bakersfield, Cal. 93304

NORMAN WIENER

18687 Kirkcoln Lane
Northridge, Cal. 91324

STANLEY C. BOICOURT

33 Mt. Whitney Dr.
San Rafael, Cal. 94903

PHIL A. MUNDT

c/o U.S. Natural Resources
3000 Sand Hill Rd.
Menlo Park, Cal. 94025

CLAUDE A. PHELAN

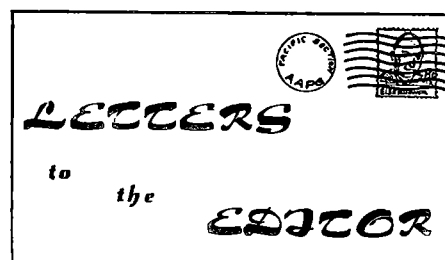
Std. Oil Co. of Cal.
P.O. Box 3862
San Francisco, Cal. 94119

RODNEY NAHAMA

602 - H St.
Bakersfield, Cal. 93304

EDWARD C. SIMPSON

3375 Tice Creek Dr., #2
Walnut Creek, Cal. 94595



Dear Sir:

The following piece of graffiti was found on the wall of the old Hancock comfort station in Bakersfield.

Convection
Subduction
Rift and
Rise
Rafting and
Mantle
Tectonics and
Size
Deep seated
Shallow
Stable and
Plating
Arcs and
Oceans and
Continents skating

The edge of sialic
With overthrust bedding
It's a comfort to know
The sea floor is spreading

JEAN B. SENTEUR DE BOUE
Geologic Poet

It looks like those back issues of the GSA Bulletin we lift inspired Monsieur Senteur De Boue. But really now, there must be a better way to popularize geology.

Guest Editorial

(From Page 1)

yet work hard on policy as well as with facts. We, each of us, grow in direct proportion to our love of this profession and our belief in this as one of the most basic of all sciences — Geology (and that includes geophysics, geochemistry, geobiology, and geologic engineering). "United we stand, divided we fall" may be trite, but it has always been true. And never forget "Nature maintains a stony silence before the passive empty mind." Ralph Waldo Emerson once said, "We are of different opinions at different hours, but we always may be said to be at heart on the side of the truth." Amen! So, let's get on with our work.

SHERMAN A. WENGERD
President, AAPG

CALENDAR for May

S	M	T	W	T	F	S
	1	2	3	4	5	6

- 1 BAKERSFIELD COLLEGE — Biostratigraphy Seminar, 7:30 P.M. SE 56. Dr. Harry E. Cook, U. C. Riverside, "Geologic History of the Equatorial Pacific, Leg 9, Deep Sea Drilling Project, Tahiti to Panama."
- 1 GEOLOGY SPEAKERS FORUM Cal State, L.A., 4 P.M. Science 273 Dr. Robert Sharp, California Institute of Technology. "Some Geological Aspects of Mariner 9 Mars Photographs."
- 2 USC SPRING LECTURE SERIES Stauffer Science Lecture Hall, Dr. Yu-Chia Chung, Scripps Institution. Rn²²² and Ra²²⁶ in the Ocean: Potential Tracers For Mixing and Circulation Studies."
- 8 GEOLOGY SPEAKERS FORUM Cal State, LA. 4 P.M. Science 273 Mr. Dean Morgridge, Humble Oil Co., "The Geology and Discovery of Prudhoe Bay Field, Eastern Arctic Slope, Alaska."
- 9 SAN JOAQUIN GEOLOGICAL SOCIETY—American Legion Hall Constitution and Bylaws Discussion and Revision. See Sectional News.
- 9 USC SPRING LECTURE SERIES Mr. James Gibson, USC. "Foraminiferal Biostratigraphy of The Anita Formation, Western Santa Ynez Mtns., Santa Barbara Co., Calif." and Mr. Larry Doyle, USC, "Some Tectonic and Paleogeologic Aspects of the Southern Half of the California Borderland."
- 15 GEOLOGY SPEAKERS FORUM Cal State LA. 4 P.M. Science 273. Dr. Gordon Gastil, San Diego State. "Mesozoic Reconstruction of California and Northwestern Mexico."
- 16 USC SPRING LECTURE SERIES Noon. Dr. Ivan Colburn, Cal State, LA. "The California Cretaceous: Basin Analysis."
- 19 NO. CALIF. CHAPTER OF API—Field Trip to The Geysers.
- 20 & 21 GEOLOGICAL SOCIETY OF SACRAMENTO ANNUAL FIELD TRIP: North Coastal Geology and its relationship to Global Tectonics (overnight stop at Fort Bragg). For information: Ad Goldschmidt, 7348 Nob Hill Drive, Carmichael, Calif. 95608.
- 22 GEOLOGY SPEAKERS FORUM Cal State, LA, 4 P.M., Science 273.

Dr. Adolph Pabst, UC Berkeley "Comments on Mineralogical Techniques."

- 26 SACRAMENTO PETROLEUM ASSOCIATION — Annual Golf Tournament and Steak Dinner: Yolo Flyers Club, Woodland, Calif.

June

S	M	T	W	T	F	S
				1	2	3

ATTENTION: The month of June has been cancelled due to lack of interest.

Sacramento

Sarge Reynolds and Art Hawley made it to Hawaii for the GSA Convention.

Local geological groups got together and proved that it's possible to get geologists out of their cages to support a function. The Sacramento Petroleum Association, AIME, the Association of Engineering Geologists and the Geological Society of Sacramento jointly sponsored a dinner-meeting to hear Ed Welday, Senior Marine Geologist with the Division of Mines & Geology, speak on "Marine Mineral Resources". One hundred attended.

ROLAND BAIN

Coast

NO REPORT.

New Members

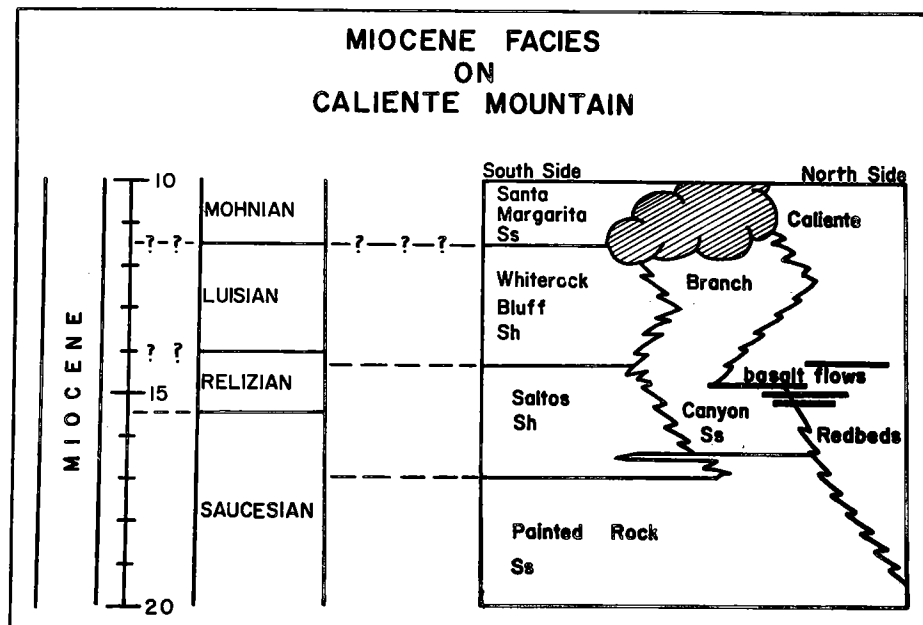
- CHARLES T. REEDER
Cities Service Oil Co.
P.O. Box 1403
Thousand Oaks, Cal. 91360
- HUGH McLEAN
238 So. Kingsley Dr.
Los Angeles, Cal. 90004
- T. GEOFFREY CLARKE
c/o General Delivery
Santa Barbara, Cal. 93102
- JAMES J. PEACOCK
413 Hewlett
Bakersfield, Cal. 93309
- TERRY PLUMB
Signal Oil & Gas Co.
3091 Fair Oaks Blvd.
Sacramento, Cal. 95825
- ROBERT E. GARRISON
Earth Sciences Board
University of Cal.
Santa Cruz, Cal. 95060
- JOHN T. SCHULENBERG
c/o Chevron Overseas Pet.
555 Market St.
San Francisco, Cal. 04105

Northwest

NO REPORT.

Caliente Mountain

The careful reader must have wondered last month why Jay Phillips ended the abstract of his paper on the Caliente Mountain with "vertical linear dimensions . . .". Well, your ding-a-ling Editor did it again. We failed to include the illustrations and now correct last month's omission. For those of you who save the *Newsletter*, April and May will now be companion issues.



The vertical linear dimension is time in millions of years before the present.

MAY 1972

QUESTIONNAIRE

	YES	NO
Do you favor a Compulsory Continuing Education Program for all Geologists to renew their State Registration?	_____	_____
COMMENT: _____ _____ _____		
Do you support the concept that all States should require registration of Geologists? . . .	_____	_____
COMMENT: _____ _____ _____		
Would you favor the establishment of a "Speaker's Bureau" — a list of speakers who would be available to Clubs, Scouts, etc., for the purpose of "popularizing" Geology?	_____	_____
COMMENT: _____ _____ _____		
Would you agree to a \$3.00 increase in Pacific Section dues — the money to go to a Publication Fund. Each member would receive a "Free" publication (Guidebook, Selected Papers, Cross Section, etc.) each year. The printing of 1300+ copies is much cheaper per copy. . . .	_____	_____
COMMENT: _____ _____ _____		
Should the Pacific Section establish a Scholarship Fund? The money going to a college geology major or a graduate assistant for work on some petroleum related project.	_____	_____
COMMENT: _____ _____ _____		
Would you favor a Pacific Section Distinguished Lecture Tour for the Western States? Papers would be of Regional interest and receive financial support from the Pacific Section. . . .	_____	_____
COMMENT: _____ _____ _____		
Should the Pacific Section take a stronger position on political legislation?	_____	_____
How? _____ _____		
Should the Pacific Section work toward improved employment practices?	_____	_____
How? _____ _____		
Should the Pacific Section work toward improving the environment?	_____	_____
How? _____ _____		

What should be the major functions of the NEWSLETTER? Please rank in order of importance. Gossip (Sectional News, Transfers, etc.) _____; Sounding Board (Letters, Guest Editorial, etc.) _____; Educational (Abstracts, Bibliography, etc.) _____; Activities (Calendar, Conventions, Field Trips, etc.) _____; Other (please specify) _____

Would you favor a "Want Add" column for Positions Wanted, Positions Available, etc.? _____ (YES) _____ (NO)

Would you object to "Limited" advertisements in the NEWSLETTER to help defray printing and mailig costs?

(YES)

(NO)

COMMENTS: _____

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DEGREES EARNED YEAR AND SCHOOL (1st) _____

(2nd) _____ (3rd) _____

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PLACE
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HERE

PACIFIC PETROLEUM GEOLOGIST NEWSLETTER

P.O. BOX 17486 FOY STATION
LOS ANGELES, CA. 90017

GEOHERMAL CONFERENCE

or a hot time in the old town

The First National Conference of the Geothermal Resources Council held at El Centro in February of this year, was successful beyond the most optimistic hopes of the Council. The original estimate was 250 to 300 attendees but more than 650 people were present from 44 states and three foreign nations.

In spite of the problems created by the unexpected turnout, all of the scheduled activities took place. The field trip to the Cerro Prieto steam field in Mexico was attended by more than 325 members. The Mexican government is to be highly congratulated for conducting an excellent trip, and their gracious hospitality will long be remembered by all those who attended. A second highly successful field trip to the geothermal areas in the Imperial Valley was attended by approximately 30 members.

Following is a list of publications generated by the Conference:

1. "Compendium of First Day Papers Presented at the First Conference of the Geothermal Resources Council, El Centro, California, February, 1972." This publication contains papers on worldwide occurrences of geothermal phenomena, federal geothermal leasing and operating regulations, geothermal exploration techniques, geology of the Imperial Valley, geothermal legal problems, the Sierra Club views on geothermal development, and two papers on dry steam and flashed steam power plants. It should be in print by the end of March and will cost \$4.
2. "Geothermal Overviews of the Western United States" (including Hawaii). This publication contains articles from 12 western states and information on the geology, geothermal potential, future power needs, regulatory agencies, and references on published papers on each state. This publication is available now at a cost of \$6.
3. "List of El Centro Conference Attendees". The list contains names, company affiliations, addresses, and phone numbers of all registered members. It will be available in about two weeks at a cost of \$2.

To obtain the above publications, write:

Geothermal Resources Council

P.O. Box 1033
Davis, California 95616

All of the above prices include postage. Make check or money order payable to the "Geothermal Resources Council".

Cows That Again?

Energy Crisis and
Environmentalists
Spark Unexpected Fallout
Latest Research Shows
New Oil Sources

Energy from wastes is a new scientific frontier. Across the nation recently, researchers have been going at full throttle seeking ways to bolster our dwindling energy resources. Simultaneously, others have sought ways to utilize the growing mountains of refuse accumulating at the fringes of our urban areas. Inevitably, the two groups met on common paths — and not without some interesting results.

Already, in St. Louis, a pilot plant is under way to grind up refuse and municipal wastes to mix with pulverized coal for burning to generate electricity. In California an oil company has developed a process to convert garbage and trash into low sulfur oil. Another technique developed in Japan converts waste plastics into a fuel oil. Most intriguing however, is a process developed by the U. S. Bureau of Mines in Pittsburgh. Promised is a possible wedding between agriculture and the nations oil industry.

Bureau scientists report a process to turn cow manure (no "bull") into marketable crude oil. Conversion efficiency would be 40% to 50% or about two tons of manure to make 1 ton of oil. The implications of this discovery staggers the imagination.

A quick run through the arithmetic related to our present domestic consumption of crude oil reveals the following:

Our present consumption of crude oil is 13 million bbls. daily. At 42 gallons per barrel and 7 lbs. per gallon, the weight of crude consumed each day is 3.82 billion lbs. Assuming a conversion efficiency of 40%, the weight equivalent in cow manure is 9,555,000,000 lbs. daily! Making the further assumption that an average cow is capable of a 5 lb. daily output (dry), we can develop that 1.92 billion cows or 8.75 cows per capita would supply our present needs in petroleum products. Truly, this is something to consider. Here "Bossy".

C. L. HOYT

We agree. That sounds like a lot of bull.

Alaska . . .

(From Page 1)

of them would probably shrink up about a head shorter in a week.

Wednesday evening George Gryc, John Mulligan, Bill Fackler, and Robert Forbes kicked off by painting Alaska red. Even after coloring in all of the past and planned coverage by the various U.S. and State Geological groups, we still have a lot of white left — if we can just keep it the State of Alaska and not Alaska National Park. James L. Wilson and Perry Roehl topped off the evening for the Lisburne fans "learn-in" us about carbonate facies and reservoirs. Couldn't help but notice how much experience (you know, wrinkles and gray) that I seem to have added since Jim taught me paleo at Armadillo U. (1950), while he appeared to have not weathered much at all.

Thursday afternoon David Stone, George Plafker and David Jones presented papers on Paleomagnetism, Tectonic History, and Mesozoic and Paleozoic rocks in all or parts of Alaska, and laid the foundation for same "Plate Tectonic" discussion later. I thought the little 4.7 door swinger a few minutes after adjournment added considerable tectonic realism and was just a real nice touch.

Roland von Heune lead off Thursday nite with "A Study of Outer Margin Structure off Kodiak Island" which entrenched us in Aleutian subduction, followed by A. A. Meyerhoff speaking on "Plate Tectonics: Marathon of Errors." Recognizing later why the title was chosen, but working for MRO, I can't help suggesting a possible alternate title such as "Plate Tectonics: A Humble Union of Standard, Mobil, Atlantic, Pacific, Gulf, and Continental, Shell Errors."

You can see that the plot thickened for a lively verbal donnybrook when the panel of speakers was assembled by the referee for the wrap-up. Art Meyerhoff was out-numbered but not out thought, spoken, or fought and the G-Men were worthy opponents. Call it a dead heat. Next time though in addition to checking the usual weapons, we gonna have to shake everybody down for oosiks too.

Next month is break up and I'll try to write a little about that big mudder—Meantime.

Buenos snowshoes youall,

DICK E. ATCHISON

SAN FERNANDO EARTHQUAKE

February 9, 1971

Received in the mail the other day, a copy of the Pacific Fire Rating Bureau review of the San Fernando earthquake. The 93 page report may be purchased from the *Insurance Service Office*, Pacific Fire Rating Bureau, 465 California St., San Francisco, California for \$2.00. It is this reporters opinion that the two dollars is money well spent. Some of the interesting facts and conclusions resulting from this quake are as follows:

1. A total of 58 deaths and over 2500 hospital treated injuries were recorded — 47 of these deaths occurring as a result of the collapse of a non-earthquake resistive structure at the Veterans Hospital.
2. Insured dollar losses will be at least \$31,000,000. Losses to buildings and other structures were estimated at \$511,000,000.
3. In the highest intensity zone (above the thrust fault block) modern earthquake resistive structures collapsed or were severely damaged. The forces far exceeded building code earthquake requirements.
4. The fault had not been identified as being potentially active, illustrating that criteria and procedures needed to locate and identify such faults are vital, particularly for metropolitan Los Angeles.
5. The four major hospitals (structures vital to public need after a

disaster) did not remain functional. There is no legal restriction which will prohibit the construction of hospitals or other vital facilities on known earthquake faults.

6. The near catastrophic failures of the older hydraulic fill (earthen) Lower and Upper San Fernando Dams have required a detailed re-evaluation of a number of similar dams throughout California, and pose a special underwriting problem for structure below these dams.
7. High-rise earthquake resistive buildings, located 15 to 25 miles from the epicenter, suffered more damage than did adjacent low-rise earthquake resistive construction.
8. Failure of numerous freeway bridges pointed out the need for substantially increased design requirements. Critical overpasses that *must* remain functioning, should have earthquake resistive design considerably in excess of other freeway structures.
9. General Telephone's central office in the Sylmar section of Los Angeles was destroyed due to equipment toppling, thereby eliminating 9,500 telephones. Communications for fire and other emergency services throughout a 9 mile area of San Fernando Valley were immediately ineffective after the earthquake.
10. Public schools, constructed under the provisions of the State of California's Field Act preformed excellently as they also have in previous earthquakes.

ED KARP

RECOMMENDED READING

U.S. GEOLOGICAL SURVEY

Professional Paper 699: New and little-known ammonites from the Upper Cretaceous (Cenomanian and Turonian) of the western interior of the United States, by W. A. Cobban \$1.25

Professional Paper 727: Distribution of gold in igneous rocks, by David Gottfried, J. J. Rowe, and R. I. Tilling 50c

Professional Paper 735: Chemistry of Kilauea and Mauna Loa lava in space and time, by T. L. Wright50c

Professional Paper 750-A: Geological Survey Research 1971, Chapter A, 1971\$3.25

Bulletin 1325: Mineral resources of the Pasayten Wilderness Area, Wash. by M. H. Staatz, P. L. Weis, R. W. Tabor, J. F. Robertson, R. M. Van Noy, E. C. Pattee, and D. C. Holt, with a section on Aeromagnetic interpretation, by G. P. Eaton and M. H. Staatz\$2.25

Water Supply Paper 1873-C: Physical, chemical and biological aspects of the Duwamish River estuary, King County, Wash., 1963-67, by J. F. Santos and J. D. Stoner40c

Water Supply Paper 1988: Definitions of selected ground-water terms—Revisions and conceptual refinements, by S. W. Lohman and others25c

MAPS:

GQ 667: Geologic map of the Kilauea Crater quadrangle, Hawaii by D. W. Peterson\$1.00

HA 423: Flood of January 1969 near Ventura, Calif., by J. A. Singer and McGlone Price\$1.00

LUCY E. BIRDSALL

NEWSLETTER

Pacific Section A.A.P.G.

P.O. Box 17486 Foy Station
Los Angeles, California 90017



NEWSLETTER

of the Pacific Section
American Association of Petroleum Geologists

VOLUME 26

JUNE, 1972

NUMBER 6

Pacific Section

The ballots are in and counted. Congratulations to the new officers of the Pacific Section. Our new leaders will take office July 1 and they are as follows:

President — ART SPAULDING — City of Los Angeles.
Vice-President — BILL EDMONDSON — Reynolds & Edmondson, Bakersfield.
Secretary — JIM WEDDLE — Division of Oil & Gas, Sacramento.
Treasurer — LOU VILLANUEVA — Getty Oil, Bakersfield.

With officers from L.A. to Sacramento, where will they hold the Executive Committee meeting? Buttonwillow? Delano? or Weedpatch?

* * *

ANNUAL SPRING BARBECUE FIELD TRIP & GOLF TOURNAMENT FRIDAY, JUNE 2, 1972 FIELD TRIP:

Chairman, Dr. Donald Weaver, U.C. S.B., assisted by Tom Dibblee and others.

Place:

Assemble by 9:00 a.m. at TUCKERS GROVE. Take TURNPIKE offramp from U.S. 101 (2 miles west of San Marcos Pass Road.) Go north $\frac{3}{4}$ mile to Tuckers Grove. Field trip coverage will include Cretaceous and Tertiary Sequence of the Western Santa Ynez Mountains from San Marcos Pass to Gaviota Pass. In general, this is the same sedimentary sequence as is present in the offshore Santa Barbara Channel. Lunch stop at Nojoqui Falls County Park about 1:00 p.m.

Cost:

\$5.00/person includes tasty lunch and handsome 60 page \pm guide book. Additional guide books will be sold at \$3.50 per copy.

GOLF TOURNAMENT:

8:00 a.m. - Noon. Chairman: Barney Yancey.

Place:

Ojai Valley Inn, Ojai, California.

Cost:

\$7.00 includes green fees, prizes, and

refreshments.

Groups:

If you have a foursome, elect one member to list names on his reservation card. Otherwise, list your own name and chairman will form foursomes and notify you of pairings and starting times.

BARBECUE:

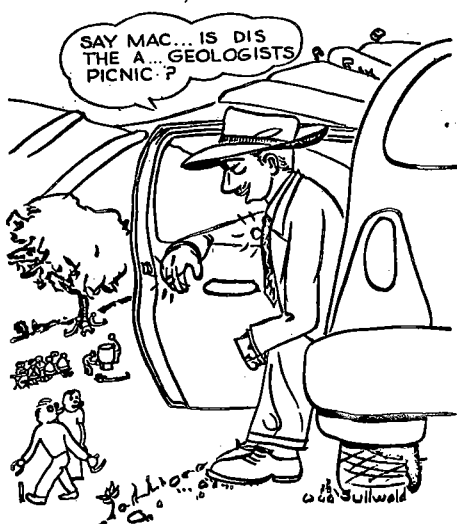
4:00 p.m. till late. Chairman: Charlie Lee. Dinner at 6:00 p.m. (hopefully).

Place:

By special arrangement with Signal Oil & Gas Company we are returning to the beautiful Dos Pueblos Beach Barbecue facility. Arrangements have been made to tour the orchid farm hot houses for those interested.

Cost:

\$4.00 includes hor d'oeuvres, barbecued steaks and beverages. (Keg beer and soft drinks.)



Sully informs us that his first cartoon appeared in the Jan. 1949 issue of the PPG. We would like to acknowledge 23 $\frac{1}{2}$ years (are you really that old, Sully?) of service to the Pacific Section and (excuse that nasty word) the Newsletter.

Northwest

NO REPORT.

Los Angeles

SPRING FAMILY FIELD TRIP A GREAT SUCCESS

The L.A. Basin Geological Society Family Field Trip Series began on a high note this year with the first trip to Joshua Tree National Monument on Saturday, April 29. A group of about 35 met at Hidden Valley Campground where the trip began with a short hike to an Indian petroglyph site led by Tom Baldwin who also talked about the natural history of the area. The trip continued to Salton View overlooking the Imperial Valley where Dr. Tom Clements discussed the geology of the Monument region. Following lunch, the group traveled to another early indian site where Dr. Clements' wife (Lydia), a noted archaeologist, discussed the history of early man in the valley. The trip ended at the Cholla Cactus Gardens in the Pinto Basin. A large campsite was available both Friday and Saturday night for those who wanted to spend the weekend in the Monument. Pac. Section members will want to watch the Newsletter for announcement of the next trip.

* * *

We were honored at our April 24th noon luncheon by the presence of our National President, Sherm Wengard, accompanied by his lovely wife, Florence. The happy occasion was the presentation of a Certificate of Merit to one of our finest members — Joseph Jensen. Mr. Jensen has been an active geologist in the Los Angeles area for a very long time and is greatly esteemed not only by his fellow geologists, but by the community as well. The citation reads as follows:

"FOR OUTSTANDING ACHIEVEMENT for long and distinguished service in all phases of the Petroleum Industry; Engineering, Geology, Conservation, Management; for continued devotion and generous application of skills to public service at the highest levels in California, both in oil and

(Continued on Page 3)

CALENDAR for June

S	M	T	W	T	F	S
				1	2	3

1. COAST GEOLOGICAL SOCIETY
Noon Luncheon, Swedish Kitchen,
Ventura.
2. PACIFIC SECTION Spring Barbe-
cue, Field Trip and Golf Tourna-
ment. See Pacific Section News for
details.
2. NORTHERN CALIFORNIA GEO-
LOGICAL SOCIETY. Rickeys Hy-
att House, Palo Alto. R. D. Hovey,
Standard, "Applications of Geo-
physical Techniques To Solutions
of Selected Geologic Problems In
the Soviet Union." See Sectional
News for details.
8. COAST GEOLOGICAL SOCIETY,
Noon Luncheon, Casa de Soria,
Ventura.
14. (TENTATIVE)—John N. Truex,
Thums Long Beach Co., "Fractured
Basement Reservoir Production",
Noon luncheon, Roger Young Aud-
itorium, Washing Blvd., Los An-
geles.
15. COAST GEOLOGICAL SOCIETY,
Noon Luncheon, Dave's Deli, Ven-
tura.
- 19-30. UNIVERSITY OF CALIFOR-
NIA BERKELEY. Two-week in-
tensive course. "Earthquake Engi-
neering: Earthquake-Resistant De-
sign of Engineering Structures".
Fee: \$250 for one week or \$425 for
both weeks. For more information
contact — Continuing Education
in Engineering, University of Cali-
fornia Extension, 2223 Fulton St.,
Berkeley, CA. 94720.
22. COAST GEOLOGICAL SOCIETY,
Noon Luncheon, Shakey Pizza,
Ventura.
29. COAST GEOLOGICAL SOCIETY,
Noon Luncheon, Swedish Kitchen.

Sacramento
NO REPORT.

Alaska
NO REPORT.

LETTERS

to the
EDITOR

Dear Eddy Tor:

Well, Fearless Fosdick here warmly appreciates your erudite correspond-
ence with my old friend Senteur de
Boue — whom I have loved ever since
the days of that peerless development
for oil-finding known as the "de Bou-
gameter" — don't know how many I
have personally worn out, hunting. But
Ian Campbell and I agreed only last
week up at his apartment that the com-
bined heading for the publication which
you edit (is that the word I want?) is
satisfactory, serves all needs and repre-
sents a equivocal settlement of old moss-
backers, like us.

You win the attachment because of
one small squib therein — namely "In
a minute" — which reverts to the above
de Boue discussion. And while I like
the several nice new distance measure-
ments, I will confess that I always
thought that a "far piece" was a woman
a long ways away. Well, I was always a
Quakerish type, i. e. a piece loving kid.

When are you going to put in a Re-
cipe Corner, Huh?

BILL BEATTY

*Glad to hear that you and Ian concur
with the name change, but who is going
to read the Newsletter now that the dust
is settled. As for the Recipe Corner, I
thought that was covered in the "Let-
ters" department. There were a few
good recipes on how to "boil karp in
oil". I see that we will have to dust off
some of our old cooking guides for
ARCOchokes with UNION sauce,
GULFile fish, GETTY de Foie Gras,
Oysters on the half SHELL and of
course that great dessert HUMBLE Pie.*

*A word of caution, the above Un-
forgettable Supreme Gastronomic Sy-
baritec experience may produce the
TENNECO Two-step. Try it, you'll like
it.*

Dear Editor.

Regarding C. L. Hoyt's recent letter
regarding the conversion of cow manure
to crude oil, I think a little re-evaluation
of the arithmetic is in order so that your
readers do not get a bum steer.

According to the World Almanac
there are approximately 115 million
cattle in the U.S. If we assume that each
cow is capable of 10 lbs. of output and
that technological advances in the con-
version process reach 65% (as well they

(Continued on Page 5)

Change of Address

- RICHARD M. BURNS**
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- R. F. DILL**
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Marathon Oil Co.
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Texaco, Inc
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Rm. 924
Los Angeles, Cal. 90010
- CORNELIUS G. WILLIS**
445 So. Figueroa St.
Los Angeles, Cal. 90017

GEOLOGICAL REVIEWS

North American Stratigraphic Principles As Applied To Deep Sea Sediments

H. E. Cook*

University of California, Riverside
92502

North American stratigraphic principles as developed by geologists mapping on continents can be applied to deep sea sediments. The ability of the Deep Sea Drilling Project to obtain long cored intervals at numerous ocean basin sites provides sufficient data for the establishment and lithologic correlation of rock-stratigraphic units (e.g. formations).

Deep sea sediments should be divided and reported in terms of distinctive lithologic units which may be assigned rock-stratigraphic names if there is reasonably good evidence of their continuity. This practice is preferable to current stratigraphic practices in oceanography of designating sediments in time-stratigraphic terms. The generally accepted North American usage of formation as a lithologic mappable unit devoid of any time connotation is recommended over the European usage of formation which often is actually a time-stratigraphic unit correlated across major facies changes.

Legs 8 and 9 of the Deep Sea Drilling Project recovered 2700 m of core in fifteen sites (sites 69-84), spread over a distance of 7500 km along the equatorial Pacific. Two of Leg 8 sites (74, 75) and each of Leg 9 sites (77-84) were cored to basement. Sites 70 and 77 were divided into several lithologic units that served as a standard of reference for Leg 8 and 9 sites respectively. The consistent stratigraphic sequence and areal distribution of these lithologic units led scientists on Leg 8 and 9 to jointly adopt four deep sea formations: The Line Islands Oceanic Formation, Marquesas Oceanic Formation, Clipperton Oceanic Formation, and San Blas Oceanic Formation. These formations are lithologically distinct, Tertiary, diachronous units that can be traced at least 4500 km. The most useful and objective criteria to define these formations are color differences and to a lesser degree bedding characteristics. These color variations are accompanied by textural, mineralogic, and biotic changes which further aids in the characterization of these formations.

Descriptions of deep sea sediments in terms of lithologic units and the establishing, tracing, and dating of oceanic

formations can provide an improved basis for understanding the interrelationships between rock-stratigraphic and time-stratigraphic units; lithologic and biologic sedimentation changes through time and space; sea floor spreading and its affect on sedimentation patterns; depositional processes; subaerial dispersal patterns; and in better communication between oceanographers and continental stratigraphers.

* Abstract of paper presented to Bakersfield College Biostratigraphy Seminar May 1, 1972.

"Identification of Sedimentary Environments in Reservoir Sandstones"

By ROBERT R. BERG

AAPG Distinguished Lecturer

The interpretation of depositional environments for reservoir sandstones requires a knowledge of primary rock properties: composition, texture, sedimentary structures, and morphology. Each of these properties has its special significance in interpretation. Compositional and textural changes in vertical sequence are the most important criteria, but because these two properties are inter-dependent, composition alone may be a key indicator of environment. Sedimentary structures are also significant indicators of sedimentary processes. Morphology of sandstone bodies commonly suggests environment of deposition, but this criterion is the least reliable unless it is used with a knowledge of other rock properties. In fact, the interpretation of morphology is often the principal problem in stratigraphic exploration. When details of rock character are lacking, the secondary properties of porosity and permeability may be interpreted to reflect compositional and textural change because these properties are largely dependent upon the primary properties.

The use of compositional and bedding criteria is illustrated by Lower Cretaceous Muddy sandstones in the Powder River Basin, Wyoming and Montana, where fluviodeltaic and marine bar sandstones are clearly separated by compositional differences. Similar differences in composition and sedimentary structures occur in recent fluvial, deltaic, and shoreline sediments, and in Tertiary sandstones in the Gulf Coast area.

Future increases in the demand for petroleum will require more reliable and efficient methods in exploration for and development of oil and gas resources. Much of the world's undiscovered petroleum reserves undoubtedly occurs in primary stratigraphic traps that are un-

detectable by conventional exploratory techniques. The exploration geologist must become more proficient in the search for hidden traps, and the imaginative interpretation of rock properties will be one of his most dependable skills.

Abstract of paper presented to Los Angeles Basin Geological Society April 24, 1972.

"Marine Geology of the Northern Shelf of the Santa Barbara Basin: Holocene Faulting, Natural Oil Seeps, and Sediments."

By PETER J. FISCHER

San Fernando Valley State College

Along the narrow (4.5-7 mile wide) northern shelf of the Santa Barbara Basin detailed isopachs of Holocene-Pleistocene(?) sediments in conjunction with continuous profiler (sparker) records reveal an interplay between tectonics, sedimentation, shelf current patterns and natural oil seeps. A linear band of sediment (0 to 150 feet thick) consisting of finer clastics and relict gravels parallels the northern shelf edge of the basin. In-situ current meter measurements made during 1966-1967 recorded westerly flowing shelf currents (attaining velocities of one-half knot) aligned parallel to the shelf trend.

Sediment isopachs show areas of structural growth (anticline) by-passed by the sediments and areas of Holocene (Pleistocene?) faulting. Fault trends, sub-parallel to the south branch of the Santa Ynez fault, are particularly well reflected by Holocene sedimentation. This structural-sedimentological relationship is confirmed by a closely spaced series of sparker lines from Point Conception east to Coal Oil Point.

In general these active natural oil seeps are located along highly faulted-fractured, nearly east-west trending zones, which have little or no sediment cover. The postulated source of the oil seeps is the continuous vertical migration of the hydrocarbons upwards along a dense network of faults and fractures from ruptured structural traps at depth.

Shelf currents eventually deposit much of the seep oil (tar) along the beaches to the north and west of the seepage area. Similar natural seeps, particularly those off Carpinteria and Point Conception are the sources of beach "tar" along the beaches of the Santa Barbara area and the western beaches of the Santa Barbara Basin.

Abstract of paper presented to Los Angeles Basin Geological Society May 17, 1972.

Coast

New officers for the Coast Society are:

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BILL MERRILL — Consultant,
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BRUCE MacPHERSON — Conoco,
Ventura.

* * *

Cities Service is closing their Thousand Oaks office and moving most of the personnel to Denver. Among geologists who are headed to Denver are: Tom Deeter, Arlin Ehm, Jeff Heller, Vern Hill, Wen Jensen, Gus Keller, Dow Mitchell, Jim Niehaus, John Ross, Jim Steidley, Bob Thompson, and Rex Young. Activities in California and Alaska will be handled from Denver. We are at a loss for words of wisdom to impart to transferees to Denver, except perhaps: Don't use as much baking powder!

R. L. STEWART

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Recommended Reading.....LUCY E. BIRDSALL

NEWSLETTER of the Pacific Section—American Association Petroleum Geologists is published monthly by the Pacific Section.

Material for Publication and requests for previous copies should be addressed to STANLEY E. KARP—GEOLOGY DEPT., BAKERSFIELD COLLEGE, BAKERSFIELD, CALIF. 93305.

Material received by the 15th of each month will be included in the following issue.

CHANGE OF ADDRESS, subscription and membership inquiries should be directed to MEMBERSHIP SECRETARY, PACIFIC SECTION AAPG, P. O. Box 17486, FOY STATION, Los Angeles, Ca. 90017.

Los Angeles

(From Page 1)

water resources with honor to his association and benefit to the people".

We have a great deal of affection and pride in counting you as one of us, Joe.

The National Convention was highly successful, according to all reports, and those of us who didn't get to go were well represented by our faithful Delegates. The Los Angeles Basin Geological Society can take great pride in knowing that we were represented by 100% attendance at the House of Delegates meeting. I personally feel very gratified that these men were able and willing to represent us. Very few affiliated societies can claim the distinction of 100% representation. We owe a debt of thanks to the following Delegates: Jim Anderson, Orville Banndy, John Forman, Don Hallinger, Lowell Redwine, Dave Shoemaker and Roy Turner.

