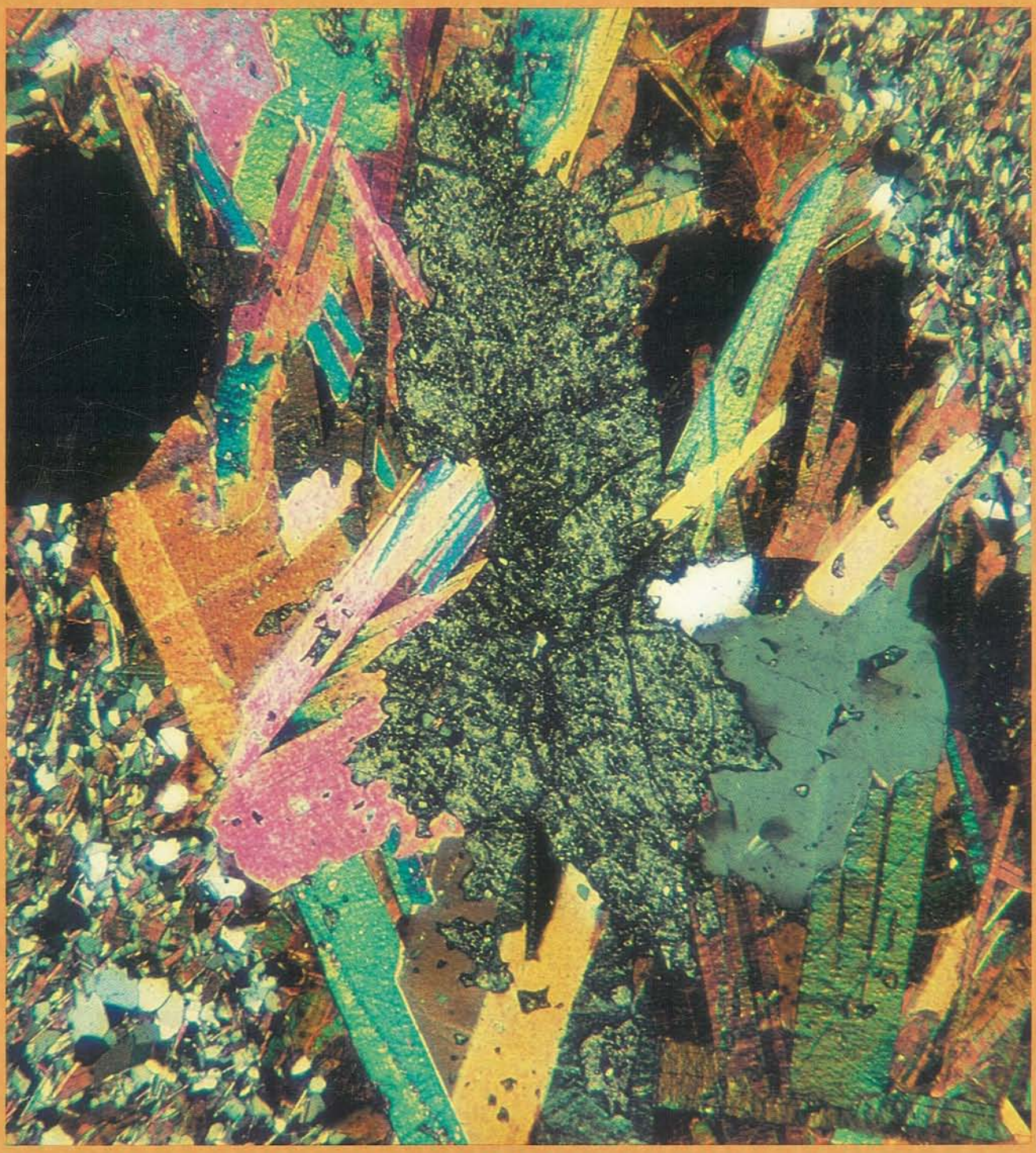
DEPARTMENT OF GEOLOGICAL SCIENCES

NEWSLETTER

THE UNIVERSITY OF TEXAS AT AUSTIN

NO. 29 : SEPTEMBER 1980 : AUSTIN, TEXAS



COVER PICTURE

Relict staurolite crystal composed of remaining staurolite core, biotite, muscovite, and feldspar; in thin section with doubly polarized light; X100.
Photo by Dodd DeCamp

BACK COVER

Prehnite in thin section with doubly polarized light; X100.
Photo by Dodd DeCamp

Department Recognizes Distinguished Graduates

The highest recognition of this Department was bestowed upon Stephen E. Clabaugh and J. Ben Carsey, Sr., who were presented plaques as Distinguished Graduates on the evening of April 10, 1980. The presentations were a highlight of the dinner held in their honor at the Westwood Country Club of Austin, attended by over 150 faculty, Advisory Council members, family, former students and other close friends of the honorees.

Following a period of informal socializing and a superb buffet, toastmaster Bob Boyer introduced Fred Bullard, noting that his teaching career spanned the student days of both Ben Carsey and Steve Clabaugh. Fred set the whimsical mood of the evening with his remarks. He first acknowledged that "it would be difficult to select *any* living graduate whose student days my tenure did not span." However, he disclaimed the rumor that he had organized the Department, granting Dr. Hill that distinction. Fred said, "I came during Dr. Simond's reign. Geologically, that would be in the closing stage of the Pleistocene."

Fred arrived while Ben Carsey was a senior, but became well acquainted with both Ben and his future wife, Dorothy Ogden. Fred also recounted the arrival of "Ed" Clabaugh at UT from the piney woods of east Texas. He said, "I have never known why he left here with a master's degree as Ed, but returned with a PhD and U.S. Geological Survey experience as Steve." He also professed ignorance of what the "J." stands for in J. Ben Carsey or why Steve isn't known today as S. Edmund Clabaugh in keeping with J. Ben Carsey.

Fred explained why he knew very early that Steve Clabaugh would become an excellent teacher. In Fred's words,

> "For a couple of years during the late 1930's, Steve was my assistant on a research project studying heavy minerals of Texas rivers and the Gulf coast beaches. We took periodic trips to the Gulf to collect samples and, on occasion, my family went along. My two girls were in grade school at the time, and on the trips Steve taught my girls to play poker, and a game was constantly in progress in the back seat of the vehicles. You know, after that I was never able to beat my girls at poker. It was then I recognized Steve's unique talents as a teacher!"

Ben Carsey proudly displays Distinguished Graduate plaque.

John Loftis (BS '40) then addressed the audience, reminiscing about his association with Ben Carsey and of Ben's many accomplishments. Their relationship dates back 39 years when Humble Oil & Refining Company sent Ben to Lake Charles, as division geologist for the newly created Louisiana Division. (Ben Carsey was first employed by Humble as a field geologist in 1925. It was 16 years later that he went to Lake Charles.) In tribute to Ben Carsey, John stated, "I was impressed that day (in 1941 in Louisiana), and the days that followed, by Ben's ability as a petroleum geologist—the ability to find oil through his own efforts and the ability to direct others to do the same. . . . Wherever Ben worked, he participated in and inspired others in finding oil and gas and distinguished himself as a working petroleum geologist."

Ben Carsey did indeed distinguish himself. After several important assignments, he was appointed chief geologist of Humble in 1948, a position he held until 1955. Ben Carsey has also contributed much to his profession in other ways. He has been highly active within AAPG, having served on the Distinguished Lecture Tour, as vice president, and then in 1967 as president. He has also been president of the Houston Geological Society (in 1965). Ben joined the Geology Foundation Advisory Council in 1972 and has been an important contributor to the Council since that time.

Phoebe Bell, far left, congratulates Pat and Steve Clabaugh.

Jack Wilson, now professor emeritus, then shared his close association with Steve Clabaugh as a "friend, close teaching associate and fellow researcher" during the 30 years of their faculty tenure together. He recounted how Steve was identified as a masterful teacher and confidante of many, many students. As Jack stated, "Steve's door was always open to students and they wisely took advantage of the opportunity to seek his counsel and encouragement." Jack also noted that Steve provided a guiding hand to Sam Ellison during Sam's years as chairman, and then proceeded to do "double duty," serving as Department chairman while overseeing the architectural planning and eventual construction of the "new" Geology Building.

Steve Clabaugh has had a major impact on the educational experience of many geology students during the 33 years he taught here. As indicated by his teaching awards (please see p. 8 of this *Newsletter* for details), Fred Bullard's daughters received instruction from a master teacher.

Clearly, J. Ben Carsey and Stephen E. Clabaugh have enjoyed careers that took them to the highest levels of their profession. We are therefore pleased and honored to have them named Distinguished Graduates of this Department.

Alumni Luncheons in Dallas and Lafayette

Dallas and Lafayette were the sites of two alumni luncheons held this past spring. Fred Oliver and Bill Stokes of the Geology Foundation Advisory Council handled the logistics for the luncheon at the Petroleum Club in downtown Dallas on March 26, 1980. A group of 50 alums socialized with faculty members during the open bar which Fred and Bill graciously hosted. Then, after a steak luncheon, the group heard comments about the Department and our programs from Bob Boyer, Earle McBride and Al Scott. John Maxwell briefed the group on the federally-supported seismic reflection profiling program being conducted in various areas including the Valley and Ridge province of the Southern Appalachians, in the Hardeman County-Wichita Mts. area and across the Wind River and Laramie ranges in Wyoming/Colorado. Bill Fisher summarized results of several research projects currently underway by the Bureau of Economic Geology. After an invitation by Sam Ellison for all assembled to visit the Geology Building and see our activities in operation, Fred Oliver closed the luncheon program by encouraging continued interest and support for the Department.

George Schneider hosted a group of five faculty members at a luncheon for UT alumni in Lafayette on March 31, 1980. The Petroleum Club provided an ideal location for the informal affair, and the group had ample opportunity to hear details of the activities on the Austin campus. A highlight was the story swapping between Keith Young and one of Keith's former students, Terry Bills (BS '55; MA '57). We still aren't sure who exaggerated the most!

The success of these luncheons prompted the Advisory Council to plan additional such alumni affairs for the coming year. Plans are currently in progress for a group of faculty to visit Midland and San Antonio. Residents of these cities will be given ample notice of the details.

Mr. Petty Honored at SEG Meeting

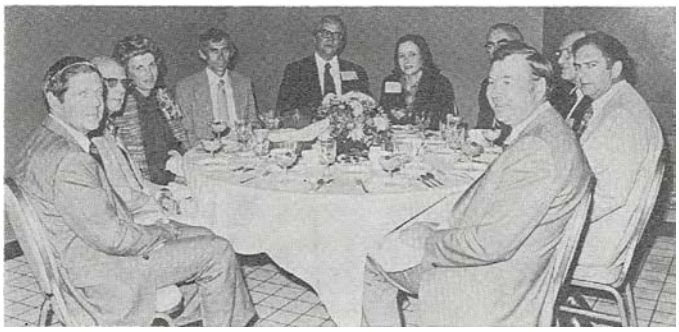
Mr. O. Scott Petty holds plaque.

It is especially fitting that Mr. O. Scott Petty was the guest of honor at the first annual UT breakfast held in conjunction with the Society of Exploration Geophysicists' convention. Approximately 40 friends of Mr. Petty and the Department gathered at 7:00 a.m. on November 6 in the New Orleans Hilton for breakfast and a brief program.

Sam Ellison reviewed Mr. Petty's vigorous support of the Department extending back to the formative years of the Geology Foundation. In the 1950's, Mr. Petty stood alone in advocating the importance of including geophysics courses in the Department's curriculum. His tenacity was largely responsible for the decision, years later, to develop a viable program in geophysics on the UT-Austin campus.

Bob Boyer credited the foresight of Mr. Petty and others on the Advisory Council for the Department's success in assembling an outstanding geophysical faculty. Through the efforts of the Advisory Council, the Wallace E. Pratt Professorship in Geophysics became a reality and Milo Backus was attracted to academe where he is laying the foundation for a superior program in geophysics. Mr. Petty's contributions to the geophysics program at UT are further acknowledged with the endowment of the O. Scott Petty Geophysical Fund.

Milo Backus commented on the pioneer endeavors of Mr. Petty and his company in establishing appropriate recognition of the potential for geophysical exploration

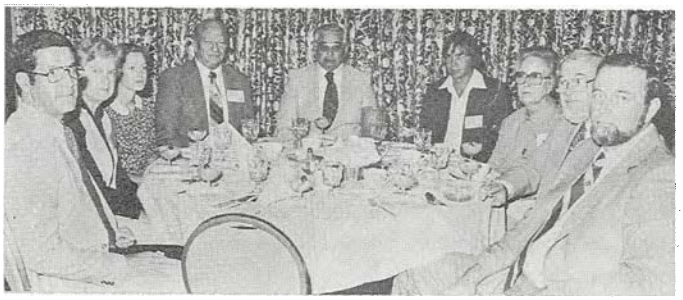


Left to right: Scott Petty, Jr., O. Scott Petty, Louise Petty, Bob Boyer, Milo Backus, Barbara Backus, Sam Ellison, Jim Frasher, Bill Laws, Don Sheffield.

techniques. He expressed particular appreciation for the support he has received from the Petty family since he joined the Department faculty, and echoed Bob's comments on the importance of the Petty Geophysical Fund to the enrichment of geophysics at UT.

As a memento of the occasion, Mr. Petty received a desk plaque which included a pyrite specimen and a citation expressing gratitude for his many contributions to the Department, the University and the geophysical profession. Scott Petty, Jr. (currently serving on the Advisory Council) and his lovely wife were on hand to add their congratulations as were Council members Decker Dawson, James H. Frasher, James R. Moffett and Augustus Seamans.

As mentioned earlier, this was the beginning of a new tradition. The Department will host a breakfast in conjunction with the SEG meetings in Houston. At this breakfast we will honor Milo Backus upon completion of his term as president of SEG. Please mark your calendars and plan to meet us Tuesday morning, November 18 at 7 a.m. in the Cottonwood Room of the Hyatt Regency Hotel.



Left to right: R. H. Ward, Pat Miller, Elizabeth Miller, J. W. Miller, Jack Foote, Mike Foote, Mable Mayne, Harry Mayne, Derek Jones.

AAPG in Denver

The 26th floor of the First National Bank Building in Denver provided a spectacular view of the mountains for those attending the alumni breakfast held during the AAPG/SEPM convention. Some 140 alumni and friends met at 7:00 a.m. on Tuesday, June 10, to enjoy what has to be one of the most successful functions hosted by the Department. A special note of thanks is appropriate to Ken Seewald for suggesting the 26 Club and serving as liaison with the caterer for a marvelous buffet breakfast in such beautiful surroundings.

Earle McBride took time out from his official duties with SEPM to present a report on the latest enrollment count of undergraduate geology majors and commented on registration for the summer field courses. Students requiring the sophomore field course far exceeded the housing facilities available, so half the group took the course immediately after finals in May and the other half during the latter part of August. Sixty-two students spent the first six weeks of the summer in Taos, New Mexico and Durango, Colorado undergoing rigorous training in the senior field course. Earle explained that the west Texas sites where many former students survived the heat and rattlesnakes were abandoned when access to several ranches was no longer available and our enrollment exceeded the Leary bunkhouse facilities. Inflation is a major problem in our field camp program and the faculty continues to consider alternative field areas in an attempt to keep down the cost to our students.

Left to right: (standing) Jim Miller, Richard A. Davis (seated) Tom Bjorklund, Allan Nelson, Bill and Jan Blankenship.

Al Scott gave a synopsis of graduate enrollment and reported on the employment offers accepted by recent graduates. He anticipates approximately 40 new graduate students for fall semester 1980, half of whom will receive some form of financial support through the University. Al has been particularly impressed with the high quality of applicants to our graduate program; many of the incoming students have advanced GRE scores of 670 or above. The Department awards committee and Al spend long hours each winter considering some 300 applications to assure that we maintain a well-balanced graduate student body.

Left to right: J. R. Jackson, Karl Hagemeier, Joel Watkins, Bill Gipson.

Don Boyd spoke on behalf of the Geology Foundation Advisory Council and expressed appreciation for the fine alumni support received by the Department during the past year. He encouraged all our ex-students and friends to stop by the Geology Building and "be impressed by what you see." Don introduced other Council members present at the breakfast: J. Ben Carsey, Rodger E. (Tim) Denison, William E. Gipson, J. Don Langston, Edd R. Turner, and Charles E. Yager.

Bill Fisher announced the recent approval of a new building for the Bureau of Economic Geology to be constructed at the University's Balcones Research Center several miles north of Austin. The Bureau staff has outgrown the fifth floor of the Geology Building and a number of employees have been relocated to rented

Left to right: Ken and Mary Seewald, Natalie, Gordon, and Elizabeth Everett.

space in two separate locations off campus. The new facility will allow all Bureau functions to be carried out under one roof, including the well sample library which is currently located at Balcones.

It has become a tradition at our AAPG/SEPM breakfasts to present several annual awards to faculty and students. Bob Boyer called on Dan Barker to introduce the winner of the Petrography Award. William David Wiggins received the highest score on the examination of a wierd assemblage of rocks provided by Dan, Steve Clabaugh, Bob Folk and several other faculty members. Dave previously attended Tulane University, receiving his B.S. degree in 1974 and the M.S. in 1977. He is working under Bob Folk's supervision on a dissertation project on the diagenesis and origin of miscrospar and pseudospar in the Marble Falls Formation (Morrowan), central Texas. In recognition of his understanding of all rock types, both in hand specimen and microscopic study, Dave received a beautifully lettered certificate, a check for $1,000 and an all-expense paid trip to the convention.

Left to right: Ed McFarlan, Leo Pugh, Cecil Rix, Dan Powell.

Through earnings from an endowment established several years ago, two Houston Oil & Minerals Faculty Excellence Awards were presented in recognition of outstanding service and special contributions to the teaching and research programs in the Department. In addition to a handsome certificate, each award carries a cash prize of $1,500. Bob Boyer introduced assistant professor J. Richard Kyle whose certificate cited his "significant contributions in the development of a program in economic geology in the Department of Geological Sciences." Bob explained that faculty and students are encouraged to present nominations for the HO&M awards through letters to the Department chairman. For the first time, Bob received not just letters, but a petition signed by a substantial number of graduate students who recommended Rich be honored for his superior efforts in teaching economic geology.

It is always fun to have a surprised honoree, and Earle McBride was duly taken aback when he was introduced as a Houston Oil & Minerals award recipient. Earle's

Honorees at Awards Breakfast held in Denver, June 10, 1980: (Left to right) Rich Kyle, Dave Wiggins, Dan Barker, Earle McBride.

certificate reads "in recognition of outstanding contributions to the Department of Geological Sciences through extensive supervision of graduate students and course instruction, research in sedimentary petrology bringing esteem to the program, and unselfish participation in Departmental administrative activities."

Bob reviewed the initiation of the Carolyn G. and G. Moses Knebel Distinguished Teaching Award and announced that Dan Barker had been selected to receive this honor for the 1979–1980 academic year. Balloting open to all undergraduate and graduate geology majors determines the selection for this high honor, and Dan can feel an extra measure of pride in the award; this is the second time his name will be affixed to the Knebel plaque in the faculty conference room. In addition to the cash award of $1,500, Dan received a desk pen set with an appropriately engraved citation.

The program was complete in ample time for those interested to catch the first papers at the convention; however, several lingered for leisurely conversation with old friends. It is always a pleasure for us to arrange the breakfasts at the AAPG/SEPM conventions and we hope you will plan now to be with us in San Francisco in June, 1981.

Russ Clemons (standing), Charlie Mankin (seated, left) Bill and Skeet St. John.

UT Luncheon GCAGS In San Antonio

The dining room at the Stockman Restaurant provided a pleasant setting for the annual Department alumni luncheon held in conjunction with the GCAGS convention. Approximately 90 ex-students and friends of the Department strolled down the River Walk on Thursday, October 11, to enjoy good food and UT fellowship, San Antonio-style.

Left to right: Robert Valerius, Elgean Shield, Wiley Harle, Jim Whitten.

The Geology Foundation Advisory Council continues to give strong support to all our alumni functions, and it was a pleasure to have Ken Martin, Fred Oliver and Bill Stokes attend the luncheon. Their enthusiasm and dedication to Departmental programs and activities typifies that of the other Council members.

Because of the proximity of the convention, several faculty were able to meet morning classes and then drive down for the luncheon. The faculty was well represented by Virgil Barnes, Bob Boyer, Sam Ellison, Thor Hansen, Earle McBride, Al Scott, Jan Turk and Jerry Wermund. Earle and Al reported on the latest developments on campus and the continued enrollment growth at both undergraduate and graduate levels. Bob announced that a petition he received from some 70 graduate students attests to the increase in the number of female geology majors. The students have requested that the University install shower facilities for the women, similar to those provided for the men. (There is a shower in the men's room in the basement of the Geology Building.) It was suggested that this might be the next "special need" for support through the Geology Foundation. However, University officials wisely deemed this a most worthy cause (ERA pervades their thinking) and approved the funds. Perhaps our next issue of the *Newsletter* will feature photographs of this shower in use.

Left to right: Jim Wheeler, Evelyn Wilie Moody, John O'Donohue, Wayne Holcomb.

Left to right: Charles Sample, Joyce Bowman Payne, Bill Payne.

The official GCAGS exhibit booth with a display of all the Association's publications was set up at the convention under the supervision of Birdena Schroeder. Dodd DeCamp, an expert at setting up the booth, attended the convention, compliments of GCAGS, in return for his labors involved in transporting and assembling the exhibit. Dodd, a master's candidate working under Bill Muehlberger's supervision, also agreed to pack the booth in a van and drive to Denver for the AAPG convention. As a three-convention veteran with the exhibit booth, Dodd has promised to draw up a "blue print" for the student who goes to Lafayette for the GCAGS convention in October.

Through the good efforts of George Schneider, a member of the Advisory Council, we have reserved the Chez Pastor Restaurant in Lafayette for our luncheon on Thursday, October 9, 1980. Tickets will be available in the registration area at the convention. We hope you will mark your calendar and plan to meet your Texas friends and former classmates for our UT Luncheon-in-Lafayette.

Department Hosts Open House & Bar-B-Que

Bar-B-Que on the mall in front of the Geology Building was enjoyed by alumni who visited the Department's Open House on Saturday, October 6, 1979. A variety of exhibits and displays were viewed by the large crowd, many in Austin for the football game that evening. (Final score: UT 26, Rice 7.) Faculty and students organized the Open House so that the visitors could leisurely examine the numerous educational exhibits. Students stood by to elaborate on the subjects and answer questions.

The gamut of geologic subjects taught in our program was represented at the Open House. Visitors had an opportunity to test their skills at such things as gem faceting, interpreting seismic lines and reconstructing the Texas Pterosaur—otherwise known as the world's greatest flying creature. In fact, a general comment frequently heard was that there was more to see than the time allowed.

A "special sale" of small samples of tumbled semi-precious minerals from the Barron Collection was a favorite. Many pounds of these mineral specimens were distributed during the sale. Another popular spot was the hospitality room, hosted by the Department staff, compliments of the Geology Foundation.

Reception to the Open House was most gratifying. The requests for a "repeat performance" may signal the beginning of a tradition. With the encouragement of the Geology Foundation Advisory Council, another (less elaborate) Open House will be held on Saturday, October 25th, with SMU playing UT as a feature attraction. **Mark your Calendar to visit the Department and have Bar-B-Que with us that day!**

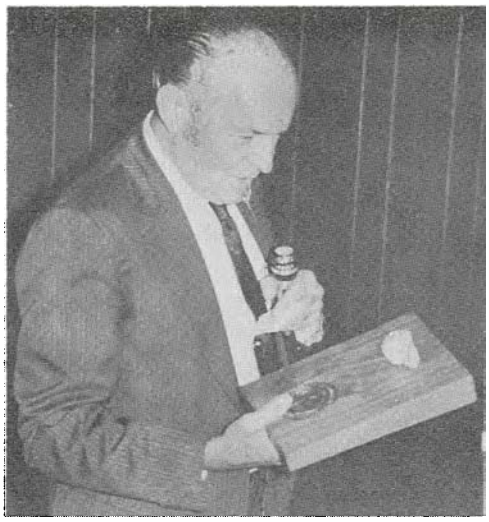
Tumbled gemstones were a popular item.

Alumni enjoying socializing and barbeque at Department open house.

Department News

FACULTY CHANGES

Again this fall the Department has new faculty additions and the departure by retirement of a senior faculty member. **Steve Clabaugh** added his name to our growing list of emeritus professors, although he has promised to be available for some part-time teaching duties in a year or two. Steve is one of only two full-time faculty members (the other is Ernie Lundelius) who received training at UT (he was awarded the BS in 1940 and the MS in 1941). Steve subsequently received the PhD in geology from Harvard. Steve began his teaching career here in 1947, after serving as a geologist with the U.S. Geological Survey during the interval 1942–1946. He was promoted to the rank of professor in 1955 and served as Department chairman from 1962-1966.



Steve Clabaugh admires Distinguished Graduate plaque. (See Article p. 1)

During his illustrious career, Steve was a "fixture" on numerous University committees and was identified for excellence in teaching on several occasions. These included the UT Student's Association Award for teaching excellence, 1957; the Minnie Stevens Piper Foundation Award for scholarly and academic achievement, 1958; and the Carolyn G. and G. Moses Knebel Distinguished Teaching Award, 1974 and 1978. Over the years, Steve supervised an impressive number of students while serving on the committees of many more. At last count he had supervised 11 PhD students and 33 Master's students. Steve's versatility as a teacher is legend. Among numerous courses, he charmed the freshman in physical geology, presented a challenging course in metamorphic petrology to graduate students, and taught an informative, yet entertaining course entitled "Mineralogy and Petrology" (GEO 416), to a diverse audience that included students in petroleum land management, engineering, education and liberal arts. For two decades Steve taught our elementary field geology course (GEO 320K), using the Hotel Llano-Hilton as his headquarters. Perhaps his most memorable (?) experience was teaching a special section of introductory geology to a class of Plan II students, who, in his words, were "very bright but not entirely motivated to learn geology." Steve maintains an office in the Geology Building, but plans to spend a share of his time at his Pedernales Ranch where he and Pat enjoy a relaxed country atmosphere which includes gardening, an orchard, fishing and entertaining grandchildren. One thing for sure, we will all miss Steve's presence on a daily basis. Fortunately, however, he isn't going to be far away.

William D. Carlson joined the faculty as an assistant professor, a position available due to Steve Clabaugh's retirement. Bill completed his PhD this past summer at the University of California, Los Angeles, working under the supervision of Dr. W. Gary Ernst. He received a BS from Stanford University (1974). Bill did his dissertation on aspects of experimental approaches to problems of igneous and metamorphic petrogenesis. Studies included: implications of aragonite-calcite transformation kinetics for blueschist-facies metamorphism, the effect of Sr substitution and anion orientational disorder on the calcite-aragonite equilibrium, and phase equilibrium relations of natural and synthetic peridotite systems within the stability field of plagioclase lherzolite. He will teach courses in metamorphic petrology and work with graduate students in both field-oriented and experimental metamorphic petrology.

Gary Kocurek is another addition to our ranks of assistant professors. He fills a new line item in our budget, approved by the Administration in response to the upsurge in our enrollment and the need for more faculty members in the general field of sedimentary geology. Gary received his PhD in August from the University of Wisconsin-Madison, where he completed a dissertation on the topics "Eolian bounding surfaces, interdune deposits, and climbing dunes" and "Distinctions and uses of stratification types in eolian and subaqueous cross-strata." His doctoral work was supervised by Dr. Robert H. Dott, Jr. Gary received his other degrees from the University of Houston (BS, 1975; MS, 1977). Gary will teach courses in sedimentology, with emphasis on sedimentary processes and fluid mechanics and in the study of recent, and the interpretation of ancient, depositional environments. In his teaching, Gary will work closely with Earle McBride and Al Scott.

Amos Salvador also joined our faculty with the beginning of the fall semester. Please refer to the article about Dr. Salvador (see p. 23) in regard to his appointment as the Alexander Deussen Professor of Energy Resources.

William D. Sill was named an adjunct associate professor in the Department. Dr. Sill received a BA degree from Brigham Young University and MA and PhD degrees from Harvard. Upon completion of his PhD (in 1968), he served two years as research and curatorial associate for the Peabody Museum at Yale, then spent several years as a science adviser to the Argentine Government, working in conservation and environment projects. From 1971-76 he was professor of paleontology and department chairman at the National University of San Juan, Argentina and in 1976 became director of the Latter Day Saints (LDS) Institute educational system in Buenos Aires. Since 1978 he has been director of the LDS Institute in Austin. His research interests are in vertebrate paleontology with emphasis on Triassic reptiles, particularly rhynchosaurs and crocodilians. Bill will be available to teach historical geology on occasion and will participate in our program of teaching and research in VP with Wann Langston, Ernie Lundelius and Jack Wilson.

Again this past year the Department benefited from the expertise available in the Bureau of Economic Geology. New additions among that group were Drs. C. Robertson Handford and Robert G. Loucks. During the spring semester they team taught a graduate course entitled "Biogenic and Evaporite Depositional Systems." Dr. Handford has since left the Bureau to work for the Louisiana Geological Survey; Dr. Loucks has since left the Bureau for employment in the petroleum industry.

The Department was shorthanded during the 1979-80 academic year with a number of unfilled faculty positions. As a result, several temporary appointments were made. Dr. Michael A. Jordan (MA '70, PhD, '78) held a one-year position as an assistant professor. He taught the introductory course in geology for engineers each semester and shared in the teaching of structural geology and mineralogy/petrology courses. Drs. Russell W. Graham (PhD '76) and Peter C. Patton (PhD '77) joined the faculty as visiting assistant professors for the spring semester. Russ taught introductory historical geology and a graduate seminar in vertebrate paleontology; Peter taught courses in geomorphology at senior and graduate levels. Rizer Everett (BS '37) taught the special section of "Geology of Energy Resources" designed for majors in the petroleum land management program. Rizer has handled this course, which is offered each spring, on previous occasions.

FACULTY AND STAFF

Professors

Milo M. Backus (Wallace E. Pratt Professorship in Geophysics), Ph.D., M.I.T.: Seismic exploration with emphasis on analysis, processing and signature refinement of seismic data.

Daniel S. Barker, Ph.D., Princeton: Igneous and metamorphic petrology; experimental phase relations of feldspars and feldspathoids; origin of granite and alkalic rocks; geochemistry.

Robert E. Boyer (Dean, College of Natural Sciences; joint appointment: College of Education), Ph.D., Michigan: Structural geology; analysis of space photographs; remote sensing; earth science education.

L. Frank Brown, Jr. (Associate Director, Bureau of Economic Geology), Ph.D., Wisconsin: Upper Paleozoic stratigraphy; depositional systems; environmental geology.

H. James Dorman (Galveston Geophysics Laboratory, Marine Science Institute), Ph.D., Columbia: Seismology; lunar seismic-data analysis, seismic studies of geothermal fields.

William L. Fisher (Director, Bureau of Economic Geology), Ph.D., Kansas: Energy and mineral resources.

Peter T. Flawn (President, UT-Austin; Leonidas T. Barrow Professorship in Mineral Resources; joint appointment: Lyndon B. Johnson School of Public Affairs), Ph.D., Yale: Economic geology; environmental geology; geology and public affairs.

Robert L. Folk (J. Nalle Gregory Professorship in Sedimentary Geology), Ph.D., Penn State: Petrography and origin of recent sediments, Tertiary sandstones of Gulf Coast, Cretaceous and Paleozoic limestones of central Texas; sedimentary properties in relation to geomorphology.

EDWARD C. JONAS (joint appointment: College of Education), Ph.D., Illinois: Electron and x-ray diffraction of clay minerals; pyroclastic sediments and uranium deposits.

LYNTON S. LAND, Ph.D., Lehigh: Isotope geochemistry; diagenesis; low-temperature aqueous geochemistry.

WANN LANGSTON, JR. (Research Scientist, Texas Memorial Museum), Ph.D., California, Berkeley: Paleontology of lower vertebrates.

GARY V. LATHAM (Associate Director, Galveston Geophysics Laboratory, Marine Science Institute), Ph.D., Columbia: Seismology; lunar and Martian seismic-data analysis; earthquake studies in Central America.

LEON E. LONG, Ph.D., Columbia: Geochemistry; isotopic age and stable isotope studies.

ERNEST L. LUNDELIUS, JR., (John A. Wilson Professorship in Vertebrate Paleontology), Ph.D., Chicago: Vertebrate paleontology; Pleistocene faunas.

JOHN C. MAXWELL (William Stamps Farish Chair in Geology), Ph.D., Princeton: Regional tectonics.

EARLE F. MCBRIDE (Chairman), Ph.D., Johns Hopkins: Sedimentary processes and sedimentary petrology.

J. ROBERT MOORE (Director, Marine Science Institute; Chairman, Department of Marine Studies), Ph.D., University of Wales: Ocean mining.

WILLIAM R. MUEHLBERGER (Fred M. Bullard Professorship), Ph.D., Caltech: Tectonics; lunar geology.

AMOS SALVADOR (Alexander Duessen Professorship in Energy Resources), Ph.D., Stanford: Stratigraphy; origin of the Gulf of Mexico; petroleum geology.

ALAN J. SCOTT (Graduate Adviser) Ph.D., Illinois: Biostratigraphy; paleoecology; Recent marine environments.

WILLEM C. J. VAN RENSBURG (Associate Director, Bureau of Economic Geology; Director, Texas Mining and Mineral Resources Research Institute), Ph.D., Wisconsin: International minerals and energy economics and policy issues. Coal characterization and utilization.

KEITH YOUNG, Ph.D., Wisconsin: Mesozoic stratigraphy and paleontology, Gulf Coast, U.S.A. and Mexico; detailed mapping of the area of the Balcones escarpment; geology of the environment of man.

Adjunct Professors

RALPH O. KEHLE, Ph.D., Minnesota: Theoretical structural geology; active fault systems; geophysics; computer applications; environmental geology.

WILLIAM M. RUST, Ph.D., Rice: Geophysics.

L. JAN TURK, Ph.D., Stanford: Hydrogeology, groundwater quality; environmental and engineering geology.

Emeritus Professors

VIRGIL E. BARNES, Ph.D., Wisconsin: Stratigraphy, geologic mapping; tektites; directing compilation of *Geologic Atlas of Texas.*

FRED M. BULLARD, Ph.D., Michigan: Volcanology.

STEPHEN E. CLABAUGH, Ph.D., Harvard: Metamorphic petrology and volcanic rocks of Texas and Mexico.

RONALD K. DEFORD, M.S., Colorado School of Mines: Stratigraphy and tectonics, southwestern U.S.A. and northern Mexico; history of geology.

SAMUEL P. ELLISON, JR., Ph.D., Missouri: Resource geology—fuels, coal, oil and gas; subsurface geology; micropaleontology and biostratigraphy—foraminifera and conodonts.

CLAUDE W. HORTON, SR., Ph.D., Texas: Underwater acoustics; magnetotelluric fluctuations; geophysical time series.

F. EARL INGERSON, Ph.D., Yale: Geological thermometry; ore deposits; hydrothermal studies; geochemistry; gems and gem minerals; petrofabrics; tektites; studies of the Martian surface.

JOHN A. WILSON, Ph.D., Michigan: Vertebrate biostratigraphy of the Tertiary of Gulf coastal plain, west Texas and Mexico.

Associate Professors

VICTOR R. BAKER, Ph.D., Colorado: Geomorphic processes; paleohydrology; Quaternary and environmental geomorphology.

ROLLAND B. BARTHOLOMEW (joint appointment: College of Education), Ph.D., Maryland: Science education, curriculum development and teaching methods.

DOUGLAS SMITH, Ph.D., Caltech: Field, chemical and experimental study of problems of igneous and metamorphic petrology; geochemistry.

JAMES T. SPRINKLE, Ph.D., Harvard: Primitive echinoderms; blastoids; Paleozoic stratigraphy and paleontology of the Rocky Mountains.

Adjunct Associate Professor

WILLIAM D. SILL, Ph.D., Harvard: Vertebrate paleontology of Triassic reptiles.

Assistant Professors

WILLIAM D. CARLSON, Ph.D., UCLA: Experimental and field studies in metamorphic petrology.

THOR A. HANSEN, Ph.D., Yale: Evolutionary patterns in lower Tertiary molluscs; marine paleoecology and biostratigraphy.

GARY KOCUREK, Ph.D., Wisconsin: Sedimentology—depositional environments and eolian processes.

J. Richard Kyle, Ph.D., Western Ontario: Metallogeny; stratabound mineral deposits in sedimentary and volcanic rocks; fluid inclusion studies; industrial minerals; mineral exploration.

Sharon Mosher, Ph.D., Illinois: Deformation mechanisms and theory and results of pressure solution; strain analysis; mapping with emphasis on metamorphic terrains.

Wayne D. Pennington, Ph.D., Wisconsin: Earthquake seismology applied to the lithosphere and asthenosphere; global tectonics.

Clark R. Wilson, Ph.D., Scripps Institution of Oceanography, California–San Diego: Geophysical time series; analysis of multidimensional geophysical data field.

Lecturers

Rizer Everett, M.A., Texas: Geology of petroleum and other energy resources.

William E. Galloway (Research Scientist, Bureau of Economic Geology), Ph.D., Texas: Sedimentary economic geology of Gulf Coast Tertiary; Paleozoic basins.

William R. Kaiser (Research Scientist, Bureau of Economic Geology), Ph.D., Johns Hopkins: Coal geology, underground coal gasification, uranium geochemistry.

Charles W. Kreitler (Research Scientist, Bureau of Economic Geology), Ph.D., Texas: Hydrogeology, geochemistry, and isotope chemistry.

Fred W. McDowell (Research Scientist, Department), Ph.D., Columbia: Geochemistry; geochronology.

Joseph M. McGowen (Research Scientist, Bureau of Economic Geology), Ph.D., Texas: Coastal geology; coastal and fluvial processes; shoreline stability as related to sediment budget; facies and geometry of Holocene bay sediment.

Robert A. Morton (Research Scientist, Bureau of Economic Geology), Ph.D., West Virginia: Coastal and marine geology; quantitative analysis of coastal processes including storms.

E. G. Wermund (Associate Director, Bureau of Economic Geology), Ph.D., Louisiana: Basin analysis, carbonate stratigraphy; remote sensing applied to mineral exploration.

Charles M. Woodruff, Jr. (Research Scientist, Bureau of Economic Geology), Ph.D., Texas: Environmental geology; urban geology; mineral and energy resources and cities.

Librarian

Martin A. Smith, M.L.S., Maryland: In charge of Geological Sciences Library and map collection.

Technical Staff

G. Matthew Coldwell, Electronics Technician: Trouble shooting and repair of electronic equipment.

G. Karl Hoops, M.A., Texas; Analytical Chemist: Rock and mineral analysis by standard methods; instrumental chemical analysis for trace elements.

Rudolph W. Melchior, Instrument Maker: Constructs special laboratory and field equipment.

Richard L. Morales, B.A., Texas; Specimen Preparator: Thin-sections—petrographic and electron microprobe; ore microscopy sample preparation; polished mounts.

James A. Morgan, Jr., Photographic Technician: Slide reproduction, photography.

David M. Stephens, Photographer: Photography and photographic consultant.

John H. Thorne, Electronic Technician: Design and repair of electronic equipment.

Salvatore Valastro, Jr. (Associate Director, Radiocarbon Laboratory), M.A., Texas: Radiocarbon assay of recent sediments, groundwater, paleobotanical materials.

Ernest E. Woehl, Mechanic: Maintains field equipment and fleet of field vehicles.

Administrative and Secretarial Staff

Joyce Best, Administrative Secretary, Geology Foundation office.

Penny Chambers, Administrative Secretary, graduate adviser's office.

JoAnn Kuper, Procurement Officer.

Betty Kurtz, Senior Secretary, second-floor faculty.

Debra Magner, Secretary, third-floor faculty.

Virginia Olson, Secretary, Departmental office.

Donna Precht, Administrative Secretary, undergraduate adviser's office.

Birdena Schroeder, Executive Assistant.

FACULTY ACTIVITIES

Milo Backus has had the pleasure of serving as president of the Society of Exploration Geophysicists during the past year. In addition to his involvement in affairs of the Society, he has had the opportunity to address many of the local geophysical sections and other groups involved in exploration. Much of the material used in these addresses is contained in the 18th annual Southwestern Legal Foundation publication on exploration and economics of the petroleum industry entitled: "The expanding role of the seismic reflection method in exploration and development." Milo spent the summer on

NSF-supported research on seismic reflection methods, on affairs of the Society of Exploration Geophysicists, and in exploration related consulting work.

Vic Baker groups his activities of the past year in two categories: (1) down under and (2) far out. The first refers, of course, to Australia, where the whole Baker family spent nine months while Vic was a visiting senior scholar, supported by the Fulbright program. "Our Aussie experience was mostly in the 'outback.' We lived in Darwin, a tropical city in the Northern Territory that is famous for cyclones, World War II bombings and beer drinking. The geomorphology was phenomenal: tropical escarpments, spectacular river gorges, billabongs, desert landscapes, and laterite. In addition to field work on the geomorphic effects of floods, I was able to travel extensively, lecturing at a dozen universities. I also served as a U.S. delegate to the International Union of Geodesy and Geophysics meeting in Canberra and attended a field excursion to New Zealand. The return trip to Texas was a family adventure through Indonesia, Singapore, Malaysia, Thailand, Greece and Italy."

The "far out" side of last year was Vic's continuing work in planetary geology. This included research on the channels of Mars and terrestrial analogs to the landforms of Mars. Vic says, "I added immensely to my knowledge of the latter through this past year's travels. Volcanoes were studied in Hawaii, Indonesia, and Greece. Meteor craters were analyzed in Australia, and fault scarps were scrutinized in New Zealand."

Vic is now beginning a new line of research concerning Venus. Last year he was named to the investigation team for NASA's proposed VOIR mission. VOIR is the acronym for "Venus Orbiting Imaging Radar," and the mission will explore the surface of Venus by using radar to penetrate the thick cloud cover that prevents visual observation of Earth's "sister planet."

Dan Barker reports a unique year (he hopes). Wife Barbara spent most of the year working on her PhD at New York University, with infrequent returns to Austin. She completed the coursework, passed the qualifying exam with high commendation, and made substantial progress on her dissertation while Dan and daughters coped in Austin. They never did figure out the proper number of minutes to boil hamburger! Dan attended a NASA workshop on the Rio Grande Rift and the UT breakfast at the Denver AAPG meetings, where he received the Carolyn G. and G. Moses Knebel Distinguished Teaching Award for the second time.

Introductory physical geology, the undergraduate igneous rocks course, and graduate courses in mineralogy, igneous petrology and analytical techniques were welcome diversions from parenthood. The Department's

Dan Barker (left) receives Knebel Award from Bob Boyer (see p. 5).

newly renovated and computerized electron probe microanalyzer was the only truly recalcitrant child with whom he had to deal, but by summer Dan and the probe began to understand and respect each other. Two major research projects, on the Trans-Pecos igneous rocks and the quartz monzonite and associated iron deposits of southwest Utah, are accelerating thanks to the improved capabilities of the probe.

Rolland 'Bart' Bartholomew reports the year was full of surprises and adventure. During the academic year, his first book entitled *Science Laboratory Techniques: A Handbook for Teachers and Students* was released. Bart's classes went along at normal pace. The exception had to be GEO 320L—a special field course (taught in May) for petroleum land management (PLM) majors. Imagine taking 170 PLM students into the Scott Klett ranch and trying to teach them how to map the area. Now that's an experience!

Bart says he especially looks forward to the coming year. "In September I'll be on leave from the University to work on an education project at the Lawrence Hall of Science, University of California at Berkeley. For this project, supported by a $31,000 NSF grant, I will design exhibits, prepare educational materials and hold workshops on physical, technical and social issues created by three geological hazards in the San Francisco Bay area. The three hazards are: earthquakes, landslides and floods.

"Wish me luck with this new project."

Bob Boyer focused activity on the Silver Anniversary of the Geology Foundation and believes "we had a banner year." The highlight was a special Open House hosted by the Department last fall (see article, p. 7), the development of a program of alumni luncheons with plans for three or four each year rotating among several cities, and the implementation of a special alumni breakfast in conjunction with the annual SEG conventions. (We already have a luncheon during each GCAGS con-

vention and, of course, our Awards Breakfast at each AAPG convention.)

Major fund-raising goals were reached during the 25th year celebration. The Bowling Professorship was completed (see article, p. 42), and substantial endowments were established for the Samuel P. Ellison, Jr. Fund and the Energy and Minerals Resources Fund. Bob says "the Foundation Advisory Council and our many alumni pitched in to make the Anniversary a most memorable one for this Department."

Bob continues to work on his book *Geology and Resources of Texas* with coauthor, Sam Ellison. In October he served as a co-convenor of an AAPG-sponsored "Industry-Academic Conference" attended by representatives of both groups to explore means of furthering common interests. In March he and Sam Ellison conducted a short course and field trip (in central Texas) for a most enthusiastic group of water well drillers. He continues his work with Encyclopaedia Britannica Educational Corporation on the development of films for use at secondary school and college levels. This summer their latest effort entitled "Continental Drift: The Theory of Plate Tectonics" was released. Bob concludes, "The most exciting event for me this year was being presented an award by the Geology Foundation Advisory Council in recognition of nearly 10 years service as Department chairman."

Fred Bullard

Fred Bullard thinks the year was unusually short. He spent the summer and most of the Fall at Taos, New Mexico, returning to Austin in late November (when the snow became unbearable); then Christmas with his daughter and family in Los Angeles, and it was mid-January before he got into his normal "University routine." The book, *Volcanic Activity and Human Ecology*, (Fred is the author of the introductory chapter) was published in November (see Faculty Publications on p. 56 for the bibliographic reference). Fortunately, a chapter on the volcanic hazards of the Cascade Range of western United States predicted that Mt. St. Helens was the one most likely to erupt and describes in some detail the type of eruption which could be expected, along with the accompanying dangers. Fred hopes that the eruption will stimulate sales of the book. (Editor's note: I think Fred is not unaware that increased sales will be reflected in the book royalty!)

At the end of February, Fred gave a lecture at UT-Arlington and was privileged to be the house guest of Nancy Brown Boon and Jack Boon. Nancy (BS '39) was a student assistant in the Department while Jack was a graduate student and teaching assistant. In mid-January Jack retired after serving 38 years on the UT-Arlington faculty, and Fred was able to give him some pointers on how to cope with his new status. He reports that it was a pleasure to visit with Burke Burkart (BS '54, MA '60) and Don Reaser (PhD '74), also members of the UT-Arlington geology faculty.

In mid-April Fred was at Kansas State University for a series of lectures. Jim Underwood (PhD '62) is the department head. Jim and his wife, Margaret Ann (an Austin girl), gave Fred the VIP treatment. Fred reported that it was pleasant to visit with Page Twiss (PhD '59) and other members of the faculty that he had known over the years.

Fred commented that the AAPG Convention in Denver in June was really "old home week" with the opportunity to greet many former students. He also noted that the summer heat in Austin was no problem whatsoever at his summer home in Taos, New Mexico.

Steve Clabaugh ended his last semester of full-time teaching and then began his retirement with a float trip through the Grand Canyon at the end of May. He reports that a late cold spell and high winds made him and Pat wish they were somewhere else when the trip began. "Running the rapids was like riding a bucking bronco in a Texas blue norther while someone tries to knock you loose with tubs full of ice water. But the weather changed and it all turned into a marvelous adventure through some of the world's best scenery and geology. We even stayed in Las Vegas afterwards long enough to see a great show and try the slot machines. I actually won almost enough at Black Jack to provide the nickels Pat fed to the one-armed bandits."

