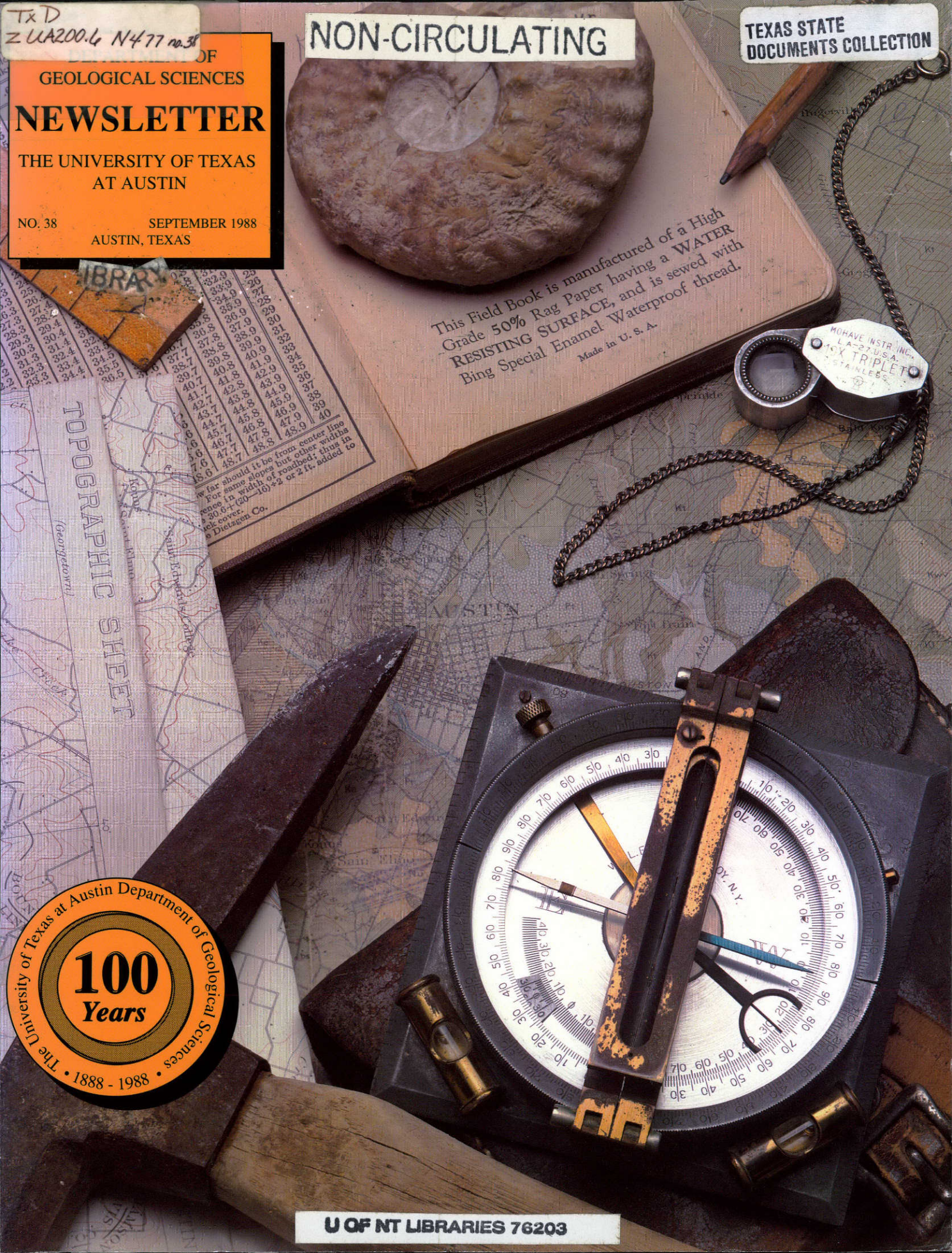
DEPARTMENT OF
GEOLOGICAL SCIENCES

NEWSLETTER

THE UNIVERSITY OF TEXAS
AT AUSTIN

NO. 38 SEPTEMBER 1988
AUSTIN, TEXAS

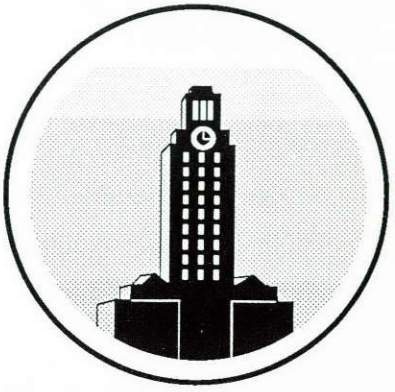


Cover Description:

Designed and photographed by David Stephens, Photographer in the Department of Geological Sciences. Specimen, *Drakeoceras Lassitzi* and field notebook (USGS style) courtesy of Dr. Keith Young; hand lens and rock hammer courtesy of Professor Ronald K. DeFord; field compass courtesy of Dr. Earle McBride; Austin "Historical Geology" and topographic maps from *Geological Atlas of the U.S.* (Austin Quad, Folio 76), courtesy of Walter Geology Library.

Geology ...

The First Century at UT Austin



by Samuel P. Ellison, Jr.

Geology teaching and research began at the University in 1888 when Robert T. Hill came to the University at the invitation of the Board of Regents. Neither he nor any of the teacher/researchers in geology who followed him in the early years could have guessed what accomplishments the Department would make in the future. Who could have predicted in 1888 that the Department of Geological Sciences would occupy one new building in 1933, then another in 1967? Who could anticipate that the number of geology teachers would be more than 35 by 1974, and who would have believed that the Department would grant 184 undergraduate degrees in one year (1939) or that 51 Master's degrees would be granted in one year (1983)? Certainly Robert T. Hill would not have predicted that 205 PhD degrees would be granted in the first 100 years of the Department's existence.

The number of students involved in geology has expanded and ebbed depending on times and conditions. Reliable counting of students began in 1955. Based on numbers of degrees granted, heavy undergraduate student enrollment peaked in 1940, 1949, 1956, and 1982. Low student numbers existed for the first 37 years, and later significant small numbers occurred in 1952, 1966, and 1987. Graduate student numbers have not fluctuated so greatly and gradually have increased to about 200 students per year.

Many of these graduates became important cogs in the economic world, especially in the petroleum and natural gas industries. A significant number became teachers and researchers at prestigious universities throughout the United States. Some former students joined state geological surveys and research organizations, private research companies, and the United States Geological Survey, where they carved out distinguished careers for themselves.

More than 143 faculty members with regular academic appointments have served during the first 100 years. In addition, a great host of visiting lecturers from other states and many foreign countries, on either short, one-day visits or even as much as two semesters, have brought the geological word to students and faculty. Lecturers for entire courses have also included members of the Bureau of Economic Geology, the Institute for Geophysics, and the Marine Science Institute at Port Aransas.

Since the early days the number of faculty members with instructor rank has decreased, but the number of faculty members with full professor rank has increased. During the last 20 years private funds have been contributed for professorships and chairs in geology. Faculty members enjoy not only the esteem of peers but also use of additional funds that are earned from the endowments. Such endowments came about mainly through the Geology Foundation that was established in 1953.

Field geology teaching started early in the history of the Department and has become an integral part of geological education at the University of Texas at Austin. In the beginning, the Department had no microscopes or instruments of any sort. Now it possesses a vast array of state-of-the-art equipment that places the Department among the top ten academic institutions in the country in terms of instrumentation for teaching and research.

The Department is fortunate to have the Joseph C. Walter, Jr. and Elizabeth C. Walter Geology Library housed in the Geology Building. A part of that library is the Tobin International Geological Map Collection. These facilities rank in the top ten academic earth science libraries in the country.

Background data for the accompanying charts and for much of the discussion which follows was obtained from papers by Keith Young (1967, 1983), papers by Fred M. Bullard (1976, 1979), each of the annual Department of Geological Sciences *Newsletters* (1953 to 1987), and each of the University of Texas Catalogues (1888 to 1987). Each *Newsletter* contains a wealth of information about faculty, students, visitors, Geology Foundation, degrees granted, and alumni.

Early Years - 1888 to 1933

For the first 13 years, the Department had only one geology teacher at a time, but this gradually changed so that by 1914 there were five geology teachers. There were eight faculty members in 1933 when the Department's first building was constructed. During this early period there were three female geology teachers, Hattie V. Whitten, Hedwig Kniker and Alva C. Ellisor.

The number of students and the number of degrees granted remained small in the earliest years. Undergraduate degrees peaked at 19 per year in 1923 and 1930. Master's degrees peaked at 18 per year in 1932. Only the Bachelor of Arts undergraduate degree was offered until 1930 when the Bachelor of Science degree was established as the preferred degree for a professional geologist. Although many protested against establishing a Bachelor of Science degree because it smacked of a trade school, Fred M. Bullard presented the proposal for the degree and it was approved on May 8, 1930.

The Department was housed in various places, including old Q Hall, and later, the third floor of the Old Main Building. Old Q Hall was famous for leaky roofs and not until more space in the Old Main Building became available (shared with Botany and Zoology), was there space to store fossils and minerals.

The Old Main Building, about 1901. At the turn of the century the Department occupied the west end of the third floor.

The curriculum was academic and research was mostly related to field geology mapping and fossil collecting in the earliest years. J. A. Udden at the Bureau of Economic Geology started as early as 1915 on subsurface studies and creation of lithologic well logs, and Francis Whitney originated a bit of an economically-related academic course called "Micropaleontology" (possibly the first in the United States). The impact of oil discovery on University Lands in West Texas brought on the desire for more geology subjects and thus a desire for a professional degree like the Bachelor of Science.

The discovery of oil in the University Lands No. 1 Santa Rita in West Texas in 1923 brought attention to the value of geology. Circumstances developing from the discovery of oil may have helped the Department toward getting the first geology building in 1933. The discovery did take Hal P. Bybee away from the teaching staff from 1924 to 1934 to be geologist for the University Lands.

F. W. Simonds chaired the Department for 31 years (1890-1921), the longest chairmanship, spanning almost one-third of the first 100 years of the Department. Francis Whitney followed as chairman for eight years, then Fred M. Bullard became chairman for eight years, beginning in 1929. The early years ended during Bullard's chairmanship with the construction of the first new building dedicated to Geology in 1933.

Unique among buildings, this 1933 structure carried terra cotta frescos of fossils and minerals. Inscribed on the Leuders (Permian) Limestone trim were words from Tennyson's poem, "In Memoriam": "O Earth What Changes Hast Thou Seen."

Summer field courses were well underway in 1919 when Hal P. Bybee was teaching a field course in the Mason-Llano region. Fred M. Bullard took this course in 1919, then organized and gave field courses in North Texas at Gainesville in 1924, Denison in 1926, and Bowie in 1928. At first tents were used as shelters; later houses were rented to hold students and faculty, as well as to provide dining and study facilities. These summer field courses given in North Texas sported Dodge screen-panel trucks for transportation.

During 1926 and 1927 the Department enjoyed a distinguished list of visiting lecturers, including Arthur Keith, E. H. Sellards, C. L. Baker, Donald Barton, Charles Schuchert, J. W. Beede, F. B. Plummer, Wallace Pratt, W. A. Wrather, W. M. Davis, and G. D. Harris. This was the beginning of a program of bringing to the campus outstanding geology lecturers, a program which continues today.

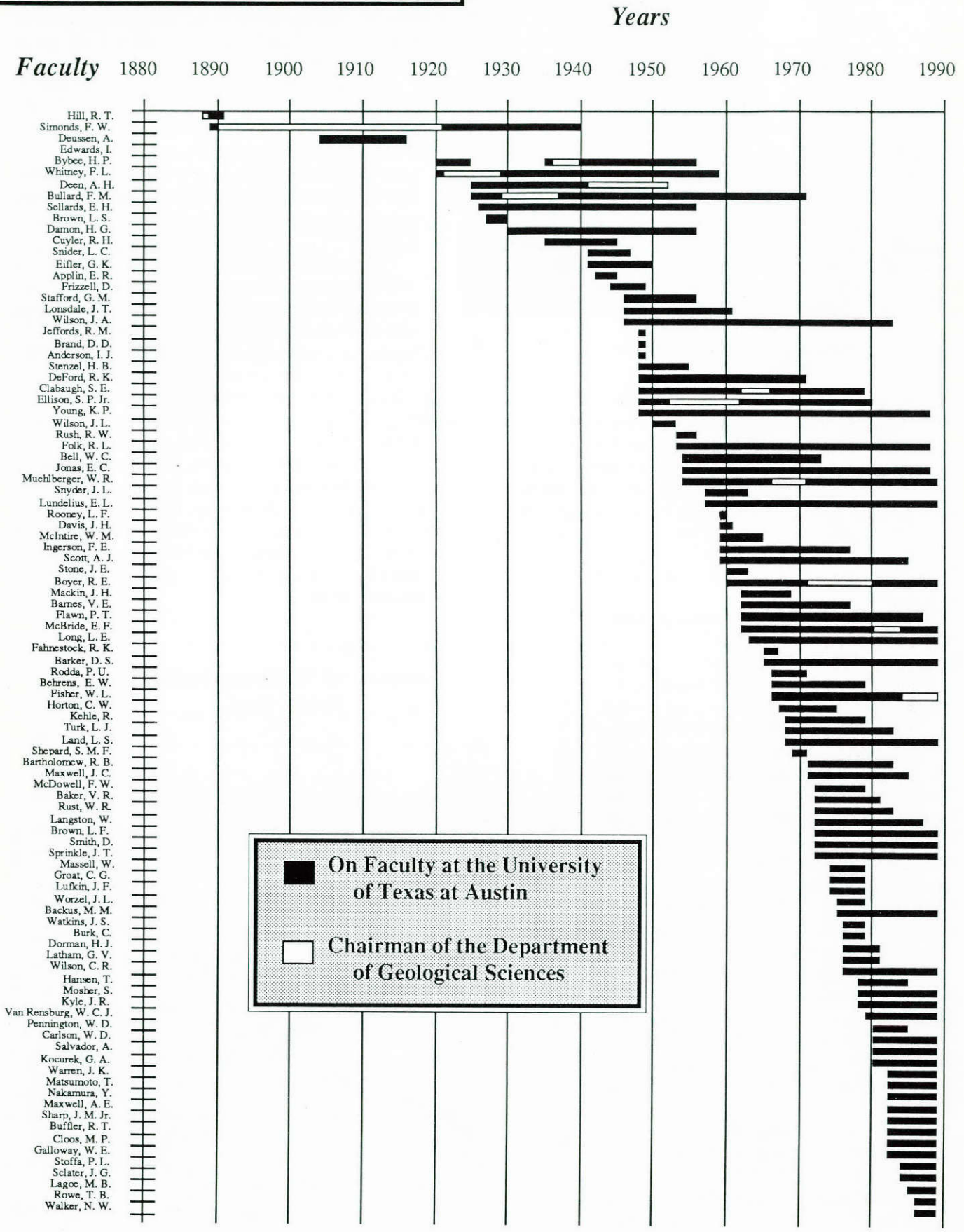
Expansion from 1933 to 1967

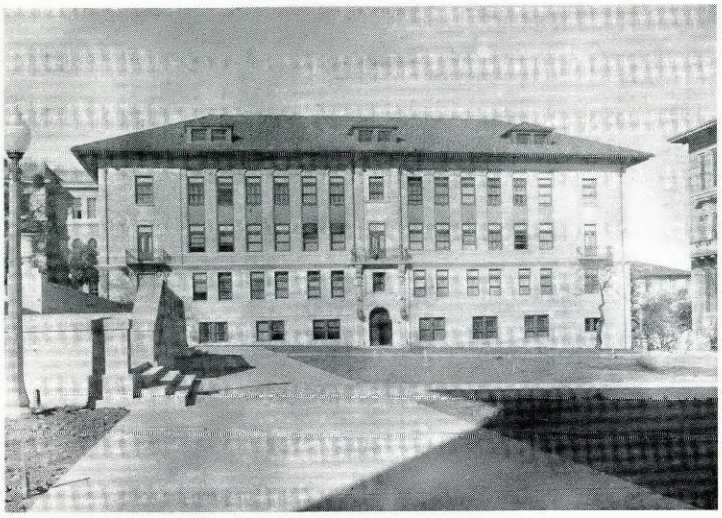
Fluctuation from 1933 to 1967 in numbers of students and degrees granted was rather drastic. The 1949 high and the 1957 high in the number of degrees granted was followed by a 1952 low and an even more drastic drop to the low of 1965. The lows primarily reflect economic conditions in the petroleum business. It may be noteworthy that numbers of students increased just after the construction of both the new building in 1933 and the new building in 1967.

The faculty numbered 26 in 1949 when the Department was trying to handle the influx of students returning after the war years of the middle 1940's. The granting of undergraduate degrees reached a high of 182 during 1947 followed by another high in 1957 when 139 undergraduate degrees were granted. Similarly the number of Master's degrees reached a high of 42 during 1951 and was not exceeded until 1983, when the number reached 51. PhD degrees were gradually increasing in number but never reached more than 12 per year (1968 and 1974).

Fred M. Bullard's chairmanship ended in 1937. Hal P. Bybee served as chairman from 1938 to 1941, followed by Arthur Deen from 1941 to 1952. Samuel P. Ellison, Jr. served as chairman from 1952 to 1962 and was followed by Stephen E. Clabaugh from 1962 to 1966. From 1966 to 1971 William R. Muehlberger was chairman. The Department of Geological Sciences moved into its second new building in 1967.

History of the Geology Faculty at the University of Texas





The Geology Building built during the chairmanship of Fred Bullard, occupied from 1933 to 1967.

The curriculum became increasingly sophisticated with subjects ranging from micropaleontology, field mapping (particularly the vast program of mapping in West Texas), more use of thin-section petrography, use of various geophysical methods, structural geology experiments, isotope work, and many other subjects. During this period the University degree plans included introductory geology as fulfilling a natural science requirement, and the students in Geology 601A and 601B, Introductory Geology, numbered more than 2,000 persons in some years.

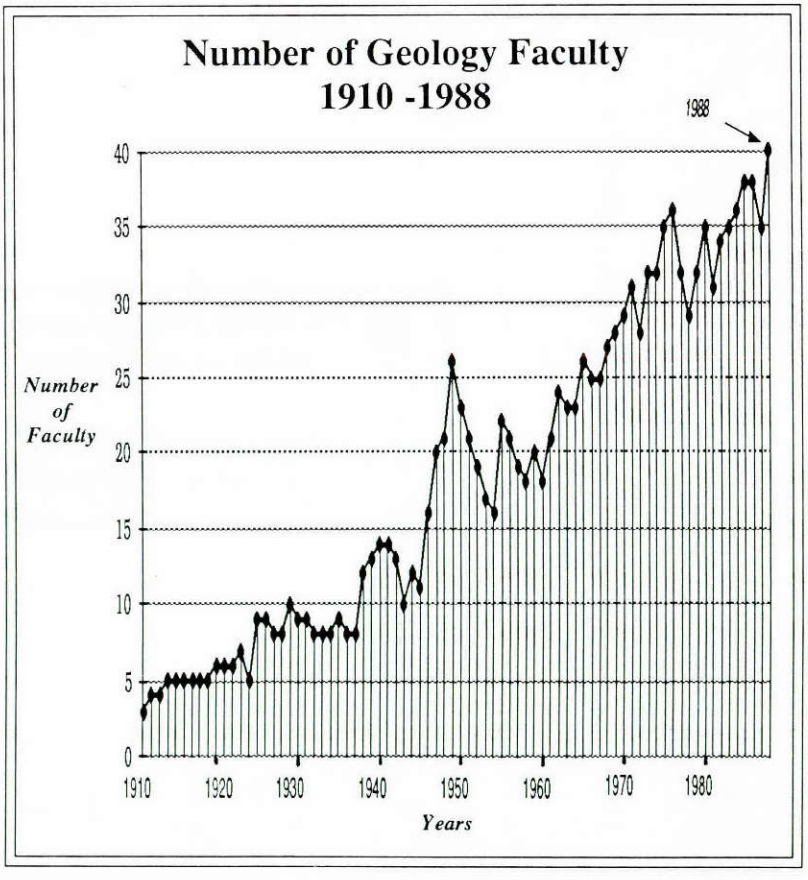
Research in many areas prevailed, but of importance was the beginning of geochemical work by newly-recruited teachers such as Earl Ingerson, Leon Long, and Edward Jonas. Strength was also added in sedimentation by the addition of Robert Folk, Earle McBride and Alan Scott. The areas of stratigraphy and fossils were enhanced by the additions of Keith Young and Samuel P. Ellison, Jr. Structural geology was upgraded with the addition of William R. Muehlberger and petrography was boosted with the addition of Dan Barker. An attempt to improve geomorphology with the addition of J. Hoover Mackin from the University of Washington ended tragically with his death in 1968. John A. Wilson and Ernest Lundelius gave strength in vertebrate paleontology. A new and different direction was developed by Robert E. Boyer when he established a path of Earth Science Education with the College of Education. Graduate work and graduate field mapping made a giant move forward with the addition of Ronald K. DeFord.

Hordes of students meant drastic increases in the summer field geology teaching. Facilities at Texas A&M University and the Smithville schools were used as barracks for the Tertiary Field Course. Facilities at Brady, Texas were employed for the Llano Uplift course and a CCC camp in the Davis Mountains served as housing in West Texas. Later the old Buttrell Ranch (now Leary Ranch) served as a field course housing facility for a number of years. Transportation had improved with the use of buses and carryalls.

Everett L. DeGolyer served a few months in 1940 as a distinguished professor. Later in 1943 Darrell Hughes of the Physics Department, with the help of Paul Weaver, generated the first geophysics course with ten additional distinguished geophysicists, including William M. Rust, who later played an important role in establishing geophysics at the University (see memorial, p. 63).

A most significant visitor, Ed W. Owen, came in 1953 and started to commute twice a week from San Antonio to conduct classes, use the library, and consult with students, especially about future employment. Ed was an independent consulting geologist and his service to the Department continued for more than 20 years, during which time he received no salary or expenses for commuting. His title was lecturer. He helped establish a program bringing distinguished geologists to the Department from both academia and from industry. He helped establish the Geology Foundation and its Advisory Council.

Ed's persuasion brought men like A. I. Levorsen, Chester Longwell, Richard H. Jahns, Francis Pettijohn, Preston Cloud, Simon Muller, James Gilluly, Hugh McKinstry, Larry Sloss, W. C. Krumbein, Charles F. Park, J. Marvin Weller, Harry Hess, and many others.



Eduardo Guzman, Chief Geologist of Pemex, conducted a short course for two months in 1954 and helped organize a Latin-American geology symposium for the Department. John M. Hills, consulting geologist, taught subsurface geology for one semester while Samuel P. Ellison, Jr. was on a study leave in 1960. Willi Ziegler, an expert on conodonts and European geology from the University of Bonn, Germany, joined the staff for two semesters in 1965 to teach structure and stratigraphy of Western Europe.

In 1966 W. L. Fisher and P. U. Rodda of the Bureau of Economic Geology were appointed lecturers. At this same time Wann Langston joined the Department as a lecturer.

The two most important events to happen during the 1933 to 1967 period were 1) the organization of the Geology Foundation in 1954 and 2) the construction of a new building large enough to allow expansion of graduate research programs. The Geology Foundation, represented by many civic-minded alumni and non-alumni who operate as the Geology Foundation Advisory Council, has done wonders for students and faculty. The Foundation established endowments so that earnings would support student loans, faculty travel, library, equipment, named professorships and chairs, and student scholarships. The goals that were first set up for the Foundation are being met. Faculty and students both salute the Geology Foundation Advisory Council for the strength that has been provided for geology at UT.

Some of the predictions at that time forecast the energy shortage that occurred in the early 1970's.

The new geology building of 1967 has 132,000 square feet of floor space, five stories high plus a basement. When first occupied in 1967, the 5th floor housed the Bureau of Economic Geology. The number of Bureau employees grew so much in the early '80's that branch offices were off-campus at Bureau West and Bureau South, in rental space. In 1984 the Bureau moved to new facilities at Balcones Research Center in North Austin. In 1983 the Institute for Geophysics was moved from Galveston to Austin and was housed in the east wing of the first floor. This included the installation of the new VAX computer. Rapid growth of the Institute staff soon required expansion into off-campus rented facilities as well.

The present Geology Building, occupied since 1967.

1967 to the Present

Soon after the occupancy of the new building in 1967, the number of faculty began to increase, climbing to 36 in 1976, then to 38 in 1985 and 1986. Some of the increase was the addition of younger members to replace those who were retiring. Several members of the Bureau of Economic Geology and scientists from the Institute for Geophysics were given academic rank without pay from the Department. Some courses are taught and some graduate students are supervised by these faculty members.

Reasonably good accounting of the number of students majoring in geology began in 1955. Undergraduate student population rose to a crest in 1982 at 815 and since 1982 has declined rapidly to less than 200 by 1987. Graduate student enrollment reached a peak in 1981, but the numbers have declined a small bit since that time.

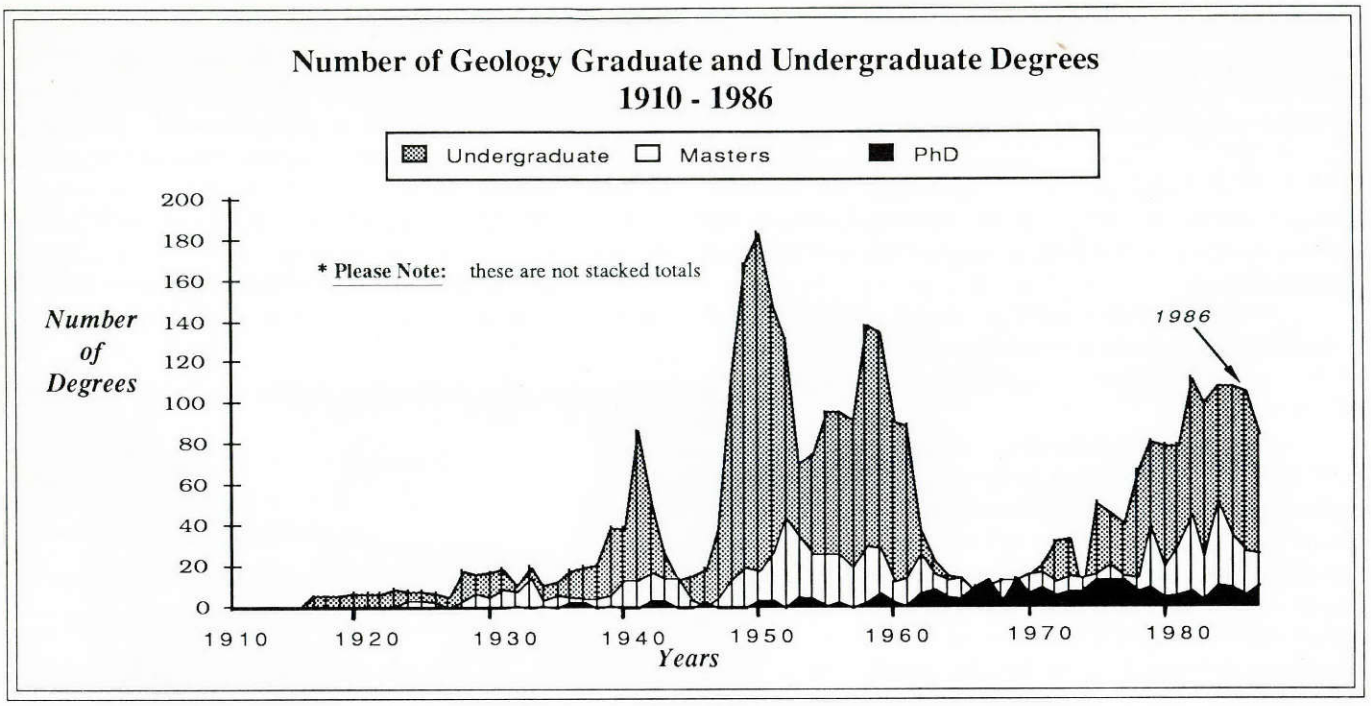
Undergraduate degrees peaked in 1981 but remained above 100 degrees a year each year until 1985, when the numbers started to decline rapidly. Master's degrees reached a crest in 1983 of 51 degrees but have since declined to about 22 degrees per year. PhD degrees have remained about the same at 11 degrees per year.

In November, 1967 the dedication of the new building featured a program on "Limitations of the Earth," which brought together eminent geologists from across the nation.

The geology curriculum has changed greatly since 1967. Introductory geology no longer has a large enrollment because in the 1960's the University eased the science requirements for undergraduate degrees. A few courses for non-majors are now offered: Geology of Texas, Frontiers of Oceanography, Gems and Gem Minerals, Application of Geology to Mineral Resources, and Earth Science for Teachers. A wide spectrum of geology and geophysics courses continued to be offered for geology majors. The graduate curriculum has shifted heavily to the specialties that each teacher is best suited to offer.

W. R. Muehlberger served as chairman for 1967 until 1971, then R. E. Boyer served as chairman from 1971 to 1978, when he was made Dean of the College of Natural Sciences. E. F. McBride followed Boyer as chairman from 1978 to 1984. From 1984 to the present W. L. Fisher has been chairman of the Department as well as director of the Bureau of Economic Geology.

Field teaching has changed greatly with emphasis on New Mexico and Colorado geology. The six weeks summer field course is required for all BS degree candidates. The elementary field geology course is taught during the fall or spring in the Central Texas area.



Only a few details of history can be recalled in an essay of this length. The alumni *Newsletter*, published each year since 1953, can provide additional historical information. Many individuals have played a part in the accomplishments of this Department. Each student who has passed through this geological maze has fond memories of many of the people involved.

What about the future? The Earth is here. The rocks are here; the fossils are here. Resources will always be needed by society, and geologists will help find those resources. The need will be on every continent and at sea. The future is bright. The Department of Geological Sciences at The University of Texas at Austin has a good start on the next 100 years.

Faculty of the Department of Geological Sciences
September 1, 1988

Professors

Milo M. Backus, Dave P. Carlton Centennial Professor in Geophysics; PhD, 1956, Massachusetts Institute of Technology: Seismic exploration with emphasis on analysis, seismic modelling and inversion directed toward recovery of stratal geometry and rock properties.

Daniel S. Barker, Fred M. Bullard Professor in Geological Sciences; PhD, 1961, Princeton University: Igneous and metamorphic petrology, experimental phase relations of feldspars and feldspathoids, origin of granite and alkalic rocks, geochemistry.

Robert E. Boyer, Robert E. Boyer Centennial Professor in Geology; Dean, College of Natural Sciences; joint appointment: College of Education; PhD, 1959, University of Michigan: Structural geology, analysis of space photographs, remote sensing, earth science education.

L. Frank Brown, Jr., Professor; Senior Research Scientist, Bureau of Economic Geology; PhD, 1955, University of Wisconsin, Madison: Upper Paleozoic stratigraphy, depositional systems, seismic stratigraphy, environmental geology.

Richard T. Buffler, Professor; Senior Research Scientist, Institute for Geophysics; PhD, 1967, University of California, Berkeley: Marine geology and geophysics, seismic stratigraphy.

Ian W. D. Dalziel, Professor; Senior Research Scientist, Institute for Geophysics; PhD, 1963, University of Edinburgh (Great Britain): Regional geology, plate tectonics and mountain building.

William L. Fisher, Leonidas T. Barrow Centennial Chair in Mineral Resources; Chairman, Department of Geological Sciences; Director, Geology Foundation; Director, Bureau of Economic Geology; PhD, 1961, University of Kansas: Energy and mineral resources.

William E. Galloway, John E. "Brick" Elliott Centennial Endowed Professor in Geological Sciences; PhD, 1971, University of Texas, Austin: Basin analysis, mineral fuels, clastic sedimentology, sedimentary petrography.

Lynton S. Land, Edwin Allday Centennial Chair in Subsurface Geology; PhD, 1966, Lehigh University: Isotope geochemistry, diagenesis, low-temperature aqueous geochemistry.

Leon E. Long, The Second Mr. and Mrs. Charles E. Yager Professor; PhD, 1959, Columbia University: Geochemistry, isotopic age and stable isotope studies.

Ernest L. Lundelius, Jr., John A. Wilson Professor in Vertebrate Paleontology; PhD, 1954, University of Chicago: Vertebrate paleontology, Pleistocene faunas, paleoecology.

Toshimatsu Matsumoto, Professor; Research Scientist, Institute for Geophysics, PhD, 1961, Tokyo University: Earthquake seismology, earthquake engineering, geophysics, acoustic emissions.

Arthur E. Maxwell, Professor; Director, Institute for Geophysics, PhD, 1959, University of California, San Diego, Scripps Institution of Oceanography: Marine geophysics and oceanography.

Earle F. McBride, Wilton E. Scott Centennial Professor, PhD, 1960, Johns Hopkins University: Sedimentary processes, sedimentary petrology, sandstone diagenesis.

William R. Muehlberger, William Stamps Farish Chair in Geology; PhD, 1954, California Institute of Technology: Tectonics.

Yosio Nakamura, Professor; Senior Research Scientist, Institute for Geophysics; PhD, 1963, Pennsylvania State University, University Park: Geophysics, seismology, lunar and planetary physics.

Amos Salvador, Alexander Deussen Professor in Energy Resources; PhD, 1950, Stanford University: Stratigraphy, petroleum geology, geology of the Gulf of Mexico Basin and the Caribbean area.

John G. Sclater, Shell Companies Foundation Distinguished Chair in Geophysics; Senior Research Scientist and Associate Director, Institute for Geophysics; PhD, 1966, Cambridge University (Great Britain): Crustal heat flow, sedimentary basin evolution.

John M. Sharp, Jr., The Third Mr. and Mrs. Charles E. Yager Professor; PhD, 1974, University of Illinois, Urbana: Hydrogeology, environmental geology; relation of groundwater to ore genesis and hydrocarbon migration, hydrology of sedimentary basins.

Douglas Smith, Albert W. and Alice M. Weeks Centennial Professor in Geological Sciences; PhD, 1969, California Institute of Technology: Field and chemical studies of igneous and metamorphic rocks, geochemistry, mantle processes.

James T. Sprinkle, The First Mr. and Mrs. Charles E. Yager Professor; PhD, 1971, Harvard University: Primitive echinoderms, blastoids, Paleozoic paleontology and stratigraphy of the Arbuckles and Rocky Mountains.

Paul L. Stoffa, Wallace E. Pratt Professor in Geophysics; Senior Research Scientist, Institute for Geophysics; PhD, 1974, Columbia University: Single and multi-ship, multi-channel seismic surveys; reflection and refraction seismic modelling, migration and inversion.

Willem C. J. van Rensburg, George H. Fancher Professor in Petroleum Engineering; joint appointment: Department of Petroleum Engineering; PhD, 1965, University of Wisconsin, Madison: International minerals and energy economics and policy issues, coal characterization and utilization.

Adjunct Professor

Alan J. Scott, PhD, 1958, University of Illinois, Urbana: Process sedimentology, depositional systems, basin analysis.

Associate Professors

William D. Carlson, Joyce Bowman Payne Centennial Teaching Fellow; PhD, 1980, University of California, Los Angeles: Metamorphic petrology, reaction kinetics, field, analytical, and experimental studies of metamorphic rocks.

Mark P. Cloos, William T. Stokes Centennial Teaching Fellow in Geological Sciences; Associate Chairman, Department of Geological Sciences, PhD, 1981, University of California, Los Angeles: Structural geology and tectonics, field, laboratory and theoretical study of subduction zones.

Gary Kocurek, Elf Aquitaine Faculty Fellow in Geological Sciences, PhD, 1980, University of Wisconsin, Madison: Sedimentology depositional environments and eolian processes.

J. Richard Kyle, Geology Foundation Advisory Council Centennial Teaching Fellow, Undergraduate Advisor; PhD, 1977, University of Western Ontario: Ore deposits geology, fluid inclusions diagenesis, salt domes, industrial minerals, minerals exploration.

Sharon Mosher, William T. Stokes Centennial Teaching Fellow in Geological Sciences, PhD, 1978, University of Illinois, Urbana: Deformation mechanisms, strain analysis, mapping with emphasis on complexly deformed terranes.

Clark R. Wilson, John A. and Katherine G. Jackson Centennial Teaching Fellow in Geological Sciences, PhD, 1975, University of California, San Diego, Scripps Institution of Oceanography: Geophysical time series, analysis of multidimensional geophysical data field.

Assistant Professors

Philip C. Bennett, PhD, 1988, Syracuse University: Hydrogeology, aqueous geochemistry, contaminant transport processes.

Stephen P. Grand, PhD, 1986, California Institute of Technology: Geophysics, shear velocity structure of the earth's mantle.

Martin B. Lagoe, Dave P. Carlton Centennial Teaching Fellow in Geology, PhD, 1982, Stanford University: Micropaleontology (Foraminifera), stratigraphy, and paleoceanography.

Timothy B. Rowe, Bill R. Payne Centennial Teaching Fellow, PhD, 1986, University of California, Berkeley: Vertebrate Paleontology, lower vertebrates.

Nicholas W. Walker, John A. and Katherine G. Jackson Centennial Teaching Fellow in Geological Sciences, PhD, 1986, University of California, Santa Barbara: Tectonics, isotope geology, petrology of igneous and metamorphic rocks, crustal evolution.

John K. Warren, Morgan J. Davis Centennial Teaching Fellow in Petroleum Geology, PhD, 1981, Flinders University (Australia): Origin of evaporites and carbonates, paleohydrology of saline lakes.

Research Scientists

Wulf A. Gose, PhD, 1970, Southern Methodist University: Paleomagnetism, tectonic evolution of Central America, the Gulf of Mexico, and the Caribbean, Magneto-stratigraphy.

Fred W. McDowell, PhD, 1966, Columbia University: Geochemistry, geochronology.

Research Associate

Sally J. Sutton, PhD, 1987, University of Cincinnati: Electron microprobe analysis, structural geology, mineralogy.

Senior Lecturer

William D. Sill, PhD, 1968, Harvard University: Vertebrate paleontology of Triassic reptiles.

Lecturers

Mark A. Helper, PhD, 1985, University of Texas, Austin: Structural and metamorphic petrology, isotope geochemistry, field geology, Cordilleran tectonics, dynamics of convergent margins.

W. Paul Mann, PhD, 1983, State University of New York at Albany: Structure, stratigraphy, Caribbean plate boundary.

Professors Emeriti

Virgil E. Barnes, Professor Emeritus: PhD, 1930, University of Wisconsin, Madison: Stratigraphy; geologic mapping, tektites, directing compilation of Geologic Atlas of Texas and of 4-quadrant Geologic Map of Texas.

Fred M. Bullard, Professor Emeritus: PhD, 1928, University of Michigan: Volcanology.

Stephen E. Clabaugh, Fred M. Bullard Professor Emeritus; PhD, 1950, Harvard University: Metamorphic petrology and volcanic rocks of Texas and Mexico.

Ronald K. DeFord, Professor Emeritus: MS, 1922, Colorado School of Mines: Stratigraphy of southwestern U.S. and northern Mexico, history of geology.

Samuel P. Ellison, Jr., Alexander Deussen Professor Emeritus in Energy Resources; PhD 1940, University of Missouri, Columbia: Resource geology of fuels, coal, oil and gas, subsurface geology, micropaleontology and biostratigraphy of Foraminifera and conodonts.

Peter T. Flawn, President Emeritus and Leonidas T. Barrow Chair Emeritus in Mineral Resources; PhD, 1951, Yale University: Economic geology, environmental geology, geology and public affairs.

Robert L. Folk, Dave P. Carlton Centennial Professor Emeritus in Geology; PhD, 1952, Pennsylvania State University, University Park: Petrography and origin of recent sediments, Tertiary sandstones of Gulf Coast; Cretaceous and Paleozoic limestones of Gulf Coast and central Texas, sedimentary properties in relation to geomorphology.

Claude W. Horton, Sr., Professor Emeritus: PhD, 1948, University of Texas, Austin: Underwater acoustics, magnetotelluric fluctuations, geophysical time series.

F. Earl Ingerson, Professor Emeritus: PhD, 1934, Yale University: Geochemistry of igneous and metamorphic studies of the Martian surface, hydrothermal studies, liquid inclusions.

Edward C. Jonas, Professor Emeritus: PhD, 1954, University of Illinois, Urbana: Electron and X-ray diffraction of clay minerals, pyroclastic sediments and uranium deposits.

Wann Langston, Jr., The First Mr. and Mrs. Charles E. Yager Professor Emeritus; PhD, 1952, University of California, Berkeley: Paleontology of lower vertebrates.

John C. Maxwell, William Stamps Farish Chair Emeritus; PhD, 1946, Princeton University: Structural geology.

John A. Wilson, Professor Emeritus: PhD, 1941, University of Michigan: Vertebrate biostratigraphy of the Tertiary of the Gulf Coastal Plain, west Texas, and Mexico.

Keith Young, J. Nalle Gregory Professor Emeritus in Sedimentary Geology; PhD, 1948, University of Wisconsin, Madison: Mesozoic stratigraphy and paleontology of the Gulf Coast of the US and Mexico, detailed mapping of the area of the Balcones escarpment, geology of the environment of man.

Faculty News

News Briefs

Milo Backus taught graduate seminars in the fall and spring terms, and a small undergraduate class in geophysical interpretation in the spring term. Project Seer (Solid Earth Exploration Research), an industry-supported research project, continued in its sixth year. The project is directed toward the development of improved and expanded interpretive information from marine seismic data.

Milo will become an Honorary Member of the Society of Exploration Geophysicists at the 1988 meeting in Anaheim.

Dan Barker taught graduate igneous petrology and a new upper-division elective in volcanology in the fall, and the graduate course in analytical techniques in the spring. The volcanology course was a real challenge to students and teacher, because it is one of the courses, now required in all departments in the University, involving substantial writing. Students each wrote short technical and nontechnical reports and a long independent research paper. The course forced Dan to organize a large amount of new material in this fast-growing and exciting field. He will give the course again this fall, and hopes that it will be better the second time.

Dan accepted an invitation from the Vernadsky Institute of Geochemistry and Analytical Chemistry (Moscow) to participate in an expedition to study volcanic rocks of the Canary and Cape Verde Islands. He and a Canadian petrologist were the only Western geologists aboard a new Soviet research vessel, the *Akademik Boris Petrov*. Dan was happy to find that his colleagues, representing the second and

Dan Barker answers a question from Dr. Victoria Kononova following his lecture on carbonatites on board the research vessel Akademik Boris Petrov between the Canary Islands and Cape Verde Islands, January, 1988.

Chairman's Report

This year marks the 100th anniversary of the founding of a geology program at the University by R. T. Hill. To commemorate this occasion, Sam Ellison has written a special article for the *Newsletter* about the history of the Department. The 1987-88 academic year was one of accomplishment for students, faculty and staff. Here, we report the status of the Department and some of the developments that made this year particularly memorable.

Undergraduate enrollment held steady at near 160 students for both fall and spring semesters. The number is far from our peak of 825 majors in 1982 but the improvements in student-teacher interaction, smaller laboratories, and fewer problems getting reserve materials out of the library, lead to a better teaching program and provide some flexibility for faculty to develop new courses. We continue our special efforts to attract the best and brightest undergraduate students by direct mailing to all National Merit Scholars from the State of Texas and by offers of scholarships. The graduate progam is a little smaller and is now near 175 students (60% MA, 40% PhD).

Competition for jobs in the geosciences is still intense but nearly all of our graduate students are reporting success. Most of the recruiting by the major companies continues to be for MA and PhD geologists and geophysicists. This year 26 companies (up from 16 last year) conducted from 1 to 39 interviews (most held 20 to 25) on campus. Twenty undergraduate and 60 graduate students participated in one or more of the on-campus recruitment interviews. This resulted in 52 offers (6 BS, 38 MA, and 8 PhD) of permanent employment and 29 offers (2 BS, 15 MA, and 12 PhD) of employment for the summer of 1988. Twenty-six permanent and 16 summer offers were accepted. The Department's placement program seeks to maximize the opportunities for all of our students. Summer jobs for undergraduates are particularly scarce and as always there are many who want some real work experience. Please contact Anthea at (512) 471-5172 if you have needs of one or twenty, summer, temporary, or permanent employees. If on-campus interviews cannot be held, we will post notices mailed to us or called in over the phone.

Dr. Sally Sutton joined the Department as a Research Associate last October. Sally came to us after completing her PhD at the University of Cincinnati. Besides continuing her research which complements that of several of the faculty interested in deep basin fluid and mineral diagenesis, her primary responsibility is keeping the electron microscope and scanning electron microscopes running smoothly and training student and faculty users.

No new faculty joined the Department last year but a rigorous series of campus interviews were held for the addition

third generations after the Soviet revolution, still have the same aspirations, courtesies, and humor as we in the West. They saw some magnificent (and puzzling) rocks, including carbonatites which have been found in an oceanic setting only in these islands. Dan is eager for his samples to arrive. After three weeks (during which Doug Smith generously took over his teaching duties), Dan landed via rubber raft on the most remote island in the Cape Verdes and made his way back to Austin.

His summer plans include examination of the Vulsini volcanic complex north of Rome (the topic of a dissertation by PhD student Bruce Turbeville) and a return to Etna and the Aeolian Islands north of Sicily, to continue research on some complicated volcanic rocks.

Virgil Barnes completed his 53rd year with the Bureau of Economic Geology in August. Although the 1:250,000 scale Geologic Atlas of Texas was completed last year several sheets have gone out of print. During the year Virgil saw publication of revisions of the Beeville-Bay City and Dallas Sheets and prepared revisions of the Beaumont, Sherman, and Palestine Sheets for cartography. Scribing and review of the 1:500,000 scale Geologic Map of Texas was completed and is now in the process of color separation.

The Texas Academy of Science named Virgil Distinguished Texas Scientist for 1988. The award was given March 4 during a plenary session at the annual meeting of the Academy, held this year at East Texas State University in Commerce. Receiving the award entailed giving an address on the "Origin of Tektites" during the

of assistant professors in hydrogeology and geophysics for 1988-89. We have made offers that were accepted to Philip Bennett, a hydrogeologist who is finishing his PhD at Syracuse. We expect Phil to arrive on campus in January, 1989. His addition augments the hydrogeology program that has so far been single-handedly run by Jack Sharp. Steven Grand, who has been an Assistant Professor at the University of Illinois for the past two years, will join our Department in September. Steve received his PhD from Cal Tech and works on earthquake seismology and seismic tomography of the earth. His addition fills a gap in our geophysics curriculum. Both Phil and Steve give the Department some much needed breadth in two critical fields. We continued our search for Chair-level faculty but, regrettably, these efforts were unsuccessful.

The Department added three new staff members during the year. Paul Desha, procurement officer, replaces Jo Ann Kuper who has taken permanent disability due to illness. Eddie Wheeler joined the Department as a half-time machinist, replaces Rudy Melchoir who died last year. In February Scott Schroeder began working as an accounting clerk in the Geology Foundation office. Scott Thieben will join the staff in fall, 1988 as a research scientist assistant. Scott will be an understudy to Karl Hoops, our analytical chemist, learning the ropes to take over when Karl retires. We were grieved by the death last August of John Thorne, one of our electronics technicians. John had been with the Department for over ten years.

The new Finnigan seven-collector, solid source mass spectrometer was installed in the basement of the building. This machine can handle up to 13 samples at a time, is fully computer automated, and is already a workhorse in the research programs of Lynton Land and Nick Walker. Nearly a dozen students are now using it as part of their graduate research. Routine measurement of U, Pb, and Sr isotopes of rocks, minerals and brines are being made. Look for the publication of the new U-Pb ages for the Precambrian rocks of the Llano Uplift and for Sr-isotopic evolution of the brines of the Gulf Coast basin. Some surprising results are already in.

Our efforts at increased computerization of the Department continue. We have established a microcomputer laboratory on the second floor with two IBM and three Macintosh computers. Students have ready access to these machines at all hours. The mineral separation lab has been upgraded with the addition of cabinets scavenged by Mark Helper from labs being renovated in the Zoology Department. The addition of two more Frantz magnetic separators significantly increases the speed and ease of mineral separations for analyses. Mark Cloos is in the process of establishing a computer-automated laboratory for apatite fission track thermal history analysis. This work complements other radiometric dating labs in the Department and provides new dated information that complements conventional vitrinite analysis of basins. Look for the first results from this facility by this time next year.