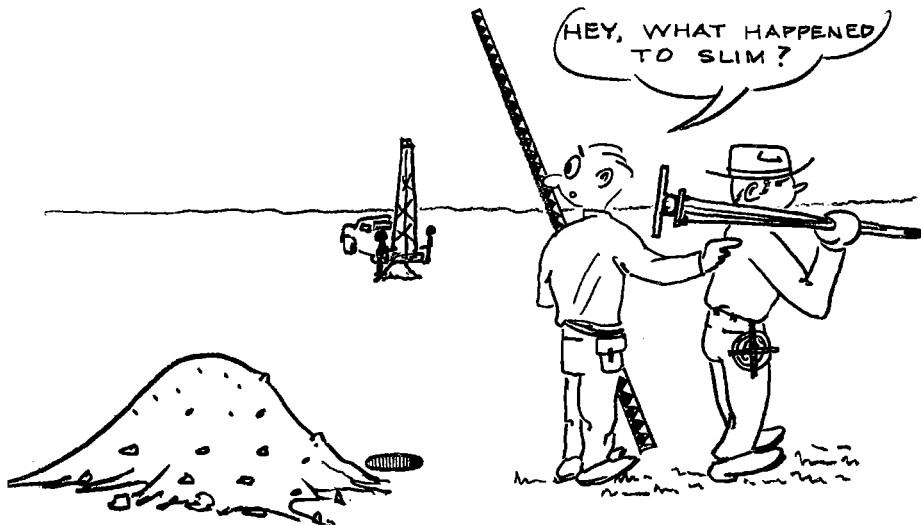
The Los Angeles Basin Geological Society had Dr. Dan Miller, AAPG Distinguished Lecturer, at their noon luncheon on March 22. Dr. Miller's paper titled "Exploration and Development for Future Energy Resources", highlighted the activities and planning that are presently under way in the central and northern Rocky Mountain states to meet the increasing need for future petroleum, natural gas, coal and uranium. Dr. Miller is the State Geologist and Executive Director of the Wyoming Geological Survey, Laramie, Wyoming.

Because of the length of Dr. Miller's paper and present space limitations, we will review his paper in a later edition.

R. W. "BOB" WAGNER

President
Los Angeles Basin
Geological Society

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San Joaquin

Phil Ryall is now an ex-Buttes employee. Phil has elected to leave the company and cast his lot with the Consultants. He will be operating out of 5913 Oakhaven, Bakersfield.

Sam Brown, who so ably handled the Pacific Section Publication sales a year or two ago will now receive his copy of the Newsletter in Tunis. Sam will keep a watchful eye on Buttes Offshore operation in Tunisia for an indefinite time.

(PLEASE TAKE ME HOME TO YOUR WIFE)

TO THE WIVES OF THE AAPG-SEPM MEMBERS:

LADIES,

I have just returned from the National Convention in Denver where over 1000 women were so hospitably entertained.

In May 1973, our husbands are hosting the National Convention at the Disneyland Hotel and we want to welcome the wives as graciously as possible.

This takes many talents. Please let me know how you would like to participate.

Thank you,

DORCHEN R. FORMAN

Ladies Hospitality Chairman, 1973

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—	GB 2-B.	Spring Field Trip, Huasna Basin, San Luis Obispo County (AAPG-SEPM) 1956. (Reproduced)	\$ 1.75
—	GB 2-C.	Guidebook, Chico Martinez Creek Area (SJGS) 1959. (Reproduced)	\$ 1.75
—	GB 3-A.	Spring Field Trip, Panoche Hills (SEPM) 1960. (Reproduced)	\$ 1.75
—	GB 3-B.	Spring Field Trip, Geol. and Paleontology of the Southern Border of the San Joaquin Valley (AAPG-SEPM-SEG-SJGS) 1961. (Reproduced)	\$ 4.00
—	GB 3-C.	Guidebook to Geol. of Carrizo Plains and San Andreas Fault (AAPG-SEPM-SJGS) 1962. (Reproduced)	\$ 3.50
—	GB 3-D.	Spring Field Trip, Devil's Canyon Area (AAPG-SEPM) 1963. (Reproduced)	\$ 1.00
—	GB 3-E.	Guidebook to the San Andreas Fault Zone from the Temblor Mountains to Antelope Valley Southern California (AAPG-SEPM-SJGS) 1964. (Reproduced)	\$ 3.50
—	GB 3-F.	Upper Cook Inlet Basin Guidebook (AGS) 1964.	\$ 3.00
—	GB 4-A.	Guidebook to Western Santa Ynez Mountains (CGS-SEPM) 1965. (Reproduced)	\$ 4.50
—	GB 4-B.	Guidebook to Placerita Area (AAPG) 1965. (Reproduced)	\$ 3.00
—	GB 5.	Geol. of Southeastern San Joaquin Valley, California-Kern River to Grapevine Canyon (AAPG) 1965.	\$ 4.00
—	GB 8.	A Tour of the Coastal Oil Fields of Los Angeles Basin in and Adjacent to San Pedro Bay, California (AAPG-SEG-SEPM) 1966.	\$ 3.50
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1967 CONVENTION FIELD TRIPS (Reproduced)			
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—	GB 9-G.	Central Santa Monica Mountains Stratigraphy and Structure	\$ 1.25
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—	GB 9-L.	Underwater Field Trip	\$ 3.50
—	GB 10.	Gabilan Range and Adjacent San Andreas Fault (AAPG-SEPM) 1967.	\$10.00
—	GB 11.	Guidebook to the Geology and Oilfields of the Westside San Joaquin Valley (AAPG-SEPM) 1968.	\$10.00

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—	GB 18.	Spring Field Trip, Ventura Avenue and San Miguelito Oil Fields (AAPG) 1970.	\$ 2.00
—	GB 19.	Upper Sespe Creek (SEPM) 1969.	\$ 6.00
—	GB 20.	Pacific Slope Geology of Northern Baja Calif. and Adj. Alta Calif. (AAPG-SEPM-SEG) 1970.	\$ 4.00
—	GB 21.	Cook Inlet Basin Oil and Gas Fields Guidebook (AGS) 1970.	\$10.00
—	GB 22.	Field Trip San Andreas Fault-San Francisco Peninsula (AAPG) 1971.	\$.50
—	GB 23.	San Fernando Earthquake Field Trip (LABGS)	\$ 2.00
—	GB 24.	Newport Lagoon to San Clemente Field Trip Guide (SEPM) 1971.	\$ 6.00
—	GB 25.	West Side Central San Joaquin Valley Field Trip Guidebook (AAPG-SEPM-SEG) 1972.	\$ 8.00
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—	MP 1.	San Andreas Fault Bibliography (AAPG) 1962.	\$ 2.00
—	MP 2.	Selected Papers Presented to the San Joaquin Geological Society, Volume 1, 1962.	\$ 3.00
—	MP 3.	Selected Papers Presented to the San Joaquin Geological Society, Volume 2, 1964.	\$ 2.25
—	MP 4.	Selected Papers Presented to the San Joaquin Geological Society, Vol. 3, 1965.	\$ 2.25
—	MP 8.	A Symposium of Papers Presented at the 40th Pacific Section AAPG Convention (AAPG) 1965.	\$ 3.00
—	MP 11.	Proceedings of North Slope Seminar (AAPG) 1970, Palo Alto, California	\$10.00
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Northern California

The Northern California Geological Society held its scheduled monthly meetings in March and April. The March meeting was held on March 20 at the Standard office at 225 Bush Street, San Francisco at noon. After a short business meeting Craig A. Lyon gave the paper titled "Stratigraphic and Tectonic Development of the Cook Inlet Petroleum Province" which was co-authored by C. E. Kirschner.

The next meeting was held on April 26th, at the El Rancho Motel in Millbrae. The meeting took place after lunch with 23 members present. David Cerkel gave a brief report on the forthcoming all-day field trip. The trip, to take place on May 20, will be led by Tom Rogers of the California Division of Mines and Geology and is concerned with the environmental geology of the northeastern flank of the Santa Cruz Mountains. Dr. Ernest Rich, president of the N.C.G.S., appointed a three-man nominating committee, composed of Wm. Barbat, chairman, and Wm. Beatty and Charles Cross. Dr. Robert R. Berg, Professor and Head of the Department of Geology, Texas A & M University, and AAPG distinguished lecturer presented his lecture titled "Identification of Sedimentary Environments in Reservoir Sandstones."

Our next meeting will be on Friday, June 2, at noon, at Rikeys Hyatt House, 4219 El Camino Real, Palo Alto. After the luncheon there will be a business meeting to elect officers, counselors and delegates for the fiscal year starting July 1, 1972. The business meeting will be followed by a talk by Mr. R. D. Hovey, Standard Oil Co. of California. The talk is titled "Applications of Geophysical Techniques to Solutions of Selected Geologic Problems in the Soviet Union." Mr. Hovey participated in the 1971 US-USSR Geophysical Exchange Program.

J. H. SAWYER

Letters . . .

(From Page 2)

should—Senators on Capitol Hill have 99.6% efficiency in the conversion of b.s. to hot air, so we know it can be done) a little cranking yields 747.5 million lbs. of crude oil or 2.5 million bbls. This, I submit, is a significant fraction of our present 13 million bbls/day rate of consumption!

Furthermore, these figures are based

on the present cattle population of the U. S. There are other cattle in the world, of course, but presumably we are thinking in terms of national self-sufficiency. The nation can always use a larger meat supply, particularly at lower prices, so the herds could quite readily be increased two or three-fold, or to the point where, along with crude oil production, domestic parity is achieved. Excess meat can always be exported, thereby improving our balance-of-payments situation, and the whole thing could snowball (or something) into a wonderful thing for humanity!

Furthermore, Mr. Hoyt and I have chosen rather arbitrary amounts for the daily output of a cow, a figure I suspect neither one of us knows enough about to stick in your eye. What if the average cow puts out not 5 or 10 lbs, but 20 or 30? We may be closer to the 13 million barrels than we think! And improvements are possible here, too—imagine a new strain of cow specifically bred for the purpose, approaching outputs close to that of the most vocal environmentalists (passing up the U.S.G.S. and college professors in the process) and you can see that almost without trying we can be up to our hips in cow manure in almost no time at all. What a wonderful prospect.

Sincerely,
GREGG CALKINS

We will continue to air this problem until we get some solid facts piled up. We still don't have the scoop on the inside story.

Did You Know

A Geologic Map of the Near Side of the Moon by D. E. Wilhelms and J. F. McCauley, 1971, 35 x 53-in., with 7-page summary text. Prepayment of \$1 is required. Order from Distribution Section, US Geological Survey, 1200 South Eads St., Arlington, VA 22202 (#I-703).

There were only 4,462 wildcat wells drilled in the United States in 1971 in attempts to discover new oil or gas fields — a decrease of 12 percent compared with 1970 and the lowest number of new-field wildcats since 1949.

Of these 4,462 wildcats, only 434 were completed as producers, for a success of 9.7 per cent. The number of new fields was a decrease of 11.9 per cent below 1970's total of 493 new fields. The new fields discovered 469 million barrels of oil and 5 trillion cubic feet of natural gas, a decrease of 28.7 per cent in liquids and 7 per cent in gas compared with 1970 discoveries. (*And this year we will consume 5.75 billion barrels of oil and 23 trillion cubic feet of natural gas*).

Recommended Reading

U. S. GEOLOGICAL SOCIETY

- B 1314-D: Distribution of minor elements in biotite samples from felsic intrusive rocks as a tool for correlation, by T. G. Lovering 25c
B 1318: Geochemistry and geology of deep drill holes at Iron Canyon, Lander County, Nev., by T. G. Theodore and R. J. Roberts, with a section on Geophysical logs of drill hole DDH-2, by C. J. Zablocki \$1.00

MAPS

- GQ 960: Geologic map of the Mt. Barcroft quadrangle, California-Nevada, K. B. Krauskopf. \$1.00
GP 757: Aeromagnetic map of the Gold Butte-Chloride area, Arizona and Nevada. \$1.25
GP 758: Aeromagnetic map of the Bradshaw Mountains and vicinity Yavapai County, Arizona \$1.00
GP 835: Aeromagnetic map of part of the Challis 1° by 2° quadrangle, Idaho 75c
HA 392: Availability and quality of ground water in the Medford area, Jackson County, Oregon, by J. H. Robison \$1.25
HA 425: Flood of January 1969 near Cucamonga, Calif., by J. A. Singer and McGlone Price. \$1.00
MF 307: Active faults and preliminary earthquake epicenters (1969-70) in the southern part of the San Francisco Bay region, by R. D. Brown, Jr. and W. H. K. Lee 50c
MF310: Preliminary photointerpretation map of landslide and other surficial deposits of the Mount Diablo area, Contra Costa and Alameda Counties, Calif., by T. H. Nilsen. 50c
MF-311: Preliminary geologic map of the San Francisco South quadrangle and part of Hunters Point quadrangle, California, by M. G. Bonilla. 50c
MF 312: Geochemical, aeromagnetic and generalized geologic maps showing distribution and abundance of mercury and arsenic, Golconda and Iron Point quadrangles, Humboldt County, Nev., by R. L. Erickson and S. P. Marsh 50c
MF 313: Geochemical, aeromagnetic, and generalized geologic maps showing distribution and abundance of antimony and tungsten Golconda and Iron Point quadrangles, Humboldt County, Nev., by R. L. Erickson and S. P. Marsh 50c
MF 314: Geochemical, aeromagnetic, and generalized geologic maps showing distribution and abundance of gold and copper, Golconda and Iron Point quadrangles, Humboldt County, Nev., by R. L. Erickson and S. P. Marsh 50c

Recommended Reading

MF 315: Geochemical, aeromagnetic, and generalized geologic maps showing distribution and abundance of lead and silver, Golconda and Iron Point quadrangles, Humboldt County, Nev., by R. L. Erickson and S. P. Marsh50c

MF 316: Distribution of copper, lead, zinc, mercury, and arsenic in the surface sediments off the coast of northwestern Alaska by Peter Barnes and Kam Leong50c

I 748: Geologic maps of the Descartes region of the Moon, Apollo 16 pre-mission maps, by D. J. Milton and C. A. Hodges\$1.00

I-589: Geologic map and sections of parts of Grant, Adams and Franklin Counties, Wash., by M. J. Grolier and J. W. Bingham.\$3.00/set

ORE BIN, vol. 34, no. 1, January 1972 (Oregon Dept. of Geology and Mineral Industries)

Geothermal activity in 1971, by Richard G. Bowen.

AMERICAN JOURNAL OF SCIENCE, vol. 271, no. 4, November 1971

Stability relations of jadeite pyroxene in Franciscan metagraywackes near San Jose, Calif., by D. M. Kerrick and W. R. Cotton.

What is type Paleocene? by Howard E. Schorn.

AMERICAN JOURNAL OF SCIENCE, vol. 272, no. 1, January 1972

The chemistry of the Broadlands geotherma area, New Zealand by William A. J. Mahon and James B. Finlayson.

NATIONAL TECHNICAL INFORMATION SERVICE, U. S. Department of Commerce, Springfield, Va., 22151

PB2-02009: Aerial cameras, camera calibration, and aerial photography,

by Roy Welch. 80 pages. \$3.00

PB2-02726: Remote sensing bibliography for earth resources, 1969, by J. P. Glasby and D. G. Lowe. 182 pages. \$3.00

PB2-04540: The identification of archaeological sites by false color infrared aerial photography, by G. J. Gumerman. 18 pages. \$3.00

PB2-04472: Color infrared (CIR) photography: A tool for environmental analysis, by D. T. Lindgren. 42 pages. \$3.00

PB2-04741: Studies in remote sensing of southern California and related environments, by L. W. Bowden. 22 pages. \$3.00

PB2-0415-U: Gravity observations and Bouguer anomaly values near Tucson, Ariz., by Donald Plouff. 30 pages. \$3.00

WORLD OIL, vol. 174, no. 1, January 1972

Seismic exploration made easier for non-geophysicists, by J. A. Coffeen.

GEOTIMES, vol. 17, no. February 1972

Viet Nam: geology and mineral resources by Eugene D. Michael

SCIENCE, vo. 175, no. 4017, 7 January 1972

Moon: Possible nature of the body that produced the Imbrian Basin, from the composition of Apollo 14 samples, by R. Ganapathy et al.

Iron-rich basal sediments from the Eastern Equatorial Pacific: Leg 16, Deep Sea Drilling Project, by D. S. Cronan et al.

WESTWAYS MAGAZINE, vol. 64, no. 2, February 1972

As the earth trembles by William Childress

CALIFORNIA DIVISION OF MINES AND GEOLOGY

Special Report 104: Upper Cretaceous stratigraphy on the west side of the Northern San Joaquin Valley, Stani-

slaus and San Joaquin Counties, California, by Charles C. Bishop\$5.00

Fabricas: A collection of pictures and statements on the mineral materials used in building in California prior to 1850. Assembled by Elisabeth L. Egenhoff (As a supplement to the Calif. Journal of Mines and Geology for April 1952.) (Reprint)

LUCY E. BIRDSALL

DID YOU KNOW . . .

* * *

The average depth for all wells drilled in the U.S. was 4,701 feet in 1971, which is 133 feet shallower than the 1970 average. New-field wildcats of 1971 were also shallower, having an average depth of 5,924 feet, which is 30 feet shallower than the 1970 average. This is a reversal of the continued and rather steady increase in average depth of new wells for the past 25 years.

* * *

CEGS Short Review No. 18, *The Estuarine Environment, Part I*, by Drs. J. R. Schubel and D. W. Pritchard, Chesapeake Bay Institute, The Johns Hopkins University, will be published in the March issue of the *Journal of Geological Education* as part of the Environmental Sequence of the Professional Development Program of CEGS. This first part of the article will deal with physical oceanography and sedimentation in the estuarine environment; *Part II*, scheduled for the May issue of *JGE*, will deal with the pollution aspect of estuaries.

* * *

Interior Secretary Morton has released a report on US energy supply, demand and objectives, *US Energy: A Summary Review*, which is available free of charge from the Office of Oil and Gas, Washington, DC 20240.

NEWSLETTER

Pacific Section A.A.P.G.

P.O. Box 17486 Foy Station

Los Angeles, California 90017

PACIFIC PETROLEUM GEOLOGIST



NEWSLETTER

of the Pacific Section
American Association of Petroleum Geologists

VOLUME 26

JULY, 1972

NUMBER 7

GUEST EDITORIAL . . .

The "Tommy Atkins Theory"

" . . . it's Tommy this, an' Tommy that, an' 'Tommy wait outside;' But it's 'Special train for Atkins,' when . . . The troopship's on the tide, my boys, . . ."

Rudyard Kipling in this Barrack-Room Ballad, "Tommy Atkins", thus contrasts the rather disdainful public attitude toward the British "G.I." in peacetime to the solicitous concern shown when "there's trouble in the wind".

It seems to me that across the country more and more people are seeing "trouble in the wind" about our energy situation and this analogy with Tommy Atkins grows more apropos daily. I don't mean to imply that I think our difficulties are behind us. Not by a heck of a lot, but I do see signs of more openmindedness and a growing feeling that "Cease and Desist" are not really solutions to the environment/energy dilemma.

If the environmentalists had said "go find your oil in the most remote and hostile environment in the country", then discoveries on the North Slope of Alaska and in the ocean areas of the Continental Shelf should have satisfied that request. But rather we see injunctions holding up production, lease sales and development in these very areas. Moreover, there are threats of still others to prevent exploration off the Atlantic Coast, Florida and almost every exploratory province. Many communities, and even some states, are denying sites for power generating plants, refineries, tanker terminals, and other energy-related facilities. Yet these same people expect to be supplied their share of energy — from somewhere. That "somewhere" is someone else's backyard. The civic ethics of such a position strikes me as a little curious, to say the least, but perhaps what is reflected is the degree of public confidence in the safety and environmental acceptability of our operations.

In early May, I attended the Offshore Technology Conference in Houston. I

was greatly impressed by the tremendous technological capability and advancements that have been made in the past few years toward operating safety and accident prevention, cleanup techniques and also the increasing environmental understanding and awareness.

While there exists impressive technological and engineering capabilities, the big need, as I've already suggested, is confidence on the part of the public that drilling and producing operations, and other oil-to-energy activities can be conducted both offshore and onshore with increasing safety and minimal environmental disruptions. How do we regain or create that public confidence. I think many of us feel that if we could just get the layman to listen, we could explain the oil business and that he would understand. With understanding should come confidence. But how do we get an audience? A very simple rescope to start with is our personal contacts and conduct. Neighbors, friends, even chance acquaintances, are inclined to judge our profession and business by what we are as individuals. Dignity, forthrightness, pride and very importantly intellectual honesty are personal attributes that characterize members of the geological profession. Add to these patience and some gentle boldness and we should begin to gain an audience. From this take or make opportunities to speak to or participate in groups of any size. No elaborate visual aids are really necessary. Geologists are good at portrayal — the simpler, the better.

J. R. Jackson of Humble tells me that the Environmental Committee of A.P.I. is now finding a growing number of invitations to present their educational programs in the Northeast, whereas only a few months ago they could hardly find an audience anywhere. It is my plan to augment and encourage the Committees on Environmental Geology and Public Information to make a more substantial contribution to informing and educating

(Continued on Page 3)

COOPERATION IS CONTAGIOUS

A recent PacSec ExCom discussion was held to determine the most appropriate method of implementing National AAPG President Sherm Wengerd's suggestion of continued and increased cooperation among Sections and affiliated Societies.

The *Pacific Petroleum Geologist Newsletter* reaches a large number of geologists who no longer reside within the western states but are worldwide in distribution.

The *Newsletter* is a viable vehicle for disseminating information to geologists interested in the Pacific Section and its affiliates. It was decided that the President of the Section should distill the results of each ExCom meeting and publish the essence in the following *Newsletter* for the interest of all.

The PacSec will send copies of the *Newsletter* to Sectional Presidents and affiliated societies with the intention of expressing cordial cooperation.

The following excerpts are from the May ExCom meeting:

Those present in addition to PacSec officers were Past President Curran; President elect Spaulding as legislative representative from Pacific Section AIPG; Jim Groom, President of Pacific Section SEG; Sam Allen, legislative officer, SEG; Joe Cobarrubias, LA Section AEG; Jim Taylor, President Pacific Section SEPM; Tom Baldwin, National Advisory Committee; Doug Traxler, legislative officer, PacSec AAPG; Jim Benzley, San Joaquin representative; Jim Saunders, Coast representative and Spring Picnic chairman; Art Weller, 1973 Anaheim Convention general chairman.

Items discussed were in the interest of all societies present and included: Formation of a legislative committee of members from all societies, AAPG, SEPM, SEG, AIPG and AEG to jointly study State legislation which would affect our combined membership. The first specific problem to resolve was an agreement on AB1961. This committee

(Continued on Page 3)

Los Angeles

We are trying to set up an AAPG Continuing Education Program for the L. A. Basin Geological Society for this Fall. At the present we are getting a body count of interested members via our normal monthly "post card." Because only a limited amount of information can get onto one of these cards we would like to have some extra publicity.

As it now stands we're considering a 12 hour total Lecture Program to be held week nights in metropolitan Los Angeles during one of the weeks of latter October or early November. The course fee should be in the \$18-\$20 range. Topics being considered include "Stratigraphy in Petroleum Exploration", "Practical Application of Geological Principles in Petroleum Exploration", "Terrigenous Depositional Systems — A Genetic Approach to Facies Analysis in Exploration" and "Practical Guidelines to Formation Evaluation through Log Analysis."

Interested members with suggestions and preference should contact Jim Mayturn, Con Ed Chairman, c/o Texaco Inc., 3350 Wilshire Blvd., Room 924, Los Angeles 90010 (213) (385-0515) ext. 478.

* * *

William Barton Henry joined Signal this month as Junior Geologist and will be located in the West Coast regional office located in Long Beach, California. Bill is a graduate of the University of Southern California where he received his B.S. in Geology in February 1972.

* * *

A note of interest — it appears as though a sure way to get transferred is to become an officer in the Los Angeles Basin Geological Society. Last year Orville Hart of Standard, President, was transferred to San Francisco, and Fletcher McCutcheon of Texaco, Vice President was transferred to Australia. This year Bob Wagner, of Mobil, President and Ed Berg, of Humble, Vice President are being transferred to Denver, Colorado.

* * *

A temporary date of July 19, 1972, has been set for a Los Angeles Basin Geological Society meeting at the Standard Oil Northam Station in La Mirada. The affair will be hosted by Mobil Oil. This will be their last time as host since the entire L.A. Exploration group is being moved to Denver. Mobil plans provide beer, steaks, fun, games, and scientific and entertaining movies.

(We heard about those "scientific" and "entertaining" movies.)

TOM REDIN
(213) 482-7600

Rod Colvin has been transferred to Denver. Filling Rod's boots as Los Angeles Associate Editor will be Tom Redin of Union. Please help Tom with news items and information of the LA Area. We would also like to express our sincerest gratitude to Rod for his Sterling reports. Our loss will be Denver's gain.

ACCENT' The Positive

This is the first of what we hope will be a long series of articles accentuating the positive side of the geologic profession and the petroleum industry. In future issues we will highlight the activities of the Pyles Boys Camp, scholarship contributions, Scouting, environmental practices and in general what is right with our industry. We invite contributing stories or leads of philanthropic activities of our profession.

In this issue of the *Newsletter*, Jim Wilson calls for greater effort in informing the public of the activities and concerns of the petroleum industry and its related professions. Many companies have begun active programs to improve the quality of life. The Getty Oil story is significant because they began their environmental activities at a most appropriate place — the Kern River Oil Field — the ugly duckling of the San Joaquin Valley.

Getty's environmental program is expanding into five district areas — air pollution measurement, water quality control, oil field cleanup, multiple land use planning and community relations.

At present, Getty operates more than 150 steam generators in the San Joaquin Valley as part of the secondary recovery at Kern River and other fields in this area. Environmental specialists with training in chemical engineering, petroleum engineering and geology operate \$20,000 worth of measuring equipment to determine the actual emissions of the generators and the ambient air conditions at each site. All of the equipment has functioned well below the minimum standards set by the federal, state and county air pollution boards.

Water quality is assured by Getty's treatment plant which processes 300,000 barrels of water per day at Kern River. Most of this production water is purified and reinjected into the formation as steam, but 100,000 barrels of water are processed through flotation cells where the oil and gas is removed and the wa-

ter placed in the Beardsley Canal and used to irrigate crops.

Most noticeable to the public is Getty's clean-up campaign at Kern River. Since January 1971, eighty-five sumps have been filled with soil and the ground returned to the original topography. Approximately two million dollars has been allocated to eliminate approximately 150 non-essential sumps. The clean-up is extended to pipe, junk, weeds and trash and the surface appearance is a far cry from the Kern River field of a generation ago. Tanks and equipment are now being painted to harmonize with the environment.

Multiple land use is beginning at Getty's Kern Front Field, where the land not only produces oil but oranges and pasture land add to the utility of the field.

Keeping the public informed of the company's environmental activities is the responsibility of the Community Relations Coordinator. This is accomplished by field trips for schools and service groups through the Kern River facilities and by a speakers bureau, staffed by company volunteers ready, willing and able to carry industry's message to the general public.

ED KARP

Alaska

NO REPORT — Still waiting for that "Break Up" report. Winter must be longer than expected.

Northwest

NO REPORT — You're fired.

San Joaquin

NO REPORT — Shape up. You may not last too long.

Coast

NO REPORT — We'll let you go this time — but don't push it.

Sacramento

NO REPORT — You've had it.

Northern California

We have reached the end of our term of office and this contribution may be the last one from me. The following is a news item about our last meeting which includes the names of the new officers for the year starting July 1.

Our meeting was held on June 2, 1972 at Rickey's Hyatt House in Palo Alto. President Ernest Rich opened the business meeting, welcomed the members present and commented on the year's activities. A vote of thanks for a job well done was given to David Cerkel for organizing a very successful field trip on May 20, to Tom Rogers and Charles Armstrong, geologists of the California Division of Mines and Geology and Arthur Agilvie, Santa Clara County Planning Department, for leading the trip and discussion at each stop.

J. H. Sawyer, secretary-treasurer, gave a brief report which included mention that a new constitution was approved unanimously on March 20, status of the treasurer and other matters. President Rich then called on W. F. Barbat, chairman of the nominating committee, to read the slate of nominees which follows:

President: Robert D. Carter, USGS,
345 Middlefield Rd., Menlo Park,
Cal. 94025

Vice-President: Charles E. Kirschner
Standard of Cal., San Francisco

Secretary-Treasurer: Jame W. Higgins,
1426 Woodberry Ave., San
Mateo 94403

Counselors: Fred Kelly
Allison J. Solari
Delegates: David H. Pfeiffer
Donald L. Ziegler
John Maher

This slate was unanimously voted into office.

The business meeting was followed by a talk by R. D. Hovey titled "Applications of geophysical techniques to solutions of selected geologic problems in the Soviet Union". R. D. Hovey is a Senior Staff Geophysicist for Standard of Cal., on gravity and magnetics. Hovey obtained his AB in 1950 from Harvard College and his AM degree from Harvard University in 1951. He majored in Geology with some emphasis on geophysics. He has been with SO-CAL since 1951 and has worked in the Great Basin and the west coast of the US from Alaska to California. In August 1971, Dick was one of a group of

five geophysicists who participated in a State Department US - USSR Geophysical Exchange program with the Soviet Union. The talk was very interesting.

HERB SAWYER

Many thanks to Herb Sawyer for keeping us posted on the Bay Area. Keeping track of that far-reaching, far-flung, far-fetched farrago group of rock pounders could be a far-out farcical phenomenon. We bid you a fond farewell.

GEOLOGICAL REVIEWS

Fractured Shale and Basement Reservoir

Long Beach Unit, California*

JOHN N. TRUEX

The south central Los Angeles basin Wilmington oil field has produced oil from fractured basement rocks since 1945. Oil was discovered in a fractured upper or middle Miocene shale and basement reservoir by THUMS in the Long Beach Unit in March, 1968. Oil production is from a southeasterly thickening prism of fractured black micaceous shale, siltstone, cherty shale and marly limestone up to 1385 feet (421.1 m.) thick, and from fractured Franciscan schist. The black shale is correlated with the Palos Verdes peninsula Altamira shale of lower Mohnian and Luisian age. No definite unconformity has been recognized in the black shale member in contrast to the strong hiatus frequently seen between the upper and middle Miocene in the Los Angeles Basin.

The absence in Long Beach Unit wells of a thick schist breccia and associated volcanic rocks cored at Seal Beach 3 miles (4.83 km.) to the northeast, indicates a northeasterly source of sedimentation. Correlation with similar rocks across the Newport-Inglewood fault zone suggests a possible 15 miles (24.1 km.) of right lateral displacement.

The oil is thought to have originated in the shale and to have migrated into an interconnected network of vertical, high angle and horizontal fractures with migration occurring during several geologic episodes. The fracture system was produced by breakage of the brittle rocks along fold axes and adjacent to the larger faults.

*Abstract of paper presented to Los Angeles Basin Geological Society June 14, 1972.

Depositional Anticlines*

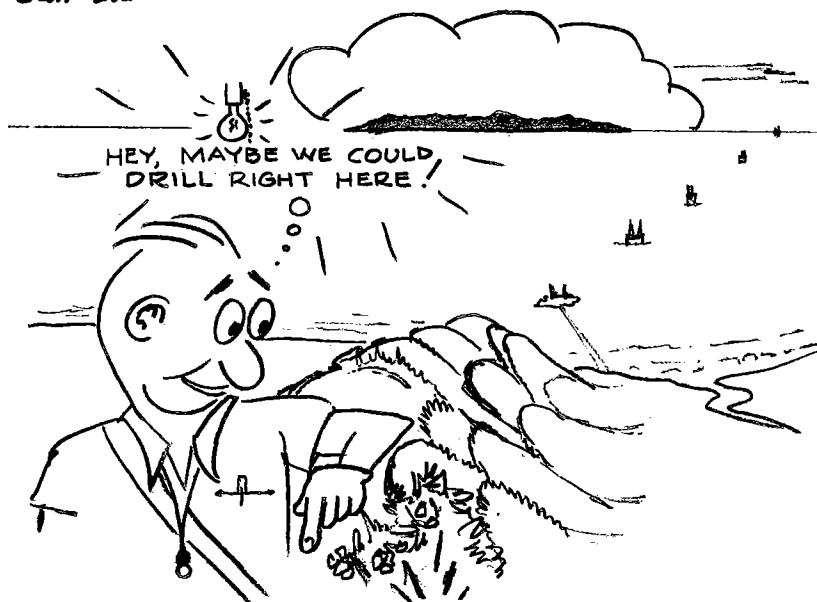
By RICHARD J. MALLOY

Director, Site Development Division
Ocean Engineering Department
Naval Civil Engineering Laboratory
Port Hueneme, California

Contemporaneous anticlines of deposition (not draped structures) are common features of the seafloor. At least those formed intra-cratonically should be preserved but none are reported. To what extent the mechanism of deposition is actually involved in the formation of anticlines is problematic. If the mechanism is extensive, the problem is one of recognition, and a review of depositional anticlines presently forming on the seafloor may serve as a key to their being recognized in the record.

*Abstract of paper presented to the Coast Geological Society May 16, 1972.

ANDY CLINE
by Sullwald



Guest Editorial

(From Page 1)

the public. In this connection, we need to involve more people from the Pacific Section, and I intend to do just that. I also intend to develop a closer working relationship with our other technical engineering and professional associates.

The theme of the Anaheim convention next May — "Major Successes in a Hostile Environment" together with the special session on "environmental challenge and the oil industry's response" will provide a wonderful opportunity to demonstrate and gain publicity on the inter-professional, inter-disciplinary cooperation and expertise. Two other meetings on the West Coast that will also provide excellent forums for these purposes are the SEG Convention this fall and the Alaska Environmental Geology Symposium in the fall of 1973.

I pledge every assistance as incoming President of A.A.P.G. in furthering the Pacific Section program and aims in oil finding, environmental responsibility or whatever. You have a wonderful combination of the venerable and the visionary — in institutions, governmental surveys and membership. You have a uniquely challenging opportunity to modify the public attitude toward "Tommies" from "chuck 'em out, the brute", to "Savior of 'is country".

JAMES E. WILSON
President, A.A.P.G.

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Recommended Reading.....LUCY E. BIRDSALL
NEWSLETTER of the Pacific Section—American Association Petroleum Geologists is published monthly by the Pacific Section.

Material for Publication and requests for previous copies should be addressed to STANLEY E. KARP—GEOLOGY DEPT., BAKERSFIELD COLLEGE, BAKERSFIELD, CALIF. 93305.
Material received by the 15th of each month will be included in the following issue.

CHANGE OF ADDRESS, subscription and membership inquiries should be directed to MEMBERSHIP SECRETARY, PACIFIC SECTION AAPG, P. O. Box 17486, ROY STATION, Los Angeles, Ca. 90017.

Cooperation . . .

(From Page 1)

will be interdenominational and moderated by a Legislative Secretary appointed by mutual agreement of the group. He will report proceedings to member societies.

A joint publication committee will be formulated with SEPM. The SEG, AEG and AIPG have been asked to join and contribute selected previously unpublished papers. This committee will also be interdenominational in scope and will function under a mutually appointed Publications Secretary. The Pacific Section AAPG will underwrite the joint publications to be called Transactions of the Pacific Sections AAPG, SEPM, AIPG, SEG, AEG. After payout of each publication sharing of proceeds will be on the basis of each society's membership as of the first of each year. AAPG members of this joint committee are Andy Alpha and Mase Hill. Other members will be announced when appointed.

A request was made for each outgoing officer to submit a list of suggestions to their incoming counterparts in the hope of preserving continuity on normal business matters of the Section.

The Spring Picnic Chairman, Saunders, predicted a plus or minus attendance of 300 on June 2.

The 1973 Anaheim Joint Convention with National is well under control. Rod Colvin of Mobil, LA, has accepted the important post of Vice Chairman.

The possibility of having the 1974 Section Convention at the new Oxnard Center was discussed and a feasibility study is under way. Hopefully this can be hosted by the Coast Geological Society. Santa Barbara-Ventura areas as yet do not have adequate auditorium facilities.

The Section maintains an independent contractor relationship with two individuals to handle the membership and publications. Because of increased activity and publication sales the compensation paid these individuals has been increased to \$750 per annum by unanimous vote.

A perpetual award in honor of Martin Van Couvering, one of our most distinguished members, is being formulated. Suggestion as to type of this award are under consideration.

Tom Baldwin announced that the family weekend field trips are continuing and average 40-50 persons attending. These trips are being organized by the LA Basin Geological Society and Craig White, Union Oil, Santa Fe Springs is the current Chairman.