Steve joined Leon Long in team-teaching two sections of freshman geology each semester last year, and enrollment was the highest in several years. He also taught the largest class of optical mineralogy in the Department's history last fall, and undergraduate metamorphic petrology both semesters. He says he doesn't see how the microscopes can endure much heavier use.

Steve plans no teaching this fall, but he will keep an office in the Department and possibly help with future teaching if needed. Meanwhile he and Pat have moved out to the Pedernales for all of their living, where visits

of children, grandchildren and friends are the focus of their activities. Steve enjoys gardening, stone masonry, sailing and swimming, and he plans to add a few head of livestock to their oversupply of cats. He says he has enough projects to keep him busy forever, and Pat has an even longer list for his attention.

Marion and Ronald DeFord.

Ronald DeFord continues to supervise Technical Sessions (GEO 193). Graduate student Arnold Wood did a take-off on him in Final Bedlam—it was so good that DeFord now wonders which is the original and which the imitation.

Ronald's former student, Jim Underwood (PhD '62), has succeeded another former student, Page Twiss (PhD '59), as chairman of the Department of Geology, Kansas State University, Manhattan. Page has returned to teaching and research. They have asked Ronald to serve on the Advisory Council of their department.

In case anyone is wondering, the answer is "yes." Ronald and his lovely wife, Marion, are still very active in their dancing. They remain the central attraction at all Department events featuring lively music.

Sam Ellison

Sam Ellison began "official" retirement on September 1, 1979. First off he spent a few days aiding the Republic Gypsum Company at Duke, Oklahoma, to acquire more gypsum. Brief attendance at the GCAGS meeting in San Antonio was sandwiched between a visit to Cape Hatteras for a vacation and to the Grand Cayman Island, British West Indies, to avoid some of the cedar pollen. More aid was then given to the gypsum company. In March, Sam undertook a joint operation with Bob Boyer in putting on a school for the Texas Water Well Drillers Association at Burnet, Texas.

The culminating activity of the year was the marriage of Stephen P. Ellison, the youngest son, to Kitsy Arnold on May 3, 1980. This was a happy time because all three Ellison boys and their good families were together for three days. Between all of this activity, three projects have been requiring much work: a book on the geology and resources of Texas (with Boyer), writings on the geology of energy resources, and research work on conodonts. The summer started with a trip to Europe to see the Oberammergau Passion Play in Germany (in June) and ended in a mountain cabin in southern Colorado (in August). All of this sounds like not much geology.

Rizer Everett taught the course in applied geology of energy resources during the spring semester (formerly taught by Sam Ellison). Most of the 250 students were seniors in the petroleum land management program of the College of Business Administration. Seventy-two were seniors obtaining degrees in petroleum engineering. Both groups of students were interested in the geologic setting and geographic distribution of the non-renewable energy resources of oil, gas, coal, oil shales, tar sands and nuclear minerals. By the end of the semester most of the students were convinced that non-renewable energy resources are finite and exhaustible. Their use must be reduced by developing ways to supply power for the commercial, industrial, residential and transportation sectors of all countries of the world by using more of the renewable sources of energy.

This summer Hildegard and Rizer conducted their six grandchildren on a tour of the places of historical interest in the vicinity of Williamsburg, VA. Rizer speculates that "perhaps one or more of the grandchildren will develop an interest in geology from the outcrops along the way from Washington, D.C. to Williamsburg."

Pete Flawn completed his first year as President of the University. During the spring semester, he taught a graduate seminar in mineral resources in collaboration with Bill Fisher and Bill van Rensburg. In June, President Carter nominated Pete to a six-year term on the National Science Board; this appointment requires Senate confirmation which is pending. This 24-member Board oversees the activities of the National Science Foundation and influences national science policy. Pete reports that, if confirmed, he will be the only Texan and the only geologist on the Board.

In April, on behalf of the University, Pete signed a *Convenio* with Jose Antonio Carranza, Mexico's Vice Minister of Education, to establish a program of "scientific and technological methodology and training" which will bring to Austin science and engineering faculty from Mexico's system of technical institutes.

Pete and Priscilla spent a few weeks in June on vacation in England and Scotland where Pete had an opportunity to make a fast reconnaissance of the geology of the Scottish Highlands.

Bob Folk continued teaching sedimentology, sandstone and carbonate petrology, and freshman physical geology. This summer he spent three scorching weeks in Israel, working at Tel Yin'am, an archeological site, as that dig closes. Bob says, "We excavated a second smelting furnace in what we believe to be the oldest iron smelting establishment ever discovered (13th century B.C.)." Last summer Bob and Hank Chafetz (PhD '70) studied the famous Quaternary travertine deposits in Tivoli, near Rome, Italy, and are developing the theory that these contain the first known bacterially-constructed carbonate bioherms. The travertines have turned out to be unique and fascinating rocks from a petrological standpoint. This summer, after Israel, he renewed old cultural (?) ties in Italy and continued working on the travertines near Rome, as well as spending a week at a UT excavation in Metaponto, an ancient Greek colony in southern Italy.

In March Bob was invited to give a lecture on carbonate rocks and their porosity at an International Meeting on Petroleum (!!!) Geology held in Peking, and for two weeks realized a life-long dream of visiting mainland China. He found it fascinating, the people wonderful, and the civilization admirable.

On May 17 daughter, Jennie, married Steve Mann, an MA geology candidate. They met at one of the infamous *required* class field trips to Bob's favorite country western establishment, the Broken Spoke. Bob and Marge celebrated their third-of-a-century wedding anniversary in January, and spent most every weekend at their love nest overlooking Lake Travis.

Thor Hansen started off the academic year by leading carloads of students to the GCAGS conference in San Antonio and the national GSA meeting in San Diego. The San Diego trip was a long drive, but everyone thought it was well worth it. The roadside geology was impressive, especially in the Guadalupe Mountain region, and a lot was learned at the meeting (not to mention professional contacts for the students). Thor was so impressed with the Tertiary volcanics of Arizona that he returned with an 85-pound piece of lava rock for his office. "You just don't see that kind of thing in the Gulf Coast"! He also became co-sponsor of the University Student Geological Society and led the students on the Spring SASGS field trip.

Besides his field trips, Thor pursued his research on the Early Tertiary of the Gulf Coast. He wrote an article on the molluscan communities of the Texas Eocene deposits and continued work on molluscan larval stages. Molluscan larvae are particularly interesting because they may have important biostratigraphic potential. A scanning electron microscope (SEM) is necessary for this research and Thor is very pleased with the new SEM the Department purchased. It has speeded up his research considerably.

Thor ended the academic year with a talk at the Austin Geological Society. He spent the first part of the summer teaching Geology 660. This was the first time he had taught 660 and he felt that it was indeed a learning experience. The rest of the summer provided an opportunity to continue his research and work with graduate students.

Earl Ingerson reports a variety of activities that amounted to another busy year. "Sam Valastro and I were invited to attend the formal opening of the large Pana Maria uranium mines of the Chevron Oil Company, in Fayette County, last fall. We did so and, although heavy rains prevented our getting a detailed look at the pits, we met the geologist-in-charge and arranged to get core samples across a complete ore 'roll', which will be very helpful in our geochemical study of these deposits."

At the meeting of the southwestern division of the American Chemical Society (held in Austin in December), Earl gave a paper on the topic "Geochemistry of Geothermal Energy." He says that a visit to Los Alamos late last summer enabled him to obtain the information needed on this subject. He has been appointed to the committee on uranium of AAPG's Division of Energy Minerals. Earl states "I am looking forward to working with this committee, especially since this is a continuation of work I was engaged in for several years with Exxon Production Research Company in Houston."

Earl was further honored this year, being elected to emeritus membership in Sigma Xi and Phi Kappa Phi. Even though his status is "emeritus", he spends a fair share of every work day in his Geology Building office.

Ed Jonas began the academic year by attending the annual meeting of the Clay Minerals Society in Macon, Georgia, where he always enjoys seeing old friends and new clay deposits on the field trips. He taught the shale petrology course, freshman geology and half of the crystallography and optical course during the fall. In the spring he taught the gem course and the second-year course for geophysics majors entitled "Mineralogy and Petrology", that Steve Clabaugh had taught for the last few years.

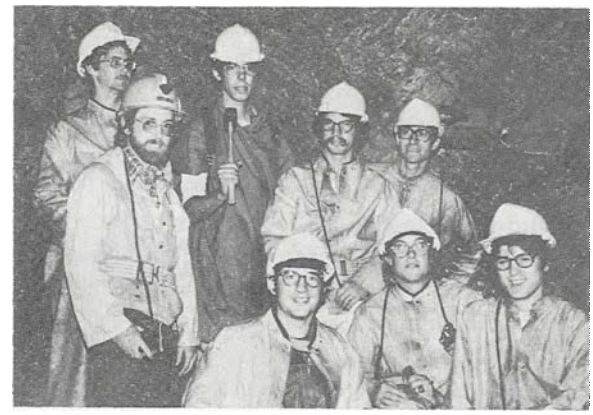
The end of the academic year provided Ed with lots of excitement. After a lifetime of collecting Chinese art objects and being interested in China, Ed got the opportunity to visit. He joined the Edgar Snow Scientific and Cultural Delegation organized at the University of Missouri, Kansas City. As soons as spring exams were completed and grades turned in, he headed for Hong Kong. There he met with the other 24 members of the delegation and began a fabulous circuit through China including Kwangchou, Hangchou, Shanghai, Ningpo and Peking. Most of those cities are located on gigantic modern alluvial plains with very little hard rock visible, but conversations with other geologists who attended the two lectures Ed gave on "Shale diagenesis and its relation to petroleum generation" filled in some of the geology of that large country.

Bangkok is not too far from Hong Kong, so Ed continued west to visit ex-student friends who live there. He saw Charan Achalabhuti, Pongsak Phongprayoon, Tanakarn Bhatrakarn, Suthi Paritpokee and enjoyed Thai hospitality that couldn't be duplicated in any other country. He visited the Asian Institute of Gemological Sciences and lectured at Chulalongkorn University. It was a disappointment not to have seen Vichai Sivaborvorn who was in the field in northern Thailand.

The trip continued westward to New Dehli and Jaipur in India, Idar-Oberstein in Germany, and London all to see special rock and mineral collections. He was glad to be back in Austin, in spite of the heat, to teach the gem course during the second summer session.

Rich Kyle reports that his second year on the faculty was at least as active as the first. In addition to teaching two undergraduate and two graduate economic geology courses, supervision of eight graduate students on research projects ranging from massive sulfides in marine volcanics to epithermal veins in subaerial volcanics to lead-zinc deposits in carbonates has kept Rich busy. He again led students on two field trips to examine ore deposits in volcanic and sedimentary strata. In February Rich attended the symposium on metallogenesis in Latin America (in Mexico City) and spent time getting two students started with research projects in southern Mexico as part of a cooperative research program with the Consejo de Recursos Minerales. Rich was invited to join a group of university, government, and industry geologists for a field conference in May to examine sedimentary-hosted ore deposits in Germany, Austria and Ireland; as part of that trip, he presented a paper on the Pine Point lead-zinc district at the University of Braunschweig.

Rich was pleasantly surprised at the AAPG Alumni Breakfast to have been presented with the Houston Oil & Minerals Corporation Faculty Excellence Award. This Award recognized his significant achievements in developing the Department's program in economic geology. He also received a Summer Research Award from the University Research Institute to establish a laboratory for fluid-inclusion studies. Rich relates, "I have great enthusiasm for the potential of fluid-inclusion research, not only to investigate the nature of ore-forming fluids in many types of geologic environments, but also to provide valuable information on other types of fluid-related phenomena such as diagenetic and metamorphic processes." He also found time to retain his mineral industry contacts by consulting in base metals exploration.



Rich Kyle (standing, left front) and Kyle's Kommandos on underground mine tour in east Tennessee, March, 1980.

Lynton (and Judy) **Land** spent most of the year adapting to life with a baby. Aaron Clayton was born September 14 with a healthy appetite, which has yet to falter. In between feedings, Lynton continues to work on burial diagenesis of both carbonates and sandstones. Lynton and Earle McBride have been trying to locate core of Pennsylvanian sandstones from north-central Texas for a regional diagenesis study. Anybody know of any dusty old warehouses? Somehow two review papers were finished (one was presented at AAPG), and the normal load of courses, outside lectures, meetings, etc. completed. Clark Wilson and Lynton made several trips to Port Aransas, using the *R/V Longhorn* to develop a high-resolution digital seismic-reflection profiling system. One incentive is a three-week cruise to Exuma Sound, Bahamas, next summer as part of a new NSF grant. The summer was spent learning to use some of the Department's new lab equipment (a new scanning electron microscope and a computer on the electron probe), with time off for reacquaintance with the reefs of Jamaica and St. Croix.

Wann Langston, describing his accomplishments as "in retrograde," relinquished the editorship of the Society of Vertebrate Paleontology when that organization moved its headquarters from UT to the U. of Florida. Wann's three-year term on the U.S. National Committee

on Geology also came to an end, but at the same time he began a three-year stint on the governing board of the American Geological Institute. He attended his first AGI board meeting in Denver coincident with the AAPG convention. Other meetings attended were the Society of Vertebrate Paleontology in Pittsburgh and the AAAS in San Francisco. Wann reports two high points of the AAAS session: attending the symposium on the new asteroid theory of mass extinctions and listening to the AAAS president describe paleontology as "science fiction."

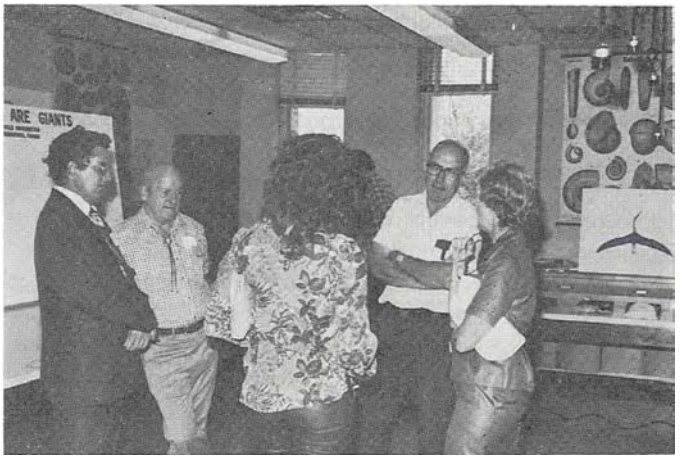
Wann taught his graduate course in lower vertebrate paleontology in the fall with an enrollment of eleven, the second highest number in the past fifteen years. He again taught the undergraduate course in paleontology for BA majors and non-geology students in the spring.

As a diversion Wann supervised the production of an admittedly handsome bronze miniature *Tyrannosaurus rex* by local Austin artists Doris and Tom Tischler. He also supervised the sculpture of a series of life-size reconstructions of the most ancient fishes, done by Doris Tischler for the Texas Memorial Museum. This summer Wann began a long-term joint study with William D. Sill of fossil crocodilians collected by the late Professor Brian Patterson of Harvard. The specimens, including some six-foot long skulls, were brought to Austin in June.

Leon Long team-taught the usual large freshman geology course with Steve Clabaugh. On the graduate level, he taught the introductory isotope geology course followed by a spring seminar course in isotope geology. Right after school was out, Leon helped to teach the beginning field course held near Llano, and then the senior field course at Durango, Colorado. He attended the GSA meetings at San Diego and participated in a field trip in Sonora. Leon also chaired an NSF panel and gave a couple of guest lectures away from campus. Leon reports that his research is "perking along" about like always. Several papers were published within the past year, with others due to appear in print soon. Leon returned to Brazil at the end of the summer (he spent six months there in 1976) to visit his colleagues and to get more research started.

Ernie Lundelius taught his usual array of courses, Geology 404 (Life Through Time), Geology 380L (Paleobiometrics) and Geology 397 (Vertebrate Paleontology-Mammals) and served during the fall semester as assistant chairman of the Department.

Ernie spent the first part of the summer of 1980 in Chicago at the Field Museum of Natural History, in their visiting scientist program, studying a large collection of Pleistocene mammals from a stratified deposit in Madura Cave on the Nullarbor Plain on the south-



Interested group discusses vertebrate paleontology exhibit with Ernie Lundelius, second from right, at Open House. (See p. 7)

central edge of Australia. These deposits have a 30,000-year history of the fauna which can be used to reconstruct the climatic history of this part of Australia. The presence of remains of several forest-living animals, such as the koala bear, in the older stratigraphic units demonstrates that this region, now a desert (ten inches or less of rain per year), was considerably more moist up to about 18,000 years ago. Since then the climate has become drier and possibly warmer. An interesting question raised by this sequence is why the major climatic change at the end of the Pleistocene took place earlier in Australia (16,000–18,000 years ago) than in North America (10,000–11,000 years ago).

John Maxwell's principal activities, other than teaching, centered on his continuing research program in the Coast Ranges and mountains of northern California, and activities related to the U.S. Geodynamics Committee, which he currently chairs. Stuart Fagin, finishing his dissertation on the southeastern Klamaths, demonstrated that this part of the Klamaths and the corresponding segment of the northern Sierra Nevada have undergone quite different geologic histories. His work has also cast considerable doubt on the widely-accepted concept that the Klamaths were offset westward from the Sierra Nevada during early Cretaceous time. Mark Helper is beginning his dissertation in the northern Klamaths where it appears that a large window of less metamorphosed and presumably younger sediments are exposed beneath a thrust plate of crystalline rocks. Six ex-students and John are currently preparing, for publication in the Geodynamics Plate Margin Series, cross sections through seven quadrangles mapped by the students. The pattern of accreted wedges or slabs of melange, which are progressively younger westward and down section, is well displayed by the cross sections, as is the cross-folding which appears to be a late feature of the northern Coast Ranges.

Thirteen of the planned twenty-two cross sections in the Plate Margin Series, being published by the Geological Society of America, have now been completed. John reported on these sections in Canberra, Australia, at the quadrennial meeting of the International Union of Geophysics and Geodesy as well as at the Cascadia Conference in Oregon and the International Geological Congress in Paris.

The U.S. Geodynamics Committee completed its three year study of the current status and probable future development of Geodynamics, and the resulting volume, "Geodynamics in the 1980's" has been published by the National Academy of Sciences. In concert with the International Geodynamics Program, a much greater concentration on exploration of the continents and deeper parts of the ocean-continent margin is anticipated. John also predicts greater emphasis on the applications of Geodynamics to natural catastrophies and to the study of natural resources.

Earle McBride served as President of the SEPM for 1979–80, completing his term at the AAPG-SEPM annual meeting in Denver. Earle found the Denver meeting very exciting. During the AAPG Awards Luncheon, Earle sat at the head table one chair from Dr. Henry Kissinger, the featured speaker. During the meal Earle asked: "Dr. Kissinger, would you please pass the pepper, and salt too?" Now Earle claims that he discussed SALT II while having lunch with Dr. K!

Earle made several trips to SEPM headquarters in Tulsa during the year to confer with HQ staff and other officers and also attended four SEPM sectional meetings. By virtue of his office, he was invited to Washington for a briefing on SALT II and a conference on how scientists should respond to the USSR's treatment of dissidents: he declined both invitations. Because of the need to improve exploration and exploitation of energy resources, SEPM activities such as publications, short courses, etc. have expanded accordingly. The SEPM has 6,000 members now—shouldn't you be one too? A note to Earle will get you an application blank.

Earle also spent some time in northern Mexico on a coal exploration study for a Mexican federal agency. Field work on this study allows him to see some interesting geology. An exciting time of the year was spent working on sandstone diagenesis and its control of reservoir quality of sandstones—work done with students and on his own for several companies. Diagenetic control of reservoir quality was also the subject of Earle's SEPM Presidential Address.

This summer was also productive. He attended field trips in the U.K. and France, associated with the International Geological Congress in Paris, and then spent time in Italy extending field work that began several years ago. Field work in Italy is as difficult and tiring as it is in Texas, but somehow it just doesn't seem as bad.

Earle was honored at the Alumni Breakfast in Denver, receiving the Houston Oil & Minerals Corporation Faculty Excellence Award for his service to the Department over the past years.

Fred McDowell reported a banner year for the study of the volcanic rocks of western Mexico, a project coordinated by Fred and Steve Clabaugh. After a long residence in the editorial mill, their review paper on ignimbrites of the Sierra Madre Occidental finally appeared as part of a GSA special paper. From all accounts it is a widely read and requested publication. Fred and Steve were further honored with an invitation to a symposium on the tectonic evolution of Mexico, held last fall in Mexico City to celebrate the fiftieth anniversary of the autonomy of Universidad Nacional Autónoma de México. They were among a total of five American participants in the four-day symposium.

The location of San Diego for the annual GSA meeting provided additional opportunity to emphasize the geology of western Mexico. Field trips running the length of Baja California and through northern Sonora gave Fred a look at unfamiliar igneous terranes adjacent to the Sierra Madre Occidental, as well as contact with geologists working in them.

Fred comments, "It is most appropriate that these exciting developments occurred during Steve Clabaugh's final year of full-time activity in the Department. Without Steve's enthusiasm and inventiveness, our Mexico research project would not have amounted to anything. He has always been eager to go to the field, and we hope that a reduced teaching responsibility will allow him more opportunity to search for calderas in Tarahumara country."

Sharon Mosher found her second year at UT to be even more satisfying than the first. Teaching undergraduate and graduate courses, supervising graduate students, and serving on Departmental committees still kept her extremely busy. However, a sense of accomplishment was felt when her first two graduate students finished their Master's degrees and one of them, Rachel Burks, presented her results at a national meeting. The hard-rock structure group is growing rapidly, which makes Texas a very exciting place to do both teaching and research.

The summer started off with a Penrose Conference on pressure solution and was followed by six weeks of teaching field camp and several weeks in the field with graduate students working in Narragansett Basin, Rhode Island. August was spent writing papers, catching her breath, and finally enjoying the new home she bought this spring on the outskirts of Austin.

Bill Muehlberger comments, "We are now finally making sense out of some of the structural history of the Big Bend region. Two of my students have been able to demonstrate that the same fault planes were used, but with opposite sense of slip, during Laramide and Late Cenozoic deformations in the Persimmon Gap region of Big Bend Park. Similarly work in progress in the Santa Elena Canyon region and the Malone Mountains is showing a complex sequence of structural events. These data and interpretations of LANDSAT imagery give a new light on the Texas Lineament (a wide swath across western Trans-Pecos Texas) and has given me a chance to show that this zone has had a component (mostly minor) of (left or right-handed) strike-slip movement during the many tectonic episodes that affected this region."

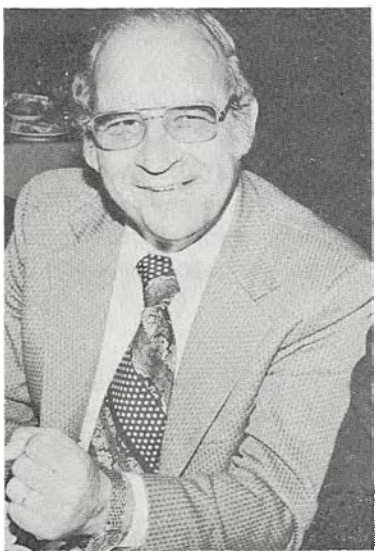
This past spring Bill chaired a NASA-sponsored workshop on "Remote Sensing Applications to the Modelling and Resource Assessment of the Rio Grande Rift." This sparked summer projects in the Taos, New Mexico region that occupied part of Bill's summer and the time of two students all summer. The rest of Bill's summer was spent at the International Geological Congress in Paris. He gave a paper entitled "Splintering of the Dead Sea Fault Zone." His primary interests in the meetings were the pre- and post-Congress field trips in which he saw (finally!) three cross-sections of the Swiss Alps. "I followed this on my own later in the summer into the western Austrian Alps and northward into the Ries Basin, Germany—a giant meteorite crater that has been extremely well studied."

This has been another busy year in which Bill tried to clear out a load of (over-) commitments so that he can begin his next 5-year task as chairman (chief compiler) of an AAPG-sponsored project to revise the Tectonic Map of North America. This should be a fascinating project and one that will force Bill to really learn the tectonics of this large area as well as to synthesize all the adjacent marine data.

Wayne Pennington says he has learned one thing this year: "Teaching is at least as much hard work as it is fun." In his first year with the Department, Wayne taught four courses including two new graduate courses on earthquakes and regional geophysics. He is continuing his studies into Central American and South American seismicity and tectonics, spending part of the summer at the Galveston Geophysics Laboratory of the Marine Science Institute, working with data from the Central American seismic networks operated by Tosi Matumoto of MSI. Other research interests, such as the effect of bathymetric features on the subduction process beneath continental margins, and the possible tidal-triggering of earthquakes in certain circumstances, kept him occupied in Austin during the latter part of the summer while he, with his wife, Laura, awaited the birth of their first child.

The Departmental seismograph station, with sensors located in an old Nike missile base west of town and a visible recording unit on the first floor of the Geology building, has been refurbished and is once again operating well. It records about two to four earthquakes per day, including events from all over the world. Other recordings of interest have been made from underground nuclear explosions, storms in the Gulf of Mexico, and an astounding number of small explosions for construction in the Loop 360 area west of Austin.

Will Rust reports that he has taken full advantage of the excellent work of our other resident geophysicists, Milo Backus, Clark Wilson and Wayne Pennington, to enjoy full academic freedom. He showed up at the Geology Building about once a month to collect gossip, notices, minutes and junk mail. He and Margaret also enjoyed the fruits of freedom given them by moving from their Lake Austin house to a town house almost within walking distance of 50 restaurants. They did some traveling, spent the usual winter months in Rockport hiding from cedar fever, visited Washington, D.C., planned a couple of other trips that were cancelled by airline strikes and in general did as they pleased (within limits!). This summer they are staying in Austin to celebrate the record heat. When it cools down they will visit New York and points west until time to go to Rockport once more.



Al Scott—ruling graduate adviser.

Al Scott is spending another summer running around "like a chicken with his head cut off." So far, he seems to have arranged to be in Austin an absolute minimum

amount of time. Considering how paper normally piles up on his desk, this year should be an exceptional one. Hopefully, his students will survive with about eight of them finishing up all at once. As usual, he should learn more from them than they from their supervisor.

Al has agreed to muddle along as graduate advisor for another term. This year has seen a lot of changes in the graduate advisor's office with Penny Chambers replacing Mary Gaddis in September of 1979. By now, Penny has Al almost in line. They are moving into a new office (down the hall) in the fall, but it is doubtful the beer cooler and carpet will arrive as promised.

Work continues on the perfect chili relleno with an attempt to add an Alaskan variation this year. I wonder how chilis are stuffed with ice cubes?

Doug Smith spent the spring semester on research leave at Caltech in southern California, with support from grants from the University Research Institute and NSF. He worked on manuscripts related to mantle rocks, with a goal of interpreting the relationships between mantle events and tectonic patterns in the overlying crust. Doug relates, "the southwestern U.S. provides an ideal field laboratory for such studies, because of the wealth of volcanic rocks in diverse tectonic settings. The California location was a good base for field work on volcanic rocks in the Arizona desert north of Phoenix; the region provided the usual combination of spectacular geology and scenery, cactus and snakes. Being in an area of active mountain building was inspirational, even though I slept through all the earthquakes and was too far south to sample the ash from Mount St. Helens."

Seeking further geologic inspiration in the summer, Doug attended the International Geologic Congress in Paris and presented a paper on rates of mineral equilibration in peridotites. A Congress field trip took him to view peridotites and associated rocks in the Alps, certainly one of the most pleasant spots to study crust-mantle tectonics. By the summer's end, he was immersed in projects with the electron probe lab and computer in Austin, wishing for a sudden reactivation of the Llano uplift.

Jim Sprinkle reported "everything continued pretty much as usual this past year. Our undergraduate enrollment is still increasing, and both the junior-level Paleobiology (with 111 students) and the freshmen-level Plate Tectonics and Earth History (with 113) hit new highs in enrollment. Lectures and labs were OK, but have you ever tried to take 111 students out on a fossil-collecting field trip? After a year as undergraduate advisor, I moved up (down?) to assistant chairman this past spring, a job I am cheerfully hoping to relinquish. The Bromide echinoderm monograph is (still!) not quite finished, but the number of spin-off projects from this work has now grown to 13. I presented one of these as a GSA poster session last fall in San Diego, and another is scheduled for a talk at this fall's GSA meeting in Atlanta. Except for teaching three weeks of the senior field course in Durango, Colorado, I was stuck in Austin the rest of the summer, trying to get the Bromide project finalized, edited and submitted for publication. Maybe next summer I can go back out in the field again!"

Clark Wilson taught the exploration geophysics class for the first time to a capacity crowd. Enrollment and interest in this course are now so great that we are offering it every semester. In a paper presented at the SEG meeting in New Orleans, Clark discussed an objective way to refine an estimate of velocity structure to bring it into closer agreement with seismic reflection data. He spent time during January on the *R/V Longhorn* in Corpus Christi bay, doing high-resolution reflection profiling, and this summer he spent a few weeks in Galveston at the Marine Science Institute, in addition to continuing his research and writing done in Austin. Clark continues to commute to the campus by bicycle—nine miles each way—weather permitting.

Jack Wilson continues to work at the Vertebrate Paleontology Lab at Balcones Research Center. He had previously collected enough from the Tertiary of west Texas to keep his retirement busy for years to come. One manuscript went off for the New Mexico Geological Society field guidebook for this fall. He and Judy Schiebout (BA '68, MA '70, PhD '73), one of Jack's former students who is now an associate professor at LSU, completed another manuscript for the Texas Memorial Museum on a family of rhinos from the Eocene of the Big Bend area. Jack gave two lectures at LSU last spring.

This past summer Jack and Marge visited their son and his family, who live in Zurich, Switzerland. On the way, they visited Dr. and Mrs. Willi Ziegler in Frankfurt. Dr. Ziegler was a visiting professor at UT several years ago and is now director of the Suchuburg Museum in Frankfurt. Another visit was with Dr. and Mrs. Heinz Tobin, vertebrate paleontologist at Johannas Gutenberg University in Mainz. Then they went to Zurich and hiking in the Alps with their grandson.

Keith Young states, "Although teaching is our primary mission, the courses do not vary greatly from year to year. Other events are therefore remembered as more exhilarating. For example, the students on the Geology 320K (post-sophomore) field course in the spring of 1980 were the most cooperative and best-behaved group of students I've ever had at Fredericksburg. I will leave the interpretation of this phenomenon to the reader, but they give the University good public relations."

In January of 1979 Keith took a group of graduate students into southwestern Mexico (Jalisco, Colima and Michoacan) on a field trip. He comments, "All they did was eat. Everytime there was geology to study or something to see, they were eating. Perhaps this just points up the difference between a young metabolism and mine. Although two eventually selected theses in that area, the primary interest seemed to be food and swimming at Barra de Navidad and coastal Michoacan. This trip was in marked contrast to a field trip into Chihuahua with Rich Kyle and Fred McDowell in December, 1979, with some of their graduate students. Of course, in the Chihuahuan desert, food and swimming are not that available, but on this trip we left at dawn and returned after dusk. This probably also emphasizes the difference between students just on a field trip and students well along on their research in the presence of their supervisors. Incidentally, the geological section in the Lower Cretaceous near Manuel Benavides south of Lajitas is remarkably like that of Mayfield Canyon below old Fort Quitman."

Keith's research to determine what rudists occur with what larger Foraminifera continues. Southwestern Mexico carries many clues to this problem, and it is remarkable that practically no work has been done in this area since that of Robert Palmer in the middle 1920's. Although the geology has not changed, the concept of subduction certainly alters its interpretation.

For almost 30 years now, Keith and his students have been mapping the Balcones fault zone, following in the footsteps of Professor Whitney, who first showed Keith much of its geology. Keith concludes, "It is now time to start tying all of this work together. I do not desire to leave it undone as did my predecessor. I am proceeding in that direction."

DEPARTMENT VISITING SPEAKERS

Each year the Department has a significant number of visitors who conduct seminars and present lectures to faculty and students. Seminars are frequently scheduled in conjunction with graduate courses in the specialties represented. Lectures are commonly given during the weekly meetings of Technical Sessions (each Tuesday and Thursday at 1 p.m. in our Geology Building auditorium). **Visitors are most welcome to the seminars and lectures and we invite you to attend whenever the opportunity arises.**

We were most fortunate to have three distinguished visitors during spring semester; each gave a series of lectures to a mixture of undergraduate majors, graduate students and faculty. Each lecture series included a presentation in Technical Sessions as well as informal seminars that provided ample opportunity for discussion. Dr. Bill St. John (BS '58, MA '60, PhD '65) chief geologist with Agri-Petco International, Inc., focused his talks on aspects of plate tectonics related to the distribution of energy resources. Included were discussions of basin classifications, North Atlantic Ocean reconstruction, and the intriguing subject of geopolitics and energy economics. Dr. St. John was able to utilize his firsthand familiarity with global tectonics as well as with international political and economic conditions in presenting a most effective series.

Dr. A. Conrad Neumann, professor of marine sciences, U. North Carolina-Chapel Hill, provided a special dimension to our program in sedimentary geochemistry. His lectures included the subjects of deep and shallow carbonate platform margins, observations of the deep sea floor off the Bahamas from a deep-diving submersible, recent and ancient "deep sea" bioherms, and carbonate and sea level changes. Dr. Neumann has worked closely with Lynton Land on research on the geochemistry of carbonate rocks; he and Lynton coauthored a paper which won the SEPM Outstanding Paper Award in 1975.

Dr. David M. Raup, curator of the Field Museum of Natural History, U. of Chicago, is recognized internationally as an invertebrate paleontologist with specialties in modern paleoecology. His series of talks covered the functional morphology of molluscs and echinoderms, computer simulation of evolutionary patterns, and taxonomic diversity changes through time.

In addition to these three visitors, we are pleased to acknowledge the following persons who gave lectures in the Department with titles as shown:

William R. Almon, AAPG Distinguished Lecturer, Cities Service Company, Tulsa, "Impact of diagenesis on exploration strategy and reservoir management."

James A. Austin, Jr., Geophysical Laboratory, Marine Science Institute, UT, Austin, "Geology of the passive margin off New England."

Richard Buffler, Geophysical Laboratory, Marine Science Institute, UT, Austin, "Unconformities of the North Atlantic."

Ruth Buskirk, Geophysical Laboratory, Marine Science Institute, UT, Austin, "Sensory mechanisms for animal behaviors before earthquakes."

William D. Carlson, Department of Earth & Space Sciences, UCLA, "Implications of aragonite-calcite transformation kinetics for blue schist facies metamorphism."

DONALD DAVIDSON, Department of Geological Sciences, UT, El Paso, "Emplacement and deformation of the Saganaga Batholith (Archean)—evidence from paleostrain analysis."

P. A. DOMENICO, Department of Geological Sciences, U. Illinois, Urbana, "Fracture initiation in compacting sediment and its relation to hydrocarbon maturation kinetics" and "Theoretical considerations of groundwater movement."

SHIRLEY DREISS, Division of Natural Sciences, UCSC, "Spring flows as a sensor to groundwater movement in karst terrains."

WILLIAM R. DUPRE, Department of Geology, U. Houston, "Depositional environments of the Tukon-Kuskokwin delta complex, Alaska" and "A model of Quaternary sedimentation along a tectonically active, wave-dominated coastal region."

CLIFF FROHLICH, Geophysical Laboratory, Marine Science Institute, UT, Austin, "Reflections on core reflections: lateral variations of seismic velocity in the earth's mantle."

HAROLD GLUSKOTER, Exxon, USA, Houston, "Elemental distribution in coals."

PETER GORDY, AAPG Distinguished Lecturer, Shell Canada Resources Limited, "Hydrocarbon accumulations in the overthrust belt of Alberta."

WULF GOSE, Geophysical Laboratory, Marine Science Institute, UT, Austin, "The aggregation of meso-America: paleomagnetic evidence."

JEFFREY A. GRAMBLING, School of Geology and Geophysics, U. Oklahoma, Norman, "Metamorphism at Truchas Peaks, New Mexico: aluminum silicates and metamorphic fluids" and "Precambrian quartzites and greenstones in northern New Mexico."

JON T. HOLDER, Department of Geology, U. Illinois, Urbana, "Microfracture and microscopic rock deformation processes."

JOHN C. HORNE, AAPG Distinguished Lecturer, Carolina Coal Group, Columbia, "Application of depositional models in coal exploration and mine planning."

SIDNEY KAUFMAN, Department of Geological Sciences, Cornell U., Ithica, New York, "Results from COCORP."

GARY KOCUREK, Department of Geology and Geophysics, U. Wisconsin, Madison, "Environmental distinctions of eolian cross-stratified sandstone and models for eolian sand seas."

THEODORE C. LABOTKA, Department of Earth & Space Sciences, SUNY, Stony Brook, "A contrast in metamorphic facies between the Panamint and Funeral Mountains, Death Valley, California."

PETER J. MCCABE, Department of Geology, U. Nebraska, Lincoln, "Fluvial sedimentology and coal resources."

LARRY T. MIDDLETON, Department of Earth Sciences, Fort Hays State U., Kansas, "Sedimentology of the Middle Cambrian FLATHEAD SANDSTONE, WYOMING."

JOHN MOMPER, AAPG Distinguished Lecturer, Amoco Production Company, "Oil expulsion—a consequence of oil generation."

ROBERT MOORE, Geophysical Laboratory, Marine Science Institute, UT, Austin, "Marine minerals exploration."

T. N. NARASIMHAN, Earth Science Division, Lawrence Berkeley Laboratory, Berkeley, California, "Subsurface fluid flow and geologic processes: striving towards improved quantification."

ED PITTMAN, Amoco Production Company, "Tight gas sands" and "Diagenesis: key to pore geometry and reservoir potential of sandstones."

GREGORY J. RETALLACK, Department of Biology, Indiana U., Bloomington, "Fossil soils—indicators of ancient terrestrial environments."

DAVID W. SCHOLL, AAPG Distinguished Lecturer, USGS, Menlo Park, California, "Resource potential and plate-margin geology of frontier basins of north Pacific and Bering Sea."

COLIN P. SUMMERHAYES, Exxon Production Company, Houston, "Prediction of types and amounts of organic matter in potential source rocks of petroleum."

FRED TAYLOR, Geophysical Laboratory, Marine Science Institute, UT, Austin, "Uplift history of the central New Herbrides Island Arc: comparison of the 10^1–10^5 year time scale."

KEVIN TUCKWELL, Broken Hill Division, U. South Wales, Australia, "Broken Hill—an orebody without an origin."

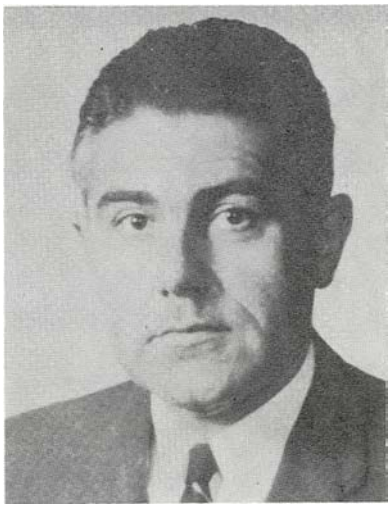
JOHN W. VALLEY, Department of Geology, U. Michigan, Ann Arbor, "Role of fluids in granulite facies metamorphism, Adirondacks, New York."

ROGER G. WALKER, AAPG Distinguished Lecturer, Department of Geology, McMaster U., Hamilton, Ontario, "Deep-water reservoirs: submarine fans and fantasies."

JOHN V. WALTHER, Department of Geology and Geophysics, Yale, "Equilibria and mass transfer in metamorphic systems."

Special News

Amos Salvador Named Deussen Professor



Amos Salvador

Dr. Amos Salvador joined our faculty this September as the Alexander Deussen Professor of Energy Resources. He comes to us from a most impressive professional career as a petroleum geologist in industry. Amos received a BS degree in geology from the Central University of Venezuela in 1945 and a PhD from Stanford University in 1950. He began his career as a surface geologist with Mene Grande Oil Company (Gulf) in Venezuela from 1945 to 1947 and then enrolled at Stanford. Upon completion of his PhD, he rejoined Gulf until 1955. During that interval, while based in New York, Dr. Salvador worked as a regional geologist and surface geologist in Europe, North Africa and South America. In 1955 he became affiliated with Exxon Corporation and until 1962, served as supervisor of the exploration group of Creole Petroleum Corporation in Venezuela. During 1962-63, Amos was vice president, exploration research for Jersey Production Research Company in Tulsa, then moved to Houston as assistant chief geologist and manager, Gulf Coast exploration division of Humble Oil & Refining Company. In 1970 he was named executive vice president of Esso Production Research Company. In 1971 he became chief geologist for Exxon Company, USA, a position he has held for the past 10 years.

Amos is keenly interested in a variety of regional stratigraphic problems and in this context has served as a member of the IUGS International Commission on Stratigraphy and chairman of the subcommission of stratigraphic classification. He also chairs the Stratigraphic Technical Committee, administered cooperatively by the major geological societies of the U.S., which correlates stratigraphic units of North America.

This fall Dr. Salvador is teaching a graduate course entitled "Applications of Stratigraphy" which will utilize stratigraphy as the framework for correlation. It will also explore the relation of stratigraphy to the study of sedimentary processes, paleogeography, global tectonics and the reconstruction of earth's geologic history. He will draw from his expertise on the geological nature of sedimentary basins throughout the world in this course. In future semesters, Dr. Salvador will teach courses on the geology of petroleum and related energy resources at both undergraduate and graduate levels.

We are extremely pleased to have Amos Salvador as an addition to our faculty. He is highly regarded both in industry and by academe, being recognized as an authority on the Mesozoic stratigraphy of Mexico and the Gulf of Mexico with special emphasis on the lower Mesozoic. His familiarity with the geology of Mexico and the oil and gas potential of that country, as well as his excellent working relationship with Pemex, will be most helpful to this Department. For more than a decade, several faculty in this Department have conducted geologic research programs in Mexico and these efforts will be enhanced by his knowledge. Dr. Salvador's years of practical experience will add an important dimension to the breadth of our overall program, affording our students an opportunity to have close association with a petroleum geologist of world renown.

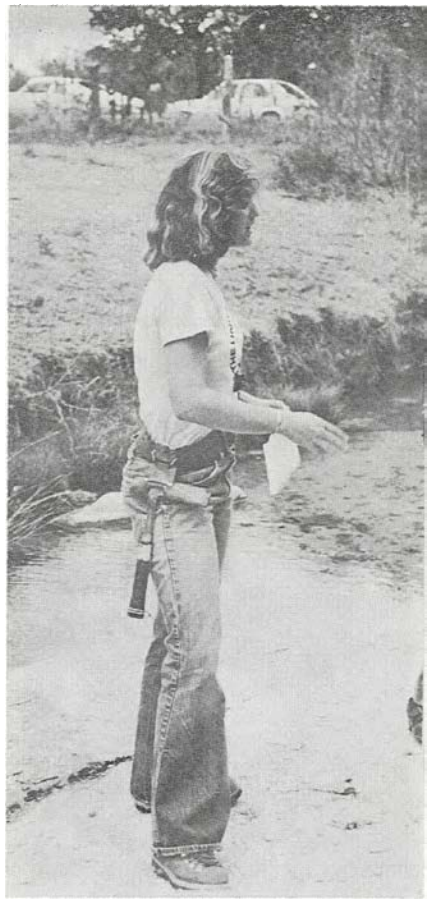
University Student Geological Society

The year began with a "get acquainted" keg party at Eastwoods Park, attended by 70 students and faculty. We swung into the fall by volunteering to clean up Memorial Stadium after a football game to earn money for the club. Dr. Jonas hosted a "Halloween" bonfire which was a great success, with plenty of food provided by Mrs. Jonas. The most notable costumes were a brachiopod and a chicken. Twelve students attended the Southwestern Association of Student Geological Societies (SASGS) field trip sponsored by Stephen F. Austin University. We toured central Texas looking at Comanchean sedimentation, with plenty of opportunities to collect fossils. In late November, USGS led a fossil-collecting trip and assembled an exhibit for the Austin Gem and Mineral Society's annual show. We won a special exhibit prize and had a good turnout for the collecting trip.

At a special evening meeting, Dr. Bartholomew presented a slide show of his trip to China. He shared his experiences and impressions of the Chinese education practices and life-style. During the Christmas break, USGS sponsored a 14-day trip to Mexico with Dr. Jonas as faculty sponsor. We traveled from Chihuahua, south to Durango, east to Torreon, and back across the border to Texas. The trip objectives were touring mines, collecting and buying minerals, and sightseeing.

Activities during the spring semester began with Earth Science Teacher Day. We sponsored a field trip and set up a booth to sell our guidebooks and rock specimens. The temperature for the field trips was a bitter 20°F so turnout was low, but we did sell some guidebooks and rock samples. In April, Dr. Jonas gave a lecture on the south Texas uranium mines as a preliminary briefing for our trip to that area. Dr. Bartholomew and 13 students toured the Conquista uranium project near Falls City, Texas. We had an excellent tour which began with a complimentary lunch in Hobson and included a reclamation area, active open pit and uranium mill. This was followed by the traditional spring SASGS field trip. It was late in the year, almost finals time, but we left Austin with Dr. Hansen and 20 students. Led by Lamar University, we examined Holocene depositional environments of southeast Texas, which included a day at the beach. Unfortunately, we misplaced the keys to one of the vans and had to spend a day getting a new set. Aside from that, we had an enjoyable weekend at the beach. The year ended with a party at Dr. Lundelius' with plenty of beer and chips to fortify us for finals. Due to guidebook and T-shirt sales, and stadium clean-up money, USGS was able to donate three hundred dollars to the Geology Foundation.

We extend our thanks to all faculty members who helped sponsor our activities or who were available to answer our questions. We hope they will continue to



Janice Hill (B.S. '79) lectures on the outcrop during SASGS field trip.

Marshall Titus (B.S. '79), left, and Rick Winston (B.A. '80) admire ammonite they dug out of Cretaceous limestone.

support and encourage the activities of USGS. Next year's officers are Jay Ingram, president; Janice Schoepfle, vice-president; and Donald Chapman, secretary-treasurer.

by Suzy Moore, President
Patti Yates, Vice-President
Jackie Smith, Secretary-Treasurer

Geophysics Enhanced by Industry Participation

Again this past spring, through the generous assistance of industry geophysicists, Milo Backus presented the popular senior course, Geology 365M entitled "Geophysical Interpretation." A class of 14 undergraduate students as well as several interested graduate students and faculty members learned practical applications of seismic exploration geophysics as well as current techniques in the use of this important exploration tool.

Once each week, a guest lecturer conducted a seminar on the topic of his special expertise. Included below are the topics covered in the course, along with the names of the visitors and their company sponsors. We are greatly indebted to these persons and the companies for contributing time and talents to our teaching program.