The level of faculty research funding for the year is notably up from the last few years. Nearly all faculty have research grants which support students. There are 18 grants from the National Science Foundation (NSF), seven from the American Chemical Society-Petroleum Research Fund (ACS-PRF) and three industrial consortia that support the research programs of the Department. This hefty and diverse funding supports graduate students as research assistants to do their thesis studies, provides employment for undergraduates as laboratory assistants and is one measure of the distinction of the faculty.

The Departmental speakers program coordinated by Nick Walker continues to be a smashing success. Speakers from the United States and Canada presented lectures varying from Jurassic carbonates to mammalian radiation to the case of tectonic thickening and thinning of the crust. A notable change was the movement in the spring semester of Technical Sessions to 4:00 p.m. on Tuesdays and Thursdays. This change in time leads to fewer laboratory conflicts for students who serve as TA's, more opportunities for extended faculty meetings (if this is a good thing), and more opportunities for open-ended discussion at the conclusion of lectures as students from the 2:00 class are no longer knocking at the door. The Endowed Lectureships in the Foundation were extensively used this year as reported elsewhere in this *Newsletter*.

A major concern for the University and the Department is the erosion of the dollar and its effect on the price of library journals. We are affected somewhat less than other branch libraries because the Walter Library Endowment is used for the purchase of books (the cost of which are also increasing at an alarming rate). It has still been necessary to cancel some of the lesser-used journals. The importance of maintaining the quality of our outstanding library for our teaching and research programs and for our visitors cannot be overstated.

As you can see, this past year was a good one. We look forward to 1988-89 with much optimism and your continued support.

William L. Fisher,
Chairman

Mark Cloos,
Associate Chairman

plenary session and preparing a manuscript for publication in the *Texas Journal of Science*.

Virgil's tektite research revived with the development of analytical capability at the Bureau. Microprobe data on a unique layered Texas tektite was presented at the Meteoritical Society meeting held in Fayetteville, Arkansas during July. Manuscript preparation continues on the interpretation of analytical data obtained by the Bureau's Minerals Study Laboratory on Southeast Asia tektites and associated materials.

Virgil prepared a chapter on "Geology" for the Soil Survey of Llano County at the request of the U.S. Department of Agriculture, Soil Conservation Service.

Dr. Virgil E. Barnes, professor emeritus in the Department of Geological Sciences and a senior research scientist in the Bureau of Economic Geology, has been named the Distinguished Texas Scientist for 1988 by the Texas Academy of Science.

Virgil received his award at the Academy's 91st annual meeting March 3-5, 1988 at East Texas State University in Commerce.

Bob Boyer spent the past year continuing his administrative duties as the Dean of the College of Natural Sciences. The College teaches a large share of the undergraduate students throughout the University. This past year, with approximately 20 percent of the total University faculty, the College taught 25 percent of the student course hours. One reason for this high teaching figure is the courses in basic mathematics and laboratory sciences required of many degree programs outside the College. Another reason is the popularity of introductory courses in science. Several of these are taught in the Department of Geological Sciences, including two GEO 302K courses entitled "The Age of the Dinosaurs" and "Geology of Natural Parks." Both have proved to be popular electives.

The instruction budget appropriated by the State for 1987-88 that enabled the College to teach so many students exceeded $28.1 million. However, the College attracted a larger amount ($45.3 million) in calendar year 1987 in external funds for research. Federal sources accounted for 89 percent of that money. Industrial and foundation sources provided most of the remainder. A concern is the relatively low amount of those dollars received by faculty in Geological Sciences. They received a modest $0.69 million. In contrast, department s of equivalent size such as Astronomy with $5.1 million, Computer Sciences with $8.7 million, and Zoology with $3.7 million all did much better. It is encouraging to note the significant allocation of State funds for research in the past few years. For the current biennium, faculty in the Natural Sciences have received $7.7 million from the special appropriation provided by the Seventieth Legislature to support basic and applied research among all the universities in the State of Texas.

Within the Natural Sciences, student enrollment totaled 6,841 in calendar year 1987, of which 5,079 were undergraduates. Geological Sciences had a relatively small number (153) of undergraduate majors compared with the most popular fields: Biological Sciences (1,125), Computer Sciences (862), and Home Economics (699). Only Microbiology (96), Astronomy (46), and Botany (12) had fewer majors than the Geological Sciences. In contrast, five years ago enrollment in the Department was third highest, just below Biological Sciences and Computer Sciences. At the graduate level, Computer Sciences awarded the most degrees in 1987 with a total of 71. Geological Sciences, with 36, was fourth behind Chemistry (41) and Physics (38). The clear trend, with the depressed oil industry and difficult times in job seeking for undergraduates, is toward graduate education. But now might be an ideal time to choose Geological Sciences as an undergraduate major, realizing that times will change and geoscientists will be much in demand within the next several years.

Bob comments, "On the personal side, Betty and I again attended the annual Marble Meet in Amana, Iowa in May (thanks for the marbles, Murray Felsher). The talks rivaled a geological convention for technical jargon, but I can now recognize clambroths, indians, and lutz latticino swirls at a glance. However, the terms I understood best were the dollar figures at the auction of prize marbles. My secret was to bid fast, but not last. Especially for the three-inch sulphide clown marble that sold for $3,400."

Frank Brown continued to direct the Bureau's review of technical manuscripts and to oversee the Bureau's program for the Governor's Nuclear Waste Programs Office, a project that ends on August 31, 1988 because of the Congressional decision to select Nevada as the site for disposal of high-level nuclear wastes. Frank also worked toward a sequence stratigraphic framework for the Upper Pennsylvanian and Lower Permian strata on the Eastern Shelf of the Midland Basin. During the year, he and coauthors Raul Solis and David Johns published an extensive set of cross sections of the Eastern Shelf in a Bureau report.

Frank directed studies of Bredasdorp and Pletmos Basin offshore South Africa for Soekor Limited in Austin during 1987-88. Working on his own time, he directed five geophysicists and two geologists who each spent 4 1/2 months in Austin. The study involved a sequence stratigraphic analysis that defined potential hydrocarbon plays in the two Indian Ocean basins. Frank will spend his vacation in Cape Town in August discussing the final reports and future drilling to test the plays established during the Austin program.

Dick Buffler returned to the Department and the Institute for Geophysics in September, 1988 after a two-year leave of absence with the National Science Foundation in Washington, D.C. While at NSF he served mainly as program director for the Ocean Drilling Program. Washington was a unique and wonderful experience, but he is really glad to be back in Austin and is excited about returning to his research and teaching.

Dick's main research continues to focus on the seismic stratigraphy and tectonics of the deep Gulf of Mexico basin and adjacent margins. Major topics include: 1) nature, distribution and origin of the crust, 2) Mesozoic seismic stratigraphy, 3) the Mississippi Fan, and 4) structural and stratigraphic synthesis of the northern Gulf slope (with

Texas A&M University). He recently received an award from the Texas Higher Education Coordinating Board under their Advanced Research Program to continue graduate student research in the Gulf. Research activities outside the Gulf area include a joint project with Rice University to study the tectonics and sedimentation along the northwestern Nicaraguan Rise just south of Jamaica. This involved participation on a recent cruise to collect seismic data aboard Duke University's *R/V Cape Hatteras* in April 1988. Dick also will participate in the upcoming ODP Leg 123 off northwest Australia as a seismic stratigrapher/log analyst during September and October, 1988.

Although Dick does not teach any formal courses, except for helping Frank Brown with the seismic stratigraphy class, he participates in the teaching program by directing student research projects and serving on student thesis or dissertation committees. He currently is serving on 14 committees, including students from Texas A&M University as well as Rice University, where he is an adjunct professor.

Fred Bullard reports that the past year (which seemed much "too short") was filled with routine activities. Fred spends some time at his University office on a more or less regular basis, and if friends are passing through and do not find him at his office, he insists they call him at his home (459-5336).

Fred continues to keep up with current volcanic activity around the world. He is also frequently asked to review books and scientific articles in his field for international journals.

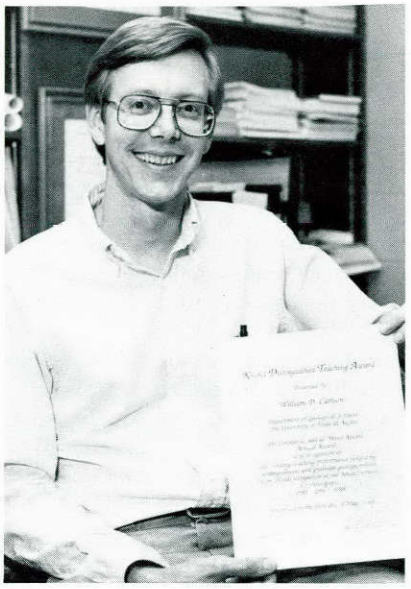
Last summer Fred and Evelyn had planned to spend some time at Fred's vacation home at Taos, New Mexico, but Fred developed a health problem, which has been corrected, but made it necessary to postpone the trip. They plan to continue their custom of spending time at Taos this summmer, where the 7,000-foot elevation provides a welcome relief from the Texas heat.

Fred and Evelyn joined other members of their families for a reunion in Hawaii during the New Year season. This is an area familiar to Fred since he began his studies on volcanoes at the Hawaiian Volcano Observatory, as an assistant to Dr. Jaggar, more years ago than he cares to reveal.

Fred and Evelyn also attended the annual meeting of the AAPG in Houston in March and Fred reported that he was pleased to have the opportunity to greet many former students and friends.

The past academic year began abruptly for **Bill Carlson**: a unexpected call came at 10 p.m. Sunday night asking that he teach the first half of the Optical Mineralogy course, starting Monday morning, 9:00! He reports that having survived the first lecture, the remainder of the semester seemed somehow less demanding than usual. He greatly enjoyed sharing that course with Nick Walker, and he again delighted in co-teaching the course in Sedimentary and Metamorphic Petrology with Lynton Land. A graduate course in Advanced Analytical Tech-

Instead of teaching courses, Bill spent much of his time during the spring in the Experimental Petrology Lab at NASA's Johnson Space Center, where he is still hammering away at the problems of high-pressure subsolidus pyroxene phase equilibria. Bill claims that the pyroxene work will be finished in another year, "when the NSF money runs out." While in Austin, he worked on a number of papers that had been



Bill Carlson, three-time Knebel Award winner.

lying fallow for some time, including one characterizing an unusual orthopyroxene-like phase stable at high temperatures and low pressures, another describing the occurrence in the Llano Uplift of unusual andalusite with the world's record for vanadium content, and three coauthored by students which have grown out of Master's theses done in the Llano Uplift. Alumni who have recently taken the summer field course in the Picuris Mountains are likely to remember the beautiful garnet-studded quartzites at the base of R_6 (Rinconada Formation); a careful look at the process of garnet crystallization in those rocks has consumed much of Bill's efforts since early last fall. They may provide some of the most complete information yet about the mechanisms and rates of porphyroblast nucleation and growth in metamorphic rocks.

Don Miser, a doctoral student co-supervised by Bill and Lynton Land, finished his dissertation on microstructures in dolomite and moved on in February to a prestigious postdoctoral appointment in the TEM lab at Arizona State. One student working on Precambrian rocks in Chihuahua, Mexico, and another studying coronal reaction textures in a variety of metamorphic occurrences, are nearing completion of their projects: look for some surprises on both fronts! Another student has begun petrologic work on the early metamorphic history of the Llano Uplift. That project got a big boost when a two-year joint proposal by Nick Walker, Sharon Mosher, and Bill was funded by NSF; the work will combine geochronologic, structural, and petrologic studies in the Llano Uplift.

"A special opportunity early in the year was the Gordon Conference on 'Atomistic Processes in Inorganic Geochemistry' during late August in New Hampshire," Bill writes. "Several gloriously sunny and cool days in the field with top-rate New England geologists made for a spectacular end to a hot Texas summer." The travel schedule over the year included invited lectures at Texas A&M and Harvard, and a talk at the November GSA meeting in San Antonio.

Bill was caught completely by surprise in May, when he was chosen by a student vote for the Carolyn G. and G. Moses Knebel Distinguished Teaching Award. "That kind of recognition," he writes, "is especially gratifying because the students themselves make the selection. The Knebel Award has to stand out as the highlight of this last year. Thanks to all the students, present and former, who make teaching so rewarding as a profession."

niques filled out his instructional efforts for the fall. The spring semester brought a welcome change of pace, as Bill took advantage of a Faculty Research Assignment from the University Research Institute.

Steve Clabaugh says he is enjoying the life of a Pedernales hermit at their place on Lake Travis. He and Pat made trips to Fiji and Belize during the past year, but Pat has developed severe asthma that restricts their winter activities. Steve enjoys reading geology these days and stays active gardening. Highlights are visits of their children and five grandchildren.

In April, Steve was featured in an article in the *Lake Travis View* newspaper. His considerable abilities as a gardener mentioned in that article include his successful growing of several varieties of apples, plums and grapes. In addition, he is now working on perfecting his own brand of hybrid amaryllis. For obvious reasons, Steve doesn't have much time to spend visiting the Department, but manages to stop by every few weeks.

Dr. Earle F. McBride was co-winner of the1987 Best Speaker Award at the annual GCAGS meeting held in San Antonio.

Mark Cloos continued as a William T. Stokes Centennial Teaching Fellow during the 1987-88 academic year. He taught Physical Geology for undergraduates in the fall semester and co-taught a new course in the spring semester with Gary Kocurek, entitled Geology of the National Parks. The course had an enrollment of 175 students even though one of the lectures was from 4:00-5:00 on Fridays! It seems to have been a success as most showed up for the Friday lectures and one of the students said he was going to keep their textbook instead of selling it back to the bookstore.

Jeff Corrigan, one of Mark's PhD students received the Harold T. Stearns award from the Geological Society of America for his research proposal on the tectonic of western Panama that he submitted to their Penrose Grant program. Leslie White, another PhD student, spent four months down under at the University of Melbourne in Australia. She is learning the details of apatite thermochronology from Trevor Dumitru and the rest of the Melbourne research group. Bill Copeland finished his MA thesis on the nature of faults mapped by others in the eastern part of the Franciscan Complex of northern California. Bill's work showed that the faults are not major structures and certainly not the boundaries between allochthonous terranes. He also presented a talk on this work at the Cordilleran Section meeting of the Geological Society of America held in Las Vegas in March.

Last spring, Mark and Dan Barker participated in a GSA sponsored field trip around the island of Maui. This was Mark's first visit to Hawaii and the ten-mile hike through Haleakala crater was fantastic as the volcanic features are spectacular and some of the silversword were in bloom. The best feature of the trip was seeing an active eruption at Pu O'o crater on Hawaii. The active movement of the crust of the lava lake simulated the rift zones, transform faults and subduction zones of plate tectonics fame (just like they say in the books). Many slides from both Maui and Hawaii will be used in Physical Geology and National Parks lectures for years to come.

Last July, Mark spent three weeks at sea with Paul Stoffa, Tom Shipley and others from UT on the Institute for Geophysics ship, the *R/V Fred H. Moore*. The experience was part of a cooperative Japan-U.S. two-ship expanding spread seismic profiling study of the Nankai Trough off southwest Japan and was leg 6 of the Pacific Tour of the Fred, as it is known. After ten days he was no longer seasick and had a great time fixing streamer leaks, deploying airguns, plotting navigation, removing flying fish from the deck, washing dishes and watching the movie Top Gun with the crew about 25 times. All land geologists should go to sea to see how this aspect of the science is really done.

On the research front, Mark continues his collaboration with Ronald L. Shreve at UCLA to refine and further develop their quantitative model for the mechanics of subduction zones. Two papers on this work came out this year in *Pure and Applied Geophysics*. A talk on the work was presented at the National Meeting of the Geological Society of America held in Phoenix last October. Summer field work with Steven R. Lipshie, who is now at Iowa State, continues in the Eastern Belt of the Franciscan to identify more field constraints on the mechanics of uplift of coherent blueschist terranes. Equipment for his new fission track thermochronology laboratory is arriving. He expects the facility to be routinely operational by December.

Mark gave invited lectures on the mechanics of subduction zones to the Department of Geophysics at Texas A&M in College Station in November and at the Department of Earth Sciences at Iowa State University in Ames, Iowa in February. In his spare time he continues to serve as Associate Chairman of the Department.

Ian W. D. Dalziel's work is continuing on cordilleran orogenic processes and evolution of southern continents and ocean basins. The past year included a full schedule of cruises and field work in interior of Antarctic continent. UT scientists conduct activity almost year-round in this region. Ian just completed the first deep seismic traverse sailing through the Andean cordillera with co-principal investigators, geophysicists James Austin of UTIG and John Mutter of Columbia. Sadly, a 240-channel streamer from *R/V Robert D. Conrad* was lost in rough weather south of Cape Horn before completing the second traverse. Ian is acting as convenor of a group of specialists on the structure and evolution of the Antarctic lithosphere of the Scientific Committee on Antarctic Research and is also Chairman of the Tectonics Panel of the Ocean Drilling Project. Next year he will lead the first and most far flung field trip of the 28th International Geologic Congress on Tectonics of the Scotia Arc, Antarctica in January 1989. It would be nice to see some UT alumni along!

Ronald DeFord retired, for the second time, at the end of the spring semester, 1987. The pace of life was supposed to slow down after that, but it really hasn't. Both he and Marion find the days flying by. Ronald's twice-weekly physical therapy sessions for Parkinson's Disease seem to regulate their schedule. Keeping in shape enables Ronald to continue enjoying the art museums, stage plays, symphony and opera performances, and dining with old friends.

In the fall of 1987 Ronald completed the John Brand memorial which was published in the December 1987 issue of the AAPG *Bulletin*. John was one of Ronald's former students. In February, 1988 the Austin chapter of the Texas Society of Professional Engineers honored Ronald as an active member for more than 50 years, and in May he became a Colorado School of Mines "Golden Miner," for he graduated more than 50 years ago.

Marion and Ronald enjoyed seeing many old friends and former students at the AAPG convention in Houston in March. They look forward to a lazy summer at home with the deer, 'coons, birds, possums, cats, dog, fish... and grandchild!

Samuel P. Ellison, as the first Distinguished Visiting Glenn G. Bartle Professor at the State University of New York at Binghamton, was honored there November 1-7, 1987. He gave student lectures on the "Geology of the Middle East," "Geology of Texas," and "Conodonts," and a public lecture on "Earth Resources for the Future." Dr. Glenn G. Bartle, Founder and President of SUNY-Binghamton, was Sam's first teacher at Kansas City Junior College, Missouri.

Sam, along with Professor Joseph J. Jones and Mirva Owen, edited *The Flavor of Ed Owen—a Geologist Looks Back*, a book based on Ed Owen's reminiscences and containing his philosophy of life as a geologist as well as his wonderful essay on "Professionalism in Geology." The book, published by Earth Enterprises Inc., is available for $10.

Sam completed a paper on the Mississippian conodonts of North Texas, their occurrences and zonation, for the Fort Worth Geological Society's symposium in fall, 1988. He gave two conodont papers at ECOS V, the European Conodont Symposium held in Frankfurt in July. The Senckenberg Museum in Frankfurt is publishing Sam's "Conodont Bibliography" and will also publish his "Tesnus (Mississippian) Conodonts of Texas."

Dottie has been substituting at Highland Park School here in Austin. Sam still has lunch with Joe Jones, down on the creek when weather and routine permit, and they frequently work on ways to obtain more funds for the Waller Creek Science Park.

Bill Fisher continues to serve as Chairman of the Department of Geological Sciences, as Bureau of Economic Geology Director, and as Director of the Geology Foundation.

Bill maintains a busy schedule representing the Department and the Bureau off campus as well as on. He was recently instrumental in creating and funding the Geoscience Institute for Oil and Gas Recovery Research, a consortium of 15 universities, led and administered by The University of Texas at Austin. During the year Bill testified to several committees in the U.S. Senate and House and to the Texas legislature on issues of energy policy and energy research. He also gave 30 invited lectures to various universities and groups across the country.

Bill is active in the National Academy of Sciences/National Research Council. During the year he served on the Academy's Board on Mineral and Energy Resources, chairing its committee on Hydrocarbon Research Drilling. He assumed chairmanship in July. He serves on the Board of Earth Sciences and will coordinate the Applied Solid Earth Sciences Section of a major NAS Committee on Status and Research Objectives in the Solid Earth Sciences.

Bill is Vice-President of the International Geological Congress to be held next summer in Washington. He continued to be active in AAPG, chairing the Honors and Awards Committee of the Advisory Council and chairing the Committee on the Resources Base of the Division of Professional Affairs.

During the year, Bill was appointed to the National Petroleum Council by the Secretary of Energy and the Texas Scientific Advisory Committee by the Governor of Texas. He continues to serve on the Outer Continental Shelf Policy Board, advising to the Secretary of Energy.

Bob Folk and Marge took a brief May vacation in Spain this year. After seeing Madrid and Toledo, they joined a group bus tour to the Moorish south, Granada, Sevilla and Cordoba—all very beautiful with Arabic palaces and mosques. Then from Barcelona and its Gaudi cathedral, they took a one-day bus trip to the tiny country of Andorra in a chiastolitic part of the Pyrenees where Bob mailed himself many postcards full of Andorran stamps. Spain was a very interesting place to tour, but they were sure happy to get back to Italy where the language was comprehensible and the food much better, despite having to begin arduous field work. Bob met his MA student Diane Pavlicek in Milano, and they proceeded to the Le Grazie area to begin her field

Mark Helper and Sharon Mosher, foreground, conduct field work in Italy with Bob Folk.

work on the black Triassic Portoro limestone that Bob began studying in 1983. Diane, co-supervised by L. S. Land, is going to concentrate on the geochemistry of the limestones—C, O, and Sr—in relation to the petrology, micrite crystal size, bacterial processes, and late fracturing. Diane loved everything about Italy except the seafood and the pastas, and her biggest thrill was being within a couple meters of the Pope as he conducted mass in St. Peter's. Marge, Bob and Diane went south to Naples where he lectured in Italian at the Universita di Napoli on bacterial activity in travertines and in the Portoro diagenetic nodules, and they all went on a field trip to see the travertines at Venafro—non-bacterial this time. Training on down to Crotone (in the toe) to do some archeological geology in a neolithic site, they hit Pompeii and enjoyed the Amalfi coast and Orvieto on the way back up north. Marge had a wonderful new pasta dish in Lucca—penne with sweet red peppers and gorgonzola cheese, which was finally successfully duplicated on the fifth trial back in Austin. After finishing work in Portovenere, Marge and Bob went up Lake Como to spend a few days in Bellagio at the edge of the Alps to escape the heat before returning to Texas.

In August, Austin was host to the midyear SEPM meeting and Bob was registration chairman. His first try at an administrative job caused a great many gray hairs of apprehension for a year beforehand, but when the meeting actually was on it became a great deal of fun to serve at the registration desk—thanks to the great help given by Joyce Best, Gloria Uribe and others of the UT geology staff.

They attended a Folk family wedding in Swan Pond, West Virginia and visited Marge's mother in Gettysburg. While there they visited the site of the great cavalry battle where Bob's great-grandfather, John Thornton Billmyer, fought with Co. F of the 1st Virginia cavalry under Jeb Stuart. Over Christmas, they visited Steve and Jenny and the two granddaughters in Tuscaloosa, where Steve is greatly enjoying his job as the putative evaporite expert for the Alabama Geological Survey. En route back they stopped at New Orleans to visit ex-students Pam Tiezzi Darwin and Vicky Pursell. The log cabin was the site of feasts for former students Vicky Pedone, Ellen Naiman Tye and Penny Bockoven Sullivan and families.

Bob taught his last regular class in the fall, "Petrography of the Lesser Rocks" (cherts, shales, travertines, bacterial and aragonitic carbonates and other oddballs not covered otherwise here). Only two students were brave enough to register (Jeff Crabaugh and Leo Lynch), and there were two auditresses (Paula Noble and Mary Crabaugh). However, it was no longer a challenge to throw chalk in class, nor could they play Pi Sheng satisfactorily with only two victims. Two Master's students finished in April: James Miller (multistage dolomitization of the Portoro in Italy), and Franz Hiebert (role of bacteria in diagenesis of a black shale unit). Franz got a chance to visit his field area in southwest Germany last summer, then came down to spend a few days in Le Grazie to experience the Italian "dolce vita."

Personal research on the Portoro continues with about a dozen topics in preparation, but an enormous amount of time was gobbled up by the wholly accidental foray into the field of HF etching on quartz, thanks to Karl Hoops at the HF bath and Mary Crabaugh on the SEM. They are getting some astounding, important (and, yes, perhaps even practical) results in etching different quartz types, deciphering the origin of metaquartzites, and getting HF-solubility zonation in quartz overgrowths. They have come up with stark images of the Virgin Mary and of Moses, to satisfy both camps.

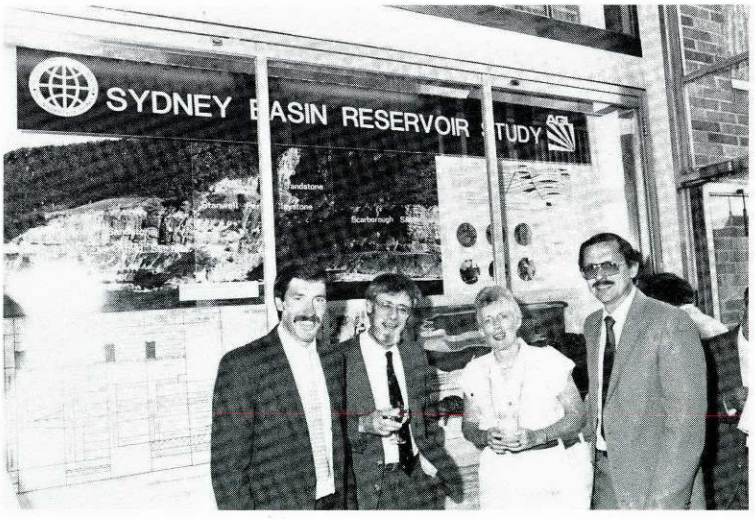
Bob gave lectures at the University of Houston and at SMU on the Portoro and on quartz etching, as well as talks at the UT Hard Rock Seminar, the Institute of Geophysics, and at Tech Sessions on etching of baroque dolomite. Quartz etching was also the subject of a lecture at the AAPG in Houston, where he touted the possible role of aluminum as the cause of quartz solubility.

In April, Bob and Marge went to Penn State for the 75th anniversary celebration of their geology program. The quartz crystals that started the big flurry of etching had been found near Penn State in 1946, and accidentally became the first subjects of HF attack in 1987. In May, Bob left for Italy again with micropaleo student Paula Noble; they will do more on the Portoro, revisit localities for radiolarian cherts and ophiolites that Bob and Earle McBride worked on in 1975, and hopefully sample the aragonitic travertines of the Siena-Viterbo region.

In bocca lupo!

Bill Galloway remained busy with courses in clastic depositional systems, petroleum geology, and basin analysis. Numerous graduate students are working on various stratigraphic, depositional, and syndepositional structural aspects of the Northwest Gulf Coast as well as the sedimentology of potential reservoir facies of the Sydney Basin.

The Sydney basin project has probably created the most excitement and general interest. In the second and concluding year of this study, which was funded by the Australia Gas Light Corporation through the Earth Resources Foundation of the University of Sydney, Bill returned to Sydney for a second seven-week summer (or winter if you are in the southern hemisphere) stint. Along the way, the project created quite a bit of news, both in the more formal press of Sydney University, and in one of the somewhat more flamboyant city tabloids. The headline in the latter covered an entire page top with "Dallas Down Under," and included maps, photos, and quotes. Having a Texas oil geologist in Sydney was almost as exciting as having Crocodile Dundee in New York. Fortunately, the photo included was of Dr. Douglas Hamilton, Bill's Sydney University co-investigator in



Bill Galloway (right) poses with Doug Hamilton (left) and associates on the Sydney Basin Project.

the study. Thus Bill can deny everything. The project officially ended in March with a reception for supporters and participants in the project and presentation of a short course and field trip that highlighted the work of Bill and two of his students.

More recent excitement was the award to Bill of a research grant through the Texas Advanced Research Program. The two-year grant will support work by several graduate students on a comparative sequence stratigraphic and depositional system study of the Gulf and North Sea basins. One immediate product is a summer trip to England and Norway to begin the task of data collection for the North Sea study area. Several companies continue to help with data and logistical support for students working in both the Gulf and North Sea. Happily, Bill reports that modern CDP seismic data is increasingly available for incorporation into these studies.

Meanwhile, at home, the Galloway zoo peaked at two horses, nine dogs, a cat, a ferret, and miscellaneous aquatic creatures. Numbers are now declining back to the normal values that will be recalled by a few of the more recent graduates and summer house sitters. Bill reports that his most memorable moment in 1988 was being awarded the opportunity to speak at 4:30 on the last day of the AAPG convention.

It has been a rather busy year for **Wulf Gose**. He was an invited participant at the Ocean Drilling Program workshop meeting in Jamaica to discuss possible drilling targets in the Caribbean Sea. A week later, he presented a paper with former UT student Ric Finch at a symposium on the Cretaceous of Latin America in Linares, Mexico. He also gave papers at the AAPG meeting, the Geodynamics Symposium at Texas A&M, and at the AGU spring meeting, and a lecture for a Venezuelan oil company.

With support from the Petroleum Research Fund, Wulf continued his paleomagnetic studies of salt domes. Magnetostratigraphic analyses of samples from the Damon Mound west of Houston indicate that the recent uplift rate of this dome is about 100 times faster than it was at the end of the Oligocene when the salt first came into contact with surface waters. Graduate student Randy Farr is an important co-worker on this project.

In January, Wulf went for a second field season to Venezuela extending his sampling to the eastern part of the country. This collaborative project with two Venezuelan scientists is yielding the first consistent paleomagnetic results from northern South America. The initial interpretation of the data has been presented at the spring AGU meeting and two papers have been accepted for publication and oral presentation for the Congreso Venezolano de Geofisica in September.

Mark Helper spent much of this last year doing research for his funded project on the age and origin of high-pressure/temperature schists in the central Klamath Mountains of northern California. This included a trip to California in late July and August to map and collect samples, several months of preparing the samples for isotopic dating, and the dating of a few samples this spring. He says that after spending nearly six months separating minerals, he has come to appreciate how truly wonderful student research assistants are. The work was made easier (and cleaner) by the refurbishment of the mineral separation lab this year; the lab now has two state-of-the-art magnetic separators, a second fume hood, built-in cabinets and countertops, and a sheet vinyl floor. Mark looks forward to spending the latter part of the summer in the Department's two other new labs, the clean lab and an adjacent room housing the new solid source mass spectrometer, obtaining isotopic ages that should help resolve a long-standing tectonic correlation problem and provide insight into the structural and thermal evolution of central and western Klamath Mountains. He gave an invited lecture on this research at the University of New Orleans this spring.

Mark again taught the elementary field methods course with Bill Sill this spring and spent six weeks last summer helping teach the senior field course. The elementary methods class was the smallest in recent memory (32 students), which permitted several more trips to the field than in past years. Mark notes that the Llano Uplift continues to be an exemplary outdoor classroom, with its diverse range of rock types and field settings, and, of course, the spring wild flowers. Several new field areas in the Sacramento Mountains of New Mexico made teaching the field course last summer particularly interesting and enjoyable, as did mapping in the Picuris Mountains. Mark will spend four weeks teaching the class again this summer.

Dr. William E. Galloway was selected to receive the 1987 SEPM Excellence of Poster Presentation Honorable Mention for "Depositional Systems and Fluvial Architecture of the Narrabeen Group, Sidney Basin, Australia," coauthored by S. A. Reynolds (senior author) and D. Hamilton, at the 1987 Mid-Year Meeting in Austin.

Earl Ingerson has had a busy year discovering new uses for quartz, his specialty, and having a newly discovered mineral named for him. Earl and Maurine have also taken some interesting local trips.

The Gem and Mineral show at Corpus Christi in March drew a large crowd. Earl was amused to find quartz was such a great factor in "fortune-telling" and horoscope predictions.

In March, Earl was interviewed by a reporter from the Austin American-Statesman. Betty Hudman, the author, wrote a two-column report, April 7, 1988, entitled "Lure of phantom gold mine led to career in geology." Earl's uncle was a surveyor and self-trained gelogist. "Uncle Jim" always said he was going to find gold in the Davis Mountains. So, young Earl went along. He became well-acquainted with rocks. By the time he had graduated from Simmons University, he knew he wanted to be a geologist.

In volume 73 of the *American Mineralogist* (1988) is an article about a new calcium-manganese mineral from Sweden named Ingersonite, named for Earl, who is of Swedish ancestry. The new mineral and the name were approved by the Commission on New Minerals and

Mineral Names. A sample of the mineral is deposited in the Smithsonian Institution and another at the British Museum. Ingersonite occurs sparsely as irregular aggregates that are few in number; hence, it is a rare mineral.

The mineral was discovered at the Langban Mine, Värmland, Sweden. The paper was published by Dunn, Peacor, Criddle, and Stanley, *American Mineralogist*, v. 73, p. 405-412.

Earl is currently preparing a paper on temperature-time relations in the formation of tektites, which also treats the origin of tektites. They are probably formed when relatively large meteorites hit the earth's surface with enough energy to glassify some of the soil, minerals, etc., at the point of impact. The color, texture, etc., of the tektites are determined largely by the composition of the surface material. In most areas, the surface material contains enough heavy metal (Cr-Ni group) so that the tektite glass is black. There is an area in the southern part of Czechoslovakia, however, where the iron group elements are so low that the tektites are green and a few blue ones have been found.

Gary Kocurek cites as his biggest accomplishment this year finishing his yard garden. After defrocking the entire 1/3 acre of grass, he proceeded to haul in (one wheelbarrow at a time) 40 cubic yards of topsoil and 28 tons of rock and gravel. Add a few thousand plants, two fountains, several statues, and a house painting, and it's complete. The cat population is up to four permanent residents, with two wild cats under the house, and, most recently, a new stray who subsequently gave birth to four. Also a new pigeon hatched into the household.

On the research front, several new breakthroughs have taken place in dune aerodynamics due to a now-impressive array of instruments and the untiring perseverance of PhD student Mike Sweet. Gary now "smells" a breakthrough in external factors that control eolian sand seas via a study of regional planation surfaces in ancient eolian deposits, and is urging PhD student Karen Havholm to abandon husband and child to spend even more of her time in Page, Arizona. In the spring, Gary spent three weeks on a lecture tour in France and Czechoslovakia. While in France he made plans for an upcoming trip to the Sahara in Mauritania with his French co-workers. Work with the Petroleum Engineering group on reservoir characterization continues, and they are reasonably close to modeling 3-dimensional flow through the world's best-documented outcrop of eolian sandstone.

Gary will spend the summer doing field work in New Mexico, Utah, Arizona, and Padre Island, as well as following up the never-ending task of paper writing.

Rich Kyle reports a busy and interesting year. He taught graduate courses with Harry Posey on ore deposits in sedimentary environments and with Jon Price on geochemical modeling. The seminar course on geochemical modeling utilized the EQ3/6 modeling code and benefitted from several guest lecturers, including Tom Wolery of Lawrence Livermore National Laboratory, author of EQ3/6, who visited the Department as the Oualline Lecturer in Geological Sciences.

Rich continues to serve as the Department's Undergraduate Advisor. For the first time in the past several years, the undergraduate geology majors enrollment increased during the Spring, 1988, semester to a total of 161. We believe that this event signifies a stabilization of the undergraduate program. Rich is heading the effort to attract and retain quality students in the undergraduate geological sciences programs through the use of scholarship and fellowship funds, including a reduction of the fees for Geology 660, the senior field course.

Rich maintains his research programs on diverse topics in the broad field of economic geology. He and Harry Posey convened a special session on fluid-rock interactions in the salt dome environment for the 1987 SEPM Mid-year meeting in Austin; this year has been spent with editorial responsibilities getting these contributions ready for a special issue of *Chemical Geology*, which should be published in late 1988. As an extension of research on the salt dome mineralization in the Gulf Coast, he recently began a project to investigate zinc-lead-silver sulfide occurrences in the deep Smackover Formation in southern Arkansas. These deposits appear to represent "Mississippi Valley-type" mineralization from heated saline formation waters of the type associated with oil reservoirs in the upper Smackover ooid grainstone unit. He is also involved in the research program associated with the proposed DOSECC drilling project into the "fossil" geothermal system at Creede, Colorado.

The highlight of the summer was a trip to Brazil. Rich presented an invited lecture at the Federal University of Bahia in Salvador and spent time in the field with Dr. Aroldo Misi, who will be coming to the Department next year as a visiting scientist to investigate some unusual associated deposits of phosphate and sulfides in the Upper Proterozoic carbonates of central Bahia. Rich and graduate student Paulo Vasconcelos spent ten days in a whirlwind tour of the gold and gemstone deposits of Bahia and Minas Gerais. Although there was no time for the beaches, there was ample opportunity for adventure. Rich is looking forward to his next trip and to beginning some research projects, including geologic investigations of some of the fabulous gemstone deposits of Brazil.

Rich also plans to spend some time at the U. S. Geological Survey National Headquarters in Reston, Virginia, in preliminary research related to a Faculty Research Assignment for Spring Semester of 1989 to further investigate sulfur isotope characteristics of the salt dome mineral deposits. This topic has much to contribute to the understanding of sulfur sources and reduction/oxidation reactions in sedimentary environments. Linda, Brock, and Brett are doing well and are looking forward to enjoying their stay in the Washington, D.C. area.

Martin Lagoe is finishing his third year at UT-Austin. Three courses were taught during the year - GEO 385K (Micropaleontology) in the fall, GEO 391 (Paleoceanography) and GEO 401 (Physical Geology) in the spring. Activities at professional meetings included presentations at the 4th International Congress on Pacific Neogene Stratigraphy in Berkeley, California; the SEPM Mid-Year Meeting in Austin; the Gulf Coast SEPM Research Conference in Houston; the Pacific Section AAPG-SEPM Meeting in Santa Barbara, California and the Annual Meeting of the Southern California Academy of Sciences in Northridge, California. Martin also taught a short course with Ray Christopher (Arco Oil and Gas Co.) on quantitative biostratigraphy at the National AAPG Meeting in Houston. Other professional activities included continuing service as associate editor for the *Journal of Foraminiferal Research* and member of the SEPM Committee on Future Projects. Tom Layman was the first student to finish

Department Faculty, fall, 1963. Front row, l-r: Peter Flawn, Keith Young, Earle McBride, Charlie Bell and Bob Folk. Second Row: Al Scott, Dan Barker, Earl Ingerson, Leon Long, Ken Fahnestock. Back two rows: Bill Muehlberger, Bill McIntire, Ronald DeFord, Ed Jonas, Jack Wilson, Sam Ellison, Ed Owen and Steve Clabaugh.

a thesis under Martin's direction. Tom's MA thesis was "Paleoenvironmental significance of benthic foraminiferal biofacies in the Yegua Formation (Middle Eocene), Southeast Texas." Tom is currently a petroleum geologist for Exxon in New Orleans. The current crop of graduate students is working on various aspects of Cenozoic stratigraphy and paleoenvironmental analysis in the Gulf of Alaska (Sally Zellers); the San Joaquin and Los Angeles Basins of California (Mike Cervantes, John Tenison, J. C. Ray) and one student (Paula Noble) working on Paleozoic radiolaria from West Texas. Martin's summer research plans include two weeks of field work in the Gulf of Alaska in late May, funded by a recently received two-year NSF grant, and several stints of California field work on a variety of projects. Major goals for the coming academic year include upgrading the micropaleontology laboratory and completing development of the graduate course in subsurface stratigraphy. A final news items, Martin was recently appointed a zero-time research associate in the Institute for Geophysics and will be collaborating on a proposal to work on the paleoceanography of the Indian Ocean.

Lynton Land, Judy and Aaron spent a month in Jamaica assessing the quality of the rum, trying to splash all the water out of the ocean, studying the recovery of the coral reef after the hurricane nearly destroyed it a few years ago, and drilling for modern dolomite (priorities not necessarily in that order). The rum's still fine. There's still lots of water left to splash, and Aaron reports that when a snapping shrimp comes out of its burrow and mistakes small toes for something good to eat, the results can be traumatic! Judy reports that the reef is recovering slowly after being insulted not only by the hurricane, but by the demise of the urchins and subsequent algal infestations. Lynton reports that all eleven cores contain dolomite, so it looks like normal seawater may replace hypersaline brines and mixed meteoric waters as the preferred agent of dolomitization (see Mitchell et al., 1987, *Geology*, v. 15, p. 537-560).

Installation of the new thermal emission mass spectrometer began about Thanksgiving and was completed in January, so most of the year was spent learning to swear at the instrument in its native language (German). The new ("yellow" - nobody likes Lynton's

choice of colors) lab is churning out samples for $^{87}Sr/^{86}$ analysis in "semi-clean" conditions, and the technology for boron and lithium isotopes is nearly routine. Numerous students are using the new facilities to study various aspects of Gulf Coast diagenesis, and several massively dolomitized Paleozoic sequences.

Judy has been trekking to the Bahamas on a regular basis, trying to understand why Atlantic corals suddenly began to bleach (lose their symbiotic algae and turn white). Some of the more militant environmentalists immediately blamed ozone, but that's not the explanation. Judy is coordinating a multi-laboratory study (with NSF funding), but, funding "to lock the gate" seems only to be available "after the horse is stolen."

Dr. John C. Maxwell was awarded the honorary degree of Doctor of Science from DePauw University at their commencement on Saturday, May 21, 1988. This honor is in recognition of his contributions to teaching, geological research, professional publications, and service to professional organizations. John received his BA degree from DePauw in 1936.

Leon Long remembers the school year as one with especially heavy teaching commitments. Enrollment in the big GEO 303 introductory course, which he co-taught again with Bill Sill, was definitely on the upswing with nearly 600 students (counting the repeated offering in both semesters). It seems that the interest that UT students have in learning some geology has not been diminished by the hard economic times that have caused such a downturn in the number of geology majors. Leon also taught a graduate course in isotope geology in the fall semester, and a graduate isotope geology seminar in the spring. Starting the day after spring final exams were over, he gave a field course for non-majors, chiefly students who plan to teach earth science in the public schools, and he assisted with teaching of the regular senior field course. It was nice to have some time during the remainder of the summer to do other things! As far as administrative duties went, Leon was a member of the Faculty Senate and chairman of the senate committee on benefits (insurance, retirement, etc.).

All the isotopists are very pleased with the installation of the new solid-source mass spectrometer (described in another article). The long-awaited machine can do some amazing things, and Leon has been getting acquainted with its idosyncrasies. His research continues in the same vein, which is use of the Rb-Sr method to date rocks and evaluate the source from which they originated. He's continuing to work in problems in Egypt, Brazil, and central Texas. He co-authored a paper at the GSA meeting in Phoenix, and had some Brazilian work published.

Last summer included a long trip to South Africa, which was fulfillment of a desire of many years' standing. It is well known that South Africa is paradise for geologists and naturalists. In their more than 4,000 miles of traveling in that country, Leon and Mary visited national parks, went down the world's largest gold mine, saw the diamond works at Kimberley, drove through Barberton Mountain Land which contains some of the oldest known fossils, and crossed the famous Karroo. They also witnessed apartheid, which was an unpleasant but instructive reason to want to see South Africa, a land abounding in natural beauty and social ugliness.

Ernest Lundelius spent the past academic year teaching Geology 401 (Life Through Time), supervising graduate students and seeing to the completion of a new office at the Vertebrate Paleontology Laboratory. A new field vehicle has been ordered thanks to generous contributions from several sources. He lectured in a course on The Evolution of Terrestrial Ecosystems at UCLA. He was invited to present papers at a symposium on Mammoths and Mastodons at Baylor University, a conference sponsored by the Academia di Lincei in Rome on The Biogeographical Effects of Insularity and another conference on Extinctions at the U. S. National Museum in Washington. He was pleasantly surprised by having a volume on the *Late Quaternary Biogeography of the Great Plains* dedicated to him by three former students, Russell Graham, Maryann Graham and Holmes Semken.

This summer he plans to spend two months in Australia to study fossil material at various museums and to give an invited paper at a conference on Quaternary Extinctions.

For **John C. Maxwell**, the year began with the laborious preparation of a short paper, "Geology in the U.S.A. from passive to dynamic earth in 50 years." This paper is a lead chapter in the December 1987 special edition of *Episodes*, devoted to the 1989 International Geological Congress and distributed to all those receiving the second circular for the Congress. The other event, new and pleasurable, was John's visit to Greencastle, Indiana, in May to receive an honorary Doctor of Science degree from his alma mater, DePauw University.

Continuing activities included membership in the Board of Trustees of the GSA Foundation, the Program Review Committee of DOSECC, and the Science Advisory Committee to the Gas Research Institute for the Siljan Astrobleme deep gas test. The latter involved aninteresting one-week conference on deep continental drilling held at Mora, Sweden, near the well site. John also chaired a small group planning an extensive study of future directions in the earth sciences, to be conducted by the Board on Earth Sciences of the National Research Council. In addition, John continued as a consultant to the Advisroy Committee on Reactor Safeguards of the Nuclear Regulatory Commission.

For a vacation, John and Marian checked out the geology of Maui during January. Then in the summer they visited former UT graduate students Pinar Yilmaz and John Clark in Norway, and wallowed in culture in England.

Photo submitted by Earle McBride which he describes as "Bottom of turbidite sandstone with cast of burrows (Paleodictyon sp.) that have a hexagonal pattern."

Earle McBride attended the GCAGS meeting in San Antonio in the fall and the AAPG meeting in the spring. His talk at the GCAGS meeting entitled "Compaction of Norphlet sandstones, Rankin County, Mississippi" received a best-paper award. He was invited to present seminars at SMU and the University of Utah during the academic year.

After teaching two weeks of the summer field course, Earle spent a week in France sampling stream sands and two weeks in Italy studying trace fossils in submarine fan deposits (see photo). The remainder of the summer was spent in Austin working on sandstone diagenesis problems.

Although economic conditions in the oil patch are not good, Earle reports they must be improving. He was invited to twice as many lunches by oil company recruiters this year as last year!

Two separate NSF-funded projects, each involving extensive travel to Mexico, have kept **Fred McDowell** hopping during the past year. He has made three trips to Oaxaca and Chiapas in southern Mexico for a study involving the stratigraphy and geochronology of vertebrate fossil localities there. This study is in collaboration with Dr. Ismael Ferrusquía, a former UT Doctoral student who is now with the Department of Paleontology of the National University of Mexico. The combination of extensive and detailed stratigraphy with Fred's K-Ar dating is providing key information on faunal evolution and migrations as well as on the tectonic development of continental basins in southern North America.

The second project is an extension of our prior studies of magmatism in western Mexico that has been made possible with development of the Department's new clean lab/mass spectrometer facility. By combining U-Pb and K-Ar dating, Fred will examine ages for magmatism along a single traverse across western Chihuahua and Sonora to see if the data truly support patterns commonly cited in plate tectonic modelling of the region. Several sampling trips will be made to those two Mexican states beginning in the summer of 1988.

After so many years of research in Mexico, the completion during the past year of the first thesis by a graduate student from Mexico taking part in Fred's program was most gratifying.

This past year was a great year for **Sharon Mosher**. In the fall she taught Advanced Structure with a new format to a very interested group of incoming graduate students and worked on organizing field camp and finishing up publications. In the spring she had her first University research leave, during which time she concentrated on completing her Narragansett Basin (Rhode Island) research. Much of the spring was spent writing several papers on the results of completed work, however, several weeks were also spent in Rhode Island doing some detailed mapping and geometric analyses (in the snow!) to explain some of the remaining problems. This latter work has turned up some new, exciting, but unexpected, results which require further work. So, although she completed nearly all of her objectives for the semester, the Rhode Island project is still not totally finished.

While out east, she also attended Northeastern GSA where she had a chance to see old friends and catch up on New England geology. One of her students, Julie Mahler, gave an excellent presentation of the new western Narragansett Basin results and of her modeling of basin sediment deformation. Sharon spoke on the Grenville Orogeny - Texas style, for a symposium honoring Leo Hall, and used this forum to acquaint people with recent results of UT theses in the Llano and West Texas Uplifts. In the process of preparing the talk, she discovered that when all the results were summarized, the tectonic implications were very exciting. Happily the task of investigating these new ideas can begin at once because NSF just funded Carlson, Mosher, and Walker for a two year combined geochronological, petrological and structural investigation of the Llano Uplift.