RICHARD I. HESTER

ANNUAL PICNIC

Contributors to the 1972 Pacific Section, AAPG Annual Picnic are listed below. We gratefully wish to acknowledge their support of this function. Contributing firms were:

Anderson & Nicholeris
*Borst & Giddens Logging Service
*Burns Geological Exploration, Inc.
Camay Drilling Co. (Scope Industries)
*Core Laboratories, Inc.
Digicon, Inc.
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Western Geophysical Co. of America

The next time you see these contributors, thank them for their support. They will appreciate it and so will we. A pat on the back goes to Roger G. Hubbell (Conoco) Contributions Chairman, who helped ease the financial pain by contacting the above contributors. We welcome the many new names to the list and acknowledge with pride last years dedicated contributors ().*

CALENDAR for July

S	M	T	W	T	F	S
						1

- 6 COAST GEOLOGICAL SOCIETY
Noon Luncheon, Casa de Soria
(Hot Mexican), Ventura.
- 13 COAST GEOLOGICAL SOCIETY
Noon Luncheon, Dave's Deli
(Quaint Hebrew), Ventura.
- 20 COAST GEOLOGICAL SOCIETY
Noon Luncheon, Shakey's Pizza
(Italian Smorgy), Ventura.
- 27 COAST GEOLOGICAL SOCIETY
Noon Luncheon, Swedish Kitchen
(Cool Nordic), Ventura.
TRY IT, YOU'LL LIKE IT.

<p>DETERMANN, ROBERT L. Geologist USGS 345 Middlefield Rd., Menlo Park CA. 94025 (415) 323-8111</p> <p>Res. (408) 245-0730 '41 Miami Univ.</p>	<p>DAILEY, DONALD H. Research Geologist CITIES SERVICE OIL CO. P.O. Box 50408 Tulsa, Okla. 74150 (918) 560-3548</p> <p>Res. (918) 663-3055 Ph.D. '69 U.C.B.</p>	<p>ELLIOTT, WILLIAM J. (Bill) Engineering Geologist BENTON ENGG., INC. R.F.D. Box 154-A Del Mar, CA. 92014 (714) 583-5654</p> <p>Res. (714) 755-4219 M.S. '66 San Diego State</p>	<p>ECKHART, RICHARD A. Region Manager, Geology SUN OIL CO. 4151 Southwest Freeway Houston, Texas 77027 (713) 626-4110</p> <p>Res. (713) 666-6594 B.A. '49 Dartmouth</p>	<p>EXUM, FRANK A. Senior Geologist MARATHON OIL CO. 1244 Granada Avenue Casper, WYO. 82601 (307) 235-2511</p> <p>Res. (307) 265-8083 M.A. '57 U.C.L.A.</p>	<p>HALL, EDWARD A. Senior Geologist UNION OIL CO. of CAL. 1003 Main St. Santa Paula, CA. 93060 (805) 525-4422</p> <p>Res. (805) 647-2461 M.S. '41 Caltech</p>
<p>FEISTER, GEORGE H. Exploration Manager, Western Region UNION OIL CO. P.O. Box 7600 Los Angeles, CA. 90051 (213) 486-7040</p> <p>Res. (213) 547-4737 A.B. '41 U.C.L.A.</p>	<p>HOWE, WALTER H. Geologist, Pacific Region USGS 25975 Portofino Dr. Mission Viego, CA. 82675 (213) 688-2846</p> <p>Res. (714) 837-2856 A.B. '52 U.C. Berkeley</p>	<p>HAINES, RICHARD B. (Dick) Senior Geologist CONTINENTAL OIL CO. 5562 Hollings St. Ventura, CA. 93003 (805) 642-8154</p> <p>Res. (805) 642-3339 A.B. '31 U.C.L.A.</p>	<p>KNAPP, ROBERT Senior Geologist STD. OIL CO. OF CALIF. 5849 Nagle Ave. Van Nuys, CA. 91401 (415) 894-5279</p> <p>Res. (213) 997-1137 B.A. '49 U.C.L.A.</p>	<p>KISTLER, PHILLIP S. Partner BEAR and KISTLER 1052 W. 6th St., Rm. 336 Los Angeles, CA. 90017 (213) 481-0839</p> <p>Res. (213) 790-6381 B.A. '40 U.C.L.A.</p>	<p>DORSEY, RIDGELY E. Geological Engineer TENNECO OIL CO. P.O. Box 1996 Bakersfield, CA. 93303 (805) 832-9010</p> <p>Res. (805) 322-0317 M.A. '60 U.C.L.A.</p>
<p>ALFORS, JOHN T. Senior Geologist STATE OF CALIF., Dept. Consev., Div. Mines & Geol. 4337 Vista Way Davis, CA. 95616 (916) 445-0514</p> <p>Res. (916) 756-7582 Ph.D. '59 U.C. Berkeley</p>	<p>ATWILL IV, EDWARD Staff Geologist OCCIDENTAL PET. CORP. 5000 Stockdale Hwy., Bakersfield, CA. 93309 (805) 327-7351</p> <p>Res. (805) 832-2479 M.A. '60 U. of Tex.</p>	<p>BOWMAN, EDGAR C. Geological Consultant CHEVRON OIL CO. 1149 Skycrest Drive, Apt. 3 Walnut Creek, CA. 94595 (415) 894-5315</p> <p>Res. (415) 937-0312 Ph.D. '50 Harvard Univ.</p>	<p>BARRON, BRUCE Geologist GEOLOGICAL SRVCS, INC. 1539 W. 16th St. Long Beach CA. 90813 (213) 436-4254</p> <p>Res. (714) 892-3093 B.A. '53 U.C.L.A.</p>	<p>CAMPBELL, GLEN Oil & Gas Engineer STATE OF CALIF. DIV. of OIL & GAS 5813 Akers Rd. Bakersfield, CA. 93307 (805) 322-4031</p> <p>Res. (805) 832-0803 B.S. '60 Univ. of Okla.</p>	<p>FISHBURN, MAURICE D. Manager, Geological Branch U.S. NAVY — NAVAL PET. RESERVES IN CALIF. Box 11 Tupman, CA. 93276 (805) 765-4181</p> <p>Res. (805) 765-7937 M.S. '62 Univ. of Kansas</p>
<p>HADDAD, EDWARD CONSULTANT 2117 W. Lindsay Norman, Okla. 73069 (405) 329-6711</p> <p>Res. (405) 329-1084</p>	<p>KANE, ARMOUR 4911 Fernvale Rd. Bakersfield, CA. 93306 LOG. CONSULTANT</p> <p>Res. (805) 871-5733 BSCE '41 Iowa State</p>	<p>LATKER, MARK 4356 Grand Ave. Ojai, CA. 93023 Vice President MINERAL CONCENTRATES</p> <p>Res. (805) 646-6961 M.S. '53 Stanford</p>	<p>MANNING, JOHN C. 2512 Spruce St. Professor of Earth Science Bakersfield, CA. 93301 CAL STATE BAKERSFIELD (805) 833-2011</p> <p>Res. 325-8284 Ph.D. '51 Stanford</p>	<p>PEGORS, HARRY R. 3012 Elhurst Bakersfield, CA. 93304 Div. Sales Engineer WELEX (805) 323-9187</p> <p>Res. 831-0611 B.S. '52 U.S.C.</p>	<p>REID, EUGENE F. P.O. Box 2471 Bakersfield, CA. 93303 President SUNBURST EXPLORATION, INC. (805) 324-6771</p> <p>Res. 871-7234 M.S. '51 Stanford</p>
<p>ROBINSON, BRUCE JR. 930 Truxtun Ave., Suite 109 Bakersfield, CA. 93301 Real Estate BAKERSFIELD INVESTMENT & REALTY CO.</p> <p>Res. 871-6240 B.S. '50 CALTECH</p>	<p>RYALL, PHILIP L. 5913 Oakhaven Bakersfeild, CA. 93308 CONSULTANT</p> <p>Res. (805) 871-3855 B.A. '59 Fresno State</p>	<p>BROWN, WILLIS R. 9 Ave. De Mutvelleville Tunis, Tunisia BUTTES RESSOURCES TUNISIE, LTD.</p> <p>B.A. '53 Wesleyan; M.S. Stanford</p>	<p>HALLINGER, DONALD E. P.O. Box 54790, Terminal Annex Los Angeles, CA. 90054 Senior Geologist SOUTHERN CALIFORNIA GAS CO. (213) 689-3649</p> <p>Res. 255-2039</p>	<p>PIERCE, RICHARD L.</p> <div> <p>DECEASED Died Jan. 24, 1972 M.A. '56 U.S.C.</p> </div>	<p>MAXWELL, JAMES M. 812 Sesnon St. Bakersfield, CA. 93309 CONSULTANT</p> <p>Res. (805) 324-7034 B.A. '58 U.C.L.A.</p>
<p>BOUSE, DONALD E. 1002 Oleander Ave. Bakersfield, CA. 93304 Geologist EXPL. LOGGING, INC.</p> <p>Res. (805) 322-8568 B.A. '51 U.C.L.A.</p>	<p>GRAFF, LEROY DALE Geologist, Geophysicist & Senior Engineer TITLE INSUR. & TR. CORP., Box 11233, Piedmont Stn. Oakland, CA. 94611 (415) 451-8300</p> <p>Res. (415) 654-2641 A.B. '54 U.C.B.</p>	<p>JUNGER, ARNE Geologist USGS 346 Northridge Rd. Santa Barbara, CA. 93105 (805) 687-5481</p> <p>Res. (805) 687-5481 B.S. '28 U.C.B.</p>	<p>HESTER, RICHARD LEE Senior Geologist McCULLOCH OIL CORP. 1911 Montecito Dr. Glendale, CA. 91208 (213) 879-5252</p> <p>Res. (213) 249-9187 B.A. '49 U.C.L.A.</p>	<p>CASSELL, JOHN K. STANDARD OIL CO. of CAL. Staff Geologist 964 Mojave Ct. Walnut Creek, CA. 94598 (415) 894-4191</p> <p>Res. (415) 937-7373 M.S. '49 Stanford</p>	<p>SAWYER, J. HERBERT Petroleum Geologist CONSULTING 816 Amber Lane Los Altos, CA. 94022</p> <p>Res. (415) 948-8977 A.B. '37 Stanford</p>

DIRECTORY REVISION

The perforated sheet of stamps is the first of several sheets of address changes for Pacific Section members appearing in the Feb. 1971 Directory. *Only those changes* that conflict with that directory will be printed. When submitting a change please include *all* information such as phone numbers, mailing address, etc. New members included.

Directory binder (\$2.00) and Directory insert (\$5.00) may be purchased from Don Hallinger, Publications Committee, AAPG, Box 17489 Foy Station, Los Angeles, CA. 90017.

Did You Know

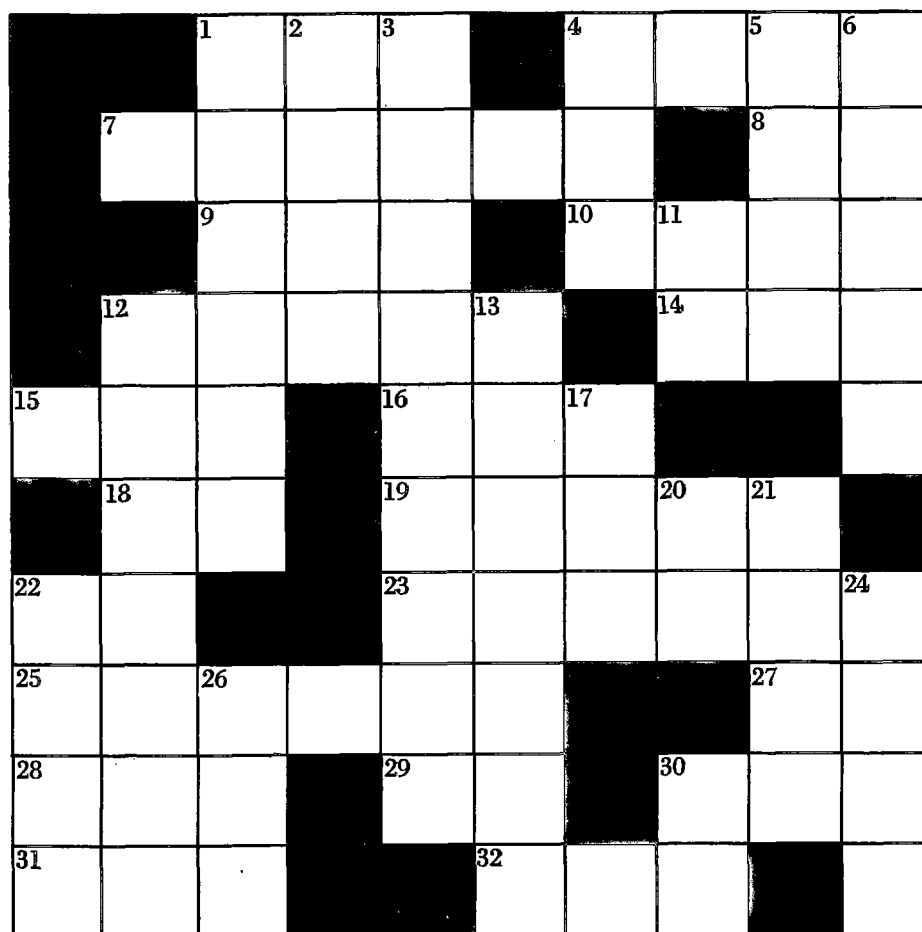
Most AAPG members have little difficulty separating their professionalism from their business interests. When James E. Wilson, a vice president of Shell Oil Co. who becomes president of AAPG July 1, addressed a news conference at the National Press Club, he emphasized: "I'm answering your questions as a petroleum geologist and not as an official of a major oil company, so let's keep our questions related to exploration and look upon my answers as those from a geologist."

The percentage of all exploratory wells that were successful in finding oil or gas was 15.72 in 1971. This percentage is about 1 per cent lower than the success of 1970, but it is higher than the 14.56 per cent low point of 1968.

New-field wildcat drilling has resulted in 10 to 11 per cent success in the past. Last year the success was 9.73 percent, which is identical with the success of 1970; this is 1.2 per cent higher than 1968 but lower than all other years as far back as 1946.

Totaling all types of wells — exploratory, development, and service — the U.S. drilled 24,300 miles of hole in 27,300 wells, the AAPG compilation showed. Compared with 1970, the decrease in total number of wells was 7.4 per cent, and the decrease in total footage drilled was 9.9 per cent.

That USGS Professional Paper 659 "Geologic framework and petroleum potential of Atlantic Coastal Plain and Continental Shelf" is being reprinted at the Government Printing Office. It was released December 1, 1971 and went out of print in February 1972. The reprinted edition is *supposed* to be available in July, but that is entirely unofficial. No orders are being taken in advance — checks are being returned.



DOWN

1. A way of doing things
2. Skin disease
3. Most important energy source
4. 252 calories
5. The solid ore veins (pl.)
6. Scouts do this the best
11. Rock flour having little plasticity
12. Vertical exposure of strata
13. Zemorrian to Delmontian
17. Type of dune
20. Cemented detrital sediment (abbr.)
21. Earths shell under continents
22. 43,560 sq. ft.
24. Beach deposit
26. Color of Ruby
27. College degree
30. The fourth tone of the diatonic scale

ACROSS

1. To survey
4. Stormbuilt beach features that resembles a small terrace
7. Holocene
8. Ionium
9. Not to be placed on shaker screen
10. the "humped" part of a bivalve
12. Mrs. Wengerd's pride and joy
14. State College of Oregon
15. prefix earth
16. Name of the game
18. Cadmium
19. Wind deposit
22. Astatine
23. Germination of plants
25. Birthplace of a glacier
27. Masurium
28. Caviar
29. Manganese
30. Low cone
31. Type of moraine
32. composed of Periods

RECOMMENDED READING

U. S. GEOLOGICAL SURVEY

Professional Paper 521-E: Stratigraphy of the Cretaceous rocks and the Tertiary Ojo Alamo Sandstone, Navajo and Hopi Indian Reservations, Ariz., N. Mex., and Utah, by R. B. O'Sullivan, C. A. Repenning, E. C. Beaumont, and H. G. Page. \$1.50

Professional Paper 779: The story of the water supply for the Comstock, by H. A. Shamberger. 70c

Bulletin 1335: Sedimentary and igneous rocks of the Grays River quadrangle, Washington, by E. W. Wolfe and E. H. McKee. 40c

Bulletin 1347: The geologic story of Yellowstone National Park, by W. R. Keefer. \$1.25

Bulletin 1354-G: Big Sandy Formation near Wikeup, Mohave County, Ariz., by R. A. Sheppard and A. J. Gude 3d. 15c

Professional Paper 456-C: The Hallett volcanic province, Antarctica, by Warren Hamilton. 70c

Professional Paper 655-D: Geology and ground-water system in the Gila River Phreatophyte Project area, Graham County, Ariz., by W. G. Weist, Jr. \$1.75

Professional Paper 708: Ground-water hydraulics, by S. W. Lohman. \$2.00

Professional Paper 711-B: Late Paleozoic ostracode species from the conterminous United States, by I. G. Sohn. 75c

Bulletin 1341: Pre-Cenozoic geology of the south half of the Auburn 15-minute quadrangle, California, by F. H. Olmsted. \$1.00

Water Supply Paper 1999-H: Subsur-

face geology of the late Tertiary and Quaternary water-bearing deposits of the southern part of the San Joaquin Valley, Calif., by M. G. Croft. \$4.50

Water Supply Paper 2005: Model hydrographs, by W. D. Mitchell. 45c

Circular 601-G: Real-estate lakes, by D. A. Rickert and A. M. Spieker. Free

MAPS:

GQ 942: Geologic map of the Spruce Mountain quadrangle, Elko County, Nev., by R. A. Hope. \$1.00

MF 320: Preliminary geologic map of the Burns and West Myrtle Butte 15-minute quadrangles, Oregon, by R. C. Greene. 50c

MF 321: Preliminary photointerpretation map of landslide and other surficial deposits of parts of the Altamont and Carbona 15-minute quadrangles, Alameda County, by T. H. Nilsen. 50c

MF 322: Preliminary photointerpretation map of landslide and other surficial deposits of parts of the Pittsburg and Rio Vista 15-minute quadrangles, Contra Costa and Solano Counties, Calif., by J. D. Simms and T. H. Nilsen. 50c

MF 323: Distribution of lead and copper in surface sediments in San Francisco Bay estuary, California, by D. H. Peterson, D. S. McCulloch, T. J. Conomos, and J. R. Carlson. 50c

MF 329: Map showing areas serviced by municipal and private water-distribution agencies, San Francisco Bay region, California, 1970, compiled by J. T. Limerinos and Karen Van Dine. 50c

MF 330: Map showing areas serviced by municipal and private sewerage agencies, San Francisco Bay region, California, 1970, compiled by J. T. Limerinos and Karen Van Dine. 50c

MF 331: Faults that are historically active or that show evidence of geologi-

cally young surface displacement, San Francisco Bay region, a progress report: October 1970, by R. D. Brown, Jr. 50c

MF 332: Municipal and industrial wastewater loading in the San Francisco Bay, Calif., 1970, by W. G. Hines and R. H. Palmer. 50c

MF 333: Drift of surface and near-bottom waters of the San Francisco Bay system, California: March 1970 through April 1971, by T. J. Conomos, D. S. McCulloch, D. H. Peterson, and P. R. Carlson. 50c

MF 334: Bedrock-surface map of the San Francisco North quadrangle, California, 1961, by Julius Schlocker, bedrock-contour intervals 50 and 100 feet, and Bedrock-surface map of the San Francisco South quadrangle, California, 1964, by M. G. Bonilla, bedrock-contour intervals 50 and 500 feet. 1972. 50c

MF 336: Land subsidence in the Santa Clara Valley, Alameda, San Mateo and Santa Clara Counties, Calif., by J. F. Poland. 50c

GQ 943: Geologic map of the McCarthy B-4 quadrangle, Alaska, by E. M. MacKevett, Jr., and J. G. Smith. \$1.00

GQ 973: Geologic map of the Show Low quadrangle, Navajo County, Ariz., by E. J. McKay. \$1.00

HA 455: Glacier damned lakes and outburst floods in Alaska, by Austin Post and L. R. Mayo. \$1.50

MF 303: Geologic map of the southeast quarter of the Priest Valley quadrangle, Fresno and Monterey Counties, Calif., by E. E. Richardson, R. G. Wayland, and M. B. Smith. \$1.00

PB 2-06826: Program design 1971 — San Francisco Bay region environment and resources planning study. 123 p. \$3.00

NEWSLETTER

Pacific Section A.A.P.G.

P.O. Box 17486 Foy Station
Los Angeles, California 90017



NEWSLETTER

of the Pacific Section
American Association of Petroleum Geologists

VOLUME 26

AUGUST, 1972

NUMBER 8

GUEST EDITORIAL . . .

The Presidency, 1972 - 73

On Friday, June 30, 1972, I met Dick Hester for lunch at El Paseo on Olvera Street. The temperature was hotter than the tacos. Somehow, in between glances at the almost unreal microcosm of Americana on the Street and gulps of Carta Blanca, the affairs and helm of the Pacific Section-AAPG were transferred from him to me.

The true informality of this exchange of authority emerged when we finished our lunch, for which Dick paid in a last gallant gesture, when we repaired to his car which was literally jammed to the top with cardboard boxes containing the transactions and memorabilia of past Section business. With a provocative grin and a triumphant handclasp, he said, "Here. Now you're the President!"

I now preside over half a dozen (he has a Karmen Chia) rather neat and attractive Bekins boxes full of files, memories, and miscellaneous debris. I also have the responsibility for guiding the professional effusions of about 1,200 assorted geologists with an interest in finding and producing petroleum or in research related to it. My purpose is to instill vigor and vitality in the organization, give it a renewed sense of direction, and keep it worth five bucks to join.

My judgment may be warped due to the insular environment of City Hall, but I believe the petroleum industry, i.e., drilling and producing, is in headlong decline in California and perhaps, more broadly, on the entire West Coast. Hand-in-hand with that decline are the fortunes of petroleum geologists. Witness the exodus of oil firms and personnel from California. Indeed, even my opponent in the recent election has been relocated in Denver. Authoritative sources estimate that in seventeen years California oil production will approach zero with depletion of presently producing oilfields.

The factors causing this industrial decay are not hard to identify — bad pro-

spects for big oilfields, poor economic incentives (high taxes and low prices), and fierce environmental hostility.

Against this bleak, backdrop, undertaking the presidency may be like being asked to officiate at a funeral, but there are a number of redeeming prospects that make it worthwhile. For example, the ingenuity and resourcefulness of geologists are the principal elements for optimism. Secondly, our annual meetings in the past several years have been well attended and profitable, so we still have some highly visible life-signs.

My first concern is for the membership. My impression, which is reinforced each time I attend a geologic meeting, is that the average age of our society grows older every year. I have appointed Bob Lindblom, who volunteered recently to perform any task we could think of, as head of a committee to examine our membership and develop a group profile, so that we can determine our composition and forecast its future. I shall expect his committee to make recommendations for increasing our numbers and our appeal for young geologists, for, without the latter, we are a dying organization.

My second imperative is to form the Planning and Organization Committee for an introspective look at the fabric of the Pacific Section. The committee will be made up of past Section presidents, and its main purpose will be to

(Continued on Page 3)

COMING SOON

SEPT. 8—BAKERSFIELD. Joint Meeting, San Joaquin Geological Society and Oil Scouts BBQ and Golf Tournament. Kern River Golf Course and Picnic Area.

OCT. 7-8—National Association of Geology Teachers. Far Western Section Meeting. Chapman College, Orange, Calif.

OCT. 20-21—S.E.P.M. Fall Field Trip. Cretaceous of the Coalinga Area.

YELLOWSTONE

Just received two USGS publications that will make a vacation trip to Yellowstone National Park a real joy and an education. Bulletin 1347 "The Geologic Story of Yellowstone National Park" is written in clear concise terms to be understood by the average layman, but still meaty enough for the geologist to enjoy.

The ninety pages are filled with charts, diagrams, and color photos of some of the most spectacular country in the world.

Hot off the press is Map I-711, "Geologic Map of Yellowstone National Park", at a scale of 1:125,000. It shows the detailed geology under the blanket of tourists. The map is available for one dollar and the Bulletin for \$1.25.

Both publications are cheap at half the price.

S. E. K.

Coast

The Annual Coast Society Summer Barbecue will be held this year on Saturday, August 26. Once again, the Lagomarsino family has graciously consented to the use of their ranch near Ojai. One can look forward to an afternoon of swimming, bocci ball, shuffleboard, and camaraderie. "Tumwater Sparkling Malt Drink" will be served along with barbecue and trimmings. Cost will be \$3.75 a head, with drink tickets at 25¢ each or 5 for \$1.

We encourage you to pay in advance: preregistrants will get two free drink tickets. For further information, or to register, write Dick Stewart at Union Oil Co., 2427 E. Harbor Boulevard, Ventura, CA 93303, or call (805) 642-0376; 963-6404; or 643-1629 evenings.

* * *

A new geologist with Union in Ventura is Brian Kimmel. Brian was transferred from Santa Fe Springs the end of May.

ACCENT' The Positive

This is the second of a series of articles that will accentuate the positive side of the Geologic profession and the Petroleum Industry. Many good works go unnoticed, but contributions are being made daily to make this a better world to live in. Bud Reid is one of many who have worked quietly and tirelessly for many years to make the Pyles Camp a success, and we are grateful for his report and dedicated work.

R. M. PYLES BOYS CAMP— OIL INDUSTRY SPONSORED

Pacific Coast petroleum geologists can get a kick out of "working" the "basement" country. Get the Hockett Peak 15' topographic quadrangle and locate the R. M. Pyles Boys Camp ("Pyles Camp" on the map) in Lloyd Meadows on Freeman Creek near the confluence of the Kern and Little Kern Rivers, Tulare County, California. The Camp Nelson quad to the west will assist in orientation. Left to the imagination will be the clean air, the sparkling streams, the trout, the giant redwood grove, the pines, the firs, the high mountain grasses and flowers.

Founded as a non-profit corporation in 1949 by the late R. M. Pyles of Signal Oil and Gas, this year marks its twenty-fourth camping season. By the end of the 1972 season, over 8,600 boys will have passed through its facilities. These are boys who never could have enjoyed two weeks in the mountains because of their economic situation, but thanks to contributions of time, material and money from men and women of the oil industry, they got a chance.

Campers, ranging in age from 12 to 16, are not delinquents, but come from situations such as poverty, broken homes, tough crowds and the like. They are selected by policemen, teachers, and youth counselors. They come from the Southern California oil and gas producing countries. They are kids that need guidance and the Pyles Camp is dedicated to the task of building healthier and happier generations of Americans, firmly endowed with the ideals and principles of our freedom loving country.

The stated objectives of the Camp are:

- 1) To show a boy how to live in harmony with others—to enjoy life through work, learning.
- 2) To encourage personal industry and individual responsibility through participation in group camp work effort.
- 3) To help a young man form good health, moral and spiritual habits as exemplified by the camp.
- 4) To achieve a lasting impression

of camp principles in the boy using the primitive natural setting of the Sierra wilderness as a classroom.

5) To continue contact through the years with the boy through follow-up meetings and staff visitation in his own community.

A typical camp experience involves games, horsemanship, archery and botany in the main camp area — and the highlight of the two weeks — a minimum of five days in a small group in an outcamp where a boy experiences the interdependency of the group while having the fun of hiking, swimming, fishing, and cooking out. All the while emphasis is placed on personal cleanliness, courtesy, responsibility, citizenship, patriotism and reverence. For many boys, this setting in the Sierra high country away from the troubles of the city, the broken home, the tough crowd, or hunger, triggers the first self-examination and analysis of what makes him and his world tick. And with strong guidance from counselors who themselves were campers at one time, many questions seem to get the right answers. Less than 1% of the Campers have been in serious trouble which must be considered exceptional when the Campers' environments are considered. It all adds up to success for the program.

No small part of the Camp's success with boys is due to R. F. "Bob" McAdams, the long-time Manager. "Smoke", as Bob is called in Camp, has been in youth work all of his working life. He is an ex-Scout Executive, has worked in private camps, and has served the Pyles Camp for a total of 17 years. He is a man obviously dedicated to helping boys and in love with his work. He is so enthusiastic about the Camp that he has a hard time finding time for anything else. A lost boy, a broken arm, water supply diminishing, generator down—all these things are taken in stride by "Smoke". And the great attribute of the man is his ability to communicate with the boys and help them through trouble in and out of camp. "Smoke" is the embodiment of the will and the spirit of the Pyles Camp.

How do oil men fit into all of this? From the beginning, they have contributed unselfishly to make it work. For all but the last three of the twenty-four summer camping seasons, the Camp was six miles by trail from the nearest road and every nail, board, sack of cement, and piece of equipment went into the campsite on the back of a man or a mule. A mess hall and sleeping facilities to accommodate 118 campers and staff were erected by oil men this "hard way". Today a Forest Service paved road allows the Camp to be serviced by truck, but the legend of the man-and-mule trains will live on.

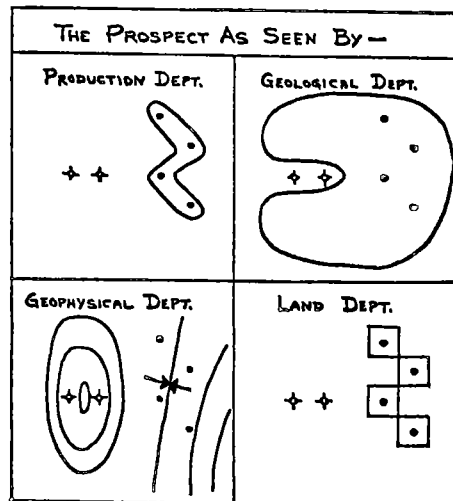
Oil companies—operators and sales and service organizations—and the men and women employed by the oil industry generously donate cash to help meet the budget which for 1972 approximates \$110,000.00. This amount will send an estimated 432 boys to the Camp and provide for follow-up services by the Camp Manager and his assistant during the winter months.

Over 20% of the annual budget is raised by barbecues sponsored by local committees of oilmen in Ventura, Bakersfield and Santa Ana. While the Ventura affair is the granddaddy, the Bakersfield barbecue—normally held in late April, has grown to the point that 3,200 14 ounce New York steaks are cooked for the affair. Literally hundreds of oilmen and women become involved in doing the hard work for these fund-raising events, and public response has been exceptional as the word of the good work of the Camp continues to spread.

Oilmen from companies comprising a cross-section of the industry also serve as the Board of Directors for the Camp which group determines the basic policies and budgeting and establishes guidelines for selection of boys. The labor of love for the oilmen involved truly makes the R. M. Pyles Boys Camp the "heart" of the oil industry. It has touched the lives of over 8,600 boys in its 24 camping seasons — 8,600 boys who will have a positive, constructive attitude about the industry and its men and women who made it all possible.

EUGENE "BUD" REID

The camp is a recognized non-profit charitable organization and all contributions are tax deductible. For further information and personal contributions please write or call: R. M. Pyles Boys Camp, P. O. Box 444, Huntington Beach, California 92648, Telephone: (714) 536-6519.



*Reprinted from New Orleans
Geological Society Newsletter*

Los Angeles

With the departure of Bob Wagner and Ed Berg for Denver, the L. A. Basin Geological Society will be led by two fearless individuals, Butch Brown of Union and Bill Polski of Shell, for the remainder of 1972. Any more oil companies moving East to Denver could be disastrous to the Society.

Well, it turned out that Mobil could not cope with moving to Denver and staging a barbecue at the Northam Station in the same month. Consequently, the barbecue held on Wednesday, July 26, was hosted by Union Oil with Mobil providing the entertainment.

* * *

Union at Santa Fe Springs has five new geological trainees this summer. They are Jim Niski, Earl Brooks, Erich Thomas, Dave Totten, and Ron Grabyan.

* * *

On August 16, 1972, Manley Natland will address the L. A. Basin Geological Society on the subject "Classification of Water-Laid Sediments". This will be a noontime meeting at Roger Young Auditorium.

TOM W. REDIN

NAGT

The Geology Department at Chapman College will host the Fall Meeting of the National Association of Geology Teachers in Hashinger Science Center, October 7-8, 1972. The program will follow the general theme of Geology as an Environmental Science.

A part of the program on Saturday and a field trip on Sunday will be particularly concerned with teaching earth sciences at primary and secondary levels. A catalog of selected geological exposures suitable for field trips in and around Orange County will be presented. Problems of teaching environmental science will be discussed.

Papers dealing with urban geology and other aspects of environmental geology will be presented.

A banquet Saturday evening will feature an outstanding and exciting speaker who is presently involved in the study of deep marine sediments.

Two field trips will be conducted on Sunday. One, mentioned above, will be of particular interest to earth science teachers in the general vicinity of Orange County. The other will visit sites in the area where landslides have presented a real problem in land utilization and which show how this type of environmental hazard is being solved by geological engineering.

CALENDAR for August

S	M	T	W	T	F	S
		1	2	3	4	5
3						
10						
16						
17						
24						
31						

- 3 COAST GEOLOGICAL SOCIETY. Noon Luncheon. Casa de Soria, Ventura.
- 10 COAST GEOLOGICAL SOCIETY. Noon Luncheon. Dave's Deli, Ventura.
- 16 LOS ANGELES BASIN GEOLOGICAL SOCIETY. Noon Luncheon. Roger Young Aud. Manley Natland, "Classification of Water-Laid Sediments."
- 17 COAST GEOLOGICAL SOCIETY. Noon Luncheon. Shakey Pizza.
- 24 COAST GEOLOGICAL SOCIETY. Noon Luncheon. Swedish Kitchen.
- 31 COAST GEOLOGICAL SOCIETY. Noon Luncheon. Casa de Soria.

Important Notice

Effective September 1, 1972, the Geological Survey will increase prices on the maps cited below. The discount will also be changed as indicated. These changes are occasioned by increased printing and distribution costs. The price of Survey maps was last increased in 1966, and we have deferred making this adjustment as long as possible.

MAP PRICES AND DISCOUNT Effective September 1, 1972

LIST PRICES

The list price of quadrangle maps at scales 1:24,000, 1:31,680, 1:48,000, 1:62,500, 1:63,360, and 1:125,000 is 75 cents each.

The list price of topographic maps at scale 1:250,000 is \$1.00 each.

DISCOUNT

On an order amounting to \$300 or more at the list price, a 30-percent discount is allowed; no other discount is applicable.

The discount applies to all maps and charts distributed by the Geological Survey.

SURCHARGE

For transmittal of maps outside of the United States (except to Canada and Mexico) a surcharge of 25 percent of the net bill will be added to cover surface transportation. Air mail and other special service will be charged at full cost of service.

Sacramento
NO REPORT.

Alaska
NO REPORT.

QUESTIONNAIRE

If you are wondering what has happened to the questionnaire, don't worry, the results will be out soon. At present, we have received over 300 questionnaires and the results are proving quite interesting. There are still three fourths of the members not heard from, so please send the questionnaire and Directory Revision in now. Don't let 1/4 of the members set policy.

Our standard operating procedure for the questionnaire is as follows. Judy Hughes (Membership Secretary) checks all income Directory Changes for correct address and informs the addressograph services of any new address. The questionnaires are then sent to Bakersfield, where we check them against the 1971 Directory and these changes are sent to the printer for stamps. The questionnaires then go to Doug Traxler for analysis and vote tally.

This may seem like a round-about way of doing things but the job is too big for one person and whatever help is received is greatly appreciated. Please help us by sending in your information and we can get the job over with now.

TO ERR IS HUMAN —
TO FORGIVE DEVINE —

All you devine members who sent in Directory changes are to be congratulated. We have received 175 changes or what will amount to five pages of stamps. Many members hurriedly filled in the questionnaire and Directory information and we have had to guess at a few addresses and schools. If the new stamp does not meet with your approval or is incorrect *please TYPE* the correct information and send it to us and we will issue a new stamp. After all, you may be devine, but we are only human.

San Joaquin

NO REPORT.

MEMORIAL

Dr. H. B. (Pete) Renfro, 57, Treasurer-elect of the American Association of Petroleum Geologists, was one of six killed in the crash of a private plane June 23 near Glenwood, N.M. He was to have taken office July 1.

Guest Editorial . . .

(From Page 1)

examine our business, our operations, our endeavors, and our ultimate destiny. What I most hope for from this committee will be the institution of new programs that will benefit our membership.

At this stage, it strikes me that the Section serves its membership in two principal ways: the annual meeting and through the medium of publications. In both of these functions we've been eminently successful due to the hard work of dedicated members and especially that of Don Hallinger, who has been simply magnificent in publishing and selling. Our short term objective is to ensure the success of the National Meeting in Anaheim next year, and our more distant objective is the 1974 Pacific Section meeting which I should like to propose to be held in San Diego. In this connection, I wonder if annual meetings under present economic circumstances are still warranted, and one of the matters that I believe the Planning and Organization Committee should consider is the virtue of biennial conventions.