Jan. 14—M. Backus (UT-Austin)
Introduction and overview

Jan. 21—S. Norman Domenico (Amoco Production Co.)
Velocity and lithology

Jan. 28—Luc Saugy (Elf-Aquitaine Oil and Gas)
The Niger Delta and direct detection of hydrocarbons

Feb. 4—M. Turhan Taner (Seiscom-Delta, Inc.)
Display and interpretation of seismic attributes

Feb. 11—Gildas Omnes (Compagnie Generale de Geophysique)
P- and S-wave vertical seismic profiles and their relationship to conventional well-log data and surface seismic data

Feb. 18—R. Neale (Tenneco)
Synthetic logs from seismic data

Feb. 25—Sidney Kaufman (Cornell University)
Use of seismic reflection method for crustal studies (COCORP application)

Mar. 3—A. M. Olander (Exxon)
Structural interpretation, contour maps, and prospect presentation

Mar. 19—Kenneth L. Larner (Western Geophysical)
Subsurface imaging: Principles and practice

Mar. 28—John Harms (Marathon)
A 3D case history

Mar. 31—Marc Larence (Fairfield Industries)
High-resolution seismic imaging

April 7—L. F. Brown (Bureau of Economic Geology UT-Austin)
Seismic stratigraphic interpretation

April 16—Peter Vail (Exxon)
Modern seismic stratigraphy and results from the North Sea

April 21—R. J. Graebner (Geophysical Service, Inc.)
Current state of the art in three-dimensional seismic reflection methods and 3D case histories

April 30—R. E. Bearnth (ARAMCO)
Exploration in Saudi Arabia

Geophysics at UT: Report of Progress

The geophysics program in the Department was significantly strengthened during the past year by the addition of Wayne Pennington to the faculty. The graduate program in geophysics has progressed to a level currently involving about 20–25 graduate students, which we hope to sustain as a minimum viable level for the program. Charles J. Sicking completed his PhD work in geophysics and is our first PhD graduate in geophysics in recent times. Charles' dissertation was on the subject of multiple dimensional sampling requirements in seismic reflection work, and also included an important contribution in the area of seismic wavelet estimation and deconvolution.

Current graduate student research activities are directed toward some of the following areas:

- deep seismic-reflection mapping at the continental margins;
- analysis of digital waveform recordings from sonic logging tools and the development of methods of estimation of shear-wave impedance and attenuation characteristics;
- analysis of the variation in reflectivity with angle of incidence, with emphasis on potential extraction of shear impedance information;
- work in conjunction with Marine Science Institute in Galveston in seismic stratigraphic interpretation and in the production and interpretation of band limited impedance logs in the deep sea;
- investigations in direct detection technology and the statistical distribution of impedance within the subsurface;
- emergent angle dependent processing methods;
- geothermal-geopressured resource exploration;

- and the acquisition and seismic stratigraphic interpretation of shallow high-resolution seismic-reflection data.

In the undergraduate geophysics option for the BS degree, a new set of requirements was introduced the previous year, with a somewhat heavier emphasis on physical and mathematical sciences. In addition, a new undergraduate course in geophysical data processing was taught last fall. The sixth edition of our undergraduate course in geophysical interpretation was again highly successful during the spring term, and a list of visiting lecturers and their topics appears on p. 25 of this *Newsletter*.

1947 Class Reunion at Vail, Colorado

A three-day reunion of the Class of 1947 assembled at the Vail, Colorado ski area on July 26, 1979. Thirty-two years earlier, members of this group graduated from the University of Texas and had gone out into the world to make their marks. The group included those with bachelor's and master's degrees awarded in 1947, as well as members of the 1947 summer field geology camp at Brady, some of whom did not graduate until the following year. The idea for a reunion was conceived by Allan Nelson, Morton Bigger and William Calloway, who were members of the 1947 summer field geology camp at Brady, Texas. They thought it would be fun to get the group together again. Sharing duties as co-chairmen, they began to make plans (which were announced one year in advance, see Department *Newsletter*, 1978, p. 84) to make it a reality. At the outset the plan was expanded to include all 1947 graduates.

Notices were sent to 54 former students and 4 faculty and from that group 18 former students and 2 faculty members assembled at Vail. Wives, families and friends made a total of 41 in attendance. We were particularly pleased that two of the four remaining faculty, Dr. Fred M. Bullard and Mr. Kent Waddell, were able to attend. Only last-minute conflicts prevented Dr. Jack Wilson and Dr. Gus Eifler from attending.

Although two of the participants live in the Denver area, most came from distant places: Indiana, California, Texas and Louisiana. This was a splendid response, especially in view of the gasoline shortage which prevailed at that time. Those attending were: Mr. and Mrs. Morton Bigger, Mr. and Mrs. Ralston Brown, Dr. Fred M. Bullard and daughter, Thais, Mr. Robert D. Carter, Mr. John Champion, Mr. and Mrs. Hal Cocke, Mr. and Mrs. William R. Devine, Mr. and Mrs. Lawrence Eth-

1947 Class Reunion at Vail, Colorado, July 28, 1979.
First row (left to right): Charles Jenkins, Hal Cocke, G. "Binx" Walker, O. D. Weaver, Morton Bigger, John Champion.
Second row: Milton Scholl, Jack LeSassier, Furman Grimm, Charles Worrel, Lawrence Ethridge, Clem George, Harry Williams, Fred M. Bullard, Allan Nelson, William Kendall, Kent Waddell.

ridge, Mr. and Mrs. Clem George, Mr. and Mrs. Furman Grimm, Mr. and Mrs. Charles Jenkins, Mr. and Mrs. William R. Kendall, Mr. and Mrs. Jack LeSassier, Mr. and Mrs. Allan Nelson, Mr. and Mrs. Milton Scholl, Mr. and Mrs. Kent Waddell, Mr. Guy "Binx" Walker, Mr. and Mrs. Harry Williams, and Mr. and Mrs. Charles Worrel, Mr. and Mrs. O. D. Weaver, two guests and two small children.

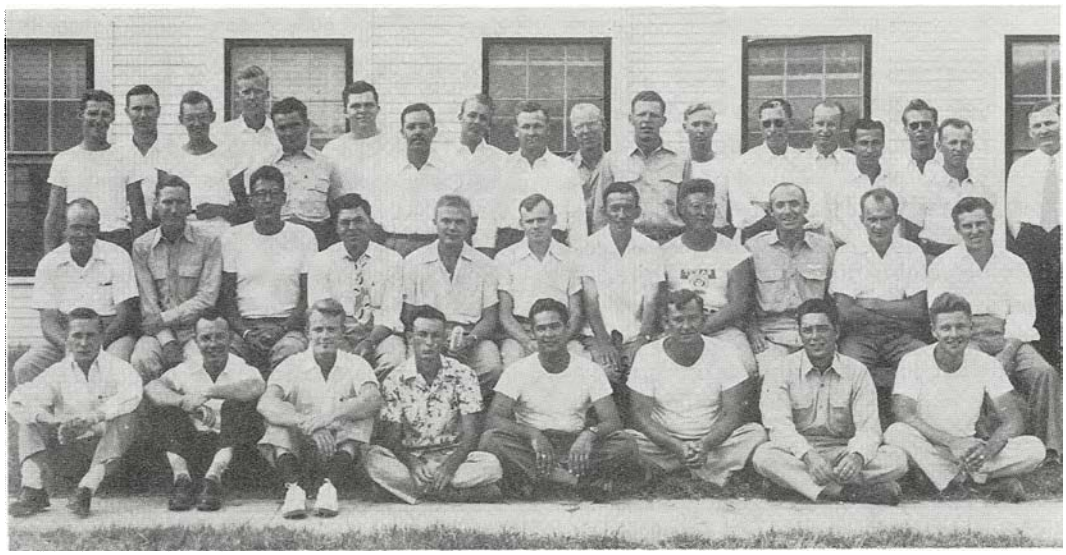
On arrival, the participants registered at the lodge at Vail and immediately received a sample of Colorado hospitality: a six pack of Coors Light and a Vail golf hat. An ice-breaker cocktail party on the first evening was one of the highlights of the reunion, because many of us were seeing friends we had not seen for 32 years. The grand finale of this party was the belated entry of three men in bright orange and white football shirts with "The Brady Bunch" in big letters on the front and "Texas Rockhounds 1947" on the back. The individuals involved in this episode were: Hal Cocke, Bill Devine and Charlie Jenkins, all from the second term of the 1947 summer field camp at Brady.

A golf tournament was scheduled for Friday (the second day), and the hardy ones had to tee off at 6:40 a.m. on Jerry Ford's favorite course.

Saturday, the last day of the reunion, was crowded with activities. A ride on the gondola at Lionshead to the top of Eagle's Nest (Elev. 12,000 ft.), where a picnic lunch, complete with beer and wine, was enjoyed by all. Eagle's Nest affords a fantastic view to the southwest towards the former Mount of the Holy Cross. In the afternoon a number of the party drove over the mountains to Leadville to visit the museum and to see one of the most famous mining areas in Colorado.

The final banquet on Saturday night was held on the terrace of the lodge and it was a fitting climax to three fun-filled days. Hal Cocke had brought a set of slides which he had taken in 1946 at Paricutín volcano in Mexico, while on a field trip with Dr. Bullard. Although

Editor's note: We thought it would be of interest to see how those in the Reunion photograph looked 32 years ago. Below is a picture taken in 1947 of the first term of the Brady field geology camp. Some, but not all, of the individuals are in both pictures. It was the Editor's considered opinion that time has been very generous with the members of the class of 1947.



First Term, 1947 Summer Field Geology Camp, Brady, Texas.

First row (left to right): Fred Smythe, W. Alan Hays, Morton Bigger,* O. D. Weaver,* Herbert L. Brewer, Jack T. Lastor, Charles J. Worrel,* Clem George.*

Second row: Ralston Brown,* Ed McFarlan, Jr., Morrison Walker,* J. G. Champion,* Charles Hornberger, Robert D. Carter, R. N. Richardson, Coyle Singletary, John D. Hill, Wm. J. Fennessy, Ray A. Burke.

Third row: J. C. Osmond, Jasper L. Starnes, Joe E. Keyser, G. Allan Nelson,* William O. Calloway, Tom D. Barrow, Henry L. Fulghum, Everett J. Carlson, W. J. Roper, Hewitt B. Fox, Henry Wyneken, Harry F. Williams,* Jack Hunter, John LeSassier,* Fernand Souaya, Bruce Kirk, W. H. McCracken, Dr. Gus K. Eifler.

***In Reunion picture**

Photo by Fred M. Bullard

Dr. Bullard had not seen Hal's slides, he gave an interesting and entertaining narration. During the evening Dr. Bullard was asked to say a few words. In a more or less humorous vein, he sought an explanation as to why, of all the classes which had graduated from Texas, only the 1947 class chose to hold a reunion. In the end, he concluded that it was due to the personal efforts of Bigger and Nelson. He then tried to find some pattern to account for those who had come. His first thought was that perhaps only the "A" students came; but with gradebook in hand, he found that the grades of those present were a cross section of the class. In the end he decided that statistically no trend could be detected. For some reason, which he could not explain, Dr. Bullard had saved the final examination papers for two of the students in the 1947 summer field course. He brought them along in order to return them, after a lapse of 32 years. He suggested that he probably saved the papers because they were the highest grades in the class, and he wanted to use them as examples to demonstrate that, contrary to general opinion, there were some high grades on his examinations. One of the papers belonged to John Champion and it was duly returned; the other belonged to Ray Burke and it was later mailed to him.

Mort Bigger was the Master of Ceremonies for the evening and he kept things going at a lively and entertaining pace. At the conclusion of the program, Al Nelson presented twenty prizes to persons who had attained distinction for such things as: "person with the most dry holes"; "person who came the greatest distance"; "person with the least hair," etc.

Everyone agreed that it was a wonderful reunion and all felt well rewarded for attending. There were two points which seemed to be a natural outgrowth of the meeting: (1) Don't wait 32 years for your first reunion, and (2) When and where will we have "our" next one?

Al Nelson (BS '47)

Bob Boyer Named College Dean

Bob Boyer's move to the position of Dean of the College of Natural Sciences leaves us both dismayed and delighted. The Department lost a highly capable chairman, leader, and counselor. This loss, however, is under the most favorable of circumstances: Bob's office is only one block away; as Dean he knows our strengths and goals; he retains his position as Professor of Geology and he will continue to teach Geology of Texas each semester; and he will continue to counsel us. We are delighted that his formidable administrative talents, which we have enjoyed for a decade, have been recognized by others.

Bob joined the faculty in our Department in 1957 when his interest was chiefly structural geology. His interest in remote sensing and many aspects of earth science education grew gradually over the years and his major professional contributions in the last ten years have been in these fields. He was given a joint appointment in the College of Education in 1965 when he started to supervise graduate students working on earth science education topics. Including both geology and education graduate students, Bob has supervised 23 students for the Master's degree and 11 for the Ph.D.

Bob was promoted to Professor of Geology in 1967, served as Assistant Chairman in the Department from 1967 to 1970, and assumed the Chairmanship of the Department and Chairmanship of the Geology Foundation Executive Committee in January, 1971. During his "administration" the faculty of the Department doubled in size, geology majors tripled, and the endowment of the Geology Foundation grew by $1.9 million. These figures are cited to show the kind of growth that Bob helped to orchestrate. The Advisory Council of the Geology Foundation recently awarded Bob a Distinguished Service Award in recognition of his dedication to Foundation activities.

Bob has made important contributions in two additional unrelated areas: teaching and professional society affairs. Bob initiated five courses in his fields of interest, but he is probably best remembered by students for his teaching of the sophomore and senior field courses. He teaches by demonstrating how field work should be done; his enthusiasm and vigor are both inspiring and exhausting!

Professional societies have made good use of Bob's talents. He has been elected President of the Austin Geological Society, Gulf Coast Association of Geological Societies, National Association of Geology Teachers (both the national association and the Texas section), Texas Academy of Science, and the local chapter of Sigma Xi; he currently is a Councilor for the Geological Society of America.

We look forward to Bob's continuing contributions to the Department.

E. F. McBride

Earle McBride Assumes Chairmanship

Earle McBride assumed the chairmanship of the Department on September 1, replacing Bob Boyer, who held that position since January of 1970. Earle joined the faculty in 1959 and became a full professor in 1969. He has been a most effective member of the faculty, teaching and supervising students in the field of sedimentation, sedimentary processes and sedimentary petrology. Earle's special research interests are in diagenesis of clastic rocks and sandstone petrology, especially as they relate to hydrocarbon reservoir quality.

Earle has just completed a term (1979–80) as president of the Society of Economic Paleontologists and Mineralogists, having been highly active in the affairs of SEPM throughout his professional career. Earle was honored as the first Merrill W. Haas Distinguished Visiting Professor at the University of Kansas (in 1975) and has recently been highly active in conducting short courses and presenting lectures to oil company groups. He has also been a most effective faculty member, serving on a variety of Department and University committees. At last count, nine PhD's and 23 Master's students had graduated under Earle's supervision; his list of publications and the number and size of research grants he has received are equally impressive. We are most fortunate to have Earle serve the Department as chairman for the coming years and wish him well in his new administrative endeavors.

Earth Science Teacher Day Number Seven

Would you believe it? Field trips planned for our 1979 Earth Science Teacher Day were stormed out and, again this past January, the ESTD field trips had to be cancelled because of inclement weather. We had a strong registration; we had an excellent program; and we had great plans for the Sunday field trips but had to cancel them because of the cold weather. (Sunday, March 2, was the coldest day of the winter.)

Earth Science Teacher Day is an innovative program for teachers that begins on Friday evening, runs all day Saturday, and normally includes field trips on Sunday. Almost 200 teachers, from literally all over Texas, registered for the conference which was developed around the theme "Voyages: Here and Beyond." Bart Bartholomew was the featured speaker in the opening session and presented an unusual and interesting session on science education in the People's Republic of China. Bart was able to give a firsthand report, based on his visit to China last year. Leon Long led an informative session on "Reading the Landscape" and spent a considerable amount of time answering individual questions from the participants. The Saturday afternoon program included a teacher show-and-tell session which was followed by dinner and Dr. David Slavsky's talk on "Formation of planetary systems and the search for extra-terrestrial life." The registrants were able to choose between some 20 workshop sessions (one hour in length) and six work sessions (two hours in length). In addition, the program offered three film previews, 14 separate exhibits and a star party at the Nike Base.

ESTD is a co-sponsored effort involving faculty and graduate students from diverse elements in the University, along with the important cooperative effort of the Austin Independent School District and the support of the Texas Education Agency. Units from the University which work with Departmental representatives are the Atmospheric Science Group (in the College of Engineering), Department of Astronomy and the Science Education Center (within the College of Education). ESTD has become the second largest meeting of science teachers in Texas and is the largest annual gathering for earth science teachers.

We enjoy working with the participants in ESTD and believe it offers valuable assistance to the earth science teachers in Texas. We look forward to another outstanding program in '81, hopefully under sunny skies!

Summer Field Camps 1930, 1932, 1934

By Fred M. Bullard

In a previous article I described the summer field camps of 1924, 1926 and 1928 (Department *Newsletter* No. 26, September 1976). In general, I find that my memories of events and students are centered around the summer field geology camps and, hopefully, this brief account may bring back some memories for the students involved. The three camps previously described were based in Cook, Grayson, and Montague counties, all bordering on the Red River in north Texas. These counties had been selected for study because they provide excellent outcrops of readily mappable Cretaceous rocks. However, the Cretaceous belt ends in central Montague County and to the west the rocks are of Upper Pennsylvanian age. Here the Pennsylvanian is a rather complex mixture of marine and non-marine sediments and was not a suitable area in which to introduce our students to geologic field methods. It was necessary, therefore, to select a new site for the 1930 field camp.

The Search for a New Camp Site

In 1924 the camp at Gainesville was a tent-based camp which posed some problems for cooking and serving meals, and lacked adequate work space. In 1926 we leased a large house in Denison where we had room for study and map work, and meal service from a modern kitchen was infinitely better than from the make-shift arrangement of a tent camp. On the whole we were able to devote more of our time to geologic work and less to camp chores. With this in mind, I considered only areas in which there was a town large enough to provide the convenience of a large house with modern facilities. An equally important factor was to select an area which was covered by an adequate base map. One must remember that aerial photographs were not generally available at that time and, for the most part, we depended on the U.S. Geological Survey topographic maps. Most topographic maps of the central Texas area were reconnaissance type maps published in the latter part of the last century. The Brady Sheet, for example, was surveyed in 1886 and published in 1894. Such maps were not suitable as a base for geologic mapping. A number of possible sites for the 1930 summer camp were considered, including the Marathon region and the Davis Mountains. I recall that there was some correspondence (which I am unable to locate) relative to locating the camp at Madera Springs in the Davis Mountains.

A major factor in the selection of the Brady area was the availability of a suitable base map. In the 1920's the Texas Board of Water Engineers, in cooperation with the U.S. Geologic Survey, issued a series of 15-minute quadrangle topographic maps which covered the Colorado River valley through west-central Texas. These maps were made to assist in the development of the flood control and hydroelectric power projects then being planned for the Colorado River. The Colorado River forms the northern boundary of McCulloch County and the new, 15-minute quadrangle maps for this portion of the Colorado River had just been issued. They were excellent maps, on a scale of one inch to the mile, contour interval of 20 feet, and a very satisfactory base on which to map the surface geology. The Mercury, Waldrip and Stacy sheets cover the northern part of McCulloch County.

Brady, the principal town and county seat of McCulloch County had, at that time, a population of about 4,500, and served as a trading center for a rather extensive farming and ranching area. It was large enough to provide the facilities we needed. Further, Brady was only a few miles from the Precambrian and Lower Paleozoic outcrops in the Central Mineral Region; Pennsylvanian and Permian rocks crop out in the northern part of McCulloch County, and a large Cretaceous outlier occupies the central part of the county. With such a wide range of the geologic section easily accessible, I felt that Brady was an excellent site for our field camp. In addition, Brady was only a one-day drive from the Marathon region of west Texas and the Wichita-Arbuckle mountains of southern Oklahoma. These areas offer a still wider range of geologic conditions, and excursions to each of these regions became an important part of the field program. Additionally, Brady is only about 130 miles from Austin so travel, communications and transportation of equipment was less of a problem.

Having concluded that Brady was a suitable site for the summer field course, I contacted the Brady Chamber of Commerce and the city officials to enlist their assistance in locating a building suitable for our use. Mr. Carl Blasig, Secretary, and Mr. Bert Hughes, President, of the Chamber of Commerce were most helpful and through their efforts we were able to lease the old Morrow Hotel, located adjacent to the railroad station (depot). Most towns had a hotel near the railroad station and at one time they served a useful purpose. However, as automobile travel became more popular, and passenger service on the railroads declined or became non-existent, many such hotels were forced to close. The Morrow Hotel had been vacant for some time and the owner, Mr. J. R. Bell, was willing to lease it to us for the summer at $50 per month. It was a two-story building with 10 guest rooms upstairs and a kitchen, dining room, office and a couple of guest rooms downstairs. It required some remodeling to make it suit our needs, especially the installation of a large shower, and some modifications in the kitchen. It is of interest to recall that we "borrowed" the necessary plumbing supplies (fixtures, pipes, etc.) from the University plumbing shop, transported the material to Brady, and had a local plumber install the fixtures. I did try to get the University to send Mr. Hargrave, foreman of the plumbing shop, to Brady to do the installations, but to no avail. Mr. Hargrave was very helpful in selecting the material we needed and he was interested in going. When the camp closed, the pipe and other fixtures were removed and returned to the University plumbing shop. We used this building for three summers and each time we went through this same procedure. It is obvious that plumbers, at that time, were not paid current rates or we would have been in deep trouble.

The city of Brady generously provided the utilities for our building at no cost to us, and many of the merchants, including the manager of the local movie theatre, offered special discounts to our students and faculty. During our entire stay at Brady, which began in 1930 and lasted more than 20 years, we enjoyed very cordial relationships with the citizens of Brady and I would like to publicly express my thanks for the many courtesies, special parties and expressions of genuine friendship extended to our group.

McCulloch County is essentially a ranching area and without exception we were granted access to the land. We worked on many of the ranches but the only ones that I can still recall by name are the White Ranches, or known as the White Company Ranch and the Raleigh White Ranch. Mr. Raleigh White was, at that time, a member of the Texas A&M University Board of Directors. Another was the Dudley Pumphrey Ranch near Mercury. Mr. Pumphrey lived on the ranch and we enjoyed many pleasant visits with him.

Getting the Morrow Hotel ready for our first group of students was quite a task. One room became an oversized shower. With the aid of a local tinner, and equipment brought from the University plumbing shop, a shower able to accommodate six at one time was constructed. Additional toilets and wash basins were installed. Another problem was in the kitchen. We needed adequate refrigerators and stoves, especially oven space, to serve at least 25 persons. Fortunately, we were able to rent used refrigerators and stoves in Brady. A real problem was finding a competent cook. In previous summers I had been able to find a local person for the job, but Brady did not have any unemployed cooks. The only solution was to find a cook in Austin and take him to Brady with us. We were indeed fortunate to find Sam—?—, who was employed at a campus restaurant. Business around the campus was sharply reduced during the summer and the manager of the restaurant was willing to let Sam off for the summer. Sam was with us for many years. If the restaurant was unwilling to let him off for the summer, Sam quit his job to go to Brady with us; however, he was such a good cook that a job was always awaiting him when he returned in the fall. One of the problems in the 1930's was that there were very few blacks in Brady, or in west Texas in general, so Sam's social life was somewhat limited. Sam was largely responsible for planning the meals, with some advice and suggestions from the staff. We purchased our supplies locally, utilizing a wholesale grocery company as much as possible. Having grown up on a farm, I felt that hot bread was a necessary part of each meal, and rarely did we sit down to a meal without hot rolls, corn bread or hot biscuits. (I might point out that my wife was unimpressed with my view on the necessity of hot bread.) Sam was an excellent pastry cook and many of the students will remember the assortment of pies that were frequently served. I early learned that the success of a camp was largely determined in the dining room. With Sam in the kitchen we were in good hands!

The summer session was divided into two terms of six weeks each. In the first term two courses were offered: Geology 20, essentially surveying with emphasis on the plane table and alidade, and Geology 60, field methods, geologic and structural mapping, etc. Geology 20, or an equivalent course in Civil Engineering, was prerequisite for Geology 60. Most of the students were taking Geology 20 in the first term in order to qualify for Geology 60 in the second term. However, we always had a section of Geology 60 in the first term, made up of students who had completed a course in surveying or students repeating the course from a previous summer. In the second term only Geology 60 was offered, and most of the students were those who had taken Geology 20 in the first term. This meant that most of the students were in camp for the entire 12 weeks. Geology 60 could be repeated for credit, inasmuch as the work was in a

different area and there were always a few who returned for a second summer.

The 1930 Summer Field Geology Camp at Brady

We opened our first season at Brady with 21 students registered for the first term and 19 for the second term. We had only two vehicles, each with a capacity of 10 persons, so our enrollment was limited to about 20 students per term. We frequently had requests from students at other schools to register for our field course and often we were able to fill our "quota" with these students. It should be noted that the camps covered in this account were in the "Great Depression" and that even the modest fee required for the field camp was not within the reach of some of our students. One of the first out-of-state students was Mr. P. W. Mattocks from the University of North Carolina. I had corresponded with him during the spring and he seemed anxious to attend our field course, but at that time we did not have a vacancy. However, just a few days before classes were to start at Brady, one of our students withdrew. I wired Mr. Mattocks that we could accept him if he could report at Brady on our opening date, which was about 5 days away. I felt that bringing students from other schools into our group was a good practice. The interchange of ideas and the inevitable comparisons of courses and professors were good for all concerned. Apparently "P. W." carried home a good report on our course and for several years thereafter we had a number of students from North Carolina. In later years, when we could accommodate more students, we had representatives from Michigan, Kansas, Oklahoma, Mississippi, Stanford and elsewhere.

The following students were members of the Geology Camp for both terms, a total of 12 weeks: Ernest Allerkamp, R. L. Breedlove, Robert E. Cady, James G. Callihan, Weldon E. Cartwright, Albert Durham, Elliot Flaxman, Wayne C. Gardiner, Ralph H. King, Robert W. Loveless, Gordon R. McNutt, Sam D. Quay, O. J. Solcher, Raymond D. Woods and Fred E. Wright. The following attended the first term only: L. Maurice Bradfute, P. W. Mattocks (Univ. of N. Carolina), Billy Rutland, Julius Slavik and Russell Sparenberg. Two students, B. G. Bryan and R. M. Coit attended the second term only. I was in charge of the camp, assisted by Dr. Robert H. Cuyler. The one student assistant was Albert Durham.

We selected the Mercury quadrangle, in the northeastern part of McCulloch County as the area in which to begin our work. Here the Adams Branch Limestone forms a prominent escarpment and I felt that it was a good place to start. The Adams Branch Limestone is the top member of the Graford Formation, the basal formation of the Canyon Group (Pennsylvanian). Some of the first work done on the Pennsylvanian rocks in Texas was done in this area, largely by N. F. Drake in his study of the Colorado Coal Field. His results were published in the *4th Annual Report* of the Texas Geological Survey in 1893, and little work has been done in the immediate area since that time.

The 1930 Summer Field Geology Camp at Brady, Texas (First Term).

First row (left to right): Dr. Robert H. Cuyler, Julius Slavik, Billy Rutland, Sam D. Quay, Dr. Fred M. Bullard, W. E. Cartwright.

Second row: Ernest Allerkamp, ——————, Wayne C. Gardiner, Albert Durham, R. L. Breelove.

Third row: ——————, Ralph H. King, R. B. Newcome, O. J. Solcher, Robert C. Cady, ——————.

Top row: ——————, Gordon McNutt, Fred E. Wright, Raymond D. Woods, Elliot Flaxman, Robert W. Loveless.

In the photograph but not identified are L. M. Bradfute, J. C. Callihan, P. W. Mattocks and J. M. Stallings. R. B. Coit and B. G. Bryan attended the first term only and are not in the picture.

The discovery of oil in north-central Texas in 1915 and on into the 1920's, at such fields as Ranger, Breckenridge, etc., stimulated a detailed study of the geology in this area. The surface rocks are largely Pennsylvanian, equivalent to those exposed in the northern part of McCulloch County. Some of the most detailed mapping was done by the Roxanna Petroleum Co. (which later became Shell) with F. B. Plummer in charge. Dr. R. C. Moore (Univ. of Kansas) was the paleontologist on the project. Mr. Plummer and Dr. Moore prepared a monumental report which covered the stratigraphy, paleontology and a geologic map compiled from plane-table surveys. It was published under the title "Stratigraphy of the Pennsylvanian Formation of north-central Texas," as *University of Texas Bulletin 2132* in 1921. Mr. Plummer joined the staff of the Bureau of Economic Geology in the late 1920's, and I was well acquainted with him and his wife, Helen Jean, a well-known paleontologist. I felt that Mr. Plummer could be most helpful in our work if he would spend a few days in the field with us. Accordingly, I wrote to him and I quote excerpts from my letter and his reply.

Letter to F. B. Plummer, dated July 8, 1930

—We started with the Adams Branch and are working up through the section. Just at present we are having some difficulty in recognizing the Ranger. From published descriptions it would seem to be quite distinctive but in the field it is not so well marked. I think we are making some progress but it is slow and of course it is as new to me as to the boys, but we are learning together.

I am sure that you could give us some valuable suggestions and I would surely appreciate it if you and Mrs. Plummer could spend some time with us. We have plenty of room and our cook is very good.

Signed. Fred M. Bullard

Reply to above, dated July 11, 1930

—I am leaving this afternoon for North Texas to spend a few days with our new man, Dr. Barnes, in his area around Wichita Falls. A day or two with Dr. Scott in Wise County and then I plan to drive to Coleman and Brady. I hope to stop off a day or two with you.

Signed. F. B. Plummer

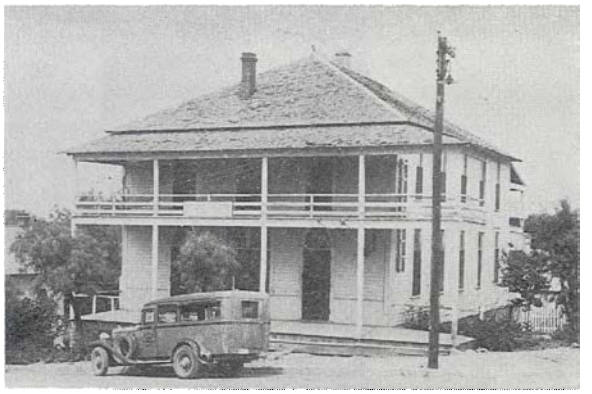
Professor Plummer did help us and by the end of the summer we felt "comfortable" with the Pennsylvanian section.

The 1932 Summer Field Geology Camp at Brady

The Morrow Hotel was again available and with our experience in 1930, the camp was quickly organized. Even though we installed the plumbing and located refrigerators, etc., everything seemed to go smoothly and camp was ready to operate when the students arrived. Sam was again the cook so, in effect, we just continued the 1930 plan of operation.

The following students were members of the Geology Camp for both terms, a total of 12 weeks: Murray Body, Robert T. Booth, Robert E. Boner, Dunbar Fisher, Sam Laird (Univ. of Okla.), Gordon R. McNutt, A. J. Needham, R. B. Newcome, Terence A. Pollard, Tom H. Shelby, Jr., J. J. Simkins, J. C. Wilder, T. Preston Wood, William T. Woodson, Ray E. Wright and Jerome Westheimer (9 weeks only, Stanford Univ.) The following attended the first term only: Clarence Jensen, Lindsay Hunt, C. G. Peebles (all from Univ. of N. Carolina), W. E. Cox and Joe Wheeler. Gideon Fischer and Dean Metts attended the second term only.

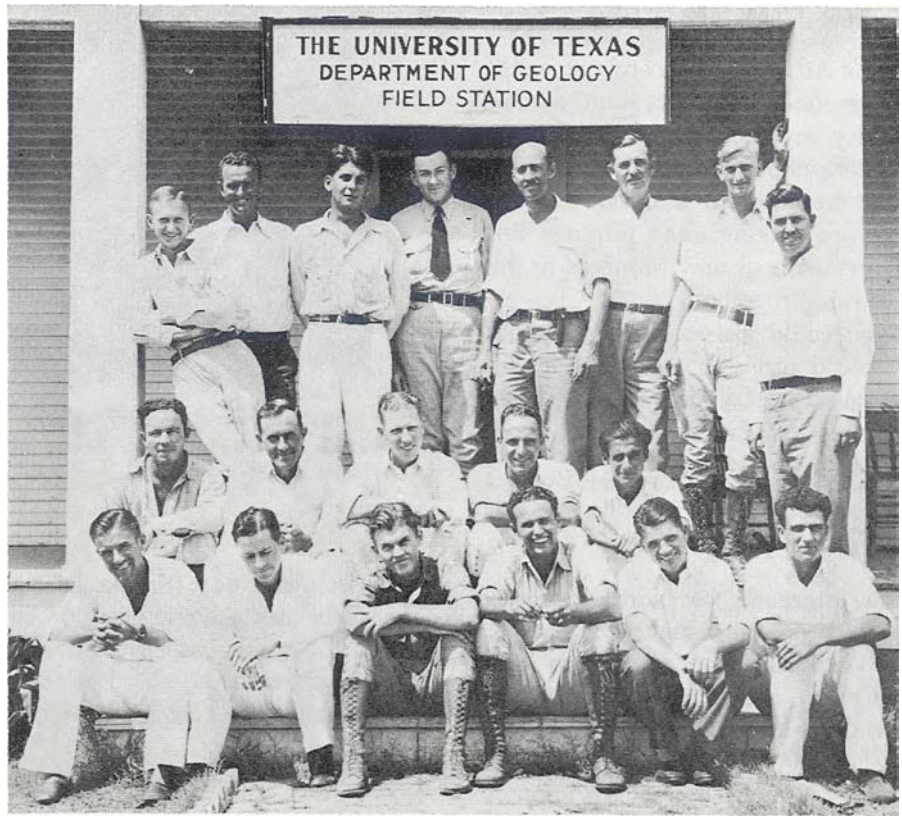
The mapping of the Mercury quadrangle was completed and the work extended to the Waldrip quadrangle. Geologic excursions to study other areas were scheduled throughout each term. Trips to the Llano area to study the Precambrian and the Lower Paleozoic section were one-day trips; a long weekend, Friday-Monday, was spent on the Wichita-Arbuckle mountains trip; and a full week was devoted to the Marathon-Big Bend-Carlsbad trip. By the end of the summer I felt that we had an accurate geologic map of the Mercury and Waldrip quadrangles.



Summer Field Geology Camp Headquarters, 1930, 1932 and 1934, Brady, Texas. The building was formerly the Morrow Hotel.

The 1934 Summer Field Geology Camp at Brady

During the spring of 1934, when we were signing up students for the summer field camp, three girls, Katherine Archer, Marie Gramann and Mildred Winans, came to me and asked to register. I had never taken girls on the field camp (none had ever asked to go) and without hesitation I told them that it could not be arranged. The field course was a requirement for the B.S. degree in Geology, but we had always substituted another course, or arranged for the girl to go to another school where girls were accepted. However, the three girls in question would not take "no" for an answer and they took the matter to Dr. H. T. Parlin, Dean of the College of Arts and Sciences. Dean Parlin agreed with the girls and informed me that I would have to make whatever arrangements were necessary in order for the girls to take the course. Today this would not pose any problem, but in the mid 30's the situation was quite different. After several conferences with the Dean of Women (Dorothy Gebauer), it was determined that the girls would live in a private home (one to be approved by the Dean of Women) and that their visits to the field camp headquarters would be limited to regular class hours. A special program was arranged for the girls which included parts of Geology 20 and parts of Geology 60. Since our normal field party consisted of three persons, the girls made up one party. The supervision of the girls was largely left to Ray Woods, who was the assistant at the time, and doubtless Ray has vivid recollections of that experience. The girls did quite well in their



The 1932 Summer Field Geology Camp at Brady, Texas (Second Term).

First row (left to right): Robert E. Boner, Preston Wood, Dunbar Fisher, Murray Body, J. J. Simkins, A. J. Needham.

Second row: Sam Laird (Okla.), Gideon Fisher, Ray Wright, R. B. Newcome, Jerome Westheimer (Stanford).

Third row: T. A. Pollard, Gordon McNutt, Dean Metts, Dr. Robert H. Cuyler, R. T. Booth, William I. Woodson, Tom H. Shelby, Jr., Dr. Fred M. Bullard.

The following attended the First Term only and are not in the picture: W. E. Cox, Lindsay Hunt (N. Carolina), Clarence Jensen (N. Carolina), C. G. Peebles (N. Carolina), and Joe Wheeler. J. C. Wilder, who attended both terms, is not in the picture.

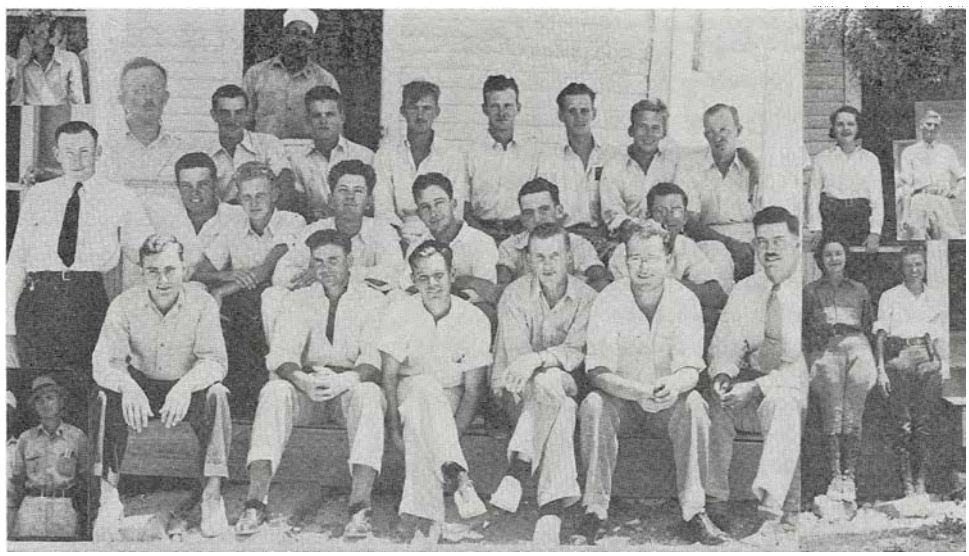
work and their presence did not disturb the camp routine in any way. In subsequent years, as long as I was associated with the field camp (1948), there were no requests from girls to register for the course. However, today girls make up about one-fourth of the geology majors and they attend the field courses where they are treated as just "one of the boys."

We opened the 1934 camp with 22 students registered for the first term and 18 for the second term. The following students were members of the Geology Camp for both terms, a total for 12 weeks: Robert E. Brown, William E. Brubeck, Richard F. Campbell, Robert R. Copeland (Univ. of N. Carolina), Robert B. Curry, William E. Dougherty, Paul B. Fahle, Claude Holcomb, Tom M. Girdler Jr., (Univ. of Mich.), William I. Mayfield, C. E. McCarter, Walter H. Marshall, Marion J. Moore, Surce J. Taylor and Raymond D. Woods. The following attended the first term only: Katherine Archer, Marie Gramann, Robert Mebane, Hugh D. McMorse (Univ. of Miss.), Tom H. Shelby, Jr., Harvey Yates and Mildred Winans. Hyman Corman (Univ. of Okla.), John R. Pedigo and Donald F. Sandifer attended the second term only.

By the end of the 1934 season we had completed the mapping of the area covered by the Mercury, Waldrip and Stacy sheets, and had extended the mapping to other portions of McCulloch County. For the area not covered by the 15-minute quadrangle maps, we ran plane table surveys of the key limestone beds on which the section is divided into formations. In general, the thin limestones are separated by shale intervals which vary in thickness. I once started three plane table parties on three limestone beds which were formation markers. In a matter of about 4 miles they all ended up on the same bed, each insisting that the others were wrong!

Our use of the Morrow Hotel as camp headquarters ended with the 1934 season, and in 1936 we were located on the second floor of a large cotton warehouse just one block off the "Square." But this is another episode which may or may not be treated in a later segment, only time will tell.

During the fall of 1934, Dr. Cuyler and I compiled the results of the work of the summers of 1930, 1932 and 1934, including a geologic map of that section of McCulloch County covered by the Mercury, Waldrip and Stacy sheets. This material was published under the title of "The Upper Pennsylvanian and Lower Permian Section of the Colorado River Valley, Texas "in *University of Texas Bulletin 3501*, issued in February, 1936.



The 1934 Summer Field Geology Camp, Brady, Texas.

First row: (left to right): Hyman V. Corman, Claude Holcomb, Robert E. Brown, Donald F. Sandifer, Tom M. Girdler, Jr., Dr. Fred M. Bullard, Mildred Winans, Marie Gramann.

Second row: Dr. Robert H. Cuyler, Marion J. Moore, Surce J. Taylor, John R. Pedigo, Walter H. Marshall, Paul B. Fahle, Charles E. McCarter.

Third row: Hugh McD. Morse, Robert R. Copeland, William E. Brubeck, Richard F. Campbell, Robert B. Curry, William I. Mayfield, William E. Dougherty, Raymond D. Woods, Katherine Archer, Tom H. Shelby, Jr.

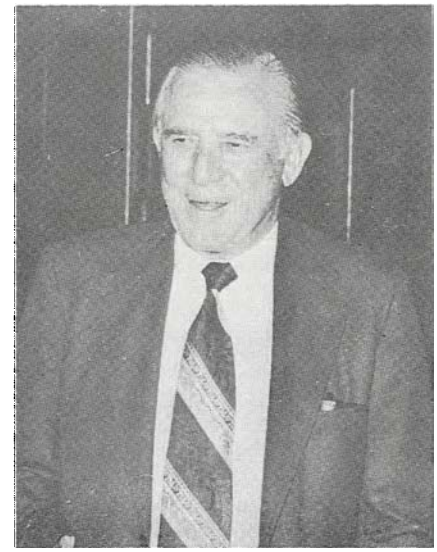
Standing at rear: Sam, the cook, Upper left: Robert D. Mebane, Lower left: Harvey E. Yates.

Geology Foundation News

The Geology Foundation enjoyed a most active and highly successful 25th Anniversary year—thanks to the good efforts of the Advisory Council and the support of many alumni and Department friends. The year included more alumni functions than ever before. In addition to semi-annual meetings of the Council held in Austin on October 5, 1979, and April 11, 1980, several special events were featured. (These are highlighted on other pages of this issue.) In addition, major actions taken by the Council resulted in the following; details of several of these items are published elsewhere in this *Newsletter.*

- Endorsed with enthusiasm the faculty recommendation to name J. Ben Carsey, Sr. and Stephen E. Clabaugh as Distinguished Graduates of this Department.
- Unanimously elected John L. Loftis, Jr. to Honorary Life Membership on the Advisory Council.
- Gratefully accepted a gift from Tobin Surveys, Inc. to establish the endowment for the Tobin International Geological Map Collection.
- Accepted with gratitude a pledge to establish the Arno P. (Dutch) Wendler Professional Development Fund.
- Appreciatively accepted the generous gift of Advisory Council member Jack K. Larsen establishing the Mesa Petroleum Co. Fund in Sedimentary Geology.
- Completed the endowment goal to establish the Guy E. Green Endowed Presidential Scholarship.
- Approved the Leslie Bowling Professorship program for implementation during academic year 1980–81 after the $100,000 endowment goal was reached.
- Approved establishment of a new endowment entitled the Energy and Minerals Resources Fund.
- Approved plans to raise funds to establish the Morgan J. Davis Professorship in the field of petroleum geology.
- Approved tentative plans to hold alumni luncheons in Amarillo, Midland and San Antonio during the 1980–81 academic year.

Mr. J. C. Walter, Jr. served as chairman of the Advisory Council during this busy and productive year. We on the faculty express special thanks to him and to the vice chairman, Mr. Jack Wallner. We also convey our appreciation to the other Council members for their active participation in the many affairs which made our Silver Anniversary so successful.



John L. Loftis, Jr., named Honorary Life Member of Council.

Four new members are welcomed on the Advisory Council with three-year terms that began on September 1, 1980. Mr. Howard R. Lowe is a director of Precambrian Shield Resources, Ltd., Calgary, Canada, and president and majority stockholder of Liberty Pipe Inc., Houston. Mr. Lowe, who resides in Coupeville, Washington, received his B.S. degree in geology at UT in 1948.

Howard R. Lowe

Following service in the U.S. Navy, he did extensive oil and gas work in western Canada and, in 1954, formed the Lowe Petroleum Engineer consulting firm, specializing in reservoir and oil and gas property evaluations. He designed and built a large comprehensive computerized well-data system covering western Canada provinces, initially containing over 50,000 wells. In 1952 he founded and was president of Caribou Mineral Resources, Ltd., which he sold to Precambrian Shield Resources, Ltd., in 1978. In 1979 he formed Liberty Pipe, Inc.

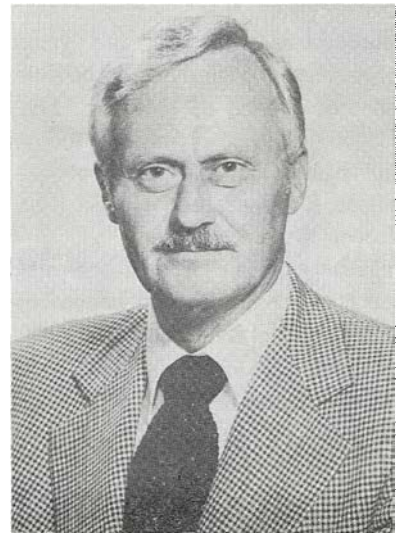
He established the Howard R. Lowe Vertebrate Paleontology Endowment in the Geology Foundation in 1979. This Fund, which was established in recognition of professor emeritus Jack Wilson's contributions to geological education and vertebrate paleontology, will be used to support student field work in vertebrate paleontology.

Judd H. Oualline

Mr. Judd H. Oualline is vice president and general manager of Getty Oil Company's Southern Exploration and Production Division, headquartered in Houston, Texas. He assumed the position in October, 1978. A native of Conroe, Mr. Oualline is a 1942 graduate of UT with a BA in geology.

Mr. Oualline joined Skelly Oil Company, a Getty predecessor company, in 1952 in Houston as a senior geologist. After holding other positions with Skelly, he moved to their home office in Tulsa in 1965 as manager of the exploration department. He was named vice president of the exploration and production department in 1969, and in 1973 became vice president of Skelly's domestic exploration and production department. When Skelly merged into Getty Oil Company in January 1977, he was named vice president and general manager of the company's Central Exploration and Production Division.

Active in numerous professional organizations, Mr. Oualline is a director and executive committee member of the Oklahoma Petroleum Council and a member of both the Western Oil and Gas Association and the Illinois Oil and Gas Association. He is also vice president for Oklahoma and a director of the general Mid-Continent Oil and Gas Association, president of its Kansas-Oklahoma Division, a director of the Mississippi-Alabama Division and a member of the Texas Division.



Philip Oxley

Dr. Philip Oxley is executive vice president in charge of worldwide exploration and production operations for Tenneco Oil Exploration and Production, a subsidiary of Tenneco, Inc., headquartered in Houston. He earned a BA in 1943 from Denison University and MA (1948) and PhD (1952) degrees from Columbia University.

After four years with Chevron in New Orleans, Dr. Oxley joined Tenneco Oil Company in 1957 as their first offshore district geologist, was named district exploration superintendent in 1958 and division exploration superintendent in 1959. After a ten-year absence with Signal Oil & Gas and Texas Crude Oil companies, he returned to Tenneco as geological manager in 1971 and was promoted to vice president for international projects in 1972 and to senior vice president in 1974. In 1976, he assumed additional responsibilities as senior vice president of domestic exploration and in January received his current title.

Among his many professional activities, he serves as a director of the U. Houston Geology Foundation and is a member of the Southern Regional Board of the Institute of International Education.