This summer Sharon spent three weeks in the Portovenere area of Italy working on another recently funded project by NSF on crustal contraction mechanisms at intermediate crustal levels. Although three weeks in the Northern Apennines on the Italian Riviera sounds very idyllic, Sharon and her two students spent most of the time drilling cores (to use for quantifying strain in stacked shear zones) and playing pack mule for 5 to 10 gallon water jugs! Between that and the two hundred and some steps up to their apartment, Sharon found that she was in great shape for field camp. She joined 660 in Taos for the last couple of weeks and had a very enjoyable time teaching a good group of students.

Bill Muehlberger spent this year on the treadmill with the result that virtually all available time was spent on teaching-related obligations with only minor amounts of time spent on the Tectonic Map of North America project! That will reverse this summer to make a major push to complete the compilation of the entire map south of Canada.

He spent a week each in Honduras and Chiapas with doctoral students to review their progress as well as trips to the Big Bend, Texas region for review of other students' progress. For each area, older tectonic grain or a substrate of evaporites controls the latest structures. Throughout the Big Bend region minor amounts of strike-slip movement have dramatically influenced the shapes of structural blocks.

Arthur E. Maxwell, director of the University of Texas Institute for Geophysics and professor in the Department of Geological Sciences, was named a New Mexico State University College of Arts and Sciences Centennial Outstanding Alumnus. Maxwell received his bachelor's degree in physics from NMSU and now serves on the visiting committee for the department of physics.

Jon Price and Rich Kyle introduced a new graduate seminar on geochemical modeling during the spring semester. The seminar focused on applications of sophisticated computer codes to various problems in aqueous geochemistry, including waste disposal, ore formation, and diagenesis. The course benefited from the able assistance of PhD candidate Tim Jackson, who helped compile programs and troubleshoot difficulties on the CRAY supercomputer at The University of Texas System's Center for High Performance Computing.

Jon taught as a part-time Lecturer in the Department. His full-time position as Research Scientist at the Bureau of Economic Geology involved research on mineral resources in Texas and geochemical aspects of nuclear waste disposal. Primary areas of research during the last year included origins of ores of beryllium and rare earth elements, thermodynamic approaches to the calculation of magmatic conditions from mineral compositions determined by electron microprobe analyses, igneous petrology and Mesozoic-Cenozoic tectonics of Trans-Pecos Texas and adjacent Mexico, relationships between hydrothermal ores and Tertiary intrusions and calderas in the Trans-Pecos region, tectonic controls on the size of epithermal vein deposits, and resource assessment. Chris Henry, Jeff Rubin, and Tucker Hentz from the Bureau worked closely with Jon on several projects.

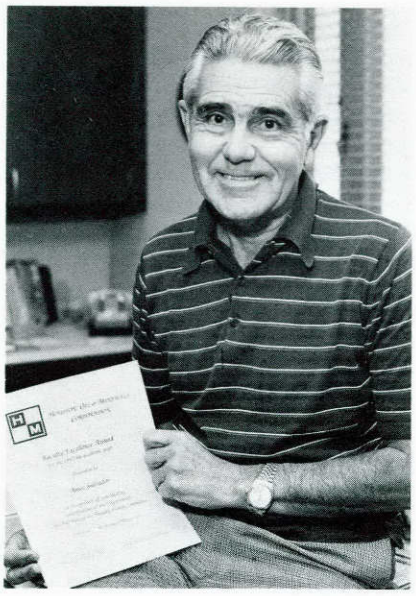
Jon is Director of the Texas Mining and Mineral Resources Research Institute, a unit of the Bureau of Economic Geology which uses funds from the U. S. Department of Interior (Bureau of Mines) to support graduate student research on mineral resources. Through the Mineral Institute program, students in the Department of Geological Sciences have received fellowships and research assistantships at the Bureau. Jon also serves on the Board of Directors of the Central Texas Mining Section of the Society of Mining Engineers, for which he was Chairman during 1987.

Tim Rowe had a full year of teaching and research. He added laboratory-discussion sections to his course, "The Age of Dinosaurs," which drew 300 students again this year. It looks like the course is here to stay. Tim also taught a new graduate seminar on "Systematics and Paleontology." It was a collaborative effect with faculty of the Zoology Department that enticed zoologists, botanists, and even a microbiologist to mingle with paleontologists in exploring new issues confronting our understanding of the history of life.

Tim has just completed a long study on the early evolution of the carnivorous, theropod dinosaurs, including the description of a new dinosaur species from northern Arizona. Remarkably, even the oldest known dinosaurs now appear to be highly specialized, suggesting that their history extends further back in time than had been thought. Tim's work on mammalian evolution is continuing and has also led to some exciting discoveries, including the recovery of Cretaceous mammals from near Big Bend. These animals were the size of small mice, and all that has survived is their teeth, which are no bigger than the head of a pin. Tim says that we've known all along that there must have been mammals in Big Bend during the Cretaceous; the trick has been in finding the tiny things. Tim has been invited to be a featured speaker at the American Museum of Natural History opening of a major new exhibit on fossils from China. The exhibit includes rare, complete skulls of early mammals that provide our most vivid view of early mammalian history.

Graduate students have been a big help to some of this research and are a continuing source of inspiration. Tim is supervising Jeff Pittman, whose PhD thesis is on Early Cretaceous stratigraphy and the sauropod dinosaurs from these rocks. He is also supervising a PhD dissertation by Gordon Bell and a Master's thesis by Amy Sheldon, both of which are on mosasaurs. Between dinosaurs, mosasaurs, and early mammals, Tim is working with some of the strangest and most wonderful organisms in the fossil record.

For **Amos Salvador**, the 1987-1988 school year slipped by as fast or faster than previous ones. Besides the usual teaching, he continued to devote much of his time in the preparation and editing of material for the volume on the geology of the Gulf of Mexico Basin (GSA), and working on the revision of the *International Stratigraphic Guide* being prepared by the International Subcommission on Stratigraphic Classification (ISSC) of which he is chairman. He will devote the 1988 summer to work on these two projects.



Amos Salvador

During the past year he also started to shift his interest to the Caribbean area working in cooperation with several scientists of the Institute for Geophysics.

A second note by the ISSC on "Stratigraphic classification and nomenclature of igneous and metamorphic rock bodies" was published in the September 1987 issue of the *GSA Bulletin.*

John G. Sclater went to sea last year on the French research vessel the *R/V Charcot* to carry out a multi-channel survey in the Nauru Basin of the Central North Pacific. He joined the ship at Honiara in the Solomon Islands and left it at Majuro. After extensive times at sea on U.S. research vessels he was most impressed by the quality of food, service and wine on the French ship. Both he and his American colleagues on the ship agreed that they could not have been better treated if the *Charcot* were a commercial cruise ship.

John has also served as Chair of the Visiting Committee of the Scripps Institute of Oceanography and has recently been appointed for three years as Chair of the Ocean Studies Board of the National Academy of Sciences.

During the past year John has concentrated on finishing his research on the subsidence of the Central Graben in the North Sea and clay models of extension by block faulting.

The highlights of **Jack Sharp's** year were being elected the chairman of the Hydrogeology Division of the Geological Society of America and seeing Phil Bennett (Syracuse University) signed on to fill the long-sought second slot in hydrogeology. Research continues on basin dynamics, the hydrogeology of West Texas and the Edwards Aquifer, and Gulf Coast heat flow. Several new projects were initiated, namely the risk analysis of coastal subsidence and inundation on the Texas Coast, and the prediction of underflow.

Job opportunities for hydrogeology students continue to be strong. Hardly a week goes by that there isn't a call from someone looking for a good hydrogeology graduate student or two. A promising group of six new graduate students will be on hand in the fall. They'll come from Massachusetts (Amherst), Virginia (VPI), Nebraska (U. of Nebraska), and Texas (UT and A&M). Projects abound. It's a fact that "You don't have to look far in Texas to find water problems."

Carol and Jack celebrated their 20th anniversary last summer and actually got away from the kids for three days. Susan, now two years old, charms her dad but drives her mother crazy. Katie (13) and David (10) are doing well. Duck hunting was good last winter and, after 20 years, Professor Sharp found himself back in a shell, rowing on Town Lake. Handball players among the grad students are still in decline, so he fears that he may have to sink eventually to racquetball—or even golf! No darts, please!

Doug Smith found that though variety may be the spice of life, it also makes it hard to get things done. Part of the variety for him last year was caused by the diverse demands of being Graduate Adviser, teacher, and scientist. Graduate enrollment has fallen only slightly in the Department, in contrast to the sharp declines in undergraduate geosciences enrollment here and at most other universities. The rapidly improving facilities for teaching and research in the Department may be responsible for our relatively stable graduate enrollment, and Doug hopes that our alumni help to publicize the opportunities here. He taught thermodynamics and petrology last year, much to his pleasure and he hopes to that of the students. His research has continued to focus on processes in the upper mantle that produce magmas and that influence crustal tectonics. Parts of his work on fragments from African diamond pipes have just been published, and he has begun to concentrate more on rocks from the southwestern U. S. The extent to which mantle processes determine the boundaries between geologic provinces remains a fascinating problem, and his studies of volcanic rocks and their inclusions may help to provide part of the answer.

Sally Sutton is enjoying her job and is settling into Austin, "although I'm not crazy about the summer weather." Sally is glad to have graduate school behind her and to be starting some new projects, including a collaborative effort with Lynton Land on diagenesis and low-grade metamorphism of the Ordovician Athens shale and Rockmart slate in the southern Appalachians. She is also working on metamorphism in the Witwatersrand quartzites with Barry Maynard and one of his students at the University of Cincinnati.

Sally Sutton

Meanwhile, the microprobe continues to be a workhorse, producing reams of data. Sally hopes to streamline its image-processing capabilities over the next few months. "We are all looking forward to the arrival of the new SEM in a few months."

Bill van Rensburg was invited to the Pacific Rim Minerals Conference in Queensland, Australia in the fall of 1987. Students in the Energy and Mineral Resources Graduate Program, which he directs, won two of three prizes for best paper in Mineral Economics for the sixth year in succession (including five first prizes). Apart from the United States, U.S. graduates from this program have been offered jobs in the United Kingdom, South Africa, Brazil, and Pakistan.

Bill visited his native South Africa in August 1987 and in March 1988 in order to monitor developments in their mineral industries.

Nick Walker reports a productive year which included bringing the isotope geochemistry clean lab into full operation and in conjunction with Lynton Land, Leon Long and Fred McDowell, overseeing the installation of the new thermal ionization mass spectrometer. Nick's efforts over the last two years toward establishing a U-Pb geochronology facility in the department came to fruition in February with the first U-Pb zircon age determinations utilizing the clean lab and the new mass spectrometer. Now that these facilities are fully functional, Nick can at last launch into a period of concentrated research.

In February, Ned Brown of Western Washington University and Nick were awarded a two-year NSF grant to study the structure, petrology, and geochronology of part of the crystalline core of the North Cascades of Washington state. Two Master's students from UT, Mark Longtine and Peter Bittenbender, will participate in this project. In April, Nick, Sharon Mosher, and Bill Carlson were notified by NSF that they would receive funding for a two-year investigation of the geochronologic, structural, and metamorphic development of Precambrian rocks in the Llano Uplift.

Nick presented a paper and chaired a technical session at the national GSA meeting in Phoenix last year. In May, he presented an invited lecture at Southern Methodist University in Dallas.

In addition to supervising two Master's students working in the North Cascades, Nick is also supervising Master's student Paul Carpenter, who is studying the genesis of a major serpentinite-matrix melange tract in northeastern Oregon and PhD candidate Bob Roback, who is investigating the tectonic history of the Kootenay Arc of southeastern British Columbia and northeastern Washington.

This summer will be spent trying to keep pace with his students in the field as well as to put the finishing touches on two field projects in northeastern Oregon.

Clark Wilson spent the fall semester teaching the undergraduate exploration geophysics course, and the graduate linear systems analysis course. Travel included a trip to the International Union of Geodesy and Geophysics in Vancouver, and to the Goddard Space Flight Center in Maryland as part of his work on the NASA Crustal Dynamics Project. During the spring semester, he taught a new course titled "Space Age Geophysics and Geodesy" with Institute for Geophysics Research Scientist David Sandwell. The course covered various problems which can be studied using satellite-based observations. Travel in the spring included a trip to the American Geophysical Union meeting in Baltimore, and a ten-day trip to California with a lecture at the Scripps Institution of Oceanography, a visit to Chevron Oil Field Research Company, and another NASA Crustal Dynamics meeting. Summer will be spent in Austin working on Project SEER and NASA Crustal Dynamics studies, and taking daughter Kirsten and new daughter Sissel (born September 1987) to the swimming pool in the afternoons.

Jack Wilson continues to work at the Vertebrate Paleontology Lab at Balcones Research Center. His interest in Paleogene mammalian faunas of Texas continues. With Ernie Lundelius he has co-supervised graduate students working in West Texas and on the Coastal Plains. Annie Walton worked on West Texas rodents and paleomagnetism and finished her MA in 1986. Jim Westgate will get his PhD in June of this year. His dissertation describes the first mammalian Eocene fauna from the Atlantic Coastal Plains. He found it near Laredo. Tony Runkel is working on biostratigraphy and correlation of continental sediments in the Big Bend National Park-Christmas Mountains area. He should finish up in late 1988 or early 1989. Jack has been in the field with each of them. The condition of the Lab's ancient pick-up worried Jack to such an extent that he initiated the action necessary to replace it by donating $500.00 toward a new one and by writing a letter to some of his former students and members of the Geology Foundation Advisory Council. A total of $6,500 was raised and with funds from Dean Boyer and from the Department, a new vehicle is assured.

Marge and Jack escaped the cedar pollen in Maui during January. An added treat was that all the Wilson sons (3) and grandchildren (7 minus 1) had five days together on Maui over New Years. In March they took off on a Flying Longhorns cruise to South America. It started in Buenos Aires then went around Cape Horn and back up the east coast to Rio de Janeiro. They lucked out on the weather and found that rounding the Horn was no worse than a norther on Lake Travis.

Keith Young retired July 31, 1988. Professor F. L. Whitney came to Austin in 1909; Keith Young came in 1948. Between the two of them they represent 79 years of teaching Cretaceous stratigraphy at the University of Texas.

In his last year of teaching Keith Young taught Physical Geology (introductory), Stratigraphy, and Geology of Texas. Keith studied at the British Museum in 1986, at Claude Bernard University in 1987, and at the Vienna Natural History Museum in the summer of 1988. This was all in preparation for the completion of a paper on Jurassic and Early Cretaceous ammonites of Texas and northern Mexico. It was fun while it lasted. Now that he is through teaching, Keith expects to continue studying Cretaceous fossils and rocks.

Faculty Publications

Backus, M. M., 1987, Amplitude versus offset: A review: *Society of Exploration Geophysicists, Expanded Abstracts 57th Annual International Meeting*, p. 359-364.

Dobbs, S. L., C. R. Wilson and **M. M. Backus**, 1987, Accounting for limited spatial aperture in a P-tau inversion algorithm: *Society of Exploration Geophysicists, Expanded Abstracts 57th Annual International Meeting*, p. 789-791.

Backus, M. M., A. J. Garcia and D. C. Huston, 1987, On deconvolution and inversion in a one-dimensional earth, *in* Bernabini, et. al., Deconvolution and Inversion: *Blackwell Scientific Publications*, p. 208-225.

Barker, D. S., 1987, Rhyolites contaminated with metapelite and gabbro, Lipari, Aeolian Islands, Italy: products of lower crustal fusion or of assimilation plus fractional crystallization?: *Contributions to Mineralogy and Petrology*, v. 97, p. 460-472.

Barker, D. S., 1987, Tertiary alkaline magmatism in Trans-Pecos Texas, *in* J. G. Fitton and B. G. J. Upton, eds., Alkaline Igneous Rocks: *Geological Society of London Special Publication 30*, p. 415-431.

Barker, D. S., R. H. Mitchell and D. McKay, 1987, Late Cretaceous nephelinite to phonolite magmatism, Balcones province, Texas, *in* E. M. Morris and J. D. Pasteris, eds., Mantle Metasomatism and Alkaline Magmatism: *Geological Society of America Special Paper 215*, p. 293-304.

Price, J. G., C. D. Henry, **D. S. Barker** and D. F. Parker, 1987, Alkalic rocks of contrasting tectonic settings in Trans-Pecos Texas, *in* E. M. Morris and J. D. Pasteris, eds., Mantle Metasomatism and Alkaline Magmatism: *Geological Society of America Special Paper 215*, p. 335-346.

Turbeville, B. N. and **D. S. Barker,** 1987, Plinian and vulcanian eruptions associated with collapse of the Latera caldera, central Italy: *EOS*, v. 68, p. 1550.

Barnes, V. E., 1988, The Precambrian of Central Texas: *Geological Society of America Centennial Field Guide—South Central Section*, v. 4, p. 361-368.

Barnes, V. E., and others, 1988, Beeville-Bay City Sheet, Geologic Atlas of Texas (Revision): *The University of Texas at Austin, Bureau of Economic Geology*.

Barnes, V. E., and others, 1988, Dallas Sheet, Geologic Atlas of Texas (Revision): *The University of Texas at Austin, Bureau of Economic Geology*.

Brown, L. F., Jr., R. F. Solis and D. A. Johns, 1987, Regional Stratigraphic Cross Sections, Upper Pennsylvanian and Lower Permian Strata (Virgilian and Wolfcampian Series), North-Central Texas: *The University of Texas at Austin, Bureau of Economic Geology*.

Winker, C. D. and **R. T. Buffler,** 1988, Paleogeographic evolution of the early deep-water Gulf of Mexico and its margins, Jurassic to Middle Cretaceous (Comanchean), *American Association of Petroleum Geologists Bulletin*, v. 72, p. 318-346.

Bullard, F. M., 1987, Review of "Explosive Volcanism: Inception, Evolution, and Hazards": *Tectonophysics*, v. 140, p. 333-339.

Wilkerson, A., **W. D. Carlson** and D. Smith, 1988, High-pressure metamorphism during the Llano Orogeny inferred from Proterozoic eclogite remnants: *Geology*, v. 16, p. 391-394.

Carlson, W. D., 1988, Subsolidus phase equilibria on the forsterite-saturated join $Mg_2Si_2O_6$-$CaMgSi_2O_6$ at atmospheric pressure: *American Mineralogist*, v. 73, p. 232-241.

Carlson, W. D. and D. H. Lindsley, 1988, Thermochemistry of pyroxenes on the join $Mg_2Si_2O_6$-$CaMgSi_2O_6$: *American Mineralogist*, v. 73, p. 242-252.

Carlson, W. D. and S. F. Harris, 1987, Intergranular diffusion during metamorphism: inferences from natural coronal textures: *Geological Society of America Abstracts with Programs*, v. 19, p. 611.

Cloos, M. and R. L. Shreve, 1987, Interpretation of seismic reflection profiles from convergent plate margins: The decollement in the subduction-channel model: *Geological Society of America Abstracts with Programs*, v. 19, p. 621.

Cloos, M. and T. Dumitru, 1987, Blueschist terranes in the Franciscan Complex; their future character and implications for past plate interactions: *Geological Society of America Abstracts with Programs*, v. 19, p. 366.

Cloos, M., 1987, Review of "Tectonostratigraphic Terranes of the Circum-Pacific Region," D. G. Howell, ed., *Science*, v. 237, p. 88-89.

Stoffa, P. L., T. H. Shipley, C. Denham, M. A. B. Bothelho, D. Dean, H. Winkler, R. Elde, P. Riherd, **M. Cloos**, E. A. Silver, D. L. Reed, G. Miscovich, A. Aguilar, F. Alvarado, C. Calvo and F. Rojas, 1987, Three dimensional seismic imaging of the accretionary wedge in the Middle America Trench off Costa Rica: the field experiment and processing techniques: *EOS*, v. 68, no. 44, p. 1466.

Shipley, T. H., P. L. Stoffa, **M. Cloos**, E. A. Silver, D. L. Reed, A. Aguilar, F. Alvarado, C. Calvo and F. Rojas, 1987, Some preliminary observations of the Costa Rica three dimensional seismic data: *EOS*, v. 58, no. 44, p. 1485.

Copeland, W. B. and **M. Cloos**, 1988, Structural and metamorphic constraints on fault displacement between coherent blueschist terranes near Ball Mountain, Eastern Belt, Franciscan Complex, California: *Geological Society of America Abstracts with Programs*, v. 20, no. 3, p. 151.

Dalziel, I. W. D., B.C. Storey, S. W. Garrett, A. M. Grunow, L. D. B. Herrod and R. J. Pankhurst, 1987, Extensional Tectonics and the Fragmentation of Gondwanaland *in* : J.F. Dewey, M.P Coward, and P. Hancock, eds., Continental Extensional Tectonics: *Geological Society of London Special Publication #28*, p.433-441.

Grunow, A. M., D. V. Kent and **I. W. D. Dalziel**, 1987, Mesozoic Evolution of West Antartica and the Weddell Sea Basin: new paleomagnetic constraints: *Earth and Planetary Science Letters*, v. 86, p. 16-26.

Fisher, William L., 1988, Rediscovering Oil and Gas: *Issues in Science and Technology*, v. IV, no. 2, p. 100-104.

Folk, Robert L., Karl Hoops and Susan Ide, 1987, Internal architecture of quartz revealed by SEM examination of HF-etched crystals: *Bulletin of the Electron Microscope Society of America*, v. 17, no. 2, p. 81.

Folk, Robert L., 1987, Detection of organic matter in thin-sections of carbonate rocks using a white card: *Sedimentary Geology*, v. 54, p. 193-200.

Folk, Robert L., K. Hoops and S. Ide, 1988, Internal architecture of quartz revealed by deep etching in HF (abs.): *American Association of Petroleum Geologists Bulletin*, v. 72, p. 185-186.

Gose, W. A., and R. C. Finch, 1987, Magnetostratigraphic studies of Cretaceous rocks in Central America: *Actas Facultad Ciencias Tierra, Univ. Auton. Nuevo Leon, Linares, Mexico, (IGCP Project 242: Cretácico de América Latina)*, vol. 2, p. 233-241.

Gose, W. A. and J. R. Kyle, 1988, Paleomagnetic studies of salt dome cap rocks (abs.): *American Association of Petroleum Geologists Bulletin*, v. 72, p. 190.

Farr, M. R., **W. A. Gose** and G. L. Macpherson, 1988, Paleomagnetic dating of depositional and diagenetic events in Upper Cambrian rocks of central Texas (abs.): *American Association of Petroleum Geologists Bulletin*, v. 72, p.

Gose, W. A.,1988, Paleomagnetic quality control: a case study: *10th Annual Texas A&M Geodynamics Symposium, College Station, Texas*.

Peramau, A., **W. A. Gose** and J. Castillo, 1988, Paleomagnetic results from western Venezuela and the southern Caribbean plate boundary: *EOS*, v. 69, p. 338.

Kocurek, G. and R. H. Dott, 1987, Distinction and uses of stratification types in the interpretation of eolian deposits, *in* D. J. Cant and F. J. Hein, eds., Approaches to Interpretation of Sedimentary Environments: *Society of Economic Paleontologists and Mineralogists Reprint Series 11*, 17 p.

Nielson, J. and **G. Kocurek,** 1987, Surface processes, deposits, and development of star dunes: Dumont dune field, California: *Geological Society of America Bulletin 99*, 177-186.

Knight, J. and **G. Kocurek**, 1987, Eolian bedform reconstruction—a case study from the Page Sandstone (Jurassic), northern Arizona: *SEPM Annual Mid-Year Meeting Abstracts*, v. 4, p. 42.

Sweet, M. L. and **G. Kocurek**, 1987, Preliminary observations of airflow over a complex crescentic dune (draa) in the Algodones dune field, California: *SEPM Annual Mid-Year Meeting Abstracts*, v. 4, p. 82.

Agee, W. N., Jr., T. G. Walter and **J. R. Kyle**, 1987, Zn-Pb-Ag zonation and sulfide ∂34S distribution in anhydrite cap rock, Hockley dome, Texas: *SEPM Annual Mid-Year Meeting Abstracts*, v. 4, p. 2.

Kyle, J. R., H. H. Posey and R. S. Fisher, 1987, Sulfide mineralization in Permian strata of the Palo Duro Basin, Texas: *SEPM Annual Mid-Year Meeting Abstracts*, v. 4, p. 45.

Posey, H. H., **J. R. Kyle**, T. J. Jackson, S. D. Hurst and P. E. Price, 1987, Multiple fluid components of salt diapirs and salt dome cap rocks, Gulf Coast, U.S.A.: *Applied Geochemistry*, v. 2, p. 523-534.

Posey, H. H., **J. R. Kyle**, M. P. R. Light and P. E. Price, 1987, Salt dome cap rock geochemistry: clues to mineral maturation in subsiding sedimentary basins: *SEPM Annual Mid-Year Meeting Abstracts*, v. 4, p. 66-67.

Prikryl, J. D. and **J. R. Kyle**, 1987, Petrographic and stable isotopic investigation of the Damon Mound calcite cap rock: *SEPM Annual Mid-Year Meeting Abstracts*, v. 4, p. 67-68.

Sassen, R., E. W. Chinn, **J. R. Kyle** and C. McCabe, 1987, Recent hydrocarbon biodegradation and sulfate reduction in salt dome cap rock at Damon Mound, Brazoria County, Texas: *SEPM Annual Mid-Year Meeting Abstracts*, v. 4, p. 75.

Vasconcelos, P. M. and **J. R. Kyle**, 1987, Gold mobilization during lateritic weathering, Fazenda Brasileiro deposit, Brazil: *Geological Society of America, Abstracts with Programs*, v. 19, p. 877.

Vasconcelos, P. M., **J. R. Kyle**, J. B. Teixeira, A. Kishida, M. Marimon and R. P. Xavier, 1987, Gold mineralization in the Fazenda Brasileiro deposit, NE Brazil: *Geological Association of Canada, Summer Field Meeting, Program with Abstracts*, p. 25.

Barrie, C. T. and **J. R. Kyle**, 1988, Geology, geochemistry, and tectonic setting of the Khayyam and Stumble-On massive sulfide deposits, Prince of Wales Island, Alaska: *Economic Geology*, v. 83, p. 182-196.

Gose, W. A. and **J. R. Kyle**, 1988, Paleomagnetic studies of salt dome cap rocks (abs.): *American Association of Petroleum Geologists Bulletin*, v. 72, p. 190.

Price, P. E., F. E. LaMore, **J. R. Kyle** and J. P. Kurtz, 1988, Anomalous base and precious metals at the oil-water contact in the No. 1 Teague well, Smackover Formation, southwest Arkansas (abs.): *American Association of Petroleum Geologists Bulletin*, v. 72, p. 238.

Vasconcelos, P. M. and **J. R. Kyle**, 1988, Gold geochemistry during semiarid weathering. A case study of the Fazenda Brasileiro deposit, Bahia, Brazil: *Geological Society of Australia, Bicentennial Gold 88, Extended Abstracts*, v. 2, p. 645-647.

Lagoe, M. B., 1987, The stratigraphic record of sea-level and climatic changes in an active margin basin—the Stevens Sandstone, Coles Levee area, California: *Palaios*, v. 2, p. 48-68.

Lagoe, M. B., 1987, Chronostratigraphic significance of late Cenozoic planktic Foraminifera from the Wheeler Canyon and Balcom Canyon sections, Ventura Basin, California, *in* T. L. Davis and J. S. Namson, eds., Structural evolution of the western Transverse Ranges: *Pacific Section SEPM, Publication 48A*, p. 17-28.

Lagoe, M. B., 1987, Cenozoic stratigraphic framework for the San Emigdio Mountains, California, *in* T. L. Davis and J. S. Namson, eds., Structural evolution of the western Transverse Ranges: *Pacific Section SEPM, Publication 48A*, p. 85-98.

Lagoe, M. B., 1987, Middle Cenozoic unconformity-bounded stratigraphic units in the Cuyama and southern San Joaquin Basins, California: Record of eustatic and tectonic events in active margin basins: *Cushman Foundation for Foraminiferal Research, Special Publication 24*, p. 15-32.

Lagoe, M. B., 1988, An outline of foraminiferal biofacies in the Soda Lake Shale Member, Vaqueros Formation, Cuyama Basin, California, *in* W. J. M. Bazeley, ed., Tertiary tectonics and sedimentation in the Cuyama Basin, San Luis Obispo, Santa Barbara and Ventura Counties, California: *Pacific Section SEPM, Publication 59*, p. 21-28.

Davis, T. L., **M. B. Lagoe**, W. J. M. Bazeley, S. A. Gordon, K. McIntosh and J. S. Namson, 1988, Structure of the Cuyama Valley, Caliente Range and Carrizo Plain and its significance to the structural style of the southern Coast Ranges and western Transverse Ranges, *in* W. J. M. Bazeley, ed., Tertiary tectonics and sedimentation in the Cuyama Basin, San Luis Obispo, Santa Barbara, and Ventura Counties, California: *Pacific Section SEPM, Publication 59*, p. 141-158.

Slatt, R. M., J. M. Boak, G. T. Goodrich, **M. B. Lagoe**, C. L. Vavra, J. M. Bishop and S. M. Zucker, 1988, Depositional facies, paleoenvironments, reservoir quality and well log characteristics of Mio-Pliocene deep water sands, Long Beach Unit, Wilmington Field, California: *in* Giant Oil and Gas Fields, A core workshop: *Society of Economic Paleontologists and Mineralogists, Core Workshop 12*, p. 31-88.

Lagoe, M. B., 1987, Miocene biostratigraphic and depositional events in the Cuyama Basin, central California: *4th International Congress on Pacific Neogene Stratigraphy, Abstract Volume*, p. 61-62.

Armentrout, J. A., R. J. Echols and **M. B. Lagoe**, 1987, Temperate glacially-influenced facies, Gulf of Alaska shelf and fjords: distribution patterns of foraminifera, mollusca and sediment: *1987 Annual Meeting, INQUA, Abstract Volume*.

Lagoe, M. B., 1987, Benthic foraminiferal distributions across an Eocene basin margin, California: An evaluation of Paleogene paleobathymetric models (abs.), *in* Innovative biostratigraphic approaches to sequence analysis: New exploration opportunities: *Gulf Coast SEPM*, p. 96-98.

Lagoe, M. B., 1987, Middle Eocene biofacies structure along a paleobathymetric gradient in the Tejon Formation, California: A preliminary evaluation of Paleogene paleobathymetric models: *SEPM Annual Mid-Year Meeting Abstracts*, v. 4, p. 45.

Isaacs, C. M. and **M. B. Lagoe**, 1987, Mid-Tertiary silica deposition in California--The pre-Monterey record (abs.): *Pacific Neogene Event Studies, IGCP Project 246, Shizuoka University, Japan*, p. 39-42.

Lagoe, M. B., 1987, Neogene record of glaciomarine deposition in the Gulf of Alaska—key to high northern latitude paleoceanography and climate history in the north Pacific (abs.): *Pacific Neogene Event Studies, IGCP Project 246, Shizuoka University, Japan*, p. 51-56.

Land, L. S. and R. S. Fisher, 1987, Wilcox sandstone diagenesis, Texas Gulf Coast: a regional isotopic comparison with the Frio Formation, *in* J. Marshall, ed., Diagenesis of Sedimentary Sequences: *Geological Society of London Special Publication 36*, p. 219-235.

McBride, E. F., **L. S. Land** and L. E. Mack, 1987, Diagenesis of feldspathic eolian and fluvial sandstones, Norphlet Formation (Upper Jurassic), Rankin County, Mississippi, and Mobile County, Alabama: *American Association of Petroleum Geologists Bulletin*, v. 71, p. 1019-1034.

Dallmeyer, R. D., **L. E. Long**, and J. McMurry, 1987, New evidence for polyphase tectonothermal evolution of the Braziliano orogen, northeastern Brazil: *Geological Society of America Abstracts with Programs*, v. 19, p. 634.

McMurry, J., **L. E. Long**, and A. N. Sial, 1988, Petrology and isotope systematics of magma/crystal mushes: some porphyritic granitoids of northeast Brazil: *Revista Brasileira Geosciências*, v. 17, no. 4.

Sial, A. N., **L. E. Long**, and G. S. Borba, 1988, Cretaceous magmatic province of Cabo, Pernambuco, northeast Brazil (field trip guide to excursion): *Revista Brasileira Geosciências*, v. 17, no. 4.

Lundelius, E. L., Jr., C. S. Churcher, T. Downs, C. R. Harington, E. H. Lindsay, G. E. Schultz, H. A. Semken, S. D. Webb, R, J. Zakrzewski, 1987, The North American Quaternary Sequence, *in* M. O. Woodburne, ed., Cenozoic Mammals of North America: Geochronology and Biostratigraphy: *University of California Press, Berkeley*, p. 211-235.

Lundelius, E. L., Jr., 1987, The Pleistocene mammalian crisis! Habitat destruction as an extinction mechanism: *Anthroquest*, no. 37, p.13-14.

Maxwell, J. C., 1987, Geology in the U.S.A.: from passive to dynamic earth in 50 years: *Episodes*, v. 10, no. 4, p. 238-242.

McBride, E. F., 1987, Compaction of Norphlet sandstones, Rankin County, Mississippi: *Transactions of the Gulf Coast Association of Geological Societies*, v. 37, p. 399-403.

Wilson, J. C. and **E. F. McBride**, 1987, Compaction and porosity evolution of Pliocene sandstones, Ventura Basin, California: *SEPM Annual Mid-year Meeting Abstracts*, v. 4, p. 92.

Picard, M. D., **E. F. McBride**, D. Fontana and R. Gelmini, 1987, Petrology and provenance of the Triassic Verrucano Group, Monte Argentario, Tuscany, Italy: *SEPM Annual Mid-year Meeting Abstracts*, v. 4, p. 65.

McBride, E. F., L. S. Land and L. E. Mack, 1987, Diagenesis of feldspathic eolian and fluvial sandstones, Norphlet Formation (Upper Jurassic), Rankin County, Mississippi, and Mobile County, Alabama: *American Association of Petroleum Geologists Bulletin*, v. 71, p. 1019-1034.

McBride, E. F. and M. D. Picard, 1987, Downstream changes in sand composition, roundness, and gravel size in a short-headed, high-gradient stream, northwestern Italy: *Journal of Sedimentary Petrology*, v. 57, p. 1018-1026.

McBride, E. F., 1988, Geology of the Marathon Uplift, West Texas: *in* O. T. Hayward ed., *Geological Society of America Centennial Field Guide—South Central Section*, v. 4, p. 411-416.

Carter, K. E. and **S. Mosher**, 1987, Apennine thrusting and post-Apennine gravity sliding in the Portovenere area, Northern Appenines, Italy: *Geological Society of America Abstracts with Programs*, v. 29, p. 613.

Mosher, S., 1987, Stretched pebbles: *in* C. Seyfert, ed., Encyclopedia of Structural Geology and Plate Tectonics, Dowden, Hutchenson and Ross, p. 753-757.

Mosher, S. and M. A. Helper, 1988, Interpretation of polydeformed terranes: *in* S. Marshak and G. Mitra, eds., Basic Methods of Structural Geology, *Prentice-Hall*, p. 361-384.

Mosher, S., 1988, The Grenville (Llano) Orogeny—Texas Style: *Geological Society of America Abstracts with Programs*, v. 20, p. 57.

Mahler, J. P. and **S. Mosher**, 1988, Late-stage Alleghenian wrenching of the western Narragansett Basin, Rhode Island: *Geological Society of America Abstracts with Programs*, v. 20, p. 53.

Gillis, G. M. and **S. Mosher**, 1988, Polyphase deformation of the Middle Proterozoic Coal Creek Serpentinite, Llano Uplift, Texas: *Geological Society of America Abstracts with Programs*, v. 20, p. 99.

Tauvers, P. R. and **W. R. Muehlberger**, 1988, Reply to Comment by J. H. McBride and K. D. Nelson of "Is the Brunswick magnetic anomaly really the Alleghanian suture?": *Tectonics*, v. 7, p. 347-349.

Muehlberger, W. R. and M. B. Gordon, 1987, Observations on the complexity of the East Anatolian fault, Turkey: *Journal of Structural Geology*, v. 9, p. 899-903.

Tauvers, P. R. and **W. R. Muehlberger**, 1988, Persimmon Gap in Big Bend National Park, Texas: Ouachita facies and Cretaceous cover deformed in a Laramide overthrust: *Geological Society of America Centennial Field Guide—South-Central Section*, v. 4, p. 417-422.

Muehlberger, W. R. and P. R. Tauvers, 1988, Tectonosynthems and new Tectonic Map of North America (abs.): *American Association of Petroleum Geologists Bulletin*, v. 72, p. 226.

Gordon, M. B. and **W. R. Muehlberger**, 1988, Evidence from Valle de Catacamas supports a right-lateral, neotectonic sense of slip for Guayape fault of Honduras (abs.): *American Association of Petroleum Geologists Bulletin*, v. 72, p. 190.

Nakamura, Y., P. L. Donoho, P. H. Roper and P. M. McPherson, 1987, Large-offset seismic surveying using ocean-bottom seismographs and air guns: Instrumentation and field technique: *Geophysics*, v. 52, p. 1601-1611.

Ebeniro, J. O., **Y. Nakamura** and D. S. Sawyer, 1987, Estimating the thickness of shallow salt from seismic refractions: *Geophysics*, v. 52, p. 1708-1714.

Henry, C. D., **J. G. Price** and R. C. Smyth, 1988, Chemical and thermal zonation in mildly alkaline magma system, Infiernito caldera, Trans-Pecos Texas: *Contributions to Mineralogy and Petrology*, v. 98, p. 194-211.

Price, J. G., C. D. Henry, D. S. Barker and D. F. Parker, 1987, Alkalic rocks of contrasting tectonic settings in Trans-Pecos Texas. E. M. Morris and J. D. Pasteris, eds., Mantle Metasomatism and Alkaline Magmatism: *Geological Society of America Special Paper 215*, p. 335-346.

Rubin, J. N., **J. G. Price**, C. D. Henry and D. W. Koppenaal, 1987, Cryolite-bearing and rare metal-enriched rhyolite, Sierra Blanca peaks, Hudspeth County, Texas: *American Mineralogist*, v. 72, p. 1122-1130.

Price, J. G., 1988, Superconductors and space stations—relevant development at Sierra Blanca (abs.): *Austin Geological Society*, v. 22, no. 6, p. 1.

Price, J. G., C. D. Henry and J. N. Rubin, 1987, Peraluminous rhyolites in a continental arc, Trans-Pecos Texas: *Geological Society of America Abstracts with Programs*, v. 19, p. 810.

Harlan, S. S., J. W. Geissman, **J. G. Price**, C. D. Henry, T. C. Onstott and J. Oldow, 1987, Paleomagnetic documentation of the cessation of Chihuahuan fold thrust belt deformation, southwest Texas: *Geological Society of America Abstracts with Programs*, v. 19, p. 693.

Price, J. G., S. T. Conlon and C. D. Henry, 1987, Tectonic controls on orientation and size of epithermal veins (abs.): *North American Conference on Tectonic Control of Ore Deposits and Vertical and Horizontal Extent of Ore Systems, University of Missouri-Rolla*, p. 59.

Rowe, Timothy and N. S. Greenwald, 1987, The phylogenetic position and origin of Multituberculata (abs.): *Journal of Vertebrate Paleontology*, v. 7, p. 24-25.

Rowe, T., 1987, Definition and diagnosis in the phylogenetic system: *Systematic Zoology*, v. 36, no. 2, p. 208-211.

Rowe, T., 1987, Review of "The Ecology and Biology of Mammal-Like Reptiles," by N. Hotton III, P. D. MacLean, J. J. Roth, and E. C. Roth: *Copeia* 1987, v. 4, p. 1075-1077.

Rowe, T., 1988, New issues for phylogenetics. Review of "Molecules and Morphology in Evolution," by Colin Patterson: *Science*, v. 239, p. 1183-1184.

Rowe, T., 1988, Review of "Vertebrate Paleontology and Evolution," by R. Carroll: *Journal of Vertebrate Paleontology*, v. 8, no. 2, p. 235-236.

Gauthier, J. A., A. G. Kluge and **T. Rowe**, 1988, Amniote phylogeny and the importance of fossils: *Cladistics*, v. 4, p. 105-209.

Sclater, J. G. and B. Celerier, 1987, Extensional models for the formation of sedimentary basins and continental margins: *Norsk Geologisk Tidsskrift*, v. 67, p. 253-268.

Rosencrantz, E., M. I. Ross and **J. G. Sclater**, 1988, Age and spreading history of the Cayman Trough as determined from depth, heat flow and magnetic anomalies: *Journal of Geophysical Research*, v. 93, B3, p. 2141-2157.

Renkin, M. and **J. G. Sclater**, 1988, Depth and age in the North Pacific: *Journal of Geophysical Research*, v. 93, B4, p. 2919-2935.

LaFave, J. I. and **J.M. Sharp, Jr.** 1987, Origins of ground water discharging at the springs of Balmorhea: *West Texas Geological Society Bulletin*, v. 26, p. 5-14.

Bodner, D. P. and **J. M. Sharp, Jr.**, 1988, Heat flow in the South Texas subsurface: *American Association of Petroleum Geologists Bulletin*, v. 72, p. 21-32.

Clement, T. J. and **J. M. Sharp, Jr.**, 1988, Hydrochemical facies in the bad-water zone of the Edwards aquifer, Central Texas: *Proceedings of the Ground Water Geochemistry Conference, National Water Well Association, Dublin, Ohio*, p. 127-149.

Sharp, J. M., Jr. and Land, L. S., 1988, Large-scale fluid transport systems in the Gulf of Mexico basin: settings, processes, and their effects upon basin sediments (abs.): *EOS*, v. 69, p. 355.

Smith, D. and F. R. Boyd, 1987, Compositional heterogeneities in a high-T lherzolite nodule and implications for mantle processes: *in* P. H. Nixon, ed., Mantle Xenoliths, *John Wiley & Sons*, p. 551-561.

Smith, D., 1987, Genesis of carbonate in pyrope from ultramafic diatremes on the Colorado Plateau, southwestern United States: *Contributions to Mineralogy and Petrology*, v. 97, p. 389-396.

Smith, D., 1988, Implications of zoned garnets for the evolution of sheared lherzolites: examples from northern Lesotho and the Colorado Plateau: *Journal of Geophysical Research*, v. 93, B5, p. 4895-4905.

Wilkerson, A., W. D. Carlson and **D. Smith**, 1988, High-pressure metamorphism during the Llano Orogeny inferred from Proterozoic eclogite remnants: *Geology*, v. 16, p. 391-394.

Smith, D., 1987, Carbonates and Ba- and Cl-rich hydrates in mantle pyrope: records of subduction, metasomatism, or both?: *Geological Society of America Abstracts with Programs*, v. 19, p. 848.

Tyner, G. N., R. D. Shuster, P. A. Mueller and **D. Smith**, 1987, Geochemical models of the potassic, xenolith-bearing Sullivan Buttes latite, Arizona: combined assimilation and fractional crystallization: *Geological Society of America Abstracts with Programs*, v. 19, p. 873.

Sprinkle, J. and P. M. Kier, 1987, Phylum Echinodermata, *in*: R. S. Boardman, A. H. Cheetham and A. J. Rowell (eds.), Fossil Invertebrates: *Blackwell Scientific Publications*, p. 550-611.

Lewis, R. D., **J. Sprinkle**, J. B. Bailey, J. Moffit and R. L. Parsley, 1987, *Mandalacystis*, a new rhipidocystid eocrinoid from the Whiterockian Stage (Ordovician) in Oklahoma and Nevada: *Journal of Paleontology*, v. 61, no. 6, p. 1222-1235.

Stoffa, P. L., T. H. Shipley, C. Denham, M. A. B. Bothelho, D. Dean, H. Winkler, R. Elde, P. Riherd, M. Cloos, E. A. Silver, D. L. Reed, G. Miscovich, A. Aguilar, F. Alvarado, C. Calvo and F. Rojas, 1987, Three dimensional seismic imaging of the accretionary wedge in the Middle America Trench off Costa Rica: the field experiment and processing techniques: *EOS*, v. 68, no. 44, p. 1466.

Shipley, T. H., **P. L. Stoffa**, M. Cloos, E. A. Silver, D. L. Reed, A. Aguilar, F. Alvarado, C. Calvo and F. Rojas, 1987, Some preliminary observations of the Costa Rica three dimensional seismic data: *EOS*, v. 58, no. 44, p. 1485.**Walker, N. W.**, T. D. Plake and E. H. Brown, 1987, Tectonic significance of Jurassic protolith ages of meta-plutonic rocks of the Shuksan metamorphic suite, Washington, and the Colebrooke Schist, Oregon: *Geological Society of America Abstracts with Programs*, v. 19, p. 879.

Kays, M. A., E. M. Bishop, **N. W. Walker** and D. Blackwell, 1987, Sodic amphibole-bearing schistose rocks of the Baker Terrane: *Geological Society of America Abstracts with Programs*, v. 20, p. 423.

Miller, Robert B. and **N. W. Walker**, 1987, Structure and age of the Oval Peak Batholith; implications for the Ross Lake fault zone, Wasington: *Geological Society of America Abstracts with Programs*, v. 19, p. 433.

Warren, J. K., 1987, Evaporites, basins, and hydrocarbons; how they interact: *West Texas Geological Society Bulletin*, v. 27, no. 2, p. 17.

Kendall, C. G. St. C. and **J. K. Warren**, 1987, A review of the origin and setting of teepees and their associated fabrics: *Sedimentology*, v. 34, p. 1007-1027.

Warren, J. K., 1988, Evaporites: *Geotimes*, v. 33, no. 2, p. 21-22.

Rosen, M. R., D. E. Miser and **J. K. Warren**, 1988, Sedimentology, mineralogy and isotopic analysis of Pellet Lake, Coorong region, South Australia: *Sedimentology*, v. 35, p. 105-122.

Li, Z. and **C. Wilson**, 1987, A damped oscillator model of the 50 day oscillation in the length of the day (in Chinese): *Acta Astronomica Sinica*, v. 28, p. 29-38.

Gutierrez, R. and **C. Wilson**, 1987, Seasonal air and water mass redistribution effects on LAGEOS and Starlette: *Geophysical Research Letters*, v. 14, no. 9, p. 929-932.

Wilson, C. and R. Vicente, 1988, The combination of polar motion observations: *International Astronomical Union Symposium 128 "Earth Rotation and Reference Frames,"* D. Riedel, p. 247-255.

Wilson, C., J. Kuehne and Z. Li, 1988, Computation of water storage contributions to polar motion: *International Astronomical Union Symposium 128 "Earth Rotation and Reference Frames,"* D. Riedel, p. 381-384.

Wilson, C., 1987, Earth's rotational changes: *Discovery Magazine, The University of Texas at Austin*, v. 10, no. 4, p. 22-26.

Wilson, C. and R. Vicente, 1987, Combination of polar motion observations: Comparison of conventional and Kalman filter methods: *in* P. Holota, ed., Proceedings of the International Association of Geodesy Symposium: Figure and Dynamics of the Earth, Moon, and Planets: *Research Institute of Geodesy, Topography, and Cartography, Prague, Czechoslovakia.*

Dobbs, S. L., **C. R. Wilson** and M. M. Backus, 1987, Accounting for Limited Spatial Aperture in a P-tau Inversion Algorithm: *Society of Exploration Geophysicists, Expanded Abstracts 57th Annual International Meeting*, p. 789-791.

Department of Geological Sciences Staff
September 1, 1988

Department Staff: Front row, l-r, Scott Schroeder, Susanna Ross, Joyce Best, Ann Page, Anthea McClelland, Jeff Horowitz, Linda Carlson, Jane Hamlin; back row, l-r, David Stephens, Dennis Trombatore, Paul Desha, Karl Hoops, Betty Kurtz, Bill Woods, Donna Precht, Eddie Wheeler, Rosemary Brant.

Joyce E. Best, Administrative Associate. Manages Geology Foundation office, handles geology alumni records, serves as editor of the annual alumni *Newsletter*.

Rosemary Brant, Senior Office Assistant. General secretarial and clerical work for third floor faculty, including typing exams and manuscripts. Line editing for all Department faculty.

Jim C. Carpetas, Technical Staff Assistant V (Electronics Technician). Trouble-shoots and repairs electronic equipment for the Department.

Ruff Daniels, Technical Staff Assistant IV. Maintains the Department's field vehicles and equipment. Oversees construction, operation, and maintenance of specialized equipment used by faculty and graduate students in their research.

Paul A. Desha, Senior Procurement Officer. Purchases equipment and supplies for Department use, including instructional, research, and administrative areas. Maintains department records of accounts, using on-line computerized accounting system, processes vouchers for departmental expenses, and maintains department inventory records.