In conclusion, it is my plan to regroup, restore, renew, and refresh the Pacific Section as much as possible in order to make it attractive to those who join it devotedly year after year and to other geologists who view it principally as a drain upon their financial resources and without productivity.

June ExCom Meeting:

Those present besides President, Treasurer, Editor and Past President, were: Bill Edmondson, Vice-President elect, John A. Carver, '72 convention chairman, J. D. Traxler, Legislative Committee chairman, Robert G. Hoffman, President, San Joaquin Geological Society, Jim Benzley, San Joaquin Representative, Jim Peacock, SEG Representative.

Discussion included: Treasurer's report by Hallinger.

GENERAL FUND

Checking	\$ 2,978.12
Savings	17,994.68
Liquid Assets	\$20,972.80

PUBLICATIONS FUND

Cash	\$ 4,766.90
Plus Savings	500.00

SPRING PICNIC

Net Loss	\$ 248.29
(not counting guide book)	
Plus Contributions	\$ 650.00

For the Spring Picnic it is noted that minor price adjustments will make all functions, except the Golf Tournament, self supporting.

Editor Ed Karp was congratulated on a job well done: 10 interesting Newsletters, comprising 68 pages. Ed has accepted the post for another year. He will make available sufficient copies of the proper current Newsletter for handouts at appropriate conventions.

The Amendment to the Geologists Act AB1961 is still in limbo.

A wrap-up of the 1972 Convention was given by General Chairman John Carver, Oxy of Bakersfield. The attendance figures total 848 (575 members, 49 students, 68 non-members, 153 wives). Carver had stressed strongly the curtailment of support by money contributions and asked for contributions of warm bodies to attend instead. His concept certainly contributed to his successful convention.

An agreement on future money contribution requests was achieved. Future activities will concentrate on acquisition of attendance and any contributions will be accepted with proper recognition but not solicited. Oil oriented companies can make any Pacific Section Convention a success by contributing talent and sending their staffs to attend the meetings. This is what the idea is all about — a means of disseminating ideas and accomplishments.

The Martin Van Couvering Perpetual Award will take the form of the selection of one or more deserving Geology students to attend local or National AAPG conventions, meetings or field trips. These awards, of substantial nature, will be financed, by agreement of the Presidents of the Pacific Sections AAPG, SEPM and SEG, from the inter-

est accruing annually from their joint conventions savings account.

Jack Durrie, Getty Oil of Los Angeles has been appointed Activities Chairman and will coordinate inter-affiliate society programs such as Distinguished Lecturers, and integration of available and willing members with activity manpower needs.

The Pacific Section has been asked to provide copies of the Pacific Petroleum Geologist Newsletter for distribution throughout the National Sections and their affiliates. This is a compliment to Ed Karp and the rest of the Pacific Section. Arrangements have been made to use National Headquarters as a clearing house for this project.

Core and sample presentation has been an item much discussed. Unfortunately there seems to be no vehicle available for managing such a program in California. Certain legal actions and contributions seem to be necessary to produce a usable program. Further studies will be made to see how the Pacific Section area can acquire the same "free information" status for wells as seen in the Rockies or Midwest regions.

A finance committee is being organized utilizing the talents of Tom Wright, Don Hallinger and Bill Bedford to continue stabilization of normal fiscal problems of the Section. We may not be big business, but the problems are sufficiently complex.

The joint Pacific Section - National Convention for Anaheim in '73 progresses in planning under Art Weller — it should be another winner for the Pacific Section.

My Swan Song as President is filled with proper thanks for having been blessed with one of the greatest Executive Committees I've ever had the luck to be elected to. You know who they are.

RICHARD L. HESTER

Northwest

We acknowledge with pride and great jubilation that the activities within the great State of Washington, will now be reported in the *NEWSLETTER*. Weldon W. Rau, Department of National Resources in Olympia, Washington, has assumed the responsibilities of Associate Editor for the Northwest. Weldon can be reached through Box 168, Olympia or by phone at (206) 753-6183. If the reports from Olympia are as good as the beer, we're in for an inebriating experience.

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Recommended Reading.....LUCY E. BIRDSALL

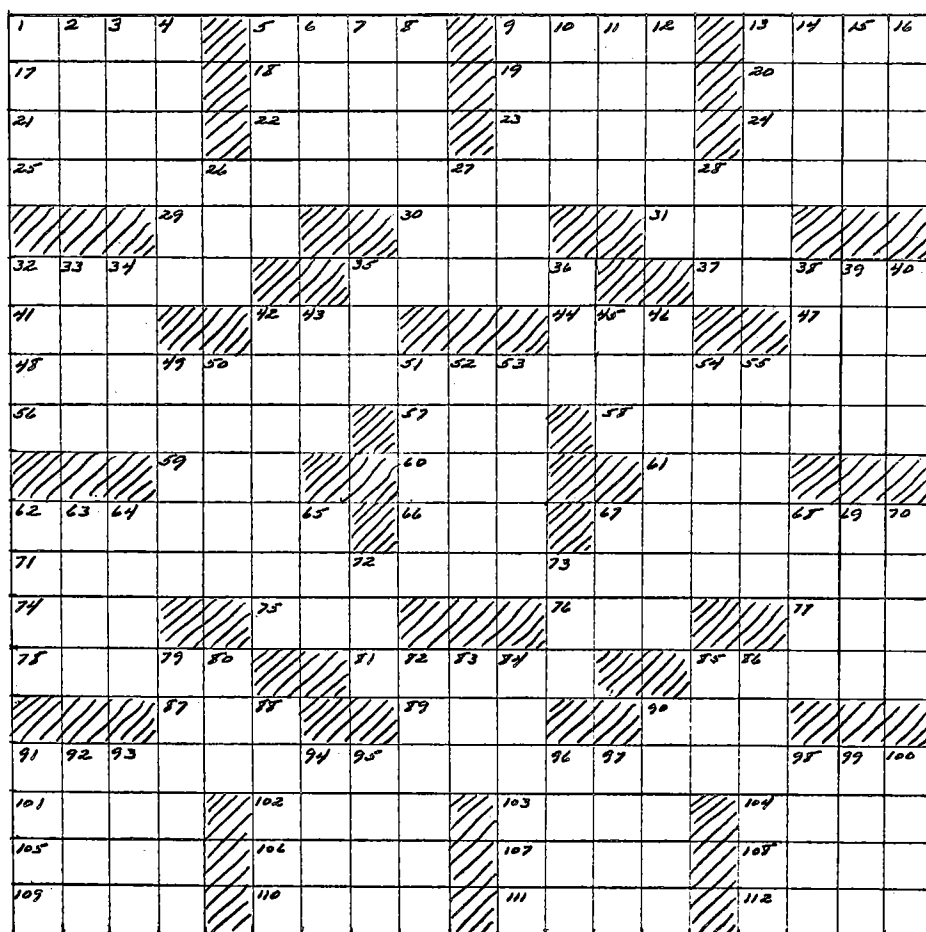
NEWSLETTER of the Pacific Section—American Association Petroleum Geologists is published monthly by the Pacific Section.

Material for Publication and requests for previous copies should be addressed to STANLEY E. KARP—GEOLOGY DEPT., BAKERSFIELD COLLEGE, BAKERSFIELD, CALIF. 93305.

Material received by the 15th of each month will be included in the following issue.

CHANGE OF ADDRESS, subscription and membership inquiries should be directed to MEMBERSHIP SECRETARY, PACIFIC SECTION AAPG, P. O. Box 17486, FOY STATION, Los Angeles, Ca. 90017.

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HORIZONTAL

- 1 Horse
 5 Maxims
 9 Wine must
 13 Peak
 17 Malay chief
 18 Tory minister
 19 Ballerina garb
 20 Castle
 21 Group
 22 Mr. Lincoln, e.g.
 23 Down with (Fr.)
 24 Israel seaport
 25 Mineral crystal with 24 faces
 29 Negative prefix
 30 Ova
 31 Bering, e.g.
 32 Luminous
 35 Rhone tributary
 37 To mire
 41 Lug
 42 The draft (init.)
 44 Spanish article
 47 Miss West
 48 Diploid crystal with 24 faces
 56 Ancient jews
 57 Okla. town
 58 Jewelry for men (3 words)
 59 Dentist
 60 Chess pieces
 61 Craze
 62 Elaborate what not
 66 Wet nurse (Pg.)
 67 Mosque attachment
 71 Mineral crystal with 24 faces (2 words)
 74 English festival
 75 Idol
 76 Card
 77 Mysterious brain ingredient (abbr.)
 78 Lithuanian port
 81 Glacial deposit
 85 Muslim coin
 87 River island
 89 Oolong
 90 Preserve
 91 25, 48 & 71 are versions of a _____ (2 words)
 101 Debauch
 102 Simpleton
 103 Cunning
 104 Hodge podge
 105 Malaria
 106 Egg
 107 15th of July etc.
 108 Tore
 109 T.V. jack
 110 Soap frame bar
 111 Gallivants
 112 English hippies

We are indebted to Lee C. McFarland, McFarland Energy, Inc., for the following Crossword Puzzle.

VERTICAL

- 1 Cleverly sly
 2 Rattle
 3 Greek hero
 4 Top _____ (Play)
 5 Finch
 6 Fusses
 7 Chamberlain's alter ego
 8 Scoffs
 9 Gazer
 10 Horn
 11 Indian
 12 Sister goddesses
 13 Turkish Mt.
 14 Palm
 15 Grieve
 16 Scratches
 26 Anc. Hebrew measure
 27 Drive slantingly
 28 _____ Plains (River)
 32 Grant
 33 Buries
 34 Epochs
 35 Jap. statesman
 36 High note
 38 Old Test. prophet
 39 Path
 40 In case
 42 Employ elbow-grease (2 words)
 43 G.P.s
 45 Interjection
 46 Play pyromaniac (2 words)
 49 Anchor
 50 Guide
 51 District in West India
 52 Swelling
 53 Passage
 54 Moon goddess
 55 Obstruct again
 62 Cheese
 63 Roofing
 64 Throat clearer
 65 Id
 67 Fungus (comb. form)
 68 Nil (Fr.)
 69 Miss Millay
 70 Ruler
 72 Poem
 73 Average
 79 Chilean island
 80 Bed (Fr.)
 82 Peach seeds
 83 Tun
 84 Dermaptera
 85 Durocher's ex
 86 Tattle
 88 Cliff-base debris
 90 Sedentary game
 91 Throw snake-eyes
 92 USSR Satellite capital
 93 Poss. pronoun
 94 Ken
 95 Diaries
 96 Opera
 97 Begged
 98 Ersatz butter
 99 Skin
 100 Sayings

SEPM

Fall Field Trip

Set aside Friday evening, October 20, and all day Saturday, October 21, 1972, for the S.E.P.M. Fall Field Trip.

Bob Hickernell, Atlantic - Richfield Co., Bakersfield, field trip chairman, says the subject of the dinner and field trip will be the Cretaceous stratigraphy of the Coalinga area. The field trip, led by Cliff Church, Consultant, should be a great one, with opportunities for sample taking.

Details will be announced in the next *Newsletter*, along with a list of available accommodations in Coalinga.

LAST MONTH'S CROSSWORD



RECOMMENDED READING

U. S. GEOLOGICAL SURVEY

Professional Paper 655-F: Subsurface hydraulics in the area of the Gila River Phreatophyte Project, Graham County, Ariz., by R. L. Hanson, with a section on Aquifer tests, by S. G. Brown 40¢

Professional Paper 724-C: Geochemistry of diagenetic dolomites in Miocene marine formations of California and Oregon, by K. J. Murata, Irving Friedman, and Marcelyn Cremer 30¢

Bulletin 1354-D: Revision of stratigraphic names for some Eocene formations in Santa Barbara and Ventura Counties, Calif., by J. G. Vedder 10¢

Water Supply Paper 1997: Geology and ground water of the Molalla-Salem Slope area, northern Willamette Valley, Oreg., by E. R. Hampton .. \$5.25

Water Supply Paper 2019-A: Estimating steady-state evaporation rates from bare soils under conditions of high water table, by C. D. Ripple, Jacob Rubin, and T. E. A. van Hylckama 30¢

MAPS:

HA-421: Availability and quality of ground water in the Ashland quadrangle, Jackson County, Oregon, by J. H. Robison \$1.00

National atlas (relief) map of Alaska. Scale 1:7,500,000. Sheet 28 by 19 inches \$1.50

National atlas (relief) map of the United States. Scale 1:7,500,000. Sheet 28 by 19 inches \$1.50

Reports available only through National Technical Information Service, U. S. Dept. of Commerce, Springfield, Va. 22151.

PB2-6673: Principle facts for gravity stations for the central Arizona project, by D. L. Peterson. 60 pages \$3.00

PB2-07594: Acoustic reflection profiles Bay of Campeche, By G. W. Moore, 34 pages \$3.00

PB2-07595: Acoustic reflection profiles East margin Yucatan Peninsula, by J. G. Vedder. 33 pages \$3.00

PB2-07597: Acoustic reflection profiles Eastern Greater Antilles, by L. E. Garrison. 33 pages \$3.00

PB2-07596: Acoustic reflection profiles Venezuela Continental Borderland, by E. A. Silver. 38 pages \$3.00

PB2-07641: Aerial photography for photogrammetric mapping: Standard specifications, by Office of Research and Technical Standards. 28 pages \$3.00

LUCY E. BIRDSALL

Did You Know . . .

"The AAPG is a professional organization chartered under the tax laws as a business league," Dr. Kengerd continues. "As professionals we apply science in a businesslike way in an attempt to make a profit for our employers or ourselves.

"We are entitled to advocate legislation for the good of our profession. For the most part we will be involved on the state level in connection with proposals to license geologists or otherwise regulate the practice of our profession.

Northern
California
NO REPORT.

NEWSLETTER

Pacific Section A.A.P.G.

P.O. Box 17486 Foy Station
Los Angeles, California 90017



NEWSLETTER

of the Pacific Section
American Association of Petroleum Geologists

VOLUME 26

SEPTEMBER, 1972

NUMBER 9

GUEST EDITORIAL . . .

When our Editor invited me to write a piece for this publication, he gave me a free rein, and I appreciate it.

At first, I was at somewhat of a loss as to what to talk about because:

- a. I have nothing to add to the Wisdom of the Ages.
- b. I am unqualified to give a learned dissertation on the latest ideas in the field of geology.
- c. As of now, I am not sufficiently informed on the professional problems of the geologist to make a worthwhile contribution in that direction.
- d. I do not know, specifically, how you should go about making more money. Such good things as have befallen me have not been the result of the workings of a massive intellect; on the contrary they resulted from *no* planning on my part — gifts out of the blue. You remember the song Bing Crosby used to sing about "a guardian angel, with nothing else to do but to give to me and to give to you".

The best I have to offer, as a contribution to this publication, are an old man's reflections on life.

A subject finally occurred to me: It has been said that "the proper study of mankind is man". Carrying the idea a little further, let us consider you, individually, as a subject for study. (Most of what I have to say applies, with equal force, to me and everyone else.)

The first point I should like to make is your individuality. *You are unique!* There is no one else just like you. (In a few cases, there is a strong superficial resemblance, but that's all.) Make the most of your individuality, and don't try to be someone you happen to admire. Mind you, I am not discouraging the emulation of good qualities we see in others. Make the best use of them — as they fit you and your circumstances. Indeed, you cannot realize your full potential without borrowing from the experience of others whose lives have preceded yours or have differed from yours.

Try to understand yourself. It takes a long time. Probably the project is never quite complete. However, you will learn some mighty interesting things — some of them without trying. But you cannot know yourself well enough without making a special effort to do so. And you cannot make the most of your assets unless you are aware of them. Conversely, you can avoid embarrassing pitfalls if you are fully aware of your weaknesses — and we all have them. But don't let your weaknesses scare you or defeat you. Weaknesses are a common heritage of all mankind. Your competitor's may be worse than your own. That's what football is all about.

Perhaps the worst problem we all share is that little ego that is planted right in the center of our personality. It is so belligerent — always ready to fight any aspersion against its owner. It is one of the worst trouble-makers in the world. Always ready to turn on the adrenalin. The good Lord must have had a purpose in putting it there. But it is up to each one of us to keep it under control — and it can be done. I have seen some magnificent examples. So have you. Undisciplined egotism is behind all the arrogance, aggressiveness and acquisitiveness we see.

(Continued on Page 2)

COMING SOON

OCT. 7-8—National Association of Geology Teachers. Far Western Section Meeting. Chapman College, Orange, Calif.

OCT. 9-11—L.A. Basin Annual Short Course. See "Continuing Education" for details.

OCT. 20-21—S.E.P.M. Fall Field Trip. Cretaceous of the Coalinga Area.

NOV. 25—L.A. Basin Holiday Dinner Dance. See Los Angeles Section for details.

NOV. 26-30—S.E.G. 42nd Annual International Meeting, Anaheim, Calif. Headquarters—Disneyland Hotel. Technical Program — Anaheim Convention Center.

ACCENT'
The PositiveOCCIDENTAL'S
ENVIRONMENTAL CONCERNS

Occidental's primary corporate goal is to make money through discovery and exploitation of new major oil and gas fields. Some of the most rewarding domestic hunting grounds are within highly urbanized portions of major sedimentary basins where exploratory drilling has not been nearly so dense as compared to adjoining crop- or brush-covered lands. For example, recent townlot drilling along the north margin of the Los Angeles Basin has resulted in discovery of several fields of which Occidental has found three.

The urban environment has forestalled discovery of oil and gas for our generation because drilling has not been previously permitted and in many areas is still prohibited. The burden is clearly upon industry to prove that operations can be conducted in a manner that is compatible with that environment.

Public acceptance of industry at every level of awareness requires huge and unusual corporate effort and expenditure. At Beverly Hills field, for example, we helped that City in drafting a municipal oil code. In addition, booklets were distributed to every home owner describing in detail our proposed operations. Work on our initial exploratory corehole, drilled to evaluate our play, was suspended every evening between 10:00 p.m. and 7:00 a.m. and on Sundays, so as not to disturb our neighbors. Our costly architectural derrick, designed to simulate an office building, was proposed by Occidental because we did not think a standard canvas wrapped derrick would be suitable or long tolerated in a sophisticated community. Storm chokes and kill lines were installed on each flowing well as added protection, a concession to safety that has since become mandatory. Precise level surveys were initiated prior to commencing production and were taken twice yearly to early detect possible subsidence. This action was timely as minor subsidence

(Continued on Page 4)

Guest Editorial . . .

(From Page 1)

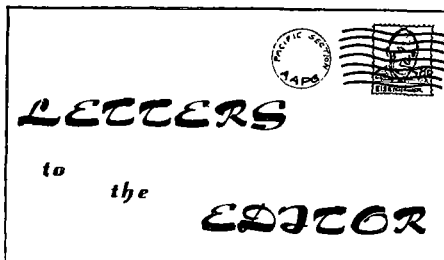
Another enemy we have to be on guard against is jealousy. Don't let this green devil eat your heart out. If you can take a reasoned view of the situation, it will usually turn out that the one you envied finally wasn't so enviable after all. Many of the slights or slurs you have experienced (or imagined) don't amount to anything in the light of subsequent events. The important thing is to see that you don't needlessly hurt somebody else. Some such wounds are hard to heal. Avoid them in the first place. Turn away from this destructive frame of mind. Exclude it from your thoughts and turn them to making the most of the many gifts with which you have been endowed.

In my opinion, one of the most important things is to be yourself — your best self. Avoid pretense — a form of dishonesty. The people who are the most appealing are the ones who are straightforward.

In a recent conversation, apropos of some particular subject, I happened to say "everybody is getting old". The man I was talking to said: "I am." He isn't much more than half my age. But he made the remark in earnest. I didn't question his statement but, to me, it seemed such a ridiculous one, for he is big and strong. But then I recalled for how many years I have thought I was getting old. As you know it is a matter of relativity. A good many of us began getting such ideas in our thirties, if not sooner. Fortunately moods change. The person, who feels decrepit one day, may be quite kittenish the next. I pity the person who is perennially discouraged and depressed. It may be due to ill health, but it may also be due to an unhealthy mind. In nearly all cases health of body or mind, or both, can be greatly improved if the desire is strong enough. I know of some astonishing changes that have been brought about when the victim really made up his mind. Probably you do too.

I am a little appalled at all the sage advice I have offered. Actually I haven't presented a single new idea. They have all been told over and over — for a thousand years. But sometimes it is well to recall some of this ancient wisdom that is so important to our lives. When you think what a magnificent creation is man, isn't it sad to see mankind failing to make the best use of its equipment and, on the contrary, devising so many means for destroying or disabling it? I wish I knew what to do about it. I hope this article may be a tiny contribution toward that end.

Finally, like Abraham Lincoln, don't



Mr. A. O. Spaulding
c/o Stanley E. Karp
Geology Department
Bakersfield College
Bakersfield, California 93305

Dear Art:

In the August 1972 PPG Newsletter, you identified the factors causing petroleum industry decay as "bad prospects for big oil fields, poor economic incentives and fierce environmental hostility." I would suggest that a much more important factor is involved, that of *poor land availability*. It may be that your phrase "bad prospects" refer to bad expectations rather than geological prospects, if so that factor could encompass the pathetic situation of so much unleaseable land. If "bad prospects" means bad geological plays, then I would beg to differ with you on that score too. You may remember that I spent many years in California and saw a multitude of prospects. There were quite a few bad prospects for big oil fields, but who but the majors won't drill for a small oil field if he can get a reasonable acreage position? If I had to elicit a factor causing industry decay to replace the "bad prospects" one, it would be poor prospect analysis and comprehension by those who would drill. I guess that I feel that you could have listed two major factors: poor land availability and deteriorating management understanding of what it takes to find oil; and, two minor factors, (your last two) Poor economic incentives and fierce environmental hostility.

I do agree that the petroleum industry appears to be in a headlong decline in California, if you consider only the majors. They should have left years ago. But, I would hope that when they leave they would be honest and realistic enough to make their data files and land available to the few remaining independents and consultants. I would predict at least 20 fantastically successful years

be asamed to pray to your Maker for help — and you'll never walk alone. Furthermore, don't forget to say "thank you" for all of the priceless gifts you are receiving every day without cost. It is so easy to just take them for granted, as if we had really earned them.

MARTIN VAN COUVERING

for all concerned, if they did.

Sincerely,
DAVE CALLAWAY

CONGRATULATIONS on taking on the 2d Year — We knowed you could do it all the time, etc. Now in regard to the X words, IF I had done the little one on CONTINUING EDUCATION, I was going to enclose it with Application for Engineering Geologist Option and ship it to Wilferd Peak & now I went & flunked it! And NOW it gives even bigger ones.

Sadly Yours
BILL BEATTY

Thanks for your card and your invite for lunch. (Our big spender from the north graciously offered to take me to lunch at the El Tejon Hotel next time he's in town. Used a PENNY postcard to boot. Boy, I've heard of cheapskates before but this beats all. The El Tejon was torn down two years ago.)

Thank you for publishing my Xword puzzle in the August edition. I am sorry to say I found minor errors in four places, and tho your typesetter did a grand job, the author did not — all the mistakes were mine.

Herewith the errata:

Vertical

15. Should say *DAWN*, not *GRIEVE*.
(If one mourns, he grieves, whereas *MORN* means *DAWN*.)

Horizontal

25, 48 and 71 — All of these words should be plural; they are *CRYSTALS*.

Mighty sorry for the goofs.

Sincerely,
LEE McFARLAND

No need to apologize. Your crossword was a monumental piece of work compared to the miserable one holer I put together the previous month. Besides, when the Newsletter appears without mistakes, you'll know that you have a new editor.

CALENDAR for September

S	M	T	W	T	F	S
					1	2
7						COAST GEOLOGICAL SOCIETY. Noon Luncheon. Dave's Deli, Ventura.
8						BAKERSFIELD. Joint Meeting, San Joaquin Geological Society and Oil Scouts BBQ and Golf Tournament. Kern River Golf Course and Picnic Area.
22						A.P.I. NORTHERN CALIF. CHAPTER Annual Golf Tournament and Dinner. Yolo Flyers Club, Woodland, Ca.

Northern California

Thank you for your "fond farewells" in the July issue of the Newsletter but I had my arm twisted by our incoming president, Bob Carter of the USGS, and will continue to report our news to the Newsletter.

* * *

I believe the feature, "Accent' The Positive", is a very good idea and hope you get the cooperation of individuals and of concerned companies.

(Sorry to say that there has been no great flood of volunteer reports. Not even a slight trickle of unsolicited comment. Maybe our critics are correct and we don't have much to offer on the positive side.)

* * *

George L. Harrington, a long time member of AAPG, passed away in Palo Alto, on May 25, 1972. A Memorial for AAPG Bulletin will be published in the October issue according to Art Meyerhoff, the Publications Manager.
HERB SAWYER

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Recommended Reading.....LUCY E. BIRDSALL

NEWSLETTER of the Pacific Section—American Association Petroleum Geologists is published monthly by the Pacific Section.

Material for Publication and requests for previous copies should be addressed to STANLEY E. KARP—GEOLOGY DEPT., BAKERSFIELD COLLEGE, BAKERSFIELD, CALIF. 93305. Material received by the 15th of each month will be included in the following issue.

CHANGE OF ADDRESS, subscription and membership inquiries should be directed to MEMBERSHIP SECRETARY, PACIFIC SECTION AAPG, P. O. Box 17486, FOY STATION, Los Angeles, Ca. 90017.

SEPM

MIOCENE PROCEEDINGS VOLUME

The Proceedings of the Pacific Coast Miocene Biostratigraphic Symposium presented at the Annual Convention March 9-10 in Bakersfield is ready for distribution and sale. The volume includes all 21 papers presented at the SEPM Technical Sessions as well as the 2 hour Symposium and panel discussions which were taped and transcribed. The Proceedings has 370 pages, 123 illustrations, 14 plates of fossils and 4 pages of photos of paleontologists.

This edition is limited and will not be reprinted nor easily reproducible. Those that preordered should have already received their copies. Others can order by mail (make \$6.50 check payable to Pacific Coast SEPM) and address to Gene Shaw, Treasurer, c/o Shell Oil Company, P.O. Box 3397 T.A., Los Angeles, California 90054.

NEW OFFICERS OF THE PACIFIC SECTION SEPM (1972-1973)

President —
Rod McLennan — Union Oil Company
Vice President —
(Mrs.) Sonja Mulvane — Shell Oil Company
Secretary —
Eugene Fritsche — California State College, Northridge
Treasurer —
* * *

Gene Shaw—Shell Oil Company
Again this year the Pacific Section SEPM has awarded outstanding students from West Coast Colleges and Universities a year's membership in the National SEPM.

NOMINEES FOR JOURNAL OF PALEONTOLOGY:

Brian G. Norris, University British Columbia.
Bruce E. Rafuse, Washington State University.
David H. Suek, Fresno State College.
George L. Kennedy, University California Davis.
Thomas G. Morgan, University California Riverside.
Gerta Callahan, California State College, San Francisco.
Gary L. Kline, University Alaska.

NOMINEES FOR JOURNAL OF SEDIMENTARY PETROLOGY:

Burns C. Brennan, Jr., California State College, Northridge.
Sean M. Carey, California State College, Los Angeles.
Charles G. Adelseck, Jr., University California San Diego.
Robert L. McConnell, University California Santa Barbara.
Robert J. Herodyski, University Cali-

Los Angeles

The Los Angeles Basin Geological Society Annual Holidays Dinner Dance will be held on Saturday, November 25, 1972 at the Lobster House, 3211 Admiralty Way, Marina Del Rey. Cocktails begin at 7:30, dinner about 8:30 (Brochette of Beef). Dancing to the music of "The Moonlighters". Price is \$20.00 per couple. For tickets contact K. J. Bird, c/o Shell Oil Co., 1008 W. 6th St., Los Angeles, Ca. 90051; (213) 482-3131.

Although mailed invitations will be sent to Los Angeles Basin Geological Society members, we sincerely invite all AAPG, SEG, and SEPM members, wives and friends to attend. Table reservations are available for parties of 10, if desired.

San Joaquin

NO REPORT.

U. S. G. S.

The U. S. Geological Survey is releasing in open file the "Correlation of Subsurface Tertiary Rocks, Cook Inlet Basin, Alaska", by R. D. Carter and W. L. Adkison. The eight page report is accompanied by two large well-log correlation sections.

Copies can be made at private expense in the USGS Anchorage, Los Angeles and Menlo Park offices. Inspection copies are available at Juneau, Alaska, Spokane and San Francisco.

* * *

A new water supply paper (1999-H) has just been published covering the "Subsurface Geology of the Late Tertiary and Quaternary Water-Bearing Deposits of the Southern Part of the San Joaquin Valley, California." M. G. Croft's report covers the area from Fresno to the Grapevine and brings up to date some of the many investigations previously published of the area.

fornia Los Angeles.

Roy W. Fulwider, California State College, Long Beach.

William B. Hanson, Oregon State University.

Ann Vernado, San Diego State University.

John J. Roberts, University of Southern California.

JAMES C. TAYLOR,
Past President, Pacific Section SEPM.

Sacramento

Things here in Sacramento are rather quiet, at least for a while longer. It appears that most of the drilling activity will be in the last quarter of the year, as was the case last year.

* * *

Gardiner W. Spring, Jr., Vice-Pres. — Natural Resources Div., United Calif. Bank, Bakersfield, presented a talk on Aug. 9 to the members of the Sacramento Petroleum Association on the annual Tevis Cup — 1 day — 100 mi. endurance ride by horse across the Sierra Nevada Mtn. The ride leaves from Squaw Valley, Lake Tahoe and is completed in Auburn. Wendel Robey originated the event over 16 yrs. ago. The event draws over 200 entrants from all over the world, and over 60% do not complete the ride. Gardiner has completed 3 times, but only completed the ride once. He had a spectacular series of slides to accompany his talk.

* * *

The Sacramento Petroleum Assn. meets every Wed. noon for a lunch and meeting at Scheidel's Bavaria, 2764 Fulton Ave. Ed Lacey, Texaco, is presiding president.

* * *

Tentative date for the American Petroleum Institute, Northern Calif. Chapter, annual golf tournament and dinner is Fri., Sept. 22 at the Yolo Flyers Club, Woodland, Calif. Costs will be announced in the near future.

* * *

Roland Bain, Tri-Valley Oil & Gas Co., recently returned from a 25-day tour of 6 Western European countries.

* * *

The Geological Society of Sacramento does not hold monthly meetings during the summer months, but will be going again in Sept. or Oct.

* * *

Bruce Brooks, Capitol Oil Co., recently moved into his new office in Sacramento. The office is very plush and includes a wet bar. Bruce has been very successful in the Sacto. Valley, and if this year isn't quite so, maybe the bar will relieve some of the disappointment.

(We wish Bruce every success in the world, and hope we're invited to his next big party.)

TERRY PLUMB

Northwest

REPORT ENROUTE, but not received by press time.

Fall Field Trip

The Fall Field Trip of the SEPM Pacific Section will be held at Coalinga, California, October 20, 21, 1972. The Friday evening dinner meeting will be held at the Elks Club, Coalinga, at which time brief orientation talks will be given by field trip leaders. The cocktail hour will begin at 6:00 p.m. and dinner at 7:00 p.m. Personal cars will be used for the field trip instead of buses. The caravan will start at 8:00 a.m. sharp Saturday from the Cambridge Motel.

The morning trip will transverse the classic Oil Canyon-Joaquin Ridge section covered in the 1941 field trip but with some exciting new collecting localities and more emphasis on rock structures and paleoenvironments. Phil Ryall will be present to discuss rock structures and depositional environments. J. Q. Anderson has also promised to be with us to contribute data from his careful study of the area.

The second leg of the morning trip will cover the Los Gatos-Pine Canyon section, the latter part of which crosses the White Creek syncline in the Joaquin Ridge sandstone and ends at the top of the Alcalde shale where excellent foram faunas may be collected. The morning trip ends at the park in Coalinga where lunch and drinks will be served.

The afternoon trip will cover the Warthan Canyon section to the Parkfield turnoff. Good exposures of upper Waltham, lower Waltham shale, Long Canyon sand and Curry Mountain shale may be seen.

The Field Trip Committee extends a welcome to all those interested in attending the meeting and field trip.

Two Field Trip packages will be offered as follows:

1. Trip with dinner, box lunch, guidebook
\$12.50 non-members, Pacific Section SEPM
\$11.50 members, Pacific Section SEPM and students
2. Trip with box lunch, guidebook
\$7.50 non-members, Pacific Section SEPM
\$6.50 members, Pacific Section SEPM and students

Breakfast will be available, but is not included in the above prices.

Pre-registration is necessary, so please send checks for the desired Trip Package (made payable to Pacific Section, SEPM) to Gene Shaw, treasurer, c/o Shell Oil Company, P.O. Box 3397, Terminal Annex, Los Angeles, California 90051 by October 6, 1972.

Any questions regarding the trip may be directed to Bob Hickernell, A.R. Co., Field Trip Chairman, and Cliff Church, Consultant, in the Bakersfield area, and to Rad McLennan, Union Oil

Research and Sonja Mulvane, Shell, in the Los Angeles area.

Following is a list of available accommodations in the Coalinga area. Please make your own reservations as soon as possible since space is limited.

Cambridge Inn — 35 Units. \$12.00 - \$16.00. 100 Cambridge. (209) 935-1541.

Coalinga Motel — 18 Units. \$7.00 - \$9.00. 698 Polk. (209) 935-0881.

Krugers Motel — 10 Units. \$6.00 - \$8.00. 290 N. Seventh. (209) 935-2493 or 935-2329.

Laura Lodge — 23 Units. \$8.00 - \$17.00. 201 S. Fifth. (209) 935-2921.

Accent' . . .

(From Page 1)

that might have been attributable to fluid withdrawal was detected and has been subsequently arrested by a joint water flood. It is significant that this surveillance, commenced voluntarily, is now mandatory within the City of Los Angeles. With wells spaced on five-foot centers at the surface (we now have 48), directional drilling problems, including a near blowout in 1968 when we drilled into a producing well, necessitated installation of a computerized directional drilling monitor at the well site to provide a continuous printout showing the location of all wells in proximity to the corridor of the drilling well. At one time we even added pine scent to the drilling mud because of a single complaint of odors. The new scent brought even more complaints and was discontinued. Currently, in cooperation with industry, a biodegradable drilling fluid comprised of fertilizers and clay, but devoid of injurious heavy metals, has been developed. We are utilizing this new mud now, and effect cost savings in disposal as farmers are pleased to have it spread on fields.

Most of the costly operational procedures enacted at Beverly Hills would not be considered for a non-urban drilling operation. Our intent has been to conduct operations that are commensurate with the local environmental requirements. In this case, it has meant vast outlays of money in terms of people, service and equipment to achieve compatibility and to be a good neighbor.

Financially, it has been a sound investment for Oxy; further, each of over 2,000 home owners receive a monthly royalty check that averages about \$100, and just maybe a new segment of the public has become sympathetic to the efforts of oil corporations that are doing their best to work with communities while attempting to discover new energy for the country.

STAN ESCHNER
Occidental Petroleum

<p>SMITH, ROBERT R.</p> <p>Senior Geologist SHELL OIL COMPANY 5126 Elkmont Drive, Palos Verdes Peninsula, CA. 90274 (213) 482-3131</p> <p>Res. (213) 375-6026 M.A. '53 U. of Mo.</p>	<p>SIMONSON, RUSSELL R.</p> <p>SELF EMPLOYED 1605 Glorietta Ave., Glendale, CA. 91208 (213) 243-3093</p> <p>Res. (213) 243-3093 M.A. '36 U.C.L.A.</p>	<p>HACKER, ROBERT N.</p> <p>CONSULTING PETROLEUM GEOLOGIST 902 Robertson Plaza Twrs., 116 N. Robertson Blvd., Los Angeles, CA. 90048 (213) 659-3736</p> <p>Res. (213) 348-2115 M.A. '50 U.C., B.</p>	<p>GATES, JOHN</p> <p>Dist. Expl. Geol. GULF OIL CO. — U.S. 3325 Christmas Tree Lane Bakersfield, CA. 93306 (805) 324-6031</p> <p>Res. (805) 871-7731 B.A. '46 U.C.L.A.</p>	<p>FEDER, HARRY R.</p> <p>CONSULTANT 2920 H St., Bakersfield, CA. 93301 (805) 324-3861</p> <p>Res. (805) 323-5323 A.B. '46 U.C.</p>	<p>HAWLEY, ARTHUR S.</p> <p>SELF EMPLOYED P.O. Box 1025, Willows, CA. 95988 (916) 934-3832</p> <p>Res. (916) 934-3832 B.S., U. of Mich.</p>
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MAJOR DISCOVERIES IN



TECHNICAL PROGRAM

AAPG

The 1973 Annual Meeting will highlight the successes in finding oil and gas in hostile environments based on examples from all over the world. We are using a broad definition of environment that includes political, geological, and economic conditions that have been successfully met. A first-day plenary session will examine major case histories. Smaller sessions on subsequent days will cover new methods, new tools, and detailed studies within the major topic. Excellent cooperation has insured a topical and dynamic program.