Don B. Sheffield

Don B. Sheffield is president and general manager, Exploration Services Division of Petty-Ray Geophysical Division, Geosource, Inc., in Houston. Mr. Sheffield received his BS in geology from UT and was then employed by the Robert H. Ray Company, a predecessor of Petty-Ray. He has remained within that organization throughout his professional career.

Mr. Sheffield began his career in computer/seismology in the U.S. and, subsequently, in Libya, then served as an interpreter/party chief (in Midland) and a geophysical supervisor (in Corpus Christi). However, Mr. Sheffield has spent most of his years of geophysical service in Houston, rising within the Petty-Ray company. His titles have included senior vice president, geophysical operations, western hemisphere (land and marine) from 1973–1976; executive vice president, geophysical operations, western hemisphere, from 1976–1978; and, prior to his current title, executive vice president, worldwide geophysical operations (land and marine) for 1978–1979.

Six members of the Advisory Council accepted reappointment for additional three-year terms. They are Messrs. Eugene L. Ames, Jr., L. Decker Dawson, John A. Jackson, Ken G. Martin, Fred L. Oliver, and Edwin Van den Bark. These gentlemen have all contributed substantially to the effective work of the Council; we convey sincere thanks to each for agreeing to remain on the Council.

Messrs. W. Kenley Clark, George R. Gibson, Holland C. McCarver and Edd R. Turner have completed terms on August 31, 1980. We express special thanks to each for his years of dedicated service. We greatly regret the untimely loss of Mr. Joseph F. Moss to the Council (please refer to his memorial, p. 48). Mr. Gibson has been a most faithful member of the Council. He served four terms (beginning in fall of 1968) with a nearly perfect attendance record at the meetings. During his second term, 1971–74, Mr. Gibson was Council vice chairman. Both Mr. Turner and Mr. McCarver completed three terms on the Council, contributing much of their time and efforts to Council affairs. Mr. Clark joined the Council in 1973, then served as chairman for the two years, September 1976 through August 1978. During Mr. Clark's term the Council expanded its activities significantly, and several new endowments were established. We look forward to continued close relations with each of these former Council members in the years ahead.

Geology Foundation Advisory Council
Effective September 1, 1980

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Mr. Don R. Boyd, Executive Vice President, Martin Exploration Company, 3501 N. Causeway Boulevard, Suite 901, Metairie, Louisiana 70002

Mr. Charles W. Alcorn, Jr., President, Alcorn Development Company, P. O. Box 3187, Victoria, Texas 77901

Mr. Eugene L. Ames, Jr., President, Venus Oil Company, 2100 N.B.C. Building, San Antonio, Texas 78205

Dr. Thomas D. Barrow, Chairman and Chief Executive Officer, Kennecott Corporation, 10 Stamford Forum, Stamford, Connecticut 06901

Mr. John F. Bookout, President, Shell Oil Company, P. O. Box 2463, Houston, Texas 77001

Mr. W. Henry Cardwell, Independent Petroleum Geologist, 942 Chimney Rock, Houston, Texas 77056

Mr. J. Ben Carsey, Consultant, 1633 Commerce Building, Houston, Texas 77002

Mr. L. Decker Dawson, President, Dawson Geophysical Company, 208 S. Marienfeld, Midland, Texas 79701

Dr. Rodger E. Denison, Consultant, Suite 616, One Energy Square, 4925 Greenville Avenue, Dallas, Texas 75206

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Mr. John A. Jackson, President, Katie Petroleum Company, 6019 Berkshire, Dallas, Texas 75225

Mr. J. Donald Langston, Vice President of Exploration, Exxon Company, U.S.A., P. O. Box 2180, Houston, Texas 77001

Mr. Jack K. Larsen, Executive Vice President, Mesa Petroleum Co., P. O. Box 2009, Amarillo, Texas 79105

Mr. Howard R. Lowe, Director, Precambrian Shield Resources Ltd., 2784 Pondilla Way W., Coupeville, Washington 98239

Mr. Ken G. Martin, President, Martin Exploration Company, 3501 N. Causeway Boulevard, Suite 901, Metairie, Louisiana 70002

Mr. Harry A. Miller, Jr., Independent Geologist, 600 First National Bank Building, Midland, Texas 79701

Mr. James R. Moffett, CEO, Chairman of the Board and President, McMoRan Oil & Gas Co., 3421 N.

Causeway Boulevard, P. O. Box 6800, Metairie, Louisiana 70009

MR. FRED L. OLIVER, President, Greenbrier Operating Company, 6060 North Central Expressway, Suite 400, Dallas, Texas 75206

MR. JUDD H. OUALLINE, Vice President and General Manager, Southern Exploration and Production Division, Getty Oil Company, P. O. Box 1404, Houston, Texas 77001

DR. PHILIP OXLEY, Executive Vice President, Tenneco Oil Exploration and Production, P. O. Box 2511, Houston, Texas 77001

MR. SCOTT PETTY, JR., Suite 235, 711 Navarro Street, San Antonio, Texas 78205

MR. JACK PHILLIPS, President, Longhorn Oil and Gas Co., 8323 Southwest Freeway, Suite 600, Houston, Texas 77074

MR. W. F. REYNOLDS, J. C. and W. F. Reynolds Oil Producers, 700 First Wichita National Bank Building, Wichita Falls, Texas 76301

MR. GEORGE W. SCHNEIDER, JR., Independent Geologist, P. O. Box 51620 OCS, Lafayette, Louisiana 70505

MR. TOM SCHNEIDER, Independent Geologist, Route 2, Box 562, Eagle Pass, Texas 78852

MR. F. AUGUSTUS SEAMANS, Vice President, Texaco Inc., Exploration and Producing Service Department, P. O. Box 52332, Houston, Texas 77052

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MR. EDGAR W. OWEN, 505 Club Drive, San Antonio, Texas 78201

MR. O. SCOTT PETTY, Suite 235, 711 Navarro Street, San Antonio, Texas 78205

MR. CHARLES E. YAGER, 3801 Potomac Street, Fort Worth, Texas 76107

Energy and Mineral Resources Fund

Another important endowment has been established within the Geology Foundation. Named the "Energy and Mineral Resources Fund," it has been identified to aid the teaching and research programs undertaken by faculty and students of this Department in these vital resource areas.

This Fund is designed especially to support the teaching/research needs of the holders of the two professorships in these fields (the Alexander Deussen Professorship in Energy Resources held by Amos Salvador and the Leonidas T. Barrow Professorship in Mineral Resources held by Peter Flawn). This Fund currently has an endowment in excess of $25,000; the endowment goal has been set at $100,000.

Development of a substantial endowment for the Energy and Mineral Resources Fund will be important to the long-range development of our program in these critical fields of the geological sciences. We therefore seek a "sponsor" whose gift of $50,000 or more will be recognized with the addition of a name of the donor's choosing to be included in the title of this Fund.

Geological Map Library Renamed

The Tobin International Geological Map Collection Fund has been established in the Geology Foundation to maintain the geological maps and photographs used in the Department. A gift of $50,000 has been pledged by Tobin Surveys, Inc., to provide support for the development of our map collection. Including previous gifts being held for that purpose, the endowment of this Fund with the pledge now exceeds $65,000.

Having our map collection bear the Tobin name is most appropriate. Tobin Surveys, Inc., has been a pioneer in the aerial photography and map-making industry, not only in Texas but nationally as well. We are therefore proud to have that name associated with our map collection.

In conjunction with the acceptance of this gift and the subsequent enhancement of our geologic map and photograph collection, the facilities in our Geology Library that house these materials will be enlarged. Over the years, this Fund will therefore greatly enhance the breadth and accessibility of our map collection which is already one of the finest in the southwestern U.S.

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To all the donors listed below we want to express our deepest appreciation for their generous support.

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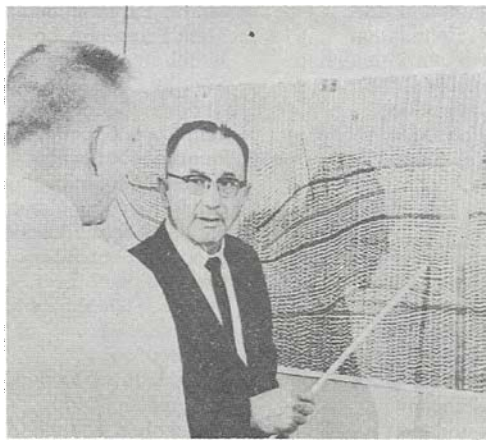
Industrial and Society Contributors to the Foundation and to Scholarships and Fellowships
July 1, 1979 — June 30, 1980

Amax Foundation, Inc.
Amoco Foundation, Inc.
Ashland Oil Foundation
Atlantic Richfield Foundation
Border Exploration Co.
Celanese Corporation
Champlin Petroleum Company
Cities Service Foundation
Conoco, Inc.
D'Appolonia Consulting Engineers
Dawson Geophysical Company
Energy Reserves Group
Everett & Associates
Exxon Company, USA
Exxon Education Foundation
Exxon USA Foundation
Getty Oil Company
Gulf Oil Foundation
Houston Gem & Mineral Society
Houston Oil & Minerals Corporation
IBM Corporation
Katie Petroleum Foundation
Kennecott Corporation
Marathon Oil Foundation
Martin Exploration Company
Mesa Petroleum Co.
Mobil Foundation, Inc.
Murphy Oil Corporation
Natomas Company
Olin Corp. Charitable Trust
Pennzoil Company
Phillips Petroleum Foundation
Pogo Producing Company
Schlumberger Foundation
Shell Oil Foundation
Sun Company, Inc.
Teledyne Charitable Trust Foundation
Tenneco Inc.
Texas Utilities Generating Company
Texaco Inc.
Texasgulf Inc.
Texas Oil & Gas Corp.
Texas State Historical Association
Turk, Kehle and Associates
Union Oil Company

Foundation Endowment Approaches $2.5 Million

Impressive gains in some endowments and the establishment of several new funds described elsewhere in this *Newsletter* are reflected in the listings here. Total endowment now approaches $2.5 million. The response of many alumni and Department friends to the special fund drive held during our Foundation 25th Anniversary year made this growth possible. We are pleased to note that the O. Scott Petty Geophysical Fund passed the half-way mark toward its goal of a $100,000 endowment. This is especially gratifying because earnings are needed for our program in geophysics, which has expanded considerably in most recent years. The continued growth of the Ellison Endowment Fund, now over $40,000, is also rewarding since earnings provide support for faculty-alumni functions. With several alumni luncheons scheduled during the current year, support from the Ellison Fund will play a vital role in continuing these activities. The impressive number of scholarships provided to our students during the past year (please refer to p. 53), attests to the important role of the funds designated for student financial support. We are pleased to note that several of these funds have also had substantial endowment increases during the past year.

We owe a great debt of appreciation to the many loyal alumni and close friends of the Department, and especially members of the Advisory Council for their efforts and support. We extend special thanks to all who have contributed to the Geology Foundation.



Arno P. (Dutch) Wendler

Professional Development Fund Named

A new fund honoring Arno P. (Dutch) Wendler has been identified for the Geology Foundation. Raymond D. Woods (BA '31, MA '34) has provided an initial gift, along with a pledge, to provide a corpus of some $25,000 for this purpose. To be named the Arno P. (Dutch) Wendler Professional Development Fund, earnings from the endowment will support a critical need which currently exists among our students. These earnings will help students defray expenses to participate in professional meetings at regional and national levels through presentation of papers, service on panel discussions and similar activities. The overall intent of this Fund is to enable students to contribute to meetings of societies and associations, thereby enhancing their professional development.

Arno Wendler, known as 'Dutch' to his many friends and associates over the years, was an especially able geologist and geophysicist. He was personally responsible for the discovery of several important oil fields by his employer, Humble Oil & Refining Company. Furthermore, his expertise in the then-fledging field of seismic interpretation was utilized on a company-wide basis to enhance the geologic understanding of many fields, which provided Humble with a distinct advantage in highly competitive exploration activities. (Please refer to the memorial on Dr. Wendler, found on p. 50 of this *Newsletter*, for further details of his distinguished career.)

The faculty warmly endorses this purpose as one most worthy of support. Our students are perhaps our best ambassadors; by presenting significant contributions at professional meetings they reflect the high quality of training provided by our program. We therefore encourage alumni who knew Dutch Wendler and those who support the purpose of this new Fund to provide gifts to the endowment which, in turn, will help our students and our program for all the years ahead.

Bowling Professorship Implemented

Mr. Ken G. Martin (MA '61), president of Martin Exploration Company in Metairie, Louisiana, will be the first Leslie Bowling Professor in the Department. Ken will visit here on October 22–25, 1980, and present a series of seminars on the Tuscaloosa trend of south-central Louisiana, one of the most active and highly potential deep gas plays in the United States today. Using the Tuscaloosa play as an example, he will demonstrate the interplay in petroleum exploration between academic training and industry experience. Included in his presentation will be the independent's perspective on petroleum economics and risk management. The Department is delighted to have Ken kick off this valuable addition to the educational program provided to our students—we convey special thanks to all who made the Bowling Professorship a reality.

Mr. Ray D. Woods (BA '31, MA '34) initiated this Professorship Fund with a charitable remainder unitrust valued at approximately $45,000. The remaining amount has been received through the generosity of our alumni and with support from industry. The purpose of the Bowling Professorship is unique among the endowed professorships within the Geology Foundation. It was designed to attract persons from industry and government to visit the Department and present lectures and seminars on topics of current geologic interest.

We hope to have one visitor each semester as a Bowling Professor. A committee of Geology Foundation Advisory Council members will work with the faculty to identify persons who might be available. This will afford faculty and students an opportunity to become better acquainted with a variety of geologic problems, especially those involving the application of geologic training as professional geologists involved with the economics of resource exploration.

New Endowed Presidential Scholarship

In 1965 a fund was established in the Geology Foundation to honor Guy E. Green, an independent geologist from San Antonio. Mr. Green, or "Squire" as he was known to his many friends, was a UT graduate (BA '22; MA '25) who had a distinguished career in the petroleum industry. He became a member of the Advisory Council of the Geology Foundation in 1956 and served as Council chairman from May 1962 until fall, 1965 when he was named an Honorary Life Member. Mr. Green died in late December of 1965.

The endowment of the Guy E. Green Memorial Scholarship Fund has grown steadily over the years and recently reached its goal of $25,000. During this interval, earnings have been used to support worthy geology students through scholarships. This past spring the University Regents approved a new designation of this Fund as the Guy E. Green Endowed Presidential Scholarship. Each year an outstanding undergraduate geology major who aspires to a professional career in the petroleum industry will be designated the Guy E. Green Presidential Scholar.

The Endowed Presidential Scholarship program was established in 1974 as a means of honoring persons through scholarships bearing their names. The scholarships are awarded to highly deserving students in designated fields. Individuals or organizations may establish a scholarship with an endowment of $25,000. A bronze plaque including an engraved photo of each presidential scholarship honoree in the geological sciences is displayed in the main conference room of the Geology Building. Each year the University President hosts a banquet for the donors, honorees and recipients of the scholarships. The Geology Foundation is proud to have four Endowed Presidential Scholarships honoring Wayne F. Bowman, Robert H. Cuyler, Carroll C. Miller and Francis L. Whitney, in addition to the latest one in the name of Guy E. Green. The Department also shares another scholarship in recognition of Mr. and Mrs. Charles Haas.

We solicit your support of this program and encourage establishment of additional endowed presidential scholarships to support our students.

Mesa Petroleum Co. Fund in Sedimentary Geology

A generous stock gift by Jack K. Larsen (BA '40) and a matching gift by Mesa Petroleum Co. has enabled the Department to establish a new fund in support of our program in soft-rock geology. Mr. Larsen, executive vice president of Mesa Petroleum Co., has served on the Geology Foundation Advisory Council since fall 1972. He recognized the importance of understanding sedimentation and sedimentary rocks as a vital element in the exploration for oil and gas as well as in the search for other mineral deposits including lignite, geopressured geothermal energy, sedimentary uranium and soft metals. With this appreciation for our need, his gift enabled establishment of the Mesa Petroleum Co. Fund in Sedimentary Geology.

This new endowed Fund has a broad purpose: earnings are to be used to provide excellence in the sedimentary geology program in the Department at all levels. The flexibility of this stated purpose will allow use of the Fund where the needs in our sedimentary geology program are the greatest, thus serving the Department in a most effective manner. Current value of the endowment, including stock being held, is approximately $50,000. We greatly appreciate this generous gift and are proud to have a fund bearing the name of Mesa Petroleum Co. for this most worthwhile purpose.

New Fund to Honor Morgan J. Davis

We are pleased to announce establishment of an endowed account in the Geology Foundation named for distinguished Department graduate, Morgan J. Davis. (Please refer to his memorial on p. 46 of this *Newsletter.*) This Fund has been initiated with plans to raise the money for a professorship in the field of petroleum geology. The immediate goal of the Fund is therefore $100,000, the endowment required to establish the Morgan J. Davis Professorship. In recognition of Mr. Davis' importance to the development of the Geology Foundation and the Department, the Advisory Council stated the desire to eventually see this fund grow to the level of an endowed chair. The endowment necessary for a chair as required by the Board of Regents is $500,000.

Geology Foundation Endowment Accounts
(July 1, 1979–June 30, 1980)

Fund	Goal	Current Endowment	1979–1980 Expenditures
Leonidas T. Barrow Professorship in Mineral Resources			
Development of program of excellence in mineral resources; income supplements recipient's salary	Unspec.	$110,000*	——
Leslie Bowling Professorship			
To attract persons from industry and government for short-term appointments on the faculty	$100,000	$100,000*	——
Wayne F. Bowman Endowed Presidential Scholarship			
Unrestricted geology scholarships, and level	Unspec.	$ 67,186†	$ 4,950
Fred M. Bullard Professorship			
Excellence in teaching; income supplements salary of recipient	$100,000	$100,000††	$ 5,299
Hal P. Bybee Memorial Fund			
Faculty use—research travel, study, etc.	$500,000	$299,374†	$16,184
L. W. Callender Memorial Fund			
Departmental use, unrestricted	Unspec.	$ 50,100	$ 3,211
Dorothy Ogden Carsey Memorial Scholarship Fund			
Geology scholarships, any level; special consideration: micropaleontology students	Unspec.	$ 47,192†	$ 3,790
Robert H. Cuyler Endowed Presidential Scholarship			
Undergraduate (upper division) and graduate scholarships	Unspec.	$ 30,749	$ 1,250
Morgan J. Davis Fund in Petroleum Geology			
To establish Davis Professorship. Income supplements salary of recipient.	$100,000	$ 11,427	——
Ronald K. DeFord Field Scholarship Fund			
Field studies for graduate students	Unspec.	$109,440	$ 8,628
Alexander Deussen Professorship of Energy Resources			
Development of program of excellence in energy resources; income supplements salary of recipient	Unspec.	$104,255	$ 35
Samuel P. Ellison, Jr. Endowment Fund			
For Department *Newsletter* and support of faculty-alumni functions	$100,000	$ 42,521	——
Energy and Mineral Resources Fund			
Support of programs and students in energy and minerals resources	$100,000	$ 26,004	——
William Stamps Farish Chair of Geology			
Income supplements salary of recipient	Unspec.	$300,000	$13,687
Miss Effie Graves Memorial Fund			
Department needs (faculty support, student aid, special equipment, etc.)	Unspec.	$ 22,983	$ 112
Guy E. Green Endowed Presidential Scholarship Fund			
Geology scholarships, any level	Unspec.	$ 25,000	$ 1,000
J. Nalle Gregory Professorship in Sedimentary Geology			
Development of program of excellence in sedimentary geology; income supplements salary of recipient	Unspec.	$102,786	$ 6,318
George S. Heyer Memorial Fund			
Any purpose of the Foundation	Unspec.	$ 84,570	$ 6,246
Houston Oil & Minerals Corporation Faculty Excellence Awards			
In recognition of outstanding service and special contributions to the teaching and research program	Unspec.	$ 40,000	$ 3,000
Carolyn G. and G. Moses Knebel Teaching Awards			
Annual Distinguished Teacher Award, Innovative Improvement and New Course Development	Unspec.	$ 60,893	$ 1, 500
Howard R. Lowe Vertebrate Paleontology Endowment			
Support of student field work in vertebrate paleontology	Unspec.	$ 16,277	——
J. Hoover Mackin Memorial Scholarship Fund			
Graduate geology scholarships	$ 20,000	$ 14,115	$ 1,200
Mr. and Mrs. L. F. McCollum Scholarship Fund			
Geology scholarships, any level	Unspec.	$ 12,574	$ 1,850

*Includes gifts and pledges.
†Does not include anticipated matching gifts.
††Figure includes Unitrust Agreement.

Fund	Goal	Current Endowment	1979–1980 Expenditures
Mesa Petroleum Co. Fund in Sedimentary Geology			
Support of the Department program in sedimentary geology	Unspec.	$ 22,800*	——
Frank W. Michaux Scholarship Fund			
Geology scholarships, any level	Unspec.	$ 10,266	$ 350
Carroll C. Miller Endowed Presidential Scholarship			
Geology scholarships to students pursuing careers in energy industries; preference to students from south Texas	Unspec.	$ 25,000	$ 1,250
Ed Owen-George Coates Fund			
Publication of geologic research related to Texas by faculty and graduate students	Unspec.	$102,992	$ 9,361
O. Scott Petty Geophysical Fund			
Development of program of excellence in geophysics	$100,000	$ 53,082	$ 3,703
Wallace E. Pratt Professorship in Geophysics			
Development of program of excellence in geophysics; income supplements salary of recipient	Unspec.	$104,679	$ 6,318
Frederick W. Simonds Memorial Scholarship Fund			
Scholarships to undergraduate (upper division) and graduate students	$ 25,000	$ 21,100	$ 188
David S. Thayer Memorial Scholarship Fund			
Senior field course scholarships	Unspec.	$ 25,000	$ 2,500
Tobin International Geological Map Collection			
For purchase of maps and photos, storage and viewing facilities for these items	Unspec.	$ 27,477**	——
Various Donors (General)			
Unrestricted funds for furtherance of basic geological education, research, graduate study, field work, travel, Foundation operation, salaries, etc.	Unspec.	$ 16,392	$26,033

*Does not include 800 shares of Mesa Petroleum Co. stock being held.

**Does not include pledge of $37,500.

Fund	Goal	Current Endowment	1979–1980 Expenditures
Vertebrate Paleontology Fund			
Faculty research in vertebrate paleontology	$ 50,000	$ 32,081	$ 935
Albert W. & Alice M. Weeks Fund			
To establish Weeks Professorship. Income supplements salary of recipient	$100,000	$ 15,453	——
E. A. Wendlandt Fund			
Purchase of books and journals in German or English translations	Unspec.	$ 5,985†	——
Francis L. Whitney Endowed Presidential Scholarship			
Geology scholarships, any level, paleontology and stratigraphy preferred	Unspec.	$ 29,474	$ 1,250
Francis L. Whitney Memorial Book Fund			
Purchase of paleontological books for library	Unspec.	$ 7,771	$ 277
John A. Wilson Professorship in Vertebrate Paleontology			
Development of program of excellence in vertebrate paleontology; income supplements salary of recipient	$100,000	$100,000††	$ 5,265
Charles E. Yager Undergraduate Field Scholarship Fund			
Support of students taking Geology 660	Unspec.	$ 35,055	$ 1,700

Will C. Hogg Memorial Scholarship Fund

General Information:

The total Hogg endowment (in the sum of $235,918) for all of the scholarships (a total of six) is carried in one Common Trust Fund account: the income is credited to one expendable account and distributed from there at the end of the fiscal year to each of the six scholarship accounts. Geology holds two of the six accounts: Hogg-Cullinan and Hogg-Sharp Scholarships.

Hogg-Cullinan			
Scholarship in petroleum or field geology in honor of Joseph S. Cullinan	Unspec.	As above	$ 3,500
Hogg-Sharp			
Scholarship in petroleum or field geology in honor of Walter Benona Sharp	Unspec.	As above	$ 2,500

†Both expenditures and expendable balance are recorded in the Geology Library Fund; no separate record maintained.

††Gifts and pledges total $100,000.

In Memoriam

LON D. CARTWRIGHT, JR.

Lon D. Cartwright, Jr., died May 27, 1980 in Sherman Oaks, CA. He was a 1924 graduate of the Geology Department at UT and also received a Master's degree in geology from Stanford in 1927. During his professional career he worked for several different companies in west Texas, in the Texas Gulf Coast and in California. He served as chief geologist for the Skelly Oil Company and later in this same capacity for the Union of California, both in the Houston area. Still later he was chief geologist for the Cyprus Mines Corporation in California. In an early paper on west Texas, he applied the name "Central Basin Platform" to the structural anomaly in the middle of the Permain Basin and is generally credited with having named this feature. In recent years he was self-employed, with interests in oil and gas royalties and some geothermal leases.

Lon D. is survived by his wife who lives at 14652 Deervale Place, Sherman Oaks, California.

J. Ben Carsey, Sr.

MORGAN JONES DAVIS

Morgan Jones Davis was born November 19, 1898, in Anson, Texas, the son of John Wesley and Gabrielle Jones Davis. He attended TCU and later was graduated from The University of Texas in 1925, with a bachelor's degree in geology. For three years, during the interval between his attendance at these two universities, he was project engineer on the Spavinaw River Project near Claremore, Oklahoma. It was there he met Veta Clare Moore, who in 1925 became Mrs. Morgan J. Davis.

This event seemed to have signalled the beginning of the numerous accomplishments that lay ahead for Morgan—accomplishments that were so many that it is difficult to enumerate even the major ones. He made outstanding contributions as an individual, as a citizen, as a professional geologist, as an alumnus of The University of Texas, and as a businessman. Much has been and will be written about all of these, so it seems appropriate here to write more specifically of Morgan's development as a petroleum geologist, his accomplishments and deeds to foster professional petroleum geology, and of his efforts to further the cause of earth science education, particularly at The University of Texas.

Morgan's career as a geologist began in 1925 at the Cisco Division of Humble Oil & Refining Company. Some of his very early work was surface mapping in Shackelford and other Bend Arch counties, using the most widely used and productive exploration tool of the time—the plane table and alidade. Numerous oil fields underlie the surface structures that he mapped. A few months later, Morgan moved to New Mexico to assist in getting his company a position in Lea County and adjacent areas. He resided with his family in Roswell, and it was during his stay there that their first son, Morgan, Jr., was born. During this phase of his career, he began to integrate surface manifestations of structure with subsurface data in developing oil and gas prospects.

In 1929, Morgan temporarily left Humble and, with his family, moved to Java and Sumatra where he was employed by Nederlandsche Koloniale Petroleum Mij. During the time spent in the East Indies, he led several geologic expeditions in the field and later became resident geologist in Sumatra.

He was rehired by Humble and returned to Roswell, New Mexico, as district geologist in 1934. It was during this later residence in Roswell that a second son, James, was born. Again, Morgan dealt with the problem of searching for oil and gas largely through the use of surface and subsurface geology. His promotion in 1936 to division geologist of the Humble Gulf Coast Division closely coincided with the growing use of the reflection seismograph as a much needed supplement to gravity meter and sparse subsurface control in the area. It was during these days of the late thirties that Humble aided in the discovery of, and gained its position in, such Gulf Coast fields as Friendswood, Conroe, Thompsons and Anahuac.

Morgan was a part of and exemplified a management which was poised for a very quick response to opportunities revealed by this newly employed seismograph tool. The trait of rapid response was a must for those younger geologists whom he sponsored and helped to train. A trait closely allied to this was strength of conviction—conviction often arrived at by what some described as intuition. He never overworked a problem, and yet his decisions were extremely sound and the results of his efforts proved the validity of his methods.

In 1941, he became chief geologist of Humble, and in 1945 he was named exploration manager as well. Then, in 1948, he became a member of Humble's board, and in 1951, a director and vice president. From that point, Morgan advanced beyond the primary responsibility for exploration, and in 1961 he was appointed Chairman of the Board and Chief Executive Officer of Humble, a position he retained until his normal retirement in November, 1963.

Even in these later years, with his added administrative responsibilities, those of us who remained more closely associated with exploration would frequently be called to his office, ostensibly for some good business reason but actually—at least in part—to give Morgan an update on what was going on in our search for oil and gas. Not infrequently we would receive an admonition to keep our efforts relatively simple and direct and our reaction time fast.

As a professional, Morgan was president of both the American Association of Petroleum Geologists and the Geological Society of America—a unique tribute to his professional standing. He worked faithfully and tirelessly for both of these organizations as well as for other societies which have a betterment of the profession as their goal.

He, along with his good friend and mentor, L. T. Barrow, joined others in helping to organize the Geology Foundation of The University of Texas. He was a charter member of the Advisory Council and served as its first Chairman from 1956 until 1962. At the strong urging of other members, he stayed on the Council until September of 1978. He was the second recipient of the Department's Distinguished Graduate Award in 1977, and was elected an honorary member of the Geology Foundation Advisory Council in 1978. As a member of the Council, he was always prepared to work for the good of the school and did. He played a strong part in fundraising efforts, both during the era when scholarships were emphasized and later when the creation and funding of professorships were given priority. He gave of his purse, but more importantly he gave of his time and ability.

Morgan has left a legacy of hard work, of impeccable ethical behavior, and a sense for doing things now. Hopefully, all of these qualities have been transmitted to others who, in years to come, will pass them on to future generations. He has indeed left his footprints in the sands of time.

John L. Loftis, Jr.
(BS '40)

EMMETT DANIELL ELLETT

Emmett D. Ellett (BA '60) died on April 24, 1979 in Casper, Wyoming. For a number of years he had taught biology in the Natrona County High School District. He is survived by his wife, Edna, daughter, Danna, and son, Rob.

WILLIAM L. JORDAN, JR.

William L. Jordan, Jr. (BS '49) died of a heart attack on July 26, 1980. Shortly after graduating from UT, he joined Humble's (Exxon's) exploration and production department. He retired from Exxon on March 1, 1977 and went to work for Adelante Petroleum Company in Andrews, Texas as an exploration-exploitation geologist. In August, 1978 he and his family moved to Midland, where he lived at the time of his death. He is survived by his wife, Grace, and three daughters.

HENRY DeROSSET McCALLUM

Henry McCallum, retired Humble Oil & Refining Company geologist, died May 7, 1979, in Tyler, Texas.

Henry was born and reared in Austin. He received a Bachelor of Arts degree in geology in 1929 and a Master's degree in 1932 from The University of Texas. Employed by Humble, surface mapping in southwest Texas became his principle work for many years. He served as assistant division geologist for Humble in Corpus Christi from 1948 to 1953 when he was transferred to the east Texas division in Tyler, where he served in various capacities.

Henry was a highly capable surface geologist. His careful work in subdividing and mapping various units of the Eocene in south Texas led to the discovery of the Imogene and Charlotte fields in Atascosa County. Henry cherished letters from Messrs. Wallace E. Pratt, L. T. Barrow and Morgan J. Davis complimenting him on this outstanding work.

From his mother, who had served as secretary of state for Texas, and his father, who had been superintendent of schools in Austin, Henry acquired a deep interest in the history of Texas. During his field work, Henry noted many kinds of barbed wire used in different parts of the state. He developed an interest in this. He and his wife, Frances, wrote *The Wire that Fenced the West*, an authoritative book on this subject.

Henry was past-president of the Corpus Christi Geological Society and member of AAPG, East Texas Geological Society, and Texas State Historical Association. He is survived by his wife, Frances Tarlton McCallum, Tyler; two sons, Bennett T. McCallum, Charlottesville, Texas, and Arthur Newell McCallum, Lafayette, Louisiana; and a sister, Kathleen M. Morely, Austin.

A more detailed memorial on Mr. McCallum is carried in the April, 1980, AAPG *Bulletin*.

J. Ben Carsey, Sr.

JOSEPH F. MOSS

After a year-long bout with a brain tumor, Joseph F. Moss succumbed on January 1, 1980. Death came on a day when Joe would have normally been indulging in one of his favorite pastimes—watching football games.

The minister of First Baptist Church of Lafayette, where Joe was an active member, eulogized that in thinking of Joe, five words came to mind. I don't believe any of us, in our private thoughts, ever got past the first—Friend. An acknowledged expert on south Louisiana geology, Joe is best remembered for his warmth and sense of humor. Anyone who ever came in contact with him was immediately a friend. What more can be said of any man.

Joe was born in Houston, Texas on February 23, 1925. After serving with the U.S. Army in the European theatre during World War II, he returned to Texas to finish his schooling. He received his BS in geology from The University of Texas in June, 1950. Upon graduation, Joe went to work for Sun Oil Company in Beaumont, Texas and was subsequently transferred to Lafayette,

Louisiana as an exploration geologist in 1954. Moving into the independent field, Joe joined Southwest Gas in 1956 where he eventually became south Louisiana exploration manager.

From 1966 until his death, Joe served the David C. Bintliff Interests as chief geologist and manager of exploration. He was a director of the First Commerce Corporation and the First National Bank of Commerce in New Orleans and a director of the Louisiana Association of Independent Producers and Royalty Owners. He was an active member of AAPG, IPAA, LAIPRO and LGS.

Joe is survived by his wife, Margaret, two sons, Sam and Rob, and one daughter, Molly.

We will miss Joe's contributions to our profession and we are, already, missing a friend.

C. M. McLean, III
Lafayette, LA

JACK P. RODGERS

Jack P. Rodgers (BS '46, MA '47) died on November 12, 1979 after a lengthy illness. Mr. Rodgers was 57 at the time of his death. After graduating from The University of Texas, he became an independent consulting geologist in Midland. He was a member of the American Association of Petroleum Geologists and the American Association for the Advancement of Science. Mr. Rodgers is survived by his wife, Patricia, two sons, two daughters, and two grandchildren.

LOUIS HAYES ROGERS

Louis Hayes Rogers (BS '40) died in Fort Worth on April 21, 1979 after a short illness. He was employed for several years as a geologist for Pure Oil Company. In 1948 he joined Sohio as a geologist, and worked in Kansas, Louisiana, and Oklahoma. In 1957 he returned to Texas and was employed by Southland Royalty Company in Fort Worth. He resigned from Southland Royalty in 1973 to pursue geologic work as a consulting geologist. He is survived by his wife, Margaret, two sons, and one daughter.

EDWARD ALVIN WENDLANDT

When Edward Alvin Wendlandt died September 29, 1979, geology lost one of its most successful practitioners. He was acclaimed not only as a fine geologist but one of the best oil finders of his time. After graduating from The University of Texas in 1924 with a degree in geology, he went to work for Humble Oil and Refining Company and quickly became recognized as one of their brilliant young geologists. When he retired in 1956, he had attained the position of chief geologist of the Company. He contributed significantly to Humble's reserves with the discovery of several oil and gas fields in east Texas, including Talco and Hawkins. He coauthored several papers which were published in the *Bulletin of the American Association of Petroleum Geologist* on these fields. His paper on the Lower Claiborne is a classic, defining and naming the formations of this group in east Texas.

Mr. Wendlandt was born August 22, 1901, in Austin, son of Carl and Sophie Wendlandt, a prominent Austin family, and he married Lottie Ann Wilkinson of Mt. Pleasant in 1926. She survives him as does their daughter, Mrs. John R. King of Houston. Characteristic of his profession, the Wendlandts lived in many places. Houston was headquarters but most of his work was done from the Tyler office where he was division geologist of Humble's East Texas Division and it was to Tyler that he retired after serving the latter part of his career in Houston. He never really retired from geology. He did widen his interests but continued his profession on a consulting basis.

As a dedicated scientist Mr. Wendlandt was always interested in education and was generous in his support of the Department of Geological Sciences at UT-Austin. Aside from monetary contributions he arranged for donations of well samples, cores and electric logs from many sites to the Department. He also played an important role in the development of Baylor University's geology, German, and home economics departments. He served on Baylor's Board of Trustees from 1970 until his death and on its Development Council. He was also a trustee of Baylor's Medical Center in Dallas from 1977 until his death. In recognition of his many services to Baylor, the Doctor of Laws degree was bestowed upon him in 1977.

Mr. Wendlandt was a Mason and a Shriner in both Austin and Tyler and a generous supporter of the Boy Scouts. He served on the Board of Directors of the Citizens First National Bank of Tyler. He was a member of the American Association of Petroleum Geologists,

Geology Society of America and a charter member of the East Texas Geological Society. A fine gentleman of the old school, he will be sorely missed by those in his profession and his many friends.

T. H. Shelby, Jr.
(BS '33, MA '34)

ARNO PAUL WENDLER

Arno P. Wendler, known to his many friends as "Dutch" or "Doc," died suddenly of heart failure in a Houston hospital February 17, 1980. He was 74 and a retired geophysicist for Humble Oil & Refining Company whose distinguished career will long be remembered.

Dutch was born near Ledbetter in Fayette County, Texas, September 23, 1905, and received his early schooling in that farming community. While still a young man, prior to entering The University of Texas at Austin, he demonstrated an interest in teaching by serving as instructor in a one-room school at Oldenburg in Fayette County. During the remainder of his adult working life, Doc continued this dedication to teaching. By example, in working with his associates, and, later, by organizing and conducting seismic interpretation classes, he contributed his knowledge and shared his "expertise" with a generation of seismic interpreters both in Humble and in Jersey Standard (now Exxon Corporation) affiliates worldwide.

Dutch early decided to become a geologist rather than farmer and worked hard to obtain an education, putting himself through school with jobs that ranged from "slinging hash" in student boarding houses to being librarian for the Geology Department. He received a BA in geology in 1929 and that summer went to work for Gulf Oil Company as a surface geologist in east Texas. This potential career was ended abruptly by the great depression, and Dutch returned to the University to work toward a Master's degree which he received in 1932, and a PhD conferred in 1934, only the second doctorate ever granted by the Department. The results of his research on the Catahoula Formation in central Texas were published in a joint paper with Leslie Bowling in the May 1933 AAPG *Bulletin*.

Immediately after receiving his doctorate, Dutch joined Humble Oil as a field assistant on one of the Gulf Coast Division's seismic crews. With his geologic background he was soon assigned to computing and interpreting seismic records. His hard work, dedication and insatiable curiosity about the meaning of seismic reflectors in terms of subsurface geology led him into a long and distinguished career with ultimate wide recognition as both Humble's and Jersey's expert on seismic interpretation. The influence of his careful work and thorough analyses on management decisions is a matter of Company record. O. D. Brooks, former chief geophysicist for Humble, said this of Dutch: "he was the final authority on seismic interpretations in tough areas and on expensive lease sales and was responsible for many important Humble purchases."

Doc was a familiar figure in all of Humble's exploration offices where he served as a working advisor and consultant on seismic interpretation problems. Jimmy Addington's comment is typical here: "we always looked forward to seeing Doc in the Division because he brought new ideas and new innovations for us to utilize and he did it in a humble way." He is credited with work that led to the discovery of several of Humble's oil and gas fields and with delineating many of the Company's offshore structures. He was also frequently called upon by various Jersey affiliates outside the U.S. Dutch supervised seismic interpretations for the North Sea where Exxon now has several major discoveries and worked with affiliate geophysicists on interpretations in Canada, Western Europe, North Africa and the Far East.

Dutch was a modest person, inclined to dismiss his own pioneering efforts, which were considerable, as part of the day's work. He was, for example, the first in Humble, and one of the first in industry, to recognize growth faults in the thick Tertiary clastic sections of the Gulf basin and to document the "roll over" on the downthrown side as a potential hydrocarbon trap; this done in the late 1930's when growth faults were not only unrecognized by industry, but generally unheard of. Doc was one of the first to recognize and document the effects of facies changes on seismic reflectors and was in the forefront in educating his associates and management on the occurrence of "velocity highs," especially in carbonate terrane. Industry drilled a lot of "velocity highs" as structures in the early days. And Dutch was ahead of his time in discovering and pointing out to his associates the significance of certain reflection characteristics and cycle changes in terms of the subsurface geology; this he did long before others "discovered" and applied seismic stratigraphy in exploration.

Dutch was not one to rush into print with each new idea, and while the profession generally may be unaware of his many contributions, these did not go unrecognized by the Company. By 1947 he had become senior seismic computer and supervisory computer on the Exploration Department headquarters staff where his "expertise" could be used Company-wide. In 1962, to make even greater use of his talents, he was trans-

ferred to Humble's Geophysical Research as advisor to a newly-formed group assigned to research on seismic interpretations. When the former Jersey Production Research Company and Humble's Production-Exploration Research were consolidated to form Esso Production Research Company in Houston in January 1964, Dutch was one of the first to be given the title of senior research associate, the highest professional recognition possible in the new research organization. In 1966 he returned to Humble operations as assistant chief geophysicist and in September 1967 received the title of senior petroleum scientist, the first in the Company to receive this highest professional title in the newly-established professional ladder. He retired in 1970.

Dutch was an active member of the AAPG for 34 years and would have been presented his silver certificate for 25 years with the Society of Exploration Geophysicists on May 8. He was a member of both the Houston Geophysical and Geological societies and of the Pioneer Oil Producers Society. He is survived by his wife, Maxine, and a daughter, Ann, both of Houston, a daughter, Julie, of Austin, and four grandchildren.

R. D. Woods
(BA '31, MA '34)

Each year our record of deaths of Department alumni is incomplete because we are uninformed about the events. We urge each of you who receives confirmed information of this unpleasant news to please relay the details to us.

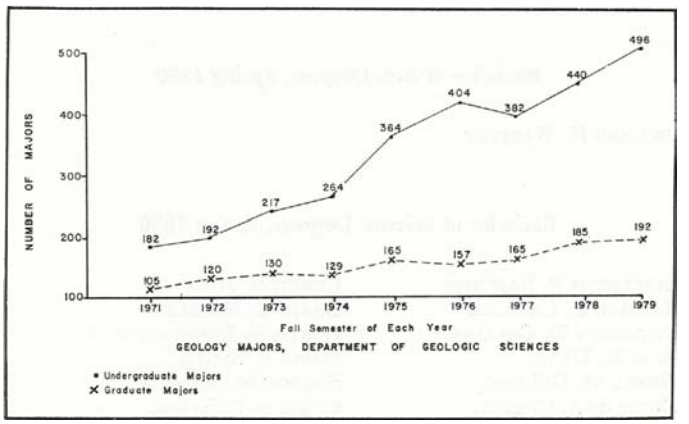
[The Editors]

Enrollment and Degrees

The accompanying graph reflects the trend of our Department enrollment at both undergraduate and graduate levels. In a word, it is **rising**! The increased popularity in geology reflects the demand for well-trained professionals, especially for jobs in the petroleum industry. However, opportunities have shown improvement in a wide range of other types of geological employment including teaching, mineral exploration, consulting firms (especially ground water and engineering), contract research programs and with petroleum-service companies. Projected enrollment for fall 1980 (this *Newsletter* went to press in July) indicates an increase in undergraduate numbers, possibly to 600 majors. Many of these are transfer students, whose numbers exceed those of incoming freshman. (We get a substantial number from junior colleges throughout the state and, in recent years, quite a few from the University of Houston.) Because of the limitations of our facilities (the teaching equipment and the student office space) and the available time of our faculty, we have placed restrictions on the number of graduate students admitted. Our desire is not to exceed 200 graduate students in order to assure close personal supervision for each student in the program.

Enrollment of women in the Department is remarkably uniform at all levels. During spring of 1980, there was a total of 140 undergraduate women majors (27 percent of the undergrads) and 53 graduate students who are women (28 percent of our graduate body).

During the interval of summer 1979 through May 1980, a total of 79 undergraduate students and 24 graduate students (20 MA and 4 PhD) completed degree programs in the geological sciences. These students are listed here with their respective degrees.