Jane Hamlin, Senior Office Assistant. Secretary to the Chairman. Assists the Associate Chairman and the Executive Assistant. Handles weekly time reports for the staff, prepares vacation/sick leave reports for Personnel Office. Acts as secretary for the Faculty Search Committee. Serves as the Department's Notary Public.

G. Karl Hoops, Research Scientist Associate II (Analytical Chemist). Performs chemical analysis of rocks, minerals, and brines. Instructs students in analytical techniques on an individual basis.

Jeff Horowitz, Drafting Technician II. Draws structure maps, graphs and charts for numerous geological publications, including

chapters in books. Works directly with the faculty preparing slides and posters for various conferences. Offers student advising on cartographic techniques.

Betty J. Kurtz, Senior Office Assistant. Fulfills secretarial duties for the second-floor faculty, including word processing of manuscripts, exams and correspondence.

Rebecca Ann Page, Administrative Assistant (Graduate Advisor's Office). Handles administration of the graduate student office, processes Teaching Assistant/Research Assistant appointments and applications for admission and support.

Donna L. Precht, Student Development Specialist II. Handles undergraduate advising, counseling, evaluation and program development for undergraduate students in the Department, and is spearheading a new program in undergraduate recruitment. Processes travel vouchers, Student Assistant appointments and payrolls. Secretary to Dr. Milo M. Backus.

Susanna Ross, Technical Staff Assistant III (Geological Technician). Prepares geologic rock and soil samples into standard thin sections, microscope slides, or polished samples for faculty and graduate student research, and student teaching sections.

Scott K. Schroeder, Accounting Clerk III. Handles accounting for Geology Foundation, serves as assistant editor of alumni *Newsletter*.

David M. Stephens, Photographer II. Photographer for professional publications and photographic consultant.

Scott Thieben, Research Scientist Assistant (Analytical Chemist). Performs chemical analysis of rocks, minerals, and brines. Instructs students in analytical techniques on an individual basis.

Marianne Walk, Administrative Assistant. Responsible for administrative and budget matters for Project SEER (Solid Earth Exploration Research) directed by Dr. Milo M. Backus, acts as liaison for the seven Graduate Research Assistant employees on administrative matters, and attends to all preparations for the semiannual Project SEER meetings.

J. Eddie Wheeler, Scientific Instrument Maker II. Assists faculty by designing and building projects to aid in their research, helping with mechanical maintance of the equipment in the Department, machining and welding of other assemblies and various other jobs.

William I. (Bill) Woods, Executive Assistant. Assists the Chairman and Associate Chairman in the annual preparation of the Department budget, handles all faculty/staff adminstrative matters, and supervises Classified Personnel. Serves as contact person with the Physical Plant for all matters relating to the Geology Building.

Staff Honors and Awards

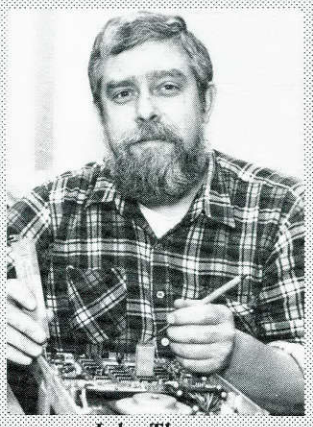
Two members of the Department's classified staff received longevity awards from the University of Texas in May. Karl Hoops, Analytical Chemist, received an award for 20 years of service to the University. Karl's entire career at UT has been in the Department of Geological Sciences. Bill Woods, Executive Assistant, was recognized for ten years of employment UT; he has worked in the Department for the last five years.

Donna Precht, Student Development Specialist, received a Staff Excellence Award which carries a $500 cash gift. Each year University faculty and staff are invited to submit nominations for non-teaching individuals who have distinguished themselves by their service to the University. Only fifty persons across the campus are selected each year to receive awards. Donna and Karl Hoops are the two employees from the Department who have been so recognized in the nine-year history of the Excellence Awards. Donna came to the Department in November, 1973 and has served in the Undergraduate Advising Office since that time.

Rosemary Brant, Senior Office Assistant, published a book review of *Truffaut*, by Hervé Dalmais. The paper appeared in the April, 1988 issue of *The French Review*.

Memorial to John Thorne

by Leon Long



John Thorne

Johnnie Harper Thorne, 43, was killed in a freak auto accident on August 21, 1987. For the previous decade he had been employed in the Department as an electronics technician, while serving outside the Department among other things as a teacher of electronics and as a consultant for a broadcasting station. John Thorne will always be remembered as one of those Unforgettable Characters that one seldom encounters. He was a brilliant and articulate person who could design and build from scratch a complex computer system including both the hardware and software. He was famous for his ability to solve subtle electronic problems that had everyone else stumped.

But John's sphere of influence extended far beyond his expertise in electronics. His interests were both catholic and Catholic, for he was also a Bishop in the Free Liberal Catholic Church. John was a complex person who lived in a mobile home without an immediate family, whose unconventional insights on the situation of the human race were likely to be controversial and assuredly thought-provoking. Never afraid to challenge his own assumptions and those of others, he was at home in the world of ideas but also the practical world of problems to solve and people to assist. He did not particularly care about money except as a means to stay alive and to share with others in need. No wonder that he was surrounded by a circle of devoted friends, both in and out of the Department, who loved to discuss with him issues of theology, metaphysics, mathematics, computing technology, design of ham radio antennas (subject of a book he was writing), and flying of light aircraft such as the one he used to own. We have greatly missed John's presence.

Bureau Of Economic Geology

by Stephen Stubbs

The Bureau of Economic Geology continues its work in energy, environmental, non-fuel mineral, mapping, and basic geological research. The 1987 calendar-year report includes descriptions of 20 different energy research projects, 11 projects concerning land, water, and environmental resources, six non-fuel mineral projects, six mapping projects, and four other research projects. Several of these projects as well as other work performed by the Bureau during 1987-88 merit special mention.

The Bureau completed a study for the U.S. Department of Energy indicating that substantial natural gas reserves and resources remain in the U.S., including 1,059 trillion cubic feet of technically recoverable gas in the Lower 48 states. More than half of this volume was found to be recoverable at moderate costs.

The Department of Energy named the Bureau as the site for the first national Geoscience Institute for Oil and Gas Recovery Research. The institute consists of 15 state agencies and research institutions representing all the oil and gas producing regions of the U.S. The institute's objective is to develop integrated and focused research programs for improving oil and gas recovery.

The Bureau, with the U.S. Minerals Management Service (MMS) and the Continental Margins Committee of the Association of American State Geologists, hosted a national symposium on studies related to continental margins. Fifty-six individuals from 19 states attended. Participants reviewed research results from fuel and non-fuel mineral studies supported by the Minerals Management Service.

The Bureau's list of benefactors and clients continues to grow. During 1987-88, new funding or research contracts were received from ARCO, Argonne National Laboratory, Corps of Engineers, Cray Research, Inc., Department of Energy, Environmental Protection Agency, Gas Research Institute, ICF, Inc., Lower Colorado River Authority, Minerals Management Service, Mobil, Total Minatome Corp., U.S. Geological Survey, Texas Attorney General's Office, Texas Low-Level Radioactive Waste Disposal Authority, Texas Parks and Wildlife Department, Texas Governor's Office, Texas Water Development Board, and VG Elemental. The Bureau also received five grants from the Texas Higher Education Coordinating Board through the Texas Advanced Research and Advanced Technology Programs.

Three individuals joined the scientific and research staff during 1987-88. Edwin Nietzel, formerly with ARCO in Plano, was appointed as Technical Coordinator for Geophysics as part of the Geoscience Institute. Ed Garner rejoined the Bureau to work on the Industrial Minerals Program. Garner was a member of the scientific staff between 1962 and 1980. Dennis Kerr, a recent graduate of the University of Wisconsin at Madison, joined the Co-Production project.

Several members of the scientific and research staff received special recognition during 1987-88. Virgil Barnes was named the Distinguished Texas Scientist for 1988 by the Texas Academy of Science. For the second year in a row, Shirley Dutton received the A. I. Levorsen Memorial Award and the First Place Best Paper award for a paper presented at GCAGS. Charles Kerans received the First Place Best Paper award for a paper presented to the Permian Basin Section of SEPM. Kerans will present a version of the paper at the "Best of AAPG for SPE" session of the national SPE meeting. A paper by Noel Tyler and Robert Finley was also selected for presentation at the "Best of AAPG for SPE" session.

Other members of the scientific and research staff also received recognition. Alan Dutton was selected to serve a three-year term on the Editorial Board of *Ground Water*, and Martin Jackson was selected to serve a three-year term as an associate editor of the AAPG *Bulletin*. Jackson was also appointed to the International Union of Geological Sciences Commission on Tectonics.

Through June, the Bureau had published 34 new research documents, including nine reports of investigations, seven circulars, one set of cross-sections, one special publication, and 16 contract reports. The Core Research Center holdings increased to nearly 800,000 linear feet of well core and cuttings from more than 57,000 wells. Likewise, the Geophysical Log Facility continued to grow. More than 7,000 well logs were added to the facility's collection during 1987-88, bringing the total number to about 35,000. These publications, geologic materials, and other data represent an extraordinary information base for the public as well as Bureau scientists and research staff.

Vertebrate Paleontology Laboratory

by John A. Wilson

Ernie Lundelius successfully completed his first year as director of the Laboratory following the retirement of Wann Langston. The lab is just recovering from the construction involved in providing Wann with a new office. He has been "kicked upstairs" to his new office and position of Director-Emeritus. All of this was to provide office and work space for Tim Rowe, Wann's replacement on the Department faculty.

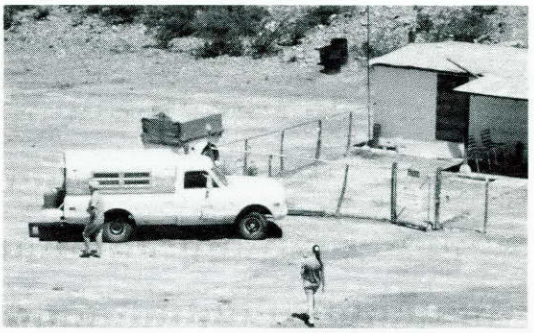
The construction is completed and the mammoth skull that was in the foyer is receiving a new base through the skillful efforts of Bob Rainey and Earl Yarmer. The dinosaur bones will be replaced and the two exhibits, "How to Collect a Dinosaur Bone," and "Publications of the VP Lab" will be renovated. Although the main function of the VP Lab is research and publications, we also serve the public by conducting tours for school groups, science summer camps, alumni with children and even grandchildren who want to see the activities involved in working on fossil vertebrates. So we try to put our best foot forward.

At the present time (July), Ernie Lundelius is in Australia. He was invited to give a paper at a symposium being held at Perth. He applied for and received a grant to stay until the end of August and do field work. Wann Langston is in Drumheller, Alberta Canada working on dinosaurs at their new provincial museum. According to Wann, it is the finest museum devoted to dinosaurs anywhere in the world.

Dr. Melissa Winans, the collections manager and researcher on fossil horses, and Jack Wilson, Director Pro Tem, are keeping the Lab operating for the summer. They answer phone inquiries about fossils and try to decide whether a bone find is worth going to investigate, or if it is just an old cow.

Jack Wilson with old orange Jeep in the Basin, Big Bend National Park, 1963.

Sleshi Tebedge from Ethiopia and James Westgate from Washington, D.C. received their PhD's in June. Sleshi was supervised by Ernie Lundelius and Jim was supervised by Jack Wilson. There are currently six graduate students "in residence" and two new students will arrive this fall.



The Lab's old Chevrolet pickup, soon to be replaced.

Field work has been one of the continuing activities of the faculty, staff and students at the VP Lab. In the "good old days," Wilson used a Department two-wheel drive carryall if one was available. After spending several days living in the carryall because of muddy roads, or getting stuck in creeks or sand, he resolved to get a four-wheel drive vehicle. With the help of Sam Ellison, then chairman of the Department, and a generous financial lift from Wallace Pratt, the Lab was able to purchase an orange Jeep truck. It was cab-over-engine hot, and rough riding, but it could go almost anywhere, and did. Eventually it wore out and with the cooperation of the Department and the Bureau of Economic Geology, we purchase a four-wheel drive Chevrolet pickup. After 97,000 miles, mostly in Trans-Pecos Texas, it was no longer trustworthy. Last spring, Jack Wilson, Ernie Lundelius, and Wann Langston each put up $500 seed money. Then Jack sent out an appeal to some of his friends on the Geology Foundation Advisory Council whom he hoped would be sympathetic to the Lab's needs. Within a month a third of the cost was contributed, and with another third contributed by the Department and the remainder by the College of Natural Sciences through Dean Boyer, a new vehicle has been purchased. Since the new vehicle did not arrive in time to be photographed for this *Newsletter*, there will be time to break it in and tell you about it next year.

Endowed Lectureship Program Promotes Exchange of Ideas

by William D. Carlson

One of the most exciting and valuable activities in the educational process is the face-to-face exchange of ideas and opinions among students, faculty, and recognized experts in various fields of the geosciences. This sort of communication is the central focus of the Department's Endowed Lectureship Program, which each year brings six to eight scientists on campus for periods up to a week long, to deliver lectures in their specialties and to engage in a variety of scientific and social interactions with members of UT's geoscience community.

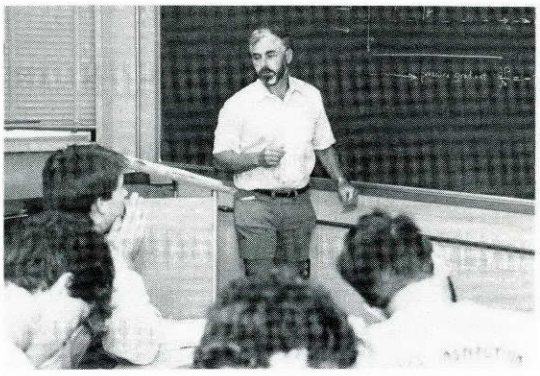
These visits, which are made possible by the generosity of donors to several endowed funds within the Geology Foundation, enrich the academic program immensely: they bring to our Department the expertise of top-level scientists recognized as leaders in their fields, while acquainting those individuals with the many and diverse strengths of the geosciences at UT. The Endowed Lectureship Program also endeavors to expand and amplify the Department's educational offerings by providing students and faculty with "short-courses" on topics of particular interest to various subdisciplines, often in fields that are not directly represented by the research interests of the present faculty.

In the academic year 1987-1988, the following geoscientists visited our campus under the auspices of the Geology Foundation's Endowed Lectureship Program:

Stanley N. Davis, Professor, University of Arizona
Fred L. and Frances J. Oliver Lecturer in Texas Hydrology and Water Resources
The Use of Isotopic Tracers in Hydrology

Thomas L. Davis, Geological Consultant, Los Angeles
Judd H. and Cynthia S. Oualline Centennial Lectureship in Petroleum Geology
Tectonic Syntheses from Stratigraphy and Structural Analysis

Mr. and Mrs. Don Boyd with Dr. Rufus LeBlanc, first Boyd Lecturer.



Dr. Clive Lister, Oualline Lecturer in Geological Sciences.

Christopher G. Kendall, Professor, University of South Carolina
Edwin Allday Lectureship in Geological Sciences
Sea Level and its Effects on Carbonates

Rufus LeBlanc, President, School of Clastic Sediments, Houston
Don R. and Patricia Kidd Boyd Centennial Lectureship
Clastic Depositional Facies and Systems

Clive R. B. Lister, Professor, University of Washington
Judd H. and Cynthia S. Oualline Centennial Lectureship in Geological Sciences
Interactions of Host Rocks and Water

Jay Namson, Arco Oil and Gas Co., Plano, Texas
Judd H. and Cynthia S. Oualline Centennial Lectureship in Petroleum Geology
Tectonic Syntheses from Stratigraphy and Structural Analysis

Kenneth Rose, Professor, Johns Hopkins University Medical School
Clara Jones Langston Centennial Lectureship in Vertebrate Paleontology
Patterns of Evolution in the Fossil Record

Thomas J. Wolery, Lawrence Livermore Laboratory, Berkeley, California
Judd H. and Cynthia S. Oualline Centennial Lectureship in Geological Sciences
Geochemical Modelling

Visiting Speakers
Academic Year 1987-88

Philip Bennett, Syracuse University, "The hydrogeology and geochemistry of a petroleum contaminated aquifer."

Donald Burt, Lunar and Planetary Space Institute/Seabrook, "Topaz Rhyolites - Extrusive pegmatites?"

William H.Casey, Sandia National Laboratories, "The surface chemistry of reacting feldspar."

David Eggler, Penn State University, "Tectonomagnetism of Wyoming Province subcontinental mantle lithosphere: What is old, cold mantle doing in the Rocky Mountains?"

Mateau Esteban, AAPG Distinguished Lecturer, "Mediterranean Miocene carbonates: Facies models and diagenesis."

Stephen Grand, University of Illinois, "Tomographic inversion for mantle shear structure beneath the North American plate."

Steve Hall, Department of Geography, "Fluvial geomorphology and climate change in the American southwest."

Hugh Hay-Roe, Consultant, Kingwood, Texas, "User-friendly scientific writing."

Ray Ingersoll, University of California/Los Angeles, "Actualistic sandstone petrofacies: Applications in paleotectonic reconstructions."

Jim Ingle, Stanford University, "The paleoceanographic, depositional, and tectonic history of the Gulf of California--the birth of an ocean."

Roy Kligfield, University of Colorado, "Tectonic thickening and thinning of continental crust."

Len Konikow, United States Geological Survey, "Predictive accuracy of groundwater models: Lessons from postaudits."

Dr. Kathy Sullivan, NASA Astronaut.

Don Lindsley, University of New York at Stony Brook, "The Laramie Anorthosite Complex, Wyoming: Some facts and speculations."

Larry Lines, Amoco Production Research, "Seismic Tomography."

Paul Mann, Institute for Geophysics, "Tectonic studies in the Caribbean."

Jim Mattinson, University of California/Santa Barbara, "Petrogenesis and evolution of the Salinian Magmatic Arc, western California."

James T. McCord, University of New Mexico, "Field-scale flow and transport in variably-saturated porous media."

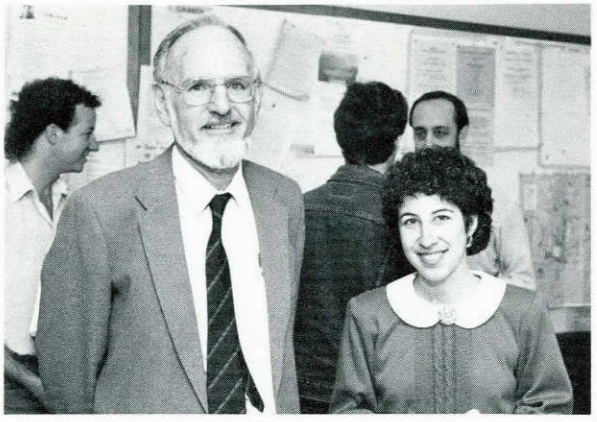
Clyde Moore, Louisiana State University, "The evolution of Upper Jurassic carbonate platforms in the Gulf rim."

Michael Novacek, American Museum of Natural History, "Mapping the Great Mammalian Radiation: Molecular and morphological evidence."

Eric Oelkers, University of California, "Hydrologic transport and the chemical interaction of fluids and minerals in sedimentary rocks."

Dave Pevear, Exxon Production and Research, "Clay minerals: Discovery and recovery of petroleum."

Victor Ramos, Cornell University, "Fault-thrust of the Padagonian Andes."



Dr. Stan Davis with Fall Technical Sessions Chairman Julianne Mahler.

Todd Rasmussen, University of Arizona, "Fluid flow and solute transports through networks of variably-saturated fractures."

Eric Rosencrantz, Institute for Geophysics, "Fact and fantasy in the Caribbean."

Stephen Rowland, University of Nevada, "Algal symbiosis in *Archaeocyatha*: the rise and fall of Lower Cambrian reefs."

Dave Rubin, United States Geological Survey, "Bedforms and cross-bedding in directionally varying flows: Field studies, experiments, and computer-graphics modeling."

Dave Scott, "Dynamical models of mid-ocean ridges."

Peter Shearer, Cambridge University, Axi-symmetric earth models and innercore anisotropy."

Carol Simpson, Johns Hopkins, "Ductile shear zones: Are fractures a necessary prerequisite?"

Philip Stark, University of California, "Geophysics on a foggy planet: strict bounds for Abel's problem and implications for core structure."

Ronald Stoessell, "Geochemical modeling of H_2S formation in sedimentary environments."

Kathy Sullivan, NASA, "Office with a view: A geologist aboard the Space Shuttle."

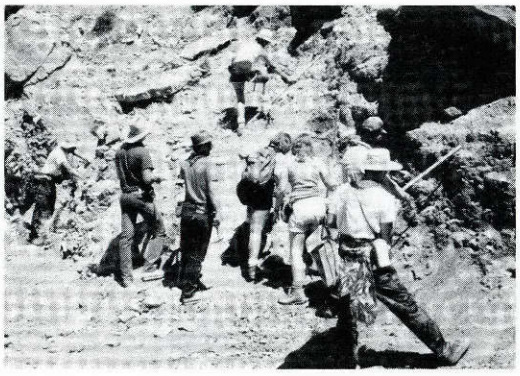
Ray Thomasson, A.A.P.G. Distinguished Lecturer, "Seismic prediction of porosity and hydrocarbon traps in carbonate rocks."

Roger G. Walker, McMaster University, "Views on intimate relationships between sedimentation and tectonics of Western Interior Seaway."

Bruce Watson, Rensselaer Polytechnic Institute, "Experimental constraints on distribution of fluids in the lithosphere."

Dr. Tom Wolery, Oualline Lecturer in Geological Sciences.

Field Camp



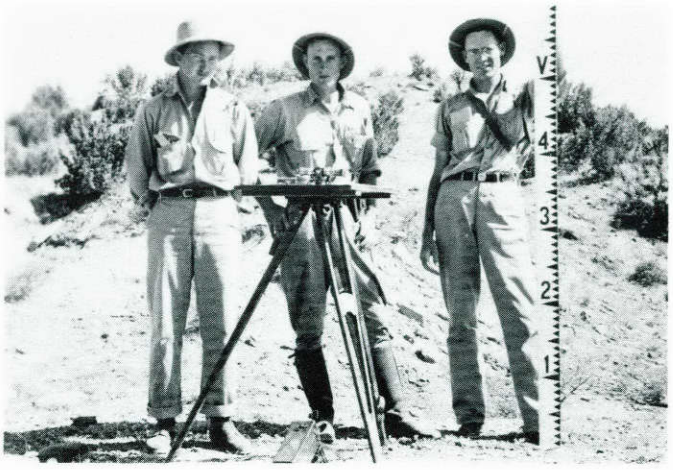
Geology 660 Field Camp - 1988

by Sharon Mosher

Students in field camp this summer spent six weeks learning to map and interpret geology in various parts of New Mexico and southern Colorado. The first part of the course emphasized section measuring and interpretation of depositional environments, whereas the second part of the course concentrated on mapping in sedimentary, igneous and metamorphic rocks and interpreting geologic structures. Earle McBride started the course off with a few days in Carlsbad examining the Permian reefs in the Guadalupe Mountains. He then took the camp to the Sacramento Mountains for a week to study carbonates and bioherms with Jim Sprinkle. Next the group moved on to Cuba, New Mexico, to look at San Juan Basin sediments along the Nacimiento Uplift. The students

Photo descriptions, this page:
Upper left: Geology 60 summer camp in Brady, led by Dr. Bullard and Dr. Cuyler. Field trip to Oklahoma, l-r: Spurgeon Conway, Wayne Ashmore, Drexel Johnson, Fred Wallis, Joe Champion, Carl Irwin, Gayle Crawford, Clint Kearney, Joe Fryou, H. C. Davis, unknown, unknown. Upper right: Ricky Nelson and Jim Ward show their skill on the dunes at White Sands National Monument. Center left: Geology 660 group studies outcrop near Alamagordo, New Mexico. Lower left: Fred Wallis, Wayne Ashmore and Spurgeon Conway jump into a creek to "save" a doe. All 1938 photos contributed by Joe Fryou (BS '40).

1938 and 1988



really seemed to enjoy their stay at an old hostel where they cooked all of their own food and mostly slept outdoors. Durango, Colorado, was the next stop where Mark Helper and Sprinkle taught them to map sediments and structure for a week. The camp then moved eastward for a few days to map an exhumed volcano near Del Norte, Colorado, with the additional help of Leon Long. Finally the group worked its way south looking at the northern segment of the Rio Grande rift, the Taos Plateau, and the Jemez caldera. For the last two weeks of the course, Helper and Sharon Mosher taught the students to map and analyze multiply-deformed, metamorphic rocks in the Precambrian of the Picuris Mountains. This year 26 students took field camp, up from the 21 of the year before. The smaller number of students again allowed more individual attention than in previous years. Also with the increase in travel, the students received a great overview of an interesting tectonic area in addition to learning field techniques.

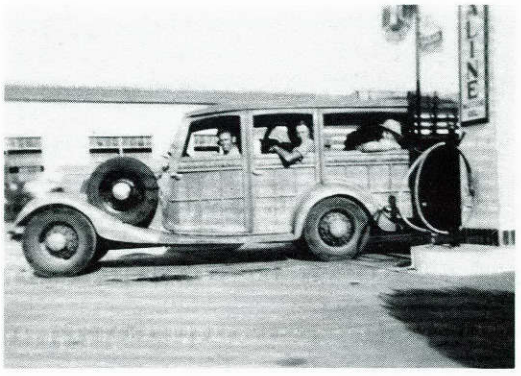


Photo descriptions, this page:
Upper left: Dr. Bullard dishing out hand-cranked ice cream. Upper right: 1938 fieldmapping crew, Joe Fryou, H. C. Davis, and Gayle Crawford. Center right: Wheels, 1938 style. Lower right: Most of the 1988 group pose by vehicle at White Sands National Monument. Behind vehicle, l-r: Rick Behal, Khib Kugler, Greg Lozano, Vincent Swadis. Front of vehicle, l-r: Cindy Fong, James Ward, Scott Staerker, Rachel Eustice (Teaching Assistant), Alicia Simpkins, Ricky Nelson, Rob Buehring, Tony Yates, Steve Fluke, Darrin Gathright, Larry Isgur. Front, on sand: Andy Hennessey. Photos of 1988 group by E. F. McBride.

Student Training Cruise Program

by E. William Behrens

During 1987-88 the student training cruise program took its first step outside of the Gulf of Mexico, and it was a big one. Nine students, Dr. Yosio Nakamura and I got to fly to Osaka, Japan and spend two weeks taking multichannel reflection and ocean bottom seismograph (OBS) refraction data on the Bonin Arc.

From 1982 through 1986 students have collected approximately 90 lines of multichannel data on nine previous cruises of from 5 to 10 days each. These data are being added to UTIG's data archives, have been partially processsed by various participating students, and are available for student thesis and dissertation research projects. They were all taken within the exploration frontier of the Texas and western Louisiana continental slope in the Gulf of Mexico. Student cruises have included some notable first accomplishments for UT such as: first academic data acquisition with the GUS 4200 - a 96 channel seismic system used by Gulf on the *Hollis Hedberg* and donated to us by Chevron, and the first simultaneous collection of OBS refraction and full-scale multichannel reflection data--an accomplishment repeated on the Bonin Arc cruise.

A variety of circumstances making the Bonin Arc cruise possible included the University's generous funding of the student cruise program, five NSF funded projects (three involving UTIG's Tom Shipley) which "positioned" the *Fred H. Moore* in Osaka at a convenient time, and a combination of misfortunes to one of those projects– a study of the Bonin Arc –which preceded the student cruise. Disappointing equipment failures and ill-timed typhoons prevented that project from acquiring half of the data it sought. So, UTIG's director Art Maxwell bestowed upon us about ten extra days of ship time and a show of confidence in assigning the student cruise to collect as much as possible of the missing Bonin Arc data.

The equipment gods were not much kinder to us than to others, but the weather gods rivaled those of the Gulf of Mexico in their past beneficence to student cruises, and we collected 8 lines of 96 channel data across the trench, inner trench slope, forearc basin and volcanic island arc. Although we saw no volcanic displays at the surface, the foreigness of the environmet was reinforced by volcanic rumblings covering one of the OBS data sets.

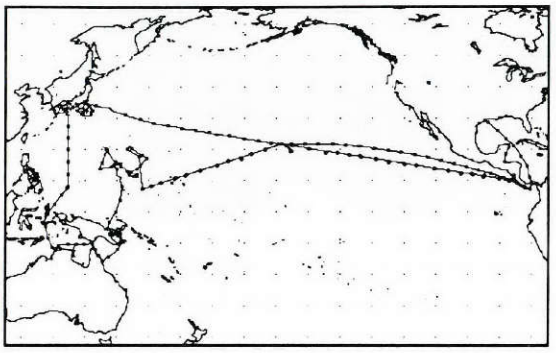
Student cruises are probably never forgotten by their participants, but the last nine students had a genuine experience of a lifetime.

Actually there were two student cruises last summer. The other was in the Gulf of Mexico on UT Marine Science Institute's *Longhorn*. This cruise was designed along the original (1972) concepts, that is, multidisciplinary (although strongly geological) with each student having a separate research project. The heretofore referred to beneficent Gulf of Mexico weather gods were in a depressed mood (affected by the economy?) and prevented almost all data collection. However, after the cruise impressed everyone with how hard it can be to collect marine data, our data archives and core collection provided materials for some good student projects in micropaleo, mineral provenance, and high resolution seismics.

Involving boats, and therefore many dollars, the student cruise program faces continuous uncertainty, but this past year has been a genuine high point and has provided stimulation to carry on the arduous efforts the program requires.

Institute for Geophysics

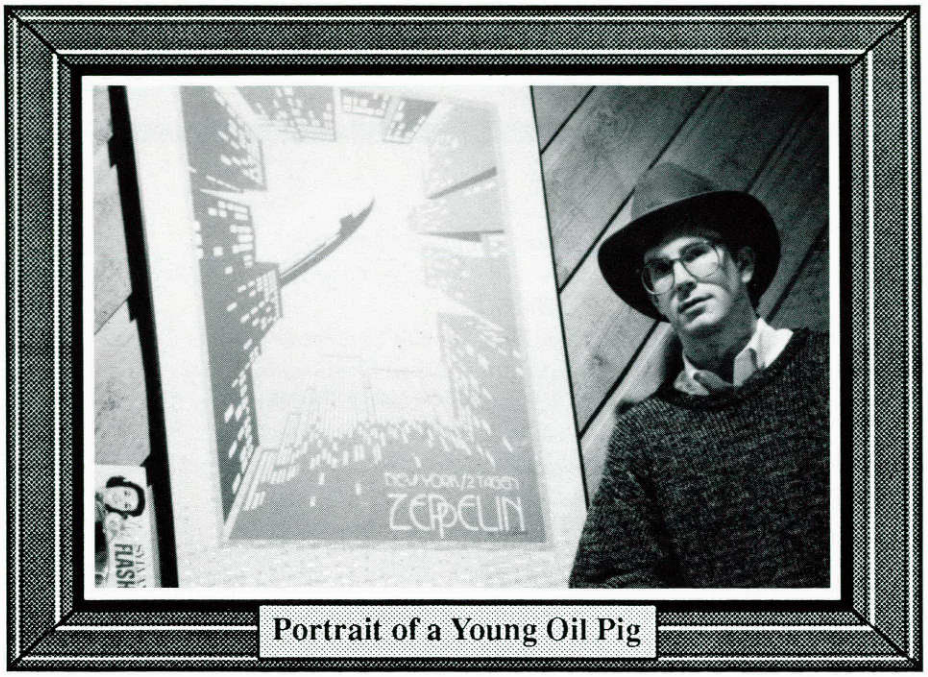
by Patricia Ganey-Curry



R/V Fred H. Moore 1987 Pacific Cruise

The R/V *Fred H. Moore*, a University of Texas oceanographic research ship, returned to her homeport of Galveston February 12 after an eleven-month research cruise in the Pacific. Since leaving Galveston last March, the ship has traveled over 37,000 n.m. and visited Panama, Costa Rica, Hawaii, Japan, Palau, Australia, Truk, Guam and Ponape. During the course of the voyage the ship conducted a series of research projects, collecting approximately 11,000 km of seismic data. Among the accomplishments of the voyage were a 3-D seismic survey conducted off Costa Rica and a two-ship seismic experiment conducted in cooperation with a Japanese research ship, the *Tansei Maru*. Both of these experiments were aimed at imaging the deep structure of complex areas of the earth's surface. The Costa Rica survey was the first of its kind to be carried out by an academic institution.

The *Fred H. Moore* is operated by the Institute for Geophysics of The University of Texas at Austin and is one of very few U.S. research ships capable of conducting sophisticated multichannel seismic reflection surveys. She was donated to The University by Mobil Oil Corporation in 1978. For the Pacific cruise, the ship was outfitted with a modern seismic reflection system donated by Chevron Geosciences. The cruise was sponsored by the National Science Foundation, an agency of the federal government, and the various research projects involved not only scientists from The University of Texas at Austin, but also colleagues from the University of Tulsa, the University of California at Santa Cruz, the University of Hawaii, the University of Rhode Island, and the University of Paris (France). The 165-ft vessel is now docked at her permanent berth at the Institute for Geophysics (formerly the Marine Science Institute) at 700 The Strand in Galveston.



Portrait of a Young Oil Pig

We asked one of last year's graduates to tell us about his first year in the world outside academia. . . .

by Bill Dingus, M.A.

Was it only a year ago that I received the magic letter from Exxon? A letter so magic that, upon viewing it, a banker was moved to buy me a car? Can it have been only a year, 12 months (one of which had but 29 days), that I left Austin for that fair, West Texas city of Midland and began a lifetime of blissful perf picking? Yes, it is as if time has wings when you are earning the Big Petro Wampum.

My memories of THE University (as it is faithfully referred to by the local alumni) have not dimmed since my departure but I have forgotten most of the negative aspects of life at UT. For instance, I have absolutely no recollection of that Dr. Folk fellow, I seem to be unable to remember how to spell Mule Burger, and I have forgotten the name of that paleontological professor who slept agape in Tech Sessions. But other memories still haunt me. Sometimes, after a hard day of depositing pay checks, I have horrible nightmares of a microwave oven with but a single power setting.

Austin is only a memory now. But that's alright because Midland is a far, far better place to live. For instance, how many times did I casually, slyly (and, I might add, with no untoward intentions) find myself admiring the particular gait of a young, nubile Austin female when another would happen by and distract me? This has not proven a problem in the fine city of Midland. Too, some people would have it believed that Midland is a less-than-beautiful megalopolis. This is not true! Megalopolises are by definition densely populated and, besides that, Midland is surrounded by many beautiful areas—they are just very far away. In addition, the people of Midland are very nice (although a few soreheads live in nearby Stanton) and there are no thesis requirements.

Of course the BEST thing about living in Midland (according to the old-timers) is that you *don't* live in Odessa. I disagree. I think the best thing about living in Midland is working for Exxon. I am constantly saying how great it to "run with the Tiger"—just ask any of my new appliances, they'll tell you.

The Exxon office in Midland is wonderfully relaxed and informal. I remember meeting my boss's boss's boss on my very first day at work. Everyone knows him simply as "Butch." Butch was wearing a light blue golf shirt and I remember thinking, "Bill, you just blew $752.88 on unnecessary suits. Dressing for success is going to be tricky here." I am currently experimenting with khaki.

And so I began what is, in my mind, the beginning of a long and fruitful rocketing to the top of the world's largest petro-conglomerate. Before too long I had become a regular chum to all of the fine, straight-A, shoot-from-the-hip, blue-chippers here in the office. I realized I had been fully accepted as a beloved member of the Exxon team the day I fainted during the annual blood drive and they made me a little badge that said, "I am a blood Woosy." These are some fine folk.

And the geology out here! It's beautiful! God should never have buried it under this sea of dirt. (But He, in his wisdom, saw the need for a trapping mechanism and so I shall not complain.) The most beautiful thing about the Permian Basin (and the reason so many people live out here) is that no matter where you drill you find oil—just like that! After all, I'm just a beginner and I've already drilled ten producers. It's easy! All you need is an eager engineer, an approved AFE or two, and a producing field in the process of being converted from 20 to 10 acre spacing. Just find a spot with enough room for a rig, spud, stir vigorously for several thousand feet and . . . Voilá! OIL!

(Editor's note: Safety first! The actions described here can be dangerous! The author is a trained professional and such activities should not be attempted without a certified Master's degree from an accredited institution such as The University of Texas, the greatest university in the free world.)

Yes, life is great. Certainly it is preferable to the alternative. And I salute the University of Texas for making all this possible. I do not think that any of my good friends from UT @ A are any better off than myself. I actually *do* like Midland (although I reserve the right to complain about it—for enjoyment purposes only) and I actually look forward to going to work . . . most of the time. I am a very lucky individual to be who and where I am today and I wish to thank everyone—professors, family, and friends—for helping me get here. I anxiously worried about the specter of getting my Master's degree and ended up having the time of my life. So I guess the gamble paid off—being a geologist is actually fun.

Student News

AAPG Student Chapter

UT's student chapter of the American Association of Petroleum Geologists hosted several guest speakers during the 1987-88 academic year. These lectures were presented:

"Getting into Graduate School," by Mark Cloos, Associate Professor, Department of Geological Sciences, UT Austin.

"Working as an Independent Petroleum Geologist," by James A. Gibbs, AAPG Visiting Petroleum Geologist, Dallas.

"Space Shuttle Earth Observation Photography," by William R. Muehlberger, Professor, Department of Geological Sciences, UT Austin.

"Porosity in Sandstone: Why is it Hard to Predict in the Subsurface?" by Earle F. McBride, Professor, Department of Geological Sciences, UT Austin.

"The Origin of Melanges in Subduction Zones," by Mark Cloos, Associate Professor, Department of Geological Sciences, UT Austin.

"Late Triassic-Jurassic Origin of the Gulf of Mexico," by Amos Salvador, Professor, Department of Geological Sciences, UT Austin.

"Initial Exploration in the Precambrian Mid-Continent Rift with Comparisons to the Modern East African Rift System," by Susan Landon, AAPG Visiting Petroleum Geologist, Amoco Production Company, Houston.

"Oil and Gas Exploration in a Frontier Province with Reference to the Montana Overthrust Belt," by Susan Landon, AAPG Visiting Petroleum Geologist, Amoco Production Company, Houston.

Two field trips were held during the fall semester. In October 13 students participated in a tour of the Lower Colorado River Authority lignite coal strip mine in Bastrop. Ten students in November went on a tour of Caverns of Sonora and camped out overnight at Enchanted Rock State Park.

The AAPG Chapter in conjunction with the University Student Geological Society held six Friday afternoon parties for students during the year.

Seven students worked in the AAPG General Store at the annual AAPG convention in Houston in March.

University Student Geological Society

The USGS jointly sponsored several student functions with the AAPG chapter of the Department. Sale of several guidebooks continues to be an ongoing project for the group. Guidebooks currently available:

Economic Geology of the Central Mineral Region of Texas ($3.00)

Geologic Excursion of Central Texas: the Llano Uplift through the Austin Cretaceous ($3.00)

Geologic Guidebook to the Permian Reef Complex of the Guadalupe Mountain Region ($3.00)

Guidebook to the Cretaceous and Tertiary Sediments of the Austin Area ($3.00)

Guidebook to the Geology of Travis County ($5.00)

Guidebooks are sold to the public by Donna Precht through the Department's Undergraduate Advising Office.

GSEC

The Graduate Student Executive Committee (GSEC) continued to accomplish great things this year. With much help from the faculty and staff, GSEC was able to initiate the purchase of a Nikon photomicroscope and a new slide copy stand for graduate student use, along with new bulletin boards for the graduate student lounge and surrounding hallways, on which recent student poster sessions and relevant graduate student announcements and information are posted.

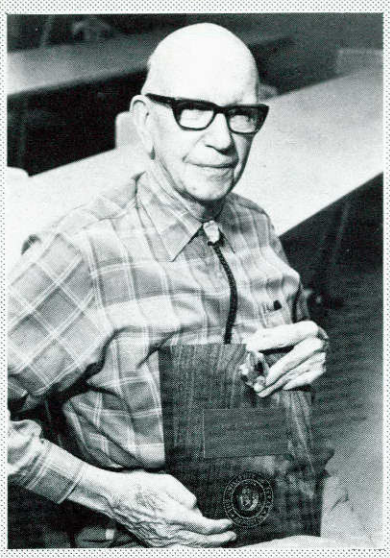
The hospitality and recruitment system was revitalized to provide prospective students a pleasurable and organized visit to this fine institution of higher learning. A new student orientation committee was formed, taking to task a possible restructuring of GEO 298T, the forming of a graduate student network to help answer ay questions about orientation, and the planing of a number of faculty/student get-togethers scheduled for the first few weeks of the semester. Two major, non-credit, low-cost field trips are tentatively scheduled for fall, 1988. The Thanksgiving trip is planning to visit the West Texas/Big Bend area, while a longer trip around Christmas will possibly tour southern New Mexico. These trips will be entirely student run, and participation is open to all interested graduate students and faculty. Depending upon the success of these initial field trips, we might be able to expand the trips to possibly include a tour of the Grand Canyon, rafting down the Colorado, and a trip to the Appalachians or the Adirondacks.

As always, GSEC planned and executed, no matter what the weather, a fall and spring picnic. We will continue in this capacity for all eternity. I think it comes with the job.

In the coming year, GSEC will continue to upgrade the quality of life in the Department, along with promoting peace and harmony within the graduate student population.

Cambria Denison, President

Graduate Students Honor Ray Woods



Ray Woods displays plaque given to him by graduate students.

Last April the Graduate Student Executive Committee and the Geology Foundation co-sponsored a special event recognizing Raymond D. Woods (BA '31, MA '34) for his support of graduate students with contributions to the Arno P. (Dutch) Wendler Professional Development Fund. Mr. Woods established the fund in memory of his good friend and business associate at Exxon shortly after Dr. Wendler's death in February, 1980. Dr. Wendler received his geological training at UT (BA '29, MA '32, PhD '34) and enjoyed a distinguished career as a geophysicist until his retirement from Exxon in 1970.

Mr. Woods recognized a critical need in the Department to help students defray expenses to participate in meetings of professional societies and associations. Such participation not only allows the students an opportunity to present research results to other geologists, but also brings prestige to the Department and the University. The first awards were granted in 1982 to six students. During the 1987-88 academic year awards were made to 26 students. Since its beginning, over 100 students have benefitted from the Wendler Fund.

Recognizing the importance of Mr. Woods' generosity in their career development, about 25 recent recipients of Wendler Professional Development awards gathered on April 25 at Fonda San Miguel Restaurant in Austin to show their appreciation. The students presented Mr. Woods with a plaque expressing their gratitude for his continuing generosity and particularly for his concern for graduate students. Both the students and Mr. Woods agreed it was such an enjoyable event it should be continued annually.

The Wendler Fund endowment now stands at $83,280. As the endowment has grown, so has the number of students whose research efforts merit presentation at professional meetings. Availability of earnings from the Wendler endowment is an assurance that students will have the opportunity for professional growth, thanks to the generosity of Mr. Woods and other contributors.

Research Assistants

1987-88 Academic Year

Departmental

Bill Agee
Gerardo Aguirre-Diaz
John E. Atkins
David N. Awwiller
Shou-tung Chiang
William B. Copeland
Timothy N. Diggs
Rachel A. Eustice
Mark B. Farr
Alan Fuqua
Guogui Gao
Mark B. Gordon
Karen G. Havholm
John W. Kuehne
James B. Lippert
Holly J. Lund
Lawrence E. Mack
Gwendolyn L. Macpherson
Deborah S. Pfeiffer
James Prikryl
Keith B. Sullivan
Michael L. Sweet
Leslie A. White
Sally D. Zellers

Bureau of Economic Geology

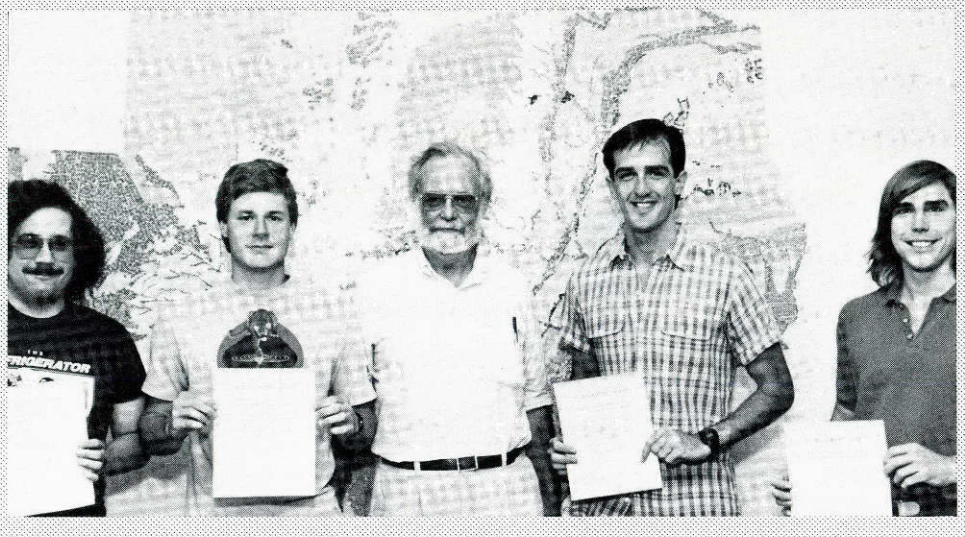
Mark Andreason
Arten Avakian
Nancy Banta
Robert Blodgett
Sabine Boardman
Harris Cander
Janet Coleman
Andrew Czebieniak
Timothy Diggs
Andrew Donnelly
Richard Erdlac
Mark Erwin
John Farrelly
Joseph Fiduk
William Fitchen
John Garber
Guoqiu Gao
Thomas Hoak
Timothy Jackson
Randall Larkin
Tung-Yi Lee
Holly Lund
Leo Lynch
James Miller
Paula Noble
Richard Sams
Robert Single
John Tenison
Sarah Zellers

Institute for Geophysics

Anthony E. Alvarez
Lila M. Beckley
Sean Boerner
Guillaume Cambois
Steven J. Cardimona
Donald G. Coltrin, Jr.
William D. Cunningham
Ruurdjan DeZotean
John A. Dunbar
J. Carl Fiduk
Lisa M. Gahagan
Walter P. Kessinger, III
Tung-Yi Lee
Catherine L. Mayes
Douglas A. McNaught
Seiichi Nagihara
Jerry S. Newman
Jurgen Peter Oberst
Paul Riherd
Sally Rothwell
Adriene Tackenberg
Robynn Tomlins
Kathleen A. Wall
Rebecca L. Wardlaw
Paul Weimer
Hugh Winkler
Warren T. Wood
George Zemlicka

1988 Petrography Contest

by Dan Barker



Petrography Award winners, l-r: Leo Lynch, Paul Carpenter, Dr. Daniel S. Barker, James Ward, and Steve Fluke.

The annual tests of petrographic skill (identification and interpretation of minerals and rocks in hand sample and thin section) drew seven undergraduate and thirteen graduate contestants on April 27th. Nine faculty members submitted a challenging array of samples, ranging from dolomite and petroleum-bearing sandstone through lawsonite eclogite and a topaz-bearing lava from Mongolia to a wind-sculpted desert cobble. Contestants were assigned code names to protect their anonymity, and the faculty member assigned from 0 to 10 points for each written answer to his or her sample. Scores for all samples are totalled to determine each competitor's standing; versatility (breadth of knowledge of sedimentary, igneous, and metamorphic rocks and mineral deposits) is therefore the key to winning. This year both contests resulted in ties for first place; Steve M. Fluke and James D. Ward shared the undergraduate award, and Paul S. Carpenter and F. Leo Lynch III divided the graduate.