AAPG Research Symposium

"Accumulation and Diagenesis of Organic Matter in Sediments"

J. A. McCall and S. R. Silverman have arranged an authoritative group of speakers and topics and have also arranged a Sunday afternoon "teach-in" on the symposium topic. This is a new innovation that should prove to be popular and provides a short course format that will give participants an in-depth review of the topic. Information on registration will be distributed later.

SEPM

In addition to sessions dealing with miscellaneous topics in the general fields of paleontology and sedimentary petrology, sessions dealing with dolomitization, remote sensing, geochemistry, and sediment transport are being organized for the Anaheim meeting.

Informal discussions and seminars will be held on Sunday by the SEPM Research Groups. These are becoming increasingly more popular and will deal with fine grained sediments, environmental geology, coastal sedimentation, computer technology, geochemistry of sediments, trace fossils, plankton, fusulinids, and deep sea sedimentation.

SEPM Research Symposium

"Geosynclinal Sedimentation and Tectonics"

W. R. Dickinson will chair this session which is particularly appropriate to the Pacific Margin's active geologic setting. This session will be followed by special sessions on turbidites and a short course on Saturday on deep water sedimentary processes organized by G. V. Middleton and A. H. Bouma.

SPECIAL TOPICS

1. Short course on turbidity currents and deep sea sedimentation, on Saturday, May 12, 1973.
2. "Teach-in" on accumulation and diagenesis of organic matter in sediments, Sunday, May 13, 1973.
3. SEPM Research Group meetings, Sunday, May 13, 1973.
4. A "Discussion Center" for informal and scheduled discussions during the three regular meeting days, May 14-16, 1973.
5. AAPG and SEPM sessions on environmental geology problems related to the petroleum industry.

SEG

Pacific Section, SEG will meet with the national AAPG and SEPM this year and will sponsor sessions on geophysical methods, techniques, and applications, as well as new contributions to the science. The theme is to weave geophysics into the format of all appropriate sessions in addition to the more specialized sessions.

HOSTILE ENVIRONMENTS

FIELD TRIPS

1. THUMS Offshore Island
2. Miocene Turbidity Currents & Submarine Canyons
3. Geophysical Hazards in Metropolitan L.A.
4. Second Look at Santa Barbara Oil Spill

ENTERTAINMENT

Ice Breaker

Dance

For the Ladies:

Local Tours:

Queen Mary Museum of the Sea
Shopping at Disneyland

Luncheon:

Grand Ballroom Disneyland Hotel

TOURIST ATTRACTIONS

Disneyland

Knott's Berry Farm

Marineland

Lion Country Safari

Queen Mary Museum of the Sea

Old Autos of the Stars

Wine Tasting Rooms
(local winerys)

Busch Gardens

Universal Studios

Magic Mountain

Movieland Wax Museum

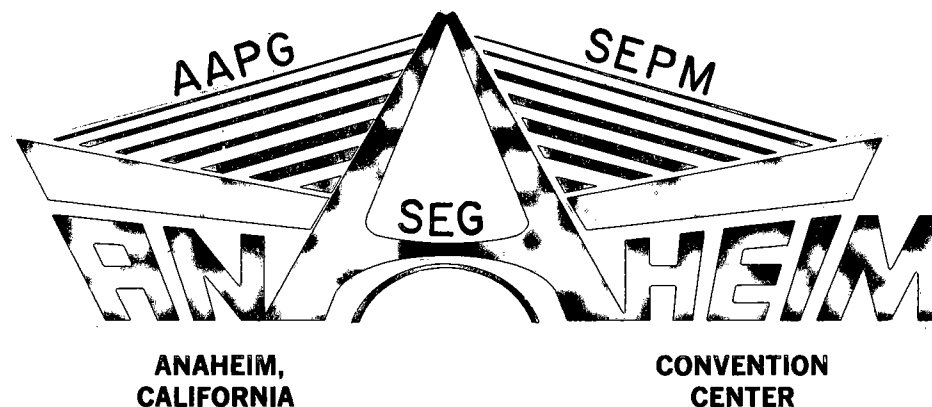
Japanese Deer Park

N.B.C. Television

Catalina Island Cruise

1973

ANNUAL MEETING



MAY 14-16

HOST SOCIETIES

Pacific Section AAPG
Pacific Section SEPM

SPECIAL MEETING

Pacific Section SEG

RECOMMENDED READING

- ORE BIN, vol. 34, no. 2, February 1972
(Oregon Dept. of Geology and Mineral Industries)
- Sedimentary petrology of Whisky Run Terrace sands, Cape Arago, Oregon, by Carmen J. Rottman
- A fossil pine forest in the Blue Mountains of Oregon, by Irene Gregory
- ORE BIN, vol. 34, no. 3, March 1972
- Geology and origin of the Metolius Springs, Jefferson County, Oregon, by N. V. Peterson and E. A. Groh
- An unusual gold occurrence from Douglas County, by Ronald C. Bartley
- ORE BIN, vol 35, no. 4, April 1972
- Thrusting of the Rogue Formation near Marial on the Lower Rogue River, Oregon, by Edward M. Baldwin and John O. Rud
- Geothermal gradient studies in Oregon, by Richard G. Bowen
- NATIONAL TECHNICAL INFORMATION SERVICE (NTIS), U. S. Department of Commerce, Springfield, Va., 22151
- PB 2-6674: Principal facts for gravity stations in the western Mojave Desert, Calif., by D. R. Mabey \$3.00
- PB 2-06737: Graphic normative analysis program, by R. W. Bowen, 85 pages \$3.00
- U. S. GEOLOGICAL SURVEY
- Professional Paper 582-B: A lagrangian method for predicting pollutant dispersion in Bolinas Lagoon, Marin County, Calif. by H. B. Fischer .. 65¢
- Professional Paper 709: Geochemical reconnaissance in the Wiseman and Chandalar districts and adjacent region, southern Brook Range, Alaska, by W. P. Brosge' and H. N. Reiser 40¢
- Professional Paper 800-B: Geological Survey Research, 1972 Chapter B \$2.25
- Water Supply Paper 1880-A: Floods of August 1967 in east-central Alaska, by J. M. Childers, J. P. Meckel, and G. S. Anderson, with a section on: Weather features contributing to the floods, by E. D. Diemer \$1.25
- Circular 649: Preliminary appraisal of ground water in storage with reference to geothermal resources in the Imperial Valley area, California, by L. C. Dutcher, W. F. Hardt, and W. R. Moyle, Jr. Free

MAPS:

GQ 970: Geologic map of the Tyler

Peak quadrangle, Clallam and Jefferson Counties, Wash., by W. M. Cady, R. W. Tabor, N. S. MacLeod, and M. L. Sorensen \$1.00

Map I-688: Generalized tectonic map of North America, by P. B. King and G. J. Edmonston (scale 1:15,000,000) \$1.00

MF-324: Preliminary geologic map of the Schroeder Mountain quadrangle, Nevada, by J. G. Evans and L. D. Cress 50¢

MF-325: Preliminary geologic map of the Rodeo Creek NE quadrangle, Nevada, by J. G. Evans 50¢

MF-326: Preliminary geologic map of the Welches Canyon quadrangle, Nevada, by J. G. Evans 50¢

MF-327: Maps showing distribution and cost by counties of structurally damaging landslides in the San Francisco Bay region, California, winter of 1968-69, by F. A. Taylor and E. D. Brabb 50¢

MF-328: Preliminary geologic map of San Mateo County, Calif. compiled by E. E. Brabb and E. H. Pampeyan 50¢

MF-335: Geologic map of late Cenozoic deposits, Santa Clara County, Calif., by E. J. Helley and E. E. Brabb .. 50¢

MF-338: Preliminary photointerpretation map of landslide and other surficial deposits of the Byron area, Contra Costa and Alameda Counties, Calif., by T. H. Nilsen 50¢

MF-340: Preliminary map showing global distribution of alpine-type ultramafic rocks and blueschists, by W. P. Irwin and R. G. Coleman 50¢

MF-341: Preliminary geologic map of Jordan Meadow quadrangle, Nevada-Oregon, by R. C. Greene 50¢

MF-345: Geochemical, aeromagnetic, and generalized geologic maps showing distribution and abundance of molybdenum and zinc, Golconda and Iron Point quadrangles, Humboldt County, Nev., by R. L. Erickson and S. P. Marsh 50¢

Geologic map index of Colorado, Part B, 1953-1969, compiled by W. L. McIntosh and M. F. Eister (1972) .. 50¢

U. S. BUREAU OF MINES
(Washington, D. C.)

Information Circular 8534: Selected list of Bureau of Mines Publications on petroleum and natural gas, 1961-70 (Supplement to Information Circular 8240) \$1.75
(Must be purchased from Government Printing Office in Washington, D. C. 20402.)

JOURNAL OF SEDIMENTARY
PETROLOGY,

vol. 42, no. 1, March 1972
Mineralogy and sedimentation history,

QUESTIONNAIRE

We are indebted to Doug Traxler for tallying the Questionnaire votes and selecting some of the more typical responses.

1. *Do you favor a Compulsory Continuing Education Program for all Geologists to renew their State Registration?*

YES—63 NO—251

We have enough problems now without adding another.

I'm against having a state or local government tell me I don't know my profession.

Education by present society meetings, lectures and publications should be publicized more. A credit system might be envisioned, where use of existing society offerings would get more non-member use.

(Continued on Page 6)

Santa Barbara Basin, California, by Peter Fleischer

Implications of three submarine mass-movement deposits, Cretaceous, Sacramento Valley, California, by D. R. Lowe

THE ORE BIN, vol. 34, no 6, June 1972
(State of Oregon Department of Geology & Mineral Industries)

Geologic analysis of the Portland Hills-Clackamas River Alignment, Oregon, by Ronald J. Schmela and Leonard A. Palmer

Geochronology of the Clarno Igneous activity in the Mitchell quadrangles, Wheeler County, Oregon, by Harold E. Enlows and Donald J. Parker

GEOLOGICAL SOCIETY OF
AMERICA BULLETIN,
vol. 83, no. 5, May 1972

Precambrian Belt basin of northwestern United States: Its geometry, sedimentation, and copper occurrences, by Jack E. Harrison

Heat flow and continuous seismic profiles in the Cayman Trough and Yucatan Basin, by A. J. Erickson, C. E. Helsley and G. Simmons

Tertiary volcanic center, West-Central Nevada, by J. R. Riehle, E. H. McKee and R. C. Spped

Quaternary history of Lake Tahoe, California-Nevada, by N. J. Hyne, P. Chelminski, J. E. Court, D. S. Gorsline and C. R. Goldman

Geothermal steam in the Geysers in Clear Lake Region, California, by Lowell E. Garrison

 **Coast**

NO REPORT.

Shades of July 1951

The pendulum swingith — so what's new?

Questionnaire . . .

(From Page 5)

We've made our bed and we'll have to do something to maintain credibility of whole registration concept — otherwise it looks too much like a game of freezeout by a bunch of "grandfathers."

Out of the question.

Continuing education is going to be a must for all professionals.

Alert professionals need no compulsion imposed by a cumbersome bureaucracy.

100% No!! This would undoubtedly get out of hand.

Repetitious or useless to the geologist who actively pursues current research through professional affiliations, and a burden to one who has extensive, heavy travel or work load.

Should be in the form of "activity level," not exams or required courses.

Anyone who has to be forced into continuing education is a lost cause.

2. Do you support the concept that

CONTINUING EDUCATION

The LA Basin Geological Society has fixed October 9-10-11, 1972 for its annual Short Course. The course is associated with the American Association of Petroleum Geologists' Continuing Education Program and will feature Dr. W. L. Fisher of University of Texas as instructor. The topic will be "Terrigenous Depositional Systems — A Genetic Approach to Facies Analysis in Mineral Exploration". The course will be held during the late afternoon in downtown Los Angeles and will cost approximately \$25 per person; student discount rates will be available. All members of industry are invited to participate along with the academic community. The course will be a review of all clastic sedimentary systems and will include applied exploration principles.

Interested parties should contact:

JAMES R. MAYTUM
c/o Texaco Inc. Room 924
3350 Wilshire Blvd.
Los Angeles 90010
213 - 380-5830, Ext. 478

J. R. Maytum, Texaco, Inc., will be giving a course on "Geology of the Malibu and Surrounding Regions" as part of Pepperdine Universities' Community Enrichment Program at its Malibu Campus. The course, given on Saturdays during October, is a part of a program concentrating on the natural and cultural history of the L.A. - Santa Monica Mountains area.

all States should require registration of Geologists?

YES—141 NO—170

It should be reciprocal.

Only where necessary. Impossible to administer in some states because too few geologists.

Yes, when public safety is concerned.

I wish to be regulated by my own professional associates — not by politicians.

This is tough to decide. Probably it's going to be a fact of life anyway, and current debate over the issue is an exercise in futility.

It would be as meaningless elsewhere as it is here.

Why stick others just because we are stuck.

There are a lot of incompetent "grandfather" registered geologists in the profession.

Would much prefer a National Registration.

If there is no activity for a geologist and none work there; why registration?

This will keep quacks from soiling our good name.

There's got to be cheaper ways of getting a small square of wallpaper.

3. Would you favor the establishment of a "Speaker's Bureau"—a list of speakers who would be available to Clubs, Scouts, etc., for the purpose of "popularizing" Geology?

YES—272 NO—37

Talks to high schools best.

The first step toward selling our profession to the now generation.

Speakers should be familiar with the legal and tax restrictions facing the oil (and mining) industry.

Most youngsters have no idea of what is signified by geology.

The Distinguished Lecture System costs too much — low attendance and we are talking to ourselves.

There are already too many geologists for the foreseeable employment opportunities.

Especially in the field of environmental matters, the public should be made aware that our work always deals with the constantly changing earth scene.

"Speakers Bureaus" are, as a rule, not very effective and probably are not worth the time, effort and money to organize them.

If I don't have to listen.

The best defense is a good offense.

Am not in favor of "popularizing" geology.

The idea is excellent, if you can find good men and true who have the time

available for such activity.

4. Would you agree to a \$3.00 increase in Pacific Section dues — the money to go to a Publication Fund. Each member would receive a "Free" publication (Guidebook, Selected Papers, Cross Section, etc.) each year. The printing of 1300+ copies is much cheaper per copy.

YES—211 NO—106

Very good idea.

Many members are associate members and they do not want the above books.

Should have been done some time ago.

Let us select what we want to buy. This is like taxes!

Yes, if some provision is made for the member to select publications according to his interests. Perhaps a selection.

I'm always interested in the Guidebooks!

Beats a stick in the eye.

To print one for every member is a waste of good forest trees and adds to pollution when the unwanted copies are thrown away.

By all means, let's do it.

This increase would be favorable to promoting more publications.

When something is "free", it loses its value and will tend to promote publication of trivia.

Believe this is an excellent program.

Too much like a "Book of the Month" club.

Other sections do so very effectively, ie RMAG.

5. Should the Pacific Section establish a Scholarship Fund? The money going to a college geology major or a graduate assistant for work on some petroleum related project.

YES—94 NO—210

I've heard many tales of Scholarship Fund going to students who don't give a damn about the oil business.

There are already many such grants available to the qualified applicant. I would much rather see any such funds used to support a "speaker's bureau" as above.

Are there any petroleum majors left? Hope so!

Leave that to National A.A.P.G. & S.E.G.

The Section is a professional organization and not a philanthropic one.

This would keep the Section in close contact with students, our future constituency.

No — use any available money for publications.

I personally donate through other organizations on this matter.

Alaska

NO REPORT.

(Continued on Page 7)

Questionnaire . . .

(From Page 6)

Oil companies are finding it hard to spend all their scholarship money now. We don't need more geologists — you can't find jobs for those you have now.

We need to encourage young geologists to enter the energy industries.

Only if it went to a deceased Pacific Section member's child. Otherwise it gets to be an academic popularity contest.

6. *Would you favor a Pacific Section Distinguished Lecture Tour for the Western States? Papers would be of Regional interest and receive financial support from the Pacific Section.*

YES—200 NO—93

If dues increase would be required — No! Otherwise OK.

If the costs are kept within our current budget.

The Pacific Section needs some papers (or ideas), other than its own.

Too damn many people yaking now. Stop figuring ways to increase dues.

By all means!

I just get more out of local speakers.

This approach may stimulate better attendance and support of such meetings.

OK — But not too many theoretical "GSA type" lecturers who never have and never will find any oil or gas.

7. *Should the Pacific Section take a stronger position on political legislation?*

YES—156 NO—146

Leave it up to AIPG with moral support and financial support as it is now.

Keep AAPG out of Local, State and Federal Politics!!!

Help AIPG in watching legislative developments in Sacramento.

Lobbies stink.

Stay primarily technical and social.

Let AIPG speak for us.

Screen oil and mineral oriented legislation & report to members.

What position do we have to strengthen?

Support, financial or whatever, of AIPG whose job this is.

The purpose of AAPG is to promote the science of geology, not the welfare of geologists or oil companies. Stay out of politics completely.

Issue "impact statements" to the news media relative to proposed legislation and to the unchallenged "demands" of the vocal minority.

The Pacific Section should stay out of politics — let AIPG do it — or as individuals.

The Pacific Section has 3 members on the Reg. Bd. which should handle these matters.

This is a function of AIPG (at least

something they would do for my money).

NOTE: *A significant portion of the No vote was influenced by the idea of working through AIPG rather than being against a stronger Pacific Section position in political legislation per se.*

8. *Should the Pacific Section work toward improved employment practices?*

YES—204 NO—83

Corporation management should be informed that it is not good business to employ geologists based on exponential growth factors and then "clean house" during inevitable business recessions.

NAME THE COMPANY.

Next step is unionism.

Nice if you can do it.

Talking to management does no good, although management education is the key.

Publicity in schools of the (names of) "bad" companies.

Leave this to AIPG!

The presently prevailing C.S. policy does no credit to the industry.

Print the facts — truth is a defense for libel — and don't be mealy-mouthed in your reporting — if a particular company violates good employment practices, name names and spell things out loud and clear — start exercising the obligations implied by "Freedom of the Press." (*We have just found our next editor.*)

By including in the PPG a "Vacancies - Positions Wanted" section such as Geotimes.

How in hell could this be worked out unless the Pacific Section enlisted Cae-

Hysterical Geology

"In the space of 176 years the lower Mississippi (by cutting off loops and leaving oxbow lakes) has shortened itself by 245 miles. That is an average of a trifle over a mile and a third per year. Therefore any calm person, who is not blind or idiotic, can see that in the Old Oolitic Silurian Period, just a million years ago next November, the lower Mississippi River was upward of one million, three hundred thousand miles long and stuck out over the Gulf of Mexico like a fishing rod. And by the same token, any person can see that 742 years from now the lower Mississippi will be only a mile and three-quarters long and Cairo and New Orleans will have joined their streets together and be plodding along comfortably under a single mayor and a mutual board of aldermen. There is something fascinating about science. One gets such wholesale returns of conjecture out of such a trifling investment of fact." — *Mark Twain in "Life on the Mississippi," via Stones & Bones and The Interamerican.*

sar Chavez to work for them.

Promote the idea of "contributory retirement." Each company the geologist works for contributes to a portion of his retirement (for example: 5 years with "A" Company; 10 years with "B" Company, etc. on a % basis).

Publicity in the Newsletter of specific instances of irresponsible hirings, firings, opening and closing of district offices.

Who says improvement is needed? Not all geologists should have guaranteed lifetime jobs — some don't produce well enough to justify continued employment.

9. *Should the Pacific Section work toward improving the environment?*

YES—218 NO—75

By keeping an eye on the Sierra Club. As a consulting service.

In your own oil patch only.

I'm not sure how geology is related toward improvement of environment.

(IT WAS TOUGHER IN THE CRETACEOUS). This is public relations: The La Brea tar seep was submerged and tar was floated to the Pliocene beaches *before* Pleistocene and recent emergence (just as in offshore seeps of L. A., Santa Bar., and S. L. Obispo Counties subsea today). Ventura Co. - Sulphur Mtn. oil seeps were much more active in ancient times before oil production. WEEP for the Pleistocene Sabre Tooth Tiger!

Offering public speakers to groups interested in environmental problems to project "our" GEOLOGICAL viewpoint. NASA gets billions for space programs by "selling" the great space adventure to American public.

Through publication of environmentally constructive vs. damaging practices of the petroleum industry.

Use recycled paper.

Individual geologists should use their influence with company officials to *constantly* police their leases.

Ron McKoy (KFI) Los Angeles, is a environmental reporter. He has never been invited to a lunch. People do not get any good news about the oil industry, only the bad.

Set up an Environmental Committee which could work with communities (especially small ones) on ecological problems.

Members should be encouraged to join (infiltrate?) Ecology / Environmental organizations to help case the radical or eco-nut group who normally have little practical back-ground in the earth and pollution.

This is a political football and is too big for Pacific Section.

What kind of reputation would Pacific Section have if it worked towards
(Continued on Page 8)

Questionnaire . . .

(From Page 7)

destroying the environment.

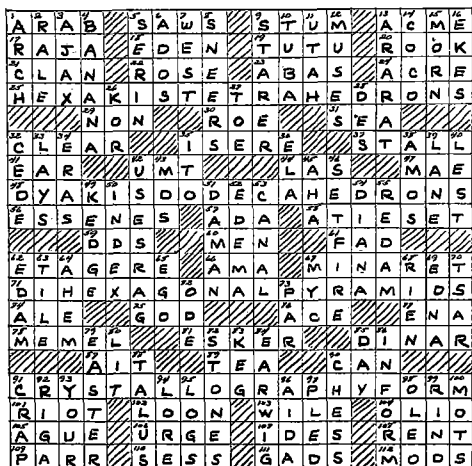
Keep membership aware of environmental responsibilities.

Let the Sierra Club have this.

10. What should be the major functions of the NEWSLETTER?

Please rank in order of import-

LAST MONTH'S CROSSWORD



ance. Gossip (Section News, Transfers, etc.) 3; Sounding Board (Letters, Guest Editorial, etc.) 2; Educational (Abstracts, Bibliography, etc.) 4; Activities (Calendar, Conventions, Field Trips, etc.) 1; Other (please specify).

Members not residing on the West Coast tended to minimize the importance of the activity news. (For obvious reasons). Even then, Activities won out by a wide margin. Associate Editors (and members) please take note and keep us posted.

Firm, clear, enlightened editorial policy. Speak out.

It is a NEWSLETTER — keep it that way.

Print a small calendar of activities. We have the AAPG Bulletin for Scientific papers; a newsletter should be just that . . . local news of the society.

The sectional news items have been de-emphasized for some time now. I for one miss them.

Think you should do away with the folksy manner of writing. It needn't be dry, but it shouldn't be cute.

Jokes, more jokes, funnier jokes.

Get rid of the name "NEWSLETTER".

The "NEWSLETTER" is great just as it is. (Thanks Mom.)

11. Would you favor a "Want Add" column for Positions Wanted, Po-

sitions Available, etc?

YES—206 NO—81

A good chance to make a few \$ \$.

No, what you would have is "Geologists Promoting Geologists".

No, there are never any positions available.

12. Would you object to "Limited" advertisements in the NEWSLETTER to help defray printing and mailing costs?

YES—55 NO—248

Advertising is distracting and takes up space which might be used to better advantage. Charge the membership with an amount required to keep the publication in the black.

We used to have advertising, but I don't know what caused its demise.

Solicit those that incorporate semi-or unclad girls in their format.

Make them small.

Why raise dues if we can get enough revenue to pay for activities from advertisers.

If the NEWSLETTER is costing too much raise the dues. That's what we are paying for anyway.

I would not restrict advertising to "limited". . . . Why not encourage advertising and expand the coverage???

It would become an income source which is taxable.

This is a good idea.

NEWSLETTER

Pacific Section A.A.P.G.

P.O. Box 17486 Foy Station

Los Angeles, California 90017



NEWSLETTER

of the Pacific Section

American Association of Petroleum Geologists

VOLUME 26

OCTOBER, 1972

NUMBER 10

GUEST EDITORIAL . . .

When Ed asked for a guest editorial, my first inclination was to suggest that he re-run Martin Van Couverin's excellent editorial; it is one of the best of its kind to appear anywhere. Editors, however, constantly demand new grist for their mills and so be it.

In recent years, there have been two major breakthroughs in geology. One, of course, is the wide acceptance of the spectacular and well-publicized concepts of sea-floor spreading and plate tectonics. The other has been the less spectacular — but no less significant — rapid broadening in acceptance of the value of applied geology in the activities of Man. These chronologically near-parallel developments herald a "golden age" for geology and geologists. I believe this to be so despite the present tight employment situation for geologists, particularly for those in the mineral field.

In the past, with some notable exceptions, geologists primarily only talked to or wrote for other geologists. Geology was too often taught as though the earth was a king-size artifact, a static lump of rocks. And this is how geology came through to the public, if at all. Geologists, commonly being "loners" by nature, compounded the geologic "image" problem. Other disciplines moved into the field—civil engineers at the applied end and physicists and mathematicians at the theoretical end. Except for minerals exploration, geology was in danger of being considered to be a "dead" science, an interesting hobby, or a poorly-used auxiliary of other disciplines.

The development of the sea-floor spreading concept, its documentation, and the related concept of plate tectonics have pretty well dispelled any notion that the earth is a static lump of rocks. These concepts have contributed to a growing understanding of earthquake source mechanisms and of geothermal phenomena. Structural geology is almost a whole new world; interest in marine geology has been greatly stim-

ulated; and the implications of these processes in the localization of minerals may be of great significance. As well as pointing up many new approaches to geologic investigation, these concepts have stimulated considerable public interest in geology.

Coincidentally, public interest in geology was also stimulated by a growing number of geologic disasters, as a rapidly expanding population after World War II, particularly in California, increasingly got in the way of, and accelerated, dynamic geologic processes. In the wake of notable slope failures, such as Portuguese Bend, Shelter Cove and Pacific Palisades, and the Baldwin Hills dam failure, some geologists said in public, "We could have told you so". In more and more areas, we are now being asked to do just that. Planners, engineers, and developers, both public and private, are becoming much more aware of the value of geology and the need to consider it in advance. And this trend is accelerating.

The growing widespread recognition of the importance of geology is reflected in California by actions of the State's elected officials in recent years. Legislation enacted in the mid-1960's requires that proposed new school sites undergo geologic investigations. This requirement was expanded and modified this year. The Geologist Act of 1968 provided legal recognition of geology and geologists. A seismic safety element was made mandatory in the general plan of all cities and counties last year. Suggested guidelines for development of the seismic safety element, clearly setting forth the geological and seismological factors that should be considered, were prepared by the Governor's Earthquake Council this year. A safety element to be included in general plans, which will require geologic hazards mapping, was also adopted by the State in 1971.

While greater public safety has been the primary motivation behind most of these governmental measures, there is

(Continued on Page 2)

WHAT IS A NEWSLETTER?

To some members the PPG *Newsletter* has the ideal shape and content to line the bottom of a bird cage, to others it is dull reading at best when nothing else is available, but to many the *Newsletter* is the only link of communication with the 1200 members of the Pacific Section. The *Newsletter* is not the editors plaything. All he does is gather the material and deliver it to the printers.

The recent questionnaire convinced me that we are not doing enough for the members with the *Newsletter*. I was disappointed that only one fourth of the members replied to the questionnaire but I was told to be happy with that figure because it's higher than normal.

(Continued on Page 4)

Fall Field Trip

SEPM PACIFIC SECTION,
COALINGA, CALIFORNIA
OCTOBER 20, 21, 1972

The Fall Field Trip of the SEPM Pacific Section will be held at Coalinga, California October 20-21, 1972, with the subject the Cretaceous stratigraphy of the Coalinga area. The Friday evening dinner meeting with brief orientation talks will be held at the Elks Club, Coalinga. The no-host cocktail hour will begin at 6:00 p.m. and dinner at 7:00 p.m. Personal cars will be used instead of buses, and the caravan will start at 8:00 a.m. sharp Saturday from the Cambridge Motel.

The morning trip will be in two segments. The first will transverse the Oil Canyon-Joaquin Ridge section. The second will cover the Los Gatos-Pine Canyon section. The afternoon trip will cover the Warthan Canyon section to the Parkfield turnoff.

Two Field Trip packages will be offered as follows:

1. Trip with dinner, box lunch, guidebook
\$12.50 non members, Pacific Section SEPM

(Continued on Page 7)

Guest Editorial . . .

(From Page 1)

a growing realization of the tremendous cumulative economic impact of losses due to geologic processes. A recent study* projects a loss of \$174 billion from geologic hazards (including flooding) in California over the next 30 years, if no significant advances are made in the development or application of loss-reduction measures. Subsequent, more detailed analyses indicate this figure is probably too high. However, even if it is high by a factor of three, the annual cost of potential future losses approximately equals the annual value of all mineral production (including fossil fuels) in California, or \$2 billion per year! And most of these losses are preventable. The term "economic geology" has generally been applied only to mineral resource aspects, but in California it could be applied equally as well to geologic hazards reduction. Two billion dollars is two billion dollars, whether it's coming in or going out.

The United States faces an imminent energy "crunch" and we hear dire prediction about the future metal supply picture. While these projected shortages are, at least in part, the result of political, environmental and social attitudes, their alleviation will depend to a large extent on geologists. (I happen to believe that most of the so-called non-renewable resources are in fact renewable, but that is another topic).

The point of all the above is simply this: geology is alive and well, and the future has never been more promising and challenging for geology and geologists. Society's needs for geology have never been greater or better recognized than right now and the need and recognition are increasing. Geologists who say, "I told my son to take anything but geology", or, "I'd never advise a student to take geology", had better re-evaluate; they may be doing all concerned a disfavor, most particularly mankind.

WES BRUER

**Urban Geology Master Plan for California, Phase I: a Method for Setting Priorities, California Division of Mines and Geology, 1971.*

Pacific Section

In recognition of Dr. William T. Pecora's outstanding service to the geologic community, Art Spaulding directed that a contribution be sent from the Pacific Section to St. Patrick's Episcopal Church, Washington, D.C., where the W. T. Pecora Educational Fund has been established.

ACCENT' The Positive

HUMBLE'S COMMITMENT TO CONSERVATION

Many people believe the age of the environment was born at the time of the Santa Barbara oil spill in 1969, and that all efforts to improve the environment stem from that date. This is certainly not true for the petroleum industry and my company is a living example of why this is not true. Humble has always been interested in a clean environment and in conservation of our natural resources.

I would like to cite a few instances that offer evidence for this concern. The first Fume and Smoke Committee of the API was formed in 1925, and Humble was a member of this committee and has been an active member of all subsequent committees of the API and of industry concerned with the environment. In 1964 it was the first company to establish a full time corporate level environmental conservation coordinator, a move that was soon followed by most petroleum industry organizations. In addition to the environmental conservation coordinator at the headquarters level, there are environmental conservation managers or coordinators in each of the departments of Humble Oil & Refining Company and in each division, region, and at each refinery operated by the company. Also, there are environmental conservation coordinators or managers located in the headquarters of Standard Oil Company (N.J.) in New York and in all affiliated companies of the worldwide Jersey family.

Since Humble is active in the petroleum industry which provides 3/4 of the nation's energy, it is necessarily deeply involved in environmental problems. Its product handled improperly can pollute at any time when transported, refined, or burned, and it makes no difference whether it is handled by our employees or our customers, the company is deeply interested in avoiding any pollution or degradation of the environment.

Humble has published many articles, brochures and booklets which have been widely distributed, one of which is titled, "You Can Help Keep Air and Water Clean." In this booklet the company points out many things that an individual can do to help "America the Beautiful" keep from becoming "America the Polluted." For example, an individual can have his home heating systems checked to insure efficient burning. He can install adequate insulation to prevent heat and cooling losses. His automobile can be tuned to insure maximum efficiency in mileage and reduction of

emissions. Operating systems of small equipment such as mowers, motor bikes, boats, etc., can be checked to insure that fuel is not being wasted or that smokes and odors are not being given off. He can avoid the dumping of any petroleum products or any other trash into bodies of water. He can avoid the discharging of oils and toxic materials such as paints and acids down drains or sewers which tend to disrupt sewage treatment plants. These are only a few of the many areas in which the ordinary citizen can be a tremendous force in the protection of the environment and improvement of the aesthetics, and the company strongly encourages this participation.

From the Humble viewpoint, every effort is made in operations to insure that drilling locations are designed to prevent any overflows or damage to the environment, either from equipment or from the aesthetic viewpoint. A sleeve exploder device has been developed for use in marine environment to replace the use of dynamite and avoid harming or frightening marine life. Every precaution is taken to insure that blowouts do not occur in operations; classroom seminars are conducted on simulators to train personnel in the avoidance of blowouts and to handle extraordinary and unexpected pressures when encountered during drilling operations.

For many years the company has operated a large oil field at Avery Island, Louisiana, one of the beauty spots of the south Louisiana area. This is a domal area pushed up by intrusion of salt, creating a large oil field. It also has an active salt mine, a large bird sanctuary which harbors many thousands of egrets and other birds, and has some of the most beautiful flower gardens in the country. All of this beauty is contained within a small area and yet it is difficult to find the oil field in the midst of this verdant setting. This is compatible multiple use in action, a program and policy which is strongly supported.

Economics indicate the environment cannot be completely remade overnight, but correction of past mistakes by industry, proper protection and enhancement of the environment is a slow steady job that must be continued day after day, month after month, and year after year. All citizens of our country have to participate and take an active interest in order to keep our environment, air, water and aesthetics in the condition which we all desire. We urge the interest and participation of all oil company personnel and all citizens in this formidable task.

J. R. JACKSON, JR.
Humble Oil & Refining Company
Mgr-Exploration Environmental Affairs

Coast

The Coast Geological Society Christmas dinner dance will be held Friday, December 15, 1972, with champagne hour at 7:00 p.m., dinner at 8:00 p.m., and dancing, thereafter, to the music of Leroy Andrews. Cost will be \$16.00 per couple. Contact Al Hanson about reservations: phone (805) 643-2154, or write him at Getty Oil Co., Box 811, Ventura, California 93001.

October's speaker will be Mr. Dean Decker, Survey Archaeologist with the UCLA Archaeological Society. His topic will be "Archaeology of Ventura County." Date: October 17; place: The Admiral's Table; time: 6:00 p.m. happy hour; 7:00 p.m. dinner. Cost: \$5.50 per person for steak dinner. Contact Al Hanson about reservations.

August's Summer Barbecue, although lightly attended, was a success. Thanks are due to chef extraordinaire Charlie Lee, and especially to Mr. and Mrs. Red Lagomarsino who allowed us to use their ranch in Ojai. Despite frequent overflights by firefighting aircraft, and a few ominous peals of thunder, nothing prevented the enjoyment of a full afternoon's activity.

R. L. STEWART

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Recommended Reading.....LUCY E. BIRDSALL
NEWSLETTER of the Pacific Section—American Association Petroleum Geologists is published monthly by the Pacific Section.

Material for Publication and requests for previous copies should be addressed to STANLEY E. KARP—GEOLOGY DEPT., BAKERSFIELD COLLEGE, BAKERSFIELD, CALIF. 93305.
Material received by the 15th of each month will be included in the following issue.

CHANGE OF ADDRESS, subscription and membership inquiries should be directed to MEMBERSHIP SECRETARY, PACIFIC SECTION AAPG, P. O. Box 17486, FOY STATION, Los Angeles, Ca. 90017.

LETTERS

to the EDITOR

Dear Editor:

To my knowledge the Newsletter has never carried any notices of positions available and the results of the recent questionnaire suggests that the members would be interested. If you are agreeable, I would like to establish a new precedent and put in a news item about some positions we plan to fill. I can let you know later how well this approach works.

Argo Petroleum Corporation will have positions available for four geologists in the near future. Two positions will be field geologists in Angola and the other two will be structural geologists in California. The minimum requirements are a degree in geology and two years of petroleum experience. Salaries are open and all inquiries will be kept strictly confidential. Resumes should be sent to: Argo Petroleum Corporation, 1336 Callens Road, Suite B, Ventura, California, 93003, in care of Howard E. Stark.