UNDERGRADUATE DEGREES GRANTED

Bachelor of Arts Degrees, Summer 1979

Theodore A. Bartling
Joseph W. DuBose
Lee A. Jirik
Manuel D. Lombas
Robert L. Maddox

Bachelor of Science Degrees, Summer 1979

Mary L. Ambrose
Pamela E. Bacon
Thomas D. Bagwell
Steven K. Belaire
David Bocanegra
Julius B. Chimene II
Norma L. Coble
Walter H. Cochran
Katharine L. Coley
Biff S. Coon
Edward A. Duncan
Deborrah A. Garcia
Judy W. Garrison
Charles S. Hale
James A. Hild
Ann D. Hoadley
David E. Hutchison
John L. Irvin
Anthony G. Johnson
Charles M. Keller
William J. Leinbach, Jr.
Michele Lockard
Manuel D. Lombas
Walton L. Lynch
Mark A. Martin
Suzanne M. Montano
Nancy D. Null
John P. Obermiller
Nancy J. Pearce
Gary D. Richter
Paul A. Rogers
Richard D. Sills
Catherine M. Stallings
David W. Vernon
John D. Weaver
Jerry B. Willman
H. Victor Wuerch, III

Bachelor of Arts Degrees, Fall 1979

Jonathan S. De Kanter
Clifford R. Gyger, II

Bachelor of Science Degrees, Fall 1979

William A. Ambrose
Clay R. Becker
Kenneth M. Cory
Mark D. Durio
Martyn M. Elliott
Laura B. Evins
Janice L. Hill
Betty G. Houston
James C. Janssen
Jeffrey T. Kremer
George A. Livesay
Thomas W. McCoy
Larry G. Miller
Ross D. Moczygemba
Heidi J. Nast
William P. Overesch
David W. Pfennig
Bobbie L. Rader
Kenneth M. Rome
Heather G. Sharrai
Thomas L. Smith
Marshall W. Titus

Bachelor of Arts Degrees, Spring 1980

Richard H. Winston

Bachelor of Science Degrees, Spring 1980

Elizabeth R. Ballard
Richard F. Carroll
Kathleen D. Collins
Ross M. Davis
Debra M. DeLong
Charles A. Goebel
Curtis E. Hinz
David C. Mosely
Curtis V. Pennington
David R. Smith
Schaun M. Smith
Charles D. Stone

GRADUATE DEGREES GRANTED

Master of Arts, August 1979

Barrett, Michael E.
B.A. geology 1975, The University of Texas at Austin
Depositional systems in the Rinconada Formation, Taos County, New Mexico
Supervisor: William R. Muehlberger

McCarley, Lon A.
B.S. physics 1970, The University of Texas at Austin
An autoregressive process model for constant Q attenuation
Supervisor: William R. Muehlberger

Poth, Stephen
B.S. geology 1977, The University of Texas at Austin
Structural transition between the Santiago and Del Carmen Mountains in northern Big Bend National Park, Texas
Supervisor: William R. Muehlberger

Master of Arts, December 1979

Caskey, Deborah J.
B.S. geology 1976, Texas Tech University
Geology and hydrothermal alteration of the Iron Beds area, Hinsdale County, Colorado
Supervisor: Douglas Smith

Hulbert, Richard C., Jr.
B.S. zoology 1976, The University of Texas at Austin
Linear discriminant analysis and variability of Pleistocene and Holocene Leporidae of Texas
Supervisor: Ernest L. Lundelius

McBryde, John C.
B.A. geology 1975, Trinity
Pennsylvanian (Middle-Desmoinesian) coarse-grained deposits, Taos Trough, north-central New Mexico
Supervisor: Alan J. Scott

Orchard, David M.
B.A. geology 1974, Stanford
Geology of the Robinson Creek—Ukiah area, northern coast ranges, California
Supervisor: John C. Maxwell

Siegmann, James M.
B.S. geology 1977, State University of New York at Stony Brook
Clay mineralogy and burial diagenesis of the Atoka Formation (Pennsylvanian), southeastern Oklahoma
Supervisor: Edward C. Jonas

Tyner, Grace N.
B.S. geology 1974, University of Florida
Field geology, petrology and trace element geochemistry of the Sullivan Buttes latite, Yavapai County, Arizona
Supervisor: Douglas Smith

Winker, Charles D.
B.S. geology 1977, University of Georgia
Late Pleistocene fluvial-deltaic deposition, Texas coastal plain and shelf
Supervisor: Victor R. Baker

Doctor of Philosophy, December 1979

Elliott, Thomas L.
B.A. geology 1971, Harvard; M.A. geology 1972, Harvard
Deposition and diagenesis of carbonate slope deposits, Lower Cretaceous, northeastern Mexico
Supervisor: Keith Young

Hunter, William C.
B.S. geology 1972, Michigan State University; M.S. geology 1974, Northern Illinois University
The Garnet Ridge and Red Mesa kimberlitic diatremes, Colorado Plateau: geology, mineral chemistry and geothermobarometry
Supervisor: Douglas Smith

Master of Arts, May 1980

Bentley, Michael E.
B.S. geology 1975, Kansas State
Hydrogeology of the Beaumont Formation (Pleistocene), Brazoria County, Texas
Supervisor: L. Jan Turk

Bunker, Russell C.
B.S. geology 1977, Oregon State
Catastrophic flooding in the Badger Coulee area, south-central Washington
Supervisor: Victor R. Baker

Cobb, Robert C.
B.S. geology 1977, University of Texas at Austin
Structural geology of the Santiago Mountains between Pine Mountain and Persimmon Gap, Trans-Pecos Texas
Supervisor: William R. Muehlberger

Johnson, Larry C.
B.A. geology 1974, University of Texas at Austin
Structure and stratigraphy of an evolving salt ridge and basin complex, Louisiana continental shelf
Supervisor: Ralph O. Kehle

Merritt, Linda C.
B.S. geology 1977, New Mexico Institute of Mining and Technology
Sandstone diagenesis of Olmos, San Miguel and Upson Formations (Upper Cretaceous), northern Rio Escondido Basin, Coahuila, Mexico
Supervisor: Earle F. McBride

Moor, Amanda
B.S. geology 1975, University of Texas at Austin
Stratigraphy and structure of Potosi Anticline, Nuevo Leon, Mexico
Supervisor: Ralph O. Kehle

Sadd, James L.
B.S. geology 1977, University of Southern California
Sediment transport in a fringing reef, Cane Bay, St. Croix, United States Virgin Islands
Supervisor: Lynton S. Land

Slator, Dorothy S.
B.S. geology 1977, University of Texas at Austin
Sandstone diagenesis and its variation with deltaic depositional environments, Upper Cretaceous, southern Rio Escondido Basin, Coahuila, Mexico
Supervisor: Earle F. McBride

Suter, John R.
B.S. geology 1977, University of Texas at Austin
Concentration, distribution and behavior of heavy metals in recent sediments, Corpus Christi Ship Channel Inner Harbor
Supervisor: Edward C. Jonas

Sutton, Stanley M.
B.A. geology 1975, Wesleyan University
Urban fluvial geometamorphosis
Supervisor: Victor R. Baker

Doctor of Philosophy, May 1980

Bockoven, Neil T.
B.S. geology 1974, William and Mary; M.A. geology 1976, University of Texas at Austin
Reconnaissance geology of the Yecora-Ocampo area, Sonora, and Chihuahua, Mexico
Supervisor: Fred W. McDowell

Casey, J. Michael
B.S. geology 1975, Virginia Polytechnic Institute
Depositional systems and basin evolution of the Late Paleozoic Taos Trough, northern New Mexico
Supervisor: Alan J. Scott

Undergraduate Scholarships

Amax Foundation, Inc. Scholarships

Ricky J. Dauzat	Summer, 1980
Steve Krolczyk	Summer, 1980
Patrick Talamas	Summer, 1980

Amoco Foundation, Inc. Scholarships

Karen Brock	1979–1980
James C. Crump	Fall, 1979
Frieda F. Heh	1979–1980
Leondres Kincy III	Fall, 1979
Marian Morris	Spring, 1980
Harold T. Morton	1979–1980
Linda Ruiz	Spring, 1980

Ashland Oil Foundation Scholarship

K. Mark Cory	Fall, 1979

William E. Bassinger Memorial Scholarships

Cecilia Binig	Summer, 1980
Roy E. Easley	Summer, 1980
Sheryl L. Hejl	Summer, 1980
Charles N. Rakestraw	Summer, 1980
Rhonda D. Rasco	Summer, 1980
Danny Worrell	Summer, 1980

Wayne F. Bowman Endowed Presidential Scholarships

Gail Ruth Brow	Spring, 1980
Boyce C. Cabaniss	Spring, 1980
Lynda L. Coons	Spring, 1980
Greg D. Gibbs	Spring, 1980
John F. Ligon	Spring, 1980
Adna H. Underhill, Jr.	Spring, 1980

Champlin Petroleum Company Scholarships

Daniel A. Sexton	Summer, 1980
Rosemary C. Shoemaker	Summer, 1980
Leslie Margaret Thomas	Summer, 1980
Adna H. Underhill, Jr.	Summer, 1980

Robert H. Cuyler Endowed Presidential Scholarship

Donald W. Vasco	Spring, 1980

Getty Oil Company Scholarship

David D. Dernick	Spring, 1980

Guy E. Green Scholarships
Janice L. Hill — Fall, 1979
Jeffrey T. Kremer — Fall, 1979

Leonard F. McCollum Scholarships
Gerald L. Atkinson — Fall, 1979
Gail R. Brow — Fall, 1979
James C. Janssen — Fall, 1979
Nathan Rakestraw — Fall, 1979
Jerry W. Schwarzbach — 1979–1980
Adna H. Underhill, Jr. — Fall, 1979

Frank W. Michaux Scholarship
Heidi J. Nast — Fall, 1979

Carroll C. Miller Endowed Presidential Scholarship
Rhonda D. Rasco — Spring, 1980

Schlumberger Collegiate Award
Stanley T. Abele — 1979–1980

Texas Oil & Gas Corp. Leadership Award
Jeff L. Blass — 1979–1980

David S. Thayer Memorial Scholarships
Gray E. Bebout — Summer, 1980
Lynda L. Coons — Summer, 1980
Michael L. Douglas — Summer, 1980
Jonathan Mack — Summer, 1980
Joseph N. Wilkinson — Summer, 1980

Vertebrate Paleontology Scholarship
Boyce C. Cabaniss — Fall, 1979

Francis L. Whitney Endowed Presidential Scholarships
Michael L. Douglas — Fall, 1979
Jeffrey G. Paine — Spring, 1980

Charles E. Yager Undergraduate Field Scholarships
Stanley T. Abele — Summer, 1980
Erica L. Everett — Summer, 1980
Michael E. Moore — Summer, 1980
Terry L. Moore — Summer, 1980

Graduate Scholarships

Best Speaker Awards
Craig R. Kochel — Spring, 1980
Robert W. McDermott — Spring, 1980

Border Exploration Company Graduate Scholarship
Timothy B. Berge — Summer, 1980

Wayne F. Bowman Endowed Presidential Scholarships
Janice Alsop — Summer, 1980
Walter Ayers — Summer, 1980
Michael Boyles — Summer, 1980
Richard Kolb — Summer, 1980
Diana Morton — Summer, 1980
Elizabeth Orr — Summer, 1980
Mark Ver Hoeve — Summer, 1980

Dorothy Ogden Carsey Memorial Scholarships
David Cornue — Summer, 1980
Susan R. Elder — Fall, 1979
Cynthia M. Lopez — Fall, 1979
R. W. McDermott — Fall, 1979
Ellen R. Naiman — Fall, 1979
Eugene Pisasale — Summer, 1980
Stephen Weiner — Summer, 1980

Continental Oil Company Fellowship
Kenneth O. McDowell — Fall, 1979

Ronald K. DeFord Field Scholarships
Terry J. Barron — Fall, 1979 and Summer, 1980
David A. Budd — Summer, 1980
Rachel Burks — Summer, 1980
Richard Chuchla — Summer, 1980
Lisa Craig — Summer, 1980
Dodd W. DeCamp — Fall, 1979
Ranaye Dreier — Summer, 1980
Susan R. Elder — Summer, 1980
Stewart Fagin — Summer, 1980
Christine Farrens — Summer, 1980
Scott Gorham — Summer, 1980
James Gregory — Summer, 1980
Jonathan C. Herwig — Fall, 1979
Holly D. Hoel — Fall, 1979
David A. Johns — Fall, 1979
R. W. McDermott — Summer, 1980
Ellen R. Naiman — Summer, 1980
Richard Padilla — Summer, 1980
Elliott Pew — Summer, 1980
Eugene T. Pisasale — Fall, 1979
Richard A. Schatzinger — Fall, 1979
Kimberly Thomas — Summer, 1980
Pinar O. Yilmaz — Spring, 1980

Energy Reserves Group Research Fellowship
Ralph S. Kugler — Summer, 1980

Getty Oil Company Scholarship
Kenneth O. McDowell — Spring, 1979

Hogg-Cullinan Scholarships
Jaime Barcelo — Fall, 1979
James P. Immitt — Summer, 1980
Jude McMurray — Summer, 1980
Richard Padilla — Fall, 1979
Calixto Ramirez — Fall, 1970
Jose-Hector Sandoval — Fall, 1979

Hogg-Sharp Scholarships
William Bath — Summer, 1980
Robert H. Blodgett — Spring, 1980
Richard Kolb — Summer, 1980
Calixto Ramirez — Spring, 1980
Alan Standen — Spring, 1980
Bruce E. White — Summer, 1980
Melissa Winans — Summer, 1980
James Wittke — Summer, 1980

Richard P. Keizer Memorial Scholarships
Richard Chuchla — Spring, 1980
James L. Gregory — Spring, 1980

J. Hoover Mackin Memorial Scholarships

Felicia Boyd	Summer, 1980
Lisa E. Craig	Fall, 1979
Stewart Fagin	Fall, 1979
Jong H. Han	Summer, 1980
Julie A. Houle	Fall, 1979

Frank W. Michaux Scholarships

Holly Lanan	Summer, 1980

Owen-Coates Fund

J. Michael Casey	Fall, 1979
Craig R. Kochel	Summer, 1980
Kenneth O. McDowell	Summer, 1980

Petrography Award

W. David Wiggins	Spring, 1980

Phillips Petroleum Company Fellowships

Michael Boyles	1979–1980
Robert K. Suchecki	1979–1980

Texaco Inc., Fellowship

Stephen P. Cumella	1979–1980

Various Donors Scholarship

Raul Huerta	1979–1980

Undergraduate Students Employed at Bureau of Economic Geology 1979–1980

Nancy Allen
Elizabeth Andrews
Cecilia Binig
Jeff Blass
Pat Bobeck
Richard Carroll
Martha Cast
Guy Cleveland
David Cunningham
Dennis Dann
Mike Darr
Rich Dauzat
Donald Downey
Martyn Elliot
Tom Freund
Mary Gilkison
James Goodwin
Carol Gray
Steve Hochstein
Jay Ingram
Kim Johnson
Amy Lewis
Steve Lovell
Cindi McCall
Geoffrey Meyer
Joan Middleton
Heidi Nast
David Olander
William Overesch
William Rack
Rhonda Rasco
Robert Rountree
Linda Ruiz
Julie Sanders
Juliette Schiebl
Janice Schoepfle
Robert Sherrill
Gregory Shoemaker
Rosemary Shoemaker
Jacqueline Smith
Dianne Sullivan
Patrick Talamas
Lia Tomlinson
Larry S. Underwood
Lloyd Vickery
Clayton Wilson
Doug Wilson
Danny Worrell
Dave Wuerch
Patti Yates
D'nese Young

Teaching Assistants Department of Geological Sciences 1979–1980

Alsop, Janice L.
Bailey, Jonas W.
Bay, Annell R.
Berge, Timothy B.
Bertagne, Allen J.
Bockoven, Frances P.
Boyd, Felicia M.
Bradford, Cynthia A.
Budd, David A.
Bunker, Russell C.
Burbach, George V.
Burks, Rachel J.
Caskey, Deborah J.
Chapin, Thomas S.
Collins, Ann M.
Cornue, David B.
Coxe, Cynthia L.
Curchin, John M.
Davies, Kyle L.
Debus, Richard W.
DeCamp, Dodd W.
Dreier, Ranaye B.
Ebeniro, Joseph O.
Elder, Susan R.
Emmet, Peter A.
Fagin, Stuart W.
Farrand, Richard B.
Farrens, Christine M.
Gabay, Steven H.
Gnidovec, Dale M.
Hamlin, H. Scott
Helper, Mark A.
Hoel, Holly D.
Houle, Julie A.
Immitt, James P.
Jackson, Timothy J.
Jacobs, James A.
Kochel, R. Craig
Lehman, Thomas M.
Leininger, R. Lee
Logan, William S.
Lundegard, Paul D.
McAllister, Kevin J.
McDermott, Robert W.
McDowell, Kenneth O.
McIntyre, John F.
McMurry, Jude B.
Melius, Douglas J.
Naiman, Ellen R.
Peterson, Christine M.
Price, Vickey I.
Sadd, James L.
Sedlacek, Wanda J.
Spradlin, Scott D.
Stone, Katherine C.
Storrs, Glenn W.
Taylor, Alisa J.
Thomas, Kimberly J.
Tyner, Grace Nell
Ulerick, Sarah
Ver Hoeve, Mark
Verross, Vicki
White, Bruce E.
Wilson, Bruce D.
Winkler, Dale A.
Wittke, James H.
Woronick, Robert E.

Graduate Students Employed at Bureau of Economic Geology 1979–1980

Adrienne Allie
William Ambrose
James Anderson
Walter Ayers
Terry Barron
William Bath
Felicia Boyd
Bryan Bracken
Emil Bramson
David Budd
Barbara Bullock
Barbara Castens
Colm Chomicky
Robert Cobb
Robert Conti
Richard Debus
Edward Duncan
Laura Dwyer
Jennifer Forman
Samir Ghazi
David Guetzow
Susan Hallam
Scott Hamlin
Jong Han
Mark Helper
Jon Herber
Jon Herwig
Mary Jackson
Will Jenkins
David Johns
Richard Kolb
Holly Lanan
Jeff Lawton
Dan Legett
Cynthia Lopez
Marcie Machenberg
Wendy Macpherson
Steve Mann
Dallam Masterson
John McIntyre
Robert Merritt
Donald Miser
Diana Morton
John Morton
Adel Moustafa
Ellen Naiman
Elizabeth Orr
David Palmer
Nancy Pearce
Elliot Pew
Gene Pisasale
Keith Pollman
Gary Poole
Kathleen Rader
Melissa Sandstrom
Richard Schatzinger
James Siegmann
Nat Smith
Raul Solis
Allen Standen
John Suter
Eric Thompson
Stephen van Dalen
Steve Weiner
David Wiggins
Steve Wright

FACULTY PUBLICATIONS

In each issue of the *Newsletter* we list faculty publications during the past academic year. Faculty names are in bold type. Reprints of articles listed will be furnished on request as long as they are available. Please send requests directly to the faculty author as listed, Department of Geological Sciences, The University of Texas, P. O. Box 7909, Austin, TX 78712. A number of the publications listed are products of the Bureau of Economic Geology. An up-to-date list of all Bureau publications with prices is available by writing to the Bureau of Economic Geology, University Station, P. O. Box X, Austin, TX 78712.

Baker, V. R., 1979, Erosional processes in channelized water flows on Mars: *Jour. Geophys. Research*, v. 84, p. 7985–7993.

Baker, V. R. and Kochel, R. C., 1979, Martian channel morphology: Maja and Kasei Valles: *Jour. Geophys. Research*, v. 84, p. 7961–7983.

Baker, V. R., 1979, *Water in Environmental Planning* by T. Dunne and L. B. Leopold, Freeman, San Francisco, CA, 1978, (A review) *in Am. Scientist*, v. 67, p. 230–232.

Baker, V. R., Kochel, R. D. and Patton, P. C., 1979, Long-term flood frequency analysis using geological data: p. 3–9, *in* Proc. of the Canberra Symposium, The Hydrology of Areas of Low Precipitation, *Internal Assoc. of Hydrological Sciences Publ. 128.*

Baker, V. R. and Milton, D. J., 1979, Catastrophic Floods on Mars and Earth, p. 181–195, *in* Gornitz, ed., *Geology of the Planet Mars*: Dowden, Hutchinson and Ross, Stroudsburg, PA.

Patton, P. C., **Baker, V. R.** and Kochel, R. C., 1979, Slack-water deposits: a geothermic technique for the interpretation of fluvial paleohydrology: p. 225–253, *in* Thodes and Williams, eds., *Adjustments of the Fluvial System*, Kendall/Hunt Publ. Co., Dubuque, Iowa.

Baker, V. R., 1980, Fluvial erosion landforms: p. 192–195 *in McGraw-Hill Yearbook of Science and Technology*, McGraw-Hill Book Co., NY.

Baker, V. R., 1980, Geomorphic mapping of dry valley systems on Mars: *NASA Tech. Memo. 81776*, p. 54–56.

Baker, V. R., 1980, Some terrestrial analogs to dry valley systems on Mars: *NASA Tech. Memo. 81776*, p. 286–288.

Barker, D. S., 1980, 951 new or revised definitions of igneous rock names: *in* Bates and Jackson, eds., *Glossary of Geology*, 2nd ed., American Geological Institute, Washington, DC, 749 p.

Bartholomew, R. B., 1979, What's the difference between a rock and a mineral: *Science and Children*, v. 17, p. 48–49.

Bartholomew, R. B., 1980, How to find the center of an object: *Science and Children*, v. 17, p. 11.

Bartholomew, R. B. and Schade, W. R., 1980, Analysis of geology teaching assistants reactions to a training program utilizing video-tape and teaching episodes: *Jour. Geo. Educ.*, v. 28, p. 96–102.

Boyer, R. E. and **Ellison, S. P., Jr.**, 1980 *Applications of Geology to the Nature and Distribution of the Aquifers of Texas*: Short course syllabus for the Texas Water Well Drillers Assoc., Burnet, TX, 88 p.

Boyer, R. E. and Matthews, W. H. III, 1980, Conference report on geology education: *AAPG Explorer*, May, p. 22. (Also published as Report on AAPG Industry-Academic Conference: *Jour. Geol. Educ.*, v. 29, p. 83, 1980.)

Brown, L. F., Jr., 1979, Deltaic sandstone facies of the mid-continent: p. 35–63 *in* Pennsylvanian sandstones of the mid-continent: *Tulsa Geol. Soc. Spec. Pub. 1.*

Brown, L. F., Jr., Brewton, J. L., Evans, T. J., **McGowen, J. H.**, White, W. A., Groat, C. G., and **Fisher, W. L.**, 1980, Environmental geologic atlas of the Texas coastal zone—Brownsville-Harlingen Area: Univ. Texas, Austin, *Bur. Eco. Geol. Env. Geol. Atlas Texas Coastal Zone Series*, 140 p. (includes 9 full-color maps).

Bullard, F. M., 1979, Volcanoes and their activity: Chap. 2, p. 9–48, *in* Grayson and Sheets, eds., *Volcanic Activity and Human Ecology*, Academic Press Inc., NY.

Ellison, S. P., Jr., 1979, Memorial to Leonidas Theodore Barrow, 1895–1978, *Geol. Soc. Am. Memorials*, p. 1–3.

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Bureau News

The Bureau's director, Bill Fisher, will take on an added responsibility in mid-1981 when he assumes the presidency of the Association of American State Geologists. Bill was selected by his fellow state geologists during their 72nd annual meeting held April 27-May 1 at the Hilton Sea Island Inn on South Padre Island, Texas. The Bureau served as host for the meeting.

A new administrative unit, the Texas University Coal Research Consortium, was added to the Bureau in March. The Consortium was established, according to its charter, "for the coordination and encouragement of university coal research and to undertake such research as will ensure the optimum utilization of the state's coal resources." Members of the Consortium are the University of Texas at Austin, Texas A&M University, the University of Houston and Texas Tech University. UT-Austin serves as the lead institution; the Texas Energy and Natural Resources Advisory Council is a non-research member, and has allocated $200,000 in research funding. Consortium research deals with the occurrence, characterization, production, and utilization of coal and also with the reclamation of coal-mined lands and other environmental aspects of coal production.

Bill van Rensburg, an associate director of the Bureau, is director of the new Consortium and chairman of its executive committee. Bill also is director of the Texas

Mining and Mineral Resources Research Institute, an administrative unit of the Bureau that was established in 1978.

Other associate directors of the Bureau of Economic Geology are Frank Brown, who serves as local administrator at the "Bureau South" quarters at 1300 Lavaca Street, and Jerry Wermund, who takes care of many of the day-to-day administrative details of the Bureau. (Incidentally, Jerry, along with Bill Fisher, is a member of the outer continental shelf advisory board of the U.S. Department of the Interior. Bill represents Texas on the policy committe, and Jerry serves Texas on the Gulf Coast outer continental shelf technical working group committee.) Another Bureau administrator is Bob Morton, who became coordinator of geothermal studies last year. Doug Ratcliff, who continues as assistant director of the Bureau, handles Bureau research contracts with various governmental agencies and other organizations.

The Bureau received welcome news this summer when the Board of Regents of the UT System gave the go-ahead signal for a feasibility study for the development of the University's Balcones Research Center in northwest Austin. Included in the study will be a cost estimate for new BEG quarters at that site. The Bureau staff, now numbering around 250, (including many UT-Austin geology students who serve as part-time research assistants), is currently housed at four separate locations in Austin. Some of the staff moved into the fourth location, "Bureau West," in the Tri-Towers Building at 801 West 24th Street, early this year. If the cost estimates are approved and the new quarters are constructed, the Bureau would be consolidated at one location.

BUREAU RESEARCH

The Bureau, as the state geological survey of Texas, conducts research that relates to many of the state's major concerns in geologic, energy, mineral, land and environmental resources. Current projects address all these concerns but, because of the urgency of the Nation's energy needs, the Bureau is giving special attention to energy-related projects. Basic funds for Bureau research come through appropriations by the Texas State Legislature. Parts of the research program also are supported through grants and contracts with state, federal and local governmental agencies and other organizations. Total operating budget of the Bureau is currently about $6 million annually.

ENERGY-RELATED RESEARCH

Geothermal—The Bureau's geothermal program, coordinated by Bob Morton, comprises studies of the deep geopressured geothermal areas and also shallow geopressured zones of the Gulf Coast, the warm ground water of central Texas, and geothermal waters in west Texas. It also includes a geothermal resource assessment for the entire state.

As a part of the the investigation of geopressured geothermal areas of the Texas coast, the Bureau is using seismic data to determine the deep structure at depths below those reached by drilling. The Lower Wilcox at the Cuero Prospect in De Witt County and the Frio Formation at the Austin Bayou Prospect in Brazoria County are being studied in this manner.

Testing of the geothermal and methane potential at the Austin Bayou Prospect has been delayed. The geopressured geothermal test well drilled at that site by General Crude Oil Company and the U.S. Department of Energy has been temporarily shut in following a change of company ownership. Nevertheless, the Bureau's Tom Gustavson is continuing to develop background environmental data by monitoring the air, water and microseismicity around the well-site area while waiting for production to resume.

In another project of the geothermal program, Bob Morton, Don Bebout, Ray Gregory, Bonnie Weise, Marc Edwards and others delineated shallower geopressured corridors having temperatures of less than 300°F (149°C) along the Gulf Coast. Within these corridors, which are primarily in the Wilcox Group and Frio Formation, they selected five fairways and outlined prospect areas within the fairways. Additional geothermal projects include Chris Henry's study of the Hueco Tanks geothermal area of El Paso County in west Texas and Chock Woodruff's and Mary McBride's investigation of the quality and extent of geothermal resources of the entire state.

Coal—During the year, Bill Kaiser and others completed an up-dated estimation of the near-surface lignite resources of Texas. The lignites considered are those occurring in seams greater than three feet thick and under less than 200 feet of cover. Results of this study are presented in the Bureau's *Report of Investigations No. 104.*

In another coal project, Bill Kaiser, Ed Garner, Susan Tewalt, Suzanne Montano and others are participating in a computerized calculation of resources of near-surface lignites of the Wilcox and Jackson Groups and the Yegua Formation in east Texas and the upper coastal plain. Using proprietary geophysical logs provided by industry, they are developing information on the lignites and recording the data for entry into the National Coal Resources Data System. U.S. Geological Survey personnel will enter the data into the system, and BEG personnel will calculate the resources.

Work continues on the development of a conceptual model for characterizing uncertainty in coal reserve and

resource estimates based on geological, chemical and statistical analyses of available data. Bill van Rensburg, Bill Kaiser, Dave Mathew, Mary Bauer, Susan Tewalt and Mike Roberts are working on this model, which has been previously applied and tested in the Gulf Coast coal basin. They are now testing the methodology further by applying the model to the sub-bituminous coal in the Powder River Basin of Wyoming and to the bituminous coal in Appalachia.

A new coal-related project began at the Bureau late last year. Ed Garner and Mary Jackson are developing land and geohydrologic data relative to the future mining of lignite in the Tertiary Jackson and Yegua units of the east Texas lignite belt.

Uranium—The Bureau's participation in a major investigation, the National Uranium Resource Evaluation (NURE) drew to a close this year. Bureau researchers have completed their studies and prepared reports on the uranium potential within all or parts of eight quadrangle areas in Texas. These correspond to the Amarillo, Emory Peak, Lubbock, Marfa, Palestine, Presidio, Sherman and Wichita Falls sheets of the National Topographic Map series (scale 1:250,000). Frank Brown was coordinator, and Bill Fisher, Marc Edwards, Chris Henry, Dave Hobday, Clara Ho, Joe McGowen and Mary K. McGowen were principal investigators for this project in which many additional Bureau geologists participated.

The results of the second phase of a study of the uranium potential of the Catahoula Formation were published this summer in the Bureau's *Report of Investigation (RI) No. 100*, "Catahoula Formation of the Texas coastal plain: origin, geochemical evolution, and characteristics of uranium deposits," by Bill Galloway and Bill Kaiser. Results of the first phase of the study were presented in *RI No. 87*, "Catahoula Formation of the Texas coastal plain: depositional systems, composition, structural development, ground-water flow history, and uranium distribution," by Bill Galloway, 1977.

The Oakville Formation of south Texas is a major uranium host rock and also a ground-water reservoir. In this project, "Predicting the response of a natural system to uranium extraction—Oakville aquifer system, Texas," Bill Galloway, Chris Henry and Gary Smith are developing information about the effect that in situ leach mining of uranium might have on the quality of ground water in the area.

Oil and Gas—The Frio Formation of the Texas Gulf Coast Basin has yielded more than 15 billion barrels of oil and gas equivalent, and likely more hydrocarbons remain to be discovered. Bill Galloway, Kinji Magara, Dave Hobday and their assistants are making a resource evaluation of the Frio major stratigraphic unit, which consists of the subsurface Frio, Anahuac and shallow Catahoula Formations. One of the objectives of the project is to develop and apply geologically based methodologies for estimating undiscovered oil and gas as an alternative to traditional approaches to resource evaluation.

In another oil and gas project, Mark Presley, Paul Ramondetta, Kathy McGillis and several assistants are investigating the potential for oil and gas generation in the San Andres Formation in the Palo Duro Basin of the Texas Panhandle.

OTHER BUREAU RESEARCH

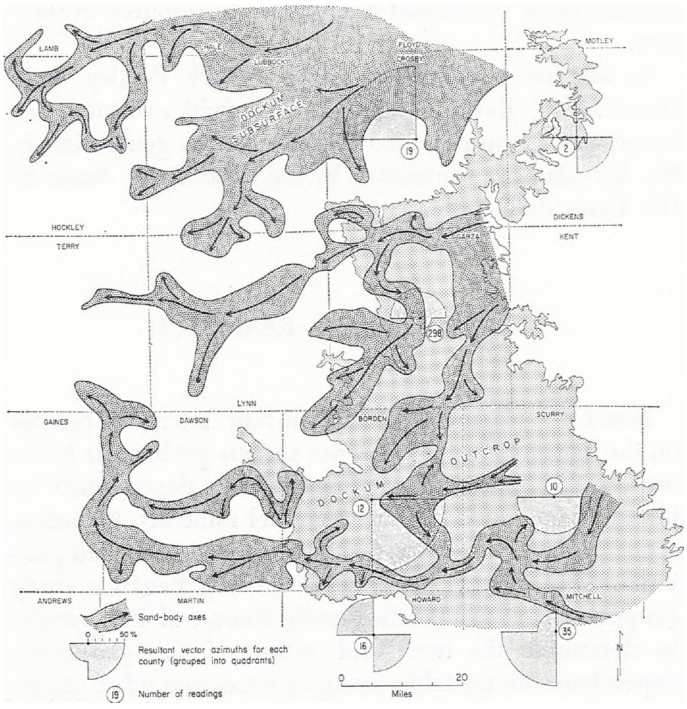
Non-Fuel Minerals—While current attention centers on the energy problem, another serious problem is looming on the horizon. It is this Nation's dependence on imported sources for many non-fuel minerals, including such vital ones as cobalt, manganese, chromium and platinum. This summer, Bill van Rensburg began a study (supported by the Scaife Family Funds, of Pittsburgh) to determine the level and nature of this precarious dependence on unstable foreign sources and what can be done about solving this problem.

Another of the Bureau's non-fuel mineral research projects deals with the recognition of regional base-metal resources in the Cambrian strata of the Llano Uplift area of central Texas. During this study Gary Smith has found lead and zinc mineralization in well cuttings in central and western Gillespie County. This find extends the area of known mineralization 31 miles farther west along the southern flank of the Llano Uplift. An additional current mineral investigation is Tim Duex' study of calderas and mineralization in the Trans-Pecos area of west Texas.

A *Mineral Resources of Texas* map, showing locations of mineral occurrences and current and historical production sites, was published last fall at a scale of 1:1,000,000. Bureau staffers also have prepared a preliminary, computer-based listing of Texas mineral producers, pits, prospects and mines as a part of the U.S. Bureau of Mines' mineral industry location system.

Sedimentary Basins—Some of the Bureau's studies of sedimentary basins include Rob Handford's investigation of deep-water facies of the Spraberry Sandstone of the Midland Basin and Kinji Magara's and Bill Kaiser's analysis of the consolidation of Tertiary sandstones of the Texas Gulf Coast. In progress are two comprehensive studies of basins to determine if Permian salt deposits in the Palo Duro and Dalhart basins of the Texas Panhandle and salt domes of the East Texas Basin might be suitable sites for safe, long-term isolation of nuclear waste. Tom Gustavson is coordinating the Panhandle investigation, and Charlie Kreitler is in charge of the east Texas study.

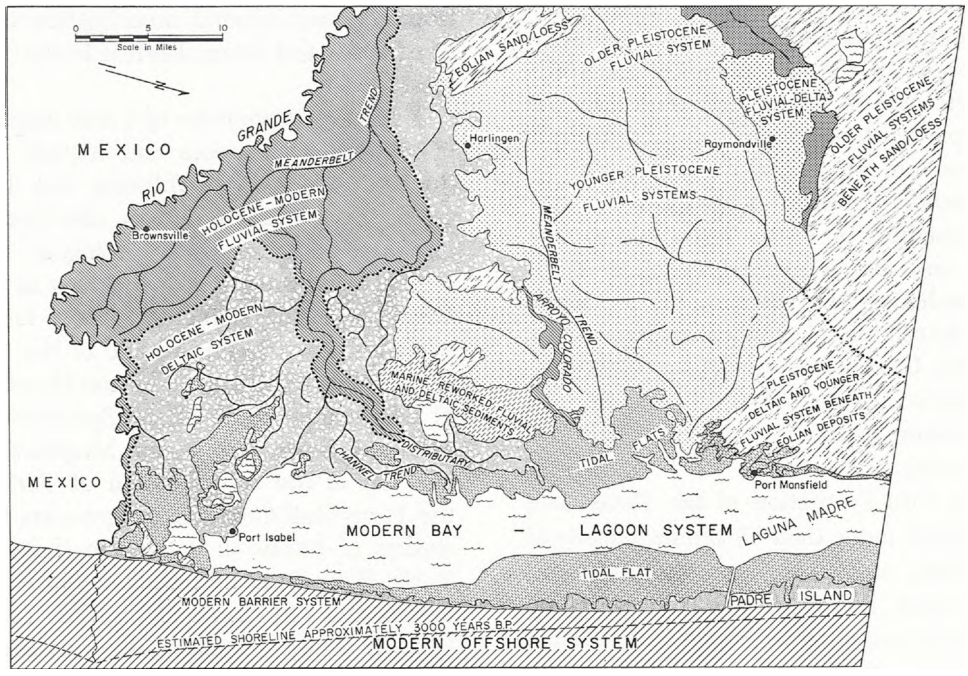
Coastal Studies—A long-term, major project came to



Subsurface sandstone distribution patterns and outcrop directional trends, lower part of Dockum Group, west Texas. (Figure 42 of *Bur. Econ. Geol. Rept. Inv. 97.*)

a close this spring with the publication of the seventh and final atlas section—Brownsville-Harlingen—of the *Environmental Geologic Atlas of the Texas Coastal Zone.* Frank Brown directed this innovative project, which has resulted in a series of maps depicting approximately 20,000 square miles of the entire length of the Texas coastal zone, within an area extending from about the five-fathom line offshore to 50 miles inland. Each atlas of the series consists of a descriptive text, an environmental geologic map (scale 1:125,000) and eight special-use maps (scale 1:250,000). Areas covered, in addition to Brownsville-Harlingen, are Galveston-Houston (1972), Beaumont-Port Arthur (1973), Bay City-Freeport (1976), Port Lavaca (1976), Corpus Christi (1976) and Kingsville (1977).

Another major coastal study, "Geology of state-owned submerged lands," coordinated by Joe McGowen and Bob Morton, is continuing. Related projects are a study of the biology of the State submerged lands in the Brownsville-Harlingen area, supervised by Bill White, and studies of surficial biology of the State submerged lands in the Corpus Christi and Houston-Galveston areas, supervised by Tom Calnan. In press and scheduled for publication this year are the Bureau's *Guidebook 17*, "Padre Island National Seashore—A guide to the geology, natural environments, and history of a Texas barrier island," by Bonnie R. Weise and William



Natural systems defined by environmental mapping in the Brownsville-Harlingen area. (Figure 4 of Bur. Econ. Geol. *Environmental Geologic Atlas of the Texas Coastal Zone—Brownsville-Harlingen Area.*)

A. White; and *Guidebook 20*, "Modern depositional environments of the Texas Coast," by Bob Morton and Joe McGowen.

Geologic Mapping—The publication of the Marfa and Emory Peak-Presidio sheets of the *Geologic Atlas of Texas* during the past year leaves only six more sheets of that *Atlas* remaining to be issued. Field work and scribing have been completed for the Dalhart, Tucumcari, Fort Stockton, Sonora and Llano sheets, and Joe McGowen is finishing up field work on the Wichita Falls-Lawton Sheet of the *Atlas*. Virgil Barnes is directing this major, long-term project, which may be finished in 1981. Virgil also is preparing a new geologic wall map of Texas, which will be published in four quadrants at a scale of 1:500,000. This map is being derived from sheets of the *Geologic Atlas of Texas*; its completion date will depend on completion of the *Atlas*.

Jerry Wermund and James Macon are coordinating the preparation of geologic maps of Texas Quaternary rock units as this State's contribution to the U.S. Geological Survey map series, "Quaternary Geology of the United States," (scale 1:1,000,000).

More detailed descriptions of many of these projects and of additional projects are contained in the *1979 Annual Report* of the Bureau. That report and a complete catalog of publications are available without charge on request to the Bureau of Economic Geology, University Station, Box X, Austin, Texas 78712; telephone (512) 471–1534.

BUREAU FACULTY

Frank Brown directed the Bureau's research projects involving nuclear waste isolation in east and west Texas, uranium resource assessment, mapping, coastal geology, oil and gas potential of the Frio Formation, among others. Most of these programs are located at the Bureau's research facility at 1300 Lavaca (commonly referred to as Bureau South). Frank also shared the teaching of a course in seismic stratigraphy with Milo Backus and Dick Buffler.

A superhuman effort this year by Raul Solis and assistants, Steve Van Dalen and David Johns, brought Frank's regional Cisco-Wolfcamp subsurface program close to completion. Frank contributed an introductory paper on cratonic delta systems to the Tulsa Geological Society's special publication on Pennsylvanian mid-continent sandstones. A milestone was reached this year when Frank, Joe McGowen and Bill White of the Bureau completed the Brownsville-Harlingen Environmental Coast Atlas. This is the seventh (and last!) of the coastal atlas series initiated in 1969.

Frank, as associate editor of AAPG, kept busy reviewing papers. Also, much to Mettie's dismay, he again spent his annual vacation time by operating with the AAPG Continuing Education Program. Overseas lectures on seismic stratigraphy were presented in London, Edinburgh, Buenos Aires, Singapore and Jakarta. Frank and Bill Fisher continued to cooperate in the Austin Petrobras program. They presented results of the program in Rio in July. Frank's resolution for the next year is to finish the book on basin analysis which he and Bill Fisher keep working on in their spare time!

Bill Fisher continued to direct the several research activities of the Bureau as well as the University's Council on Energy Resources. He taught a course in energy and mineral resources in the spring with Pete Flawn and Bill van Rensburg.

Bill maintained a busy schedule of lecturing, talking to about 60 different groups over the past twelve months. He also serves on some 35 professional, governmental, and private committees and councils. Bill was also named president-elect of the Association of American State Geologists.

Bureau administrators, Bill Fisher (second from left) and Jerry Wermund (far left), visit with Advisory Council members Ken Martin (second from right) and Bill Stokes (far right) at GCAGS luncheon in San Antonio.

Bill Galloway has divided his research time between continuing studies of the depositional setting and geochemistry/paragenesis of south Texas uranium deposits and a regional synthesis of the Frio Formation and its voluminous contained petroleum. Participation in several short courses and seminars has taken Bill to such exotic places as Australia, England and Columbus, Texas. Bill states "Only in Columbus did I have more time to spend than I would have wished."

During fall semester Bill cotaught (with Bill Kaiser) a graduate course entitled "Sedimentary Economic Geology" which focused on mineral deposits found in sedimentary rocks including lignite and uranium, especially important deposits of south Texas.

Bill Kaiser continues his research on Texas lignite. A new report on the lignite resources of Texas will be jointly published this fall by the Bureau and the Texas Energy and Natural Resources Advisory Council. The study is based upon extensive proprietary industry data. Bill and coworkers have begun a study of the Powder River Basin; it is funded by the Electric Power Research Institute as part of a larger project to evaluate uncertainty in coal resource estimates. Bill is excited to be learning about a different coal basin and anxious to apply methodology developed in the Texas Tertiary to the Wyoming Tertiary. At the same time Bill has become involved in sandstone diagenesis research funded as part of the Bureau's overall geothermal effort. His particular interest is the geochemistry of brines in natural and experimental rock systems.

Charlie Kreitler had a busy year between his teaching activities and his responsibilities at the Bureau of Economic Geology. This was Charlie's first year in teaching his graduate course in hydrogeology. Putting a new course together was very time-consuming, but an equally rewarding experience. Charlie's prime responsibility at the Bureau was directing their program on the suitability of salt domes in the East Texas Basin for geologic isolation of high-level nuclear waste. Trying to assess whether salt domes will be hydrologically and structurally stable for ¼ million years has proven to be an interesting geologic problem. Over the last year Charlie's other research interests have been in the role of ground water in geologic processes and the feasibility of using ground-water heat pumps in Texas.

Joe McGowen reports a busy year. He completed the uranium resource evaluation of the Lubbock and Amarillo quadrangles for the U.S. Department of Energy but "inherited" a new task, namely the last quadrangle, the Wichita Falls Sheet, of the Geologic Atlas Project. Joe served as a consultant, with Bill Fisher and Jerry Wermund, to the Texas Department of Water Resources relative to use of inspissated oil from IXTOC 1 for dune stabilization. He also continued to work with Bob Morton, Bill White and Tom Calman on the State submerged lands project while beginning work on cores taken from surface to depths of 4,000 feet in Palo Duro Basin as part of the Bureau's nuclear waste isolation study.

Bob Morton says this past year brought many new experiences and changes in his research direction. Last September, he and his wife traveled to the Netherlands where Bob attended the International Association of Sedimentologists Meeting on Holocene Marine Sedimentation. With careful planning and much assistance from the crack trains in western Europe, the Mortons were able to visit England, Holland, Germany, Switzerland and France.

Upon returning to Austin, Bob was appointed as coordinator of geothermal studies for the Bureau. In this new role, he also coordinates all the geopressured-geothermal research at UT funded by the Department of Energy. Bob's new responsibilities also include management of Bureau West, the second off-campus facility which is located in Tri-Towers. Some would consider this an enviable position because Tri-Towers is also a women's dormitory.

In addition to administrative duties, Bob manages to find time for research problems dealing with the methane dispersed and dissolved in hot overpressured brines of the Gulf Coast. Results of some of this work will be presented this summer in Laxenburg, Austria, at the IIASA Conference on World Natural Gas Resources. The potential of this unconventional gas supply has sparked widespread interest which has resulted in numerous interviews and film sessions. The most notable of these reports were done for *Science* and WNET, a PBS affiliate in Atlanta.

Bill van Rensburg cooperated with Pete Flawn and Bill Fisher in presenting a graduate course entitled "Mineral Resources" during the spring semester, and taught Geology 368, "Geology of Energy Resources" last fall. In June he taught a two-week course on the subject of mineral commodity economics at the Australian Mineral Foundation in Adelaide.

Bill has been appointed director and chairman of the executive committee of the Texas University Coal Research Consortium, in which UT is the leading university, cooperating with Texas A&M, the University of Houston, Texas Tech and the Texas Energy and Natural Resources Advisory Council.

He also served as chairman of a University-wide *ad hoc* committee charged with the task of designing a multi-disciplinary graduate program in energy and mineral resources. The Department is pleased to be an important component of that new program which encompasses, among others, concentrations in business, economics, engineering and public affairs.

Chock Woodruff continued his research on low-temperature (less than 100° C) geothermal resources. Initially, his work focused on warm-water-bearing aquifers along the Balcones and Luling-Mexia-Talco fault zones, but for the current DOE-funded research project he has extended the scope of study to encompass the entire state. Projected products of this research include a statewide map of thermal ground waters, a statewide thermal gradient map and a statewide Landsat lineament map. In addition, Chock and his research associates are conducting further work in central Texas, one facet of which is an assessment of geothermal resource potential for space heating and hot water needs at military bases in Bexar, Travis and Val Verde counties.

Chock presented some of his findings at a poster session at GSA in San Diego. While at the San Diego meeting, he attended a field trip to observe geothermal features of the Salton Trough. He also gave papers at U of Illinois, Urbana; an AAAS regional energy seminar at Arkedelphia, Arkansas; the Institute for Energy Analysis of the Oak Ridge Associated Universities, Oak Ridge, Tennessee; and the DOE-sponsored meeting of state geothermal resource teams at Salt Lake City. Chock serves as Texas' coordinator of hydrothermal/geothermal research for DOE's state-coupled geothermal research and planning teams.

Marine Science News

During the year, the administrative structure of the Marine Science Institute was changed in order to meet the increased and expanded research activities of the Institute. Gary Latham was appointed associate director of the Institute, as scientist-in-charge at the Galveston Geophysical Laboratory. Pat Parker was, likewise, appointed associate director of the Institute, as scientist-in-charge at the Port Aransas Marine Laboratory, with Robby Moore, as director, at Austin. This arrangement provides for quicker responses to administrative problems, facilitates more direct communication, and, not least, brings the geographically separated components of the Institute together. Also, the St. Croix Field Station was closed, and the title, director of mariculture, abolished.

In July, the Port Aransas Marine Laboratory was the site of the Regents' meeting and the MSI Advisory Council meeting. The Regents and members of the Advisory Council were Institute guests for a cruise on the R/V *Longhorn*, tours of the several laboratories and they attended a special one-day scientific session of presentations by staff and students on current research. It was our pleasure to have President and Mrs. Flawn and the other distinguished guests "aboard."

All MSI researchers met at a weekend retreat in Victoria, and provided many new ideas for future research projects. Three of the ideas generated at Victoria have already become funded research projects. Such retreats will become semi-annual events from now on, and we welcome visiting UT alumni to sit in with us.

A special hospitality service has been initated at both the Port Aransas Marine Laboratory and the Galveston Geophysics Laboratory whereby visitors are given conducted tours. If you and your family are vacationing in or near either Galveston or Port Aransas, do visit us—you are always welcome.

Of special concern to us all, but particularly to personnel at the Galveston Geophysics Laboratory, was our admission to membership in the Joint Oceanographic Institutions, Inc. earlier this year. Such recognition by our peer institutions (Scripps, Woods Hole, Lamont, *et al.*) is of much pride to the scientists of the Institute, and to the University. JOI, Inc. is already planning a major deep-coring program in the 1980's, estimated to cost between 700 million and one billion dollars—a combined effort of academe, industry and government. With deep holes planned in the Gulf of Mexico, Atlantic shelf and Caribbean, MSI marine geophysicists can be expected to carry the UT flag in site surveys, seismic stratigraphy and other endeavors of this highly imaginative program.

RESEARCH PROGRAM

Our proposal for a major investigation of selected intra-slope basins off the Texas and Louisiana coast of the Gulf of Mexico was accepted by several major oil companies and, as we go to press, the final plans are being made and the ship is being prepared for this research. At-sea activities include multichannel seismic profiling, magnetometry, PDR and piston coring of the bottom sediments. Subsequent laboratory studies include seismic stratigraphic and structural mapping, analysis of the textural, mineral and geochemical properties of the cored sediments, including mass spectrometry of the organic fraction. The objectives of this research are related to achieving a firm understanding of intra-slope depositon, diagenesis and facies development. There is a real need to understand the setting for generating proto-petroleum compounds, and where anoxic bottom waters are present, for studying the ultrafine authigenic sulfide mineral genesis.

Continuing work on Caribbean and Central American earthquakes is based on existing seismograph networks operated by the Galveston group in Costa Rica, Honduras and Guatemala, plus a network recently installed in the Dominican Republic. Paleomagnetic studies in Mexico, Guatemala, Panama, Costa Rica and Jamaica are also proceeding. The most successful MSI ocean bottom

seismograph expeditions of the past year have been on the Kodiak shelf and slope where data on earthquakes of an active subduction zone are being gathered. Several new strong-motion seismographs for the ocean bottom have recently been tested in this area by the MSI group.

The IXTOC oil spill made its way to the front door (tracked in by visitors) of our Port Aransas Marine Laboratory, where Pat Parker marshalled the expertise of many MSI researchers to pursue "now" research on the distribution and chemical degradation of the floating blobs of crude oil. MSI scientists quickly established the chemical fingerprint of the IXTOC crude, which will give us much better control on future spill studies, particularly the buried pieces of crude.

The Galveston Geophysics Laboratory operates the research vessels *Ida Green* and *Fred H. Moore*. The latter, a December 1978 gift from the Mobil Oil Corporation, on its first UT cruise from February thru August 1979, performed deep-sea drilling site surveys and recorded reflection profiles in basins of the South Atlantic. In early 1980, the *Fred H. Moore* was occupied with seismic surveys of drilling sites in the Straits of Florida. In the Greater Antilles and Bahamas from mid-June thru late August, the vessel made a major addition to the GGL Caribbean tectonics seismic data base. Looking ahead, the *Fred H. Moore* will be involved in a much expanded research program in 1981, including new seimic surveys in the Gulf of Mexico, Caribbean and Atlantic. Likewise, the R/V *Ida Green* is scheduled for survey cruises in the Gulf of Mexico and off the coast of Central America, including combined geophysics and geological investigations.