Teaching Assistants

1987-88 Academic Year

Gerardo Aguirre-Diaz
Martin L. Albertin
John E. Atkins
David N. Awwiller
Gordon L. Bell
Peter E. Bittenbender
Sean T. Boerner
Lars E. Borg
Paul S. Carpenter
Celia A. Clowe
Becky J. Coel
Janet M. Coleman
Todd A. Council
Jeff P. Crabaugh
Peter M. Cronan
William Cunningham
Kimberley A. D'Arcy
Linda J. Davis
Cambria Denison
Ruurdjan deZoeten
John A. Dunbar
Stephen I. Dworkin
Richard G. Elkins
Rachel A. Eustice
William M. Fitchen
Guogiu Gao
Steven J. Germiat
Gretchen M. Gillis
Jennifer L. Glasford
Michael S. Hall
Peter H. Hennings
Keith A. Klepeis
Randall G. Larkin
Mark W. Longtine
Francis L. Lynch
Julianne P. Mahler
Michael O. Maler
Janet E. Manchester
Carla M. Matherne
Matt L. McCullough
Steven K. Miller
Paul J. Noble
Jeffrey G. Pittman
Rodulfo Prieto
Jerry C. Ray
Robert C. Roback
Anthony C. Runkel
Will M. Satterfield
Elizabeth T. Schwarze
Benjamin J. Sloan
Christopher Small
Peter R. Tauvers
Richard S. Toomey
Paulo Vasconcelos
Thomas A. Williams
George Zemlicka

Student Speakers

Technical Sessions

Fall 1987

Gerardo Aguirre-Diaz, "Eocene and younger volcanism on the eastern flank of the Sierra Madre Occidental, Nazas, Durango, Mexico."

William B. Copeland, "Structure and Petrology of coherent schists of the Eastern Belt, Franciscan Complex, Northern California."

George Coltrin, "The effects of a rough surface at the top of the accretionary prism on convergent margin seismic reflection data."

Timothy N. Diggs, "Reinterpretation of the origin of microfaults in the Tesnus Formation, Marathon Basin, Trans-Pecos, Texas."

Mark R. Farr, "Geochemistry of late dolomite cement in the Upper Cambrian Bonneterre Formation, Missouri: Implications for brine source."

Barbara A. Gaskell, "Paleoecology of the Eocene Wheelock Member of the Cook Mountain Formation."

John L. Gholston, "Genetic stratigraphy and oil recovery in a Permian submarine fan: Spraberry Formation, Midland Basin, west Texas."

Paulo Guimaraes, "Basin analysis and structural development of the Sergipe-Alagoas Basin, Brazil."

Thomas B. Layman, "Paleoenvironmental significance of benthic foraminiferal biofacies of the Yegua Formation, southeast Texas."

Catherine L. Mayes, "Reconstructions of the South Pacific using GEOSAT geoid data."

Jerry A. McNeish, "Indirect evaluation of hydrogeologic spatial correlation length: A method for quantifying hydraulic conductivity variance reduction using hydrogeologic tests."

Hardie S. Nance, "Structure and depositional facies relationships along the Matador Arch, Guadalupian Series, Texas Panhandle."

Daniel J. Neuberger, "Swastika (Upper Pennsylvanian) shelf-margin deltas and delta-fed turbidites, Flowers 'Canyon Sand' Field, Stonewall County, Texas."

Jerry S. Newman, "ODP drilling site surveys on the Ninety East Ridge."

Richard E. Paige, "The morphology, depositional setting, and evolution of the Lavaca Submarine Canyon Complex, Lavaca County, Texas."

Matthew J. Parsley, "Depositional facies, porosity distribution, and dolomitization of the Middle and Upper Tansill Formation (Permian) Back Reef, Dark Canyon, Guadalupe Mountains, New Mexico."

Rodulfo Prieto, "Seismic stratigraphy and depositional systems of the Orinoco Platform, eastern Venezuela."

Shawn A. Reynolds, "Depositional development and fluvial architecture of the Narrabeen Group, Illawarra District, Sydney Basin, Australia."

Paul S. Riherd, "Seismic analysis of proposed nuclear waste repositories."

Sally A. Rothwell, "Continent-vergent shearing resulting from marginal basin collapse, southernmost Andes."

James L. Simmons, "Travel time inversion for a near surface velocity model."

Spring 1988

Gianni O. Chieruzzi, "Geochemical modeling of the supergene enrichment of porphyry copper deposits."

Ruurdjan deZoeten, "Stratigraphic and tectonic analysis of Eocene to Miocene basinal clastics."

Andrew C. Donnelly, "Meteoric water penetration in the Frio Formation, Texas Gulf coast."

John A. Dunbar, "Kinematics and dynamics of continental extension during rifting."

Richard J. Erdlac, "Structural analysis of the Terlingua uplift, Brewster and Presidio counties, Texas."

Steve Germiat, "Risk analysis for inundation along the northern Texas Gulf coast."

Gretchen M. Gillis, "Deformation and metamorphism of the Middle Proterozoic Coal Creek Serpentinite, Gillespie County, Texas."

Michael S. Hall, "Structure and stratigraphy of the Picuris Range, New Mexico."

Christoph Heubeck, "Geology of the southeastern termination of the Cordillera Central, Dominican Republic, Greater Antilles."

Julianne P. Mahler, "Late-stage wrenching of the Western Narragansett Basin, Rhode Island."

James K. Miller, "Multistage dolomitization of the Portoro Limestone, Liguria, Italy."

Jerry S. Newman, "Geophysical data collection at sea."

Deborah S. Pfeiffer, "Temperature variations and their relation to groundwater flow, south Texas, Gulf Coast Basin."

Rafael Ramirez, "Tectonic and sedimentary history of the Tertiary of the Middle Magdalena Basin, Colombia."

Anthony C. Runkel, "Stratigraphy, sedimentology, and Paleontology of Eocene and Early Oligocene rocks in the Big Bend region, Texas."

Will M. Satterfield, "A cyclic component of intraslope basin evolution, Northwest Gulf of Mexico."

Jeffrey A. Sauve, "A 3-D near surface velocity model and diving wave tomography, Erawan Field, Gulf of Thailand.

Keith B. Sullivan, "Sandstone and shale diagenesis of the Frio Formation (Oligocene), Texas Gulf coast: A close look at sandstone/shale contacts."

Deborah S. Travis, "Chronostratigraphy, rates of deposition and shelf margin progradation, and structural dynamics within the Cenozoic sedimentary prism, northwest Gulf of Mexico."

Philip M. Weatherill, "A seismic stratigraphic investigation of the Stord Basin, northern North Sea."

Paul C. Weimer, "Sequence stratigraphy and depositional history of the Mississippi deep-sea fan, northeastern Gulf of Mexico."

Best Speaker Awards

Each semester the graduate students vote to select the Best Technical Sessions Speaker. Names of those selected are engraved on a plaque in the graduate student lounge. Best Speaker for Fall 1987 was Sally Rothwell and for Spring 1988 was John Dunbar.

Undergraduate Scholarships

1987-88

Bloomer Fund for Motivated Students

Scott D. Fletcher	Spring 1988
Hillary Tulley	Spring 1988

Chevron Scholarships

Daryl Chicken	Fall 1987
Carlos Estrada	Fall 1987

W. Kenley Clark Endowed Presidential Scholarships

Jake Kons	1987-88
Michael Starcher	1987-88

Conoco Scholarships

Judy Cavazos	Fall 1987
John Granado	Fall 1987
Leroy Hernandez	Spring 1988
Larry Isgur	Summer 1988
Laszlo Keszthelyi	Summer 1988
Eloy Valdez	Fall 1987

Robert H. Cuyler Endowed Presidential Scholarship

Carlotta Chernoff	1987-88

Enserch Scholarships

Robert Buehring	Fall 1987
Christopher Haas	Fall 1987
Wendall Honeycutt	Fall 1987
Paul Richard	Fall 1987

Exxon Education Foundation Scholarships

Anthony Alvarez	Spring 1988
James Lozano	1987-88

Guy E. Green Endowed Presidential Scholarship

Mark Shield	1987-88

Marathon Oil Company Scholarships

Robert Buehring	Spring 1988
Christopher Haas	Spring 1988
Dan Ryder	Spring 1988
Margaret Townsley	Spring 1988

J. H. & Lujza P. McCammon Scholarships

Ginger Braswell	Fall 1987
David Lloyd	Fall 1987

Carroll C. Miller Endowed Presidential Scholarship

William Darrin Gathright	1987-88

Mobil Foundation, Inc. Scholarships

Namho Baag	1987-88
Steven Chang	Fall 1987
Cindy Fong	Spring 1988
John Granado	Spring 1988
Robert Salinas	1987-88

Pennzoil Scholarships

Aimee Beveridge	Fall 1987
Lauren Browning	Fall 1987
Reneé Daulong	Fall 1987
David Evans	Fall 1987
Charles Hewitt	Fall 1987

Louis and Elizabeth Scherck Geology Scholarships

Douglas Bowling	Spring 1988
Robert Buehring	Summer 1988
David Evans	Spring 1988
Victoria King	Summer 1988
David Lloyd	Spring 1988
Tim Parks	Spring 1988
Cheryl Richard	Fall 1987
Margaret Townsley	Spring 1988
James Ward	Spring 1988
Paul Warren	Fall 1987
Amber Williams	1987-88

F. W. Simonds Endowed Presidential Scholarship

Charlotte S. Bryant	1987-88

Sohio Petroleum Scholarships

Lila Beckley	Spring 1988
Daryl Chicken	Spring 1988
Reneé Daulong	Spring 1988
Carlos Estrada	Spring 1988
Charles Hewitt	Spring 1988
Laszlo Keszthelyi	Spring 1988
Suzanne Mechler	Spring 1988
Cheri Teisberg	Spring 1988

Sun Oil Scholarships

Lila Beckley	Fall 1987
Lauren Browning	Spring 1988
Judy Cavazos	Spring 1988
John Hudson	Spring 1988
Suzanne Mechler	Fall 1987
Cheryl Richard	Spring 1988

Udden Memorial Scholarships

Steven Fluke	Summer 1988
Jack Jones	Summer 1988
Bruce Wik	Fall 1987
James Ward	Fall 1987

F. L. Whitney Endowed Presidential Scholarships

Larry Isgur	1987-88
Robynn Tomlins	1987-88

Charles E. Yager Undergraduate Field Scholarships

Richard Behal	Summer 1988
Sigrid Clift	Summer 1988
David Evans	Summer 1988
Darrin Gathright	Summer 1988
Alana Haveman	Summer 1988
Andy Hennessey	Summer 1988
Khib Kugler	Summer 1988
April Lloyd	Summer 1988
Kevin McKinney	Summer 1988
Ricky Nelson	Summer 1988
Mark Shield	Summer 1988
Alicia Simpkins	Summer 1988
Michael Starcher	Summer 1988
Thomas Staerker	Summer 1988
Theresa Theisen	Summer 1988
James Ward	Summer 1988
Michael Whittaker	Summer 1988
Bruce Wik	Summer 1988
Anthony Yates	Summer 1988

Graduate Scholarships and Fellowships

1987-88

Amoco Foundation Scholarships

Steve Cardimona	1987-88

Atlantic Richfield Company Scholarships

Michael Cervantes	Spring 1987

Arco Designated Scholarship

Michael Rosen	Spring 1988

L. T. Barrow Chair Grant

Richard H. Sams	1987-88

Bloomer Fund for Motiviated Students

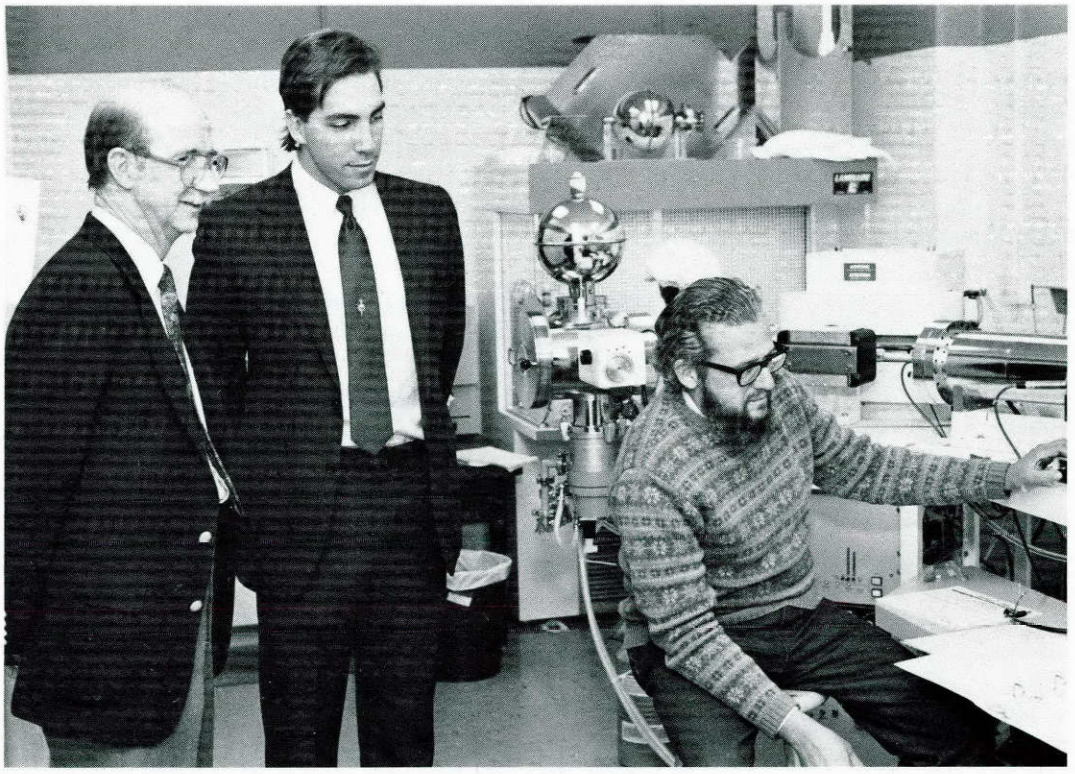
Bruce Turbeville	Fall 1987

Wayne F. Bowman Scholarships

Karen Carter	1987-88
Brian Reck	1987-88

Fred M. Bullard Professorship Grant

Lars Borg	Summer 1987
Bruce Turbeville	1987-88



Dr. John Wood (PhD '65) of Texaco, Inc., tours clean lab with Harris Cander (center), Texaco Fellow for 1987-88, and Dr. Lynton Land.

Dave P. Carlton Professorship in Geology Grants
Paula Noble — Spring 1988

Dorothy Ogden Carsey Memorial Scholarships
Michael Cervantes — 1987-88
J. C. Ray — Spring 1988

Chevron Scholarship
Anthony Runkel — 1987-88

Conoco Scholarship
Karen Havholm — Fall 1987

Ronald K. DeFord Field Scholarships
Peter Bittenbender — Spring 1988
Sabine Boardman — Spring 1988
Lars Borg — Spring 1988
Paul Carpenter — Spring 1988
Janet Coleman — Spring 1988
Todd Council — Fall 1987
Linda Davis — Spring 1988
Richard Erdlac — Fall 1987
William Fitchen — Spring 1988
Gretchen Gillis — Summer 1987
Peter Hennings — Spring 1988
Thomas Hoak — Spring 198
Ronald Johns — Spring 1988
Mark Longtine — Spring 1988
Robert Roback — Spring 1988
Mary Amy Sheldon — Spring 1988
Robert Single — Spring 1988
Richard Toomey — Spring 1988
Bruce Turbeville — Spring 1988
Leslie White — Spring 1988
Sally Zellers — Fall 1987

Michael B. Duchin Memorial Endowed Presidential Scholarship
Deborah Travis — 1987-88

Earth Resources Foundation Grant
Jennifer Glasford — Fall 1987
Shawn Reynolds — Fall 1987

John E. "Brick" Elliott Academic Activities Fund
Jeff Crabaugh — Fall 1987
Janet Coleman — Fall 1987
Jennifer Glasford — Spring 1988
Richard Paige — Fall 1987
Deborah Travis — Spring 1988

Exxon Education Foundation Scholarships
Becky Coel — Spring 1988
Julianne Mahler — Fall 1987
James Miller — Fall 1987

William Stamps Farish Chair Grant
Mark Gordon — Spring 1988
Peter Tauvers — Spring 1988

Geology Foundation Advisory Council Teaching Fellowship Grant
Paulo Vasconcelos — Fall 1987

Getty Oil Company Centennial Chair Grant
Cambria Denison — Summer 1988
Elizabeth Schwarze — Summer 1988

Hogg-Cullinan Scholarships
Jonathan Blount — Fall 1987

Hogg-Sharp Scholarships
Michael Lamar — Fall 1987
Michael Maler — Fall 1987

John A. and Katherine G. Jackson Centennial Teaching Fellowship Grant
Robert Roback — Spring 1988

Wann and Marietta Langston Research Fund in Vertebrate Paleontology
James Westgate — Fall 1987

Howard R. Lowe Vertebrate Paleontology Scholarships
Tony Runkel — Fall 1987
Mary Amy Sheldon — Fall 1987

J. Hoover Mackin Memorial Scholarship
Jeff Pittman — Spring 1988
Michael Rosen — Fall 1987

Marathon Oil Foundation Scholarship
Paul Weimer — Spring 1988

Mobil Foundation Designated Scholarship
Julie Kupecz — 1987-88

Ed Owen-George Coates Fund Grant
Robert Blodgett — Fall 1987
David Bristol — Fall 1987
Tim Diggs — Spring 1988

Bill R. Payne Centennial Teaching Fellowship Grant
Gordon Bell — Fall 1987

Joyce Bowman Payne Centennial Teaching Fellowship Grant
Jonathan Blount — Spring 1988
Peter Tauvers — Fall 1987

Phillips Petroleum Company Fellowship
Steve Dworkin — 1987-88
Wendy Macpherson — 1987-88

Scholarships, Various Donors

Robert Roback	Fall 1987

Shell Oil Foundation Fellowships

Jonathan Blount	Spring 1988
Bruce Turbeville	Spring 1988

Sohio Petroleum Fellowships

William Cunningham	Spring 1988
Michael Rosen	Spring 1988

William T. Stokes Centennial Teaching Fellowship Grant

Karen Carter	Spring 1988
William Copeland	Spring 1988
Jeff Corrigan	Spring 1988
Tom Hoak	Spring 1988
Leslie White	Spring 1988

H. Tod Sutherland Memorial Scholarship

Christoph Heubeck	Summer 1988

Tenneco Designated Scholarship

Dan Neuberger	Fall 1987

Texaco Fellowship

Harris Cander	1987-88

Texas Oil and Gas Corp. Leadership Award

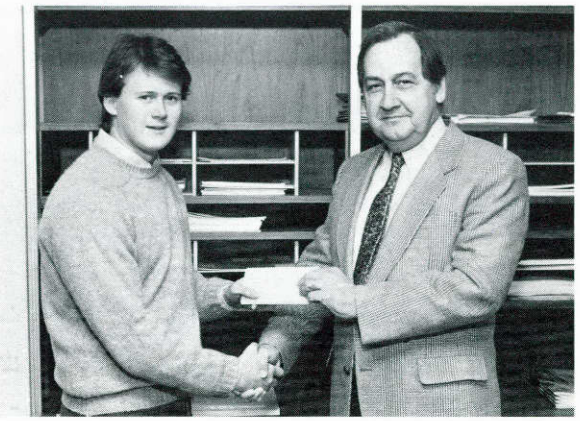
Bill Agee	1987-88

Arno P. (Dutch) Wendler Professional Development Awards

Gerardo Aguirre-Diaz	Fall 1987
Robert Blodgett	Fall 1987
Karen Carter	Fall 1987
Bill Copeland	Spring 1988
Rudi deZoeten	Spring 1988
John Dunbar	Fall 1987
Mark Farr	1987-88
Gretchen Gillis	Spring 1988
Mike Hall	Spring 1988
Christoph Heubeck	1987-88
Mark Gordon	Fall 1987
Julianne Mahler	Spring 1988
Paula Noble	Spring 1988
Jeff Pittman	Fall 1987
Robert Roback	Spring 1988
Michael Rosen	Spring 1988
Sally Rothwell	Fall 1987
Anthony Runkel	Fall 1987
Will Satterfield	Spring 1988
Mary Amy Sheldon	Fall 1987
Michael Sweet	Fall 1987
Richard Toomey	Fall 1987
Bruce Turbeville	Fall 1987
Paulo Vasconcelos	Fall 1987
Paul Weimer	Spring 1988
James Westgate	Fall 1987

Second Mr. and Mrs. Charles E. Yager Professorship Grant

David Awwiler	Fall 1987
Richard G. Elkins	Summer 1988



Michael Starcher receives Houston Geological Society Scholarship check from Chairman Bill Fisher.

Minority Students: Recruitment and Retention

by Earle F. McBride, Minority Liaison Officer

The Department has, for several years, tried to provide academic incentives and financial support that would serve to recruit and retain qualified minority students in both our undergraduate and graduate programs. Minority student majors in the spring semester of 1988 include:

Undergraduates	*Graduates*
3 blacks	2 hispanics (1% of graduate students)
11 hispanics	
7 orientals	
21 = 13% of undergraduates	

Our greatest success has been in providing financial support for minority students who have demonstrated significant academic skills for one or more semesters. Eight undergraduate students received scholarships from the Department in the fall of 1987 and seven received scholarships from the Department in the spring of 1988. Scholarships ranged from $500 to $1200. All these funds were from industrial sources. The Department awarded one graduate student minority fellowship for the academic year from a combination of sources.

If you know of minority students interested in the geological sciences, please ask them to contact either the Undergraduate Advisor, Graduate Advisor, or Minority Liason Officer in the Department. We will be pleased to follow up on all leads.

UNDERGRADUATE DEGREES

Department of Geological Sciences

1987-88 Academic Year

Undergraduate Enrollment (Fall, 1987)
Total Department Majors: 155
Geophysics Majors: 28 (18%)
Male: 113 (73%)
Female: 42 (27%)
Minority Enrollment: 8 males, 2 females (6.5% total enrollment)

Undergraduate Majors by Class (Fall, 1987)

Seniors	103
Juniors	24
Sophomores	16
Freshmen	12

Majors with GPA of 3.0 or better - 35
Majors with GPA of 3.5 or better - 11
Total BA degrees awarded - 11
Total BS degrees awarded - 29

Bachelor of Arts, August 1987 (6)

David S. Hoskins
Laurie L. Jones
Todd A. Mason
Christopher C. Osburn
Scott P. Snell
Thomas A. Tremblay

Bachelor of Science, August 1987 (7)

Charles S. Beach
Ellis S. Belfer
Marie D. Durbin
Kevin L. Frenzel
Laurel J. Lacher
Mark D. Weatherill
James K. Winn

Bachelor of Arts, December 1987 (3)

Denise E. Hanna
Sharon E. Hinds
Robert R. Tarver

Bachelor of Science, December 1987 (9)

Linda R. Balcom
Aimee E. Beveridge
Ginger A. Braswell
Steven D. Chang
Wendall B. Honeycutt
Leah E. Kelley
Rodrick D. Myers
Paul E. Neumann
Paul K. Richard

Bachelor of Arts, May 1988 (2)

Bo B. Dao
Andrew W. Sowell

Bachelor of Science, May 1988 (13)

Gregory L. Barta
Jack M. Brannon
Daryl S. Chicken
Marcia L. Henize
Charles D. Hewitt
Robert T. Parks
Dirkjan Plas
Martin Stupel
Adrienne H. Tackenberg
Robynn L. Tomlins
Margaret K. Townsley
Kathleen A. Wall
Paul Q. Warren

GRADUATE DEGREES

Conferred by

THE UNIVERSITY OF TEXAS AT AUSTIN

1987-88

Master of Arts, August 1987 (7)

Bristol, David A.
Sc.B., Geology, 1983, Brown University
Structural Evolution and Metamorphism of Mid-Proterozoic Basement in the Northwest Van Horn Mountains, Trans-Pecos, Texas
Supervisor: Sharon Mosher
Committee Members: William D. Carlson, William R. Muehlberger

Conover, William V.
A.B., Geology, 1984, Occidental College
Depositional Systems and Genetic Stratigraphy of the Lower Miocene *Planulina* Trend in South Central Louisiana
Supervisor: William E. Galloway
Committee Members: William Behrens, Martin B. Lagoe

Dobbs, Steven L.
B.A., Physics, 1984, Gustavus Adolphus College
Linearized Inversion of Plane-wave Seismograms
Supervisor: Clark Wilson
Committee Members: Milo M. Backus, Arthur Weglein

Gutierrez, Gay Nell
B.S., Geology, 1981, University of Texas at Austin
Controls on Ore Deposition in the Lamotte Sandstone, Goose Creek Mine, Indian Creek Subdistrict, Southeast Missouri
Supervisor: J. Richard Kyle
Committee Members: Lynton S. Land, Earle F. McBride

Huston, Daniel C.
B.S., Geology, 1980, University of Hawaii at Manoa
Interpretation of Seismic Signal and Noise through Line Intersection Nis-tie Analysis
Supervisor: Milo M. Backus
Committee Members: James Austin, Clark Wilson

Wiggin, Roger C.
B.A., Geology, 1980, Colgate University
Depositional Environments of the Cambrian Ignacio For mation and the Devonian Pre-Elbert Conglomerate, San Juan Mountains, Southwestern Colorado
Supervisor: James Sprinkle
Committee Members: Gary Kocurek, Sharon Mosher

Witebsky, Susan N.
B.S., Geology, 1981, University of California/Santa Cruz

Paleontology and Sedimentology of the Haymond Boulder Beds (Martin Ranch), Marathon Basin, Trans-Pecos Texas
Supervisor: William R. Muehlberger
Committee Members: Earle F. McBride, James Sprinkle

Doctor of Philosophy, August 1987 (2)

Miser, Donald E.
B.S., Geology, 1976, Indiana University at Ft. Wayne
M.S., Geology, 1978, California Institute of Technology
Microstructures in Natural and Synthetic Dolomite
Supervisor: William D. Carlson and Lynton S. Land
Committee Members: Robert L. Folk, Doug Smith, Hugo Steinfink

Schatzinger, Richard A.
B.S., Geology, 1971, San Diego State University
M.S., Geology, 1975, San Diego State University
Depositional Environments and Diagenesis of the Eastern Portion of the Horseshoe Atoll, West Texas
Supervisor: Robert L. Folk and Don G. Bebout
Committee Members: L.F. Brown, Myron H. Dorfman, Alastair M. Reid

Master of Arts, December 1987 (17)

Coley, Katharine L.
B.S., Geology, 1979, The University of Texas at Austin
Structural Evolution of the Warwick Hills, Marathon Basin, West Texas.
Supervisor: William R. Muehlberger
Committee Members: Earle F. McBride, Sharon Mosher

Coltrin, Donald G.
B.S., Geology, 1985, Cornell University
Seismic Reflection Imaging Problems Resulting from a Rough Surface at the Top of the Accretionary Prism at Convergent Margins.
Supervisor: Milo M. Backus
Committee Members: Mark Cloos, Thomas Shipley

Dingus, William F.
B.A., Geology, 1981, Rice University
Morphology, Depositional Setting, and Origin of the Middle Wilcox Yoakum Canyon, Texas Coastal Plain.
Supervisor: William E. Galloway
Committee Members: Amos Salvador, John G. Sclater

Farrelly, John J.
B.S. Geology, 1984, The University of Texas at Austin
Depositional Setting and Evolution of the Pliocene-Basal Pleistocene Section of Southeast Trinidad, West Indies.
Supervisor: Amos Salvador
Committee Members: Leonard F. Brown, William E. Galloway

Johns, Ronald A.
B.S., Geology, 1984, Purdue University
Biostratigraphy, Paleobiology, and Taxonomy of Articulate Brachiopods from the Middle Ordovician Bromide Formation, Southern Oklahoma.
Supervisor: James Sprinkle
Committee Members: Martin B. Lagoe, Keith Young

Kautz, Steven A.
B.S., Geology, 1983, Michigan State University
The Importance of Cryptic Extension in Scale Models of Normal Faulting.
Supervisor: John G. Sclater
Committee Members: Ian W. Dalziel, Dale S. Sawyer

Laguros, George A.
B.S., Geology, 1985, The University of Oklahoma
Seismic-Stratigraphic Analysis of Sedimentation Processes in Pelagic Carbonate Sequences of the Equatorial Pacific: Deep Sea Drilling Project Site 574.
Supervisor: Clark R. Wilson
Committee Members: Thomas A. Davies, Thomas H. Shipley

Layman, Thomas B.
B.S., Agronomy, 1979, Pennsylvania State University
Paleoenvironmental Significance of Banthic Foraminiferal Biofacies in the Yegua Formation (Middle Eocene), Southeast Texas.
Supervisor: Martin B. Lagoe
Committee Members: William E. Galloway, Amos Salvador

Lee, Tung-Yi
B.S., Geology, 1982, National Taiwan University
Seismic Stratigraphy and Tectonic Evolution of Tungyintao Basin, Offshore Northern Taiwan.
Supervisor: Leonard F. Brown
Committee Members: Mark Cloos, William E. Galloway

McNeish, Jerry A.
B.A., Geology, 1979, Carleton College
Indirect Evaluation of Hydrogeologic Spatial Correlation Length: An Approach to Quantification of Hydraulic Conductivity Variance Reduction Using Synthetic Hydraulic Tests.
Supervisor: John M. Sharp
Committee Members: Robert Andrews, Larry Lake

Mitchell, J. Todd
B.A., Geology, 1981, The Colorado College
Submarine Lithification of a Holocene Reef Hardground: Discovery Bay, Jamaica

Supervisor: Lynton S. Land
Committee Members: Robert L. Folk, John K. Warrren

Neuberger, Daniel J.
B.S., Geology, 1983, Yale University
Swastika (Upper Pennsylvanian) Shelf-Margin Deltas and Delta-Fed Turbidites, Flowers "Canyon Sand Field" Area.
Supervisor: Leonard F. Brown
Committee Members: William E. Galloway, Noel Tyler

Newman, Jerry S.
B.S., Geology, 1977, College of Mining, Ostrava, Czecho slovakia
Site Surveys of the Central and Southern Ninetyeast Ridge for the Ocean Drilling Program, Leg 21.
Supervisor: John G. Sclater
Committee Members: Martin B. Lagoe, David Sandwell

Ramage, Joseph R.
B.S., Geology, 1983, Arizona State University
Lithofacies, Regional Stratigraphy, and Depositional Systems of the Clear Fork Group (Permian), Palo Duro Basin, Texas Panhandle.
Supervisor: John K. Warren
Committee Members: Don Bebout, Gary Kocurek

Rothwell, Sally A.
B.A., Geology, 1984, Colgate University
Continent-Vergent Shearing Resulting from Marginal Basin Collapse, Southernmost Andes.
Supervisor: Ian W. Dalziel
Committee Members: Sharon Mosher, Nick Walker

Simmons, James L.
B.S., Geology, 1983, The University of Texas at Austin
Traveltime Inversion for a 3-D Near Surface Velocity Model.
Supervisor: Milo M. Backus
Committee Members: Charles Denham, Clark R. Wilson

Vasconcelos, Paulo M.
B.S., Geology, 1983, The University of Kansas
Gold Geochemistry in a Semiarid Weathering Environment: A Case Study of the Fazenda Brasileiro Deposit, Bahia, Brazil.
Supervisor: J. Richard Kyle
Committee Members: Lynton S. Land, John M. Sharp

Doctor of Philosophy, December 1987 (3)

Blanchard, Paul E.
B.S., Geology, 1979, Michigan State University
Fluid Flow in Compacting Sedimentary Basins.
Supervisor: John M. Sharp
Committee Members: Randall J. Charbeneau, Jeffrey S. Hanor, Charles W. Kreitler, Lynton S. Land

Corso, William
B.S., Geology, 1979, Adelphi University
M.S., Geology, 1983, University of Miami
Development of the Early Cretaceous Northwest Florida Carbonate Platform.
Supervisor: Richard T. Buffler
Committee Members: James Austin, Don Bebout, Wolfgang Schlager, Amos Salvador, Paul L. Stoffa

Prieto, Rodulfo, C.
B.S., Geophysics, 1980, Pennsylvania State University
Seismic Stratigraphy and Depositional Systems of the Orinoco Platform Area, Northeastern Venezuela.
Supervisor: William L. Fisher
Committee Members: Leonard F. Brown, Freddy Chiquito, Robert L. Finley, Amos Salvador

Master of Arts, May 1988 (14)

Badachhape, Abhaya R.
B.A., Geology, 1982, Rice University
Mid-Cretaceous Unconformities in the East Texas Basin and Sabine Uplift.
Supervisor: Amos Salvador
Committee Members: Keith Young, Don Bebout

Gahagan, Lisa M.
B.S., Geology, 1984, Tulane University
The Mapping of Tectonic Features in the Ocean Basins from Satellite Altimetry Data.
Supervisor: John G. Sclater
Committee Members: Mark Cloos, Christopher Scotese

Gaskell, Barbara A.
B.S., Geology, 1981, University of California at Santa Cruz
Paleoecology of the Eocene Wheelock Member of the Cook Mountain Formation, in Western Houston County, Texas.
Supervisor: Martin B. Lagoe and Samuel Ellison
Committee Member: Harold G. Billman

Hiebert, Franz K.
A.B., Geology, 1981, Harvard University
The Role of Bacteria in the Deposition and Early Diagene sis of the Posidonienschiefer, a Jurassic Oil Shale in Southern Germany.
Supervisor: Robert L. Folk
Committee Members: Martin B. Lagoe, James Sprinkle

Jones, Jon R.
B.S., Geology, 1982, University of Oklahoma
Reservoir Characterization for Numerical Simulation of

Mesaverde Meanderbelt Sandstone, Northwestern Colorado.
Supervisor: Alan J. Scott
Committee Members: Robert Finley, Larry Lake

Mahler, Julianne P.
B.A., Geology, 1984, Wellesley College
Late-Stage Alleghanian Wrenching of the Narrangansett Basin, Rhode Island.
Supervisor: Sharon Mosher
Committee Members: William D. Carlson and William R. Muehlberger

Mayes, Catherine L.
B.S., Geology, 1985, The University of Texas at Austin
Tectonic History and New Isochron Chart of the South Pacific.
Supervisor: John G. Sclater
Committee Members: Ian Dalziel, Lawrence A. Lawver, David T. Sandwell

Miller, James K.
B.S., Geology, 1985, University of California at Davis
Multistage Dolomitization of the Portoro Limestone, Liguria, Italy.
Supervisor: Robert L. Folk
Committee Members: Lynton S. Land, John K. Warren

Paige, Richard E.
B.S., Geology, 1982, Southern Connecticut State University
The Morphology, Depositional Setting, and Evolution of the Paleocene Lavaca Submarine Canyon System, Northwest Gulf of Mexico.
Supervisor: William E. Galloway
Committee Members: John G. Sclater, Amos Salvador

Reynolds, Shawn A.
B.S., Geology, 1985, Cornell University
Depositional Development and Fluvial Architecture of the Narrabeen Group, Illawarra District, Sydney Basin, Australia.
Supervisor: William E. Galloway
Committee Members: Leonard F. Brown, Earle F. McBride

Satterfield, Will M.
B.S., Geology, 1985, The University of Texas at Austin
Late Quaternary Sedimentology and Evolution of the Continental Slope, Northwest Gulf of Mexico.
Supervisor: Amos Salvador
Committee Members: W. E. Galloway, E. W. Behrens

Sullivan, Keith B.
B.S., Geology, 1985, University of Michigan-Ann Arbor
Sandstone and Shale Diagenesis of the Frio Formation (Oligocene), Texas Gulf Coast: A Close Look at Sandstone/Shale Contacts.
Supervisor: Earle F. McBride
Committee Members: Robert L. Folk, Lynton S. Land

Wood, B. Leigh
B.S., Geology, 1985, The University of Texas at Austin
Development of a Structural Framework from Seismic Reflection Data.
Supervisor: Milo M. Backus
Committee Members: Clark R.Wilson, Charles R. Denham

Worrall, John G.
B.A., Geology, 1984, Rice University
Deposition and Diagenesis of the Jurassic Smackover Formation, Hatter's Pond Field, SW Alabama.
Supervisor: John K. Warren
Committee Members: Robert L. Folk, Lynton S. Land

Doctor of Philosophy, May 1988 (3)

Guimaraes, Paulo de Tarso Martins
B.S., Geology, 1976, Universidade Federal do Parana Brazil
Basin Analysis and Structural Development of the Sergipe-Alagoas Basin, Brazil.
Supervisor: William L. Fisher
Committee Members: Mark P. Cloos, William R. Muehlberger, Martin P. Jackson, Peter Szatmari

Tebedge, Sleshi
B.S., Geology, 1976, Addis Ababa University, Ethiopia
M.A., Geology, 1980, The University of Texas at Austin
Paleontology and Paleoecology of the Pleistocene Mammalian Fauna of Dark Canyon Cave, Eddy County, New Mexico.
Supervisor: Ernest L. Lundelius, Jr.
Committee Members: Wann Langston, Jr., William R. Muehlberger, Alan J. Scott, Bassett Maguire, Jr.

Westgate, James W.
B.S., Geology, 1975, William and Mary College
M.S., Geology, 1978, University of Nebraska-Lincoln
M.S., Biology, 1983, Southwest Missouri State University
Biostratigraphic and Paleoecologic Implications of the First Eocene Land Mammal Fauna from the North American Coastal Plain.
Supervisors: Ernest L. Lundelius, Jr. and John A. Wilson
Committee Members: Martin B. Lagoe, Steven Hall, Frank Whitmore

Graduate degrees on the next page were inadvertently omitted from last year's ***Newsletter****:*

Master of Arts, August 1986 (5)

Cagle, Clinton D.
B.S., Geology, 1981, Texas A&M University
Seismic Stratigrapy of the Central Tonga Arc, Southwest Pacific
Supervisor: Mark Cloos
Committee Members: James Austin, Thomas Shipley

Dumitru, Trevor A.
A.B., Geology, 1983, Harvard University
Plate Tectonic Controls on the Time-Varying Geothermal Gradients in the Great Valley Forearc Basin, California: Fission Track Analysis and Computer Modeling
Supervisor: Mark Cloos
Committee Members: Nichiolas Walker, Ian Duddy

Greenberg, Joseph G.
B.S., Geology, 1983, Yale University
Diagenesis of the Lower Cretceous James Limestone, Fairway Field, East Texas: A Petrographic and Geochemical Study
Supervisor: Lynton S. Land
Committee Members: Robert L. Folk, Robert G. Loucks

Rubin, Jeffrey N.
B.S., Geology, 1982, Yale University
Mineralogy and Ore Genesis at the San Martin Mine, Zacatecas, Mexico
Supervisor: J. Richard Kyle
Committee Members: William D. Carlson, Jon Price

Vogt, Jay N.
B.S., Geology, 1982, Texas A&M University
Dolomitization and Anhydrite Diagenesis of the San Andres Permian Formation, Gaines County, Texas
Supervisor: Lynton S. Land
Committee Members: John K. Warren, Don G. Bebout

Equipment Report

by Lynton S. Land

The high point of the year was delivery of the new Finnigan-MAT 261, automated, 7-collector mass spectrometer in November. For a variety of reasons it took nearly two months for the installation engineer to disappear and leave us the task of making it work all by our selves. Nick Walker has concentrated on U/Pb dating of zircons and is now analyzing the ultra-small samples with similar accuracy and precision as other established laboratories. He has already upset some Llano stratigraphy! Fred McDowell is tooling up for zircon work in the fall. Leon Long pursues clay dating on ever-smaller samples. Larry Mack is analyzing strontium and neodymium isotopes as part of his dissertation on Gulf Coast diagenesis. Together with Dave Awwiller, he has even branched out and tried to do calcium and magnesium isotopes. Julie Kupecz and Guoqiu Gao are using strontium isotopes to study dolomite diagenesis, and Wendy Mac pherson is attempting to study lithium isotopes in Gulf Coast Formation waters. Working with Wendy, Lynton Land is studying boron isotopes in Gulf Coast formation waters and rocks. Lynton is also using high resolution strontium data to study Louann evaporite diagenesis, and to "date" quaternary reef terraces around the Caribbean. Several "visitors" also availed themselves of the new instrument, which was essentially saturated except for parts of the late summer when most people were in the field. Several new students are expected to descend of the lab in the fall, so it looks like the night shift will expand.

Next year promises another new addition, as the purchase order for a new scanning electron microscope went out during the summer. We'll try to make the cover with a spectacular photo!

Doctor of Philosophy, August 1986 (4)

Cather, Steven M.
B.S., Geology, 1976, New Mexico Institute of Mining and Technology
M.A., Geology, 1980, The University of Texas at Austin
Volcano-Sedimentary Evolution and Tectonic Implications of the Datil Group, West-Central New Mexico
Supervisor: Robert L. Folk
Committee Members: Mark Cloos, William Galloway, Douglas Smith, Charles Chapin

Ebeniro, Joseph O.
B.S., Physics, 1976, University of Lagos, Nigeria
M.A., Geology, 1981, The University of Texas at Austin
Structure and Crustal Type of the Northwestern Gulf of Mexico Derived from Very Large Offset Seismic Data
Supervisor: Yosio Nakamura
Committee Members: Clark R. Wilson, John G. Sclater, Jan D. Garmany, Henry J. Dorman

Smith, Brian A.
B.A., Geology, 1979, Rice
Upper Cretaceous Stratigraphy and the Mid-Cenomanian Unconformity
Supervisor: Amos Salvador
Committee Members: Keith Young, Lynton S. Land, Don G. Bebout, Charles I. Smith

Stark, Tracy J.
B. S., Geology, 1979, The University of Texas at Austin
Information from Deep Water Seismic Reflection Data: LASE Line 2
Supervisor: Milo M. Backus
Committee Members: Clark R. Wilson, Paul Stoffa, Joseph D. Phillips, Francis X. Bostick, Jr., Wulf Massell

Walter Geology Library

by Dennis Trombatore, Geology Librarian

Even though 1987-88 has been a year of holding steady between the continuing pressures of rising costs and declining resources, the Geology Library has made progress on several important projects.

Last August, Geology Library staff began coding the map collection for entry in the UT Library Online Catalog (UTCAT). We now have entered brief records for more than 6,300 USGS geologic maps. We anticipate completing the coding of all 8,000 USGS maps in our collection by September '88, then we will begin other map series from U.S. state and foreign geological surveys as well as Texas topo maps.

This labor-intensive task makes author, title, and series information for these maps available across the campus to anyone with direct or dial-up access to UTCAT. Once located in this way, a map also can be charged to the borrower like any other item in the collection. This greatly improves and simplifies record keeping for map circulation, and eliminates the tedious process of filling out cards.

With almost 38,000 maps in the Tobin Map Collection we have a long way to go, but thanks to our dedicated staff and the support of the Tobin Fund we are getting it done.

The Tobin Fund also has enabled us to improve our equipment situation at a time when other resources are stretched thin. The Tobin Fund has supported the renovation of our diazo printer, purchase of a copy stand for the production of slide copy from large sheets or color plates, purchase of basic drafting supplies for use with our 2 light tables, and most important, the purchase of an Apple Macintosh SE personal computer. We are already using the Macintosh for a variety of local files and inventories which will improve services and access to the collections.

In other equipment news, the Geology Library is in the process of installing two video-viewing stations courtesy of professors Tim Rowe and Gary Kocurek. These stations will allow students to view videocassettes placed on reserve by professors. As AAPG and other organizations make high-quality video short courses available, we will begin to build a collection in this new format.

Acquisition of materials slowed dramatically this year. Requests have received more scrutiny and have been ordered more slowly. Available funds for purchase of all materials are being squeezed tighter and tighter. We draw our collections from around the world, and we face a real crisis in the falling exchange value of the dollar, in spite of the welcome support from Geology Foundation endowment funds.

Even worse is the alarming rate of price increases for books and journals. More and more of our books cost over $100.00, and many of the books that now cost as much as $250.00 are not luxuries but necessities to support a comprehensive graduate and research program. Journal price increases have been even more astounding, and we have not subscribed to a new journal in two years.

Compounding our worries are the flat state funding situation and, most dramatically, the decline in library endowment revenues, which fell by more than 40% between 1982 and 1987.

The Walter Geology Library has enjoyed very strong support and collections over the years, and is recognized as having nationally ranked collection strength in the earth sciences. If the current situation continues for another biennium or worsens, more journal cancellations and further restriction of new book purchases will be required. While it may take several years to surface, the resulting collection weakness would hamper our work for years to come.

With the help of the Walter Library Committee (Dan Barker, chair, R. L. Folk and Timothy Rowe), we are actively seeking ways to regain the strength and flexibility we enjoyed prior to 1986, and we are confident that through a combination of better planning, improved efficiency and technology, and continued Geology Foundation funding support we will find solutions to these difficulties.

Reduced buying power has the effect of forestalling the inevitable space problem in the Geology Library. While the library may be filling up more slowly, within five years we should be absolutely full. We are seeking ways to alleviate this problem without having a negative effect on future development of the library.

In staff news, Dennis Trombatore, the librarian, has been serving this year as chair of the General Libraries Advanced Research Services Task Force, charged with the review of services to advanced researchers throughout the General Libraries and the development of recommendations for improving and updating services to this important group of faculty, staff, and graduate students.

Jim McCulloch, library assistant, has been participating in the General Libraries Staff Sharing program this year, spending two hours a day working in the General Libraries Information Systems Office learning various programming techniques to further development of the Library's evolving computerized information system. Carol Russell, maps clerk, has been supervising the maps coding project, and also is nearing the completion of her master's degree in Library Science.

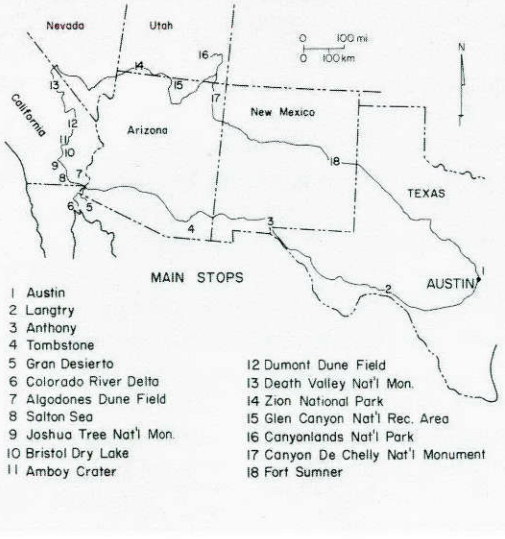
Special thanks for the hard work and contributions of all our staff members, including Dennis Sweeney, Mary Crabaugh, Alice Dewberry and our student clerical assistants Abbey Gans, Liz Henry, Stephanie Jackson, Rick Nelson, and Hillary Tulley. They are the ones who bring the Walter Library and our collection to life.

Travels With Gary

by Karen Havholm, Mike Blum, Mark Chandler,
Rudy de Zoeten, Jennifer Glasford, Mike Sweet

In the spring semester of 1987 Dr. Gary Kocurek taught a course called "Sedimentary Processes: Field and Experimental Techniques." Five brave souls registered for this class. Dr. Kocurek may be a world-renowned scholar of eolian processes and deposits, but among graduate students at UT he is infamous for leading field trips that are, well, less than perfect. One field trip in particular, early in his career at UT, was apparently a disaster of epic proportions. Nothing he has done since has been able to wipe out the memory of it. None of the students who survived that trip are still at UT. However, rumors linger of someone's foot being run over (by Dr. K?), a 2-ton water truck getting stuck in the sands of the Gran Desierto in Mexico, a vehicle that would only go in reverse as it was being chased by Mexican police near the border, and a night spent in the vehicles stuck in snow and ice in the right lane of an Interstate highway while semis whizzed by in the left lane. The truth or accuracy of these details cannot be verified. But such are the stories that are whispered in the halls of the fourth floor.

So, with some trepidation five students and a teaching assistant embarked on a course that was to culminate in a two-week trip to the Mecca of eolian sedimentologists (the Colorado Plateau) and assorted other eolian holy places. The first half of the course went well enough. We did experimental projects in the wind tunnel, and took some short field trips to the Fredericksburg area and to Padre Island. Then we began to gear up for The Big Trip. We had crash courses in eolian and sabkha (thanks to Dr. John Warren) processes, and were required to commit to memory all geographic and geologic, and some historic, points of greater (and lesser) importance in the Four Corners states, southern California and western Texas.



A typical scene from a Kocurek field trip.

Logistical planning began. And this is where we heeded those fourth floor rumors and warnings. The students took on *all* the preparations for the trip. We humored Dr. K., letting him think he was directing things. We even made him responsible for bringing one or two simple items (a coffee pot, and his own sleeping bag). But we planned and provided everything else ourselves, from itinerary to menus, from cooking and field gear to maps, road logs and other pertinent literature. The one geography student taking the class was amazed at our detailed planning. But then, he had not heard all the horror stories.