Thanks,
HOWARD E. STARK,
Manager
U. S. Exploration

As the Ad-man says — "Let's run it up the flagpole and see who salutes it."

I believe the inserts in recent issues of the Newsletter for up-dating the AAPG Directory are a good idea, but I have two suggestions to make.

1. It would save considerable time for everyone if the additions were in alphabetical order — this should be accomplished at no extra cost to the Pacific Coast Section.
2. It would be a great help if the tags could be backed with glue — such as a postage stamp — or some sort of peel-off similar to that used by the State to back the yearly colored tags for our car license plates. This cost may be prohibitive.

Kindest regards,
ART

Thanks for your suggestions. If my head wasn't screwed on backwards the names would have appeared in alphabetical order. As for suggestion number two, try licking the back of the stamps and see what happens.

Professional geologists can do something to improve the environment problem by helping to dispel misinformation and downright lies put out by environ-

ment zealots. The conflict is not between professional petroleum geologists and oil companies, and Clean Environment proponents. It is between the 20 million people of California who need the mobile oil energy and its attendant revenues, and the uninformed lay environmentalists who seek to deny it to them. It is essential that everyone realize that in today's society oil is an indispensable part of the human environment, and that in California it is in precariously short supply.

It was tough meeting a 150,000 B/D oil shortage in World War II, and since 1940 reserves have been depleted by 10 billion barrels of production. Now, California dependence on crude oil imported from Middle East-Asia sources (which were cut off in hours after Pearl Harbor) increased from 160,000 B/D in 1970 to a 302,800 B/D average for 1971. Add to this 139,500 B/D foreign oil products imports, 209,000 B/D via the Canadian pipeline, and 192,100 B/D from eastern U.S., and California's total import dependence averaged 843,600 B/D in 1971! These Bureau of Mines figures should scare the hell out of anybody who can think, and they were not suppressed by "corporate policy makers in the energy companies" as Professor Colburn contends. They were published by energy companies in Table XVI of the 1971 Annual Review of the Conservation Committee of California Oil Producers. The figures are readily available to all.

The Clean Environment Act Initiative and half a dozen coast control bills introduced in the 1972 State Legislature deceive the people by purporting to improve environment, when, in fact, they stop drilling and cripple the peoples' energy position more effectively than an enemy saboteur. Fortunately enough informed legislators know this, and don't pass such bills.

The increasing smog noted by Barry Commoner (The Closing Circle) and Professor Colburn (Newsletter, April 1972) is not due to Detroit salesmen and energy companies' advertising, but to too many people whose transportation needs increased California motor vehicle registration from 2, 327,984 in 1936 to 10,347,012 in 1966. Probably few of these people are independently wealthy, so they need the transportation to their jobs. We have no mass transportation because, unlike New York, we don't have masses of people going to and from the same places. These California drivers who create the smog (corporations don't drive cars — people do) don't like it any better than others but they can't take the alternate,

(Continued on Page 4)

Los Angeles

Jim C. Roth has been appointed President of Carlsberg Petroleum Corporation, a new internationally oriented oil and gas exploration company. It is an affiliate of the Carlsberg Financial group of companies and will be domiciled at 1801 Century Park West, Los Angeles, California 90067. Roth has been active in international exploration over the past 13 years. He is a member of geological societies in the U. S. A., Venezuela, the Republic of China, Malaysia and Australia. Roth was formerly with Occidental Petroleum Corporation where he headed exploration for Asia, Australia and the Pacific region.

What is a Newsletter . . .

(From Page 1)

I disagree. There are more than one hundred address changes that need to be made in the directory, but unless these members send us the correct information we cannot correct these errors. This months insert includes a change of address card for those who may have lost the questionnaire.

Your comments on the questionnaire were greatly appreciated and some changes will undoubtedly occur. These changes however must be decided by the Executive Committee after careful study of the legal and financial implications of these revisions.

Eighty-two percent of the replies said that they would not object to advertising in the *Newsletter*. I believe that advertising should be a service to the members and not just a money-maker. "Limited" advertising implied small one inch ads at the bottom of each column. These ads would be "limited" to announcements of services, new products or literature. The legal and financial aspects of these ads must first be resolved.

Seventy percent of the members favor "Want Ads" for positions available. This too should be offered as a service, either free or for a minimal fee. True, we will not be deluged with job offers, but thats all the more reason why any position available should receive wide attention.

More members chose "Activities (Calendar, Convention, Field Trip, etc.)" as the most important function of the *Newsletter*, than any other category. It would then seem prudent for the officers and committees of the local societies (as well as the Pacific Section) to let us know well in advance of coming events. The success of many functions rest heavily on a good attendance. Associate Editors may not be at all meet-

ings and not be aware of these events unless notified.

The series "Accent the Positive" and "Guest Editorial" may end soon, not because there is nothing positive to say, but I am fresh out of ideas and we have had no volunteers to tell us their company activities. Who would you like to have as the Guest Editorialists? Drop me a card and I will do my best to fill your request.

Some of the deaths in the Pacific Section have been members I have never met. I do not even know who to ask to write the Memorial. Without your volunteer help we may ignore the passing of a dear friend.

The *Newsletter* should and can work more closely with S.E.P.M and S.E.G. Papers and abstracts, not meeting the rigid standards of the AAPG Bulletin could be included in the *Newsletter*.

So then — What is a *Newsletter*? It is seven Associate Editors reporting the events in their area, it is a Lucy searching the literature for pertinent references to save you valuable time, its a Judy keeping tabs on your address so that you will receive the *Newsletter* on time, but most of all it is a letter from you to us all.

ED KARP

Letters . . .

(From Page 3)

which is no jobs because they can't get to them.

It is not the duty of professional geologists to criticise these millions of people for driving as they must to survive, and accosionally taking a vacation trip. They were not conned into the myth of oil affluence by energy companies and auto salesmen, but by ignorant (or mischievous — ?) environmentalists. Proponents of the Clean Environment Act Initiative lied by telling the people (KNXT-TV) the offshore oil could be found and developed by slant drilling from over a mile inland. The Sierra Club told the U.S. Senate Interior Committee we had enough oil and didn't need Santa Barbara Channel development. The Wilderness Society and associates erroneously claimed there was no oil shortage to justify the Alaskan pipeline, now, and got an injunction to stop it. The Los Angeles Times, April 20, 1969 editorialized against offshore drilling "when so much oil potential remains untapped inland." Some environmentalists are promoting a natural gas powered auto with cleaner fumes, but the Clean Environment promoters are trying to stop development of the natural gas required to run it. Professor Colburn did not cite any misstatements by the energy companies he criticised.

Damage is done to the whole community by claims of a plentiful oil sup-

ply, like those cited above. Although professional petroleum geologists know that such representations are false, the general public doesn't, and, unless enlightened, may cast a vote based on a false premise.

The fact is, that while spending over \$1 million a day in recent years for the improvement of the human environment, the petroleum industry has also contributed, along with some geologists as individuals, to education by telling the public and legislators that ill-advised so-called environment improvement bills that curtail oil and gas exploration and development, will create an oil shortage which would be far more calamitous to all the people than an oil spill or smog.

BILL PORTER

CALENDAR for October

S	M	T	W	T	F	S
1	2	3	4	5	6	7
2	BAKERSFIELD COLLEGE. Biostratigraphy Seminar. 7:30 p.m. Science and Engineering Room 56. Dr. George Plafker, USGS, Menlo Park. "The Gulf of Alaska Region; A Complex Trench-Transform Transition."					
7-8	NATIONAL ASSOCIATION OF GEOLOGY TEACHERS. Far Western Section meeting. Chapman College, Orange, Ca.					
9-11	L. A. BASIN ANNUAL SHORT COURSE. Details appeared in September issue of <i>Newsletter</i> .					
17	COAST GEOLOGICAL SOCIETY. Dan Decker, UCLA Archaeological Society. "Archaeology of Ventura County." Admirals Table, Ventura, Ca.					
20-21	S.E.P.M. FALL FIELD TRIP. Cretaceous of the Coalinga Area.					

November

S	M	T	W	T	F	S
			1	2	3	4
6	BAKERSFIELD COLLEGE. Biostratigraphy Seminar. 7:30 p.m. Science and Engineering Room 56. Dr. Zach Arnold, Dept. of Paleontology, U.C. Berkeley. "Environmentally Induced Variabilities in Foraminifera and Their Paleocological and Taxonomic Inferences."					
25	LOS ANGELES BASIN GEOLOGICAL SOCIETY. Annual Holidays Dinner Dance. Contact K. J. Bird (Shell, L.A.) for reservations.					
26-30	S.E.G. 42nd ANNUAL INTERNATIONAL MEETING. Anaheim, Calif. Headquarters — Disneyland Hotel. Technical Program — Anaheim Convention Center.					

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NEWSLETTER

P.O. BOX 17486 FOY STATION

LOS ANGELES, CA. 90017

Northwest

After nearly one a half years without exploration drilling in the State of Washington, activities were recently renewed, this time, in the Puget Sound Basin. Drilling began with Mobil's Kingston No. 1 in the northeast corner of the Kitsap Peninsula, which reached a depth of 8,648 feet. Union of California followed on a nearby location with their Pope and Talbot No. 18-1, reaching a depth of 4,019 feet. As of mid-August, Standard of California had reached a depth of 9,671 feet and were preparing to log their Social-Schroeder No. 1 near the town of Brier just north of Seattle. They plan to drill a second well on the south end of Whidbey Island. Further interest was shown in the Puget Sound Basin during August when the Department of Natural Resources of the State of Washington leased 16,000 acres in that area. Oregon reports that Mobil has applied for leases on 90,000 acres in the southern coast range of that state.

* * *

Many field parties are engaged in geologic studies this summer in the Northwest. Bruce Ellison and Erich Thomas of Union of California are active in the Puget Sound Basin. On the Olympic Peninsula, where this correspondent is the most closely associated, Parke Snively and Norman McLeod of the U.S. Geological Survey were continuing their work on the northwest corner of the Peninsula. Wallace Cady and Roland Tabor, also of the USGS, were picking up loose ends on their compilation of a geologic map of the entire Peninsula. Dr. Robert Carson of North Carolina State University began mapping Pleistocene geology in the Hood Canal area for the Washington State Division of Mines and Geology. Between trips to the office, your correspondent continues his field studies along the coastal area of the Olympic Peninsula.

* * *

The Washington State Division of Mines and Geology recently open-filed a report on "Geothermal ground noise measurements in Washington State," by Dr. Robert Crosson of the University of Washington. A reconnaissance geologic map of the southern Cascade Mountains is being compiled by Dr. Paul Hammond of Portland State University this summer. The map, emphasizing the Cenozoic igneous activity and tectonic features, will be released in preliminary form by the Washington State Division of Mines and Geology early in 1973.

* * *

Harold A. Pelton of the Seattle Community College was recently elected

president of the Northwest Geological Society for the 1972-73 season. He will succeed Dan Horn also of the Seattle Community College. It is hoped more information about time of meetings and programs will be available for next month's report.

WELDON RAU

Weldon's report didn't reach us in time for last month's deadline. Good news is always timely and welcome.

Northern California

Our president, Bob Carter (USGS — Fuels Branch), appointed Thomas L. Wright as the Membership Committee-Chairman for the mid-1972 to mid-1973 period. Tom is with Standard Oil of California in San Francisco.

* * *

The Northern California Geological Society is updating the bibliography of the geological literature on the San Joaquin Valley. Plans are to publish and distribute this report through the Pacific Section of the AAPG.

* * *

A luncheon meeting of the Society was scheduled for September 15th at 12 noon at the Engineers' Club at 160 Sansome St., in San Francisco. Ken Crandall spoke on "Obligations to our Profession".

* * *

The October meeting (date not selected — waiting on AAPG's Tulsa office) will feature Distinguished Lecturer, Karl W. Klement, who will speak on "Practical Classification of Reefs and Banks, Bioherms, and Biostromes."

* * *

L. F. Brown, Jr., another Distinguished Lecturer is scheduled for November (final date not selected) and will speak on the Upper Paleozoic in West-Central Texas and on Environmental Geology and Genetic Mapping.

* * *

The Executive Committee of the Northern Cal. Geol. Society is also making plans for a 2-day field trip in March. This 2-day excursion across the Sacramento Valley will feature exposures of the Franciscan, Stony Creek Fault, and Great Valley sequence on the west and the Sutter Buttes, Oroville Dam and Mesozoic rocks on the east. Ernie Rich, Associate Dean of the School of Earth Sciences at Stanford University and past president of the N.C.G.S. will lead the first day of the field trip. We also hope that the Sacramento Society will join us on this field trip.

J. H. SAWYER

Alaska

The Alaska Geological Society announces newly elected officers for 1972-73 as follows:

PRESIDENT—

Wm. (Dock Adams)
Union Oil Co. of Calif.

VICE PRESIDENT—

John H. McKeever
Amoco Production Co.

SECRETARY—

William G. Noonan
Marathon Oil Company

TREASURER—

Charles E. Sloan
U.S. Geological Society

Also, Mr. Williams M. Decker and Mr. William W. Barnwell have been elected delegate and alternate, respectively, to the A.A.P.G. House of Delegates, replacing Mr. Marvin D. Mangus and Mr. L. L. Vigoren.

WILLIAM G. NOONAN

Fall Field Trip . . .

(From Page 1)

\$11.50 members, Pacific Section, SEPM and students

2. Trip with box lunch, guidebook
\$7.50 non-members, Pacific Section SEPM

\$6.50 members, Pacific Section SEPM, and students

Breakfast will be available but is not included in the above prices. Please mark registration blank if you desire breakfast.

Pre-registration is a must. Please send registration blank and your check (made payable to Pacific Section SEPM) to Gene Shaw, treasurer, c/o Shell Oil Company, P.O. Box 3397, Terminal Annex, Los Angeles, California 90051 immediately. Registration blank is included elsewhere in this Newsletter.

See September Newsletter for more detail and list of available motels in Coalinga. For information concerning other local lodging accommodations and for late field trip registration, phone co-chairman Edwin H. Stinemeyer (805) 324-0762, or if necessary, write him at 131 Wetherly, Bakersfield, California 93309.

DID YOU KNOW . . .

Members of the Organization of Petroleum Exporting Countries (OPEC) are planning to nationalize their oil industries and before long we may be confronted with government-to-government negotiations to obtain imports rather than commercial deals conducted by oil companies.

San Joaquin

Bob Hickernell of ARCO is being transferred to Corpus Christi, Texas. Bob is cleaning 20 years of memories out of his office and garage. We hope he can make his Fall S.E.P.M. field trip. Larry Haws is the new ARCO man in Bakersfield or 'Midland with hills'.

* * *

Gordon R. Bell has retired from Gulf and is headed for Africa. Vic Church is going on the same trip. This will make for good company over rum in the Tree Top House, but remember, no sampling when visiting Kimberly.

* * *

Lou Villanueva of Getty Oil is teaching an evening adult education course in "Practical Geology for the Layman". A sneaky way of exchanging diapers for diapiers on Monday night.

* * *

The 35 year old 'Geologic Table' meets for noon lunch in Bakersfield at the Hillhouse, 700 Truxtun Avenue. Stanley Beck keeps things going Monday through Friday. If you are in town, the 'Table' is a good place to exchange thoughts over and about rocks.

* * *

Patty and Tip Tobias have added to the valley population one Jason Theodore Tobias.

Rose and Otha Boozer have brought a new little drinker, Otha Lane Boozer, into the world.

* * *

The news from Oxy is that Jim Roth has left and is with Carlsberg Financial Corporation in Los Angeles setting up a petroleum exploration division.

Kip Herring is in Peru doing well

sitting on the first Oxy wildcat.

Frank Omato is in Venezuela looking at sand grains.

Jerry Williams is Manager of Exploration in England.

Tom Brady is Manager of Exploration in Lagos and has two new discoveries.

Walt Harris is returning soon from Moscow.

Bob Morrison is in South America.

One wonders who is watching the store.

* * *

The annual Scouts - S.J.G.S. Bar-B-Cue and Golf Tournament was the usual success. Chuck Edwards and crew did those great steaks.

Congratulations to the Tenneco bunch who did such a wonderful job of making sure that no beer was returned to the supplier.

HAROLD SUGDEN

We welcome Harold Sugden (Getty, Bakersfield) to our staff as Associate Editor. We thank Leon Ernest for his efforts the past year. Passing the baton should be very smooth since both men work out of the same office.

Sacramento

J. F. Matthews, Jr., State of California Oil and Gas Supervisor, was the distinguished speaker at the Sacramento Petroleum Association meeting August 30, 1972. Mr. Matthews presented a very necessary and timely discussion of California's Oil and Gas industry — past, present, and future. Some of the topics discussed were geologic potential, early to present development, new recovery prospects and potential, increased crude oil and gas prices, and environmental problems. The discussion was well received and it is hoped that fu-

ture talks of this nature can be arranged with state, governmental, and private agencies.

TERRY PLUMB

RECOMMENDED READING

U. S. GEOLOGY SURVEY

Professional Paper 341-J: Geology and ore deposits of the Alegria district, Minas Gerais, Brazil, by C. H. Maxwell. (Cat. No. I 19:16:341-J) \$7.50

Professional Paper 437-C: Prehistoric near-surface subsidence cracks in western Fresno County, California, by W. B. Bull. (Cat. No. I 19:16:437-C)\$1.75

Professional Paper 440-JJ: Data of geochemistry, sixth edition, Michael Fleischer, technical editor — Composition of fluid inclusions, by Edwin Roedder. (Cat. No. I 19:16:440-JJ)\$2.75

Professional Paper 456-D: Early and Middle Cambrian trilobites from Antarctica, by A. R. Palmer and C. G. Gatehouse. (Cat. No. I 19:16:456-D) 70c

Professional Paper 729-B: Volcanic stratigraphy of the Quaternary rhyolite plateau in Yellowstone National Park, by R. L. Christiansen and H. R. Blank, Jr. (Cat. No. I 19:16:729-B) 40c

Bulletin 1352: Selected annotated bibliography on asphalt-bearing rocks of the United States and Canada, to 1970, by M. C. Mullens and A. E. Roberts. (Cat. No. I 19:13:1352)

Circular 648: Reports and maps of the Geological Survey released only in the open files, 1971, by B. A. Weld, K. t. Iseri, and G. W. Brett.Free

NEWSLETTER

Pacific Section A.A.P.G.

P.O. Box 17486 Foy Station

Los Angeles, California 90017



NEWSLETTER

of the Pacific Section

American Association of Petroleum Geologists

VOLUME 26

NOVEMBER, 1972

NUMBER 11

MARTIN VAN COUVERING AWARD

In keeping with our intention to maintain the Martin Van Couvering Award in a simple yet useful form, I am setting down some ideas for selection of students and opinions as to the manner of initiating the Awards.

With the high caliber of management to which our conventions are becoming accustomed I foresee many years of the fund remaining intact and drawing its usual yearly rate of over \$300.

The MVC Award, however is not predicated on the solvency of the emergency convention fund; it will continue from another source is necessary.

For the present we assume \$300 and suggest that each year four deserving students are invited to attend our Conventions and/or field trips. Each student will be presented with a check for \$75 to help defray their costs. Each will receive some form of personal recognition at the main dinner or luncheon meeting.

Each student should receive a free registration (Guide books, pre-prints, etc.) as a matter of form; these costs are easily absorbed by each individual function. The presentation of the check can be made informally by mail upon selection. A simple poster at the convention on a busy corner can advertise their names and the Award.

Realistically a "deserving" student is usually known only to his Department Head (sometimes), and we are not talking about a "poor-monetarily" student. We are basically interested in "acquiring another of our own." The selection should be made by the Department Head.

A \$75 subsidy should not insult any student when it is applied as a "no strings attached" award other than his physical, and hopefully mental attendance to the convention at hand.

We will try to initiate the first Award on the forthcoming SEPM Coalinga field trip with selected students from the Bakersfield Area.

DICK HESTER

It is with pride and pleasure that we announce that the first recipients of the Martin Van Couvering Award were Richard Darke and Allen Waggoner, Geology Majors, Bakersfield College.

EXECUTIVE COMMITTEE MEETING

The following excerpts were taken from the Sept. 19th meeting of the Pacific Section Executive Committee meeting.

The Treasurer's Report was presented by L. Villanueva. A motion to disburse the membership funds on a proportional basis to the other member societies was passed. The percentages are based on membership during the calendar year.

AAPG — 75%

SEG — 14%

SEPM — 11%

NEWSLETTER

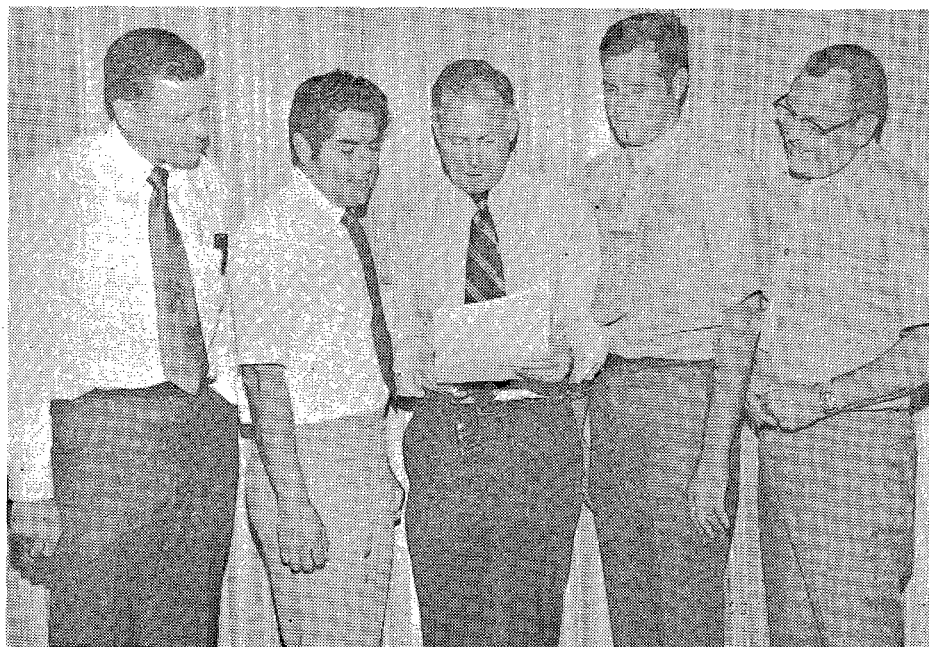
A proposal to include advertising in the Newsletter was discussed, but was discarded as it could possibly lead to problems with the IRS and our tax exempt status.

(Continued on Page 4)

Northern California

We were encouraged when we had a turn-out of 56 persons for our Sept. 15 meeting. In addition to a good plug by Ken Crandall on our obligations to our profession and the need for financial aid we had a special showing of the B.B.C. (British Broadcasting Corp.) film "The City That Waits To Die." The city is San Francisco and it is a good story of the San Andreas fault.

(Continued on Page 4)



Pacific Section - AAPG officers for the 1972-1973 business year are, left to right: James R. Weddle, Secretary; Louis F. Villanueva, Treasurer; Arthur O. Spaulding, President; William F. Edmondson, Vice President; and Richard L. Hester, Past President.

MEMORIAL

LEWIS ALEXANDER BOND
(1896 - 1972)

After a two year fight against cancer Lewis A. Bond died in San Marino, California on August 1, 1972. He willed his body to the University of Southern California School of Medicine but an impressive memorial service was held in Pasadena on August 11. He is survived by his devoted wife of nearly 50 years, Lois, his two daughters and seven grandchildren. As Lois so aptly states, "In the two years since he was threatened with cancer he had been, with characteristic thoroughness, putting his affairs in order to care for his family after his death."

Lewis was born and raised in Oregon; he received his B.S. degree from the University of Oregon at the age of 19 and his Master's in Chemistry at 20. He was a Phi Beta Kappa and member of Delta Tau Delta fraternity at Oregon and he won the Pacific Northwest Intercollegiate Championship in Tennis in 1914-15. In World War I he served as First Lieutenant in France and in the Army of Occupation in Germany.

In 1920 he came to Berkeley and entered the University of California as a graduate student in Geology where he became a member of Theta Tau engineering fraternity. Although Lewie had never had a formal course in Seismology and was a Chemistry (not Geology) major at the University of Oregon, his quick grasp of scientific devices such as seismographs as well as his

brilliant mentality and outstanding record at Oregon made a great hit with Professors Lawson and Loubserback at Berkeley. As a result he was awarded a teaching fellowship in Geology and appointed Acting Seismologist at U.C. Berkeley. He inherited the heart-rending job of studying and recording the results of eight months or more of seismograph records that had accumulated as well keeping up with current records and teaching a course in Seismology. Lewie also took several courses in Geology in his "spare time" including Field Geology and the week's trip to the Mother Lode mining district with George Loubserback, who helped inspire him to become a geologist instead of a chemist or seismologist.

From 1925 to 1947 Bond worked for Shell Oil Company in California first as a field geologist and later as Assistant Land Manager. In 1947 he resigned from Shell and opened an office as a consulting geologist. He continued his consulting practice as well as his beloved "tennis as usual", which meant four strenuous matches a week, until only a year before his death.

Lewie spoke softly but with authority and I have never seen him lose his temper. He was thoughtful and considerate of others, a true gentleman. He did not push himself forward, was thoroughly dependable and competent as well as having a sly sense of humor. We shall miss him sorely.
THOMAS L. BAILEY
Ventura, Calif.

Whatsa Pacific Section?

Overheard at a recent meeting of "Over the Hill Gang" (Past Presidents of the Pacific Section), was the following conversation.

Art: "What does the Pacific Section do?"

Dick: "I donno."

Art: "We've all held office, some one should know."

Dick: "I donno."

Art: "Well hell, if we don't know, who does?"

Dick: "I donno."

History did not record the rest of that emotional scene and so we must turn to the membership for answers. In fact, we're so desperate to know the answer to "What is the Pacific Section?" we will even award a bottle of booze for the best letter. What's more, we'll print it (if it's not too nasty) in the Newsletter. Second prize will be a free ride on the Buttonwillow to Tupman Monorail. Third prize winners will be awarded application blanks for Major Oil Company credit cards. So, what have you to lose? (You don't have to answer that question). Send your comments in a plain envelope to your unbiased, honest, trustworthy and handsome editor at Bakersfield College.

House of Delegates

The following members from the Pacific Section have been elected by their local society to represent you at the National AAPG level. Let them know how you feel about important issues.

The House of Delegates is the legislative body of AAPG and meets in conjunction with the annual convention to be held next in May, 1973, in Anaheim, Calif. Herbert G. Davis, geological consultant from Oklahoma City, was elected Chairman of the House of Delegates during the AAPG convention in Denver last April, and assumed office July 1. He also represents local societies as a voting member of the association's Executive Committee.

AFFILIATED SOCIETY DELEGATES TO AAPG HOUSE OF DELEGATES

Alaska Geological Society:

Anchorage, Alaska — Richard W. Crick; Willis M. Decker. Alternate — William W. Barnwell; Ernest B. Lian.

Coast Geological Society:

Ventura, California — Jack C. Cooper.

Santa Paula, California — Edward A. Hall.

Los Angeles Basin Geological Society:

Los Angeles, California — James B. Anderson, Orville L. Bandy, Donald E. Hallinger, David W. Shoemaker. Alternate: George Bruno Pichel.

Brea, California: Lowell E. Redwine. Alternate — Agoura, California: James R. Maytum.

Long Beach, California: J. Douglas Traxler. Alternate — Long Beach, California: Theodore W. Ehring, Valencia, California: Howard G. Kinzey.

Northern California Geological Society

San Francisco, Calif.: Peter W. Gester, David H. Pfeiffer. Alternate — Marshall G. Ayres, Allison J. Solari.

Menlo Park, Calif.: John C. Maher.

San Rafael, Calif.: Donald L. Ziegler.

Sacramento Petroleum Association:

Woodland, California: Sargent T. Reynolds.

San Joaquin Geological Society:

Bakersfield, California: Otto Hackel, Louis F. Villanueva. Alternate — Gene R. Pollock, Henry Walrond.

Alaska

NO REPORT.

Sacramento

NO REPORT.

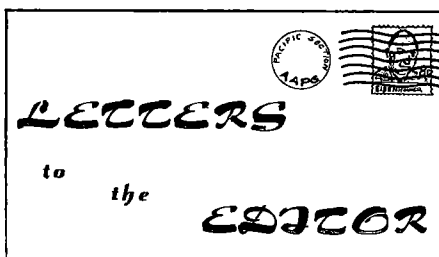
CALENDAR for November

S | M | T | W | T | F | S

- | | 1 | 2 | 3 | 4 |
|----|---|---|---|---|
| 6 | BAKERSFIELD COLLEGE. Biostratigraphy Seminar. 7:30 p.m. Science & Engineering Room 56. Dr. Zach Arnold, Dept. of Paleontology, U. C. Berkeley. "Environmentally Induced Variabilities in Foraminifera and Their Paleocological and Taxonomic Inferences." | | | |
| 6 | GEOLOGY SPEAKERS FORUM. Cal State, Los Angeles, 4 p.m. Physical Science 158. Robert S. Miller, Thums Long Beach Co. "Revising Normal Exploration, Criterion to Prospect for Fractured Oil Shale Reservoirs, Los Angeles Basin, 1972." | | | |
| 7 | NOON LECTURE SERIES. U.S.C. Stauffer Science Hall 100. George Sharman, Scripps Institution of Oceanography. "Tectonic Studies in the Gulf of California." | | | |
| 8 | NORTHWEST GEOLOGICAL SOCIETY. Hunter Yarbrough, Humble Oil & Refining Co. "Plate Tectonics & Major Oil Accumulations." Contact Weldon Rau for time & place. | | | |
| 14 | SAN JOAQUIN GEOLOGICAL SOCIETY. Bill Edmonson, Con- | | | |

sultant. "A Twelve Year History of Geologic Interpretation at Tod Hunters Lake." American Legion Hall.

- | | |
|-------|--|
| 20 | GEOLOGY SPEAKERS FORUM. Cal State, Los Angeles. Dr. Jack Green, Cal State Univ., Long Beach. "Evaluation of the Inner Planets — A Volcanological Overview." 4 p.m. Physical Science 158. |
| 21 | COAST GEOLOGICAL SOCIETY. W. G. Ernst, UCLA. "Global Tectonics and High Pressure Metamorphism." Admirals Table, Ventura. |
| 25 | LOS ANGELES BASING GEOLOGICAL SOCIETY. Annual Holidays Dinner - Dance. Contact K. J. Bird (Shell, L.A.) for reservations. |
| 26-30 | S.E.G. 42nd ANNUAL INTERNATIONAL MEETING. Anaheim, Calif. Headquarters — Disneyland Hotel. Technical Program — Anaheim Convention Center. |
| 27 | GEOLOGY SPEAKERS FORUM. Cal State, Los Angeles. Dr. Sol Silverman, Chevron Oil Field Research Center. "Current Theories of Petroleum Origin & Evolution." 4 p.m. Physical Science 158. |
| 28 | NOON LECTURE SERIES. U.S.C. Stauffer Science Hall 100. John Crowell, Geological Sciences, U.C. S.B. "Ice Ages Through Time." |
| 30 | L.A. BASIN GEOLOGICAL SOCIETY. Dr. L. F. Brown, AAPG Distinguished Lecturer. "Environmental Geology & Genetic Mapping." Noon. Roger Young Auditorium. |



Mr. Arthur O. Spaulding, President
Pacific Section — AAPG
Box 17486 Foy Station
Los Angeles, California 90017

Dear Art:

Thank you for your letter of October 10, 1972 advocating payment of AAPG membership dues for individuals by companies, universities, and government agencies. Possibly this would be good to print in the Pacific Section Newsletter. The responses could be printed in the Letters-to-the-Editor column.

We shall discuss the proposal locally, even though it seems unlikely that the Survey and other governmental agencies could follow the suggestion at this time.

Perhaps Ed Karp should ask the Newsletter readers for their thoughts about why young geologists are not joining AAPG and the Pacific Section. Or better yet, find a means of asking the young geologists.

JOHN C. MAHER, Geologist
Branch of Oil & Gas Resources

Glad to help out. The Newsletter has been getting dull as hell lately. Even considered changing the name again, just to create some interest.

December

S | M | T | W | T | F | S

- | | 1 | 2 |
|----|---|---|
| 1 | NORTHERN CALIFORNIA GEOLOGICAL SOCIETY. Distinguished Lecturer L. F. Brown Jr. "Upper Paleozoic in West-Central Texas & Environmental Geology and Genetic Mapping." Noon Luncheon. San Francisco. | |
| 5 | NOON LECTURE SERIES. USC Stauffer Science Hall 100. Ian Kaplan, Geology Dept., UCLA. "Diagenesis of Organic Matter in Marine Sediments." | |
| 12 | NOON LECTURE SERIES. USC Stauffer Science Hall 100. Craig Meyer, Geological Sciences, USC. "Paleoceanography of the Red Sea." | |
| 15 | COAST GEOLOGICAL SOCIETY. Christmas Dance. Contact Al Hanson, Getty Oil (805) 643-2154 for reservations. | |

Did You Know

In his Presidential Address at the Denver convention Dr. Wengert said: "Geologists have long been decision makers and representatives of industry, but this does not downgrade us as scientists. Profit must be involved, and to say that the search for valuable fossil fuels and other minerals is a selfish utilization of pure scientific principles is ridiculous."

* * *

"Up until now, the best source of imports was the one that offered it at the lowest cost. This is no longer the sole or even the prime consideration of national policy. The era of cheap energy is over everywhere. The world, like the United States, has run out of low-price oil and gas." According to Dr. Sherman Wengert.

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Recommended Reading.....LUCY E. BIRDSALL

NEWSLETTER of the Pacific Section—American Association Petroleum Geologists is published monthly by the Pacific Section.

Material for Publication and requests for previous copies should be addressed to STANLEY E. KARP—GEOLOGY DEPT., BAKERSFIELD COLLEGE, BAKERSFIELD, CALIF. 93305. Material received by the 15th of each month will be included in the following issue.

CHANGE OF ADDRESS, subscription and membership inquiries should be directed to MEMBERSHIP SECRETARY, PACIFIC SECTION AAPG, P. O. Box 17486, FOY STATION, Los Angeles, Ca. 90017.

Executive Committee . . .

(From Page 1)

ANNUAL MEETING

The question was raised as to whether there should be a dinner dance; the general consensus was that even though it may be risky in terms of financial success, it would be expected and should be available. W. Leroy will be Chairman. His proposal is to have the dance on Tuesday evening with a breakfast after midnight. This will reduce the cost.

The advisability of having preprints was brought up. The consensus was that preprints are a good idea, but there might not be the support necessary to make printing them a success. It was pointed out that the policy of National Publications is not to print material that has appeared before, so this might discourage participation.

SPRING PICNIC

G. Sorensen reported that the spring picnic will be in the Castaic area. J. Bedford will be Chairman. J. Bedford and G. Sorensen to pursue the planning and report to the Committee at either the next or the following meeting.

HONORS AND AWARDS COMMITTEE

The Chairman is E. Reid, and members are J. Curran, E. Adams, and H. Fothergill. There has been some criticism of bestowing honors and awards in the past. Anyone receiving recognition should have been active in the Pacific Section in some manner.

MEMBERSHIP COMMITTEE

R. Lindblom, Past Secretary, has been appointed Chairman with W. Hunter serving as a member. This committee will study our current membership and compile a profile in terms of age, geographic location, and years of membership. Hopefully, such a study will lead to recommendations for increasing our membership.

PLANNING AND ORGANIZATION COMMITTEE

President Spaulding has organized a new committee of Past Presidents which will make a study of where the organization is going, what direction the organization should take, and how best to achieve our destiny.

MARTIN VAN COUVERING AWARD COMMITTEE

The interest on this \$5,000 fund provides support for the award. The object of the award is to pay or defray the expenses of geology students to a local convention. The amount to be spent annually is about \$300. There is a problem of how to select the students. It was suggested that the department heads at various colleges could nominate the students, and that selection could be ro-

tated among the various schools serving the area where the convention is held.

1974 PACIFIC SECTION ANNUAL MEETING

President Spaulding reported that he had received no adverse comments on the proposed San Diego location. He feels that we can get good support from the local geologists so as to make the convention a success. President Spaulding introduced J. Minch (from San Diego) who has agreed to be the General Chairman. A motion was made and passed to designate San Diego as the site for the convention. C. Morris said he would like to discuss this proposal with the SEG, and that the SEPM should also be consulted. President Spaulding instructed J. Minch to proceed with preliminary preparations and to explore possible dates in March and April.

Northern California . . .