Advances in our animal detection of pre-earthquake events have lead us to expand this research project, and our researchers, notably Ruth Buskirk, have presented keynote papers on the research at several recent conferences.

TEACHING PROGRAM

The Department of Marine Studies is a graduate department with offices on the first floor of the Geology Building. Presently, the Department is preparing a plan for MA and PhD degree programs in marine studies which may be enrolling students by Fall 1981. Meanwhile several geological sciences graduate students and (during the summer of 1980) Wayne Pennington of the departmental faculty, are doing research at the Galveston Geophysics Laboratory. We are pleased to have Wayne working with our Galveston team, and we look forward to a continuing cooperation.

The Department of Marine Studies offers a limited number of classes on the Austin campus. Graduate study programs are offered as well as introductory courses in marine studies and oceanography for undergraduate students. In addition to the Austin course, the Department offers summer courses at Port Aransas for both upper-division undergraduates and graduate students, and at Galveston for graduate students.

Graduate students in the marine studies program usually spend two semesters on the Austin campus taking courses within the students' major departments. The students then continue at one of the facilities of the Marine Science Institute (Galveston Geophysics Laboratory; Port Aransas Marine Laboratory; including the mariculture research and teaching facility in Port Aransas), where they take advanced courses and conduct thesis or dissertation research.

Graduate students in the chemical and biological sciences do their research at the Port Aransas Marine Laboratory. Geological sciences students who are doing their work in coastal sedimentation or coastal processes also utilize the facilities at Port Aransas for their research program. Students in geological sciences (including geophysics) conduct their research through the Galveston Geophysics Laboratory where they may participate in marine geophysical, geochemical and geological studies in the Gulf of Mexico and throughout the world; tectonic studies of the Gulf Coast region, Central America, Mexico, west Texas, the Pacific Northwest and Alaska, and the western Pacific Ocean area; earthquake studies and lunar and Martian seismology; and lunar magnetism and paleomagnetic studies in Central America.

The faculty of the Department of Marine Studies approved a proposed new graduate degree program (MA and PhD in marine studies), and the proposed program has been forwarded to the UT Administration. While we will continue to co-sponsor students doing purely disciplinary research with departments at Austin, the new degree program will provide a much better graduate study program for those students who wish to pursue multidisciplinary or interdisciplinary research, e.g., thesis problems involving clams, sediments and currents, or marine minerals exploration research involving geology, physical oceanography and chemistry. Clearly, new students in this new program will add to the number of those already taking several of the geology courses that we consider as core courses in marine science.

MSI GEOLOGY FACULTY

For **Jim Dorman**, this was the year when tilt measurements began at Chocolate Bayou. Data of micron sensitivity are being obtained from a 1-km buried system of liquid tubes. Jim's group is now attempting to sort out tidal, instrumental and secular tilt effects. Jim has

also been involved this year in planning a program of earth strain measurements using the Astronomy Department's satellite laser ranging system as a geodimeter. Long range field tests are being conducted in the Davis Mountains this summer. Jim also believes that his student, David Dumas, has identified an active fault in the Marfa Valley, between Valentine and Van Horn, on which occurred a large 1931 earthquake which shook west Texas and surrounding areas. With Clark Wilson and Gary Latham, Jim went to sea in July 1979 to gather data on seismic surface wave propagation in several areas off Louisiana. They returned to sea aboard *Ida Green* three times during January to gather further wave propagation data from the shelf and slope south of Galveston. Analysis of these data is proceeding as a graduate research project.

Gary Latham was appointed associate director of the Marine Science Institute with new duties and responsibilities as the scientist-in-charge of the Galveston Geophysics Laboratory. He had a full measure of headaches and cliff-hangers in getting the R/V *Fred H. Moore* cruise plans and personnel ready in time to begin the 1980 cruise season. With early seismic traverses near Cuba, a new program for managing all ship operations, plus considerable turnover of clerical and artificer personnel, he has had his hands full. Nonetheless, he found time to make two cruises in Alaskan waters to place ocean-bottom seismometers on the seafloor off Kodiak.

For **Robby Moore**, this year has been his busiest ever. He has revamped the administrative structure of the Institute, helped initiate new research projects in mariculture, marine geology and in marine minerals exploration. In October, MSI co-sponsored the Tenth Underwater Mining Institute when it was held at the Galveston Geophysics Laboratory under Robby's chairmanship. Although much of his time has been devoted to administration, he has now found a bit of time in which to plan and initiate the new MSI program in marine minerals and to supervise some student work.

Currently, Robby is preparing the Decade of '80's Plan for the Institute, chiefly to detail research directions for the Institute in the ten years ahead, to initiate new research programs, and to plan better ways for pulling personnel, laboratories and ships together in order best to meet new goals and new opportunities.

Joe Worzel retired in mid-1979, and has written from his new home in North Carolina that he is enjoying golf, gardening, travel and the fun of not having to worry about budgets, proposals or ships. We wish for Dottie and Joe all happiness in retirement.

Students gathering multi-channel seismic data from the Caribbean during the 1980 summer cruise of the R/V *Fred H. Moore*.

Alumni News

Summer Field Course, Brady Texas, Summer 1948. (Back row, left to right) Jack Mothershead, Keith Levy, George Marshall, Coy Warren, Ben Morgan, George Walker, Jack Major, Fred Hoeninghaus, Enrique Medina, A. M. Olander, Howard Lowe. (Front row, left to right) R. L. Ripple, L. E. Hoover, Calvin Smith, Joe Kitchens, Charles Jones, Bill Poe, Jim Hooton, Bill Murrah, Bill McIntire, Bill Burney, Dr. Bullard. (Photo contributed by George Marshall.)

Edwin V. Acker (BS '56), a rancher and consultant in Tilden, Texas, comments, "Bev and I are staying busy ranching, consulting and remodeling two houses. We enjoyed seeing everyone at the convention in San Antonio."

Samuel C. Adair, Jr. (BS '56) writes from Stavanger, Norway, where he is a geophysical associate with Esso Expro Norway. "Our daughter, Donna, will finish UT Austin this year with a major in clay sculpture. Sammy has a lovely 20-month-old daughter, so we are grandparents. We plan to repatriate to the USA in early 1981."

G. Baxter Adams, Jr. (BS '51, MA '53) is an independent geologist in Houston.

Jim W. Adams (BS '51) reports he is president of the Andrews, Texas, Geological Society for 1980. "We have enjoyed four field trips during the first 1½ years of Society existence. The latest was a float trip through Santa Elena Canyon, Big Bend." Jim is senior exploitation geologist for Exxon.

William H. Adamson, Jr. (BS '51) writes from Midland, "Pat Bolden (BS '51) and I have joint offices and business interests. After 29 years we are 'mapping partners' again. Kinda nice, but he still steps over those high fences. I just climb them and break them down."

Floyd J. Adcock (BS '55) is working offshore Texas for Marathon Oil Co. in Houston.

William A. Akersten (BS '63, MA '67) works for the George C. Page Museum in Los Angeles. "Still in charge of scientific activities at Rancho La Brea. Fallout from California's Proposition 13 is keeping us on the ropes. One bright spot: Holly Marjorie Akersten, born April 19, 1980."

C. W. Alcorn, Jr. (BS '52), partner in Alcorn Development Co. in Victoria, Texas, is "still looking for oil and gas in Mississippi, Louisiana, Arkansas, and Texas with the current emphasis along the 'Austin Chalk trend' in central Texas. Daughter, Anne, graduated in May from SMU; Lexey a junior at TCU, Charlie graduated from high school. Dorothy at home writing short stories and waiting to be discovered." Chuck also spends time assisting the Department as a member of the Geology Foundation Advisory Council.

John L. Aldridge (BA '70), an anesthesiologist, says, "I enjoy practicing medicine here in Tulsa. I am constantly running into people associated with the oil business. I miss my old friends in geology. If anyone knows the whereabouts of Chuck Caughey or Nugent Brasher, I surely would enjoy hearing from them."

Michael Amdurer (MA '78) is working on his PhD dissertation in geochemistry at Lamont-Doherty Geological Observatory in Palisades, New York. "I am studying the chemical speciation and removal mechanism of trace metals in the estuarine environment using radiotracers in large microcosms."

E. L. (Gene) Ames, Jr. (BS '55) is president of Venus Oil Co. in San Antonio. "As a member of the Council of the Geology Foundation I have been exposed to the outstanding work that Dr. Boyer and his staff are doing in maintaining a position of pre-eminence nationally with the Department, and this is a source of tremendous pride to me."

David L. Amsbury (PhD '57) is still working at NASA in remote sensing and learning about statistics and computers. He taught a course in environmental geology at University of Houston-Clear Lake City this summer. He and his wife, Ann, live in Seabrook. "Ann is selling marine electronics hardware and really picking up the lingo."

Nancy Jenswold Anderson (BA '50) is a partner in Planning and Participation Systems, with offices in Dallas and Austin. "Specializing in socio-economic studies, environmental resource development management, public participation programs, environmental impact studies, urban planning work takes me all over the southwest, as well as other parts of the country."

Payton V. Anderson (BS '45) is still active in exploration for oil and gas in Permian Basin, Rockies, and southeastern states as a partner in W. D. Anderson & sons in Midland. "Same wife, Evelyn (UT '45), three daughters and three grandsons with one more on the way. Love to travel and play golf."

Thomas H. Anderson (MA '67, PhD '69) writes, "I am happy to report that I was promoted to associate professor of geology at the University of Pittsburgh. Still clawing through the marvelous geology of Sonora, Mexico. Tanna spent part of the winter teaching at the local high school. Both kids are avid soccer players."

Edgar P. Armstrong, Jr. (BS '51) lives in Dallas where he is national coordinator of petroleum examinations for the Internal Revenue Service.

Robert N. Arrington (BS '51, MA '54) is director of the mineral resources division of Texas Eastern Corp. in Houston. "Job responsibilities have been expanded to cover exploration, development and mining of uranium, coal and other hard minerals."

E. R. (Bob) Atwill, IV (MA '60) says it's "nice to be back in a domestic (US) job after seven years in foreign exploration which included about two years in Libya and about three years in Bolivia." Bob is now exploration manager, interior division, for Occidental Petroleum Corp. in Bakersfield, California.

Sara Avant (BS '78) says, "I am still enjoying New Orleans and all it has to offer. I've loved moonlighting as a tour guide for everyone who's wandered this way." Sara is a production geologist for Exxon.

Herbert A. Babione (BS '40), geologist with Exxon in Corpus Christi, writes, "Norma and I are enjoying living in Corpus and I am pleased to be working in an area where both my company and industry are actively adding to the country's oil and gas inventory."

A. C. Baker (BS '51), independent geologist in Wichita Falls, Texas, reports that Wichita Falls is coming back strong and fast after last year's tornado. He rebuilt, and is not "throwing any more wild parties."

Ernest T. Baker, Jr. (BS '55) continues to work for the U.S. Geological Survey in Austin, as subdistrict chief of the Austin subdistrict. "Son graduated this year from Austin High, daughter is a high school sophomore. My wife is a full-time homemaker."

Gus B. Baker (BA '49, MA '51) is vice president and Gulf Coast division manager for Energetics, Inc. in Houston.

Jerry D. Baker (BS '51) writes from Dallas, "Last year I reported being with the same company for 15 years, so what should I do but up and quit and move to a very fine and considerably smaller firm by the name of Magill-Cloyd Consulting Engineers. One needs to look over the top of his rut every now and then. My congratulations to the staff of the *Newsletter* for a continuing fine job. No rut in sight with these people."

Robert A. Baker, III (PhD '70) comments, "Howdy, out there! The Bakers are still here and kicking. We're up to two girls and three boys. Still at Exxon, still in Houston. Would like to thank David Alt for starting me on my career in geology."

W. F. Baker (BS '51) writes from Amarillo, "I have been assigned new duties with Diamond Shamrock and enjoy them very much. Youngest son, Dave, is enrolled as a junior at UT and oldest son, John, lives at Lakeway. I'm certain this will involve many trips to Austin in the future."

Donna Balin (BS '78) notes, "My work with the U.S. Geological Survey in Menlo Park, California will take me to the Brooks Range in Alaska this summer. Our field work will be based out of an Eskimo village called Anaktuvuk Pass in the central part of the range. If I can brave the bears, helicopters, and mosquitoes, it should be an exciting and productive project. My best to all."

James M. Balogh (BS '72) is district geologist for Exchange Oil & Gas Co. in Houston.

Alcides Paulo A. Barbosa (MA '77) is chief of the geophysics section at Petroleo Brasileiro's research center in Rio de Janeiro.

William B. Barnhill (MA '50) is a consulting geologist in Roswell, New Mexico. His sons, Clayton and Christopher, are majoring in geology at the University of Arizona and the University of California, respectively. "Why they chose these second-rate schools is beyond me."

Tim Barrett (att. '68-'74), a counselor for Travis County in Austin, writes: "I am currently working with people (who at times can be harder than llanite!). Keeping my hand in geology doing occasional research projects on the side."

Thomas D. Barrow (MA '48) is chairman of the board of Kennecott Corporation in Stamford, Connecticut. He continues to be an active member of the Geology Foundation Advisory Council.

Jerald H. (Jerry) Bartley (BS '37) is a geologist and independent oil operator in Midland. "All of my family are OK. Enjoying remote sensing of satellite images in exploration for new oil and gas reserves in west Texas. The *Newsletter* is the greatest thing since the wheel! Please keep it coming."

Tab Bartling (BA '79) is employed as a geologist in Houston.

Gerald S. Barton (MA '71) says, "Barb and I live in Washington, D.C. with daughter Kristin, who is 9. We have three acres and old white farmhouse on a Shenandoah meander; but it is probably no rival to Will Reid's Colorado estate. Work is with environmental projects; OK, but far from geology." Jerry is chief of the systems design branch, National Oceanic and Atmospheric Administration.

Robert W. Baumgardner, Jr. (MA '79) is a research scientist associate for the Bureau of Economic Geology in Austin.

Lynn S. Beeler (BS '62) is a Major in the U.S. Army in Killeen, Texas. "Currently working on a master's in computer science. Upon finishing 20 years in the service, would like to relocate in Austin or San Antonio."

Rick Bell (BA '78) is teaching earth and physical science at Bassett High School in El Paso.

Sid Bell (BA '46) is owner of two jewelry companies in Tully, New York. "The hectic silver/gold market has depressed sales of our sportsmen's jewelry. But to compensate, our pewter buckles, boxes and clocks are selling well. I started the second business two years ago, but it got too big too fast, so I gave it to my son-in-law to manage. We do a big volume in custom buckles. Built a 50x40' log shop next door last year. This year we get machinery and begin our own pewter casting in order to maintain better control over quality. I get in about four or five big game hunts a year for elk, caribou and bear. Collect nice firearms and recently have made several muzzle-loading rifles. A grandfather several times over now—but still need a 36-hour day to get everything done."

Walter E. Belt, Jr. (BS '43) is a partner in Trio Exploration Consultants in Houston.

James B. and **Kathryn G. Bennett** (BS '61; BA '61) write from Houston, "Formed a partnership with a friend and colleague after being associated with Belco Petroleum Corp. for eight years, and now waiting for offices to be constructed. We will be exploring the Tertiary of the Texas Gulf Coast and the Mesozoic trend from Florida to east Texas. Daughter, Kathryne, has conned Grandma into a trip to Hawaii in August and the rest of the family is standing around with their mouths agape. Wiley (7) is doing great. Kathryn and I enjoyed seeing many old friends at the convention in San Antonio."

Charmaine C. Bentley (BS '77) got married in May, but still works as a data engineer for Magcobar in Oklahoma. "At least, I'm not living in Burns Flat anymore. Elk City has a population of 15,000 as opposed to 2,500 souls of Foss and Burns Flat."

Ed Berg (BS '67, MA '70) moved to Houston from Stavanger, Norway in June. "Contact me at Amoco International. Looking forward to seeing some old friends now that we're back stateside!"

Earl H. Bescher (BS '40) still lives in Houston, "where all my children and grandchildren also live." Earl continues as coordinator of professional recruiting for Exxon.

Don G. Bilbrey (BS '53, MA '57) is manager of enhanced recovery for Gulf Oil Exploration and Production Co. in New Orleans. "I'm looking forward to the next few years as enhanced recovery is finally coming to the Miocene sands of south Louisiana. This is the frontier area for a young and emerging part of the oil industry—and I look forward to the challenge."

H. Bruss Billingsley (BS '58) is president and chief executive officer of Denison Savings Association in Denison, Texas. He was recently nominated to serve a three-year term as director of Texas Savings and Loan League, the statewide trade organization representing some 300 savings and loan associations.

Russell C. Bingley (BS '62) is an engineering geologist for the department of water and power in the city of Los Angeles. "I have been performing geologic investigations for the seismic safety of dams in the Los Angeles water system."

Neal J. Bingman (BA '26) is retired in Wichita, Kansas. He enjoys reading the many publications he receives from the University and from SMU where his wife attended. "We also enjoy watching the TV serial 'Dallas'."

T. K. Bjorklund (MA '62) is now working as project geologist for an exploitation geology group in Amoco's southern division (midcontinent), in Denver.

Harvey Blatt (MA '58) says, "As of September, 1980, my three children will be at the University of California, one at Berkeley, one at Santa Cruz, and one at San Diego. I now accept CARE packages sent from third world countries. Another textbook, this time for undergraduates, due out from W. H. Freeman in March 1981—*Petrology: Igneous, Metamorphic, and Sedimentary,* coauthored with E. G. Ehlers of Ohio State University. A spinoff text, *Introduction to Sedimentary Petrology,* should appear toward the end of 1981."

Bob Bluntzer (BS '60) writes, "I'm in planning and development division of Texas Department of Water Resources; doing description of water outlook and problems in 25 metropolitan areas of Texas. Made personal trip to Cancun with wife, Jo. Hunted with Harlan Wolff (BS '60) last January." Bob lives in Austin.

David Bocanegra (BS '79) works as a geophysical assistant for Pennzoil in Houston.

Murray E. Body (BA '32), retired in Madrid, Spain, says "Always enjoy the *Newsletter*—like a letter from home. Still live in Spain, and the 'latchstring' is always out."

Silverio Bosch (BS '74, MA '75) lives in Corpus Christi where he is employed by McMoran Oil & Gas Co. as an exploration geologist.

Douglas L. Bostwick (MA '51) continues to work for Esso Production Malaysia in Kuala Lumpur. "We are now approaching seven years of overseas living—3½ years in Singapore and 3½ years in Malaysia. The two younger daughters are still with us and the older daughter and son are in universities in the States. I am now supervisor of exploration development projects. One field developed and two underway."

Don R. Boyd (BS '58) is executive president of Martin Exploration Co. in New Orleans. "My trips to Austin and to the Department of Geological Sciences always reinforce my feelings that the quality of our instruction and of our students is the best in the country! Good work!" Don will be the chairman of the Geology Foundation Advisory Council as of September 1, 1980.

Walter A. Boyd, Jr. (BS '53) writes, "Thanks again for the great job you are doing. Enjoy reading it so much!" Walter is senior reservoir geologist for Columbia Gas Development Corp. in Houston.

Southern W. Bower (BS '50) comments, "After many years in the oil field, Ann and I have set our roots in Georgetown (a little north of Austin), and we love the leisure life here."

Philip Braithwaite (MA '58), geological specialist for Mobil Exploration and Production Services Inc. in Dallas, is "still working on Middle East and European carbonate problems and enjoying the international travel. Daughter, Bridget, graduated from SMU last spring and wife, Barbara, finished her first year of teaching at Brookhaven Community College."

William A. Bramlette (MA '34), retired from Exxon, continues to live in Houston.

Tom Breedlove (BS '54) is a geologist for Marathon Oil Company in Houston.

David B. Brock (BS '65) is an independent in Corpus Christi. "I've found independence even better than anticipated—plenty of interesting, varied, effective work. Bev is active with Girl Scouts and the civic association, Amy is getting ready for dance recital, and Toby has become an expert 'turtle rancher.'"

Ken Brook (BS '67), a consulting geologist in Reno, comments: "Precious metal exploration activity is at a fever pitch in Nevada, so I have been quite busy. I haven't found my own gold mine yet but I'm sure looking."

Elmo Brown II (BA '72) lives in Denver, where he is a geologist for Placid Oil Co. He continues to work toward his master's degree from UT.

Thomas E. Brown (BS '56, MA '58, PhD '63) continues working as a consultant geologist in Forth Worth. "Son, Titus, starts UT Austin in fall, 1980. You may

not recognize him, but his father is now a bright shade of green."

George S. Brownell (BS '52) is exploration manager, Gulf Coast division, for Bass Enterprises Production Company in Fort Worth.

Richard T. Buffler (BS '59) says he really enjoyed spending some time last fall in Austin helping teach the seismic stratigraphy course. Dick is a research scientist at the UT Marine Science Institute Geophysical Laboratory in Galveston.

Selwyn O. Burford (BA '27, MA '28) writes from Tyler, "I swore I would retire at 80 (September 16, 1980) but companies here keep requesting special work. So, with inflation eating away at my Humble retirement fund, I have no choice but to continue to work. Am in excellent health and going strong."

Dave Butler (BS '55) is division manager of Chevron Resources in San Francisco.

Arthur B. Busbey and **Janet E. Nilsson** (BS '75, MA '77; BS 77) are proud to announce the birth of a cute daughter, Saramae, on November 26, 1979. "She really helps us keep some degree of sanity in Hyde Park!" Art continues work on his dissertation in anatomy at the University of Chicago, and Janet is working part-time at a hemoglobin clinical/research laboratory.

L. G. Byerley, Jr. (BS '52) is an independent geologist in Midland.

Julius A. Buchanan (BS '41) retired in Tyler, Texas on June 1 after having served 4½ years in the Army, worked for Union Production Co. 14 years, and having been coordinator of petroleum technology at Tyler Junior College for 22 years. "Now I am ready to start a fourth career which will be combined with a great deal of traveling."

Pat Parks Burbridge (BA '58) is a consultant for Sunmark Exploration in Richardson, Texas. "Still trying to juggle job and family. Wally and the three girls are doing great; the oldest graduated from high school in May. At work, I am enjoying the challenge of interfacing palynology and thermal maturation studies with geochemistry."

Burke Burkart (BS '54, MA '60) is on the faculty of the department of geology at UT-Arlington.

Hal H. Bybee (BA '41), coordinator for industrial, conservation and environmental affairs for Conoco Inc. in Houston, says, "Sally and I will have our new house at Lakeway completed between Labor Day and the end of September. I intend to work three more years but will spend lots of time at Lakeway (near Austin)."

Robert W. Bybee (BA '41) continues as operations manager, exploration department, for Exxon in Houston.

Warren J. and **Susan Kiefner Cage** (BS '50; BA '50) write from Houston, "We are both busy trying to find the elusive oil with thoughts turning more and more toward 'the golden years' in the Hill Country. We still enjoy the *Newsletter*." Jack is senior project geologist, Susan is senior regional geologist, both with Gulf Exploration and Production.

Dean L. Callender (BS '56, MA '58) is looking forward to the fall of '80 when he will have two sons at UT—the youngest planning to major in geology. Dean is vice-president of Dean Witter Reynolds, Inc. in Houston.

Donald H. Campbell (MA '62), petrographer with Portland Cement Association in Skokie, Illinois, says, "Work continues on microscopy of portland cement clinker and concrete. Also teaching and lecturing on these subjects. Living in this area has made me appreciate the Chihuahuan desert even more."

Alvin Candela (BS '41) writes, "I can't understand the high cost for energy while the major integrated companies continue to declare billions of dollars in profits. There is no question that inflation can never be halted as long as there is such greed. War seems inevitable in the Middle East." Alvin lives in Galveston.

W. Henry Cardwell (BA '38) is working as a consultant in petroleum geology in Houston. "Still working as an active member of the Geology Foundation Advisory Council and enjoying it very much."

A. T. (Toby) Carleton (BS '51, MA '52) writes, "After 19 years of being self-employed, I have taken a job with Pogo Producing Co. in Midland. I find it fun, exciting and challenging, but after being on my own for so long, it has required some adjusting on my part."

Royce P. Carr (BA '74, BS '76) is manager of lands and permits for Northwestern Resources Co. "Our company just announced its first Texas lignite mine. We are really busy with development work and permitting. Deborah and I still enjoy living in Huntsville but we really miss Austin. I get over to Austin about once every six weeks so that is somewhat of a compromise."

Gary D. Carter (BS '76) writes, "Don't give up on prospects for oil and gas in the Atlantic offshore. We are actively pursuing them, having had some success in the Baltimore Canyon (Block 598)." He is Atlantic offshore geologist for Transco Exploration Co. in Houston.

Jack C. Cartwright (BS '51, MA '55) writes from Midland, "Since July 1, 1979 I have become strictly independent in my operations. I have established a new office and am enjoying prospecting and investing as an independent oil operator. Now have three grandsons and last child completed high school in May. Barbara and I look forward to a new phase of life. Best wishes to all our many friends and acquaintances."

Dave Casey (BS '60), president of CCH, Inc. in Lafayette, is "still beating the earth in Oklahoma and Louisiana. Getting ready to attack Colorado. Feast and famine while hunting the big one. Satisfying Uncle Sam takes about 20% of my time and fighting him takes 30%, so I'm really productive only half the time (or less during football season). I've finally gotten Cynthia to pull for the Horns occasionally."

Robert D. Carter (BS '48, MA '48) is a geologist for the U.S. Geological Survey in Menlo Park, California. "Prudhoe Bay II still under our group. Two high points last year—Al Nelson's 1947 Brady class reunion at Vail and a three-week stint in Portugal with a DOE energy team."

Chuck Caughey (BS '69, MA '73) is an exploration geologist with Inexco Oil Company in Lafayette, Louisiana.

Donald E. Caussey (BS '51) was transferred by Pennzoil from Midland to Denver last summer. "We are busy drilling and look forward to a very active year."

Hank Chafetz (PhD '70) writes, "The big news for this year in the Chafetz household was the birth of our son, Joshua Aaron, in mid-September. Janet and Josh doing great, father still hasn't recovered." Hank is an associate professor in the geology department at the University of Houston.

John G. Champion (BS '47), an independent, comments: "I still live in Tyler, and I operate in the east Texas area. I enjoyed our 1947 summer camp reunion in Vail, Colorado last summer, especially seeing Dr. Bullard."

William D. Chandler (BS '51) is division geologist for American Quasar Petroleum Co. in Midland.

Walter Chatham, Jr. (BA '48, MA '50) sends greetings to everyone from Washington, D.C. where he is a geologist for the Federal Energy Regulatory Commission for the Department of Energy.

J. B. Chimene (BS '79) is a graduate student at the University of Houston.

Joe Christie (BS '58) is president of Christie Energy Co., Inc. in Austin. "Actively drilling in the Bend Arch area and soon to commence operations in Laguna Madre."

Rubie V. Christner (BA '29) is retired in Shamrock, Texas.

Uel S. Clanton (BS '55, MA '60, PhD '68), geologist for NASA in Houston, says he "co-authored a best seller, the USGS Miscellaneous Field Studies Map MF-1136 on faulting in Houston. The initial printing of 1400 copies sold in two weeks; we are now into the third printing and orders continue. Oh, for royalties!"

Mary Jo Clark (BA '46) is retired in Houston.

George H. Clements (BA '22) is retired in Denton, Texas. "I have good memories of the days with Dr. Bybee, Simonds, and Whitney and, with Emerson, can say that 'the things I have seen teach me to trust the Creator for the things I have not seen'."

Kelton Cloud (BS '73) writes, "We tried skiing this past winter for the first time and survived without any broken bones. Our five-year-old son, Joel, is now thoroughly hooked on it and I suspect we will be going back next year." Kelton is exploration geologist with Bass Enterprises Production Co. in Fort Worth.

D. B. Clutterbuck (MA '58) is vice president of financial services for Tipperary Corp. in Houston.

Robert C. Cobb (BS '77, MA '80) lives near Dallas, where he is employed as a geologist for Sohio Petroleum.

Lynn Coble (BS '79) is a geologist for Killam & Hurd, Ltd. in Laredo, Texas.

W. Howell Cocke, Jr. (BS '48) is an independent producer in Houston. "Last of the 'litter' is a junior at UT studying advertising. I attended a fine reunion of the Brady Field Trip class of '47 last July." He also looked forward to a two-week tour of Greece and Turkey last May with his family.

H. Grady Collier, Jr. (BS '49), a consulting petroleum geologist, says, "More prospects and ideas needed. Open invitation for all to drop in to visit when in New Orleans."

Bryan D. Collins (BS '50) planned a trip to Germany to visit his daughter and only grandchild during the summer. "Shelley and husband (Reagan Simon) living in Kyle, Texas. Son, Bryan, playing basketball at Churchill High in San Antonio. Joanne (BS Ed. '52) is teaching gifted children in NEISD." Bryan is chief of policy division, electronic security command, USAF.

James W. Collins (BS '56) says it's great to be a geologist—he's an independent in Corpus Christi.

John B. Comer (PhD '72) is an assistant professor in the department of geosciences, University of Tulsa.

Susan J. Conger (BS '70) lives in Houston where she is project geologist for Gulf Research and Development Co.

Tom Connally (Master's aspirant) lives in Ponca City, Oklahoma, where he is a geologist for Conoco. "Three years in the trenches and I still am planning to finish the MA. The oil companies make it very difficult to find time to work on the thesis. Expect a transfer overseas next year, probably to London."

Carlton Cook (BS '78) is a petroleum geologist for Superior Oil Company in Lafayette, Louisiana.

Carroll E. and **Marion C. Cook** (BA '23, MA '32; BA '22) continue to live in Austin, where Carroll is a consulting geologist. "Due to ill-timed minor medical problems, we did not take a long ship cruise last winter. We are planning to take two young grandchildren on Amtrak, from Houston to San Francisco and back, and on a ship cruise in July from San Francisco to Alaska and back. Future trips depend on how we get along on this one."

Beaumont B. Cooley (MA '55) writes, "About June 1 I accepted a transfer from Chevron Spain, in Madrid, to San Francisco, where I will have the responsibility of all economic analyses for Chevron Overseas Pet. Inc. After two years overseas and living, it seems, in airplanes, it will be nice to work in one place again and hopefully at a more leisurely pace."

John D. Cooper (MA '64, PhD '70) is a professor of earth science at California State University in Fullerton. "Enjoyed seeing old friends at GSA in San Diego last November. Looking forward to a sabbatical this coming fall—plan to work on lower Paleozoics in the southern Great Basin. I just completed my tenth year at Cal State; after the break, I'm anxious to begin a second ten."

Mary Beth Cooper (BA '66, MA '69) is district geologist for Kansas-Nebraska Gas Co. in Lakewood, Colorado. "Currently in charge of K-N's Niobrara gas play."

Glen Lee Corrigan (BA '55) is a library representative for Macmillan Publishing Co. in Houston. "Celebrated 30th wedding anniversary, 5/30/80. Family still collects Lionel electric trains. Anyone willing to part with one?"

Augustus S. Cotera, Jr. (BS '52, MA '56, PhD '62) writes from Flagstaff, "Still at Northern Arizona University but leaving teaching and research for a while to work as the assistant to the president and as acting vice president for academic affairs. Our daughter, Carol, finished her freshman year at UT-Austin and in another year our second daughter, Angela, will probably follow! The years do go by."

Relmon E. Cotten (BS '54) comments, "After 15 years I left Clovelly Oil Co., Inc. and started Langham Petroleum Exploration Corp. We now have offices in New Orleans and Houston with plans to open exploration offices in Oklahoma City and Denver very soon. Best regards to all." Relmon lives in Covington, Louisiana.

Jerry Covington (BS '43) is a geologist in Midland. "There is a lot of activity in the oil, gas and sulfur business in west Texas. We are getting more and more help in running our business from the Feds, and if anyone knows how to beat that problem, please let me know."

R. Wilson Cozby (BS '60) is a pedodontist in Tyler, Texas.

William P. (Bill) Craddock (MA '47), geological advisor for Exxon in Houston, has 38 years' service with Exxon. "Retirement can't be far off. Have two girls and one boy, all grown now. Have three grandchildren. Hope my friends of the class of '47 will read this and get in touch."

William W. Craig (PhD '68) reports that son Jeff graduated from high school this past spring, and son, David, will start to first grade next fall. "I've dropped my membership in Planned Parenthood." Bill is chairman of the department of earth sciences at the University of New Orleans.

Weyman W. Crawford (BS '50) lives in Houston and is senior vice president of Texasgulf Oil & Gas Co.

W. R. Cree (BS '52) is an independent operator in Abilene, Texas.

John C. Crowell (BS '39), professor of geology at University of California at Santa Barbara, says, "I'm still deeply involved in graduate teaching, research and national geological affairs (chairman, office of earth sciences, National Research Council); and other activities —paleoclimates (especially record of ancient glaciations), and tectonics (especially southern California)."

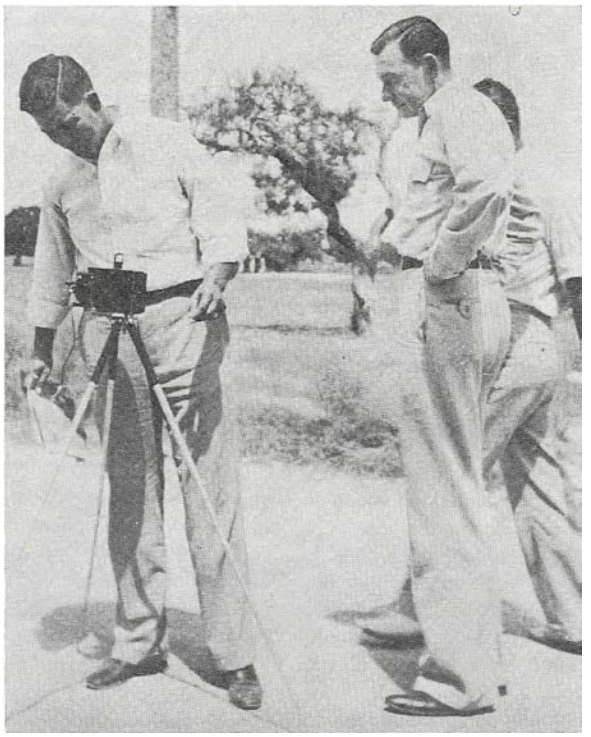
Max M. Crunk (BS '51) is a consulting geologist in Midland, "Still doing exploration geology and generating prospects. Daughter, Kathy, graduated 'summa cum laude' from Texas Tech in May."

Hugh W. Curfman (BS '48), independent in Lafayette, says his third son is now learning about the oil business with a forestry degree from LSU. "Still putting together 'good' drilling deals in south Louisiana."

David K. Curtice (BA '53) lives in San Antonio, where he is senior scientist with Southwest Research Institute.

Esther S. Cuyler (widow of Dr. Robert H. Cuyler) writes from San Antonio, "My son and I have just finished building and furnishing a house on our Bandera ranch. My grandchildren (boys—8 and 10) love to go there and run wild. Best wishes to all."

George H. Davis (MA '66), associate professor in the department of geosciences at the University of Arizona at Tucson, comments: "Still working on metamorphic core complexes and Miocene faulting, but will take off for Peru this summer to map folds and thrusts in the central Andes. Class project this semester—white-water rafting and mapping of the Salt River Canyon (yes, the river that washed out Phoenix). Mike, Matt, and Drew are 11, 9 and 6. Their hobby is wrestling with Tom Anderson when he passes through town on the way to Mexico. Merrily and I are doing fine."



Dr. Fred M. Bullard (left) and Dr. Robert H. Cuyler (right) teaching geology summer field camp, Brady, Texas, 1936. (Photo contributed by Holland C. McCarver.)

Larry J. Darnall (BS '58) lives in Dallas. "I became an independent on January 1, 1980. I'm engaged primarily in originating and screening drilling prospects with the emphasis on south Louisiana. It's really great to be spending the bulk of my time searching for oil and gas again without all the management responsibilities."

Franklin W. Daugherty (MA '59, PhD '62), president of D and F Minerals, Inc. in Alpine, Texas, writes, "Our new home outside Alpine has finally been completed. Still mining fluorspar in the Christmas Mountains, doing a little prospecting for precious metals, and hoping for rain."

Robert B. and **Mary Q. Davis** (BS '49; BS '48) live in Tyler, Texas, where Bob is presently employed as district geologist for Thomas D. Coffman, Inc. Mary continues her work as medical lab technician.

Leslie A. Dedeke, Jr. (BS '55) is "still picking seismic sections for Union Oil" in Houston.

Jonathan Scott deKanter (BA '79) is employed at the Villa Capri Motor Hotel in Austin.

Frederik E. Dekker (MA '66), exploration manager for Union Oil Co. of Egypt in Cairo, says, "Have settled in here in the land of the pyramids. Quite a difference from our last post in Thailand. Much to see and explore. Geology very varied and interesting."

Charles J. DeLancey (BS '40, MA '42) lives in Houston.

George P. Derry, Jr. (BS '49) is a consulting geologist in Corpus Christi. "We are still looking for that elusive oil and gas. Eldest daughter, Karen, has a new baby girl making the number of grandchildren four. My, how time does fly by."

W. H. (Bill) Devine (BS '48), consultant in Houston, says he "really enjoyed the first 'UT Rockhound Round-up' reunion of the 1947 'Brady Bunch' summer field course at Vail, Colorado last summer. Looking forward to the next reunion."

James E. Dobkins, Jr. (MA '68) works for Exxon Co. USA as a district geophysicist. "My wife, two sons and I are still enjoying life in the Sparkling City by the Sea—Corpus Christi. I continue to enjoy reading the *Newsletter*. Keep up the good work."

Thomas W. (Tim) Doll (BS '60) is director of wage and salary administration for Conoco Inc. in Houston.

George A. Donnelly, Jr. (BS '40) continues to be active on the Geology Foundation Advisory Council. He is president of Eastland Oil Co. in Midland. "Enjoy the *Newsletter* and hearing about the rest of the world."

A. K. Doss (BS '49) is still managing 10.5 million acres of State Trust Land mineral estate for the Arizona State Land Dept. in Phoenix. "Biggest play for the past year has been oil and gas. Anschutz Corp. is presently drilling a 20,000′ wildcat. Activity is still good in uranium geothermal resource. Copper is by far the largest generator of royalty revenue."

Gene C. Doty (BS '54) is "still working on (around?) waste disposal investigations at Nevada Test Site. This fall Mopsy and I will have three kids in UT—that's the lot of them. The geology profs can relax—none of them seems headed toward geology." Gene is hydrologist for the U.S. Geological Survey in Las Vegas.

Mike E. Douglas (BS '57) says his son, Kirk, will enter UT in the fall of '80 to study geology. His oldest daughter, Robin, received her degree in architecture from UT in '78 and is working in San Antonio.

Bill M. Doyle (BS '52) is an independent in San Antonio.

Larry Doyle (BS '50) is program manager, waste management research branch for the U.S. Nuclear Regulatory Commission in Washington, D.C. "Am in radioactive waste management. Plan and

contract research needed in geology and hydrology for the 'geologic repository' for high-level waste."

Ralph C. Duchin (MA '55) continues to consult for Zinn Petroleum Company in Houston.

Gail L. Duffin (BS '56) is conducting a groundwater study on the Edwards Aquifer in Williamson and Bell Counties as a geologist for Texas Department of Water Resources in Austin.

David E. Dunn (PhD '64) dean of the college of sciences, University of New Orleans, comments: "After a year of commuting between Chapel Hill and New Orleans, Gretchen has become a full-time resident of the French Quarter. Dusty and Peter are now on their own, while we are enjoying a new and altogether delightful life style. To my surprise, administration is proving to be just as much fun as field work, and a lot less sweaty."

William R. Dupre (BS '68, MA '70) writes, "The past year has been a busy one, giving talks in the Netherlands, San Diego, Bakersfield, South Carolina, and most enjoyable of all, Tech Sessions in Austin. Yet the best comes this July, with the arrival of a promotion, tenure, and most important, a new addition to the family!" Bill is an assistant professor at the University of Houston.

Connie Mayes Dyer (BA '58) writes from Houston: "The children are almost grown. Jeff is still at Southwestern U. and Kelly will be at Texas Tech this fall. BUT—we have added a fantastic surprise—John Steven was born September 10, 1979, and we're having so much fun, you'd think we had good sense."

Fred A. Ealand (BA '45, BS '48), exploration coordinator for Exxon Co. USA in Houston, comments: "Energy exploration today is busy, exciting, hectic and very challenging. Young geologists just entering the business world have a tremendous opportunity. All four children graduated from college, two married, one of which has presented us with two grandchildren."

Billy M. Easley (BS '48) is in the business of finding oil and gas "for Uncle Sam to share in the profits. Really hard to keep the old curve horizontal. David B. Brock (BS '65) is now associated with me." Billy is president of Easley Oil & Gas Inc. in Corpus Christi.

G. K. Eifler, Jr. (BA '29, MA '30) continues to maintain his consulting office in the American Bank Tower in Austin and welcomes all visitors, especially UT-exes.

Ab R. Ellis, Jr. (BS '50) retired from Texaco after 29 years. Now he is working as senior exploration geologist with Pioneer Production in Midland.

Ralph I. Ellsworth (MA '49) is a geologist and petroleum engineer in Houston. "Jackie and I are proud grandparents—two boys born in October, 1979, one granddaughter, age three going on seven. We have a place at Lakeway which affords us a chance to grow nearer to 'God's Country'. Come see us."

Albert W. (Al) Erxleben (MA '74) writes, "Charlotte, Jason and I have moved to Los Angeles—still with Exxon. Enjoying the climate and working Prudhoe Bay Field area. Will be traveling to several major US cities, as well as North Slope of Alaska."

Stephen D. Etter (PhD '79) is a geologist for the Texas Department of Water Resources in Austin. "Currently I am evaluating permit applications for commercial waste injection wells. Carrell and I bought a beautiful house about a year ago and are expecting our first child sometime in January, 1981. Gosh, it almost seems as if we're planning on staying around awhile!"

Will Evans (BS '78) is an area engineer, far east area, for Dresser Singapore Pte. Ltd. in Singapore. "When you are in the neighborhood drop by."

A. Gordon Everett (PhD '68), consultant with Everett and Associates in Rockville, Maryland, says: "Last year we did some fascinating work on a large gold and copper prospect in Papua, New Guinea—a big change from the southwestern US. This summer we will be working on a project in the Green River and Wind River basins and the Overthrust Belt. The company is thriving and the family is growing up."

John R. Everett (MA '64, PhD '70) writes, "I married Barbara Abrahams last July. Barbara, Jessica, Gretchen, Chris and I are living in Silver Spring, Maryland. Barbara is an AAAS Congressional Fellow working with Congressman Heftel on Capitol Hill. I'm working with Earth Satellite Corporation assisting people looking for oil, gas and minerals all over the world."

Rizer Everett (BA '37, BS '37) taught a course in geology of energy resources at UT-Austin during spring semester. "Plan to take the six grandchildren on tour of Williamsburg, Virginia, and other places of historical interest during the summer."

Max Eversberg, Jr. (BA '29) is retired in Albany, Texas.

Robert H. Fakundiny (MA '67, PhD '70), state geologist of New York in Albany, notes: "With at least three state geologists and one assistant state geologist from the alumni of the Department, maybe you ought to institute a course on how to do the job. It's tough without any training. Enjoyed the visit in April to the Department. Peeked in on the old graduate office and noticed by the name on the door that my old desk is occupied by a female graduate student. Little does she know that she is sitting at the desk of former chairman Steve Clabaugh. Best regards to all."

George H. Falk (BS '57) is still living in Rockport. "Now besides Austin I have 'Net Result' sport shops in San Antonio, Houston and Corpus Christi."

J. A. (Tony) Fallin (BS '69) writes from Terlingua, Texas, "When not floating with folks down the Rio Grande or doing slow burns when political leaders bungle their jobs, I've been hoping to receive word that I've been allocated funds to return to UT to complete a doctorate."

Thomas E. Fanning (BS '56) says, "After a three-year stint in Findlay, Ohio at Marathon's corporate office, we were delighted to transfer to Houston last fall."

Dorman N. Farmer (BS '50), owner of Fargo Exploration Co. in Abilene, Texas, says, "We are still surviving in spite of the present government regulations; however, they do make it harder. We are down to only two students at UT—things are looking up. When in Abilene, drop by to see us."

William A. Faubion (BS '50) is vice president of Wainoco Oil Corp. in Houston.

O. W. (Buzz) Fauntleroy (BA '48) is president of Vista Petroleum Company in Abilene, Texas. "Can the oil business or even the USA survive until the November elections? I only hope so."

Wiley R. Feist (BS '50) sent the following from Abu Dhabi: "My wife and I have been enjoying 'the cool breezes' off the Arabian Sea since coming from Dallas in December, 1978. I am a secondee from Mobil with ADCO. Two of our children are living in Dallas suburbs and the youngest is attending high school in Rome."

Walter M. Fitzgerald, Jr. (BS '53) is senior geologist for Temple-Eastex. "Enjoying our new corporate office building in Diboll. Still hammering the Yegua rocks and enjoying beautiful East Texas."

Robert C. Floyd (BS '58), a lawyer with Butler-Binion in Houston, says, "Have added a new member to my family—Kathryn Allyson, age 1½. Still doing trial work but handle a few oil and gas cases now and then."

Randy A. Foutch (BS '76) is exploration evaluation manager for Keplinger & Associates in Houston.

Hewitt B. Fox (BA '47, BS '48, MA '48), independent operator in Corpus Christi, writes, "I never had any idea how much money independent producers are making until I read the testimony presented by consumer groups in Washington. That convinced me I could afford to attend the International Geological Congress in Paris in July—hope to see some of you there."

Curtis C. Franks (BS '50) enjoys living in San Antonio, where he is area sales manager for Welex, Inc.

Glen Frantzen (BA '73) is projects co-ordinator/operations assistant for Pool-Intairdril in Tripoli. "Still in Libya—things have been rather interesting lately. Only change since last year is that I got married to a UT-ex last December, Betty Beazley. Best wishes to all."

Merle Freeman (MA '50) is exploration manager and general partner for Banner Oil & Gas Ltd. in Denver.

Darrell L. Frey (BA '70) is a uranium exploration consultant in Casper, Wyoming.

Annabelle Bannahan Friddle (MA '50) lives in Aztec, New Mexico and looks forward to the *Newsletter*.

Ralph E. Fuge (BS '49) works for Sun Gas Company in Dallas as administrative reservoir engineering manager.

Walter Louis Furche (BS '51) is a geologist with Santa Fe Minerals, Inc. "This is my 25th year in Midland. Life here could not be better."

Robert B. Gaines (BS '49, MA '51) comments, "Northern changed its name to Nortex. All is going well; Midland is booming. Enjoyed seeing so many friends in Denver. Surprising how so many have let themselves age so."

Jay L. Gallia (BA '73) is an attorney for United Energy Resources, Inc. in Houston.

Kathrin Leigh Gann (BA '43) notes, "Older daughter married last year and moved to Denton with her husband (NTSU-ex). I keep in touch with the oil business through my other son-in-law (UT-ex) who is a petroleum engineer. I like my job; it is hectic, infuriating and fascinating." Kathrin is traffic manager for Reichhold Chemicals Inc. in Austin.