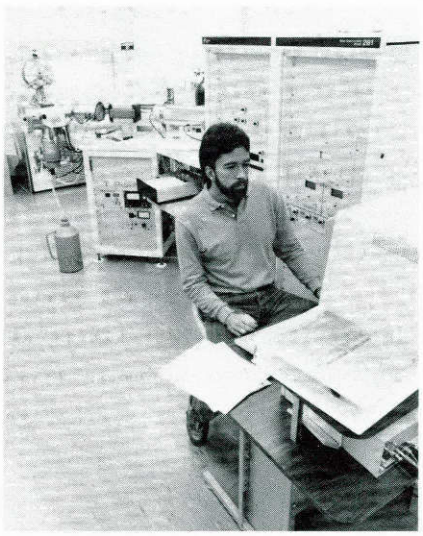
To make a long tale short, the trip, which included stops in six states and Mexico (see map) went almost perfectly. We saw ancient eolian sandstones and modern desert environments, and improved our understanding of the geology of the southwestern U.S. in general and the Mesozoic stratigraphy of the Colorado Plateau in particular. Not to mention learning more than we ever wanted to know about Gunfighters of the Old West (a sideline of Dr. K's) at sites like Tombstone, Langtry and Fort Sumner. Oh, there were a few minor hitches. We drove a hundred miles out of our way on the Navajo Indian Reservation because we did not have current road maps. We were temporarily lost in the Gran Desierto; when we finally found our vehicles, we discovered that the jars in the lunch cooler that had been strapped to one of the dune buggies had all jostled open, creating an ugly and odoriferous mixture of mayonnaise, mustard, peanut butter and jelly, along with lunch meat, fruit and lettuce. Despite this setback to our food supply, we ate rather well. We had the usual sandwiches for lunch, but for supper we had a variety of delicious campfire meals from Indonesian stew on rice to coq au vin. Except for the one night we let Dr. K. cook. That night we had lukewarm "machka" (that's Czechoslovakian for the one meal he claims to be able to cook: chipped beef sauce on white bread) in the rain.

So, if you ever get an opportunity to participate in a field trip run by Dr. Gary Kocurek, by all means jump at the chance. The man is knowledgeable and articulate, and you'll learn a lot. But to ensure your own safety and health, go prepared. It would be best to organize the trip yourself. If this is not possible, be sure that you bring along enough equipment and supplies to be self-sufficient. This should include enough food for the entire trip, maps to avoid getting lost, and enough cash to fly home from any point along the way. Remember: "logistics" is not Dr. Kocurek's middle name.

New Thermal Ionization Mass Spectrometer Installed

by Nick Walker

The Department's new thermal ionization mass spectrometer (funded by the Geology Foundation, the National Science Foundation, and the University) was delivered in September and installed in a recently renovated laboratory in the basement. Following nearly six months of performance tests, which included analyzing isotopic standards of Sr, Pb, U, and Nd in replicate to exacting precision and accuracy, the instrument was formally "accepted" in March. At the time of this writing (June, 1988) over 1200 successful analyses have subsequently been performed by the four faculty who oversee the instrument (Walker, Land, Long, McDowell), their graduate students, and visiting faculty and students. The capability of the instrument has thus far been applied to diverse geologic investigations such as: U-Pb zircon geochronology of igneous and metamorphic rocks from Washington, Oregon, Idaho, California, British Columbia, and the Llano Uplift of central Texas to establish the timing of tectonic, metamorphic, and magmatic events; measuring the isotopic composition of Pb in alpine-type ultramafic massifs from Italy and the Pyrenees to model their petrogenesis; measurement of the initial Sr isotopic composition of sedimentary rocks collected in Jamaica, Egypt, the Texas interior and Gulf coast, and Oklahoma in order to provide information regarding the geologic processes responsible for their generation; measuring the Nd isotopic composition of sedimentary rocks and pore fluids from the Texas Gulf coast to constrain permissible diagenetic models and to trace the movement of pore fluids; dating the timing of diagenesis of clays in the Gulf coast using Rb-Sr isotope systematics; tracing pore fluid movement and identifying participants in chemical reactions during diagensis in the Texas Gulf coast by measuring the isotopic composition of Li and B; determination of Rb-Sr ages of Llano Uplift granites, Brazilian granites, and of central Texas paleosols.



Nick Walker explores the capabilities of the new mass spectrometer.

Unlike the department's earlier generation thermal ionization mass spectrometer into which only one sample at a time can be loaded and which has one "collecter" to receive and count a beam of generated ions, this new instrument is designed to accept as many as thirteen samples and has seven collectors which permit up to seven ion beams to be received and counted simultaneously. Such a design has the advantage of increased sample throughput, higher precision of measurement of elemental isotopic ratios, and the ability to precisely measure isotopic ratios of very small samples. For example, isotopic ratios of many elements for which the total sample weight may only be in the range of several hundred picograms (1picogram = 10-12G) to a few tens of nanograms (1 nanogram = 10-9G) can now be routinely analyzed.

This new instrument is already playing a fundamental role in the advancement of both teaching and research within the Department. It is the central analytical tool for projects to which four National Science Foundation grants have recently been awarded and several graduate students have been trained in its use. Together, the new mass spectrometer, the clean lab under the direction of Nick Walker, Lynton Land's new isotope geochemistry lab on the fourth floor, and the other isotope geochemistry labs in the Department form one of the finest facilities in the nation to pursue geologic investigations utilizing isotope geochemistry.

Land Named to Allday Chair

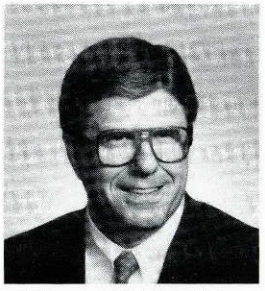
Dr. Lynton S. Land has been named the first holder of the Edwin Allday Centennial Chair in Subsurface Geology effective September 1, 1988. Mr. Allday was a graduate of the Department of Geological Sciences (BS '51, MA '53) and was an independent oil and gas operator in Houston at the time of his death in 1982. The Chair was established by the Fondren Foundation in 1983 to promote an outstanding research program in subsurface geology, especially in aspects of oil and natural gas exploration.

Dr. Land joined the Department in 1968, and is internationally recognized for his research in sedimentary geology, particularly the genesis and diagenesis of carbonate rocks. He is also well known for his contributions to the subsurface geology of the Gulf of Mexico sedimentary basin. In addition to his superior research record and excellent classroom teaching, he has played an active role in Departmental student committees. In 1979 he was awarded the Carolyn G. and G. Moses Knebel Distinguished Teaching Award by vote of the students in the Department. In 1982 he was awarded an Exxon Graduate Teaching Excellence Award, and in 1983 was designated a recipient of the Houston Oil & Minerals Corporation Faculty Excellence Award upon recommendation of both faculty and students. His impressive academic performance is verification of his outstanding qualifications for this prestigious Chair. Funds from the Allday Chair will provide Dr. Land with additional opportunities to support his own research and that of numerous graduate students.

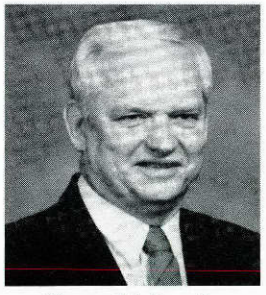
Foundation News

Advisory Council Membership Changes

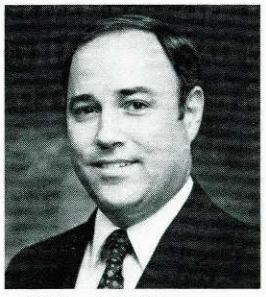
Larry M. Asbury



Thomas E. Fanning



Vance M. Lynch



Eddie A. Williamson

The Geology Foundation Advisory Council is pleased to welcome four new members as of September 1. Addition of these members significantly increases the Council's representation from major oil companies. All four of the companies represented (Amoco, Arco, Marathon, and Unocal) not only provide financial support for the Department through the Geology Foundation, but also have been active in hiring a number of graduates from the Department in recent years.

Larry M. Asbury, Vice President of Exploration for Arco International Oil and Gas Company in Los Angeles, received his BS degree in 1959 and the MA degree in 1961 in geology from UT Austin. His career with Arco began in Houston shortly after his graduation in 1961. In the ensuing years he has worked with Arco in Corpus Christi, Libya, Iran, Los Angeles, New York, and Indonesia, where he was president of Atlantic Richfield Indonesia, Inc. For the past few years he and his wife, Jackie, have lived near Los Angeles, where they greatly enjoy the Southern California climate.

Thomas E. Fanning is Manager of Domestic Exploration for Marathon Oil Company in Houston. Tom received his BS in geology from UT Austin in 1956 and began working for Marathon in 1960 after completing a tour of duty in the Air Force. He has held assignments with Marathon in Roswell, New Mexico; Midland; Shreveport; Findlay, Ohio; and for the nine years has been in Houston. Tom has been Domestic Exploration Manager since 1986. He and his wife, Anne, are glad to be back in Texas after living in several other areas of the U.S.

Vance M. Lynch, Vice President of Scientific Research for Unocal Corporation in Brea, California, graduated from UT Austin with a BS degree in 1951. He received a MS degree in geophysics and geology from the University of Houston in 1959. Vance's early career included employment with Tidelands Exploration Company and Sidney Schaefer and Associates. In 1963 he joined Unocal as Director of Gravity and Magnetics Exploration, then became Chief Geophysicist, International Division, followed by serving as Chief Geophysicist of the Gulf Region, before assuming his present position in 1986. Vance also has done extensive traveling for Unocal including Europe, China, Africa, Middle East and the Far East. Vance and his wife, Sarah, live in Placentia, California.

Eddie A. Williamson is Division Exploration Manager, Offshore Louisiana Division of Amoco Production Company in New Orleans. Eddie received his BS in geology from UT in 1969, served in the U.S. Army from 1969 until 1971, then completed the MS in geology at the University of Missouri at Columbia in 1973. He began working for Amoco in Houston, and in 1980 was transferred to New Orleans. In 1982 he became manager of exploration operations and planning for the domestic portion of Amoco in Chicago, and in 1984 assumed his present position. Eddie and his wife, Constance, have a son and daughter who are future Longhorns.

Eleven Council members were renominated to serve additional three-year terms: Charles W. Alcorn, Jr., Richard R. Bloomer, Weyman W. Crawford, Rodger E. Denison, George A. Donnelly, Jr., George M. Harwell, Jr., J. Donald Langston, Harry A. Miller, Jr., W. F. Reynolds, George W. Schneider, and Phillip E. Wyche. Members of the Advisory Council devote much time and energy to assisting the Department, and their efforts are gratefully acknowledged. Council members were saddened by the death last September of Mr. Arthur J. Wessely, who had served on the Advisory Council since September, 1985 (see article, *In Memoriam* section).

Report of Council Activities

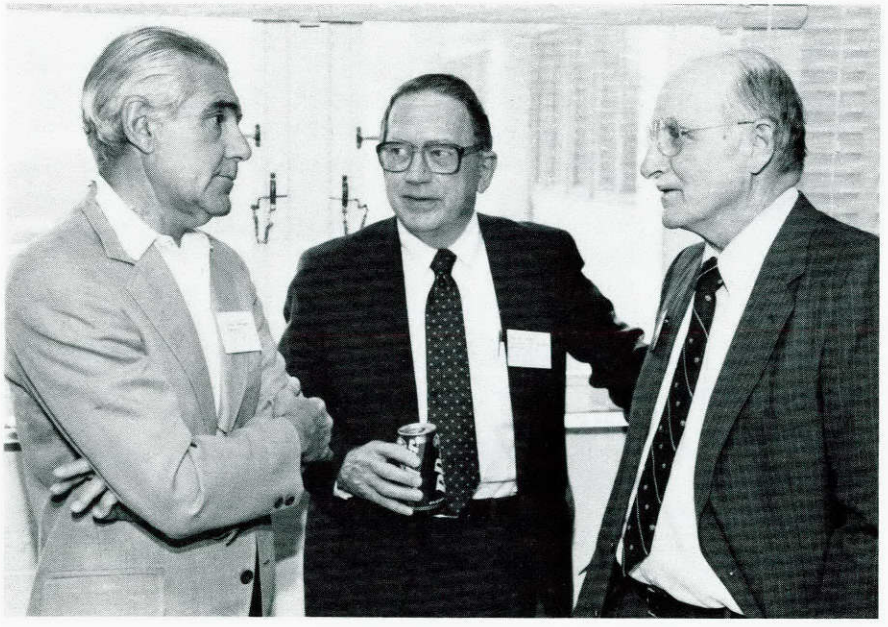
Advisory Council activities during the past year centered around the downturn in the energy industry, in terms of building up the dwindling number of students at the undergraduate level as well as making UT's graduates as competitive as possible in a limited job market. Through scholarships provided by the Geology Foundation, the Department is able to offer excellent financial support to National Merit Scholars and other high academic achievers and is aggressively seeking such students. At the graduate level, recent emphasis on providing state-of-the-art equipment and facilities coupled with competitive financial support seems to be successful in attracting highly-qualified students, who in turn are usually able to find suitable employment. With the help of the Foundation, over $1 million has been spent on equipment in the Department during the past two years, which has increased the Department's ability to recruit top-level students.

The Council and the Department have established a Long-Term Planning Committee chaired by Tim Denison to determine as precisely as possible the needs of companies for the next 10-15 years, and to assess which courses within the Department and from outside disciplines will be most useful for graduate students. A goal of the committee is for the Department to be able to anticipate change in industry rather than react to it. The Committee will make recommendations on these findings to the Council within the next year.

A major concern of the Council's was the impact of last fall's market crash on the Foundation's portion of the Common Trust Fund. Because of the conservative manner in which UT's funds are invested, the Common Trust Fund lost only 5.9% of its value. Mr. Michael Patrick, UT System Vice Chancellor for Asset Management, told the Council at its April meeting that between October and April, the loss in value had already been recouped. Total endowment in the Geology Foundation at the end of May stands at $11,931,646 in hand, with a pledged total of $12,237,702.

A special feature of the spring meeting was the presentation of a plaque to Judd Oualline in recognition of his two years of service as Chairman of the Geology Foundation Advisory Council from 1985-1987. His effective leadership and continued service on the Council are greatly appreciated.

Judd Oualline displays the plaque he received from the Advisory Council in recognition of his service as Council Chairman, 1985-87.



Amos Salvador (left) visits with Honorary Life Member Edd Turner (center) and Dr. Peter T. Flawn.

Geology Foundation Advisory Council

Effective September, 1988

Chairman

Mr. William E. Gipson, President, Pogo Producing Company, P. O. Box 61289, Houston, TX 77208

Vice Chairman

Mr. Rodger E. Denison, Mobil Research and Development Corporation, Box 819047, Dallas, TX 75381

Members

Mr. Charles W. Alcorn, Jr., President, Alcorn Companies, P. O. Box 2879, Victoria, TX 77902

Mr. Eugene L. Ames, Jr., President, Venus Oil Company, 2100 NBC Building, San Antonio, TX 78205

Mr. Larry M. Asbury, Vice President, Exploration, Arco International Oil and Gas Company, 444 South Flower Street, Los Angeles, CA 90017

Dr. David S. Birsa, Coordinator-Exploration, Chevron U.S.A. Inc., 575 Market St., San Francisco, CA 94105

Dr. Richard R. Bloomer, Bloomer & Associates, Inc., 132 Devonian Building, 310 N. Willis Street, Abilene, TX 79603

Mr. Thomas M. Burke, Consultant, 8519 Manhattan Drive, Houston, TX 77096

Mr. Weyman W. Crawford, Executive Vice President, Elf Aquitaine Petroleum, Allied Bank Plaza, 1000 Louisiana, Suite 3800, Houston, TX 77002

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

Mr. George A. Donnelly, Jr., President, The Eastland Oil Company, P. O. Box 3488, Midland, TX 79701

Mr. Thomas E. Fanning, Manager, Domestic Exploration, Marathon Oil Company, P. O. Box 3128, Houston, TX 77253

Dr. Peter T. Flawn, 3718 Bridle Path, Austin, TX 78703

Mr. James H. Frasher, Consultant, 14751 Quail Grove, Houston, TX 77079

Mr. Joseph N. Gittelman, General Manager, Geophysics, Shell Oil Company, P. O. Box 2463, Houston, TX 77001

Mr. George M. Harwell, Consultant, 14918 River Forest, Houston, TX 77079

Mr. Larry R. Hensarling, President, Tee Oil, Inc., P. O. Box 52343, Suite 800, Lafayette, LA 70505

Mr. David S. "Scotty" Holland, President and Chief Executive, Pennzoil Exploration and Production Company, P. O. Box 2967, Houston, TX 77252

Mr. Charles J. Hooper, President, Texana Petroleum Corporation, 3355 W. Alabama, Suite 840, Houston, TX 77098

Mr. John A. Jackson, President, Katie Petroleum Company, Forest Plaza III, 12221 Merit Drive, Suite 460, Dallas, TX 75251

Mr. J. Donald Langston, 78-6880 Kuhinanui Street, Kailua-Kona, HI 96740

Mr. Howard R. Lowe, 2784 Pondilla Way West, Coupeville, WA 98239

Mr. Vance M. Lynch, Vice President, Scientific Computing Services, Unocal Science and Technology Division, Unocal Corporation, P. O. Box 76, Brea, CA 92621

Mr. Ken G. Martin, Martin Energy Company, 134 E. Ruelle, Mandeville, LA 70448

Mr. Harry A. Miller, Jr., 600 First National Bank Building, Midland, TX 79701

Mr. Michael B. Morris, 3108 Reba Drive, Houston, TX 77019

Mr. Judd H. Oualline, Consultant, 214 Blalock Road, Houston, TX 77024

Mr. Scott Petty, Jr., 711 Navarro Street, Suite 235, San Antonio, TX 78205

Mr. W. F. Reynolds, J. C. & W. F. Reynolds Oil Producers, 700 MBank Building, Wichita Falls, TX 76301

Mr. George W. Schneider, Jr., #10 Cicero, Austin, TX 78746

Mr. Don B. Sheffield, President, Geosource, Inc., P. O. Box 36306, Houston, TX 77036-6306

Mr. Robert K. Steer, 9061 Briar Forest, Houston, TX 77024

Mr. William T. Stokes, Consultant, 211 N. Ervay Building, Suite 1010, Dallas, TX 75201

Mr. Eddie A. Williamson, Division Exploration Manager, Amoco Production Company, P. O. Box 50879, New Orleans, LA 70150

Mr. Phillip E. Wyche, 126 Firebird, Austin, TX 78734

Honorary Life Members

Dr. Thomas D. Barrow, Consultant, 1010 Lamar, Suite 400, Houston, TX 77002

Mr. Don R. Boyd, Independent, 1720 The Six Hundred Building, Corpus Christi, TX 78473

Mr. J. Ben Carsey, 1061 San Jacinto Building, 911 Walker Street, Houston, TX 77001

Dr. Samuel P. Ellison, Jr., 5948 Highland Hills Drive, Austin, TX 78731

Mr. John L. Loftis, Jr., 11919 Broken Bough, Houston, TX 77024

Mr. O. Scott Petty, 711 Navarro Street, Suite 235, San Antonio, TX 78205

Mr. Edd R. Turner, 900 West Main, Kerrville, TX 78028

Mr. Joseph C. Walter, Jr., Walter Oil & Gas Corporation, Suite 204, The Main Building, 1212 Main Street, Houston, TX 77002

Mr. Charles E. Yager, 3801 Potomac, Fort Worth, TX 76107

GIFTS TO THE GEOLOGY FOUNDATION

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

CONTRIBUTORS TO THE GEOLOGY FOUNDATION

June 1, 1987-May 31, 1988

Scott H. Adamek
Floyd J. Adcock
William N. Agee, Jr.
Charles W. Alcorn, Jr.
Adrienne D. Allie
Walter Alvarez
Eugene J. Amaral
Nancy J. Anderson
D. Russell Andress
Anonymous
Larry M. Asbury
Gerald L. Atkinson
Arten J. Avakian
David N. Awwiller
Herbert A. Babione
Byron Z. Bachschmid
Dr. & Mrs. Milo Backus
Donna F. Balin
Mr. & Mrs. J. A. Bannerot
Mr. & Mrs. T. D. Barber
Virgil E. Barnes
Mrs. L. T. Barrow
Dr. and Mrs. Thomas D. Barrow
Jerald H. Bartley
Gerald S. Barton
William W. Bath
Mr. & Mrs. Fred H. Becker
Richard C. Beckman
Richard E. Bennett
Timothy B. Berge
Earl H. Bescher, Jr.
Mr. & Mrs. Mike Best
Dr. & Mrs. David S. Birsa
Laura K. Blethen
Richard R. Bloomer
Jonathan Blount
Daniel P. Bodner
Louis F. Bonner
John L. Boone
Lars E. Borg
Mr. & Mrs. Don R. Boyd
Mr. & Mrs. Walter Boyd, Jr.
Richard G. Bozanich
Robert Anthony Brady
Philip Braithwaite
Mrs. John P. Brand
Mr. & Mrs. John F. Brand
Rosemary Brant
John D. Bremsteller
Herbert L. Brewer
David A. Bristol
Wallace E. Brunson
James E. Bryant
Ray A. Burke
Mrs. W. Z. Burkhead Sr.
Ronald A. Butterworth
Robert W. Bybee
L. G. Byerley, Jr.
Mr. & Mrs. W. J. Cage, Jr.
Frank K. Cahoon
Bruce Calder, Jr.
Dean L. Callender
Donald H. Campbell
Ralph B. Cantrell
Jose D. Carballo, Jr.
W. H. Cardwell
A. T. Carleton
Linda Carlson
William D. Carlson
Jeffrey S. Carmody
Plack Carr
J. Ben Carsey, Sr.
Karen E. Carter
Mr. & Mrs. Robert D. Carter
Mr. & Mrs. Steven M. Cather
Martha Chambers
Mr. & Mrs. Robert C. Chambers
Guy A. Chamot
Marybelle H. Clark
Arthur W. Cleaves II
Eric N. Cloos
George W. Cloos
Dr. & Mrs. Mark Cloos
Robert C. Cobb
Becky J. Coel
George B. Coffin
Janet M. Coleman
Catherine L. Coley
H. Grady Collier, Jr.
Carroll E. Cook
Virginia B. Coons
John D. Cooper
Duncan Corbett
Jeffrey D. Corrigan
Todd Allen Council
Weyman W. Crawford
Stephen P. Cumella
Russell W. Cumley
Thomas Blackman Curlee
Elizabeth J. Daily
Ruff Daniels
Larry J. Darnall
Pamela T. Darwin
Howard E. Davenport
L. Decker Dawson
Charles J. De Lancey
Rodger E. Denison
Mr. & Mrs. Ronald K. DeFord
Gilbert J. De Paul
Mr. & Mrs. Paul Desha
Mr. & Mrs. Henry E. Diggs
Tim Diggs
William F. Dingus
Andrew C. A. Donnelly
George A. Donnelly, Jr.
William E. Dougherty
James D. Doyle
Stephen I. Dworkin
Joan Echols
Mr. & Mrs. John Edwards
G. K. Eifler, Jr.
Mary Dale Ellis
Peter A. Emmet
Mr. & Mrs. Richard Erdlac, Jr.
Dr. & Mrs. A. Gordon Everett
Rizer Everett
Stuart William Fagin
Robert H. Fakundiny
Thomas E. Fanning
Dorman N. Farmer
Irma M. Feibelman
Murray Felsher
John W. Ferguson
Joseph Carl Fiduk
Dorothy Y. Fisher
Dr. & Mrs. William L. Fisher
Ted E. Flanigan
Peter T. Flawn
Dr. & Mrs. Robert L. Folk
Hewitt B. Fox
Dorothy G. Fransen
Dan R. Frantzen
James H. Frasher
Annabelle Friddle
Joseph A. Fryou
William J. Ganus
William C. Gardner
Steve F. Germiat
Robert W. Gillespie
Gretchen M. Gillis
William E. Gipson
Paul Giraudin , Jr.
Jennifer Lynn Glasford
Lisa L. Godwin
Mark Buchanan Gordon
Mr. & Mrs. Kenneth B. Gore
Volker C. Grasso
Robert W. Grayson
Guy E. Green
Willard R. Green
Redge L. Greenberg
Robbie Gries
Roy H. Guess, Jr.
Edgar H. Guevara
Bryan M. Hale
Richard B. Hale
Jane Hamlin
Weldon W. Hammond, Jr.
Richard E. Hart
John S. Hatfield
Karen G. Havholm
Grant H. Heiken
Mark Helper
Michael D. Helton
Mary Cornelia Henderson
Peter Hennings
Christoph Heubeck
Katherine R. Higgins
Sumner Best Hixon
Charles W. Holcomb
David S. Holland
Elena K. Holloway
James W. Hood
Mr. & Mrs. Karl Hoops
Dr. & Mrs. Richard A. Hoover
Jeff Horowitz
Richard T. Houser
Douglas J. Howard
Jack M. Howard
Don F. Hugus, Jr.
Dan Huston
Dr. & Mrs. Earl Ingerson
Carl B. Irwin
Mr. & Mrs. John A. Jackson
Wm. J. John
Luther G. Jones
J. R. Jackson, Jr.
Russell W. Jackson
Phyllis Johnson
Luther G. Jones, Jr.

Richard D. Jons
L. Scott Kelley
Douglas K. Kirkland
Leo W. Konz
J. David Krause
Edward J. Krish
John William Kuehne
Mr. & Mrs. Edward Kurtz
J. Richard & Linda Kyle
George A. Laguros
Janet G. Lammers
Lynton S. Land
Judith C. Lang
J. Donald Langston
Wann Langston , Jr.
Flora Jayne Larkey
Robert K. Lattimore
Jeffrey L. Lawton
Robert L. Layden
Jocelyn B. Layton
David H. Lehman
Mr. & Mrs. William E. Lester
Max Levin
Schon Sophie Levy
Paul S. Lewis
John Farris Ligon
Eugene J. Lipstate
Allen C. Locklin
Susan A. Longacre
E. William Longmire
Ernest L. Lundelius, Jr.
Pamela E. Luttrell
Larry Mack
Julianne Mahler
Janet E. Manchester
Charles J. Mankin
Mr. & Mrs. Gary M. Marchwick
George W. Marshall, Jr.
Sabin W. Marshall
Hildebrando J. Martell
Ann Ayers Martin
David F. Martineau
Leslie E. Mashburn
Earle F. McBride
Benjamin A. McCarthy
Jeremiah F. McCarthy
Mr. & Mrs. Bill McClelland
Duncan McConnell
Fred W. McDowell
Edward McFarlan ,Jr.
William Rex McKinley
W. N. McKinney, Jr.
John F. McKnight
Michael L. McLeod
Asa D. McRae
J. L. Meadows
Larry S. Melzer
Leland H. Miller
Harry A. Miller, Jr.
Wayne D. Miller
Mr. & Mrs. Daniel M. Mills
Mr. & Mrs. Herbert G. Mills
Richard A. Mills
James R. Moffett
Marian Morris
Michael B. Morris
D. Lee Morton
Sharon Mosher
William R. Muehlberger
Mrs. Thad M. Neal
Mary Karen Nelis
G. Allan Nelson
John H. Newberry
Kenneth E. Nemeth
Ronald W. Nordquist
Isaac W. Norman , Jr.
A. M. Olander
Jeffry D. Ottmann
Robert D. Ottmann
Judd H. Oualline
Ann Page
Gaston H. Parrish

Chairman Bill Fisher receives a scholarship check from Ms. Julia Downey (BA '82) on behalf of Marathon Oil Foundation.

Dorothy S. Paterson
Thomas H. Patton
William Y. Penn
Charles Stuart Percy
Ben J. Petrusek
O. Scott Petty
Mr. & Mrs. Scott Petty, Jr.
Van A. Petty, Jr.
Elliott Pew
Mr. & Mrs. Ronnie W. Pfeiffer
Donald F. Pierini
Jeffrey G. Pittman
William A. Poe
James W. Porter
Robert B. Porter
Donna Precht
John Wm. Preston
William C. Price
David Nelson Purgason
Marietta Jackson Ransone
Marion Allen Reagan, Jr.
Donald F. Reaser
Mrs. R. C. Redfield
Bernard W. Reiss
W. F. Reynolds
Mr. & Mrs. Robert R. Rieke
John S. Rives II
Jess P. Roach
Robert C. Roback
Edwin C. Robinson
L. T. Rogers
Michael R. Rosen
Lucy O. Ross
Susanna Ross
Sally A. Rothwell
Timothy Rowe
Jeffrey N. Rubin
Paul Sagasta
Richard H. Sams
Jack S. Sanders
Will M. Satterfield
Harrison L. Saunders II
Judith Ann Schiebout
Jack R. Schmid
John T. Schulenberg
Dr. & Mrs. John Sclater
George Sealy, Jr.
Dr. & Mrs. John M. Sharp, Jr.
Don B. Sheffield
William D. Sill
Kathleen Fernalld Simpson
Robert S. Singer
Christopher Small
Marriott Wieckhoff Smart
Richard A. Smith
Douglas Smith
Howard J. Speer
Dr. & Mrs. James Sprinkle
Dr. & Mrs. Bill E. St. John
Mr. & Mrs. David Stephens
William T. Stokes, Jr.
Mike Stowbridge
Robert E. Stowers
H. Tod Sutherland Family
Leonard J. Svajda
Mr. & Mrs. George S. Tallichet
James B. Tartt
C. B. Thames, Jr.
Laura A. Thomas
Mr. & Mrs. T. J. Thompson
Bert C. Timm
Donald H. Torgerson
Everette J. Travis
Dr. & Mrs. Delos R. Tucker
John D. Tuohy
Mr. & Mrs. Edd R. Turner
LeRoy J. Tydlaska
Mary Marks Udden
Mr. & Mrs. Ruben Uribe
Mr. & Mrs. Glenn Vargas
Harry A. Vest
R. B. Vickers Jr.
Lillian G. Vidal
Viviane Vidal
Bryan C. Wagner
Virginia M. Wagner
Richard B. Waitt, Jr.
Marianne Walk
Nicholas Walker
Virgil A. Walston, Jr.
J. C. Walter, Jr.
J. C. Walter III
Anthony W. Walton
Bonnie R. Weise
Eddie Wheeler
Mr. & Mrs. George W. Wheeler
R. C. Wilber, Jr.
Duncan C. O. Wilson, Jr.
Gail H. Whitcomb, Jr.
Leslie Ann White
Leslie P. White
Steven L. White
Shirley W. Whiteside
Peter N. Wiggins III
Dan Williams
John B. Williams
James C. Willrodt
Mr. & Mrs. Allan Wilson
Dr. & Mrs. Clark Wilson
John A. Wilson
Melissa C. Winans
Robert L. Wood, Jr.
Arnold M. Woods
Ray D. Woods
William I. Woods
Kenneth E. Woodyard
Charles F. Word
Charles J. Worrel
John Buel Wright
Phillip E. Wyche
Robert L. Wynne, III
Keith Young
William C. Young III
Robert L. Zinn
Kevin L. Zonana

During the spring semester Mobil Exploration & Producing U.S. Inc. sponsored the visit of AAPG Distinguished Lecturer Dr. Ray Thomasson by providing a $500 gift to the Department. Shown here are, from left, Gretchen Gillis (Technical Sessions Chairman), Ray Thomasson, and Mike Guest of Mobil.

Industrial and Society Contributors to the Foundation

June 1, 1987-May 31, 1987

Amoco Foundation Inc.
Arco Oil and Gas Co.
Atlantic Richfield Co.
BP America Inc.
R. W. Byram & Co.
Chevron U.S.A. Inc.
Conoco Inc.
Dernick Resources, Inc.
Desert Ventures Inc.
Diven Camp & Co.
Henry L. Doherty Educ. Fdn.
E. I. du Pont de Nemours & Co.
Elf Aquitaine Petroleum
Enserch Exploration Inc.
Estate of Dean Metts
Estate of Edwin Allday
Exxon Education Foundation
Freeport-McMoRan Inc.
Gulf Coast Geol. Library Inc.
Hall Southwest Water Consultants Inc.
Harry E. Hinken Inc.
Homestake Mining Co.
Houston Gem and Mineral Society
IBM Corp.
Katie Foundation
Kerr-McGee Corp.
Robert S. Kier Consulting
Louisiana Land & Exploration Co. Fdn.
Marathon Oil Foundation Inc.
Mobil Fdn. Inc.
Mobil Producing Texas & New Mexico Inc.
Occidental Oil and Gas Charitable Foundation
Padway and Padway
Pennzoil Co.
Pennzoil Exploration and Production Co.
Phillips Petrol. Foundation, Inc.
Pogo Producing Co.
Richland Development Corp.
Shell Co. Foundation
Standard Oil Co.
Standard Oil Production Co.
Sun Oil Exploration & Production Co.
Sun Refining & Marketing Co.
Tenneco Inc.
Texaco Philanthropic Fdn. Inc.
Texas Gas Transmission Corp.
Texas Oil & Gas Corp.
Union Pacific Foundation
Unocal Foundation
W. W. Cattle & Oil Co.
Whitcomb Interest
Erle and Emma White Foundation
Xerox Foundation
Zinn Petroleum Co.

Donors of Books and Special Items to the Department of Geological Sciences

June 1, 1987 - May 31, 1988

Denise Apperson
Mr. & Mrs. Roger Baker
Nancy Barber
Dan Barker
Robert Boyer
Steve Clabaugh
Mark Cloos
Doris Cornell
Ronald K. DeFord
Samuel P. Ellison, Jr.
Edgar Guevara
Mark Gordon
Adel M. Hassan
Chris Henry
Anatoly Kaplan
Richard Kyle
Wann Langston
Leon Long
Rick Major
John Maxwell
Earle McBride
Fred McDowell
William R. Muehlberger
Helmer Ode
Peter Rose
Harrison L. Saunders
Jack Sharp
C. K. Shepherd
A. Richard Smith
Jasper L. Starnes Family
Glen Vargas
Paul Weimer
Chock Woodruff
Keith Young

Geology Foundation Endowment Accounts

(June 1, 1987-May 31, 1988)

Fund	Goal	Current Endowment
Edwin Allday Centennial Chair in Subsurface Geology Income supplements salary of recipient	$500,000	$590,000
Edwin Allday Lectureship in Geological Sciences To provide for guest lecturers in geological sciences	$200,000	$ 63,989
Alternative Energy Research and Development Fund For study of energy sources other than petroleum	$187,250	$187,250
E. M. Barron Trust For support of the Barron Mineral Collection	Unspec.	$ 99,877
Leonidas T. Barrow Centennial Chair in Mineral Resources Development of program of excellence in mineral resouces; income supplements salary and research of recipient	Unspec.	$828,926
Bloomer Fund for Motivated Students Financial aid for students not qualified for scholarships	Unspec.	$ 45,852
Leslie Bowling Professorship To attract persons from industry and government for short-term appointments on the faculty	$100,000	$63,306
Wayne F. Bowman Endowed Presidential Scholarship Unrestricted geology scholarships, any level	Unspec.	$ 90,494
Don R. and Patricia Kidd Boyd Lectureship in Petroleum Exploration To provide for guest lecturers in petroleum exploration	Unspec.	$ 42,000
Robert E. Boyer Centennial Professorship in Geology Income supplements salary and research of recipient	Unspec.	$280,064
Brahman Energy Scholarship Senior field course scholarships	Unspec.	$ 15,120
Jesse L. Brundrett Memorial Endowed Presidential Scholarship Graduate student scholarships	$25,000	$25,025
Fred M. Bullard Professorship Excellence in teaching, income supplements salary of recipient	$100,000	$56,592
Hal H. Bybee Memorial Fund Student field support, or support of students researching geologic issues related to public policy	Unspec.	$ 22,940
Hal P. Bybee Memorial Fund Faculty use - research, travel, study, etc.	Unspec.	$389,953
L. W. Callender Memorial Fund Departmental use, unrestricted	Unspec.	$ 50,200
Dave P. Carlton Centennial Professorship in Geology Income supplements salary and research of recipient	Unspec.	$430,740
Dave P. Carlton Centennial Professorship in Geophysics Income supplements salary and research of recipient	Unspec.	$456,694
Dorothy Ogden Carsey Memorial Scholarship Fund Geology scholarships, any level; special consideration to micropaleontology students	Unspec.	$ 79,075
S. E. Clabaugh Fund in Hard-Rock Geology To support research in hard-rock geology	Unspec.	$ 23,237
W. Kenley Clark Memorial Endowed Presidential Scholarship Geology scholarships, any level	Unspec.	$ 42,400
Robert H. Cuyler Endowed Presidential Scholarship Undergraduate (upper-division) and graduate scholarships	Unspec.	$ 43,954
Morgan J. Davis Centennial Professorship in Petroleum Geology Income supplements salary and research of recipient	Unspec.	$572,535
Ronald K. DeFord Field Scholarship Fund Field studies for graduate students	Unspec.	$139,849
Alexander Deussen Professorship in Energy Resources Development of program of excellence in energy resources; income supplements salary and research of recipient	Unspec.	$114,255
Michael Bruce Duchin Centennial Memorial Endowed Presidential Scholarship Scholarship for Master's candidate with preference toward general geology	Unspec.	$ 29,500
Elf Aquitaine Petroleum Faculty Fellowship in Geological Sciences Income supplements salary and research of junior faculty member	$100,000	$ 100,000
John E. "Brick" Elliott Centennial Professorship in Geological Sciences Income supplements salary of recipient	Unspec.	$248,541

Fund	Goal	Current Endowment
Samuel P. Ellison Jr. Endowment Fund For Department *Newsletter* and support of faculty-alumni functions	$100,000	$ 62,986
Energy and Mineral Resources Fund Support of programs and students in energy and mineral resources	$100,000	$ 23,501
William Stamps Farish Chair in Geology Income supplements salary and research of recipient	Unspec.	$338,500
Peter T. Flawn Centennial Chair in Geology Income supplements salary and research of recipient	Unspec.	$566,470
Geology Foundation Advisory Council Centennial Teaching Fellowship in Geological Sciences Income supplements salary and research of junior faculty member	$ 50,000	$ 50,000
Geology Foundation Advisory Council Special Maintenance Fund Maintain teaching and research equipment	$250,000	$ 58,825
Geology Foundation Advisory Council Special Operations Fund Purchase teaching and research equipment	$250,000	$ 23,125
Getty Oil Company Centennial Chair in Geological Sciences Income supplements salary and research of recipient	Unspec.	$749,987
Miss Effie Graves Memorial Fund Department needs (faculty support, student aid, special equipment, etc.)	Unspec.	$ 23,033
Guy E. Green Endowed Presidential Scholarship Geology scholarships, any level	Unspec.	$ 27,548
J. Nalle Gregory Professorship in Sedimentary Geology Development of program of excellence in sedimentary geology; income supplements salary and research of recipient	Unspec.	$108,786
Gulf Oil Foundation Centennial Professorship in Geology Income supplements salary and research of recipient	Unspec.	$215,000
George S. Heyer Memorial Fund Any purpose of the Foundation	Unspec.	$ 84,570
William 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 Scholarship in petroleum or field geology in honor of Joseph S. Cullinan	Unspec.	$ 39,320
Hogg-Sharp Scholarship in petroleum or field geology in honor of Walter Benona Sharp	Unspec.	$ 39,320
Houston Oil & Minerals Corporation Faculty Excellence Awards In recognition of outstanding service and special contributions to the teaching and research programs	$ 40,000	$ 40,000
F. Earl Ingerson Graduate Research Assistance Fund in Geochemistry Research assistance to graduate students in geochemistry	Unspec.	$ 12,575
John A. and Katherine G. Jackson Centennial Teaching Fellowship in Geological Sciences Income supplements salary and research of junior faculty member	Unspec.	$107,000
Carolyn G. and G. Moses Knebel Teaching Awards Annual Distinguished Teacher Award, Innovative Improvement and New Course Development	Unspec.	$ 71,399
Clara Jones Langston Centennial Lectureship in Vertebrate Paleontology To provide for guest lecturers in vertebrate paleontology	Unspec.	$ 20,000
Wann and Marietta Langston Research Fund in Vertebrate Paleontology Faculty research in vertebrate paleontology	Unspec.	$ 86,139
Jack K. Larsen--Mesa Petroleum Co. Fund in Sedimentary Geology Support of the Department's program in sedimentary geology	Unspec.	$108,393
Howard R. Lowe Vertebrate Paleontology Endowment Support of student field work in vertebrate paleontology	Unspec.	$ 25,683
J. Hoover Mackin Memorial Scholarship Fund Graduate geology scholarships	$ 20,000	$ 19,585
John H. and Lujza P. McCammon Endowed Scholarships Upper-division undergraduate scholarships	Unspec.	$ 10,280
Mr. and Mrs. L. F. McCollum Endowed Scholarships Geology scholarships, any level	Unspec.	$ 17,574
Frank W. Michaux Scholarship Fund Geology scholarships, any level	Unspec.	$ 10,266

Fund	Goal	Current Endowment
Carroll C. Miller Endowed Presidential Scholarship Geology scholarships to students pursuing careers in energy industries; preference to students from south Texas	Unspec.	$ 29,673
Fred L. and Frances J. Oliver Lectureship in Texas Hydrology and Water Resources To provide for guest lecturers in water resources	$ 25,000	$ 25,000
Judd H. Oualline Endowment Fund For special needs of the Department	Unspec.	$ 11,001
Judd H. and Cynthia S. Oualline Centennial Lectureship in Geological Sciences To provide for guest lecturers in geological sciences	Unspec.	$ 24,000
Judd H. and Cynthia S. Oualline Centennial Lectureship in Petroleum Geology To provide for guest lecturers in petroleum geology	Unspec.	$ 26,656
Ed Owen-George Coates Fund Publication of geological research related to Texas by faculty and graduate students	Unspec.	$103,522
Bill R. Payne Centennial Teaching Fellowship in Geological Sciences Income supplements salary and research of junior faculty member	Unspec.	$ 57,900
Joyce Bowman Payne Centennial Teaching Fellowship in Geological Sciences Income supplements salary and research of junior faculty member	Unspec.	$ 52,900
Pennzoil and Pogo Producing Companies - William E. Gipson Scholarships Scholarships for UT graduates seeking Masters degrees at UT	Unspec.	$ 70,900
O. Scott Petty Geophysical Fund Development of program of excellence in geophysics	Unspec.	$123,018
Wallace E. Pratt Professorship in Geophysics Development of program of excellence in geophysics; income supplements salary of recipient	Unspec.	$145,379
Louis and Elizabeth Scherck Geology Scholarship Undergraduate (upper division) and graduate scholarships	$100,000	$100,000
Wilton E. Scott Centennial Professorship Income supplements salary and research of recipient	Unspec.	$212,000
The Shell Companies Foundation Centennial Chair in Geophysics Income supplements salary and research of recipient	$750,000	$810,000
The Shell Companies Foundation Distinguished Chair in Geophysics Income supplements salary and research of recipient	$750,000	$815,000
Frederick W. Simonds Endowed Presidential Scholarship Scholarships to undergraduate (upper division) and graduate students	Unspec.	$ 25,510
William T. Stokes Centennial Teaching Fellowship in Geological Sciences Income supplements salary and research of junior faculty member	Unspec.	$107,000
Structural Geology and Tectonics Fund For support of faculty and student research and structure and tectonics	Unspec.	$20,050
H. Tod Sutherland Memorial Scholarship Fund For summer research support for graduate students	Unspec.	$17,765
David S. Thayer Memorial Scholarship Fund Senior field course scholarships	Unspec.	$ 26,160
Tobin International Geological Map Collection For purchase of maps and photos, storage and viewing facilities for these items	$100,000	$ 69,882
Udden Memorial Scholarship Fund Geology scholarships at any level	Unspec.	$ 10,565
Glenn and Martha Vargas Gemological Scholarship in Geological Sciences Scholarship for students interested in gemology or mineralogy	$ 15,000	$ 15,000
Various Donors (General) Unrestricted funds for furtherance of basic geological education, research, graduate study, field work, travel, Foundation operation, salaries, etc.	Unspec.	$ 17,500
Joseph C. Walter, Jr. and Elizabeth C. Walter Geology Library Fund Acquisition of books, maps and other library materials	Unspec.	$169,598
Albert W. and Alice M. Weeks Centennial Professorship in Geological Sciences Income supplements salary and research of recipient	Unspec.	$138,989

Fund	*Goal*	*Current Endowment*
E. A. Wendlandt Fund Purchase of books and journals in German or English translations	Unspec.	$ 6,790
Arno P. (Dutch) Wendler Professional Development Fund Support of graduate student presentations at professional meetings	Unspec.	$ 83,280
Francis L. Whitney Endowed Presidential Scholarship Geology scholarships, any level, paleontology and stratigraphy preferred	Unspec.	$ 40,364
Francis L. Whitney Memorial Book Fund Purchase of paleontological books for library	Unspec.	$ 11,431
John A. Wilson Professorship in Vertebrate Paleontology Development of program of excellence in vertebrate paleontology; income supplements salary of recipient	Unspec.	$105,257
Charles E. Yager Undergraduate Field Scholarship Fund Support of students taking Geology 660	Unspec.	$42,823
Mr. and Mrs. Charles E. Yager Professorships Three professorships in any discipline for faculty who participate in field instruction	Unspec.	$344,500

New Endowment Targets Structural Geology and Tectonics

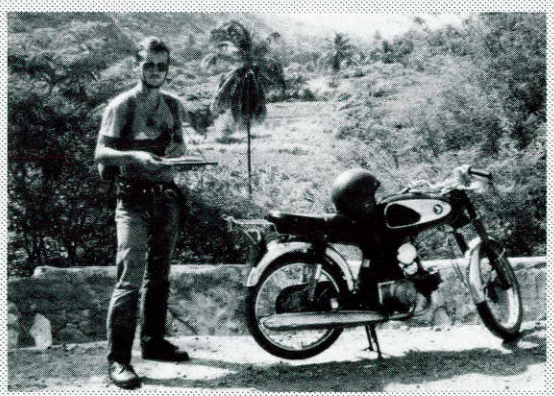
For the past several years it has been a goal of the Geology Foundation to establish endowments for each of the various subjects areas in the Department. Such endowments include the O. S. Petty Geophysical Fund, the Jack K. Larsen-Mesa Petroleum Company Fund in Sedimentary Geology, the Clabaugh Fund in Hard-Rock Geology, the Energy and Minerals Resources Fund, the Carsey Memorial Fund with emphasis on micropaleontology, and the Wann and Marietta Langston Fund in Vertebrate Paleontology. To the surprise and delight of the faculty, an anonymous donor chose in late 1987 to endow the Structural Geology and Tectonics Fund to support faculty and student research in those areas. The donor's initial gift was $20,000, with a pledge for a total endowment of $100,000 to be paid over the next five years.

Income from the endowment of the fund can be used to help students with various costs associated with their theses, including attendance at short courses held in conjunction with professional meetings. This fund will make it easier for students to pursue thesis topics and areas for which their supervisors do not have a grant. It can also be used to repair and update equipment or to purchase structure teaching aids.

Current faculty members in the subject area of structural geology and tectonics include Mark Cloos, Ian Dalziel, Sharon Mosher, Bill Muehlberger, and Nick Walker. The existence of this new endowment will enhance the research capabilities of these members of the teaching staff and provide for costs associated with their students' projects.

First H. Tod Sutherland Scholarship Awarded

Shortly before the 1987 *Newsletter* was published last summer, the tragic death of H. Tod Sutherland, Master's student, stunned faculty, staff, and students. Tod was shot by an unknown assailant while he was completing his field work along the California coast near Fort Bragg. His death profoundly affected his family and friends outside the geologic community, as well as his fellow students and friends within the Department. In August, 1987, graduate students initiated efforts to fund the H. Tod Sutherland Memorial Scholarship Fund as a permanent tribute to their friend. By early September, the $10,000 minimum needed to establish the endowment had been donated by Tod's family, friends, and former co-workers from Chevron Geoscience Company. The fund had accrued almost $18,000 by the end of May, with additional pledges to bring the total to almost $30,000. Consensus among the graduate students indicated that the scholarship fund should provide summer research support for finishing graduate students.



Christoph in field area, Dominican Republic.

On May 5, at the final Technical Sessions class of the semester, Christoph Heubeck was announced as the first recipient of the H. Tod Sutherland Memorial Scholarship. Christoph is a native of Ansbach, West Germany and studied at the University of Würzburg before coming to Austin in September, 1985 to complete his Bachelor's degree. Christoph became a graduate student in fall, 1986. His thesis topic is "Geology of the Southern Termination of the Cordillera Central, Dominican Republic."