(From Page 1)

The film was made in 1970 with the cooperation of the U.S.G.S. It is worth seeing!

* * *

The October meeting was on October 17 with Karl W. Klement, Distinguished Lecturer, speaking on "Practical Classification of Reefs, Banks, Bioherms & Biostromes."

* * *

December 1 is the day — a Friday — when Distinguished Lecturer L. F. Brown, Jr., will speak to us at a luncheon meeting in San Francisco. Brown's subject is the "Upper Paleozoic in West-Central Texas and Environmental Geology and Genetic Mapping."

HERB SAWYER

Coast

November's speaker will be Dr. W. G. Ernst, from UCLA, speaking on:

"Global Tectonics and High Pressure Metamorphism."

His talk will relate the Franciscan Formation and Great Valley sequence to Mesozoic sea floor spreading. It all happens Tuesday, Nov. 21, at The Admiral's Table, Ventura. Happy hour at 6:00, dinner at 7:00. Cost, \$5.50 per person. Contact Al Hanson, Getty Oil Co., Box 811, Ventura, CA. 93001 (or phone (805) 643-2154) for reservations.

* * *

Another reminder that the Coast Society's Christmas dinner dance is Friday, December 15, starting at 7 p.m. for champagne with dinner at 8:00. Contact Al Hanson for reservations. Cost is \$16.00 per couple.

R. L. STEWART

ACCENT' The Positive

Tenneco Oil Company operates with a dual concept of energy and environment in the exploration and production of hydrocarbon products. We do not believe in an attitude of "either and/or" for such an attitude denies the existence of technological ability and expertise of our industry to fulfill our nation's energy requirements and improve our environment without sacrificing our present standard of living. As an energy company, we are committed to meeting our country's growing energy requirements while continuing to solve the environmental problems resulting from our operations and the use of our products. Our management believes this is good business as well as an important public responsibility.

Tenneco's environmental enhancement program is compatible with rules and regulations governing pollution and the protection of our environment. The operation and maintenance of our drilling, production and abandonment programs are designed to prevent waste of our natural resources and prevent pollution of air and water. The selection of drilling sites and roads are planned to minimize damage to natural habitat and vegetation, and to prevent erosion. Wells are drilled with non-toxic fluids and sumps for retention of drilling fluids are maintained free of oil. Our production department gives high priority to prevention of oil spills. Our receiving and storage vessels are designed and field personnel trained to prevent spills. Contingency dikes and sumps are constructed to contain spills in vulnerable environmental areas. Also, we are involved in the multimillion dollar project of eliminating and filing unused and abandoned oilfield sumps. Metal tanks for storage and automatic shipping meters for sale of produced oil and disposal wells for waste water have reduced the number of sumps required for retention of produced fluids. Dry holes and depleted wells are plugged and abandoned, lease facilities removed and locations are graded and returned to their natural state.

An important phase of our enhancement involves good housekeeping policies; i.e., disposal of solid wastes and storage and use of surplus equipment. A positive attitude of controlling pollution is necessary to preserve and enhance the quality of our environment. This is Tenneco's policy.

H. W. SWAN

Tenneco Oil Company

BERRY, KEITH D. Senior Paleontologist STANDARD OIL CO. of CAL. 1737 San Gabriel Court Concord, CA. 94250 (415) 894-2922 Res. (415) 686-1415 M.S., '51, Iowa State Univ.	FEDER, HARRY R. CONSULTANT 2920 H St. Bakersfield, CA. 93301 (805) 324-3861 Res. (805) 323-5323 A.B., '46, U.C.	GREIDER, BOB Geological Consultant CHEVRON OIL 70 Corte Del Bayo Larkspur, CA. 94939 (415) 894-5314 Res. (415) 924-6975 G.E., Colo. Sch. Mines	GRIBI, EDWARD A. JR. CONSULTING GEOLOGIST Holland Park D-1, Singapore IO (Stateside — Box 984, King City, CA. 93930) 64-1035 B.S. '48 Stanford	GUSSOW, WM. C. (JPDC) Consultant JAPAN PETROLEUM DEVELOPMENT CORP. 9-13, I-Chome, Akasaka Minato-Kv, Tokyo (Japan) 582-9221 Res. 261-7047 Ph.D., '38, M.I.T.	HACKER, ROBERT N. CONSULTING PETROLEUM GEOLOGIST 902 Robertson Plaza Twrs., 116 N. Robertson Blvd., Los Angeles, CA. 90048 (213) 659-3736 Res. (213) 348-2115 M.A., '50, UC Berkeley
HARRINGTON, GEORGE L. DECEASED Died May 25, 1972	HEINTZ, LOUIS O. SELF-EMPLOYED Consulting Geologist — Mining - Oil 1746 No. Stanley Ave., Los Angeles, CA. 90046 (213) 343-1977 Res. (213) 876-6426 M.A. Ed., '69, Cal State LA	HEMBRE, DON Exploration Manager MIDWEST OIL CO. 1700 Broadway Denver, Colo. 80202 (303) 255-4851 Res. (303) 798-0690 M.S., '55, U. of Wis.	HOLSTON, ASHLY S. ("IKE") CONSULTANT 552 Bean Creek Rd. 87 Scotts Valley, CA. 95060 Res. (480) 438-2380 B.A., '22, Stanford	JENKINS, OLAF P. SELF-EMPLOYED P.O. Box 479 Pacific Grove, CA. 93950 Res. (408) 375-9300 Ph.D., '30, Stanford	LANGENBAHN, WILLIAM E. Mgr., North American Expl. SIGNAL OIL & GAS CO. Golden Center I 2800 North Loop West Houston, Texas 77018 (713) 686-9261 M.S., '60, Michigan
LAUGHLIN, DWIGHT JAMES Director of Public Services CITY OF WHITTIER 855 Picaacho Dr. La Habra, Calif. 90631 (213) 698-2551 Res. (213) 697-1479 M.S., '57, U. of Kansas	LEKAS, MITCHELL A. President GEOKINETICS, INC. 563 Bermuda Drive Concord, CA. 94520 (415) 689-4461 Res. (415) 686-6611 B.S., '48, U.C. Berkeley	LEWIS, DONALD W. Senior Geologist CHEVRON OVERSEAS PET. 432 Candleberry Road Walnut Creek, CA. 94598 (415) 894-4521 Res. (415) 939-5324 M.S., '59, Northwestern U.	MARRALL, GERALD E. Regional Exploration Mgr. MINERALS EXPLORATION CO. (Union Oil of Cal.) P.O. Box 2674 Casper, Wyo. 82601 (307) 234-7331 Res. (307) 237-7872 M.S., '51, Univ. of Wisc.	MAYTUM, JAMES R. Geologist TEXACO, INC. c/o Texaco, 3350 Wilshire Blvd., Rm. 924 Los Angeles, CA. 90010 (213) 385-0515 Res. (213) 889-2848 M.S., '67, San Diego State	MINER, ROGER L. Asst. Mgr., Santa Barbara STOVICK'S JEWELERS 228 Hayes Ave. Ventura, CA. 93003 Res. (805) 647-2712 B.A., '50, Univ. of Conn.
MORAN, WILLIAM R. Vice Pres. & Gen. Mgr. MINERALS EXPLORATION CO. (Union Oil Co. of Cal.) 1335 Olive Lane La Canada, CA. 91011 (213) 486-6934 Res. (213) 790-1529 A.B., '42, Stanford	NESBIT, ROBERT A. Regional Geologist GULF OIL CORP. Gulf Oil Corp. P.O. Box 1392 Bakersfield, CA. 93302 (805) 324-6031 Res. (805) 832-4278 M.S., '51, Oregon State	NICOLAI, FRED H. Asst. to Sr. V.P. TEXACO 3350 Wilshire Blvd. Los Angeles, CA 90010 (213) 385-0515 Res. (213) 888-1451 B.S., '49, Cal Tech	PEASE, EVERETT SELF-EMPLOYED 1874 Grand View Drive Oakland, CA. 94618 (415) 841-7390 Res. (415) 841-7390 A.B., '41, UCLA	PORTER II, WILLIAM W. SELF-EMPLOYED 35401 Cheseboro Rd. Palmdale, CA. 93550 (213) 382-1971 Res. (805) 944-1317 A.M., '25, Harvard	ROTH, JIM C. Asian Exploration Rep. OCCIDENTAL PET. CORP. 6424 Tevis Dr. Bakersfield, CA. 93309 (805) 327-7351 Res. (805) 831-4188 M.A., '59, UCLA
SAVIT, CARL Sr. Vice Pres., Technology WESTERN GEOPHYSICAL 13626 Tosca Lane Houston, Texas 77024 (713) 781-3261 Res. (713) 465-5841 M.S., '43, Cal Tech	SCHULENBERG, JOHN T. Staff Geologist CHEVRON OIL c/o Chevron Overseas Petroleum, Inc. 555 Market St. San Francisco, CA. (415) 894-5277 Res. (415) 254-8729 M.A., '58, U. of Texas	SMITH, LYLE W. Consultant Eng. & Geol. 805 Plymouth Road San Marino, CA. 91108 Res. (213) 799-9808 Eng, '36, Stanford	STARK, HOWARD E. Exploration Manager ARGO PETROLEUM CORP. 1062 Peninsula Ventura, CA. 93003 (805) 642-6709 Res. (805) 642-9509 M.A., '49, Claremont	STINEMEYER, EDWIN H. PALEONTOLOGIST CONSULTANT 131 Weitherly Dr. Bakersfield, CA. 93309 (805) 324-0762 Res. (805) 324-0762 E.M., '31, Colo. Sch. of Mines	TOBIAS, THEODORE Petroleum Geologist STANDARD OIL of CAL. P.O. Box 5355 Bakersfield, CA. 93308 (805) 393-1312 Res. (805) 871-6705 M.S., '66, Mich. Tech. U.
TRAXLER, J. D. Division Geologist SIGNAL OIL & GAS CO. 2828 Junipero Ave. Long Beach, CA. 90806 (213) 636-3301 Res. (213) 454-5256 M.A., '47, UCLA	VAN BEVEREN, O. F. Exec. Vice Pres. CHEV. OVRs. PET. INC. 20 Conifer Lane Hillsborough, CA. (415) 894-5284 Res. (415) 344-9327 M.S., '32, U. Colo.	VILONI, EUGENE B. Sr. Geologist TENNECO WEST, INC. 4408 La Mirada Bakersfield, CA. 93309 (805) 832-9010 Res. (805) 324-8254 B.A., '47, U. of Argentina	WEBER, GERALD E. Grad. Student, U.C.S.C. T.A. @ U.C.S.C. Phys. Sci. Tech. w/U.S.G.S. Earth Sci., Applied Sci. Bg. University of Calif., Santa Cruz, CA. 95060 (480) 429-2342 Res. (408) 423-6631 M.A., '68, U. of Texas	WILSON, THOMAS Division Geologist MARATHON OIL CO. 1519 Hidden Ln. Anchorage, Alaska 99501 (907) 274-1511 Res. (907) 272-7863 B.S., '48, Univ. of Redlands	WOLF, M. W. Calif Expl. Div. Mgr. STANDARD OIL CO. of CAL. 118 Baldwin Drive Danville, CA. 94526 (415) 894-0273 Res. (415) 837-0434 M.A., '43, Univ. of Mo.

Convention Colloquy

This is the first in a series of articles reporting the planning and activities of the forthcoming National Convention in Anaheim next May. With this series, we wish to demonstrate to the members as well as to management, that attendance at this convention will be a rewarding experience. We hope that corporate management will not only encourage full attendance but declare a Geological Holiday during the May Convention.

S.E.K.

An in depth treatment of energy exploration is becoming a reality for Anaheim. Your Convention Committee is enthused at the response already evident, promising a convention with thrust towards the future.

The theme, "Major Successes in Hostile Environments" is a key to the coverage, where and how are the significant

energy reserves being found today. How do you compare opportunities in the North Sea, Canadian Arctic, Gulf Coast and Indonesia?

Program Coordinator Don Gorsline with his crew of chairmen; John Forman, AAPG; John Castano, SEPM; and Walt Fillippone, SEG will present a stimulating view of the demands on industry and how and where they are being met. This time we will not only hear about the geology of major new areas like the North Sea and Indonesia, but also see the type of geophysics used in evaluation. Sig Muessig as the Symposium on Economics of Energy Minerals lined out relating these major new areas to the world supply/demand forecast and to competition with alternate energy sources.

The Symposium on diagenesis of organic sediments under John McCall and Sol Silverman will bring out the latest on source rock and migration theory,

and SEPM Symposia and Colloquia, under Bill Dickinson and others, the latest on reservoir prediction. For participation, short courses on deep water sedimentation and the generation and accumulation of oil and gas are scheduled on Saturday and Sunday and a "But and Rebut" gathering each evening after formal sessions for exchange of views between speakers and audience.

At the Convention Center you can find the session of interest and see and hear when you get there. Exhibitors have room and a flow pattern that puts them in the Convention.

Jeanne Burns and her committee have planned interesting, exciting and varied fare to offer the ladies while they are here. Tuesday morning, they will participate in an all-day "Environmental Workshop", an innovation at this Convention. After a Continental breakfast, they will hear speakers from government, education and industry, who will discuss energy, ecology and the petroleum industry's environmental achievements and plans. After lunch, as an adjunct to the workshop, field trips are planned which will further emphasize the positive steps taken by our industry to protect the environment. Registration for this important workshop will be limited.

Local Interest? How about the geology of the Santa Barbara Channel, despite reports to the contrary, still glistening in the sun. Perhaps a trip to the Gulf of Baja California Rift, the American counterpart of the Red Sea, with geothermal power plants in Mexico, and unusual structural and stratigraphic features. Southern California's excellent field examples of varied structure, stratigraphy, and oil field development will be ready for viewing on Jack Vedder's field trips.

Keep abreast of professional trends — plan now for the week of May 12-18 at Anaheim.

A. R. WELLER,
General Chairman

MEMORIAL

JESSE HILLMAN PARSONS
(1922 - 1972)

Jesse Hillman Parsons, known as Jess to his many friends in the oil industry, passed away in Ventura, California on June 15, 1972.

Jess, a native Californian, was born in Santa Maria and had early exposure to the "oil patch" in the Montebello Field where his father was employed by the Kern Oil Company. He attended El Monte High School where he was captain of the Football team. After four years' service in the Navy during World War II, he returned to school, attending Pasadena Junior College and Pomona College. He received his B.S. in Geology from Pomona in 1950 and also starred on the football team.

Jess earned his degree in geology under A. O. (Woody) Woodford who inspired his career in Petroleum Geology. After graduation he was employed by Texaco. His first assignment was in Taft, California. This was during the active development of the Cuyama Field, and Jess received his initial practical training in this highly active area. His work in this area earned him recognition as an excellent field and subsurface geologist among his colleagues. He was transferred to Bakersfield in 1955 and supervised a Texaco exploration team working on the West Side of the San Joaquin Valley. Jess was promoted to staff geologist in the Los

Angeles Division Office in 1959, and was subsequently transferred to Ventura in 1961 to handle Texaco's offshore exploration activity in the Santa Barbara Channel.

In 1971 Jess resigned from Texaco and opened a consulting office in Ventura where he worked until his death.

The period of Jess's career covered a time of extremely active drilling and exploration activity in California, and because of his ability he was always assigned to the most active areas.

His love of geology and the outdoors, his family and all children are the attributes most typical of Jess Parsons. He had a genuine and friendly personality. Few people who ever met him forgot him, particularly those geologists who were on each side of "Big Jess" during the "competitive" core sampling at "core parties" held regularly many years ago.

He was active in local sections of the AAPG and seldom missed a meeting. Jess contributed a great deal of knowledge to the many geologists who were associated with him during his career, and he will long be remembered by the many California geologists who knew him as a trusted colleague and friend.

He is survived by a daughter and a son, and his wife Barbara, who shared his life and career since his days at Pomona College.
J. W. BEDFORD

CONTINUING EDUCATION

The San Joaquin Geological Society has tentatively arranged to have John M. Hunt, Chairman, Department of Chemistry, Woods Hole Oceanographic Institute conduct a 3-day course at Bakersfield College on "Origin and Migration of Hydrocarbons".

Classes are tentatively scheduled for late November or early December. Hours will be 6 to 9:30 P.M. Fee \$25.00. Contact Don Taylor, Tenneco, Bakersfield (805 832-9010, for details.

Los Angeles

The L.A. Basin Geological Society family field trip to the USC Marine Biological laboratory on Catalina Island is presently filled to capacity (105 people). I'll report next month on any interesting events or situations that may have happened on the trip.

* * *

More than 50 geologists attended the AAPG Continuing Education Program at the Union Oil Center Auditorium. The subject of the seminar was "Terrigenous Depositional Systems—A Genetic Approach to Facies Analysis in Mineral Exploration" given by Dr. W. L. Fisher, University of Texas.

* * *

At noon on October 19, the L.A. Basin Geological Society had its first AAPG distinguished lecturer, Dr. Carl Klement. The title of his lecture was "A Practical Classification of Reefs and Banks—Bioherms and Bisotromes". I'll attempt to obtain an abstract of his talk for publication next month. Possibly I'll also have an abstract of Gordon Gastil's fine lecture on "Mesozoic Reconstruction of California and N. Mexico" to send along for publication.

* * *

Looking ahead, it is presently planned to have distinguished lecturer, Dr. L. F. Brown speak to the L.A. Basin Geological Society at the Roger Young Auditorium, noon, Thursday, November 30, 1972. He will speak on one of the following: "Environmental Geology and Genetic Mapping" or "Upper Paleozoic Fluvial Deltaic Shelf and Slope Depositional Systems in a Cratonic Basin".

* * *

The only personal item I know of is that Dave Paffett left Union Oil Company, Bakersfield for a position with General Crude, Houston, Texas.

* * *

One last note, don't forget the Christmas Dance, November 25, 1972, at the Lobster House Marina del Rey.

Tom W. Redin

San Joaquin

Bill Edmonson, consultant in Bakersfield, is the November 14 speaker for the S.J.G.S. His subject "A Twelve Year History of Geologic Interpretation at Todhunter's Lake" is a unique catalog of how things change in a geologist's

mind, when someone drills a new hole and blows an old theory.

* * *

A few observations at the last S.J.G.S. dinner meeting. Some new faces were—Harry Briscoe with Tenneco, Bob Ros setter with Gulf, Jim Stiles with CWOD, and Lyle Timberlake, the new Engineering Geologist with Kern County. Bruce Robinson handing out Doug Minner Realty business cards. Hy Seiden mopping spilled beer, a serious waste of a valued natural resource. It was easy to see who had the duty with the D.O.G., Bob Kohlbusch was wired for sound with his little beeper. Spirited bidding for surplus steaks, called by Don Taylor, established Joe Dunwoody as the big spender of the valley. We hope to have an abstract of the talk, "Late Cenozoic Geology Offshore Oxnard Plain" by H. Gary Green, U.S.G.S. Marine Geologist, for a future issue.

* * *

Glen Campbell of the D.O.G. is now in Sacramento in the position of Assistant Geothermal Resources Officer. After five years in Bakersfield Glen is exchanging a job in a hot place for a job on hot places.

* * *

For registered geologists the word is that more bills are in the mill concerning some kind of continuing education. Unless the profession supports programs such as the Biostratigraphic Seminar at Bakersfield College, the matter may be taken out of our hands.

* * *

If you would like to help with the 1:20,000 scale map of geologic hazards in Kern County (now required by law) call or see Bill Park.

* * *

Alan Hershel retired from Shell at the end of September and has joined the ranks of consultants as a paleontologist and biostratigrapher. His lab is in his home at 101 Dunlap in Bakersfield, phone 324-9144. Good luck to you and does this mean that no one takes a bath at the Hershey manor when Alan is washing samples?

* * *

As associate editor from San Joaquin I wonder if there is a geographic or geologic limit to my area? Perhaps the Stockton Arch to the north, San Andreas - Sur - Macimiento fault to the west, Garlock fault to the south and the White Mountains to the east. That does leave some gaps, maybe something will move to fill them in before the next newsletter.

HAROLD SUGDEN

NOITACUDE GNIUNITNOC

How many names of minerals can you find in the scrambled square? Names may be vertical, horizontal, diagonal and either frontwards or backwards. There are 25 different mineral names.

T E N R A G E C C C C
O D I A L L L T H L H
D A L P E A E T A G A
I J O S Y G N T L G B
R W A D O A I A K A A
E R K L N T P R C L Z
P N D E Y O S I I E I
I E I F X P M R I N T
D R E T S A B A L A E
N O C R I Z T R A U Q

Devised by:

R. A. CHRISTMAN

Geology Department

Western Washington State College

Thanks to Erich Thomas (Union, Santa Fe Springs) for sending in the above "Scrambled Square". We are most thankful that he included the answers — which will appear next month. Rhatsa Ruck.

Bakersfield College BIOSTRATIGRAPHY

1972-73 Series, 7:30 to 9:30 p.m.
Science and Engineering Building,
Room 56

2. Environmentally-Induced Variabilities in Foraminifera and Their Paleological and Taxonomic Inferences—November 6, 1972. Dr. Zach Arnold, Department of Paleontology, University of California, Berkeley.
3. Neogene Forests in Relation to Sierran History—December 4, 1972. Dr. Daniel Axelrod, Department of Geology, University of California, Davis.
4. Late Tertiary Tectonism Along the Eastern Gulf of Alaska Continental Margin—January 15, 1973. Dr. Roland Van Huene, U.S. Geological Survey, Menlo Park.
5. The Oligocene-Miocene Boundary in Shallow Water Marine Sequences of the Pacific Coast—February 5, 1973. Dr. Warren Addicott, U.S. Geological Survey, Menlo Park.
6. Hydro-Geology and Water Resources of Kern County, California—March 5, 1973. Mr. Michael Recor, Kern County Water Agency.
7. Sediment Transport on the Southern California Coast—April 2, 1973. Dr. Ronald Kolpack, Department of Geology, University of Southern California.
8. To Be Announced—May 14, 1973.

Northwest

After having been recessed for the summer months the Northwest Geological Society will resume its monthly meetings on October 19. The meeting is planned to be held jointly with the A.I.M.E. and it will probably be held at Rose's Highway Inn located along the old highway between Seattle and Tacoma. We are fortunate in having as our speaker for the evening Mr. A. J. Horn of Standard Oil Company of California. He will present his views on "Our Energy Supply." On November 8, Mr. Hunter Yarborough with the Humble Oil and Refining Company will speak before the NWGS on "Plate Tectonics and Major Oil Accumulations." Sometime in December, L. Frank Brown, an AAPG distinguished lecturer from the University of Texas, will speak on "Environmental Geology and Genetic Mapping." I think everyone will agree, Hal Pelton, our newly elected NWGS president, has done a great job organizing the program for the coming season. We hope to keep you informed on additional programs after December in subsequent reports.

* * *

At the third Annual Thermal Power Conference sponsored by Washington State University, Pullman, Washington, and held this October, J. Eric Schuster of the Washington State Division of Mines and Geology presented a paper on "Geothermal Exploration in Washington." His talk pointed out that although no geothermal reservoirs have yet been located in Washington, basic data on geothermal gradients and heat flows, geothermal ground noise, geology, and chemistry of spring and surface waters are being collected and assessed in order to locate target areas for further geothermal exploration by private companies, public utilities, or any other organizations interested in this energy resource.

* * *

Dana Braislin of the Union Oil Company of California and wife, Carol, were seen vacationing in the Olympia area during the early part of September. We understand by the grapevine that Bruce Ellison and Erick Thomas of the Union Oil Company of California got a little damp during exploration activities in the Puget Sound area this summer. You know fellows, there is a limit to what those rubber rafts will take.

* * *

After two dry holes in a row in the Puget Sound area, it is rumored that the staff at Standard Oil Company of California have gone back to the drawing board. Dean Johnson of Standard

was seen returning south for "R & R."

* * *

We understand Jack Ells of the Mobil Oil Corporation has returned to home base after spending a field season somewhere in Oregon. Bob Orwig and John Sprague of Mobil apparently were kept busy with their move to Denver, however, they were seen on occasion in the Northwest. Congratulations to Dan and Paula Horn, who recently became proud parents to Jeffery Ancel Horn.

Weldon W. Rau

Convention Field Trips

Sunday, May 13, 1973, 1 day

1. AAPG Field Trip:
Drilling islands in Long Beach Harbor and Signal Hill oil field.
2. SEPM Field Trip:
Miocene sedimentary environments and biofacies, southeastern Los Angeles basin.
3. SEG Field Trip:
Seismicity of the Los Angeles basin.

Thursday and Friday, May 17-18, 1973
2 days

1. AAPG Field Trip:
Santa Barbara revisited.
2. SEPM Field Trip:
Nonmarine to marine facies changes, Transverse Ranges and southern Coast Ranges.
3. AAPG Field Trip:
Geothermal power sources and geologic framework of the Imperial basin.

FIELD TRIPS

Six field trips will afford an opportunity to visit areas that exhibit some of the diverse and complex geology of southern California. As the trips are intended to be as comprehensive as possible, participation will not be limited to members of the sponsoring organizations. A number of papers in the technical sessions have been prepared for discussion of specific aspects of the various field trip areas.

Three 1-day pre-convention trips are scheduled. The first is an AAPG trip to the drilling islands in Long Beach Harbor and to oil producing structures along the Newport-Inglewood fault zone. The second trip, sponsored by the SEPM, will feature sampling of the Miocene succession at Newport Bay and interpretations of the sharply contrasting sedimentary environments in Miocene rocks along the sea cliffs near San Juan Capistrano. The third trip is intended by the SEG to acquaint visitors with the seismicity of the Los Angeles basin and will include a tour of the site of the 1971 San Fernando earthquake.

Three post-convention trips of two days each have been arranged. These will include an AAPG trip to the Santa

Barbara area, where the effects of the 1969 oil spill will be re-examined and the regional geology discussed. An SEPM trip to sedimentary basins in the Transverse Ranges and southern Coast Ranges will emphasize facies relations between nonmarine and marine strata of Eocene to Pliocene age. Another AAPG trip is scheduled for the Imperial basin at the head of the Gulf of California, where geothermal power sources and the tectonic framework of the region will be highlighted.

Additional information on each of these field trips, including leaders, subject matter, and cost, will be published with the Field Trip registration form.

JOHN G. VEDDER
Field Trip Chairman

RECOMMENDED READING

- U. S. GEOLOGICAL SURVEY
Professional Paper 743-A: Biostratigraphy of Mississippian lithostratigraphic corals, Lisburne Group, Arctic Alaska by A. K. Armstrong..... 70¢
Professional Paper 785: Petrology and stratigraphy of the Fra Mauro Formation at the Apollo 14 site, by H. G. Wilshire and E. D. Jackson..... 40¢
Bulletin 1269: Bibliography of North American Geology, 1969.....\$6.00
Bulletin 1139: The Colebrook Schist of southwestern Oregon and its relation to the tectonic evolution of the region, by R. G. Coleman.....\$1.00
Bulletin 1345: Precambrian rocks in the Cordes area, Yavapai County, Arizona, by C. A. Anderson.....\$1.00
Bulletin 1371-A: Mineral resources of the High Sierra Primitive area, Calif., by J. G. Moore and L. Y. Marks, with a section on Aeromagnetic interpretation, by H. W. Oliver.....\$1.00
Water Supply Paper 1999-G: Groundwater outflow from Chino basin, upper Santa Ana Valley, southern California, by J. J. French..... 25¢
Circular 554: Hydrology for urban land planning — A guidebook of the hydrologic effects of urban land use, by L. P. Leopold.....Free
Circular 650: Energy resources of the United States, by P. K. Theobald, S. P. Schweinfurth, and D. C. Duncan.....Free
Circular 667: West Virginia's Buffalo Creek flood: A study of the hydrology and engineering geology, by W. E. Davies, J. F. Bailey, and D. B. Kelly.....Free
Circular 676: Estimated use of water in the U.S. in 1970 by C. R. Murray and E. B. Reeves.....Free

RECOMMENDED READING

MAPS:

- GQ 958: Geologic map of the Mount Angeles quadrangle, Clallam and Jefferson Counties, Wash., by R. W. Tabor, R. S. Yeats, and M. L. Sorensen \$1.00
- GQ 969: Geologic map of the Brothers quadrangle, Jefferson, Mason, and Kitsap Counties, Wash., by W. M. Cady, and N. S. MacLeod.....\$1.00
- GQ 993: Geologic map of the Whitmore quadrangle, Calif., by G. A. Macdonald and P. A. Lydon.....\$1.00
- GP-815: Aeromagnetic reconnaissance and generalized geologic map of the San Andreas fault between San Francisco and San Bernardino, Calif., by W. F. Hanna, R. D. Brown, Jr., D. C. Ross, and Andrew Griscom. 75c
- I-684: Geologic map of Annette Island, Alaska, by H. C. Berg\$1.00
- I-710: Surficial geologic map of Yellowstone National Park, by the U. S. Geological Survey\$1.00
- Map I-685: Geologic map of the Teller quadrangle, western Seward Peninsula, Alaska, by C. L. Sainsbury....\$1.00
- MF 337: Preliminary geologic map of the Wildcat Peak quadrangle and the western part of the Dianas Punch Bowl quadrangle, Nevada, by E. H. McKee 50¢
- MF 339: Preliminary photointerpretation map of landslide and other surficial deposits of the Mount Hamilton quadrangle and parts of the Mount Boardman and San Jose quadrangles, Alameda and Santa Clara Counties, Calif., by T. H. Nilsen..... 50¢
- MF 342: Preliminary geologic map of the northwestern part of the Tantara quadrangle, Alaska, by R. M. Chap-

man and W. E. Yeend..... 50¢

MF 344: Preliminary map of landslide deposits in San Mateo County, Calif., by E. E. Brabb and E. H. Pampeyan 50¢

MF 350: Reconnaissance bedrock geologic map of the Chugach Mountains near Anchorage, Alaska, by S. H. B. Clark 50¢

OC-66: Graptolite identification chart for field determination of geologic age, by Michael Churkin, Jr., and Claire Carter 50¢

JOURNAL OF GEOLOGY,
vol. 80, no. 4, July 1972

Late Quaternary eustatic sea-level changes along the Malibu Coast, Los Angeles County, California, by Peter W. Birkeland

Sulfide ore deposits in relation to plate tectonics, by Frederick J. Sawkins

AMERICAN JOURNAL OF SCIENCE,
vol. 272, no. 7, Summer 1972

Symposium: Plate Tectonics (various authors)

JOURNAL OF SEDIMENTARY
PETROLOGY,

vol. 42, no. 2, June 1972

Surface sediments in Lake Tahoe, California-Nevada, by J. E. Court, C. R. Goldman and N. J. Hyne

Surface diagenesis of limestone, by Henry S. Chafetz

Correlation of the Bishop Ash, a Pleistocene marker bed, using instrumental neutron activation analysis, by G. A. Borchardt, P. J. Aruscavage, and H. T. Millard, Jr.

JOURNAL OF GEOLOGY,
vol. 80, no. 5, Sept. 1972

Sediment transport and accumulation in a fjord basin, Glacier Bay, Alaska, by Charles M. Hoskin and David C. Burrell

GEOLOGICAL SOCIETY OF
AMERICA BULLETIN,
vol. 83, no. 7, July 1972

Fission-trace age bearing on the Permian-Triassic boundary and time of Region: Time of drainage adjustment, by E. D. McKee and E. H. McKee

Pliocene uplift of the Grand Canyon the Sonoma Orogeny in north-central Nevada, by E. H. McKee and D. B. Burke

Early history of the Colorado River in the Basin and Range Province, by Ivo Lucchitta

Evolution of the Cordilleran fold belt, by Ralph J. Roberts

Paleomagnetism and potassium-argon ages of the Sonoma Volcanics, California, by E. A. Mankinen

Geomorphic evidence for Late-Wisconsin and Holocene tectonic deformation, Death Valley, California, by Roger LeB. Hooke

Major heavy mineral assemblages and heavy mineral provinces of the Central California Coast region, by T. E. Yancey and J. W. Lee

Geosynclines in the new global tectonics, by Chaucer S. Wang

Potassium-rich alkanline intrusive rocks in western Alaska, by Thomas P. Miller

Age and correlation of the Eocene Ula-tisian and Marizian States, California (Discussion and reply) by F. J. Phillips and J. M. Gibson

GEOLOGICAL SOCIETY OF
AMERICA BULLETIN,

vol. 83, no. 8, August, 1972

Pleistocene glaciation, Bridgeport Basin, California, by R. P. Sharp

Pre-Permian global tectonics: A tectonic test, by A. E. J. Engle and D. L. Kelm

Lava tubes of the Cave Basalt, Mount St. Helens, Washington, by R. Greeley and J. H. Hyde

NEWSLETTER

Pacific Section A.A.P.G.

P.O. Box 17486 Foy Station
Los Angeles, California 90017



NEWSLETTER

of the Pacific Section

American Association of Petroleum Geologists

VOLUME 26

DECEMBER, 1972

NUMBER 12

CALIF. DIV. MINES PUBLICATIONS

CRUSTAL MOVEMENT INVESTIGATIONS

CALIFORNIA DIVISION OF MINES
SPECIAL PUBLICATION 37
by Roger W. Greensfelder
1972, 33 pages, Map

There can be little doubt, even to the average layman, that California is located in a belt of active tectonic movement. The petroleum geologist, often more concerned with stratigraphy and paleocrustal activities, may not be knowledgeable of the extent of forces working at the present time. Special Publication 37 reviews the crustal movement studies now taking place in California. Of particular interest is the accompanying map showing the historical and Quaternary fault displacements.

In addition to the map, an index lists the dates and locations of triangulation networks, level lines, angulation arrays, tilt and strain meters as well as creepmeters and alignment arrays. A glossary and description of the equipment and methods employed add to the usefulness of Special Publication 37.

SITE CHARACTERISTICS OF SOUTHERN CALIFORNIA STRONG MOTION EARTHQUAKE STATIONS

Special Publication 38
1962. Reprinted 1972 by
California Division of Mines
and Geology. 112 pages.

This report lists the locations as well as a graphic log of the subsurface stratigraphy of 66 strong motion earthquake recorder locations in Southern California. The area included ranges from San Luis Obispo and Bishop to Hawthorne, Nevada and San Luis, Arizona. The purpose of this study is to determine the effect of earthquake intensities to the type of and structure of the rock units beneath the recording devices. Water content of soils, as well as depth of water table are included (when encountered) at each site.

DIRECTORY OF MINERAL PRODUCERS IN CALIFORNIA FOR 1970

CALIFORNIA DIVISION OF MINES AND GEOLOGY
Susan K. Intfen and F. E. Davis
1972. 50 pages.

If you are interested in "who" produce
(Continued on Page 4)

Pacific Section

REMINDER TO PAY 1972-1973 DUES

Membership in the Pacific Section AAPG as either a subscriber or a full member runs from July 1, 1972 through June 30, 1973, and is \$5.00 per year. Please check your records to insure that you have, in fact, paid.

Your local society, as well as the Pacific Section, relies heavily on your dues to meet all of its obligations. The Pacific Section membership dues are the primary source of funds for such items as annual conventions, spring field trips, our directory, and various publications. Each local geological society receives a rebate of \$2.00 per member. This money is used to mail out notices, engage distinguished lecturers, and hold continuing education programs.

Our records show several hundred past members who have not paid their dues.

Make out your check to the *Pacific Section AAPG* and send it to:

Pacific Section AAPG
P.O. Box 17486 Foy Station
Los Angeles, CA 90017

Current Annual Dues	(only)	\$5.00
Foreign Air Mail	(plus)	2.00
Extended Mailing List	(plus)	2.00

LOUIS F. VILLANUEVA,
Treasurer

Pacific Section AAPG

PLEASE NOTE — *The Pacific Petroleum Geologist Newsletter is totally financed by your dues. We will be forced to remove names from mailing list if dues are not paid.*

Convention Colloquy

This is the second of a series of articles of the forthcoming National Convention in Anaheim next May. Make it a point to bring your wife to Anaheim, after all, she deserves the finer things of life, too.

May we convey to the ladies a warm and friendly invitation to come to Anaheim for the 1973 National AAPG-SEPM Convention.

Jeanne Burns and her committee have planned interesting, exciting and varied fare to offer you for your pleasure while you are here.

On Sunday, you may register, and our hospitality room will be open for coffee and conversation. Then on Sunday evening, be sure to join us for the Ice Breaker Cocktail Party in the Grand Ballroom of the Disneyland Hotel.

Early Monday, you will want to travel to the Port of Long Beach to tour the beautiful Queen Mary and enjoy a delightful luncheon in her Grand Salon.