D. G. Garrott (BS '51) is exploration operations manager for Exxon Co., USA in Houston.

Cameron H. Gates (BS '60, MA '62) lives in Corpus Christi where he is senior vice president of McMoran Oil & Gas Co. "After 20 years, we are still enjoying the search for hydrocarbons and the employment of our geological skills—the beginning of which were developed at the University of Texas. Looking forward to more and wish everyone the best."

Leroy Gatlin (BS '48, MA '51) is enjoying being a grandpapa in Oklahoma City. "Looking for a Pancho Villa to lead an attack on the windfall profit tax."

Henry B. Gayle (BS '58, MA '61) is manager of technical support for Holmes & Narver, Inc. in Las Vegas. "Been promoted and have moved into the alternate energy field—geothermal/geopressure and photovoltaic. Margee's doing a fantastic job for Easter Seals. Karen now at USC and Mike finished his first year in high school."

T. B. Geddie (BS '45) is an independent geologist in Houston.

David Easton Gee (MA '49), professor in the department of geology and geophysics at Midwestern State University in Wichita Falls, Texas, says, "Student majors in our department now total over 100, but classes are still small enough for individual attention. We could use some of your 'overflow'."

Fred Marion Gibson (BA '51) is assistant vice president and manager of policy owners' service department for American Founders Life Insurance Company in Austin.

Ronald M. Gieger (BS '63, MA '65) writes, "Life in Shreveport has been good to us. Our new business is buzzing and we are enjoying a new home. Lots of fine folks here, too." Ron is vice president of Williams-Gieger Resources, Inc.

Paul Giraudin, Jr. (BS '48) writes from Corpus Christi, "After spending ten years in another endeavor, it's good to be back in 'the profession' again. Nothing has changed but the economy and the size of the prospects." Paul is employed by Centura, Inc.

Arthur W. (Bill) Glover (BS '56) is district manager, west Texas and Rocky Mountain, for North American Royalties, Inc. in Midland. "Moved to a smaller, more stramlined, and more active company a couple of years ago. Looking for (and finding) oil and gas is actually fun again."

Elizabeth Merritt Goerner (BA '39) says, "By the time the *Newsletter* goes to press I will have changed my name to Mrs. Raymond A. Kenley. Ray is a first cousin of Kenley Clark's and has passed inspection by numerous other geologists from UT." Elizabeth lives in Houston.

Rusty Goetz (MA '77) is still chasing after uranium all across western New Mexico as an exploration geologist with Conoco Minerals/Uranium. She lives in Albuquerque.

Michael H. Golden (BS '78) is a geologist for Pennzoil International in Houston.

W. L. (Boots) Goode (BS '53) reports that all is well in the Permian Basin. "Come by when you are in the vicinity." He is a consulting geologist in Midland.

James E. Gordon, Jr. (MA '51) is a consultant in Corpus Christi.

Daniel E. Gorski (MA '70) is mine manager of Oro del Rey Mine in Callao, Utah. He lives in Denver.

Ronald L. Graner (BS '58), employed as technical support staff geologist for the Soil Conservation Service in Nashville, Tennessee, is "currently involved in field investigation of dam sites in the Reelfoot Lake section of the New Madrid seismic area. We are trying to evaluate the ability of foundation and embankment materials to resist and survive seismic events."

Richard E. (Dick) Grant (PhD '58) continues as research paleontologist and curator, department of paleobiology, National Museum of Natural History in Washington, D.C. "Had a fairly active year, with field trip to Greece and Turkey in the spring and to China in November. Attended the All-China Stratigraphic Congress in Beijing, then joined with a Smithsonian invited delegation and visited Nanjing, Shanghai, Kunming, and Canton. Chinese were friendly and hospitable; love that Chinese food! Hope the contact will lead to cooperative research in Permian paleontology."

C. DeVearle Gray (BS '57) is exploration manager, Mobil Exploration and Producing Services, Inc. in Dallas. "Sorry to have missed the luncheon in Dallas earlier this year—perhaps I'll make the one in Denver."

Donald M. Gray (BS '51, MA '53) lives in Houston, where he is staff geologist for Shell Oil Co.

Robert W. Grayson (BS '48) retired from Marathon Oil Co. in Findlay, Ohio on April 1. He is now a consulting petroleum geologist in Austin.

Willard R. Green (MA '55) writes from Midland, "Have been with Energy Reserves Group three years and find excitement in today's oil business. Have one daughter at Ft. Lewis College, Durango, Colorado, and another in high school."

John C. Gries (PhD '70) continues as associate professor of geology at Wichita State University in Wichita, Kansas. "It was good to see lots of old friends at GSA in San Diego. Non-geologic highlight of the winter was three weeks spent on a juicy arson trial as a juror. Hung the jury instead of the

defendant! Finished up my part of some Kansas NURE (uranium evaluations) in this area. Looking forward to a good field season. Stop in if you're this way."

Robbie R. Gries (MA '70) comments, "We all jumped ship when Getty bought Reserve Oil last year—but change is usually for the better, and opening an office for Mabee Petroleum Corp. in Denver has certainly been a good experience, in spite of ribbing over the name! Two jobs, two geological papers and two residences in one year are a load—hope 1980-81 is more relaxing."

Ariel Dale Griffin (BS '57) is retired in Houston.

Thomas W. Grimshaw (MA '70, PhD '76) is senior geologist at Radian Corporation in Austin.

Roy H. Guess (BA '39, MA '40), consulting petroleum geologist in Casper, Wyoming, says, "Drilling, wildcat exploration and new discoveries are all up from previous years. With the majors concentrating on the overthrust belt, the independents have lots of prospects all over Wyoming. $6 gas below 15,000' sure helps. I am expecting a good year."

W. Gumert (MA '65), geophysicist with Carson Helicopters in Perkasie, Pennsylvania, has put together the second helicopter-borne gravity system. "It's on the West Coast looking for structures. Third system on the drawing boards as more people accept airborne gravity."

Charlie Haas (BS '41) is owner of Charles F. Haas Oil Co. in Corpus Christi.

Karl F. Hagemeier (BS '49) is a petroleum exploration consultant in Houston. "Continue to buy leases in producing trends in the hope that we might enjoy a 'windfall'. Presently concentrating on the Frio (deep) and Austin Chalk (medium depth). Karl III in Baylor Medical School. Jeannie will enter UT-Austin this fall. Dottie and I are trying to adjust to the empty nest."

Edward J. (Ned) Hale (BS '60) lives in Oklahoma City, and is employed by Union Texas Petroleum as district operations geologist.

Curry Hall (BS '54) writes from Houston, "Moved over to Blocker Exploration Company last fall. Am evaluating south Louisiana drilling prospects. Enjoyed the anniversary celebration and barbecue at the Department last fall. Was very impressed with the facilities and projects on display."

W. T. Hancock, Jr. (MA '29) is retired in Houston.

Louis H. Haring, Jr. (BS '38) is an independent petroleum geologist in San Antonio.

Travis O. Harkness (att. '34-'36) has retired to ranching and manufacturing in Kaufman, Texas. "Patented Hayporter (round hay bale mover), and patent is pending on a mesquite sprout-root grubbing plow to offset ban on use of 2-4-5T."

Russell S. and **Karen Steinhoff Harmon** (BA '69; BA '70) have spent the last 2½ years in Scotland, where Russ is head of the stable isotope laboratory and Karen is working with the radiochemistry group, both at Scottish Universities Research and Reactor Centre in East Kilbride.

Weldon J. Harrell (BS '49) is a consultant petroleum geologist in Graham, Texas.

Cleason L. Harris (BS '51) is completing 29 years with Amoco, "mostly in New Orleans. Same wife (UT '51) and have the final two of four offspring in college. Keep that excellent *Newsletter* coming."

J. R. (Dick) Harris (BS '53, MA '57) continues as president of Bow Valley Industries Ltd. in Calgary, Canada. "Everything is continuing fine in our company; we expect sales this year of over $300,000,000 and we will invest over $100,000,000 in ten countries in search and development of oil, gas, coal, and uranium."

H. Lee Harvard (BA '55) writes, "Joanne (UT '55) and I stay busy with business and community affairs and travel. Alan, age 18, graduated from high school and enters SMU in the fall. Jeff, age 19, is still at Texas A&M and will start his junior year in engineering in the fall." Lee is a general partner in Harvard & LeMay Exploration Co. in Roswell, New Mexico.

Robert S. Harvill, Jr. (BS '50) lives in Houston, where he is division interpreter (Gulf Coast division) for Exxon Co. USA.

George M. Harwell, Jr. (BS '57, MA '59) is exploration manager, southern region, for Natomas in Houston. "After 21 years, my appreciation of the faculty at UT continues to grow. To those who contributed to my academic experience, I want to say again—thanks; you furnished the foundation upon which I could build my professional dreams."

Glenn D. Hatcher (BS '73) continues working for Houston Oil & Minerals Corp. in Houston.

Edward F. Haye (BS '51) is president of Benchmark Exploration Inc. in Houston.

Hugh Hay-Roe (MA '52, PhD '58) writes, "This is a big year for me; by coincidence, it's also the 30th annniversary of my first entry into (1) the oil patch (as a summer field geologist) and (2) UT. Those of us who arrived in Austin that year found the Geology Department, with the impetus of Sam Ellison and Ronald DeFord, in the midst of the fundamental changes that led to the international reputation the Department enjoys today. The influence of RKD on my life is still continuing; this year I left petroleum exploration to begin a new career in technical writing and editing. I'm in partnership with M. W. (Jerry) Murray, one of the top professionals in this field, and with Houston as a base of operations. Since many of our clients are oil companies, quite a few of the people I help are geologists (those who didn't have the good fortune to study the principles of effective scientific communication under R. K. DeFord). We'd be delighted to hear from old friends in the Houston area."

John E. Hearn (BS '52) has changed company affiliations "but am still doing my thing along the Texas Gulf Coast and south Texas." John works for Callon Petroleum Company in Houston.

Grant H. Heiken (MA '66) works as staff geologist, geothermal program, at the Los Alamos Scientific Laboratory in New Mexico.

James H. Helland (BS '43), an independent in San Antonio, writes, "We have all seen what punitive action (windfall tax) the Federal Government has inflicted on *all Texans*. I urge all who read this to become politically active nationwide in order to elect a Congress that will restore sanity to our government."

John D. Henderson (BS '37) is retired in Dallas.

E. R. Henningsen (BS '57) comments, "Last son, Sam, graduated from high school this year, will start at Tarleton State University this fall. Oldest son, Brandt, should finish his PhD at University of Southern Florida within the year. Middle son, Curtis, and wife working in Dallas. Wife and I working as usual to stay ahead of inflation." He is associate professor of geology at Tarleton State University in Stephenville, Texas.

L. R. Hensarling (BS '56) lives in Lafayette and is continuing to do exploration in south Louisiana. "My oldest son is finishing his master's degree in geology from the University in December, 1980."

Charles W. Henslee (BS '51) lives in Houston and is district geologist offshore,

Gulf of Mexico and Atlantic, for Diamond Shamrock Corporation.

Harold T. Henslee (BS '50) says, "Our fourth grandchild due in September. Still working and trying to avoid enough windfall profits tax to move back to the beautiful 'Hill Country'. Sure enjoy the *Newsletter*." Harold is an independent geologist in Amarillo.

Charles H. Hightower, Jr. (BS '56) is an independent geologist in Lafayette.

John D. Hill (BS '49) lives in Dallas and is chairman of the board of Hill Production Company.

Russell E. Hinote (MA '78) is "married, fat and happy here in the big city. Trying to keep on top of those Cretaceous critters." Russ is a petroleum paleontologist for Amoco Production Co. in Houston.

Paul B. Hinyard (BA '28) is retired from Shell Oil Co. in Tyler, Texas. "Being retired has one big advantage. You don't have to cope with all those government regulations. I am still enjoying good health and busy with various civic activities."

Nolan Hirsch (BS '44), an independent in Midland, is "staying fairly busy trying to keep ahead, looking for the good one. Family all well, enjoying first grandchild."

Dave Hixon (MA '59) writes from Houston, where he is employed by NASA: "Even Muehlberger comes by once in a while. Redaf dispenses information on imagery from JSC aircraft, Skylab and Landsat. Remarkable interest in the overthrust belt of the Rockies."

Carroll Ann Hodges (BA '58) writes, "Decided it was time to escape the proverbial rut—before it got too deep to climb out of—and a ten-year 'survival pin' from the Survey prompted me to act. Will be spending next year (9/80–9/81) in Washington, D.C. as AGU Congressional Science Fellow. Sounds stimulating, challenging and very demanding—but should at least clear out a few cobwebs. Rewarding opportunity, I hope—Washington scene could be fun for a year—and anyway, there are lots of Longhorns on the Potomac. However, leaving home, hearth, horse and community affairs in Woodside, California will be a soul-wrenching experience."

F. A. (Fred) Hoeninghaus, Jr. (BS '49), geophysicist for Exxon Co., USA in Houston, is looking forward to the next issue of the *Newsletter*.

Charles Wayne Holcomb (BS '37) retired from Exxon four years ago. "Doing some consulting on stratigraphy and micropaleontology. Have small ranching operation to keep me busy." He lives in Columbus, Texas.

Bill D. Holland (BS '54), says, "Same stand as last year—trying to add to Pogo's reserve. It gets tougher every year. Family is doing fine—son is trying to finish his degree in geology at UT. Oldest daughter presented us with the world's most beautiful granddaughter." Bill lives in Houston.

David S. Holland (BS '57) is senior vice president-exploration for Pennzoil Exploration and Production Company in Houston.

Kirk Holland (MA '73) is program manager for Radian Corp. in Austin. "The environmental services business is keeping me more than occupied, with travel throughout the US. It's still exciting, though, and is a good opportunity for hydrogeologists in particular."

H. W. Hollingshead, Jr. (BS '57) is manager, Midland district, for Pennzoil Co. in Midland.

Elena Kowalsky Holloway (BA '72) lives in Laredo, Texas, where she and her husband own two retail bakeries. "Bill and I have settled into our new home and are enjoying all the gardening that goes with it. Besides a myriad of perennial flowers, we have a sizable rose garden that requires much loving attention. Needless to say, Guy (4) and Grayson (2) are out there helping us, too."

James W. Hood (BS '48) writes from Salt Lake City, "Eva and I are approaching 16 years in Utah—a record length of residence in one location. With eight grandchildren and possible retirement down the road, I continue to plug away at Utah groundwater hydrology. Present subject is the Navajo Sandstone as an aquifer." James is hydrologist for the U.S. Geological Survey.

Eleanor M. Hoover (BS '56) is an exploration geologist for Exxon Co., USA in Houston. "Busy working Texas Gulf Coast onshore and offshore (State waters). Enjoyed the barbecue and open house celebration of the Geology Foundation's 25th Anniversary last October."

Lawrence E. Hoover (BS '48) is an independent in Corpus Christi.

Joseph Hornberger, Jr. (BA '29, MA '31) is president of Hornberger Bros. Properties, Inc. in Houston. "Tell Gus Eifler hello."

Blythe L. Hoyle (MA '78) lives in Denver, where she is employed by ARCO Oil and Gas as a geologist.

William P. C. Hudson (BS '75) writes, "The collapsing uranium market implies opportunity for making or breaking a new company. All is well in San Antonio. Cindy and I are expecting another baby in August." Bill is president of Brahman Energy.

Jack E. Hughes (BA '48) writes from Houston, "Joined C&K Petroleum in April and am enjoying it immensely, but working hard. This is my first experience with a Drilling Fund operation and I find it a little different, but exciting. Would like to have any of my old friends drop in, particularly if they have some good drilling deals."

Ed Hughston (MA '50) is doing consulting work from Taos, New Mexico for Dico Petroleum, Inc. of Dallas and New York.

Emmett A. Humble (BA '49, MA '51) is vice president and director of Esso Exploration, Inc. in Houston.

Elvin M. Hurlbut, Jr. (BS '43) has completed his 11th year at LBJ Space Center. "Working on earth resources and Space Shuttle documents. Had a nice visit with Norman Ewbank, who was here for the AAPG convention last year. Always enjoy the *Newsletter*. Keep up the good work." Elvin is technical editor for LTV/Kentron International, Inc. in Houston.

Joe A. Hybner (BS '52) works as district geologist for Texas Oil & Gas Corp. in Corpus Christi.

Logan Irvin (BS '79) is an exploration geologist with Ray Holifield and Associates in Dallas.

Carl B. Irwin (BS '39) wrote about his plans to retire in summer, 1980. "Chances are good that I'll move back to Texas around Austin or Kerrville." Carl's son, Barry, lives in Austin.

Otis L. James, Jr. (MA '52) continues his efforts as an independent geologist in Gainesville, Texas.

Gerhard C. J. Jansen (MA '55) is vice president and general manager of Occidental Petroleum Corp. of Peru and lives in Lima.

M. H. (Pete) Janszen (BA '48, MA '53) is in real estate sales, oil and gas in Orange Grove, Texas. "It's great to be back in the old home town. Viv and I are still enjoying traveling. We are booked for a Cape Town to Cairo three-week trip in October. Best wishes to all."

Charles B. John (BS '51) is trying to keep up with the Carlsbad Mining District (potash) as district geologist for the U.S. Geological Survey in Carlsbad, New Mexico.

Anthony G. Johnson (BS '79) is working toward his master's degree in geology at the University of New Orleans.

M. L. Johnson (BS '50) after thirty years has taken the plunge and become an independent in San Antonio. "Now we'll see if I walk or crawl."

Charles E. Jones (BS '51) reports that Mobil Oil purchased General Crude Oil Co. from International Paper this year. "Now working for Mobil and drilling many wells." Charles lives in Houston.

Charles R. Jones (BS '50) is enjoying geology "looking for good prospects for exploration in the Permian Basin." He is region manager for Davis Oil Co. in Midland.

Harold E. Jones (BS '41) is "still trying to discover significant oil and gas reserves in the Permian Basin. My wife and I are looking forward to the Texas-Ex Mid-East trip September 4–18." He is an independent geologist in Midland.

J. Phil Jones (BS '64) writes from Oklahoma City, where he is land manager for Hoover & Bracken Energies, Inc.: "The oil and gas exploration business is doing well despite all the government 'help'. Everyone in the business is working at capacity. As a result, we currently have a glut of gas with interstate and intrastate markets being curtailed due to reduced demand. Looking forward to receiving the *Newsletter*. It is always nice to hear Texas news here in Okie land."

Wayne E. Jones (BA '72) is owner-operator of Villa Enterprises in San Antonio. "This year marks a turning point, for I have formed a company for oil and gas ventures. It is still quite small but we do have the combined talent of a geologist, a landman and a geophysicist, and we are currently operating in south Texas with several wells scheduled for this year."

W. L. (Bill) Jordan (BS '49) is enjoying his new job in the exploration department of Delta Drilling Company in Midland.

Jon T. Jorgenson (BA '49) is "elated to report 32 years of bliss with Frances, two grandchildren via daughter Lynne, one more nine months after wedding of son, Craig, to Nancy, and a belated hope for our eldest son, Jon, in Canada." Jon is senior geologist with Veezay Geoservice, Inc. in Englewood, Colorado.

J. G. (Bub) Joyce (BS '48) is a partner in Joyce and Hilty in Houston.

Edwin N. Kasper, Jr. (BS '51) says, "All of the family are busy and in good health. I am enjoying driving a GM 'X' model 4-cylinder car this spring. It was an experience taking delivery from a Detroit dealer. Houston Geological Society spring field trip was good in spite of the weather. It was nice to see Dr. Young." Ed is a geologist, reservoir-financing, for Coastal Corp. in Houston.

Robert A. Keahey (BS '57) enjoyed visiting with other UT-exes at the GCAGS convention in San Antonio this past year. "Things are moving right along, and it looks like 1980 will be another good year for geologists." Bob is president of Keahey Exploration, Inc. in San Antonio.

William R. Kendall (BA '47) enjoyed the field trip class of '47 reunion in Vail last summer. "It hardly seems possible, but I'm starting my 33rd year with the same firm, even though the name has changed." Bill is district development geologist with Getty Oil Company in Midland.

E. R. Kennedy, Jr. (BS '48, MA '49) is a consulting geologist in Midland.

Robert F. Kent (BS '52) lives in Houston, where he is exploration geophysicist for Exxon Co., USA.

George L. Keprta (BS '52) is a geologist for Rutherford Oil Corporation in Houston. "I'm still looking for the big field in the Miocene, Frio, and Wilcox trends. Oldest son will graduate from UT dental school this year."

Jack C. Kern (BS '43) is now senior exploration advisor, Arabian Chevron, Inc. in Dhahran. "Our first foreign assignment, after 34 years of domestic exploration, is a stimulating experience. The oil fields of Saudi Arabia are astonishing."

Donald M. Kerr, Jr. (BS '60) writes from Houston, "We are actively involved in commercial construction, consulting and expert witness testimony in the general contracting field." He is president of Kerr Construction Services, Inc.

Gene Funkhouser Keyser (BS '48) writes, "I continue to live in the same house in the same city as the last 25-plus years. That familiarity has given me time to explore some interesting things this year: a progressively interesting business (the oil business is an exciting place to be just now and Midland is an interesting place to be doing it); some unusual work-type vacations doing research with—last year the American Museum of Natural History off the coast of Georgia and this year with Florida State University on the west coast of Florida; enjoying visiting my five children and their families scattered from coast to coast and my mother, who still lives in Calgary, Canada; and last, but not least, being in Austin and having a chance to visit Dr. Bullard. Austin in the spring is still lovely."

Howard W. Kiatta (BS '58) an independent geologist in Houston, comments: "Now have three daughters at Texas Tech and a son still in high school—my one last chance for a Longhorn. Ada and I are fine and busy. We moved our residence in November and my office in April. Still enjoying exploration in the Gulf Coast area."

Jan H. Knox (BS '70) a geologist for the Texas Department of Water Resources in Austin, is busy coordinating and organizing for the 8th International Speleological Congress. The Congress will meet July 18-24, 1981, in Bowling Green, Kentucky. Jan urges all who are interested to write for details to: 8th International Congress Secretariat, Department of Geography and Geology, Western Kentucky University, Bowling Green, KY 42101.

Leo W. Konz (BA '31, MA '32) is retired in Belton, Texas, but is available for consulting jobs in geophysics, especially seismic.

Erwin K. Krause (BS '49, MA '54) is senior paleontologist with ARCO Oil and Gas Co.

Ted B. Lacaff (BS '50) is still enjoying life in Midland and northern New Mexico (Tererro), and is looking forward to the *Newsletter*.

E. B. (Bill) Lacy (BS '50), self-employed in Houston, says he's "working hard, no shortage of ideas but very difficult to find open acreage on one of these ideas. Finished building my house; took two years to finish. This is definitely Bill Lacy's last creation. Very best to all the old gang."

Charles F. Lamb (BS '49) is division development geologist for Chevron, USA in Denver.

James L. Lamb, Jr. (BS '56) is an oil and gas producer in Midland.

Leon M. Lampert (MA '53) says, "In September our daughter, Ellen, will be a junior at UT and son, Wayne, will be in second year of graduate work in UT business school. Still working in south Texas and New Mexico and having a little luck in both places." Leon is a geologist in Corpus Christi.

James Donald Langston (BS '49) continues to play an active role as a member of the Geology Foundation Advisory Council. He is vice president of exploration for Exxon Co., USA in Houston.

Jack K. Larsen (BA '40) is executive vice president of Mesa Petroleum Co. in Amarillo. In spite of his busy schedule, he finds time to assist the Department as a member of the Geology Foundation Advisory Council.

Jim D. Latham (BS '60), maintenance manager, Roadway Express, Inc. in Memphis, Tennessee, writes: "Enjoying living in the beautiful state of Tennessee and association with wonderful Christian friends. Enjoying new career with Roadway Express since retiring from the Navy in 1976."

Robert K. Lattimore (BS '56, MA '62) is "still doing marine geophysics; have just about surveyed the whole western Gulf. Sure beats sitting behind a desk." Bob is project geophysicist for Gulf Research and Development. He lives in Coral Gables, Florida.

Walton S. Launey (BS '37) is retired in Rockport, Texas.

J. Earle Lawless (BS '51) lives in Corpus Christi, and is senior vice president of Texas Energy Exploration. "Great time for us to recall twelve days per month proration and $2.80 per barrel price. Also 12¢/MCF and no guaranteed take."

Royce E. Lawson, Jr. (BS '49) is president of Centurion Oil and Gas Corp. in Midland.

Johnny Gordon Lay (BA '53) is a lawyer and sole owner of Geo-Lay, geological consultants in El Paso. "Ginnie, Shawn (age 26) and I are doing fine as usual here in El Paso, hoping to get back into the interior of Mexico before long. Thorne (age 24) is working on his PhD at Cal Tech, and has presented several interesting papers to AGU meetings, along with doing whatever geophysicists do. Shawn will graduate from UTEP in December, after serving six long and interesting years in the Navy."

H. Louis Lee, Jr. (BS '54, MA '58) writes from Houston, "Left Aminoil, USA last November and teamed up with Roger Casey (Univ. Nebraska, '64) to form Panterra Petroleum Company. We will be exploring for oil and gas on the Gulf Coast and in west Texas."

Joseph W. Lee (BS '50) is a geologist in Richardson, Texas.

David H. Lehman (PhD '74) is an exploration geologist for Exxon in New Orleans. "Looking for oil and gas in south Louisiana. Am now the proud father of a little girl, Lisa; family is doing fine."

G. T. Leslie (BS '50) is district manager, Louisiana, for Shell Oil Co. in New Orleans.

Robert A. Levich (MA '73) writes from Spokane, Washington, "Geology is great but 'geology in action' can be awful. We are still trying to clean up the mess we were given by Mt. Saint Helens. I hope that by the time you read this Spokane doesn't get another layer of ash. The ¾" on May 18th was enough. I am running uranium leachability tests on ash swept off my car and driveway but can do without new samples." Bob is a geologist for the U.S. Department of Energy.

Paul S. Lewis (MA '78) notes, "After completing graduate studies in 1977, I started work with Pennzoil's marine division in Houston doing reservoir development geology in the Gulf of Mexico. In January, '79 I relocated to Austin for a job with the Texas Department of Water Resources working with waste disposal wells. My career so far has taken me from West Texas volcanics, to getting oil out of the ground, to putting oil refinery waste back into the ground."

Dean Leyerly (BS '50) is regional manager of sales for Hughes Tool Co. in Midland. "Margy and I are still located in Midland and enjoying every day. John Turner finally paid attention to my golfing instruction and made a hole-in-one. If he would work that hard on geology we'd both be rich. Hook 'em Horns!"

Walter S. Light, Jr. (BS '77) lives in Houston, where he is employed as an exploration geologist for JWR Exploraton Inc.

Sandy Lindquist (MA '76) is a staff geologist for Amoco Production Co. in Denver.

Alsie Linscomb (BS '51) writes from San Antonio, "Joined Clayton W. Williams, Jr. in early September, 1979. Working in an extensive drilling program in the Austin Chalk in Giddings area. Dr. Keith Young's work and Gregg Robertson's work have been a great help in this effort. Oldest son is a minister in Manchester, New Hampshire. Daughter married and living in San Antonio. Youngest son, Jr., in ACU in Abilene. Enjoy the *Newsletter*. Keep up the good work. It is a pleasure to read—something you can be proud of."

Eugene Lipstate (BS '49) is vice president of Northwest Oil and president of Eugene J. Lipstate, Inc. in Lafayette. "Still recuperating from torn ligaments in knee from ski accident. Son graduated from Tulane Medical School in May, daughter graduates from LSU in December. Looking forward to seeing old friends in Lafayette for the GCAGS convention in October."

Nancy G. Lister (BA '55) reports from Houston. "This has been a wonderful, busy year. Our sons are in elementary, junior high, and senior high school, so many activities keep us very busy. Hello to all."

George Livesay (BS '80) is a geophysicist for Union Oil Co. of California in Midland.

Hal S. Lobree (BA '49) is an independent oil producer in Evansville, Indiana. "My eldest son, Baird, age 17, won the United States National Junior Sailing Championship single-handed (USURU Smythe Trophy) in Massachusetts last summer. His younger twin brothers, Shawn and Shawl, age 14, were both on the USA five-man sailing team for the 15-and-under World Championships in Thailand last December, winning the Miami Herald Team Racing Trophy over all nations. They hold various other titles in sailing."

Edwin R. Lochte, Jr. (BS '56) is an independent petroleum geologist in San Antonio.

Allen C. Locklin (BS '54) writes, "After approximately 19 years, Wade Ridley and I phased out our very compatible partnership just to do other things. Each of us is on his own. It was a great 19 years. Nancy (Summers), my wife, is fine and we celebrated 25 years of marriage last August. Our son, Chris, graduated frrom Texas Tech and is with Welex in Midland. Our daughter, Lee Ann, a junior at Texas Tech, is to be married in June, '80, to a Texas Tech grad, a geologist. Things couldn't be better." Allen continues to live in Tyler.

John L. Loftis, Jr. (BS '40) continues as senior vice president of Exxon Co., USA in Houston.

Vince Loftis (BS '68) lives in Midland and is general manager, western division, for Houston Oil & Minerals Corp.

Alan Lohse (PhD '52) writes, "Grateful for the quality and standards of the Geology Department, Bureau of Economic Geology, and Law School, and their continuing expansion in excellence." He is executive vice president of Gruy Federal, Inc. in Houston.

Laddie F. Long (BS '52) writes, "Recently appointed manager of University Lands and discovered a great mystery: How did that fine old gentleman, Dr. Bybee, manage this job and remain such a fine person?" Laddie lives in Midland.

T. E. Longgood, Jr. (BS '58, MA '60) is well evaluation manager, headquarters production department of Exxon Co. USA in Houston.

Jack E. Loocke (BS '74, MA '78) comments, "I'm learning a lot looking for oil and gas in the offshore basins of California, Alaska, and the east coast." Jack is a geologist, frontier group, for Pennzoil Company in Houston.

Robert G. Lovick (BS '51) is a consulting geologist in New Orleans.

Howard R. Lowe (BS '48) is "enjoying life in Puget Sound region. Mt. St. Helens is a little too far away to view—Dr. Bullard should set me up as his personal rep on the site. I commute to Calgary and Houston, but frequency is once every month or so—not bad. Come see me—my boat (a trawler) hails by the name of 'Fishin' Tool'." Howard is director of Precambrian

Shield Resources Ltd. and president of Liberty Pipe, Inc., and lives in Coupeville, Washington. He joins the Geology Foundation Advisory Council in September.

Pamela E. Luttrell (BA '73, MA '76) writes from Dallas, "I've been doing a lot of travel in South America for Mobil in 1980. Hello to all."

Reynaldo E. Macedo (MA '69) sends greetings and best wishes to all graduate students during the years 1967-69. "Presently very much involved in the hydrocarbon evaluation of some of the basins in Europe, outside the North Sea. High prices and the shortage of oil make old exploration areas attractive for a 'new look'." Reynaldo is staff geologist for Mobil Exploration and Production Services Inc. in Dallas.

Rufus O. (Jack) Major (BS '49, MA '50) is president and chief executive officer of MGF Oil Corporation in Midland. "Building a bigger and hopefully better oil and gas exploration and drilling company. Meeting old friends as our areas of operation expand (stateside)."

Robert L. Makins (BS '49) is still with Perkins Prothro Company in Wichita Falls, Texas after 27 years.

Vaughn C. Maley (BA '26), although retired in Midland, remains interested in surface geology, paleontology, and mineralogy.

Jack Mangum (BS '59) sends greetings and best wishes to all UT-exes. He is a government contracting officer in San Antonio.

Charles J. Mankin (BS '54, MA '55, PhD '58) writes from Norman, Oklahoma: "I've completed my 21st year of temporary residence at the University of Oklahoma. I am now serving as director, Energy Resources Center at OU in addition to state geologist. Daughters, Sally and Helen, are now OU students and Laura is beginning high school."

Robert Manson (BS '76) recently left Dinero Oil Co. to strike out on his own as an independent geologist in Corpus Christi. "I'm looking for oil and gas drilling prospects in the Wilcox trend of south Texas."

Edward Marks (MA '50) is employed by Unocal Corp. in Singapore. "Still working away, trying to find oil in Indonesia. Doing some diving and lots of photography."

Charles W. (Chick) Marquis, Jr. (BS '49) is technical director for Core Labs, Inc. in Dallas. "Daughter, Laura, just got BS in dental hygiene from TWU in Denton. Daughter, Leslie, is a legal secretary. Son, Charlie, is a journeyman electrician. Wife, Mary Lou, manages a real estate firm. Finally got everyone working!"

Ronald J. Marr (BS '52, MA '56) is enjoying his new assignment overseas in Jakarta, Indonesia. "The work is not only challenging but also very exciting."

George W. Marshall, Jr. (BA '48) is employed by Conoco Inc. in Houston. "Ada Mae and I always look forward to the *Newsletter*. Super job!"

Lester Marshall (BS '37) writes, "Upon my retirement from Gulf Oil, Midland office in 1974, I moved to Buchanan Lake where I spent two happy years gardening, boating, and fishing for black bass. I then moved to San Antonio where I am currently residing. I recently realized one of my lifelong ambitions when I broke 25 at skeet shooting on the local National Gun Club range. It must have been an accident; I have not been able to repeat it."

Sabin W. Marshall (BS '52) reports that two of his children are away at college and two are still at home. He is assistant manager—geology for Texas Gas Transmission in Houston.

Roy W. Massey (BS '50) lives in Houston and is offshore district geophysicist for Marathon Oil Company.

R. F. Mathews (BA '48), independent geologist in Midland, now has two geologists in the family. "Oldest boy, Mark, graduated from Tech. Youngest boy, Jeff, is a junior engineering student at UT-Austin. Best regards to all our friends."

Jose F. Matos (MA '71) writes, "I was recently appointed head of the production geology department for Maraven SA in Lagumillas, Venezuela."

Edward J. Matulich (BA '47) is a professional geologist for Sun Production Company in Dallas.

Lamar B. Maxwell (BS '60) is a partner in Maxwell Brothers in Devers, Texas.

Mildred P. Mayhall (BA '24) is retired, but continues to write, lecture, and do volunteer work. "We now have three granchildren, Phillip (9), Laura (2), and Katie (1)—children of Dr. Bill Mayhall and wife, Cheron, of Salem, Oregon. Our older son, David, is doing research at Livermore, California. Our last trip was most interesting—Greece, Turkey and a cruise up the Adriatic—lots of archaeology."

Paul R. Mayo (BS '50) is enjoying west-central Texas as an independent in Abilene. "Would like to hear from alums in the area, or anywhere else for that matter."

Robert McBroom (BA '51), independent in Wichita Falls, is "a prime advocate for WFPTOPNOW (wind fall profits tax on peanuts, now).... No time to look for oil, and not much incentive from the Government!"

John C. McBryde (MA '79) received a plaque at the June AAPG Awards Luncheon for outstanding student paper at Rocky Mountain Section AAPG (June, '79) in Casper, Wyoming. Mick Casey was co-author with John, and their paper tied for first place with another paper authored by Mick! John is a geologist with Mobil Producing Inc. in Houston.

J. H. McCammon (MA '36) is an oil and gas producer in San Angelo, Texas. "Twenty thousand employees and ten billion dollars couldn't reduce consumption of gasoline and oil, but it was simply accomplished with escalating prices—by us, the people."

Lon A. and **Ann Boggs McCarley** (MA '79; BA '75, MA 78) are both working for Mobil Oil Co. in Houston.

Robert B. McCarty (BS '50) transferred in 1979 to Exxon's east Texas division office, production department, in Houston.

Holland C. McCarver (att. '31-'37) is retired in Hilltop Lakes, Texas, and spends his time "traveling, fishing, golfing, gardening and growing orchids. Have just retired from the Geology Foundation Advisory Council after serving nine years."

Jerry McCauley (BA '49) is an independent in Houston.

Duncan McConnell (faculty, '37-'41) retired in 1976 as a professor at Ohio State University in Columbus. "Now have office in the chemistry department. No trips to Mexico since 1979, when we had indirect news of Clyde Ikins."

Leroy McCravey (BA '42) is retired in Houston.

C. Carew McFall (BS '50, MA '52) is a consulting geologist in Los Altos Hills, California, who is continuing to work in western coal.

Edward McFarlan, Jr. (MA '48) comments, "As a UT alumnus and an AAPG Research Committeeman, I appreciate the opportunity to help initiate the AAPG-sponsored project—the new 'Tectonic Map of North America' in our geology department with Prof. Bill Muehleberger as project director, 1980-1987." Ed is a geological scientist with Exxon Co., USA in Houston.

Joe M. McGeath (BS '61) is an exploration consultant in Lancaster, Texas.

Bill S. McGowen (BS '58), owner of McGowen Exploration Co. in Houston, says, "I have two Texas Exes now working with me. Life is good. One son is a junior geology major at UT."

Bill J. McGrew (BS '54, MA '55) transferred to Lafayette last July. "Enjoyed visiting with Charles Mankin and Dan Miller at the AIPG convention here. Family all at retirement home on farm in Arkansas, and I am a long-range commuter." Bill is a production geologist for Exxon Co., USA.

Wayne Eugene McIntosh (BS '56) geologist for the Department of the Army, office of the chief of engineers, in Washington, D.C. "Married off the two oldest daughters in June. Looking forward to returning to the southwest in about four years (retirement). Enjoy the *Newletter*. It's hard to believe I'm a senior citizen already, though the gray hairs give me away."

W. N. (Mac) McKinney, Jr. (BS '60, MA '63) writes from Houston, "I've been with Aminoil for three years now, originally as district geologist for the frontier district working Baltimore Canyon. For the last year I've been working the Gulf of Mexico offshore, coordinating lease sales and having a great time."

Steve McLean (att. '72-'76) is owner of McLean Plunger Lifts in Woodward, Oklahoma.

Bill McMichael (BS '49) is chief development geologist for Marathon International Petroleum in London. "Enjoy the *Newsletter*; appreciate your efforts."

Jereld E. McQueen (BS '61, MA '63) urges, "Although the pressure is on the University to turn out large numbers of graduate geologists to meet the energy demand, keep your goal of high quality and excellence for the Department." Jerry is vice president and chief geologist for Medallion Oil Company in Houston.

A. D. McRae (BS '42) is still working in the Gulf of Mexico as exploration projects manager for Mobil Oil Corp. in New Orleans.

Clifford R. McTee (BS '54) has just completed a very active and rewarding year as president of the Corpus Christi Geological Society. "We have a membership of well over 500, including a lot of Texas-Exes. Looking forward to hosting the 1981 GCAGS meeting in Corpus Christi." Clifford is an independent.

Lee I. Meador (BS '57) lives in Denver, and is president of Merit Energy Corp.

Joe N. Meadows (BA '62) is an attorney in Abilene, Texas.

William J. Meek, Jr. (BS '55) comments, "General insurance and fuel marketing really booming since I went on my own two years ago. Call me if you need something. Also, Navy keeps me busy recruiting for U.S. Naval Academy. I just got back from the Washington, D.C. area, where I attended a recruiting conference at USNA in Annapolis, Maryland." Bill's office is in Arlington, Texas.

Peter Megaw (BA '76, MA '79), exploration geologist for Sage Assoc. Inc. in Tucson, is "involved in precious metals exploration in the western US and Mexico. Avidly collecting minerals in any available old mines."

Mario L. Messina (BS '59, MA '62) writes, It was good to see many of the Department staff and fellow ex-students at the recent Dallas luncheon. Wish it could be repeated more often." Mario is president of Messina Inc. in Dallas.

Dean F. Metts (BS '32) reminisces, "Remember when petroleum geologists made $150 per month and derrick men made $175, and they worked eight hours a day, five days a week . . .and oil was $1.80 to $2.00 a barrel and gas was 3¢ per MCF. You can live through it, so you $20,000 boys don't give up!"

Daniel N. Miller, Jr. (PhD '55) is state geologist of Wyoming. "Still enjoying the tremendous surge of mineral exploration and development in the state. The overthrust belt is phenomenal and will be for a long time to come. Esther and I are as busy as always. Please call or drop by Laramie if there is an opportunity."

Harry A. Miller, Jr. (BS '41) is an independent geologist in Midland. "Don't know know what the government will do next to ruin the country after the windfall profits tax—my gosh, the unnecessary paper work and cost." Harry has just completed his first year as a member of the Geology Foundation Advisory Council.

Harry W. Miller (BS '50) moved to Seguin, Texas in January "to enjoy small city life. Will continue to work as an independent. Still married to same wife, Chy, after 30 years."

R. Dick Miller (BS '51), partner in Peppard-Souders & Associates in Houston, is enjoying new offices in Regency Square.

Wayne D. Miller (MA '57) writes from Midland, "Last November I resigned as western region exploration manager with Cabet Corp. and opened office as a consulting geologist. Presently have a group of investors who are acquiring acreage on several prospect areas we plan to drill. Competition now is tough, but the challenge and potential of the oil business today makes it worth the effort."

Cynthia Sheffield Ming (BA '41) says, "I have spent the last year on the west coast enjoying the geology and scenery, and will probably move to either Seattle or San Diego this fall, though I will miss Texas."

James Robert Moffett (BA '60) is chairman of the board, chief executive officer, and president of McMoRan Oil & Gas Co. in Metairie, Louisiana. "The energy business is moving like a snowball. Those with geology degrees have the best opportunity ever to make a contribution to their country's big need and being financially independent." Jim Bob is helping our department train geologists by serving on the Geology Foundation Advisory Council.

Jane Anepohl Monroe (MA '73) writes, "At the end of June, my husband, Scott, will complete his residency in family practice at Scott AFB and we will be moving to Bossier City, Louisiana. The past year has been a busy and exciting one as we care for our son, Daniel Myrick (born August 6, 1979)."

Evelyn W. Moody addresses National Convention of SIPES in Houston.

Evelyn Wilie Moody (BA '38, MA '40), consulting geologist in Houston, comments, "What an exciting year! Am chairman of the Houston chapter of Society of Independent Professional Earth Scientists and still their only woman member. We hosted the national SIPES Convention in Houston in February. My son, John Jr., became a land attorney for Exxon and the father of twin boys, Andrew and Michael, at the same time last November; daughter, Melissa, had a baby boy, Christopher, in April, and daughter, Jennifer, shuttles between here and Greece as an archaeologist. I have been retained by Shell Oil all year and just renewed contract."

Charles Gardley Moon (BS '40, MA '42, PhD '50) continues to enjoy his retirement in Houston.

R. McKay Moore (BS '52) is an independent geologist in Shreveport, Louisiana.

J. B. Moorhead (BS '39, MA '39) is an independent in Wichita Falls, Texas.

Mary Moran (BS '77) is attending the University of Wyoming. "I'll be spending the summer of 1980 doing more field work in the Caribou Mountains, Idaho, in the Idaho-Wyoming thrust belt. Then I'll be finishing up my master's thesis in Laramie and possibly holding out for another ski season here."

Duane E. Moredock (BS '58) lives in Denver, and is a geologist for Brownlie, Wallace, Armstrong and Bander.

Francis W. Morgan (BA '39), consulting geologist in Wichita, Kansas, is "working 18 hours a day at petroleum geology—and what little spare time is available is spent with stock on ranch in east Kansas, and admiring my granddaughter."

Julian (Hank) Morgan (BA '49) is originating south Louisiana prospects for Nestor Petroleum Co. in Houston. "Future looks great with an active program underway. As always, the *Newsletter* is appreciated and enjoyed."

Michael S. Morris (BS '75) is an independent geologist in Corpus Christi.

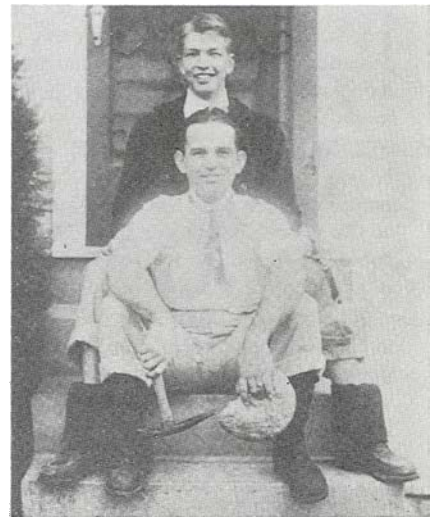
Jimmy K. Morrison (BA '57), hydrologist with Water & Power Resources Service in Amarillo, Texas, has 'just completed two projects in New Mexico. One was water supply studies for the City of Raton. The other was development of a hydrological model for the San Juan River. Wife, Catherine (BS '59 in institutional management), is head of food services at Bivins Nursing Home."

John M. Mothershead (BS '49), independent geologist in Midland, is "still sweating supporting two sons at UT. One of my friends remarked that when they were educated, I would be rich. My rejoinder was that what little I had would be depleted."

Charles Motz (BS '60), employed by the Small Business Administration in San Antonio, writes that his son, Barron, graduated from the U.S. Military Academy at West Point in May, and his daughter, Julie, is to be married in September.

C. P. (Chick) Mueller (BS '60) notes, "After 21 years' association with Viking Drilling Company as co-owner and geologist, I recently formed a new company, 'Mueller Oil & Gas Corp.', which will concentrate exclusively on exploration. I still have the same wife (Bobbie) and same kids (Kathy and John); we are all optimistic about the future. Bring me a good drilling deal." Chick and his family live in San Antonio.

Ed Mugford (BS '58) is still teaching, fossil collecting, and rockhounding in Georgetown, Texas. "All three kids now teenagers and all of us still well and happy. Marietta has me on another diet. Wonderful memories of the geology dept. at UT. Keep up the *Newsletter*. A special hello to Pete Roux and Bill St. John."



George A. Musselman (BA '38, MA '40) sent the above photo and following description: "In the spring of 1938, Kemp D. Solcher (BS '30), top in photo, and I were 'neophyte brothers' being initiated as members of Sigma Gamma Epsilon. In the spring of 1980, Kemp and I visited the Geology Building in Austin and congratulated each other after spending the past 23 years together as one of San Antonio's most active independent producers of oil and gas, drilling approximately 30 wells annually. Kemp and his assistant geologist do most of the geology, while my son, Jamie (BBA from UT, '74), and I handle most of the business transactions, negotiations and contracts for the oil and gas business, as well as supervising 25,000 acres of ranching and farming operations in Victoria, Jackson and DeWitt Counties. Jamie is also owner and president of Grande Oil Company. Another son, Larry (BA Arch. from UT, '72) is in our office assisting with land planning and real estate development in San Antonio and is president and owner of Omniventures, Inc., a home building corporation."

Roy L. Naumann (BS '57) says, "I have been busy the first half of this year with developing the program for this year's GCAGS convention which we will host this October 15-17 in Lafayette, Louisiana. Hope to see a lot of you there." Roy is an independent petroleum geologist.

G. Allan Nelson (BS '47), consultant in Denver, comments: "The first reunion of the Class of '47 at the Vail Ski Area last summer was a whopping success as written elsewhere in this issue, with over 40 people attending, including families. Our honored guest was Dr. Fred Bullard."

A. Sergio T. Netto (MA '74) is professor of sedimentology at the Petrobras training center in Bahia, Brazil. "Last April my son was cleaning a few trophies won by the family in yachting regattas, and he was confused by a strange Chinese medal kept in a distinguished place. It is a prize given by Professor Folk for the winner in the Pi Sheng literature game during GEO 383L, 1973."

Robert Newton (MA '63) lives in Houston where he is senior staff consultant with D'Appolonia Consulting Engineers. "Still a great variety of work with D'Appolonia; everything from marine geology and geophysics in the Baltic to analyzing salt domes of the Gulf Coast for oil storage."