In Memoriam

Neal J. Bingman (BA '26) died on February 2, 1987 at the age of 85, in Wichita, Kansas. After receiving his degree from the University of Texas, Mr. Bingman worked for the U.S. Geological Survey and Standard of Texas. In 1936 he joined Amerada Petroleum Corporation in Midland. He moved to Wichita in 1947 as district geologist, and continued to live there after his retirement from Amerada in 1966. In addition to Texas and Kansas, he worked in Oklahoma, New Mexico, Colorado and Nebraska. He was a member of the Kansas Geological Society and the American Association of Petroleum Geologists.

Mr. Bingman is survived by his wife, Opal Turner Bingman, who lives in Edmond, Oklahoma; and a son, Frank, and his family, who live near Oklahoma City.

Murray E. Body (BA '32) died on December 21, 1987 at his home in Fort Lauderdale, Florida. Mr. Body's career included six years as vice president of Tidewater Oil Company in Europe and the Middle East. He then became president of Oasis Oil Company of Libya with offices in Tripoli and New York. After his retirement from Oasis, he lived in Madrid, Spain for several years. During his retirement he enjoyed acting as petroleum advisor to Hispanol (Spanish Oil Company) and traveling.

Horace C. (Dave) Davis (BA '40) died on August 16, 1987 in Great Bend, Kansas at the age of 69. While he was a geology student at UT, he was a member of Sigma Gamma Epsilon and Phi Beta Kappa. After graduation he worked in Caracas, Venezuela for two years, then worked as a surface geologist for Gulf Oil Company in Nicaragua. In 1943 he moved to Wichita, Kansas, working at first for Texas Company, then after two years becoming chief geologist for Vickers Petroleum Company. He moved to Great Bend, Kansas in 1954 and began Davis Drilling, Inc., a drilling and production company of which he was president for 27 years.

Mr. Davis was greatly interested in politics, especially at the local level, and felt a sense of responsibility to participate in his community government. He served on the City Council of Great Bend for four years, and served two terms as mayor of Great Bend from 1965 to 1969. He was active in a number of civic organizations in Kansas, and belonged to the American Association of Petroleum Geologists, and the Kansas Independent Oil and Gas Association.

Mr. Davis is survived by his wife, Uldine Burroughs Davis, of Great Bend; a son, Chuck, in Davenport, Iowa; a son, Bill, who lives in Spring Hill, Kansas; a daughter, Cindy Davis Rice of Anderson, Indiana; and five grandchildren.

Richard B. Hale (MA '68) passed away on April 22, 1988 in Austin after a lengthy illness. He was 75 years old. During World War II he served in the U.S. Navy. For 35 years Mr. Hale was a geophysicist for Shell Oil Company. After leaving Shell, he returned to Austin to get a Master's degree in Earth Science Education, which he received in 1968. He taught earth science at Murchison Jr. High School in Austin until 1978. During his retirement years, he traveled extensively and volunteered as a reader for recording for the blind.

Mr. Hale was a friend and staunch supporter of the University of Texas. A frequent visitor to the Department of Geological Sciences, he attended open houses and other events in the Department. Since 1984 he had also served as an associate member of the McDonald Observatory and Department of Astronomy Board of Visitors.

Mr. Hale is survived by his son, Gerald, of Los Alamos, New Mexico; his daughter, Carol Hale Neubauer, of Austin; and three grandchildren.

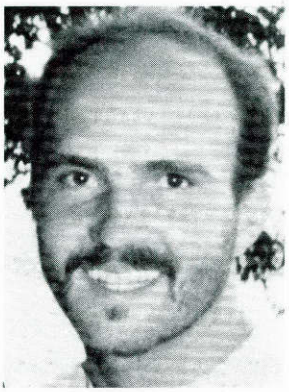
Holland C. McCarver

Holland C. McCarver died in Austin on November 27, 1987. He was born in Smithville, Texas on July 29, 1913. He attended the University of Texas from 1931 to 1937, lacking only one semester in German to complete the BS degree. He joined Geophysical Service Inc. in 1937. He worked from October 1939 until January 1942 in Sumatra, Indonesia. Mr. McCarver was employed by Seaboard Oil Company in January 1944, and was assistant vice president and manager of exploration for Seaboard when Seaboard was bought by Texaco in 1958. Mr. McCarver continued to work for Texaco from 1958 to 1972. During those years he worked in New York, Coral Gables, Florida, and Houston, where he lived at the time of his retirement. Mr. McCarver was involved in discoveries of the fields of Minas and Dura, Sumatra, Indonesia; Horsehoe Reef, West Texas; Block I, Lake Maracaibo, Venezuela; Pembina, Alberta, Canada; and Oriente, Ecuador. He held membership

in the American Association of Petroleum Geologists, Society of Exploration Geophysicists, Dallas Geophysical Society, and Dallas Geological Society. From 1971 to 1980 he served as a member of the University of Texas Geology Foundation Advisory Council.

Although Mr. McCarver was well known for his expertise in geology and geophysics, he was probably appreciated as much for his wit and sense of humor as for his scientific skills. During Mr. McCarver's years of service on the Geology Foundation Advisory Council, his letters and visits were always a treat for faculty and staff in the Department. It was not unusual for him to send his written communications in clever verse form. Several poems he wrote have appeared in issues of the alumni *Newsletter*. He loved to discuss traveling and his hobby of raising orchids.

Mr. McCarver is survived by his wife, Donna Molloy McCarver of Austin, and his daughter, Holly, of California.



David N. Purgason

David Nelson Purgason (BS '83) passed away in Austin on February 10, 1988 at the age of 29. After his graduation from UT he began working in the Water and Wastewater Department of the City of Austin, first as a laboratory technician and then since January, 1985 as an industrial waste specialist. He was a member of the Water Pollution Control Federation and represented the City of Austin at an international conference in Monterrey, Mexico in August 1986. At the conference he presented a paper on industrial waste monitoring. When the City of Austin hosted their own pre-treatment seminar in April, 1985 Mr. Purgason presented the field laboratory and monitoring portion of the three-day program.

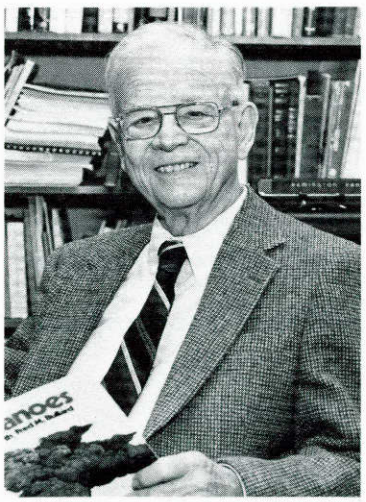
Mr. Purgason is survived by his parents, Dr. and Mrs. John R. Purgason of Austin, brothers John, Raymon, and James of Austin; a brother Thomas, of Arlington, and sisters Judy and Laura, also of Austin.

M. Frank Reedy, Jr. (MA '39) died on December 22, 1987 at his home in Dallas. He was 72 years old. Mr. Reedy received a BS degree in Geology and a BA degree in geography in 1936 from Southern Methodist University. He taught geology at UT in 1939-40, worked briefly for the Coronado Corporation, then from 1940 to 1943 he worked for Crown Central Petroleum Corporation in Houston. He served as an officer in the U.S. Navy in the Pacific during World War II. After the war he returned to Houston, working once again for Crown Central Petroleum. In 1951 he moved to Dallas to become chief geologist for the Republic Natural Gas Company. In 1958 he began working as an independent geologist.

Mr. Reedy was a member of the Society of Exploration Geophysicists, Dallas Geological Society, Dallas Geophysical Society, and Society of Independent Professional Earth Scientists, and the American Association of Petroleum Geologists. He was awarded the AAPG President's Award in 1949.

Mr. Reedy is survived by his wife, Sarah Barrow Reedy; a son, Frank Barrow Reedy; and a grandson.

William M. Rust, Jr. died on September 24, 1987. He received his AB degree in 1928 and the MA degree in 1929, and received his PhD in mathematics in 1931, all from Rice Institute. He graduated Phi Beta Kappa. In 1931-32 he was an instructor in mathematics at Rice, then in 1932-33 he was an international exchange fellow at the Charlottenburg Polytechnic Institute in Berlin, Germany. He was an instructor and tutor in math at Harvard University from 1933-1934. In 1934 he joined Humble Oil & Refining Company as a research geophysicist. Dr. Rust became head of geophysics research in 1937, then became assistant chief geophysicist in 1955. In 1961 he was made exploration administrative manager and became manager of the exploration data processing center for Humble (Exxon) in 1967. He retired from Exxon in August, 1969 and moved to Austin.



William M. Rust, Jr.

Dr. Rust began teaching a course in exploration geophysics as a lecturer in the Department of Geological Sciences in the fall of 1969. In 1970 he expanded the course offering in geophysics by teaching solid earth geophysics. During those first years at UT he actively developed facilities for geophysical research and teaching. In September, 1972 he became an Adjunct Professor in the Department. He chaired the search committee in 1972 that was responsible for hiring an assistant professor in geophysics, Wulf Massell, then chaired the committee to hire the first faculty member to fill the Pratt Professorship in Geophysics, Milo Backus, who joined the faculty in 1975. His

impact on the beginning of the geophysics program at UT was substantial.

A long-time member and former officer of the Society of Exploration Geophysicists, Dr. Rust was elected to honorary membership in 1982. He was a charter member of the Houston section of the IEEE, was elected a fellow in the Institute of Radio Engineers, and served as chairman of the Central Committee on Radio Facilities for the API, among many other professional affiliations and accomplishments.

Dr. Rust is survived by his wife, Margaret, of Austin and by his son, William Monroe III in Gualala, California.

G. Russell Sparenberg (BA '30, MA '32), age 81, died on April 17, 1988 in Kerrville, Texas. After graduation from UT, he did geological work in Venezuela from 1933-35, and in the Dominican Republic from 1937-38. In World War II he served as a lieutenant commander in the U.S. Navy, and received a letter of commendation from the Navy for his work at Omaha Beach and other areas during the war. He worked as a petroleum geologist in Houston for Texas Eastern Gas Transmission. After his retirement he continued to live in Houston for several years, then in 1982 moved to Kerrville, Texas. He was a member of the American Association of Petroleum Geologists, the Houston Geological Society, and the Hill Country Geoscientists in Kerrville. He was also active in several musical groups in the Kerrville area.

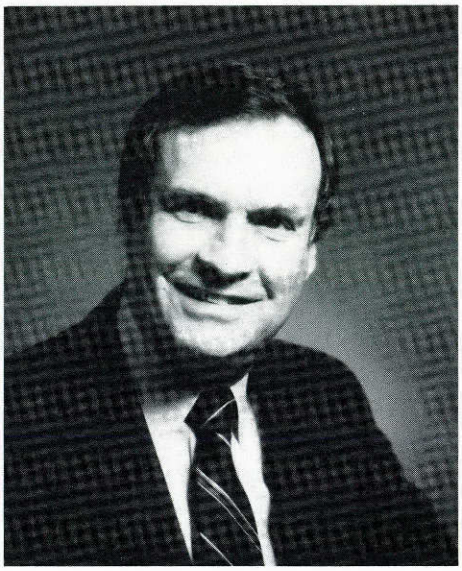
Mr. Sparenberg is survived by his wife, Orlena Allen Sparenberg of Kerrville; a nephew and three nieces.

Jasper L. (Jap) Starnes (BS '47, MA '48) died on March 17, 1988 at the age of 69 after a year-long struggle against lung cancer. He was employed as a geologist by Atlantic Richfield Company for thirty years, retiring as manager of foreign exploration in 1973. He worked periodically as a consultant during his retirement, but he spent most of his time raising cattle on his farm near Wills Point, Texas.

Mr. Starnes is survived by two daughters, Marcy Starnes and Molly L. Turey.

Arthur J. Wessely (BS '50) passed away on September 13, 1987 at the age of 60 in Dallas. He had served in the U.S. Navy in the Pacific during World War II. After graduation, he worked with Petroleum Service and Research Company, Sun Oil Company, Core Laboratories, H. J.Gruy & Associates Inc. Global Oils Inc. and W. C. Pickens. He became a partner and exploration manager of Wessely Petroleum Limited in 1965 and formed Arthur J. Wessely in 1968. In 1971 he and several associates founded Wessely Energy Company in Dallas.

Mr. Wessely was active in a number of professional organizations, including the American Association of Petroleum Geologists, Dallas Geological Society, Oklahoma City Geological Society, Southwestern Federation of Geological Societies, and was founder and past chairman of the Dallas Energy Political Action Committee. He had been a leader in lobbying and political activities associated with the oil industry in



Arthur J. Wessely

Washington since 1977. In September, 1985 Mr. Wessely was elected to membership on the Geology Foundation Advisory Council, and was serving in that capacity at the time of his death.

Mr. Wessely is survived by his wife, Chris; two daughters, Pat Mitchell of Texarkana, Texas and Carolyn Wolffarth of Plano, Texas; and five grandchildren.

James A. Wheeler (BA '47) passed away on September 13, 1987, at the age of 71, in Houston. He attended Victoria Junior College and the University of Houston before completing his BA degree in geology at UT. From 1936-1942 Mr. Wheeler was a draftsman and scout for Navarro Oil Company. He was a pilot in the U. S. Air Force during World War II, and was awarded the Silver Star and the Purple Heart. In 1945-46 he was an assistant geologist for Atlantic Refining Company before returning to school to complete his degree. After graduation, he worked for Tennessee Gas Transmission Company until 1949, when he joined Fidelity Oil & Royalty Company. In 1955 he was a consulting geologist for Howard and Wheeler, then in 1956 he began consulting on his own.

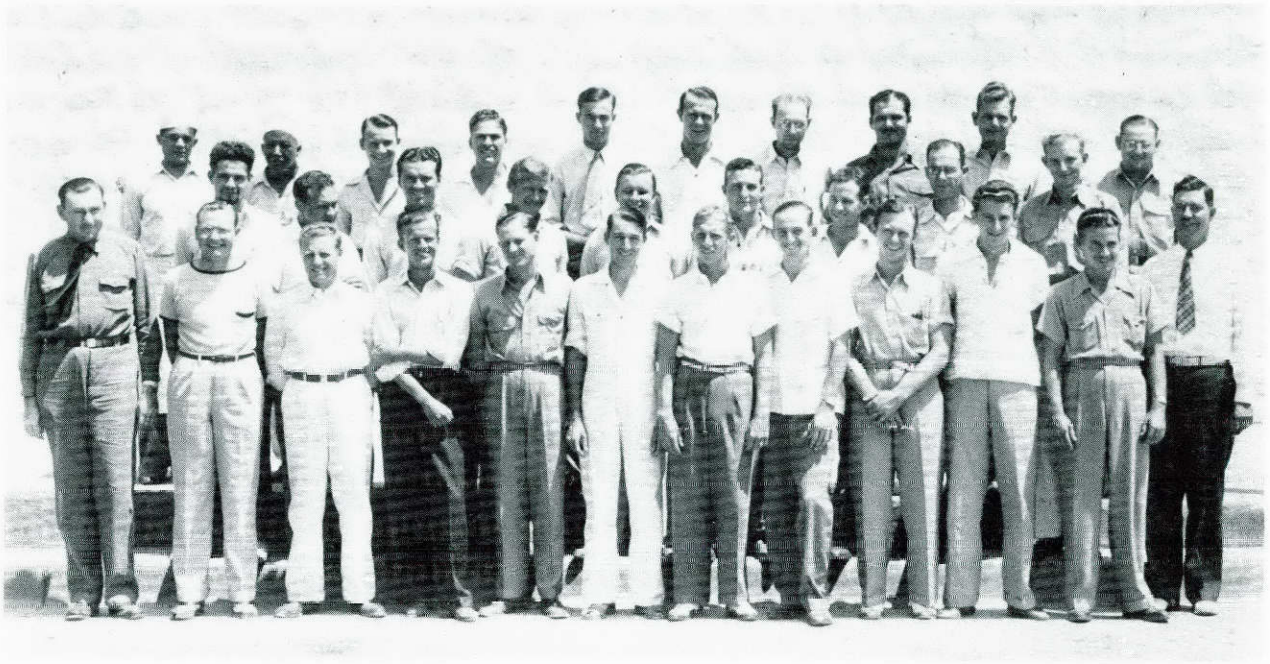
He was a member of the American Association of Petroleum Geologists, the American Institute of Professional Geologists, and held an honorary life membership in the Houston Geological Society. Mr. Wheeler also belonged to the South Texas Geological Society and the Society of Independent Professional Earth Scientists.

Mr. Wheeler is survived by his wife, Jerry; two daughters, Jane Ferguson and Janis Pinnelli; and three grandchildren.

Hans Winkler (BA '28, MA '29) died on July 10, 1987 in Roswell, New Mexico. He was 81 years old. Mr. Winkler served in the U.S. Navy as a personnel officer during World War II, attaining the rank of lieutenant commander. He was a geologist for 32 years with Sun Oil Company.

He is survived by his wife, Arloan Corrinne Merrill Winkler, of Roswell.

Alumni News



1940 Geology Summer Field Camp at Brady, Texas. Front row, l-r: Dr. Robert Cuyler, Charles Gardley Moon, Pat Wells, J. B. Means, Clyde Turner, Freeman Orman, Jerome Terry, J. Dallas Smith, Bill McBroom, John Meyer, Tom Muse, Dr. F. M. Bullard. Second row, l-r: Wilford L. Stapp, Pete Harder, Earl Bescher, Dan Holland, Roger Wiley, Lincoln Warren, B. Davis, "Happy" Kimball, Leslie Taylor, Robert Hackbarth. Third row, l-r: "Tom" (cook), "Sam" (cook), James Alcorn, Harold Jones, Bob Mathis, Judd Hutchison, Julius Buchanan, George Pappas, John Stripling. (Photo provided by Julius Buchanan, with thanks to Wilford Stapp for assistance in identifications.)

Edwin V. Acker (BS '56) continues living in Tilden, Texas where he is a geologist and rancher.

Samuel C. Adair, Jr. (BS '56) retired from Exxon in 1986 and is "enjoying retirement very much here at Walden on Lake Conroe. Doris and I are heavily involved in many things, especially our church. The golf course is one of the finest in Texas."

G. Baxter Adams, Jr. (BS '51, MA '53) says he has left Houston behind after 25 years there and has bought and moved to a Hill Country ranch near Kerrville. "I spend time propagating native maple trees, growing apples, and continuing to look for prospects in my favorite areas."

Jim W. Adams (BS '51), geological advisor for Exxon, says that he is "really enjoying living in Midland again. Lots of good Texas Exes here. The southwest section AAPG field trip by train and bus to Mazatlan was super. I hope to attend the convention in Nice, France also. I am field trip chairman for WTGS Oct. 13-16 to Guadalupe Mts. and Carlsbad. Come join us!"

J. Wesley Adams (BA '48) writes, "enjoying retirement life after 37 years with Exxon exploration department." He lives in Conroe, Texas.

Bill Akersten (BS '64, MA '67) is now associate professor and curator of vertebrate paleontology at the Idaho Museum of Natural History, Idaho State University, and lives in Pocatello. "Finally managed to get out of Los Angeles to more open country. We even have a trout stream in our backyard. Idaho really has great geology, paleontology, fishing, skiing, etc., but some weird politics—even stranger than those of Texas. Have mostly recovered from a mild heart attack in January, 1987. Sue and Holly doing fine (allowing for culture shock)."

Charles W. Alcorn, Jr. (BS '52) is owner and CEO of Alcorn Companies in Victoria, and CEO of Alcorn International, Inc. in Houston. "My business partner and president of Alcorn International is my brother-in-law, Virgil A. Walston, Jr. (BS

in geology from UT in 1960). Alcorn International is involved in oil and gas production in the Philippines, Thailand and Australia at present." Chuck continues in his capacity as a member of the Geology Foundation Advisory Council.

Elaine Marie Allan (BS '83), a geologist and project manager at International Technology Corporation in Austin, entered UT Law School in May. "Wish me luck: I'm a single mom who owns a house in Austin, and I'm quitting my job to do this. Erika is three years old now, and I hope she'll understand."

Robert Allen (MA '57) writes from Denver, "Been in the Rockies since leaving Austin in 1957. I am currently working the 'Basin and Range' Province—great reserve potential, virtually undrilled, relatively shallow drilling depths."

Fred Altman (BS '42) is an account executive at Paine Webber. He has spent the past ten years in the investment business. "Single once again, two boys (27 and 28); just became a granddad. If ever in Fort Lauderdale, come by to see me."

Gene Ames, Jr. (BS '55), an independent geologist and president of Venus Oil Co. in San Antonio reports "We will be around for at least one more boom." Gene still participates at UT as a member of the Geology Foundation Advisory Council.

James H. Anderson (PhD '85), research specialist for Exxon Production Research in Houston is "still traveling a lot. Debbie and I are staying busy with the two girls, Jackie (1 1/2) and Diane (6 1/2)."

Nancy (Jenswold) Anderson (BA '50) is owner/managing principal of Urban Environment Associates in Dallas. She is "still working on environmental impact studies for highways, airports, even military hospitals. Now president of Cedar Hill Park Board and board member of Cedar Hill Chamber of Commerce. As owner of my own consulting business, I can be choosy about the projects and flexible enough to get in some enjoyable travel to California, Minnesota, New York, and England."

Paul D. Anderson (BS '47) is "still working lots of places to drill but as you know the price isn't right. Peg and I are doing OK. Daughter Karen is in San Marcos, son Ken is ranching in South Dakota." Paul is a partner in W. D. Anderson & Sons in Midland.

Payton V. Anderson (BS '45), partner in W. D. Anderson & Sons in Midland, is still active in oil and gas exploration in all areas except West Coast. "Spend about half my time in travel and golf."

Russ Andress (BS '80) lives in Dallas, where he has been working as a geophysicist for Sun Oil almost three years since leaving Gulf. He is now involved in oil exploration in the Gulf of Mexico.

Carl E. Andrews (BS '58), living in Dallas, is an associate of J.W.L. Investments.

David Angstadt (MA '83), senior geophysicist interpreter for Texaco Overseas in Bellaire, Texas reports an exciting year. "Transferred from Alaskan Exploration in Los Angeles to Far East Exploration in the Houston area (where we bought our first house). Went through a lot of anxiety with the closing of the West Coast office and Chapter 11, but things are looking a lot brighter now."

Edgar P. Armstrong (BS '51) is an engineer manager for the Gulf Coast, working at the Internal Revenue Service in Houston. His first grandchild, a girl (Ashley Armstrong), was born in August 1987.

Robert N. Arrington (BS '51, MA '54) is retired in Houston, and is chairman of Lotus Special Interest Group, a PC users group in Houston.

Larry M. Asbury (BS '59, MA '61) is vice president of exploration for Arco International in Los Angeles. "Arco International's headquarters is moving to Plano, Texas in January '89. Jackie and I will miss Southern California, but look forward to being near old friends in Texas." Larry became a member of the Geology Foundation Advisory Council on September 1.

J. H. Ashley (BS '60) continues as a land man in Houston. "Oldest son Mark is now a geologist. Middle son at A&M in pre-vet. Youngest son in high school and possibly will be a student at the Air Force Academy." Jim says he and Carol are fine.

Carol Evans Avery (MA '86), development geologist in Lafayette, says, "I have been busy with my work at Chevron. I've also volunteered my time to VITA (Volunteer Instructors Teaching Adults to read). My husband's private investigation business is doing well. He started this agency less than one year ago."

Olufemi O. Babalola (MA '84) is chief geophysicist for Afram-Tech International in Houston. "Continuing Gondwanaland continental margin evaluation and hydrocarbon prospect generation; intrigued by research results indicating interesting global-tectonic predictabilities."

Herbert A. Babione (BS '40) writes from Tulsa, "Had I known that my retirement from Exxon in 1982 would devastate the petroleum industry, I would have delayed that action. A big event in our life this year was when Norma and I became great-grandparents. Thanks to the Foundation for the *Newsletter*."

A. C. Baker (BS '51) is an independent geologist in Wichita Falls.

Ernest T. Baker, Jr. (BS '55) continues as senior staff geologist for the USGS in Austin. "Ken is now 26, Laura is 22 and just graduated magna cum laude with BBA degree from Abilene Christian University. Same wonderful wife."

W. F. (Bill) Baker (BS '51), retired in Bullard, Texas writes: "Virginia and I still enjoy life on Lake Palestine. Lots of golf, some fishing and many friends to enjoy."

Linda R. Balcom (BS '87) is an exploration geologist in Fort Worth. "Everyone should have this much fun."

James M. Balogh (BS '72) writes from Houston, "Char, Brigitte and I have been living out of a suitcase this year, traveling to California where Transco is drilling several wells. Brigitte is now learning to talk." Jim is a senior geologist, onshore California, for Transco.

Chris Barker (BS '78) is starting work on his doctorate at the University of South Carolina in Columbia. "Combining field mapping in the Piedmont with geochronologic analysis--hoping to unravel the deformational history of this part of the Appalachian orogen, and by extension, to gain insight into the Phanerozoic history of the North American plate. I am loving it--and it's three hours from Myrtle Beach!"

C. Tucker Barrie (MA '84) is a graduate student in geology at the University of Toronto. "Field trip to Great Dyke of Zimbabwe last summer; radiogenic isotope work at Carnegie Institution this summer. Will graduate in about one year."

Barbara Rae Barron (BS '83, MA '85) has been working for Exxon Co., U.S.A. since September, 1985 with the Automation Plan for Exploration group. She started working on her MS in computer science at the University of Houston in fall, 1987. She married Alan Paksima on April 9, 1988 and honeymooned in the Hawaiian Islands.

Ben Barrow (BS '51) has enjoyed two years of retirement living on family ranch in Utopia, Texas. He is still spending time rebuilding fences, fishing on the gulf coast and vacationing in the Rockies.

Jerald (Jerry) H. Bartley (BS '37) lives in Midland, and continues working as a petroleum geologist and satellite imagery analyst in exploration for oil and gas in all major basins and frontiers of the U.S. He

is "finding use of unconventional methods in exploration for oil and gas, including helium (satellite imagery for lead-in, radiometrics, and audio frequency magnetotellurics), all with success."

Joe Beard (BS '42) is an independent petroleum geologist who lives in Wichita Falls, Texas.

Robert E. Beatty, Jr. (BA '50, BS '54) is a geological consultant in San Antonio.

Gray E. Bebout (BS '81, MA '84), a PhD student at UCLA, is completing his dissertation research on fluid flow and metasomatism in subduction zones.

Fred H. and **Teresa Harkrader Becker** (BS '83, BS '82) live in Slidell, Louisiana. "Fred was promoted from assistant party chief to party chief last summer at Shell. He is responsible for acquisition and processing of data acquired by *R/V New Venture*. Teresa is still interpreting offshore Texas at Amoco and is enjoying recommending and monitoring wells. We would love to hear from anyone that we knew from class or field camp."

Richard C. Beckman (BS '37) lives in South Daytona. "Have been a Florida resident since WWII. Four offspring—all living within stone's throw; married 44 years. My geological training has made each travel experience a field trip. It has enhanced enjoyment of natural wonders and brought benefits in abundance."

Sidney S. Bell (BA '46), self-employed silversmith in Tully, New York, has "nothing much to report--a few more grandchildren, western elk hunts, Alaskan trips. Will teach several courses in engraving at Trinidad State in Colorado—trying to pass on the techniques acquired over the years that aren't found in books."

Walter E. Belt, Jr. (BS '43) comments, "Retirement is great. Virginia and I have planted 4,700 trees. We are raising bass and catfish plus a super vegetable garden. Would like to see/visit/hear from UT schoolmates." Walter lives in Flatonia, Texas.

Allen Bertagne (MA '80) is "still working as a consultant in Denver, although I have also been traveling to California and Texas. I'm doing a lot of work with CGG; most of it consisting of seismic interpretation in different U.S. basins. There's certainly no shortage of challenge. By the way, Denver just isn't the same since The Wildman got transferred out."

Don G. Bilbrey (BS '53, MA '57) writes from New Orleans, "My wife, Eva, died April 30, 1988 leaving me and my daughter, Karen, who is 15, to forge a new life. Things will be different. I'm looking forward to visiting the campus and taking in a football game or two this fall." Don is retired from Gulf Oil Corp.

W. T. Biskamp (BS '54) is manager in the minerals department of Placid Oil in Dallas. He writes, "Daughter married last April. Real estate, oil and minerals are depressed. . .must be time to retire!"

Frank Bissett (BS '82) is a staff associate for Techlaw Inc. in Dallas. "Valerie and I moved from Austin to Dallas last fall so that I could start a new job with an environmental consulting firm based in Denver. We provide litigation support services to the EPA."

T. K. Bjorklund (MA '62) lives in Denver, where he is division exploitation geologist for Amoco Production Company. "Last summer I visited China for three weeks as a guest of the Ministry of Petroleum Industry and lectured on development geology in Beijing and at Dagang oil field. I am continuing to study the Chinese language and hope to become involved in oil and gas exploration in China in the future."

Robert H. Blodgett (PhD candidate) is in Austin continuing work on his PhD. "The past year has been one of personal and professional growth. I have published three papers on trace fossils and paleosols, and have made substantial progress on my dissertation. For ten months I worked part-time at the Bureau of Economic Geology on the sedimentology of late Cenozoic deposits of the High Plains. This fall I will co-lead a GSA Centennial field trip to southeastern Wyoming to examine the Oligocene White River Fm."

Patricia Bobeck (MA '85) continues to combine her linguistic talent and geological expertise in her growing translating agency, Geotechnical Translations, in Austin. Her recent work has ranged from translating French geologic articles for a major oil company to providing a Chinese

A *cold field trip in 1942, led by Bill Bramlette, Instructor (center). (Photo provided by Jean Ott Williams.)*

interpreter for the federal court in Austin. She and her husband, Bob Kinney, who is publications director at the Episcopal Theological Seminary of the Southwest, have one son, Dennis. "A robust, soon-to-be two-year-old, Dennis is a rock-hound—he enjoys stuffing his mouth with rocks."

Neil T. and **Linda Merritt Bockoven** (MA '76, PhD '80; MA '80) are both employed by Exxon in Denver. "Neil, Linda and Alison announce the birth of Eric Thomas, born 3/17/88 (St. Patrick's Day)."

Steven Bond (BS '74, MA '82) is a staff geologist for the Lower Colorado River Authority in Austin. "I used to say that I would *never* work for a State agency or in coal. There must be a lesson here, somewhere!"

John L. Boone (BS '73, MA '79) says, "I've evolved through the downturn crisis from an oil and gasser to a glower-in-the-dark and jack-of-all-trades. The key to survival is adaptation and luck. My regards to those who've made it." John is currently employed as a uranium geologist for Everest Minerals Corporation in Corpus Christi.

Clint Booth (MA '56) lives in Dallas where he is president of Booth Energy Company.

Silverio Bosch (BS '74, MA '75) is an independent petroleum geologist in Corpus Christi. "The worst for the oil industry is hopefully, and mercifully, behind us. Lisa and the awaited arrival of our first 'rock collector' in June have kept our spirits in high gear. Take my deals, please!"

Gregory M. Bourland (BS '80) has been married to Patti Yates (BS '80) for six years. They have a daughter, Megan (18 months old) and are expecting their second child in August. Greg is a gas control representative for Amalgamated Gas Pipeline Company in Houston. "I worked for Fina Oil and Chemical Company for eight years as a geologist in their Houston and Oklahoma City offices and have just made the move to gas control. It looks like a good move for Patti and me."

Walter A. Boyd, Jr. (BS '53) became chief reservoir geologist for Columbia Gas Transmission Corp. in Houston in August, 1986, and put off retirement for a while.

Southern Bower (BS '50) writes, "In January, Ann and I moved to Luling. We are now in the process of building ourselves a new home on three acres outside of Luling. In my spare time I have been repairing, restoring and refinishing furniture. Retirement is busier than ever."

Felicia M. Boyd (MA '82) is a hydrogeologist for R. W. Harden and Associates, Inc. in Austin.

Walt V. Boyle (BS '54, MA '55) is a geologist for Shell Western Exploration and Products, Inc. in Houston. He writes that he is "prospecting in the Permian Basin and surrounding areas."

Robert W. Bradley, Jr. (BS '56), a consulting petroleum geologist in New Orleans, is "still working the Smackover Trend in the southeastern states. Sandra and I have a new weekend pastime, collecting shark teeth. Largest find is 88mm (Glendon Limestone--Oligocene, Waynesboro, Mississippi)."

Philip Braithwaite (MA '58) writes from Dallas, "Last November I was transferred to Mobil's research lab to act as a coordinator for the reservoir analyst group. The change is exposing me to a lot of new technologies and ideas as well as being a less stressful environment and easier to commute."

Charles M. Brasier (BS '83) is now a medical representative of Lederle Laboratories in Houston. "Recently returned from Rank Xerox (UK) Ltd. in London to accept a sales position in the pharmaceutical industry. Looking forward to moving into international operations."

Tom Breedlove (BS '54) is a geologist with Marathon Oil in Lafayette.

Jeanne L. Brennan (BS '83) works as a processing geophysicist for Marathon Oil Company in Houston.

Bill Brenner (BS '58, MEd '60) is retired in Alpharetta, Georgia.

James Gregory Brewton (BS '83), a seismologist in Houston, says he "spent two years in China doing seismic interpretation in the Songliao Basin (Taikang area) and the Bohai Bay Basin (Dagang area)."

Ben M. and **Anne L. Brigham** (BS '83; BS '84) live in Dallas, where Ben is busy in exploration with Rosewood Resources, and Anne is in her first year at SMU Law School.

M. H. (Buddy) Brock (BS '56) looks after farming interests and investments in Ganado, Texas. "Three grandkids keeping me busy. Business is slow but still hanging in."

Ken Brook (BS '67), is president of Desert Ventures, Inc. in Reno, Nevada. "Gold exploration activity has reached a near frantic pace as every company seeks a land position in the hot areas. Field work along with mergers and acquisitions for our clients keeps us quite busy. All will be fine as long as the price of gold stays up. Family fine."

Charles Douglas Brown (BS '84) has served as a production development geologist for Sun Exploration and Production Company since January, 1987, working onshore south Texas Gulf Coast properties. He lives in Corpus Christi.

Gib Brown (BS '76), independent geologist in Amarillo, comments, "Jeannette and I are still married and are still having kids; #4 is due in April. Twelve years after graduating I have yet to miss school."

Wallace E. Brunson (BS '42, MA '54) writes from Houston, "The retirement life is great whether traveling, slipping logs, or just doing nothing."

James Elwood (Woody) Bryant (BS '43, MA '48) does part-time consulting for Ray Holifield and Associates in Richardson, Texas. "My geological activities very slow during '86 and '87; however, I did originate a prospect or two. In the process, I found out that the demand for wildcat prospects was very low. Hope this finds my friends and associates hanging in there and doing well."

Julius A. Buchanan (BS '41) writes from Tyler that he is "still retired doing volunteer work and writing a book. Also reminiscing about the times we attended UT."

Richard T. Buffler (BS '59) returned to the Department and the Institute for Geophysics in September, 1988 after a two-year leave of absence with the National Science Foundation as program director with the Ocean Drilling Program. "Living in Washington, D.C. and working as a government bureaucrat was a unique and rewarding experience. It even included living with my wife on a more permanent basis, instead of commuting between Austin and Houston, as we are now back to doing. But I'm really glad to be back in Austin and am excited about returning to research and teaching."

Thais Jeanne Bullard (MA '51) is owner of Valverde Parke vacation and long-term residential rentals in Taos, New Mexico. "Taos is beautiful and flourishing. Wonderful place for geologists to visit. I am drawn to Hawaii for the winters; our family reunion on Waikiki Beach was complete with my dad, Dr. Fred Bullard, in attendance."

Terrie L. Buratti-Jordahl (BA '84) is a research supervisor for Graphics Information Inc. in Austin.

Claude M. Burnett (BS '51) writes from Dallas, "Having made the agonizing decision about a year ago to begin the process of retirement, my wife and I hope to have time to move around and perhaps visit a few old friends."

1946 summer field camp, Ft. Davis, led by Dr. Gus Eifler and Gordon McNutt. L-R: Abdullah Tariki, R. B. Vickers, John Means, Gordon McNutt, Doug Keenan, Charles Liebscher, Hal Holland, Joe Pritchett, Gus Eifler, Fred Schulz, Tom Culbertson, Jay Skrabanek, Bob Balsley. Coiled rattlesnake, front. (Photo provided by R. B. Vickers, Jr.)

T. J. (Jeff) Burnett, Jr. (BS '49), working at T. J. Burnett & Son in Houston, is celebrating his fortieth anniversary in the insurance business as an independent agent. Jeff also notes that "the third generation has now started with T. J. Burnett III in his fourth year."

Robert W. Bybee (BA '41), a petroleum consultant in Houston, writes "Elizabeth and I continue to enjoy semi-retirement."

Leon G. Byerley, Jr. (BS '52) continues as an independent geologist in Midland. "Exploration in the Permian Basin continues, but at a much more disciplined and less frantic pace. With the posted price at its current level, I am in a holding pattern just trying to remain viable in this challenging business."

W. J. Cage, Jr. and **Susan Kiefner Cage** (BS '50; BA '50) are both retired from Chevron and are enjoying retirement life in the Hill Country (Boerne, Texas). "We stay busy with the garden club and humane society activities in addition to golf and yard work."

Frank Kell Cahoon (BS '57) works as an independent oil operator in Midland. He reports that the "best news in our family is two wonderful granddaughters." He recently became a member of the Texas Higher Education Coordinating Board, of which he notes, "My first two meetings have been a real education."

Dean L. Callender (BS '56, MA '58), senior vice president of Dean Witter in Houston, enjoyed getting together with the Texas-Exes at the AAPG meeting in Houston.

Jorge Marques T. Camargo (MA '82) is employed by Petrobras in Rio de Janeiro. "As seismic data quality supervisor, I had to travel a lot this year, from the wheat plantations of the Paraná Basin to the hot and wet Amazon jungles. Milo Backus' lessons apply everywhere."

Donald H. Campbell (MA '62) continues his work at the Construction Technology Labs in Skokie, Illinois. "Industrial microscopy? My work at the Construction Technology Laboratories requires my attention to the microscopy of materials of construction from bricks to the finest building stone, even the Egyptian pyramids. This year we celebrate the 10th annual meeting of the International Cement Microscopy Association. There's more to concrete than a readymix truck!"

Donald M. Campbell (BA '55) writes, "After six years mudlogging and doodlebugging and 27 years as a geophysicist with the USGS and more recently the Inter American Geodetic Survey (part of DMA), I'm retiring (temporarily) to Damascus, Maryland, where my wife's family and our daughter live. I've traveled much in my work, been to practically every island in the Pacific and during the last seven years have been to every country in Latin America. Since I will be living in the Washington, D.C. area I am available for any job opportunities in that location. If any exes in that area know of any opportunities, please contact me in Maryland."

W. Henry Cardwell (BA '38), petroleum geologist in Houston, is keeping busy looking after his own interests, playing golf, and doing some consulting work.

Jim Carew (MA '69, PhD '78) is professor of geology at the College of Charleston, South Carolina. "Participated in a British-organized 'Andros '87 Blueholes Project' in July '87. Got a few marginal scenes in a film of the project shot for *National Geographic Explorer* series (aired in March '88). Promoted to Professor. I'm co-leading an IGC field trip to the Bahamas in July '89. I'd love to see some old friends on it: sign up, Laudon!"

A. T. (Toby) Carleton (BS '51, MA '52) is vice president and western division manager for Pogo Producing Co. "Still hanging on in Midland. Spending less time on geology and more on raising funds for drilling projects."

Marvin T. Carlsen (BS '52) is semi-retired, living in Midland. "I am gradually slowing down. Spending more time with our nineteen-month-old granddaughter while her mother works. That helps keep me active. Also I have a new grandson in Mesquite and a sixteen-month-old granddaughter in Plano. Regards to all UT geology grads."

Richard F. Carroll (BS '80) reports that he is an exploration geologist for Ultramar Oil and Gas Ltd. in Houston.

Ralph V. Carson (BS '55) comments, "DuPont got me along with the Conoco acquisition in 1981. They thought they had better move me to Wilmington in 1983 where they could keep a closer watch on me. Wife and I and six dogs now live on three acres in the Pennsylvania countryside within commuting range (13 miles) of Wilmington. The dogs chase the deer, squirrels, rabbits and ground hogs; I chase the dogs, we all get some exercise, and none of us lie awake at night worrying about oil prices."

Robert (Bob) Carter (BA '43, BS '48, MA '48) is retired. "Enjoying Austin except for that City Council." When not on the Lakeway golf courses, he is spending "lots of time on the road to Houston to see Miss Liz, world's cutest granddaughter!"

Jack C. Cartwright (BS '51, MA '55) continues as an independent in Midland. "I'm still enjoying the family business in

which Barbara and I work with our son and daughter. We enjoy having three of our four children living in Midland. Barbara gets me to the New Mexico mountains fairly regularly."

Lee Case (BS '71) says, "I'm really enjoying my new assignment as district chief of the USGS, WRD in Utah. Our technical program continues to be challenging and varied, and living in Park City, just minutes from three ski areas, is fantastic!"

David G. Casey, Jr. (BS '60) is owner of Star Energy, Inc. and Dave Casey & Associates in Lafayette. "We are still surviving—seems like West Texas in '60-'61. Things should start picking up. Former La. state commissioner of conservation, H. W. Thompson, has joined forces with me as of March 15, 1988. Drilled two shallow oil wells (Hackberry salt dome) recently and really learned a lot. Learned a bunch of things I didn't want to know. Send prospects and come visit. Raye and I will be in Austin for football this fall."

Dwight E. Cassell (BS '55, MA '58), division geologist for Plains Petroleum Co. in Houston, writes, "Plains Petroleum bought our little company in late '86 and has breathed life back into exploration. As a result, we will drill six wells this year following a detailed trend study. Here's hoping! Linda is working too, trying to fill the sock so we can slip off to Drippin' Springs. Both daughters are working in Austin, so no complaints as long as I don't count birthdays."

Diana Grunig Catalan (graduate student '71-'75) says,"I married a native of Chile last year - hope this means I get to learn a lot about South American geology." She is geologist/general handyman for Hayes Petroleum Company Inc. in Rangely, Colorado.

Steve and **Martha Cast Cather** (PhD '86; BS '81, MA '86) are building a small adobe house on five acres they bought in the desert south of Socorro, New Mexico. "Our land has a great view of the Rio Grande and the Magdalena Mountains. We are doing almost all the work ourselves, including building a stone foundation (what else for two geologists?), so it is going slowly. Steve said it's much more complicated and difficult that writing a dissertation. I am working for the materials and metallurgy department of the New Mexico Institute of Mining and Technology, running an SEM and microprobe, while Steve is jointly employed by the New Mexico Bureau of Mines (doing a regional mapping and basin analysis study) and by the Petroleum Recovery Research Center (studying porosity). We like the desert and mountains, so we are becoming adept at finding ways to make our living here. I keep busy building, swimming, playing the hammer dulcimer in a local Irish music group, and learning to weave, while Steve does lots of hunting and hiking. For all of our friends scattered around the country—no, we still don't have a telephone or TV at home."

The 1987 Alumni Survey

Some of you wrote long letters, others filled the blanks with brief comments, but a remarkable 637 of you cared enough to take the time to respond to last year's questionnaire. You informed us and improved our records by telling us what's happened to you, your family and your career. Many of these personal reports were in last year's Alumni News. Now it's time for us to try to summarize your responses to some of our questions about the Department. Your responses overwhelmed us at first but we have now read every word. The responses tended to be similar based upon one's years of attendance (which is not surprising because the program changes as the faculty change) so we have grouped some responses by decade. First of all, it's clear that many of you thought that from the 1930's to the present, we had done a good job in providing a first-rate education in geology.

COURSES

The chart below shows the courses you found most important in your career development. Structural geology and field camp were leaders in all decades. Micropaleontology was particularly important in the 1930's and '40's. Depositional systems and hydrogeology emerged in the 1970's and '80's. Geophysics (seismic stratigraphy) broke into the top five in the 1980's. No doubt hydrogeology and geophysics will continue to move up because of their importance in the profession and with the addition of a second faculty member in hydrogeology and the addition of the Institute for Geophysics to the University. Technical Sessions, and courses in petroleum engineering and well logging were also always near the top five.

What courses did you take at UT that you found the most important in your career development?

1930's	1940's	1950's
1) Structural Geology	1) Structural Geology	1) Structural Geology
2) Micropaleontology	2) Historical Geology	2) Stratigraphy
3) Summer Field Camp	3) Mineralogy	3) Sedimentology
4) Physical Geology	4) Micropaleontology	4) Summer Field Camp
5) Subsurface Geology	5) Summer Field Camp	5) Historical Geology
1960's	**1970's**	**1980's**
1) Stratigraphy	1) Depositional Systems	1) Depositional Systems
2) Technical Sessions	2) Structural Geology	2) Structural Geology
3) Sedimentary Petrography	3) Summer Field Camp	3) Hydrogeology
4) Structural Geology	4) Hydrogeology	4) Seismic Stratigraphy
5) Summer Field Camp	5) Stratigraphy	5) Summer Field Camp

Donald Caussey (BS '51) is vice-president of onshore exploration for Pennzoil. He resides in Houston.

Ralph S. Chamness (BS '57), chief geologist for Texasgulf Inc. in Aurora, North Carolina, is working on phosphate geology, planning, groundwater and on some other industrial minerals.

Guy A. Chamot (post-graduate, '68) lives in Washington, D.C. "Though retired from the World Bank, I continue to work part-time with that financial institution, essentially in Africa."

Walter Chatham, Jr. (BA '48, MA '50) is retired in Mineral Wells, Texas and sends greetings to everyone.

Stephen E. Clabaugh (BS '40, MA '41) writes, "Pat and I enjoy the quiet retirement life on the banks of the Pedernales arm of Lake Travis. Unfortunately Pat developed severe allergic asthma last fall, but spring weather and medication are helping with that. We made trips to Fiji and Belize last year."

Guy Grant Cleveland (BS '81) is the brine mining program manager for the oil and gas division of the Railroad Commission of Texas in Austin.

Donald B. Clutterbuck (MA '58) says, "It has been a good year. New job with a major U.S. glass manufacturer that consumes large quantities of gas. We joint venture, buy production and as a result are in the energy business. Wife and family well, oldest son graduated from Yale Law School in May and younger son a senior at Rice." Don is president of AFG Energy Inc. in Houston.

Kitty Coley (BS '79, MA '87) writes from Houston, "I had a hard time trying to decide what I wanted to do after graduate school, but I finally decided to take the plunge into the oil business. Am enjoying it so far." Kitty is an exploration geologist for Amoco Production Co.

H. Grady Collier, Jr. (BS '49), an independent and consulting geologist, is serving SIPES Foundation during 1988 as past president and director. "I extend to all UT geologists an open invitation to cocktails when in New Orleans."

James W. Collins (BS '56) lives in Corpus Christi and operates Collins Resources, Inc. as a geologist and oil operator. He says he is still drilling a few wells.

Jim Collum (BA '60) reports that he is a consulting geologist and independent oil operator in Tyler, Texas.

George Coltrin (MA '87) is a geophysicist for Standard Alaska Production Co. in Anchorage. "Involved with operations planning and development of Prudhoe Bay. Involves wellsite work in addition to interpreting 3-D seismic reflection data. A good mixture of geology, geophysics, petrophysics, and engineering."

Tom Connally, Jr. (BA '70, MA '81), chief geologist/partner in Esmeralda Energy Corporation in Austin, says "In '86 I couldn't find a job so I made one—the company works East Texas. Let's make a deal! Sharon and I have two little boys

DEPARTMENTAL IMPROVEMENTS

With respect to improvements in our undergraduate and graduate programs, several areas rang loud and clear in the comments from all age groups. In particular the need for more field work, emphasis on computer techniques and uses (on this issue a new course on microcomputer techniques has been added to the curriculum by Paul Stoffa and a microcomputer lab for student use has been added on the second floor of the geology building), smaller undergraduate classes, more technical writing and the development of oral communication skills, expansion in geophysics and environmental geology, and an increase in the price of oil.