Tuesday morning, come prepared to participate in an all-day "Environmental Workshop", an innovation at this Convention. After a Continental breakfast, hear excellent speakers from government, education and industry, who will discuss energy, ecology and the petroleum industry's environmental achievements and plans. After lunch, as an adjunct to the workshop, field trips are planned which will further emphasize the positive steps taken by our industry to protect the environment. Registration for this important workshop will be limited.

Tuesday evening will be a time to join your friends at our exciting "Neptune's Ball", topped off at midnight by a tasty "Hunt Breakfast". This promises to be a memorable occasion.

On Wednesday, be sure to save some time to visit fantastic Disneyland with its colorful attractions and shopping opportunities. Come early and stay late at this unique entertainment spot. Remember Disneyland is not open on Monday or Tuesday.

(Continued on Page 4)

CALENDAR for December

S	M	T	W	T	F	S
					1	2

- 1 NORTHERN CALIFORNIA GEOLOGICAL SOCIETY. Distinguished Lecturer L. F. Brown Jr. "Upper Paleozoic in West-Central Texas & Environmental Geology and Genetic Mapping." Noon Luncheon. San Francisco.
- 4 BAKERSFIELD COLLEGE. Biostratigraphy Seminar. Science and Engineering Room 56, 7:30. "Neogene Forests in Relation to Sierran History." Daniel Axelrod, Geology Dept., UC, Davis.
- 5 NOON LECTURE SERIES. USC Stauffer Science Hall 100. Ian Kaplan, Geology Dept., UCLA. "Diagenesis of Organic Matter in Marine Sediments."
- 12 NOON LECTURE SERIES. USC Stauffer Science Hall 100. Craig Meyer, Geological Sciences, USC. "Paleoceanography of the Red Sea."
- 12 SAN JOAQUIN GEOLOGICAL SOCIETY. Ladies Night. American Legion Hall. Fun with your Hun.
- 15 COAST GEOLOGICAL SOCIETY. Christmas Dance. Contact Al Hanson, Getty Oil (805) 643-2154 for reservations.
- 16 BAKERSFIELD ASSOCIATION OF PETROLEUM WIVES. Annual Gourmet Dinner & Dance. See Sectional News for details.

January

S	M	T	W	T	F	S
	1	2	3	4	5	6

- 9 NOON LECTURE SERIES. USC Stauffer Science Hall 100. Ronald Kolpack, Geological Sciences, USC. "Environmental Studies in the California Borderland."
- 15 BAKERSFIELD COLLEGE. Biostratigraphy Seminar. Science & Engineering 56, 7:30 p.m. "Late Tertiary Tectonism Along the Eastern Gulf of Alaska Continental Margin." Dr. Roland Van Heune, U.S. Geological Survey, Menlo Park.



NO REPORT.

NATIONAL AAPG

The following is a selected list of members of the American Association of Petroleum Geologists from the Pacific Section who have been appointed to special posts for the current year by James E. Wilson of Denver, AAPG President, or by Krank Kottlowski of Socorro, N.M., AAPG Editor. Wilson is a Vice President of Shell Oil Company and Kottlowski is Assistant Director, State Bureau of Mines.

It would be appropriate to attribute announcements of appointments to chairmanships or memberships of committees to Wilson, and attribute appointments as *Associate Editor* to Kottlowski.

ALASKA

Anchorage: Harry C. Lee, Marine Geology Committee.

CALIFORNIA

Altadena: Thomas A. Baldwin, Advisory Council.

Bakersfield: Michael R. Rector, Membership Committee.

Brea: Edward W. Scott, Research Committee.

La Canada: W. R. Moran, Mineral Economics Committee and Associate Editor.

Laguna Beach: Manley Leonard Natland, Marine Geology Committee.

La Habra: Lawrence C. Bonham, Boy Scout Committee; Willard J. Classen, Jr., Public Information Committee; John E. McCall, Research Committee; George T. Moore, Marine Geology and Boy Scout Committees.

La Jolla: Joseph R. Curray, Marine Geology Committee.

Long Beach: Stanley G. Wissler, Stratigraphic Correlations Committee and Chairman, Commissioners on American Commission on Stratigraphic Nomenclature.

Los Angeles: Ray A. Burke, Industrial Advisory Committee; W. H. Easton, Academic Advisory Committee; Rollin Eckis, Industrial Advisory Committee; John A. Forman, Marine Geology Committee; Donn S. Gorsline, Publication and Marine Geology Committee; Donald E. Hallinger, Membership Committee; Charles W. Hatten, Associate Editor; John C. Hazzard, Publication Committee and Associate Editor; John E. Kilkenny, Distinguished Lecture Committee; J. W. Lockett, Professional Division Board of Certification; John R. McMillen, Industrial Advisory Committee; Anthony E. L. Morris, Associate Editor and Publication Committee; Siegfried Muessig, Chairman, Mineral Economics Committee; Henry H. Neel, Associate Editor; William C. Penttila, Boy Scout Committee; George B. Pichel, Industrial Advisory Committee; Arthur O. Spaulding, Environmental Geology Committee; Arthur R. Weller, Chairman,

Convention Coordinating Committee.

Menlo Park: Robert D. Carter, Stratigraphic Correlations Committee and Committee on Preservation of Samples and Cores; George Gryc, Associate Editor; Richard K. Hose, Associate Editor; Richard D. McIver, Associate Editor; Irvin L. Tailleux, Stratigraphic Correlations Committee.

Palo Alto: S. L. Rose, Mineral Economics Committee.

Palos Verdes Pen.: John N. Terpening, Committee on Computer Applications to Geology.

Piedmont: Kenneth H. Crandall, Industrial Advisory Committee and Advisory Council; J. Donald Weir, Representative in American Geological Institute House of Representatives and Associate Editor.

Sacramento: Gordon Oakeshott, Distinguished Lecture Committee.

San Diego: E. C. Buffington, Marine Geology Committee; David G. Moore, Marine Geology Committee.

San Francisco: Ian Campbell, Continuing Education Committee; Lawrence W. Funkhouser, Industrial Advisory Committee; Earl W. Hart, Committee on Preservation of Samples and Cores; Peter W. Gester, Membership and Industrial Advisory Committees; Thomas L. Wright, Environmental Geology Committee.

Santa Barbara: John C. Crowell, Continuing Education Committee; John Curran, Public Information Committee; Donald W. Weaver, Environmental Geology Committee.

Santa Paula: D. E. Ritzius, Committee on Preservation of Samples and Cores.

Saratoga: R. Maurice Tripp, Chairman, Boy Scout Committee.

Stanford: John W. Harbaugh, Committee on Computer Applications to Geology; Richard H. Jahns, Industrial Advisory Committee.

Tarzana: Andrew G. Alpha, Academic Advisory Committee.

Van Nuys: Robert R. Knapp, Stratigraphic Correlations Committee and Committee on Statistics of Drilling.

Ventura: Ted Off, Committee on Preservation of Samples and Cores.

Whittier: John E. Sherborne, Academic Advisory Committee.

Yorba Linda: Donald Asquith, Field Trip Research and Coordination Committee.

OREGON

Corvallis: John V. Bryne, Research Committee; Keith F. Oles, Industrial Advisory Committee and Chairman, Academic Advisory Committee; T. H. van Andel, Marine Geology Committee.

WASHINGTON

Seattle: Robert C. Bostrom, Associate Editor; Peter H. Misch, Associate Editor.

LETTERS

to the
EDITOR

Mr. J. R. Jackson, Jr., Manager
Exploration Environmental Affairs
Humble Oil & Refining Company
Rt. 1, Box 175 F
Luling, Louisiana 70070

Dear Mr. Jackson:

I enjoyed your recent article in the Pacific Petroleum Geologist Newsletter about Humble's commitment to conservation. To your comments, I would like to add that Humble has been a major contributor to the U.S. Geological Survey-Department of Housing and Urban Development San Francisco Bay Region Environment and Resources Planning Study, a \$3,000,000 3-year program to apply geologic factors to the solution of regional and urban planning and development problems. Geologic maps provided by Humble in the area from Vacaville to Pacheco Pass provide almost the only integrated synthesis of geologic information that can be applied to solving some very real human problems. For example, the maps are used extensively by consultants to evaluate faults that

might damage or destroy school buildings. The fault information is also being used by city and county planning departments to flag areas of potential hazard to development. Lithologic information on the maps is being used in conjunction with landslide studies to determine which geologic units are most susceptible to slope failure. The strike and dips provide clues about aggravation of landslide problems on dip slopes. Anomalous strike and dips are in many places, the best indication that landsliding has occurred.

Humble is also providing samples of basement rock from oil test wells close to the San Andreas fault. These samples will help us to understand the mechanics of fault movement and hopefully something about recurrence intervals so that we can make predictions about future movement. Without the information from these wells, we would be limited to the sparse and usually less strategically located outcrop areas.

Of course, the elements of competition will always preclude release of some geologic data, but my hat is off to Humble for cutting through the red tape and for providing the data we needed at a critical time.

I should add parenthetically, that some of my colleagues think that I will dry up our information pipeline by publicizing these contributions. Humble is singled out because I know that top management participated in the decision. There are at least a half dozen additional major oil companies that have been and are making contributions to our environmental and San Andreas fault programs but I am uncertain about the involvement of top management and am, therefore, reluctant to publicize their contribution. The point is worth making, however, that the petroleum industry is contributing far more to conservation and environmental studies than is generally realized.

Sincerely Yours,
EARL E. BRABB

We agree that this information should be made public. The series "Accent the Positive" almost died in child birth because the companies that are controlled by lawyers and accountant (rather than geologists) wouldn't give the time of day without first checking company policy, which usually means NO.

Dear Ed,

As Pacific Section Activities Committee Chairman, I am trying to become as knowledgeable as possible concerning the social and business schedules of the various geologic groups on the West Coast. I will attempt to develop a master calendar and try to coordinate the selection of distinguished lecturers to our area. Also, I have the information

relating to which Pacific Section members are interested in working on particular activities.

If you obtain any information from time to time that may assist me, would you please drop a line. Also, if I can be of any service to you or anyone else in my capacity on the Activities Committee, please notify me.

Sincerely,

J. H. DURRIE

Getty Oil Company
3810 Wilshire Blvd.
Los Angeles, Ca. 90010
Telephone (213) 381-7151

Your feature "Accent' the Positive" has inspired me to copy it for the Corpus Christi Geological Society Bulletin. Enclosed are two articles I wrote for our Bulletin as well as the longer features from which they were summarized. I hope they enable you to extend the life of your column a few more months.

Reader contributions to my version of "Accent' the Positive" have been nil. In order to help me extend my series, I would like to obtain your first "Accent' the Positive" article which I believe was in the July 1972 issue of the Newsletter, and also permission to reprint it or abstract it for our Bulletin. If you wish, I would be happy to send on any contributions I may receive in the future.

Thank you for your consideration.

Sincerely,

MIKE SWITEK

Bulletin Editor

Corpus Christi Geological Society

Appreciate your contributions, and rest assured, they will be used.

GEOLOGICAL REVIEWS

"Practical Classification of
Reefs & Banks,
Bioherms & Biostromes"*

KARL W. KLEMENT
University of Texas

Reefs and banks for stratigraphic traps which account for more than 40 percent of the total petroleum production in the world. Yet there is much confusion concerning the classification and terminology of these skeletal deposits. Following LOWENSTAM and NELSON et al, I apply the terms "reef" and "bank" to denote the origin of the structures, whereas I use the terms "bioherm" and "biostrome" to designate the shape of the structures and their relations with the associated layered facies.

A reef is a structure built by the in-

(Continued on Page 6)

PACIFIC SECTION — AMERICAN ASSOCIATION PETROLEUM GEOLOGISTS EXECUTIVE COMMITTEE

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San Joaquin	HAROLD SUGDEN	(805) 399-2961
Recommended Reading.....	LUCY E. BIRDSALL	

NEWSLETTER of the Pacific Section—American Association Petroleum Geologists is published monthly by the Pacific Section.

Material for Publication and requests for previous copies should be addressed to STANLEY E. KARP—GEOLOGY DEPT., BAKERSFIELD COLLEGE, BAKERSFIELD, CALIF. 93305. Material received by the 15th of each month will be included in the following issue.

CHANGE OF ADDRESS, subscription and membership inquiries should be directed to MEMBERSHIP SECRETARY, PACIFIC SECTION AAPG, P. O. Box 17486, FOY STATION, Los Angeles, Ca. 90017.

Calif. Div. of Mines . . .

(From Page 1)

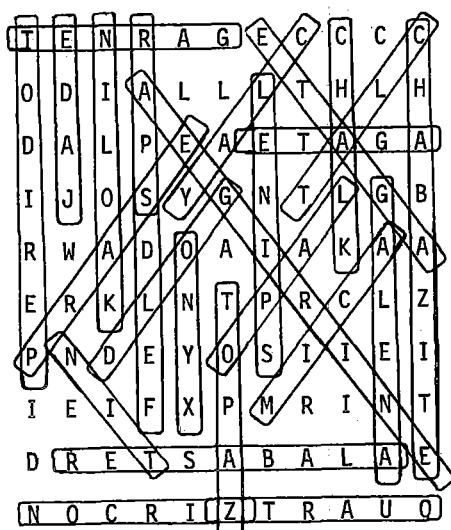
duced "what" and "where" in California, the Directory should keep you current. Names and addresses of mine operators in 58 counties have been corrected to January 1972. Every mineral product from Antimony to Zinc (except oil and natural gas) is listed in the Directory.

CALIFORNIA GEOLOGY

A monthly publication of the California Division of Mines and Geology is designed to report on the progress of earth science, especially in California, and to inform the public of discoveries of interest and concern to their lives and livelihood in geology and allied earth sciences.

Subscriptions are \$2.00 per year, and in the opinion of this reporter, it is the best \$2.00 investment any geologist can make. Send your check to California Division of Mines and Geology, Post Office Box 2980, Sacramento, California 95812.

Answer To Last Months Scrambled Square



Answers to the scrambled square:

Jade	Kaolin	Onyx
Topaz	Chalk	Talc
Galena	Chabazite	Feldspar
Spinel	Garnet	Agate (2)
Quartz	Alabaster	Gold
Opal	Mica	Aegirine
Tin	Zircon	Clay
Peridot	Prase	Spar
Wad		

ACCENT' The Positive

Many corporations today acknowledge responsibility to higher education. Through special foundations tremendous amounts of money have been given to help ease the financial burden faced by today's colleges and universities. But financial problems are only part of a larger educational crisis. Instruction has become increasingly depersonalized, resulting in alienation and, at times, open rebellion on the part of students. These students, with their increased awareness of social and economic problems require a new environment of teaching methods and administration.

A small but growing response to the massive need for innovation in education is a program called SPUR, established by the Esso Education Foundation. Set up in 1964, this program was designed to back experiments that might improve the use of instructional, administrative and physical resources of higher education. Projects may receive up to \$75,000 a year for work in undergraduate education, the main requirement being that the idea be genuinely innovative. The element of risk does not rule out a program if it is creative and useful.

Through 1969, a total of thirty-five projects had been funded at a cost of \$1.4 million. They included such things as revamping the freshman-year program at Antioch College; a study by the University of Rochester of the use of graduate students as teachers; an experiment at the University of Utah into the identification and development of creative engineering talent; a new integrated course at Wesleyan University for freshmen science and mathematics majors; a joint five-school project to study a systems approach to administration; and an attempt at Illinois Institute of Technology to determine if group therapy could reduce waste in young people failing to reach their potential.

The programs have met with varied degrees of success, reflecting to some extent the degree of innovation and experimentation associated with SPUR. But the men who direct the Esso Foundation know this is money well spent if it helps higher education meet the stresses of the present and solve the difficult problems that would seem to lie ahead.

MIKE SWITEK

Editor

Corpus Christi Geological Society

Northwest
NO REPORT.

POSITION WANTED

Bob Hacker received the following resume of employment. Bob's consulting work has been so successful lately that he is willing to make available the following prospect to members of the Pacific Section.

TO WHOM IT MAY CONCERN:

The following is a summary of my employment for the past 10 years. I am currently looking for a position which will provide a challenge for my varied talents and experience. Additional information and references will be forwarded on request. I am available for interview at any reasonable hour.

1. 6 months: Olive View Hospital, Structural Design Engineer.
2. 4 months: Holy Cross Hospital, Structural Design Engineer.
3. 1 year: Chief Engineer, Van Norman Dam.
4. 6 months: Project Engineer, Foot-hill Freeway Overpass.
5. 1 year: Production Manager, Rolls Royce Engine Division.
6. 1 year: Consulting Engineering Geologist, Baldwin Hills Reservoir.
7. 1 year: Editor-in-Chief, "Howard Hughes — An Autobiography."
8. 6 months: Political Advisor George McGovern.
9. 1 year: Controller, Queen Mary, Long Beach.
10. 6 months: Political Advisor, "Vote Yes, on Proposition #9."
11. 6 months: Market Survey Consultant, Edsel Motor Division.
12. 1 year: General Operations Manager, King Resources.
13. 6 months: Military Advisor, Bay of Pigs Invasion.
14. 6 months: Union Oil Co., Chief Instructor, Blow-out prevention training program.
15. 10 months: Batting Coach, Los Angeles Dodgers.

All inquiries to me will be held in the strictest confidence.

Hopefully,

Jean B. Senteur De Boue

Convention Colloquy . . .

(From Page 1)

Most any day, you may take excursions to Knott's Berry Farm, Movieland Wax Museum or Japanese Village and Deer Park — all quite close to the Anaheim Convention Center. And don't forget our hospitality room as a place to meet friends and relax.

We look forward to seeing you in May and enjoying with you the activities we have planned.

ARTHUR R. WELLER,
General Chairman

Los Angeles

FAMILY FALL FIELD TRIP A GREAT SUCCESS

Members and their families numbering over one hundred in attendance enjoyed a motor cruise to Fisherman's Cove near the Isthmus on Catalina Island last month. Highlight of the trip was a guided tour through the USC Marine Biological Laboratory and adjoining facilities led by Assistant Resident Director, Dr. Robert Given. A picnic lunch on the beach was followed by a scenic cruise along the Channel side of the island to Avalon. A running narrative was provided by Tom Baldwin and others who commented on points of interest along the way and managed to locate several herds of "rare Catalina Island wild goats".

The group returned to San Pedro at 5:00 after a most enjoyable day.

At noon on November 30, 1972, at the Roger Young Auditorium, Dr. L. F. Brown, AAPG distinguished lecturer, spoke to the L.A. Basin Geological Society. The title of his lecture was "Environmental Geology and Genetic Mapping".

Duane Estelle recently of Union Oil, Casper, Wyoming, has been transferred to Union's Head Office in Los Angeles. If there are any other personal items, please call me at (213) 945-1221, or mail to Union Oil Company of California, 9645 S. Santa Fe Springs Road, Santa Fe Springs, California 90670.

TOM W. REDIN

San Joaquin

Tip Tobias, late of Standard in Bakersfield, is now with Amerada-Hess in Tulsa.

No one is watching the store for Shell in Bakersfield any more. Bob Steinert has retired and Shell has closed ranks and is marching forward. Bob is now marching in the ranks of consultants from his home at 6504 Mt. Hood Drive, Bakersfield, phone 831-5083. His addition to the ranks of consulting paleontologists and bio-stratigraphers has improved the sellers market for binocular scopes.

Went to the great party given by Dresser-Atlas at the AIME convention in Bakersfield. I met a lot of old friends, both engineers and geologists, and that, of course, is one of the great things about conventions.

One old friend I met was Armour Kane, retired from Schlumberger, who is actively engaged as a consultant in electric log interpretation, formation evaluation, and well programming. He works out of his home at 4911 Fernvale Road, Bakersfield, phone 871-5733. It is good to see that 'Army' is still getting 'kicks' out of logs. Pun intended.

Speaking of parties, the Bakersfield Association of Petroleum Wives (a fun group) is having the annual gourmet Greek dinner and dance Saturday, December 16, 1972 (7:00 p.m. to 1:00 a.m.) at the Greek Hellenic Center, 401 Truxtun Avenue, Bakersfield. In addition to looking at 'bugs' Bob Steinert and six more will provide the sounds. Call Rita Rennie 871-5568 by December 12 for your \$14/couple reservations.

The San Joaquin Geological Society annual ladies' night is Tuesday, December 12. Same location, the American Legion Hall, 2020 'H' Street, Bakersfield. Same abundance of steak, friends and libation. The word so far is — no speaker this year, just fun.

HAROLD SUGDEN

Northern California

We have been encouraged with the good turn-out for the September and October meetings, both of which were held in San Francisco. Attendance at the last meeting held on October 17 was 78 persons who gathered to hear Professor Karl W. Klement of the University of Texas at El Paso speak on "Practical Classification of Reefs and Banks, Bioherms and Biostromes." I'm certain that most of the attendants at this Distinguished Lecture will agree with me that it was a pleasure to listen to a good speaker with a very well prepared and presented lecture.

Our November meeting was held at the Leopard Cafe, 140 Front Street, San Francisco, on Tuesday, November 14, 1972. E. H. Lathram with the Alaskan Geology Branch of the U.S. Geological Survey presented a brief review of his previously published article "Nimbus IV View of the Major Structural Features of Alaska" (Science 31 March 1972, Volume 175, pp. 1423-1427).

In addition, Mr. Lathram suggested the relationship of some of the features seen on the Nimbus IV photo to the occurrence of metallogenic provinces. He also briefly discussed and answered questions about the EROS (Earth Re-

sources Observation Systems) program, and showed an example of this photograph taken of the San Francisco Bay Area.

Our December meeting will be in San Francisco on Friday, December 1. This will be a luncheon meeting and the speaker will be L. F. Brown, Jr., a Distinguished Lecturer who will speak on the Upper Paleozoic in West-Central Texas and on Environmental Geology and Genetic Mapping.

I'm fresh out of news. I, for one, appreciated the additions to the Directory being printed in alphabetical order — for a change. I agree with your ideas on what is a Newsletter and will try to help.

J. H. SAWYER

Sacramento

Drilling activity in the Sacramento Valley has picked up considerably, and hope that this will continue into 1973.

S. T. Reynolds, Consultant, gave an excellent talk to members of the Geological Society of Sacramento, Tuesday, October 24, entitled "Subsurface Geology of the Sacramento Valley." Mr. Reynolds also presented this talk to members of the Sacramento Petroleum Association November 22, Wednesday, at Scheidel's Bavaria, Sacramento.

A joint dinner meeting of the AEG, ASCE, GSS, and AIME was held Tuesday, November 21, at the Woodlake Inn Camellia Room North Sacramento. Guest speaker was George Milias, Deputy Regional Administrator, Environmental Protection Agency, Western USA. Mr. Milias's subject was "Environmental Issues and their Relation to Engineering Geologists, Earth Scientists, and Engineers."

We are saddened by the passing of Mrs. Raymond Alexander. Ray is the Landman with Texaco in Sacramento.

For those not able to attend the weekly luncheon meetings of the Sacramento Petroleum Association, 1973 membership cards may be obtained by contacting Mr. Ed Lacey or Mr. Ray Alexander, Texaco, 1722 J Street, Sacramento, Calif. 95814.

TERRY PLUMB

Alaska

NO REPORT.

EXECUTIVE COMMITTEE MEETING

The Treasurer's Report was presented by L. Villanueva. President Spaulding requested that the Finance Committee confer with the Treasurer to discuss our dwindling checking account.

1973 ANAHEIM MEETING

T. Off, Vice Chairman for the 1973 Annual Meeting, reported that the National Organization had approved the convention budget. Preregistration will be \$26, regular registration \$30.

A motion to the effect that the Pacific Section will finance the publication of selected preprints at the 1973 Convention and that the Technical Program Coordinator should make appropriate arrangements was passed.

T. Off also said that the convention preparations were going quite well, but they need a few more papers for the SEG.

1973 SPRING PICNIC

President Spaulding read a letter from R. Hindle which stated in part that he had contacted Newhall Land and Farming Company and they will hold Friday, June 1, 1973, for the golf tournament, and that the acreage used for the driving range can be made available for the barbecue; however, the area has no tables or lights. The club house is vacant after 7:00 and thus the facilities would be available for dominoes and other games.

PUBLIC RELEASE OF OILWELL INFORMATION

J. Weddle discussed the current Division of Oil and Gas negotiations with the Western Oil and Gas Association which, in essence, calls for a voluntary release of well data (summary page and E-log) on a systematized annual basis. It is the feeling of the Division of Oil and Gas that if the oil industry wants to forestall legislation making the release of well information mandatory, there will have to be a system of widespread voluntary release. T. Off, who is Chairman of an AIPG committee for the release of well information, feels that the industry will not support a voluntary program. He has been compiling data on the release of records in other states, and will talk to various geological societies and attempt to obtain resolutions from them supporting legislation. President Spaulding stated that the Pacific Section should take a position on this matter and that we should be represented on the AIPG committee. Our representatives should then make recommendations to the Executive Committee at a future meeting.

MEMBERSHIP COMMITTEE

R. Lindblom, Chairman, reported that he will write to the department chairmen at various colleges and encourage both faculty and students to join the Pacific Section. He reported that the SPE of AIME had a contest for new members which met with some success. The SPE also had a specially colored tag for registrants at the convention who were not members. This gave members the opportunity to approach these people. R. Lindblom also said that he was having trouble finding data concerning a profile of our membership.

1974 ANNUAL MEETING

A motion was made and passed to hold the convention at the Sheraton Inn on the dates April 24-27, 1973.

J. Minch further reported that W. Elliott will serve as Vice Chairman and that there was no shortage of volunteers to aid in staging the convention.

AAPG NATIONAL AFFAIRS

T. Baldwin reported that there was a strong division of opinion by the members on the issues of nomination for national office and honors; also, that elected officers are not on the Advisory Council. He also said that Pacific Section members are being nominated for honors and offices. He feels that we should answer the question of whether the Advisory Council should have an elected membership or appointed membership.

JAMES R. WEDDLE

Secretary

Geological Reviews . . .

(From Page 3)

situ growth of organisms which have the ecological potential to act as frame-builders. It is a wave-resistant, prominent structure on the sea floor and will, therefore, influence and modify the sedimentation in its vicinity.

A bank, on the contrary, is made up of organisms which did not have the ability to act as frame-builders. Banks may be formed in place or by mechanical accumulation following transport of the skeletal remains. Banks are also wave-resistant. They may or may not be prominent structures on the sea floor. Correspondingly, they may or may not influence the sedimentation in their surroundings.

According to the mode of their formation, bank: may be further subdivided into (1) mechanical aggregational banks and (2) biogenic banks resulting from

- (a) biogenic baffling of sediment;
- (b) biogenic sediment binding;
- (c) biogenic accretions of cementing organism; and
- (d) local gregarious growth of organisms which did not cement them-

selves to one another or to the substratum.

Thus, reefs and banks represent distinctly different biogenic structures. A reef is a structure in which the in-situ growth of organisms is more important than sediment-trapping and binding. In banks the sediment-baffling and binding functions of the organisms are the predominant source of sediment accumulation. In a reef, the organic productivity of the frame-building organisms is by itself sufficient to elevate the structure above the surrounding sea floor. Frame-builders in general are organisms which cement themselves to the substratum and form a rigid reef mass.

According to their shape and geological settings, biogenic buildups may be subdivided into bioherms and biostromes.

A bioherm is a massive, mound-shaped structure which is in discordant relationship to the surrounding layered facies of different lithology. A biostrome is coarsely layered and grades concordantly into the associated layered sediments.

According to the foregoing definitions, a reef represents a bioherm on the basis of its shape and geological setting. A bank, however, may appear in the form of a bioherm or a biostrome. Mechanically accumulated banks and biogenic banks resulting from the sediment-baffling activity of organisms usually are found in the form of bioherms. Banks resulting from biogenic binding of sediment may represent bioherms or biostromes. Local gregarious growth of organisms usually leads to accumulations of biostrome type.

Examples of various types of Recent and ancient reefs and banks were illustrated and discussed. The lecture emphasized the fact that structures which superficially appear to be similar may be quite different in their genetic and environmental interpretation.

* Abstract of paper presented to the Northern California Geological Society Oct. 17, 1972.

"Interpretation of Lineaments Observed on a 1971 Satellite Photograph of Alaska and Western Canada"*

E. H. LATHRAM,
U.S. Geological Survey,
Menlo Park, California

On March 29, 1971, a rare, cloud-free day in Alaska, an exceptional synoptic picture of most of the State and adjoining areas in western Canada was obtained by the Image Dissector Camera System (IDCS) on Nimbus IV, a meteorological satellite of the National Aeronautics and Space Administration, in a

(Continued on Page 7)

Geological Reviews . . .

(From Page 6)

600 nautical mile circular polar orbit. Ground resolution obtained is about 2 nautical miles over most of the field of view. On March 29, the snow cover was heavy and accentuated the contrast between uplands, which appear white because vegetation is nonexistent or too low to conceal the snow, and lowlands, which are dark because brush and trees have obscured the snow. The sun angle was low, ranging from 40° in southern Alaska to about 15° in northern Alaska. As a consequence of the above factors, only those regional physiographic features that follow a significant linear belt of vegetation or of water or that cast a long shadow can be seen.

On the IDCS image, lineaments that coincide with the position of many known or suspected major strike-slip faults can be seen. These are the Kobuk trench, the Kaltag and Yukon Flats

faults, the Tintina trench, the Aniak-Thompson Creek, Iditarod-Nixon Ford, Togiak-Tikchik, and Holitna faults, the Denali fault system (including the Shakhwak fault), the Castle Mountain Chatham Strait and Peril Strait faults, and the northern end of the Rocky Mountain trench. The Duke depression and Chilkat River fault seem indicated by a single short linear. The Ehakwak fault, commonly believed to connect the Denali fault system to the Chatham Strait fault by southward deflection, seems on the image to continue to the southeast generally on strike with the west side of the Atlin horst.

Lineaments that coincide with known structural trends can also be seen in folded mountain belts. The northern thrust front of the Brooks Range, the faults that bound the Sadlerochit and Shublik Mountains, arcuate fold and thrust structures in the Ogilvie and Mackenzie Mountains, and arcuate fold

trends in the Chugach and Kenai Mountains are evident. Northeast-trending lineaments cut across the Brooks Range, and short linears cut across the thrust belt of the Mackenzie Mountains, radiating outward from the Selwyn Mountains to the west.

Other lineaments, for whose position knowledge of structural control is scant or as yet nonexistent, also appear on the image. Many of these, coupled with those known to be structurally controlled, define a northeast-trending set of lineaments that is not apparent on most small-scale maps of Alaska. The northeast-trending lineaments are orthogonal to the known northwest-trending faults of the State; together they may represent a conjugate set of fractures in the crust — possibly the planetary set of “mega-shears” noted by Moody and Hill and others and considered to have been formed in the lithosphere of a planetary body in response to changes in its rotational regime.

* Abstract of paper presented to the Northern California Geological Society Nov. 14, 1972.

Give Him A Rock For Christmas

In our present affluent society, Christmas giving may become a difficult and painful experience, rather than a joy and pleasure. To help you choose that “just right” gift that is not only unique but truly representative of the geologist, we offer the following suggestions.

This is another of the many services offered to the readers of the Pacific Petroleum Geologist Newsletter. Merry Christmas and Happy Shopping.

For the Smoker — give him *smokey quartz*.

For the Skier — how about a pair of *slickensides*.

For the Author — *graphite* or if you prefer *chalk and slate*.

For the Golfer — his own patch of *greenstone*.

For the Fisherman — a can of *worm borings* might do the trick.

For the Politician — a few well chosen *mud cracks* would be appropriate.

For the Brother-in-Law — *dripstone* may convey your feelings.

For your Sweetheart — what could be nicer than a box of *rock candy*?

For the Executive — a *conglomerate* will advance his many holdings.

For the Hippie — some scented *soapstone* is a gift we all can enjoy.

For the Anarchist — a *volcanic bomb* will be appreciated — and a lot safer too.

For your Minister — “*A Rock of Ages*”. Pre-Cambrian granite from Lordsburg.

For the “Man who has everything” — *Rapakivi Granite with porphyroblastic texture*.

Convention Field Trips

SEISMICITY OF THE
LOS ANGELES BASIN

DATE: Sunday, May 13, 1973 — 8:00
A.M. - 6:00 P.M.

T. L. Henyey and T. L. Teng — University of Southern California

B. Adent — California State Lands Division, Long Beach Operations

A. Barrows — California Division of Mines

T. Downs — Los Angeles County Museum

B. Ericson — Standard Oil Company

B. Nason — Earthquake Mechanics Lab

J. Whitcomb — California Institute of Technology

B. Yerkes — U. S. Geological Survey

This one day trip will tour the portions of the San Fernando Valley affected by the February 9, 1971 earthquake, the Caltech Seismological Laboratory and the University of Southern California Microseismic monitoring network along the Newport-Inglewood Fault and associated uplift. Trip stops at the primary fault scarp, the Olive View Hospital and Van Norman Dam in the San Fernando Valley will emphasize the destructive nature of a moderate sized earthquake in an urban development while stops at Caltech and the USC facilities at Baldwin Hills and Long Beach will demonstrate work that is being done to gain a better understanding of local seismicity and to determine the relationships between oil field fluid injection-withdrawal and the natural environment. A lunch stop will be made at the fossiliferous La Brea tar pits. Fee includes bus transportation, box lunch and guidebook. The limit is 80 persons.

RECOMMENDED READING

GEOLOGICAL SOCIETY OF
AMERICA BULLETIN,
vol. 83, no. 9, September 1972

Deformation paths in structural geology, by David Elliott

Evaluation of effects on trees of past movements on the San Andreas Fault, northern California, by V. C. LeMarche and R. E. Wallace

Thrust sequences in the Windermere Hills, northeastern Elko County, Nevada, by Brian Oversby

NEVADA HISTORICAL PRESS,
(Star Route 1, Box 751, Carson City,
Nevada, 89701)

The Story of Seven Troughs, by Hugh A. Shamberger\$3.50

THE ORE BIN,
vol. 34, no. 7, July 1972

The trace fossil Tiosa in Washington and Oregon, by Robert W. Frey and John G. Cowles

OREGON DEPARTMENT OF
GEOLOGY AND MINERAL
INDUSTRIES

Bulletin 73: Geologic formation of eastern Oregon (east of longitude 121° 13') by John D. Beaulieu.....\$2.00

CALIFORNIA GEOLOGY,
vol. 25, no. 8, August 1972

“Dust from Antelope” — The Fort Tejon Earthquake of 1857, by Donald B. Eisman

U. S. GEOLOGICAL SURVEY

Professional Paper 599-J: The contri-

(Continued on Page 8)

Season's Greetings

from

HAROLD SUGDEN

TERRY PLUMB

TOM REDIN

WELDON RAU

DICK STEWART

DICK ATCHISON

HERB SAWYER

LUCY BIRDSALL

JUDY HUGHES

me too — ED KARP

Recommended Reading

(From Page 7)

- butions of Ranger photographs to understanding the geology of the Moon, by N. J. Trask 40c
- Professional Paper 707: Interpretation of an aeromagnetic survey of the Amchitka Island area, Alaska, by G. D. Bartha, W. J. Carr, L. M. Gard, Jr., and W. D. Quinlivan\$1.75
- Professional Paper 753: Geophysical, geohydrological and geochemical reconnaissance of the Luke salt body, central Arizona, by G. P. Eaton, D. L. Peterson, and H. H. Schumann .. 40c
- Professional Paper 800-C: Geological Survey Research, 1972. Chapter C\$3.00

Bulletin 1342: Massive sulfide deposits near Shellabarger Pass, southern Alaska Range, Alaska, by B. L. Reed, and G. D. Eberlein\$1.00

Bulletin 1372-A: Changes in stratigraphic nomenclature by the U. S. Geological Survey, 1971, by G. V. Cohee and W. B. Wright 25c

MAPS:

GQ 987: Geologic map of the Huntington Lake quadrangle, Central Sierra Nevada, Calif., by P. C. Bateman and D. R. Wones\$1.00

I-675: Map showing recently active breaks along the San Jacinto fault zone between the San Bernardino area and Borrego Valley, Calif., by R. V. Sharp\$1.50

I-680: Geologic map of the Burns quadrangle, Oregon, by R. C. Green, G. W. Walker and R. E. Corcoran \$1.00

I-700: Geologic map of the Lunar Crater quadrangle, Nye County, Nev., by R. P. Snyder, E. B. Ekren and G. L. Dixon\$1.00

I-787-B: Slope map of Anchorage and vicinity, Alaska, by H. R. Schmoll and Ernest Dobrovolsky 75c

MF 343: Preliminary geologic map of the Franciscan rocks in the central part of the Diablo Range, Santa Clara and Alameda Counties, Calif., by W. R. Cotton 50c

LUCY BIRDSALL

NEWSLETTER

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