Isaac W. Norman (BS '48) continues his employment with Highland Resources Inc. in Houston as senior vice president and general manager of the oil and gas division.

K. V. Northington, Jr. (BA '51) is owner of Northington, Inc. and exploration manager for SUNEX Energy Corp. in San Angelo, Texas.

George E. Nowotny, Jr. (BS '55) says, "I have continued to move further from energy exploration to exploration of financial energy. As of March 1, 1980 I became chairman and control stockholder of Guaranty National Bank in Tulsa. Dena and I continue to love Tulsa and are very active."

Bob R. O'Brien (BS '52, MA '56), geography professor at San Diego State University, will lead a trek to the Nepal Himalayas in January. "Anyone interested get in touch."

John F. O'Donohoe (BS '50) is a partner in O'Donohoe and Harrison Exploration Co. in Houston.

A. M. (Red) Olander (BS '48) transferred from Exxon's Alaska/Pacific division to Gulf Coast division. "Recently finished term as president of the Geophysical Society of Houston. Enjoyed visiting and lecturing to geophysics class at UT this spring. The Texas-Ex breakfast at the SEG convention in New Orleans was great—hope it can be continued."

John S. Orr (BS '59) is chief geologist for Patrick Petroleum Co. in Jackson, Michigan.

R. William Orr (MA '64) is professor of geology at Ball State University in Muncie, Indiana.

John C. Osmond (BS '47) is "greatly pleased to be back in the high energy business and with many friends from Texas and other stops along the way." John is vice president, Rocky Mountain region, for Natural Gas Corporation of California in Denver.

Geneva R. Oswald (BA '37) enjoys the best of two worlds: Chicago lake front in the summer, and Marco Island, Florida in the winter.

Napoleon Otero (att. '63-'65) comments, "I am working as a researcher in geology at the Instituto Nacional Investigaciones Agricocalle in Mexico City. My son has a PhD from Univ. of Wisconson at Madison, and I have two grandsons. I send best regards to all my friends."

Jeffrey D. Ottmann (BS '77) is a geologist for Exxon Co., USA in Houston.

Donald E. Owen (MA '51), professor of geology at Indiana State University in Terre Haute, planned to direct the Western New Mexico University field course this summer, and to participate for the ninth summer in the Indiana U. Montana field course. "Summer before last, made a nostalgic detour through Van Horn, Texas (noted that the Mint Bar was still alive and well)."

Kenneth I. Owens (BS '54) is a geological interpreter in his fourth year with Geotronics. "Magnetotellurics is growing in petroleum and geothermal exploration worldwide. Austin is a great corporate headquarters."

Robert M. (Bob) Owens (BS '51) is a consulting petroleum geologist in Houston.

John W. Parker (PhD '67) lives in Albion, Michigan where he is an associate professor of geology at Albion College. "Lu and I are going to the 26th International Geological Congress in Paris and expect to see some classic European geology. Hope to see Enrique Martinez in Spain. There's a good chance for a Fulbright in Nigeria this fall for us, also. Best wishes, good Texans!"

Walter Parrish (MA '75) is a consulting geologist in Oklahoma City.

J. F. Patterson, Jr. (BS '52) works as a consultant in Bellaire, Texas.

Jacob L. Patton (MA '32), an independent oil operator in Tyler, Texas, says nothing exciting has happened except that he became a grandpa for the third time on January 29.

Tom S. Patty (MA '68) continues as a research geologist for the materials and tests division, State Department of Highways and Public Transportation in Austin. "The switch from natural gas to fossil fuels by many of the cement mills has resulted in an increase in the alkali content of cements, thus, a reassessment of our potentially reactive aggregates through the state is now underway. Guess who has to petrographically examine every sand and gravel source for the components which may chemically react with alkalies?"

Bill R. and **Joyce Bowman Payne** (BA '40, MA '41; BA '41) live in Houston where Bill is retired from Exxon and is presently associated wtih Banner Petroleum I Ltd. in an advisory capacity. "Does not prevent Joyce and me from continuing to travel. We had a fantastic trip to China with the 'Flying Longhorns' in April. We also look forward to the *Newsletter* each year."

Charles S. Percy (BS '43) retired, comments that there's nothing new with him, but it's nice to hear about old friends through the *Newsletter*. "The faculty continues to make the Department of Geological Sciences at UT-Austin the finest."

Ben J. Petrusek (BA '42) is continuing as paleontological associate with Amoco Production Co. in New Orleans. "Always look forward to the *Newsletter*."

Van A. Petty, Jr. (BS '40, MA '41) is an independent in San Antonio. "As always I look forward to the next issue of the geology *Newsletter*."

Sharon A. Pickett (BS '78) writes from Dallas, "Got tired of throwing my money down somebody else's drain—bought a house in February. It's great! There's never a dull moment, because something always needs a little work here or there. My job keeps me happily busy for as many hours as I want to devote to it—couldn't ask for more." Sharon is an exploration geologist for Placid Oil Co.

Gerald S. (Jerry) Pitts (BS '54) is a general partner in Gerald S. Pitts Ltd. #1 in Midland. "After oldest son, Greg, graduated from A&M with BS in petroleum engineering, and second son, David, a junior pet. eng. at A&M, I finally have a Longhorn. Steve made it to UT as a freshman PLM major. This gave Carol and me a good excuse to attend all home football games. Good to see old friends."

Phil Pitzer (BS '54) is an independent oil operator in Breckenridge, Texas. "Fighting government red tape. Greg graduated as a geologist from Trinity University in spring, '79. Clay at St. Stephen's in Austin, Marc in Breckenridge, Polly doing portrait commissions, Phil getting balder."

Mike Plamondon (MA '75) is a geophysicist for Chevron USA in Denver.

Tom Poe (BS '62) is now in charge of all engineering for Baroid solids control equipment (shale shakers, desilters, centrifuges, etc.). "Believe it or not, I am still using some things I learned in geology in the design of this equipment. Call if you come through Houston."

William A. Poe (BS '48) has a different job, same location, and broader horizons as Gulf Coast division staff geologist for Exxon Co., USA in Houston. "Things going well. Everyone healthy and in good spirits. Lots of new faces in our profession—a tribute to geology departments all over the country. They are sure welcome. Good luck on your 1980-81 program."

T. A. Pollard (BA '33) writes, "My wife and I have just moved to a new retirement village in Weslaco, Texas, and look forward to the mild winter climate, citrus groves, relaxed living, and lots of tennis for health."

Gene R. Pollock (BS '52) is vice president, exploration, for Buttes Resources in Dallas. "Having a ball exploring worldwide with Buttes. Balancing exploration budget approximately 1/3 foreign and 2/3 domestic. Looking for some good geologists who want to explore domestic and foreign."

M. E. (Gene) Pollock (BA '62) is a geological consultant in Amarillo, Texas. "I am busy trying to adjust to the wind fall profits tax. I hope the two million royalty and mineral owners write their legislators so we can get this nightmare repealed."

Robert B. (Bob) Porter (MA '51) notes, "After 26 years with Texas Pacific Oil Co., took early retirement on April 1, 1980. Now associated with William B. Wilson and Sons in Midland. Actively searching out oil and gas prospects and finding the 'patch' more exciting than ever."

Elisabeth Portig (BA '70) is "looking forward to a long-awaited master's degree in August, 1980. Still working at the Kentucky Geological Survey doing coal reserve estimates with help of the computer." Elisabeth lives in Lexington.

J. Dan Powell (PhD '61) says all is well with the Powells. "We entered the consulting business in June, 1979. Since then, been busy with exploration and research on uranium in carbonatites and in Precambrian rocks; and ferroalloys, etc., plus oil and gas." Dan lives in Grand Junction, Colorado.

John L. Proctor (BA '50) says his workload as a petroleum engineer for the U.S. Government in Dallas has really increased. "However, it's great to be needed."

Leo Pugh (BS '52) reports from Houston that the geophysical data business is great. He is vice president of Gulf Coast Geo Data Corp., which has two 'spec' shoots going at the present time in the east Texas basin.

Aubrey H. Rabensburg (BS '37) is director, executive vice president, and exploration manager for Cambridge Royalty Company in Houston. His company is active in domestic and foreign exploration for purchase of oil and gas royalties, sale of domestic wildcat blocks, and uranium exploration on the Gulf Coast.

James A. Ragsdale (MA '60) is chief geologist for Blocker Exploration Co. in Houston.

W. K. Rainbolt, Jr. (BA '57) is vice president of Dynamic Exploration, Inc. in Lafayette.

Clyde M. Rascoe (BS '49) lives in San Angelo, Texas, where he is president of Merit Oil Comapny.

W. A. (Al) Ratcliff (BS '50) says, "Took early retirement from Conoco after 23½ years, now working in Gulf Coast area for Houston Oil & Minerals Corp. in Houston. Also retired from yardwork—moved into a townhouse in summer of 1979."

Robert Randy Ray (BS '74) comments, "It was great to get to see some T-sippers in Denver at AAPG. I am enjoying working the west coast (California, Washington, Oregon) and I find it challenging and frustrating. I am still plodding along on the MS at Colorado School of Mines working on a seismic stratigraphic interpretation of the Ft. Union Fm. in the Wind River Basin. Plans call for a December '80 graduation if I am able to escape future volcanic eruptions, earthquakes, and mudslides which are an everyday hazard on the west coast." Randy lives in Arvada, Colorado.

Donald F. Reaser (PhD '74) is associate professor of geology at UT-Arlington. "I attended the AAPG annual meeting in Denver this June. It was a pleasure seeing so many old friends again. In July, I presented a paper at the International Geological Congress in Paris, France. Rain in Paris is much better than the current Texas heat wave."

Robert C. and **Mary J. Redfield** (BS '37, MA '40; BA '37) comment, "Our time is divided between examining and evaluating safety of dams, and traveling to distant places." Bob and Mary live in Austin.

H. Clay Reichert (BA '38) enjoys his work as an independent geologist in Lafayette, and "am thankful that there is no mandatory retirement limit. The 'old rocking chair' has no appeal."

Charles B. Renaud (BS '49, MA '50) says, "Just returned from visit to daughter whose husband is area manager for Chiles Drilling Co. in Douala, Cameroon, West Africa, drilling for Mobil offshore Douala. Youngest son, Chris, is senior in petroleum engineering at UT Austin. I am still working up drilling deals in west Texas." He lives in Midland.

W. F. Reynolds (MA '53) is a partner with J. C. and W. F. Reynolds in Wichita Falls, Texas, and continues his participation as a member of the Geology Foundation Advisory Council.

James V. (Jim) Richards (BS '56) is an independent geologist in Houston. "Our 'World of Christmas' store in Austin is getting bigger every year. Still looking for new reserves in the Gulf Coast. Hoping for a big new find before the government figures out a way to put us out of business."

James W. Richards (BS '58), partner in Richards and Winkler in Midland, says, "Bob Winkler and I have had a great year and are hoping to do more next year."

Frank M. Richardson (BS '57) is looking forward to another good year in 1980. "All the family is doing well. Hello to all my friends from UT." Frank is president of ERA Consulting Co. in Houston.

Wade C. Ridley (BS '53, MA '55), independent geologist and oil operator in Tyler, says: "Moved into new quarters in Tyler's newest office building, First Place, which is part of the boom going on in Texas' Garden City. Oil business in east Texas is busy as it is everywhere until the government taxes us out of business. Oldest son, Tom, has joined business as landman and youngest, Clark, is naval aviator in Pensacola, Florida."

Frank W. Rife, Jr. (BS '50) is a geologist and vice president of Loduri Oil Corp. in Austin. "Monroe Lopez, James Ducas and I have a small field in Bastrop County. I have two grandchildren and another on the way."

Alexander W. (Zan) Ritchie (MA '69, PhD '75) lives in Tampa, Florida where he is an assistant professor of geology at the Univ. of South Florida. "It's hot here and I love it! Returning to Guatemala this summer with my first master's student. Hope the bandits are few this time. All are invited to visit when on vacation."

Jess P. Roach (BA '41) continues as vice president with Ladd Petroleum in Denver. "Am spending most of my time with foreign and offshore. Am especially enjoying the foreign work which is taking me to some exotic places."

Virgil H. Roan (BS '49) is an independent geologist in Ardmore, Oklahoma.

Griff Robason (BS '57) writes, "I left many friends at Exxon in September, 1979 to accept a new challenge with Mosbacher (in Houston). Alice, Michelle, Terri and Chris are doing well."

Clem H. Roberts (BS '49) is now in his 27th year in Midland ". . . and the boom has never been like this. We are busy in exploration and development drilling." Clem is area geologist with Suburban Propane Gas Corp.

Roland S. (Rock) Roberston (BS '55, MA '56), consultant in Corpus Christi, says "Toni and I celebrated #25 in May. Son, Gregg (23), working on MA in geology at UT, will work with me when finished. Amy (11) keeps us young and busy. Been in Corpus 20 years, plan to stay. Come see us."

Carol Grimes Roe (BA '64) is a consultant in Austin. "I have been doing geological work in Milam County and have entered into working interests with other independents in this area."

J. W. (Bill) Rogers (BS '49) is vice president and managing director of Texaco Japan Inc. "We are well into our second year of residency in Tokyo and involvement in an exploratory program in the East China Sea. Japan has changed a bit since my last visit here in September, 1945. Three of our five offspring have graduated from UT Austin with varying degrees in the past year; one still struggling there and the youngest on his way to the University of Colorado next fall."

Peter R. Rose (BS '57, MA '59, PhD '68) left Energy Reserves Group in mid-September and is setting up a consulting practice, Telegraph Exploration, on a ranch in the hill country near Telegraph, Texas. "After about 20 years with various geological organizations we're really looking forward to operating on our own."

Ray M. Ross (BS '56) is district manager, Central America, for NL Baroid. "My wife, Joan, and I enjoy the 'City of Eternal Spring' as well as the countryside of surrounding volcanoes (some active, all geometrically beautiful). A few tremors every now and then add some excitement. The Mayans in their hand-woven "huipiles' of bright varicolored fabrics, their culture still linked to the Spanish conquistadores . . .on and on, but will just finish; nos amamos." Ray lives in Guatemala City.

Peter D. Rowley (PhD '68) is a geologist with the U.S. Geological Survey in Denver. "My main project remains mapping in the Marysvale volcanic field, southwest Utah, assisted by UT-ex J. J. Anderson (PhD '65) of Kent State University. I am also dabbling in Antarctica reports."

W. Wayne Roye (BS '51) enjoyed doing very little last year in Midland, "while awaiting the outcome of the Windfall Rupture Tax."

John S. Runge (BS '50) is enjoying the profession of geology very much. He is president of L R Company in Casper, Wyoming.

Jimmie Norton Russell (BS '48, MA '52) is a geologist for the Texas Department of Water Resources in Austin.

Bob E. Rust (BS '57) lives in Houston, and is vice president of Peabody Shoreline.

Floyd F. Sabins (BS '52) says, "I presented an invited paper, 'Oil Occurrence and Plate Tectonics as Viewed on Landsat Images', at the 10th World Petroleum Congress in Bucharest, which was my first trip behind the iron curtain. Currently I am investigating geologic applications of images from the Seasat and Heat Capacity Mapping Mission satellites." Floyd is senior research associate for Chevron Oil Field Research Co. in La Habra, California.

Bill St. John (BS '58, MA '60, PhD '65) is chief operating officer for Agri-Petco International. "Still based in Tulsa but still running around the world. Producing oil offshore Ghana, shooting seismic in Congo, filing applications everywhere. Skeet still healthy, Mike still a cop, Tad still a grocer, Kevin out of high school and working in Alaska with minerals field crew this summer and off to OSU in fall, Doyle two years of high school to go!"

Philip K. Sampler (BS '51) is president of Sampler Oil and Gas in Deanville, Texas. "We are doing our best to help Carter's welfare programs with his WPTA. Since last report have completed 35 new wells and running six rigs. Best wishes to all."

Jack S. Sanders (BS '57) lives in Amarillo, Texas, where he is coordinator of Water and Power Resources Service. "Groundwater studies and people studies in southern Colorado remain interesting."

D. F. Sandifer (BS '35, MA '35) had a very good year as a consulting geologist in San Antonio in 1979. "But because of the WPT I can see that 1980 will be at least 35% less income. Should we smile and be glad, or keep 'cussing' Washington?"

Ken Sands (BS '78) writes, "Spent my first year and a half out of school working for service companies in Wyoming and North Dakota. Just recently, though, I accepted a position with Gulf Oil and am looking forward to getting back to Texas. My initial assignment will be in Houston."

James W. Sansom, Jr. (BS '63) comments, "After over 15 years in the water business with the Texas Department of Water Resources, I have changed jobs to the surface mining business (coal and uranium) with the Railroad Commission of Texas." Jim continues to live in Austin.

O. E. Schellhase (BS '51) is a consultant and independent in Corpus Christi.

Elsie C. Schiemenz (BA '43) is retired in Mobile, Alabama.

Jack R. Schmid (BS '51) is a petroleum consultant in Dallas.

David L. Schmidt (BS '77) lives in Midland, where he is a geologist for Gifford, Mitchell and Wisenbaker.

Louis I. Schneider, Jr. (BS '59) is vice president and division manager of Teledyne Exploration in Houston.

Tom Schneider (BS '50, MA '51) says, "Am now oil prospecting mainly, but still ranching, too. Enjoy being on the Geology Foundation Advisory Council and renewing old contacts." Tom is an independent geologist in Eagle Pass, Texas.

Milton Scholl (BS '47, MA '48) is a teacher at Hilltop Junior High in Chula Vista, California. "Freda and I thoroughly enjoyed the Vail reunion last summer of the 1947 class. Many thanks to Al Nelson for his organizing efforts. This summer I have been appointed to NSF Coastal Studies Institute."

Glynn M. Schuchardt (BS '52) writes from Houston, "Back with a great bunch—Tenneco. Just received a Silver Certificate from SEG—Gosh! Yesterday I hello and thanks to my peers."
couldn't even spell geophysicist. My

Fred E. Schultz (BS '47) joined Esso Seismic Inc. in Houston, which is the Exxon affiliate that gathers geophysical data on a worldwide basis.

Rubin A. Schultz, Jr. (BS '61) reports no change, "still with the Highway Department. Lots of work, short on funds, like every other government agency. I thoroughly enjoyed seeing everyone again last fall at the barbecue and open house at the Geology Building. Hope you do a repeat on it again this fall." Rubin's home is in Corpus Christi.

T. J. (Jerry) Schwarzbach (BS '58, MA '61) continues as a consulting geologist in Shreveport, Louisiana.

Eugene P. Scott (BS '56) is a consulting petroleum geologist in Corpus Christi.

John E. Seale (BS '41) changed companies in 1979 and is now district geologist, south Texas, for Blocker Exploration Company in Houston.

Louie Sebring, Jr. (BS '41, MA '47) notes, "Fishing trip to Alaska the high point of the year—going back this summer. Still three grandchildren, and only one son is a geologist for Cities Service in Midland." Louie is an independent geologist in Corpus Christi.

Clyde R. Seewald (BS '63, MA '66) writes from Longview, Texas, "Still looking for hydrocarbons in east Texas for Excelsior Oil. Recently promoted to vice president of geology."

Kenneth O. Seewald (att. '61-'64) is vice president of Wichita Industries, Inc. in Denver. "Five years in Denver now and still enjoying the 'Mile High City' from both a personal and professional viewpoint. We enjoy visiting with old friends from UT so if you come this way give me a call."

George B. Sewell (BS '54) is a consulting geologist in Denver, "still developing prospects primarily in North Dakota, Montana and Colorado. Still single. There's an extra car (wreck) to drive and an extra bedroom with bath, so you-all come."

John S. Shambaugh (BS '49, MA '51) comments, "After almost 25 years with Exxon in south Texas (Kingsville and Corpus Christi), I was assigned to the permit section in offshore exploration and moved to Houston in March, 1979. Have now survived over one year of rush hour traffic."

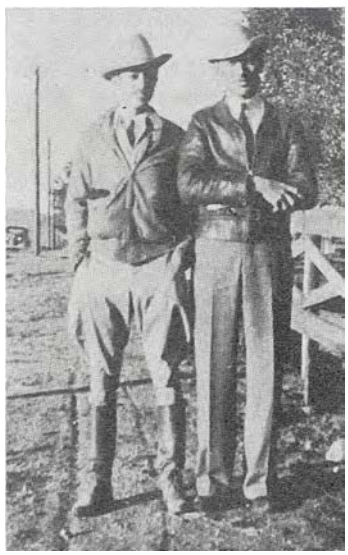
Heather Gwen Sharrai (BS '79) is a subsurface geologist for Rio Pecos Corp. in Austin.

Stephen L. Shaw (BS '71, MA '74) notes, "Nancy and I moved our family to Midland in late 1979, and I switched from the water business to the oil industry (I have a fear of finding water now). We love west Texas.'" Steve is an exploration geologist for Superior Oil Co.

Don B. Sheffield (BS '58) is president of Petty-Ray Geophysical division of Geosource Inc. in Houston. In September he will begin a three-year term on the Geology Foundation Advisory Council.

Jerry M. and **Gay S. Shelby** (BS '57; BA '57) write from Amarillo: "In the past year our company has changed its name from Amarillo Oil Company to Pioneer Production Corporation. I have been made executive vice president and appointed to the board of directors and will celebrate my tenth anniver-

sary with the company in June. Eldest daughter, Theresa, will graduate from Amarillo High School and attend Texas Tech. Gay and Annette plan on playing the tennis circuit again this year. Our best to all of you."



Robert A. Sheldon (BS '37) sent the following: "My book *Roadside Geology of Texas*, which is intended to interest non-geologists in the geology of the state, was published in September, 1979, by Mountain Press Publishing Co., Missoula, Montana. Sales are going well—try your favorite book store. Am now working on articles of a similar nature for *Texas Highways*. This, plus the advent of a third granddaughter, and building a summer place in Colorado, has kept me and wife, Norma Archer (BA '40) and daughter, Kay Williamson (BA '65) busy. The picture (above) of me and Glen Evans (att. '33-'36) was taken while Glen was working for the Bureau of Economic Geology in the Miami area of the Panhandle in the fall of 1937." Glen is on the left, Bob on the right.

William K. Sheldon (BS '48), chief geologist for Copano Oil Co. in San Antonio, is "getting to that age where I have more gold in my mouth and less lead in my pencil—but still enjoying work and life. If you haven't seen brother Bob's (R. A. Sheldon) book 'Roadside Geology of Texas', you really should. Well done and worthwhile."

George H. Sherrill (BS '50) has "no complaints about business. Wife, Shirley, has returned to Angelo State University to complete her degree. Daughter Kimberly Ann, graduated from med school, Galveston, May 24, 1980. Daughter, Kay, teaching in Mesquite school system. Son, Hayden, transferred from Fort Worth to Long Beach, California with Champlin Oil and Refining Co. Shirley and I travel when possible." George is an independent petroleum geologist in San Angelo, Texas.

Alan Shield (BS '60) is a geological consultant in Austin, "still seeking that elusive 'pot of energy'. Sandra and the kids are fine."

Samuel J. Sims (MA '57) continues to keep busy as a senior geologist for Bethlehem Steel Corp. in Bethlehem, Pennsylvania.

David W. Sipperly (MA '67) says, "My wife, three children and I are settled in Midland. I am land manager for ARCO Oil & Gas Company's Permian district. I am enjoying land work as a means of using my background in geology and law. For the most part, however, I seem to be using more of the legal background than the geological background. Unfortunate."

Harry H. Sisson (BS '40) says he had heart surgery (by-pass) last February, but is back to work as a consulting geophysicist in Houston and is enjoying life. "We manage to stay busy. Nancy and I are looking forward to a vacation in Hawaii this fall."

Marriott Wieckhoff Smart (BS '57) writes, "John was transferred to Denver in September, 1979 from Consolidation Coal to Conoco Inc. where he is working in oil and gas exploration again. I transferred from the corporate library of Gulf Oil to the exploration (geology) library of Gulf Mineral Resources Co. It is fun working in geology again and I didn't forget as much as I had thought I would have after such a long interlude."

Tommy T. Smiley (BS '51) continues working as a cartographer for the Defense Mapping Agency, aerospace center, in St. Louis, Missouri.

A. Richard Smith (BS '64) is director of hydrocarbons and minerals development for Olin Corp. in Houston. "Although most of my time goes into managing Olin's oil and gas investments, I try to 'do' a little geology to keep my hand in."

Barbara Jean Smith (BS '78) is a geologist for the Dallas engineering and consulting firm LaRue, Moore, and Schafer.

Bruce Dixie Smith (BS '58) is a trial attorney with Fulbright and Jaworski in Houston.

Daniel L. Smith (BS '58), vice president of Texoil Co. in Houston, says "Looks as if we should have our best year ever. We are increasing our staff to keep up with increase in activity."

Harry L. Smith (BS '51, MA '56) says he "got to believing my own geology too much. Took some large working interests in some leases that haven't panned out. The oil business has its highs and lows." Harry is an independent in Corpus Christi.

J. T. Smith (MA '56) is working frontier basins as a geologist with Sunmark Exploration Company in Dallas.

Fred C. Smyth (BS '47) is senior professional geologist for Sunmark Exploration Co. in Dallas.

Edmund D. Sneed (MA '55) lives in Midland, where he is district geologist for Marathon Oil Company.

John L. Snider (MA '55) is a hydrologist in Alexandria, Louisiana.

John L. Snyder (faculty, '57-'62) spent six weeks last September and October in South Africa as a consultant for the U.S. International Communication Agency, visiting Pretoria, Johannesburg, Durban, Capetown, East London and less urban points in between. "A rich, beautiful country. What a pity their internal policies are so potentially destructive." John is program director of the National Science Foundation in Washington, D.C.

Raymond P. Sorenson (MA '75) is senior geological engineer for Anadarko Production Co. in Oklahoma City.

Johnny F. Stanford, Jr. (BS '49) continues to work on the Edwards Research Project for the U.S. Geological Survey in San Antonio. He sent the above photo taken by D. Hoye Eargle in 1963 when Johnny and Hoye were surface mapping on a Duval Co. ranch for uranium studies. The javelina shown with Johnny was a pet at the ranch where the photo was taken.

Ann M. Stanley (BA '44) is chief geologist of Miles Production Company in Carrollton, near Dallas. "Miles Production Co. is expanding its areas of exploration to west central Texas. I now have a geological assistant—another woman geologist."

Herbert M. Stanley, Jr. (BS '49) reports he is having a good year. "Our son, Mark, was valedictorian of his high school class at Midland High and will study engineering at Rice University. Our daughter, Eileen, is still at OU." Herb is chief geologist for Texas American Oil Corp. in Midland.

Ted E. Stanzel (BS '56) is working the lower 48 states for Transco Exploration Company from the Transco Tower in Houston.

Frederick L. Stead (MA '50), of F. L. Stead and Associates, Inc. in Dallas, says "My son, Lee, is a senior this year at UT in the PLM program."

Wendell J. Stewart (BS '49) is now retired from Texaco after 37 years and is in business for himself in Midland. "I plan on some time now for publication and some time to make money. I guess the world traveling is now over unless I make a lot of money. I plan to publish my carbonate manual and teach some."

James H. Stitt (MA '64, PhD '68), professor and chairman of the geology department at the University of Missouri—Columbia, comments: "My three years as chairman are coming to a close. It's been interesting and extremely busy, but it will be nice to pass the worries on to someone else and return to teaching and trilobites. Betty and I sure enjoyed seeing so many friends at the San Diego GSA. Tanya (11) and Merrilee (8) are growing like weeds, and definitely have Daddy in the palm of their hand."

Preston A. Stofer (BA '57) is still in the cattle and real estate business in Long Mott, Texas, "both of which have been victims of the current economic situation."

William T. Stokes (BS '50) writes from Dallas, "Looking forward to 1980. Will be associated with the King Ranch Oil & Gas Division. Have son, Bill, in The University as a freshman. Brad will be a senior at Highland Park High. Fifi is enjoying golf, and I am enjoying serving on the Geology Foundation Advisory Council. It is a pleasure to be associated with such outstanding people on the faculty of the Department."

Winston L. (Skip) Stokes (BS '57) says, "Completed 15 years with Ashland Exploration, Inc. before it was sold. Now employed by Lear Petroleum Exploration, Inc., a smaller company which will drill. We live two miles from the office, which is great." Skip lives in Woodlands, Texas.

Michael W. Strickler (BS '78) lives in Houston, where he is a geologist wth Keplinger and Associates, Inc.

Stanley M. Sutton, Jr. (MA '80) is a geologist for the Colorado School of Mines Research Institute in Golden.

Leonard J. Svajda (BS '40) is a dentist in Corpus Christi. "I always heard that when a man quit bragging about his feminine conquests and started bragging to the boys about a great new laxative he'd discovered, this was a sure sign of old age. I'm getting there quicker than I'd like."

Thomas W. Talbert (BS '57) has lived in Denver for 11 years. He opened an office for Florida Exploration Company in 1978 and is vice president. The company is aggressively working Rocky Mountain area.

Jim Tartt (BS '48) is national sales representative for IMCO Services in Houston. "Although I don't draw structural maps anymore, we do enjoy the University of Texas. Thanks for the *Newsletter*."

George W. Taylor (BA '49), senior exploitation geologist for Exxon in Houston, has purchased the L&M Cafe in Georgetown, Texas. "We are always happy to feed hungry geologists."

Dick Teel (BS '39) is still working for Amoco Production Company in Houston. "Considering another African safari for 1981—probably south west Africa."

C. B. (Tim) Thames, Jr. (BS '53, MA '57) is exploration manager of Keldon Oil Company in Bismarck, North Dakota. "Retired from law firm and municipal judgeship and am enjoying the fun part of the oil business. Still have some bass fishing to catch up on but I'm working at it."

Billy D. Thomas (BS '49) continues to work for the Railroad Commission of Texas in Austin. "Upsurge in drilling activity is a healthy sign for oil and gas industry."

George L. Thomas (MA '60) is chief of construction management at Laughlin Air Force Base in Del Rio, Texas. "Kelly started to college last fall; John and Kristen are still in high school. Eloise is still working at Sid Peterson Hospital in Kerrville. Not many changes with the Thomases this past year except that the children are growing up."

Roy W. Thompson (BA '38) writes, "I am thoroughly enjoying my retirement as geophysicist for J. W. Humbard and Associates in Midland."

T. J. Thompson (BS '57), a geologist in Dallas, enjoys reading the *Newsletter* and sends best regards to all.

Harold Thomson (BS '58) reports that his oldest son, Steve, just graduated from UT in chem engineering, so he has had good contact with UT events the last four years. He is president of Republic Mechanical Company in Dallas.

Wesley A. Tiller, Jr. (BS '50) is working the Texas Gulf Coast as exploration manager for Sunmark Exploration Co. in Dallas.

Bert C. Timm (MA '41) is manager of corporate planning for Sunmark Exploration in Dallas. "We much enjoyed the visit of Boyer, et al. to Big 'D' this spring. Hope it will become an annual affair."

Donald H. Torgerson (BS '52) is employed by Dowell Division in Williston, North Dakota, "trying to keep up with activity in the Williston Basin."

Mike Trant (BS '58) is concentrating on drilling and production in west central Texas, Abilene, and San Angelo as president of Walsh & Trant Petroleum Corp. in Dallas.

C. Brian Trask (MA '72) wrote in May, "Spring has sprung—my redbuds, crabs, and magnolia have bloomed. The tulips are going. I'm looking forward to another season of mapping in southern and eastern Illinois." Brian is assistant geologist for the Illinois State Geological Survey in Urbana.

Cindy Haynes Trautman (MA '78) continues to work as a geologist for Amoco Production Company in Houston.

Everette J. Travis (MA '51) teaches at San Antonio College in San Antonio.

Richard Travis (BS '48) partner in Travis Oil Co. in Jackson, Wyoming, comments, "With the coming of the windfall profit tax my ranching in the Tetons looks better and better."

Roy W. Tronrud (BS '40), retired in Richardson, Texas, laments, "I'm in a rut, folks. Golf, travel, reading, beer. . . ."

Steven R. Trudeau (BS '70) is district geologist for Pioneer Nuclear, Inc. "The uranium industry is focusing in on the south Texas Gulf Coast. I was transferred to Corpus Christi to open up and establish a new district office for the company. Setting objectives for exploration research studies and drilling programs, and choosing staff members is a very rewarding experience."

Arthur J. Tschoepe (BS '51), independent geologist and oil operator in Corpus Christi, says, "Four friends formed partnership and built new office building called Mormac Building; also formed Santa Fe Log Library. All memberships have been sold, and we are now all looking for some of the $40/bbl oil to pay the interest."

John D. Tuohy (BS '39) gave up on the retirement life in January, '80 and went to work for CEO Inc., a new company

acquiring oil properties in the States and foreign concessions. "My first run at the US oil business which I found most interesting. In mid-June, took a job with The Coastal Corporation as manager of a new subsidiary handling exploration work in several of their foreign operating areas and based in London. My first time to work in Europe and both Evelyn and I are looking forward to it. The boy is now in Venezuela with National Supply and the girl married and living happily in Austin while finishing an MBA. All goes well."

Clyde W. Turner (BA '40) is a partner in McClure and Turner in Midland.

Edd R. Turner (BA '43) has retired from Getty Oil Co. and is now a consulting geologist in Kerrville, Texas.

Neil Turner (PhD '70) says, "I am currently heading up the regional studies group for Amoco's New Orleans office along with running the recruiting and training efforts for geologists here. With all that, however, I do still get to do a little geology."

LeRoy J. Tydlaska (BA '49, MA '51) reports no change from New Orleans. "Still busy as ever looking for the open spot to drill." LeRoy is senior geological associate with Amoco.

Robert C. Tysor (BA '52) is a geologist for Davis Oil Company in Houston.

James R. Underwood, Jr. (MA '56, PhD '62) is professor and head of the department of geology at Kansas State University at Manhattan. "Was teaching a course, 'Volcanoes and Man', when Mount St. Helens began erupting. Highlight of the course for the students and their teacher was the series of lectures given by Dr. Bullard. Libyan Desert glass and Mars consume most of my research time. Margaret Ann is busy helping Marion and Andy be teenagers; Beth begins those years in December. We long to see more of you in Manhattan. Tony Walton (MA '68, PhD '72) wandered upriver from KU this spring and gave a splendid lecture."

Robert D. Valerius (BS '59) is an independent geologist in Corpus Christi.

Bruce R. Van Allen (MA '78) is exploration geologist for Tenneco Oil Exploration and Production in Tucson.

Charles D. and **Eloise Faulkner Vertrees** (BA '23; BA '22) continue to enjoy life in Midland.

Harry A. Vest (MA '59) is chief geologist for Dubai Petroleum Co. "My optimism of last year has dampened to some degree with two dry holes, but we are still looking—and drilling."

James R. Vetters (BS '51) reports that after 20 years with Tenneco, he was promoted from geophysical manager to exploration manager in April. "Responsible for frontier exploration covering Alaska and the Atlantic OCS." He lives in Houston.

Bob Vickers (BS '47) notes that family and business are alive and well, "notwithstanding 'income profits' tax, FERC, DOE, and other machinations of politics". He is a geologist with Mayfair Minerals Inc. in Abilene, Texas.

M. C. (Morty) Vinson (BS '51) writes from Midland, "My backlog of overdue forms for FERC and DOE does not permit me sufficient time to list my activities; however, I might add that little else was accomplished anyway this year." Morty is an independent.

William Vrana (BA '39) is managing to keep his head above water "in a business of extremes." He is a consulting petroleum geologist in Corpus Christi.

Martin James Wachel, Jr. (BS '56) is senior petroleum engineer with Getty Oil Co. in Mina Al Zoor, Kuwait. "Still working in Wafra and SUG fields to maintain production with high volume lift equipment. My wife, Jean, and I spent a week in Egypt last October; great fun. Sure miss football, pizza and Mexican food over here, but thoroughly enjoy the *Newsletter*. Plan to take leave in December to visit families and watch Bowl games."

William R. Waddell (BS '38) is an independent geologist in Houston, "still drilling a few wells and enjoying the grandkids and fishing and hunting."

A. H. Wadsworth, Jr. (BS '41, MA '41), independent geologist and president of Minopco Inc. in Houston, is "finding more metal than oil these days. We are building a 400 TPD mill for Pb-$BaSO_4$-CaF_2-Aq near Socorro, New Mexico, and opening an old mother lode mine near Placerville, California. Also operating two gold mines near Oatman, Arizona. Wadsworth Oil Co. still trickling along."

Robert B. Waggoner, Jr. (BS '56) comments, "Our oldest son, Monty, has received his degree in earth sciene from Ashland College, and works for the Ohio division of oil and gas. Doing more geology these days and catching a few fish. The rest of the family doing fine. All our friends seem to be getting old!" Bob is a petroleum consultant and drilling contractor in Mt. Gilead, Ohio.

T. J. (Tommy) Waggoner III (BA '56) is president of Trans-Western Exploration Inc. in Dallas. "Our company is active in mid-continent exploration, planning to drill 50 to 60 wells in 1980. We enjoy working with a number of UT geologists and find that our industry is very exciting with the current level of activity. Come to see us."

George P. Walker III (MA '66) recently resigned as division geologist with Amoco Production Co. to set up his own consulting practice in Houston. "Am currently on retainer for Amarex, Inc. and am enjoying this new perspective of the oil industry immensely."

Hershel (Huck) Walker (BS '50) writes from Corpus Christi, "Still with Tana Oil and Gas Corp. and doing great. Remarried 6/1/80 and starting over in life."

Joe Dudgeon Walker, Jr. (BS '51, MA '54) says, "Still continue to consult geologically on the Wilcox trend of central and south Texas. Always interesting, rarely caught up and never enough time. Still appreciate the *Newsletter* and the effort put forth to publish it."

Bernie Ward (BA '55), independent from Tyler, is "still working the east Texas basin from Eocene to Jurassic. Business good. All family doing fine. Alice, our youngest, has discovered horses. Have met many new friends going to horse shows. Come see us in the Rose Capital."

Bill and **Kathy Ward** (BS '55, MA '57; BA '57) report from New Orleans: "Last summer Bill consulted for ERICO in London and Libya. This year Kathy and Bill will spend the summer in Saltillo, Mexico, where Bill will teach at UNO's geology field camp." Bill is a professor in the department of earth sciences at University of New Orleans.

Joe H. E. Ward (BA '38, MA '40), president of Geo Energy Corp. in Midland, is "moving ahead in spite of Federal Government. Wife, Charlotte (BA '40), and three children are doing well. Son, Tom, is in MBA school at UT-Austin. New and first grandchild arrived May 16th, 1980. Name—Charlotte Amalie."

Ralph H. Warner (MA '61) is division geologist, southeastern US, for Gulfstream Petroleum Corp. in Houston. "Made it through another year. Kim finished junior year at Univ. of Houston, Brian solved freshman year at UT-Austin, Julie straight-A'd the 5th grade, and Marilyn held the home front together. Gulfstream continues to grow and prosper. Thanks again to everyone at UT who helped make it possible."

Ken A. Warren (BA '34) is a petroleum exploration consultant in Dallas, on an assignment with Cities Service International in Houston.

Lincoln E. Warren (BS '41) is vice president of Odeco in New Orleans.

Joel S. Watkins (PhD '61) lives in Pittsburgh, where he is manager of the geology and interpretation department for Gulf Science and Technology Co. "Those courses I didn't want but had to take are being used, as I am getting involved in aspects of geology I haven't worried about for 20 years. The job's very interesting, the family is fine, and Pittsburgh grows on you—slowly. Shore was cold, though, for Southern bones."

John A. Watson (BS '56) is a hydrologist for the Texas Department of Water Resources in Austin.

John Rex Wayland (BS '50) is raising registered Texas Longhorns and "helping wife, Sarah, run antique shop (I do the hauling). Doug and Emily have graduated from SMU, John is a senior at Southwestern, and Jo is a sophomore at SMU." His home is in Corpus Christi.

James D. Webb (BS '52) reports that business as a self-employed geologist in Midland is excellent.

Gerald E. Weber (MA '68), a consultant geologist in Santa Cruz, California, says he is still mapping active faults and marine terraces. "The PhD remains an ever-elusive goal. After ten years here at UCSC I am attempting to set the longevity record for geology grad students. Perhaps I'll pass Reaser—how many years did it take him?"

Suzanne Dallas Weedman (BA '70) continues her efforts as a graduate student at Pennsylvania State University in State College.

H. P. (Pat) Wells, Jr. (BA '40) says, "Son, HP III, is at TCU studying geology and business; daughter, Lindsay, is in Fort Worth; daughter Lauren (UT '78) married John Clark (UT '76). Wife, Margie (UT '46), is an antique dealer and authority. I am enjoying drilling plus association and fun with Wayne Wood."

John Westmoreland (BS '59) is president of John Scott Westmoreland Corp. in Waco, Texas. "Finally have the corporation established with two operating divisions. It is nice to be back in Texas."

David J. White (BS '41), geologist for the Texas Department of Water Resources, says, "Living in Austin with an office across from UT campus has provided the pleasant opportunity to attend an occasional verbal presentation of a thesis at the Geology Building."

Hugh G. White III (BA '52, BS '54) is southwest district geologist for Terra Resources, Inc. in Midland. "Children beginning to fly out of the nest on their own. Time sure flies when you're having fun. AAPG convention in El Paso with Bill Fisher was great. Missed the rest of you all."

Jane Brite Dunkle White (BA '46), rancher and domatologist in Marfa, Texas, comments, "Although I have never been a professional geologist, the background and knowledge acquired at UT under Dr. Bybee, Dr. Bullard, Dr. Whitney, Arthur Deen, and Gus Eifler have continued to enrich my life. Whether visiting Santarini or following the eruption of Mt. St. Helens, I'm glad to have chosen geology!"

F. L. Whitney (BS '43), retired in London, Texas, thinks "everything is going just great. Best wishes to all."

Marion I. Whitney (BA '30, MA '31, PhD '37), professor of geology in Mt. Pleasant, Michigan, comments: "I have had several papers published this year; (1) Electron micrography of mineral surfaces subject to wind blast erosion, GSA Bull. V. 90; (2) and (3) Aerodynamicerosion of Mars, Part I, Channels, Part II, Vortex features, GSA Bull., v. 90; (4) Ventifacts: models for wind erosion on any scale, Planetary Program Meeting, Jan. 1980; (5) I was a co-author on Pitted rocks of the Western Desert of Egypt; Viking Analog, Jour. of Geophys. Res., December 1979. Also my university (Central Michigan U.) awarded me a research professorship award for the fall of 1980."

Frank M. Whittington (BS '49) is "still try-in to locate that elusive oil and gas, working Texas and Louisiana" as president of Geo-Exploration Inc. in Houston.

Leanne Wiberg (BA Science Ed., '71) has been invited to give talks at several Texas universities on the feature she has mapped for a master's thesis—a circular structure in north-central Texas which is likely to be an 'astrobleme' (the eroded roots of a meteorite crater). The feature, which is visible on satellite imagery, is ten km in diameter and incorporates the entire town of Hico, Texas. Jim Underwood (MA '56, PhD '62), who has mapped a somewhat similar feature in Libya, is on her graduate committee. She will defend her thesis at TCU in September. She hopes to continue the free-lance science-writing she has started recently.

Roscoe C. Wilber, Jr. (BS '37) has been retired for four years and has no desire to go back to work. "Have plenty of time to visit and enjoy our four children and ten grandchildren, all of whom live in Texas." Roscoe lives in Houston.

Michael A. Wiley (BS '57, MA '63, PhD '70), senior research geologist for ARCO Oil & Gas in Dallas, says "Doing research in remote sensing and geochemistry to aid petroleum exploration gives one a different look at rocks—from the inside looking out or from 500 km looking in. Meanwhile, we are avidly watching drilling in old UT field areas (Marathon, Van Horn, etc.)."

A. B. (Bo) Williams (BS '53) is enjoying hunting and fishing in Sequim, Washington, as well as taking care of a big garden. "Mt. St. Helens is down the road not too far."

James Richard Williams (BS '50) is maintaining the status quo as district geologist for Cabot Corp. in Houston.

Larry E. Williams (BS '78) is a geologist with Pioneer Production Corp. in Houston.

Mark Williams (BS '50) is an independent in Amarillo.

Turner F. Williamson (MA '79) lives in Farmington, New Mexico where he is a geologist for El Paso Exploration.

Louita Dodson Wilson (BA '40) is a real estate manager in Del Rio, Texas. "Learning more geology as drilling continues in Val Verde County."

Thomas S. Wilson (BS '70) is employed by Petroleum Equipment Tools Co. in Lafayette, Louisiana.

Wilbur D. Wilson (MA '54) is exploration manager, Permian Basin, for Coquina Oil Corp. in Midland.

William Feathergail Wilson (BS '60, MA '62) is exploration manager for Placid Oil Co. in San Antonio. "Looking back 20 years, I can see the professional impetus that was granted to me by the geology department. My two sons, Douglas and Clay, now have that same impetus and geological spirit being molded into their future."

C. Robert Winkler, Jr. (BS '50), general partner in Richards & Winkler in Midland, notes: "Jim Richards and I are still happily drilling in west Texas, and the Giddings area. Robert III graduates in petroleum engineering from UT this summer and starts his career with Amoco in Odessa."

Jan A. Winter (PhD '61) is still in London as vice president of Murphy Eastern Oil Co. In the fall of 1980, both his daughters will be studying in Austin.

Helen Patterson Withers (BA '40) is a geologist for the U.S. Geological Survey in Reston, Virginia. "Saw a few senior-citizen Texas alumni at AAPG in Houston last year and hope to see more contemporaries at AAPG meeting this June. Family's first trip to Europe in 1979 was so delightful that this year I hope to explore more of rural Britain, especially Scotland and Wales."

Robert L. Wood, Jr. (BA '56) continues to live in Houston, and is president of Occidental Crude Sales, Inc.

R. D. Woods (BA '31, MA '34) is retired in Houston, where he still does a little consulting for Exxon.

W. W. (Bits) Woolfolk (BS '50) is busy and enjoying it in Midland as a Houston division geologist for Marathon Oil. "One married this year, one engaged, and one to go."

Dan M. Worrall (PhD '79) lives in Houston, where he is a research geologist for Shell Development Company.

Charles J. Worrel (BS '47), a partner in Forney and Worrel in San Antonio, says, "We went to the reunion of our 1947 Class at Vail, Colorado and had a wonderful time. Really good to see our classmates. Allan Nelson should be congratulated for the organization of the group. Dr. Bullard was there and we all had a very nice visit. Recommend it to all classes."

Phil Wyche (BS '51) is vice president of Gulf Oil Corp. in Houston and an active member of the Geology Foundation Advisory Council.

John C. Yeager (MA '60) says "Still in Lafayette and all is well. Will have 20 years with Union Oil this year."

Jack J. Yovanovich (BS '59) is senior vice president—land, for Mitchell Energy Corporation in Houston.

We are anxious to keep your current address on our mailing list and, therefore, solicit your cooperation in advising us if you move. We attempt to keep our files current by asking the post office to send notices of address changes but this is becoming increasingly expensive. Also, if you know of other alumni who do not receive our letters, please send their names and addresses; we would like to add them to our file.

The Editors

WE NEED YOUR HELP

The faculty and students appreciate your continued interest in the Department and Geology Foundation. We are pleased with the enthusiastic response to our request for information to be included in the Alumni News section.

We need your financial assistance in many areas—cost of publication of the *Newsletter,* scholarships for worthy undergraduate and graduate geology students, and teaching and research equipment—and others.

CAN WE COUNT ON YOUR SUPPORT?

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