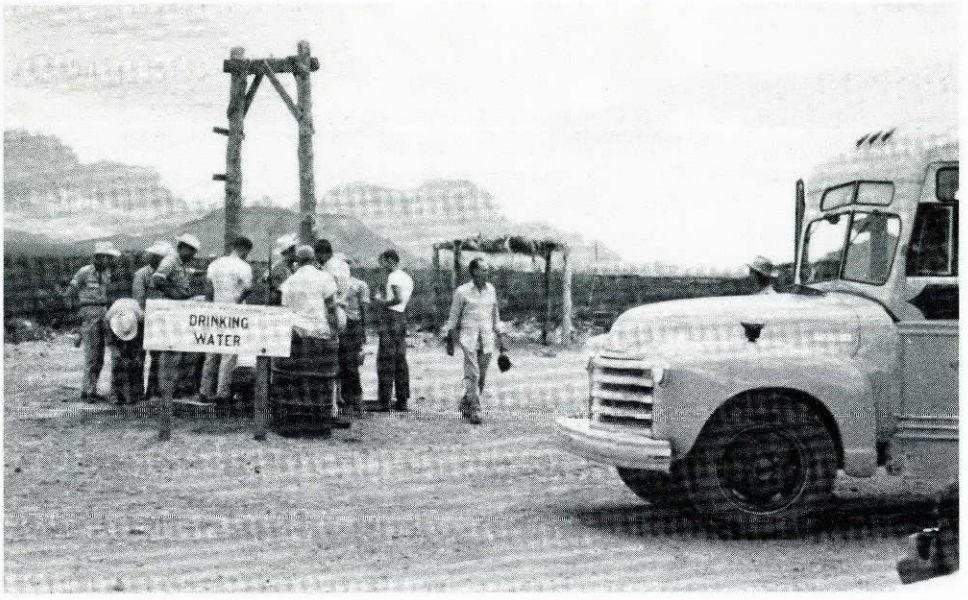
Those who attended during the 1930's through the '60's also emphasized the need for more courses in math and physics, economics and finance, and courses in logic and ethics. Those who attended during the 1970's and '80's also emphasized a need for more practical, "real world" classes in petroleum geology and a less pressured summer field camp. To some extent, these differences in outlook probably reflect one's position in his or her career.

COMPARISONS WITH OTHER UNIVERSITIES

The responses indicated that other departments were superior to UT by having smaller classes, better communication between students and faculty, better field trips and field courses, and the quality of specific teachers and courses. Overall, UT was superior in the breadth and depth of its program—particularly in soft-rock geology and the recent growth of geophysics, equipment, the library, and quality of the faculty.

IMPROVEMENTS IN THE NEWSLETTER

More pictures, more pictures, more pictures. More alumni news (we need your help). Listing of job opportunities. Class reunion news (send us news articles). Interviews with professors and alumni. Articles by professors no longer at UT. Less news about the faculty. More news about the faculty. Start a special section about recent alumni retirees. Add articles on modern technology and faculty research. Include a directory of alumni.



The Water Hole. 1949 Geo. 660 field camp, led by Dr. Gus Eifler and assisted by Harlan Fisher, who was also the bus driver. (Photo provided by DeWitt C. Nogues.)

now and, as always, it's great to be in Austin."

Carlton Cook (BS '78) is a petroleum exploration geologist in Lafayette.

Beaumont B. Cooley (MA '56), a consultant in Austin, is "just winding down from a major consulting job on the Panhandle field before the Railroad Commission. Plan to spend about six months in Australia and New Zealand this year."

John D. Cooper (MA '64, PhD '70) continues as professor of geology at California State University in Fullerton. "I thoroughly enjoyed the mid-year SEPM meeting in Austin last August. It was good to see many old friends again and to visit the Cambrian bioherms in the Llano country. I also had the opportunity to visit my old dissertation area near Eagle Pass. My work in Upper Cambrian carbonates in the southern Great Basin continues with the help of an American Chemical Society PRF grant for the next two years. Teaching and research are going well and one of my undergraduate senior thesis students gave a superb talk at the GSA meeting in Phoenix last October. Son Randy had a very successful season as a freshman on University of San Diego's basketball team, and Nancy, Zachary, Chaska, and I received our karate purple belts last winter. I'm looking forward to a float trip on the Colorado River through the Grand Canyon this summer and to my sabbatical research leave next fall."

Mary Beth Cooper (BA '67, MA '69) is vice president of Excalibur Geophysical Consultants in Denver. "My husband, Ted Fons, and I are marketing geophysical modelling software. Luckily we are doing reasonably well during tough times, and seeing activity increase."

Frank Cornish (MA '75) is district exploration geologist for Texas Oil & Gas Corp. in Corpus Christi. "Still working, and writing magazine articles for fun and profit. Boys are 9 and 7. Judi working at creative arts center as pottery teacher."

Augustus S. (Gus) Cotera (BS '52, MA '56, PhD '62) is professor of geology and assistant to the president of Northern Arizona University in Flagstaff. "My wife of 30 years, Betty Lou Tropani Cotera (UT '56), was killed in an automobile accident on February 16, 1987."

Bill C. Cotner (BS '53) is owner of Meadco Properties in Midland. "No drilling with the low oil price."

Jerry Covington (BS '43) is president of Covington, Inc. in Midland. "The years are rolling mighty fast now. Best regards to all the old classmates."

R. Wilson Cozby, Jr. (BS '61) pediatric dentist in Tyler writes,"Visits to Austin sports and seeing Gleith (freshman) and Drew (junior) are few. Chris is married living in Dallas and Ray finishes Tech Law School in June and will marry in September. Gleith to be in Tyler Fall Rose Festival. Whew!"

Raymond W. Cozby III (BA '83) writes, "I am taking the bar in July '88, marrying Mary Ann Borchers (UT Plan II, '85) in September '88, and start work in October '88, so it looks to be an exciting year." He will be an attorney with the firm of Lynch, Chappell, Allday and Alsup in Austin.

Bill Crawford (BS '62) comments, "Happily working in newly formed G & G group at Hunt Oil Co. production department in Dallas. All is going well."

Steve Crews (BS '82) says, "After completing a Master's degree at Colorado State in 1985, I worked for Amoco Production Co. in Denver for two years. Last fall (1987) I began PhD work at the University of Wyoming. My dissertation research involves tectonic controls in non-marine sedimentation, particularly in extensional settings such as continental rifts. Coincidentally, this interest may return me to some of the scenes of the UT field camp, since I am considering the northern New Mexico portion of the Rio Grande rift for a field area (I will definitely *not* be mapping Precambrian metamorphics, however). My wife, Bonny, and I continue to live in Fort Collins, Colorado."

Steve Cumella (BS '77, MA '81) is working as a geologist for Chevron U.S.A. He reports, "Cindy and I had our first child, Nathan Paul, last August."

Russell W. Cumley (BA '31, MA '31) is retired in Austin.

Hugh W. Curfman (BS '48), an independent in Lafayette, is still working toward good oil and gas prospects in south Louisiana, and still looking for the money to drill them.

Janice Schoepfle Danser (BS '81) is married and lives in Houston, where she works for Exxon Co. U.S.A.

Harris P. (Koop) Darcy (BS '51) is an independent in Houston.

Larry J. Darnall (BS '58) is president of Darnall Petroleum, Inc. in Dallas and lives in Garland. He says, "We are beginning to see an upswing in the oil and gas business. In the last two and one-half months, we have been busier and sold more prospects than we have in the last two years. Let's hope it continues." His son Steve is a junior business major at UT Austin.

Pamela Tiezzi Darwin (MA '84) lives in New Orleans, where she is senior geologist for Exxon Co. U.S.A.

Erik K. Davidsen (BS '83, MA '86) is presently working in development geology for Chevron on the North Ward Estes Field. "My activities include trying to keep track of 3,000+ wells in preparation for a large-scale CO_2 flood." Erik lives in Midland.

Flavy E. Davis (MA '37) is retired in Aspen, Colo.

Joe Davis (PhD '81) is vice president of Strategic Petroleum in Dallas. "Helped start a new independent in September, 1987. Primarily working eastern shelf of Permian Basin right now."

William H. Davis (BA '41) is retired in San Antonio.

Brad Dawson (BS '82) is staff geologist for Norcen Explorer, Inc. in Houston.

Leslie A. Dedeke, Jr. (BS '55) is area geophysicist for Unocal Corp. in Houston, working the onshore area of Texas.

Frederik E. Dekker (MA '66) comments, "Have been promoted to exploration manager of the Asia Pacific district in the International Division of Unocal Corp. Will be doing a lot of traveling to countries as far afield as Pakistan and the People's Republic of China." Fred lives in Santa Monica, Calif.

E. J. and **Patricia Wood Dickerson** (BS '57, MA '66; BA '70) are still in rural Midland County and have consulting offices there. "The last year has been hectic. In addition to finishing her New Mexico travel guide and writing many proposals for research, Pat found time for field trips: Geological Society of Mexico in Chihuahua, along with several of our old border compadres; co-author/leader with Bill Muehlberger, Structure and Stratigraphy of Trans-Pecos Texas, International Geological Congress, 1989; co-leader with Jim Stevens on the Houston Geological Society AAPG Big Bend field trip; attended PBS-SEPM Persimmon Gap field trip and a core-complex trip following the GSA meeting in Phoenix. She was second vice president of the West Texas Geological Society and is currently secretary of the WTGS Foundation. In her spare time, she exercised her green thumb, tending lawn and roses. Ed continues as consulting geophysicist-exploration seismic, shallow-target seismic contracting (worked on a job in Llano County for the Texas Water Commission); worked with the University of Arkansas geophysical field camp in Montana again. He presented a paper on shallow-target seismic methods at the 30th Annual Meeting of the Permian Basin Geophysical Society. He branched out into PC/Supercomputer applications. This led to a training session (and a mini-vacation) in the Seattle area. The car ferries will be recovered by now, but not the seafood restaurants! Old friends are always welcome at Los Arboles--come and stop in."

Kenneth L. Diebel (BS '50) is retired and spends a lot of time traveling. He lives in Conroe, Texas.

Mike Dildine (BS '72) lives in Houston where he is director of strategic planning for Conoco.

Jane Ormond Dinkins (BS '38) writes that she is still raising angus cattle at Chappell Hill Farm near Houston.

Steven Dobbs (MA '87) is a geophysicist for Chevron Geosciences in Midland.

George A. Donnelly, Jr. (BS '40) is president of the Eastland Oil Company in Midland.

Jim Doyle (BS '73, MA '76) lives in Dallas, where he is a geologist for Standard Oil Production Co.

Larry Doyle (BS '50) is happy to have made it back to Texas. He "retired" from the Federal government and joined a consulting group at Brooks AFB in San Antonio. They advise the Air Force on their nationwide waste management efforts.

Robert E. Doyle (BS '55, MA '57) is owner of American Energy Reserve Consultants in Houston, working primarily with end users of natural gas in order to develop long-term, reliable supplies at reduced costs. He has been in this area of activity for the past five years.

Daniel D. Droll (BS '49) lives in McAllen, Texas. He has "enjoyed early retirement for almost a year, after returning to the States from Mexico City last May. My time is largely occupied doing volunteer Boy Scout work, which I find most enjoyable."

Ralph C. Duchin (MA '55) is still consultant to Zinn Petroleum Co. in Houston.

William E. (Bill) Dunaway (MA '62) is an independent geologist in Kingwood, Texas.

David E. Dunn (PhD '64) continues as Dean of the College of Natural Sciences and Mathematics at the University of Texas at Dallas. "This has been a year highlighted by great trips including GSA's Centennial raft trip through the Grand Canyon, a tour of the Swiss Alps, and playing the famous golf courses of Scotland, with side trips to numerous fault zones and distilleries, not necessarily in that order. Hope to see all in Denver."

B. G. DuPree (BA '54) took early retirement from Pogo Producing in March, 1987, and reports that it's nice to be back home in East Texas (Palestine).

Bill Dupré (BS '68, MA '70), associate professor of geosciences at the University of Houston, is looking forward to more meetings in Texas to visit old friends.

William Kent Duran (BS '83) writes from Houston, "My wife and I are glad to be back in Texas. After receiving our Master's degrees from the University of Arkansas, we moved back to Texas in October. Krista is employed as a geophysicist by Kerr McGee. I am currently employed with TGS Geophysical Company, working in the Gulf of Mexico."

Marie Durbin (BS '87), a geotech for Geological Data Services in Dallas, notes: "I just want to say that my degree from UT, and the respect in the business world of the UT geology staff, got me more interviews when I graduated than would have ordinarily come about under different circumstances. Keep up the reputation."

Connie Mayes Dyer (BA '58), a homemaker in Houston, says "I enjoy running into former classmates at conventions I attend with Byron, even though I'm an inactive geologist. Nine-year-old John definitely keeps me in the active mother category."

Fred A. Ealand (BBA '45, BS '48) retired from Exxon in August 1986. "Best move I ever made! Latest news is that our youngest daughter, Carol is expecting in May and our daughter-in-law, Judy is expecting triplets in April. (We'll be busy grandparents)."

Billy M. Easley (BS '48) is owner of Easley Oil and Gas Inc., living in Corpus Christi. He writes,"I'm now working with a great crew: Chet Freeman (land and legal department) and Leslie Easley (geologist). I still show up at the office almost every day, but have slowed down considerably. We are very busy with new prospects and have had some luck and we hope things keep improving."

John L. Ebach (BS '82) writes, "Janet, the kids and I have recently moved to Arlington, and I am now working for Pier 1 Imports in Fort Worth as a senior systems programmer. I will be building and maintaining their communications network. Old friends are always welcome as are evenings discussing the field camp of the summer of '82."

Joan Echols (MA '59) is an associate professor of earth sciences at East Texas State University in Commerce. "Not much new with me. It is good to hear my 'alma mater' is doing so well. Hello to all."

Charles and **Lynda Coons Ehlers** (BS '78; BS '80) live in Richardson, Texas. Charles has begun his eighth year as a geologist with Placid Oil Co., working with their international data. Linda is at home with their little boy, Jonathan, who was born on August 8, 1987.

Leo Ehrhard (BS '86) works for Phillips Petroleum's seismic stratigraphy group in Bartlesville, Okla.

Gus K. Eifler, Jr. (BA '29, MA '30) continues his consulting business in the same office in MBank Tower in Austin where he has been since 1974.

Arthur B. Elliott, Jr. (BS '55, MA '58) is still working in the U.S.A. with Mobil as a regional geologist for Central-South America and the Caribbean Sea area. "Enjoyed short term assignment in London working onshore UK. We appear to be putting down roots in Dallas."

Ralph I. Ellsworth (MA '49) was forced to take early retirement, but loves being back in the Austin area.

Joe Elo, Jr. (BS '56) says he still sees a few UT exes around, and even is involved with a few old summer camp friends in his business as an independent geologist in Fort Worth.

James T. Engelbrecht (BS '74) lives in Plano, Texas.

Rojelio P. Espinosa (BS '85) is employed by Tesoro Petroleum Corporation in San Antonio.

Ross Ensley (BS '76) exploration geophysicist for Exxon Co., International in Houston reports, "At present I am buried up to my neck in seismic data (over 10,000 km) from the Peten region of Guatemala and offshore Argentina. We plan to drill two wells in the Peten late this year and one in Argentina next year."

James (Jim) L. Eppler (BA '43) is an independent geologist in Dallas. He remarks that he is "still doing some consulting and prospect generating, but mostly trying to grow old gracefully on the golf course."

Barbara Everett (BS '83) is a graduate student at UT San Antonio. "Believe it or not, I'm finishing up my Master's this summer. I realize some of you are asking yourselves, 'Is that the Barb I knew at UT?' Thesis topic is 'Rock matrix, pore geometry and hydraulic conductivity of the Lower Glen Rose Limestone Aquifer in core.' I'm sure it will be a best-seller, so order your copy now. Special hello to Kevin Kelly, Terri Osbourne, Steve and Gail Sisco."

Rizer Everett (BA '37, BS '38) says he and Hildegard thoroughly enjoyed their trip to China in May, 1987. "We were favorably impressed with the competence of the guides as well as the food, lodging and the courtesy and friendliness of the people. Hildegard had visited Shanghai in 1935 when she and her parents made a trip to China. Consequently, she saw some things on this trip such as the major landmarks that were still the same as they were in 1935, but now there are no dogs or vagrants in the streets that are swept clean every day. In addition to Shanghai, we visited eleven cities and spent four days on the Yangtze River. Chinese geology students certainly have plenty of good outcrops to map in that segment of the Yangtze from Chongqing to Wuhan. Of the three grandchildren in college this year, one is graduating. Of the two in high school, one is graduating, and the sixth grandchild is in military service. Grandchildren really do grow up faster than children. Since the *Newsletter* is one of the few sources of information about former classmates, I encourage all of you to write something for the *Newsletter* every year.

Norman Ewbank (BS '43) says "The unyielding severity of retirement life continues to take its toll. I probably won't be able to stand more than 25 to 30 more years of this." Norm lives in Midland.

Dorman N. Farmer (BS '50) comments, "We did not do much last year, but are going to give 'em heck this year." He is owner of Fargo Exploration Co. in Abilene.

John J. Farrelly (BS '84, MA '87) says, "I received my MA degree in December, 1987 after completing my thesis: 'Depositional setting and evolution of Pliocene-basal Pleistocene section of southeast Trinidad, West Indies.' I am a geologist for Amoco Production Co. (International)." John lives in Houston.

O. W. (Buzz) Fauntleroy (BA '48) retired from Deminex U.S. Oil Co. as vice-president in charge of exploration to become president of Vista Petroleum Co. in Dallas. "We are participating in five-well wildcat drilling program in Australia, a gold and diamond concession in West Africa, and several Texas and Oklahoma wildcats. The boom has started. Are you in it or just wringing your hands?"

Irma Morgan Feibelman (BS '59) continues working for Ford Aerospace Corp. in Houston as a computer software quality assurance manager.

Murray Felsher (PhD '71) is publisher and editor of *Washington Remote Sensing Letter*, and president of Associated Technical Consultants in Washington, D.C. "Elyann completed her Master's and is beginning doctoral studies in international relations; Harry is entering his senior year in nuclear engineering; Josh is moving into tenth grade. Natalie and I decided to contemplate vital issues of the world, and did so during a long R&R in Maui. Issues are still vital, but so what...! Enjoyed seeing many old friends at AAPG in Houston. Satellite remote sensing is becoming very respectable, and both the newsletter and the consulting business are taking off—no pun intended. Best wishes and regards."

Guy Anthony Felton (BS '85) recently completed his MS from Indiana University in Bloomington, and is now staff hydrogeologist at Law Engineering in Houston.

W. Grant Fergeson (BS '78), chief geologist for Venus Oil Company in San Antonio, announces, "Fergeson Boulder Conglomerate welcomes the Katherine Elizabeth Member as of 2/17/88. Unit is described as single, cute, pinkish, well rounded, tubbily tabular, auburn-haired boulder measuring 533.4mm x 150.4 mm x 75.2 mm (measurements approximate due to recalcitrance of particle). An informal reference is given as 'Katie.'"

Nancy D. Null Ferstler (BS '79) lives in Houston, where she is an exploration geologist for John H. Young, Inc.

Harvey L. Fischer (BS '59) reports that "due to the depressed oil and gas exploration in the Permian Basin, I am subsidizing my consulting geophysical business as a real estate salesman in Midland. I am now qualified to help you with either need."

Goldoni E. Flack (BS '51) is retired after 35 years with Gulf Oil Corporation, lives in New Orleans, and is playing all of the tennis he can. "Hope to visit Austin again; keep up the good work."

Ted Flanigan (MA '80) is an independent geologist in Nevada. He writes, "I took a leap on leap year day and became an independent. I left Mobil to join Donna and form the firm of Flanigan & Flanigan in Reno. We are prospecting for oil and gas in the basin and range, and we hope to have more friends visit in Reno than did in Midland. Y'all come!"

Sterling H. (Chip) and **D'nese Young Fly** (BS '80, MA '85; BS '80) live in Midland, where Chip is staff geologist for Oxy U.S.A. Inc. and D'nese works for TXO Production Co.

Jay and **Cathy Kantenberger Flynn** (BS '84; BS '84) write from Houston, "Since Cathy went to work for Conoco International at the end of 1987, she's enjoyed a couple of overseas trips (twice to London, once to Dublin). But we're hoping to do some traveling together very soon. We miss our old UTGS buddies—our regards to all of you."

Charles M. Forney (BS '47) lives in Corpus Christi, working as a consultant concentrating on prospect generation and regional mapping in all trends of South Texas.

Gary Foster (BS '86) is attending the UT Austin Graduate School of Business. He will earn his MBA degree in May, 1989.

Hewitt B. Fox (BA '47, BS '48, MA '48) is president of Hewitt B. Fox, Inc. in Corpus Christi. "We are busy keeping old wells going and not drilling many new ones while we are waiting for the gas bubble to recede and OPEC to set our oil prices in the absence of a national energy policy. We are happy to report that a third grandchild is scheduled to arrive this summer."

Matthew and **Kathleen Minahan Franey** (BS '81; BS '82) are eager to hear from old classmates. "After two years of teaching earth science to 8th graders, Kathleen is taking time off to raise our first child, Sarah Marie, born last November. I am still working for Covella Energy in Houston."

Nancy E. Frank (BS '82) is a hydrologist for the Texas Water Commission hazardous and solid waste enforcement section in Austin.

Glen Frantzen (BA '73) is regional manager, South America, for Intairdril, Ltd. in Quito, Ecuador. "I want to extend best wishes for all in the next year as it appears that our business is on the upswing. We have a new addition to the family, our second child, Michael Harry, born 7/26/87."

Kevin L. Frenzel (BS '87) is a geologist for Hall Southwest in Austin.

Annabelle Bannahan Friddle (BA '45, MA '50) continues to live in Aztec, New Mexico. "I am a volunteer one-on-one tutor in the Project Read program with San Juan College. I am teaching an adult to read and write English. It is an exciting and very gratifying experience."

Tatiana Frierson (BS '85) is a financial analyst for Union Pacific Resources Company in Houston. "Last August I landed a job using my MBA rather than my geology degree—I hope to phase back into exploration soon if the price ever gets back up. For all the 660 Geodogs—please send me your current addresses so that we can have a reunion. If you are in Houston, give me a buzz—'let's do dinner.' Have a great '88."

Ralph E. Fuge (BS '49) is enjoying retirement in Austin.

Robert B. Gaines (BS '49, MA '51) writes from Midland: "I retired in June, 1985 and am putting prospects together plus some consulting. I am spending the summer of 1988 getting my right leg rebuilt. Have had two surgeries and have another scheduled in a couple of months. First grandchild arrived Sept., 1987."

May Defandorf Dasch (left) and Marriott Wieckhoff Smart at a "holler" at Connie Clark's ranch near Dripping Springs, Dec. 9, 1956. (Photo submitted by Ed Dickerson.)

G. H. Galny (BS '48) is enjoying travel, family, and retirement in Houston.

William J. Ganus (BS '58) is vice president of engineering services for Kerr McGee in Oklahoma City. "Groundwater profession continues to need good geologic underpinning. It's amazing to see how much money is being spent and problem-solving attempted with so little geologic understanding."

J. Neal Garland (BS '59) is executive vice-president of Goldston Oil Corporation in Houston.

Abato John Garza (BS '78) says he forgot to mention last year that he and his wife have a boy, Jared Ross, who is now 16 months old and keeps them hopping. John is a senior production geologist for Mobil in Houston.

Leroy Gatlin (BS '48, MA '50) comments, "I am probably retired and don't know it, but still make the office each day and have taken up phases of geochemistry in developing prospects. All I need is drilling money." Leroy lives in Oklahoma City.

Henry B. Gayle (BS '58, MA '60) is manager of technical support for Holmes and Narver in Las Vegas. "All's well with us. Margee's business is doing extremely well. I'm in the middle of planning to send a drilling crew to Semipalatinsk, U.S.S.R. as part of the Nuclear Test Ban Treaty Verification Program (April '88). Margee and I are going to England in June and Mike's getting married in November. Just your average year in Las Vegas. Come see."

Clem George (BA '47, MA '48), self-employed in Midland, thinks 1987 was a good year, since he found a little production. "Betty and I enjoyed France, Belgium, Holland and Germany last year. Six grandchildren keep us busy."

Leslie W. Giddens, Jr. (BS '54, MA '57) is still an independent geologist in Corpus Christi, drilling a few wells each year despite low prices for oil and gas.

Ronald M. (Ron) Gieger (BS '63, MA '65), an independent, comments, "Jen and I are still doing business in the Upper Gulf Coast, out of Shreveport. Demand for

North Texas Field Trip, 1969. L-R: Chip Groat, Bill Fisher, Bill Galloway, Al Scott and Joe McGowen.

prospects is down to a trickle, but at least still exists. I guess we are like everyone else in this business; we'll be glad when it gets better. Best wishes to all of you."

John P. Giltner (MA '87), a geophysicist in Houston, writes, "In June of 1987 I started an assignment with Exxon U.S.A. exploring for gas reserves in the Anadarko Basin. Maggie and I are expecting our first child in September of 1988."

Paul Giraudin, Jr. (BS '48) is retired in Corpus Christi. "My, my, how times have changed since the 40's. Even Big Bend is getting crowded."

Charles A. Goebel (BS '80) is a geologist for Arco Dubai. He reports the birth of a daughter, Amanda, in August, 1987.

Eugene M. Goltz (BS '49) would like to invite all Texas geologists to stop by for a visit in Abilene, where he is an independent petroleum geologist. "Happy Hour starts early."

Richard E. Grant (PhD '58) is senior geologist at the Smithsonian Institution in Washington, D.C. and curator of brachiopods at the National Museum of Natural History. "Completed third trip to China in September, 1987 (Carboniferous Congress) and 18th to West Texas in April, 1987. Plan to see Alpine again in April, 1988."

Volker C. (Charlie) Grasso (BS '49) is still enjoying retirement and occasional travel. He would like to hear from any friends going through Oklahoma City.

C. DeVearle Gray (BS '56) is in Dallas, "still slithering along on $15 oil but doing well in spite of all. I have thoroughly enjoyed the old photos in the *Newsletters*. Wish I had one to contribute. This booklet is widely read each year in keeping up with lost friends. Thanks very much."

Gary Gray (PhD '85) states, "Mary Ann and I now have two kids, Caitlin (3 yrs.) and Evan (1 1/2 yrs.). I am really enjoying working in the structural geology group at the Exxon Lab, and Mary Ann has recently taken an outdoor education position at the Houston Arboretum. As all things shall pass, maybe someday we will grow to like living in Houston."

Robert W. Grayson (BS '48) is retired in Austin.

Barbara Hurley Greene (BA '44), a retired science teacher in Odessa, stays busy with Meals-on-Wheels, Symphony and Playhouse Boards, and tutoring GED candidates. "Page and I fly to London in late May; from there in June to Florence and Rome. Odessa is alive and almost well. We'd welcome UT visitors to our hot tub."

Willard R. (Will) Green (MA '55) has been employed by Forest Oil Corp. as division geologist in Midland since June, 1987. He will serve as vice chairman of AAPG House of Delegates for a year beginning 7/1/88.

Charles (Chuck) Greene (BS '75) says he ran into some UT geology exes at the GCAGS meeting in San Antonio last fall. He is working with the Ground Water Conservation Section of the Texas Water Commission. "Still alive and well in south Austin (as well as can be expected in south Austin)."

Tamela Gregory (BS '84) comments, "After graduation, I worked for Texaco for about two years in the geochemistry division of the Houston Research Center. I'm now working in the environmental law section of Fulbright and Jaworski and just finished my first year of law school here in Houston."

Charles R. Grice (BS '46) writes from Midland, "Still working as an independent. Ann and I spend a lot of time visiting children and grandchildren."

Robbie Gries (MA '70) is an independent in Lakewood, Colo. "1988 looks great for drilling—will have three or four prospects evaluated. Lynn is winding up her year in Egypt as an exchange student, plans to travel in Europe all summer and fall and then meet me in Bordeaux, where I will be speaking at a tectonics symposium in November."

Ariel Dale Griffin (BS '57) continues to live in Houston, where he is retired due to a stroke which disabled him in 1976.

W. Leonard Goode (BS '52) reports that all is well in West Texas, where he is a consulting geologist in Midland.

Guy Groomer (BS '83) writes, "After four years with Conquest Exploration Co. I

moved back to the good life in Austin for a hydrology position with the Fire Department. It is great to be out of the urban jungle of Houston and the uncertainty of oil and gas, and into the heat and excitement of fire and water. What a change!"

Roy H. Guess (BA '39, MA '40) writes from Casper, Wyoming, "The gas 'bubble' was just about to evaporate when the Canadian Free Trade Agreement destroyed the possibilities for a distinct improvement in gas demand and prices. The world 'oil glut' continues, but world and U.S. consumption continue to grow, U.S. production continues to decline, oil imports account for about 1/3 of our enormous trade deficit, oil imports will soon reach the critical 50% figure where OPEC will once again be in the driver's seat. Geologists take heart—-find sound prospects and your time will come."

Edgar H. Guevara (MA '72, PhD '74) continues as a research associate at the Bureau of Economic Geology at UT Austin.

William Gumert (MA '65) is chief geophysicist for Carson Services Inc. in Perkasie, Pennsylvania. "Have successfully flown a fixed wing air gravity system. Completed over 50,000 kilometers in Colombia and Indonesia. Presently working in Venezuela, Colombia, and Indonesia. The company has four complete airborne gravity and mag systems now, two in helicopters and two in twin otters."

Mehmet Gurel (MA '56) is councillor and adviser to the General Directorate for Petroleum Affairs of Turkey. "I am preparing for my retirement next July. Best wishes to all the friends and collegiates."

Marco Guzman-Speziale (MA '85) is still doing PhD work at New Mexico State University in Las Cruces. He hopes to graduate early next year. "Seismo-tectonics of Burma (my dissertation topic) turned out to be very interesting."

Walt Haenggi (MA '57, PhD '66), a geologist with Dow Chemical in Houston, is "still having fun trying to learn all the things Muehlberger tried to teach me."

Karl Hagemeier (BS '49) received recognition for 34 years of membership and service award from the New Orleans Geological Society on December 7th, 1987. "Bought an interest in a viable Wilcox deal south of Neale Field in Beauregard Parish, La. Recommended participation in a southeast Texas 'discovery.' I attend classes at Rice University to continue my education in the arts and sciences." Karl is a petroleum exploration consultant in Houston.

Curry Hall (BS '54), chief geologist for Wintershall Corporation in Houston, says, "1988 exploration budget isn't very large, but we hope to generate and sell as well as buy into a few drilling deals. Always enjoy reading about UT classmates and friends in the *Newsletter*. Am trying to become 'PC literate.'"

Henry R. Hamman (BS '59, MA '61) is president of Hamman Oil and Refining Co., looking for oil and gas in South Louisiana and Texas. Henry lives in Houston.

Paul A. Hardwick (BS '83) writes, "I have been working in the Midland office for Texas Crude Inc. for the last three years, and hope to continue to do so. My wife, Laurie Waters Hardwick (BJ '82) and I try to get to Austin every other month, and go to all the home football games."

Jennifer Thompson Hare (BS '86) is a software design engineer doing research in magnetics for Texas Instruments in Richardson.

Louis H. Haring, Jr. (BS '38), president of Haring Energy Company in San Antonio, is participating in a few wells but not actively drilling any new wells as operator.

Wiley B. Harle (BS '50) is retired in Houston.

Weldon J. Harrell (BS '49) lives in Graham, Texas. "I have been retired for three years now after serving 39 years as a consultant geologist in this North Texas area."

David H. Harrington (BS '51, MA '53), a consulting geologist in Houston, is "back on the domestic scene after some years of foreign work. Looking forward to renewing acquaintances."

John Richard Harris (BS '53, MA '57) is an oil and gas consultant in Calgary, Canada.

Linda Harrison (BS '84) is studying law and mineral economics at the University of Denver Law School and the Colorado School of Mines.

Richard E. (Rick) Hart (BS '74) works for Ladd Petroleum Corporation as an exploration geologist in Houston. "Paul Hoffman, Bob Parker and I would like to thank AAPG for choosing our paper as one of the 'Best of AAPG Papers' at the 1988 annual convention in Houston. The paper will be presented again at the annual SEG Convention in October in Anaheim, California."

Margaret A. Hart (BS '83) is working as a geologist for the Texas Water Commission while pursuing her MA in geological sciences at UT Austin.

Eric K. Hass (BS '78) works for Mobil Oil as a senior production geologist in Houston.

Laurence H. Hawes (BS '51) retired from Arco Oil & Gas Co. after 33 years in October, 1986. "Since then I have done some contract work for Arco and some consulting. Geology is as exciting today as it ever was. We have made several great trips to Massachusetts to see the grandson."

Edward F. Haye (BS '51) is president of Benchmark Exploration, Inc. in Houston.

Hugh Hay-Roe (MA '52, PhD '58) is a consultant in Kingwood, Texas. "Wow! This makes 30 years since I last graduated from UT. How time flies when you're looking for oil.... Have started as half of a team replacing Bob Bates with the monthly "Geologic Column" in *Geotimes*—all contributions gratefully received (the funnier, the better)."

Alyson C. Headle (BS '86), an ensign in the U.S. Navy, is auxiliaries officer aboard the *USS McKee*. Home base is San Diego, California.

John E. Hearn (BS '52) is an independent geologist in Houston. "With all of the present day 'good times' I am trying to keep out of bankruptcy. I think I am failing."

Kris K. Hefton (BS '78) comments, "After being fortunate to survive in uranium exploration for 11 years, I was the victim of a layoff in March due to the ever-deteriorating domestic uranium industry. I'll now give gold exploration a try." Kris is a geologist for Freeport-McMoRan Gold Company in Tucson.

Michael D. Helton (BS '82) is currently working exploration, Gulf Coast Tertiary, expanded Yegua, as a geophysicist with Amoco Production Co. in Houston.

Grant Heiken (MA '66) is a geologist for the Los Alamos National Laboratory in New Mexico. "I'm continuing applied research in volcanology and geothermal explorations and am also getting a dose of teaching experience--we taught two UNESCO-sponsored short courses on volcanology in Colombia and Ecuador. Judy and I are going to Naples for two months this spring, where I'll be teaching in the Department of Volcanology."

William Brent Hempkins (BS '58, MA '62) says, "Now I am in the applied math-stat group of the engineering department. After over 20 years with Chevron I think they forgot I was once a geologist. My work is still in upstream. I get back to Austin often but don't often see any of the 'old' timers and scarcely recognize the campus." Brent is a senior geological statistician for Chevron in Richmond, California.

Cornelia Henderson (BA '81, MA '84) is currently practicing maritime law in the Corpus Christi office of one of the top five U.S. admiralty law firms—Royston, Rayzor, Vickery and Williams. "I have

seen and visited with David Becker and Doug Brown. René Curtis McCartney and I eat lunch together regularly—she's working with my father, Tom Henderson. The closest I get to geology is either the gem and mineral show, or an investigation of an accident on an offshore drilling rig or production platform."

John D. Henderson (BS '37) is retired in Dallas.

Kurt Henize (BS '78) is a geophysicist for Western Atlas International Inc. in Englewood, Colorado. "Spent a year between 1986 and 1987 working in South America, mostly Colombia, where the food is great. Quite a change from China. Colombia is not as bad as the media claims, and the geology is spectacular. The place would make for an interesting GEO 660 field camp."

E. R. (Bob) Henningsen (BS '57), associate professor of geology at Tarleton State University in Stephenville, Texas, started half-time retirement at the end of May. "I will be teaching only in spring. I am looking forward to traveling. Family all well at present, still only two grandchildren."

Larry Hensarling (BS '56) is still looking for oil and gas and good investors. Larry is president of Tee Oil Inc. in Lafayette.

Reid Hensarling (MA '81), a geologist at Tee Oil Inc. in Lafayette, says "We are hoping the oil business firms up and we can drill some wells this year. We have many excellent oil and gas prospects."

Charles W. Henslee (BS '51) comments, "Still having fun looking for 'grease,' playing golf and enjoying six grandchildren." He is district exploitation geologist, offshore and southern division, for Maxus Exploration Co. in Houston.

James G. Herblin (BS '52), independent geologist in Kenner, Louisiana, says, "It is hard to say a good word about oil and gas, with the price going down, down. Oh well, one of these days it will turn around. I hope everyone is doing fine."

E. R. (Ted) Hewitt (MA '51) is vice president of S. N. Phelps and Company in Greenwich, Connecticut. "Life is recovering after the revolutions of 1986, October 19, 1987, etc. Doing financings for smaller companies and continuing some consulting work."

Charles H. Hightower, Jr. (BS '56) is president of Hightower Oil Corporation in Lafayette.

Janice Hill (BS '79) writes from Aurora, Colorado: "I never thought I would see the day when I'd reply: present job—homemaker. I certainly don't feel unemployed. I'm on call 24 hours a day chasing after Caitlin. The rumors fly constantly of transfers to Houston with Amoco. However, since John and I don't mind Houston, we'll probably be the last to go."

John D. Hill (BS '49) is chairman of the board of Hill Energy in Dallas.

Russell E. Hinote (MA '78) is a staff paleontologist for Amoco in Houston.

Nolan Hirsch (BS '44) lives in Midland, where he is president of MVC Inc. "Still in the business. I'm recovering from back surgery. I'm hopeful 1988 will be the recovery year for oil as well as health."

Carroll Ann Hodges (BA '58) says, "I'm due to rotate out of my management job in USGS/Western Region and back into research, but not sure what slot—looking for an enticing project. Co-leading Stanford Alumni travel/study tour to Colorado Plateau in June. Great meeting with state geologists in Taos last fall, where Bill Muehlberger was featured entertainer. Returned to Austin briefly in May—what a skyline. Always fun to see any of you, anywhere, anytime."

F. A. (Fred) Hoeninghaus, Jr. (BS '49) is presently enjoying life in Houston as a retiree after 36+ years with Exxon. "The *Newsletter* is always welcome at our house."

Raymond J. Holasek (BS '51, MA '52) retired from Marathon Oil Co. in 1986 "having spent 25 years as a subsurface geologist in Alaska, Colorado, Wyoming, Louisiana and Texas and nine more years with Marathon International as exploration manager in Indonesia, manager of geologic projects in Houston, and manager of exploration and production geology, North Sea, and manager of the technical group for unitization in London. It was a long haul, but we made a lot of friends. Wencie and I have returned to our home town of West, Texas where we love to entertain 'oil trash.' Come on by."

Charles W. Holcomb (BS '37) is retired in Columbus, Texas. "Am trying hard to make the next Golden Anniversary. Enjoyed the 1987 gathering seeing old friends."

William C. Holland (BS '81) is working for Tenneco in exploration, still looking for the "elephant of an oil field. Daughter, Elise, is three years old now and doing great." Bill lives in Lafayette.

H. W. (Bill) Hollingshead, Jr. (BS '57) is exploration/exploitation manager, western division, for Pennzoil in Houston.

Lee Holt (BS '49, MA '50) is a consultant hydrogeologist in Port Aransas. "Recently opened a sculpture studio for creating and showing works of ceramic, bronze, and wood. Of interest to geologists are large sculptured mosaics of cross-sections, 'earth rhythms.' President of Southwest Sculpture Society."

James W. Hood (BS '48) is enjoying retirement in Salt Lake City. "Eva and I are pursuing ancestors and compiling family history."

Ben Hooper (BS '80) writes from Houston, "Our first child, Mary Elizabeth, was born in June, 1987. I'm still working for Chevron exploration, upper Texas coast."

Edward Hooper (BS '82) is a Master's student at the University of Queensland in St. Lucia, Australia. "Studying fluid migration in growth faults and enjoying good Ozzie hospitality."

Scott Hoskins (BA '87) is a laboratory technician at the Bureau of Economic Geology in Austin. "I am currently running the Bureau's petrographic thin section lab, but am pursuing an entry-level geologist position. Hopefully this position will be within an international drilling fluids company based in the U.S. with possibilities to send individuals to the Middle East."

John W. House (BS '57) is co-owner of Jon and Sue House Enterprises in Ruidoso, New Mexico.

John Howard (BS '86) is a gas contract analyst for Excel Natural Gas in Houston, and is also seeking the MBA degree at the University of Houston.

Blythe Hoyle (MA '78) finished her MS at Oklahoma State University last summer and moved to California to work on a PhD in civil engineering (water resources). "I eventually plan to teach or work with the EPA or USGS in one of their labs. Even though I've moved completely away from paleontology, I've found that my paleo background has provided good training for the other geology I've done."

Ed Hughston (MA '50), an independent in Taos, New Mexico, is doing some consulting work for the Dico Group in Dallas and participating in a few drilling deals.

Steven D. Hulke (MA '78) is a senior exploration geologist with Hunt Oil Company in Midland.

Emmett A. Humble (BA '49, MA '51) writes, "Hard to kick the traces and retire completely. Missing old friends and the fun of the oil business. Three of my associates and I have joined forces and are thoroughly enjoying the continued challenge of the oil business, domestic and international." He is with Humble, McClain, Miller and Smith, Inc. in Houston.

Elvin M. Hurlbut, Jr. (BS '43) is retired in Tyler and comments, "Home almost in

shape and home office almost in shape. Virginia and I are in good health except for allergies, arthritis, and sore muscles. Nice to be out of Houston and back in Tyler again. Enjoying the comedy of life with our two cats, Tommie Shoes and Rudolph Valentino. They are a real study. I recommend cats."

Joe A. Hybner (BS '52) is semi-retired in Corpus Christi, and is enjoying ranching, golf, and "dabbling with the oil and gas game."

Adelaide. "Worked in oil and gas division of South Australian Department of Mines and Energy. From April '87 to January '88, I was a geologist with Tarcoola Gold, Ltd., gold exploration. At present, I am consultant to Archon, Ltd. on purchase of U.S. reserves."

Joe L. Jackson (BS '56) is a regional geologist, southwest region, for the Bureau of Reclamation. "Still holding down the fort in Amarillo with lots of travel to adjoining states. Have been unable to find time to think seriously about retirement."

need Social Security, welfare and food stamps to survive!"

Gerhard C. J. Jansen (MA '48) has retired and is "happily bashing computers and raising citrus fruit in Southern California." Gerhard lives in San Clemente.

Jim Janssen (BS '79) says the big news of the past year is the birth of Andrew, first child for Jim and Linda. "I was recently transferred to a special project doing regional mapping in the deep water of the Gulf of Mexico. After looking for 100ft. faults in south Texas, this is quite a change." Jim

The "Fried Pi's," UTGS Banquet, April, 1957. Carol Ann Hodges, clarinet. (Photo provided by Ed Dickerson.)

Susan Ide (MA '86) moved to Poughkeepsie, New York in September, 1987 to work with the newly-formed company of a Bureau-ex, Roy Budnik. "We are in the sand and gravel business; we design low-impact mining and reclamation plans for quarry operators, among other things."

Judy Ingham (BS '81) received an MS in mineral economics from the Colorado school of Mines in 1986. "I've temporarily switched from production geology to economics. I'm in acquisitions buying producing properties and making trades. I'll probably go into exploration next, or back to school. Hello to my friend, Anne Smith." Judy is employed by Mobil Oil in Denver.

Logan Irvin (BS '79) is a consulting geologist in Dallas. "I am now working for myself and am busier than ever. Lisa and the kids (Neal, 5 and Shelly, 3) keep my spare time filled. Hope to see everyone at the GCAGS Convention."

Paula Ivey (BA '84) moved to Adelaide, Australia in January 1986 on a sister-cities work exchange between Austin and

J. R. Jackson, Jr. (MA '40), president of NORJAC Enterprises Inc. in Houston, is busy with work, travel, and golf. "Enjoy seeing Texas Exes in Houston and at various meetings."

S. Lance Jackson (BS '79) continues working for Exxon Co. U.S.A. "Back in Houston again, this time in the business analysis section of the planning group. So far, it's been interesting, but very different from past geologic assignments."

Russell W. Jackson (BS '76) is an independent geologist in Tyler.

Joseph Jacquot (MA '78) comments, "After six years of exploring in the Rockies and living in Denver, Tenneco transferred me to Houston to work in the South America division. I'm exploring in the Upper Magdalena Valley of Colombia; the geology is outstanding. It's been good to get back to Texas and renew friendships with fellow UT students. If you're in town, give a call."

Otis James (MA '52) is a self-employed petroleum geologist and oil producer in Gainesville, Texas, "still hunting oil—

works for Sun Exploration and Production in Dallas.

Alice Domingues Jobes (BA '23) writes from Kerrville: "The *Newsletter* is great. I really enjoy reading about old friends."

Charles B. John (BS '51) is supervisory geologist for the U.S. Department of the Interior in Tulsa. "Plan to retire in Tulsa at end of 1988 after 17 years in private industry and 20 years Federal service. Am thankful to the Lord for an exciting and personally satisfying career in geology. Thank you for the *Newsletter* through the years."

John W. Johns (BS '77) is a contract geologist for Conoco International in Houston.

M. L. Johnson (BS '50), an independent geologist in San Antonio, says it's a "great business in which to go broke."

John E. Johnston, III (MA '77) is chief economic geologist at the Louisiana Geological Survey in Baton Rouge. "Chip Groat, Rick McCulloh and I are still at the LGS. Everything is just fine. I am supervising my nephew's education in civil engineering at LSU, and he is seeing to it

that I get at least one gray hair for every one I ever caused anyone to get...and he's only a sophomore!"

Wayne T. Jolly (MA '66) is a professor of geology at Brock University in St. Catharines, Ontario. He is currently working on the petrology of Huronian, Archean, and Mesozoic volcanic rocks from Canada, Australia, and Puerto Rico.

Gene Keyser Jones (BA '48) writes from Midland, "Life in West Texas looks a bit better for those of us in the oil industry; some of us even smile occasionally! I continue to manage oil properties for my mother and myself. Both Phil and I have offices at home and spend quite a bit of time keeping up with changes in the paper work. Our combined families include eight children and eight spouses of same, 16 1/2 grandchildren and two very active mothers. Life has been very good to us, we keep very busy, and we will be looking forward to the *Newsletter*."

Luther G. Jones (BS '58) is in the civil service at Kelly Air Force Base in San Antonio. "I read the *Newsletter* from cover to cover; it's really great--thank you."

Richard D. Jons (BS '56) is an independent geologist in Midland.

James D. Kallina (BS '53) is president and owner of Seismic Ventures, Inc. in Stafford, Texas. "JDK Incorporated is a division of SVI (a Texas corporation). SVI/JDK is a seismic data services company conducting non-exclusive seismic surveys and performing data exchanges."

Mark C. Kasmarek (BS '82) is still employed with the U.S. Geological Survey as a geohydrologist in Houston. "We've been doing research in conjunction with the National Park Service in Big Bend National Park. I also attended a course in Denver dealing with geophysical techniques for ground water, pollution, and other subsurface exploration."

Edwin N. Kasper, Jr. (BS '51) says, "It was nice to see so many colleagues during the March annual convention of AAPG in Houston. A new granddaughter, Andrea, arrived April 20, 1987 in Austin." Ed is a consultant in Houston.

Steven G. Katz (PhD '75) writes: "I'm now in my second year as general manager of the laboratory instruments group at Harrop Industries, Columbus, Ohio. We are actively engaged in developing and promoting a new line of thermal analysis equipment, and it is exciting work. Best regards to the gang in Austin."

Scott Kelly (BS '86) lives in Tampa, Florida, where he is a youth minister for Campus Crusade for Christ. "I've gone from studying rocks to placing my lifetime occupation in the Rock, Jesus Christ. Youth ministry is definitely a change from geology, but continues to enrich and bless my life. In my spare time, when not counseling or leading Bible study, I still manage to do some fossil collecting. If you are in Tampa give me a call."

Edward R. Kennedy, Jr. (BS '48, MA '49) is a consulting geologist in Midland.

Leon A. Kent (BA '41, MA '50) is retired in Houston, and enjoys playing golf and traveling.

Robert F. Kent (BS '52), now retired, comments, "Do not know how I found time to work! Living in Emerald Bay near Bullard and Tyler. Lake Palestine is out the back door, and No. 1 tee box a five iron away."

George L. Keprta (BS '52) is senior exploration geologist for Rutherford Oil Corporation in Houston, exploring in the Miocene, Frio, Vicksburg, Yegua and Wilcox Trends along the Texas coast.

Don Kerr, Jr. (BS '60) is president of Kerr Construction Services in Houston.

Ralph S. Kerr (MA '76) moved to New Orleans in 1986 as district manager for the offshore eastern Gulf of Mexico with Shell Oil. "My wife, Donna, and I are proud parents of a baby girl, Lauren, born June, 1987."

Howard W. Klatta (BS '58) is an independent petroleum geologist in Houston.

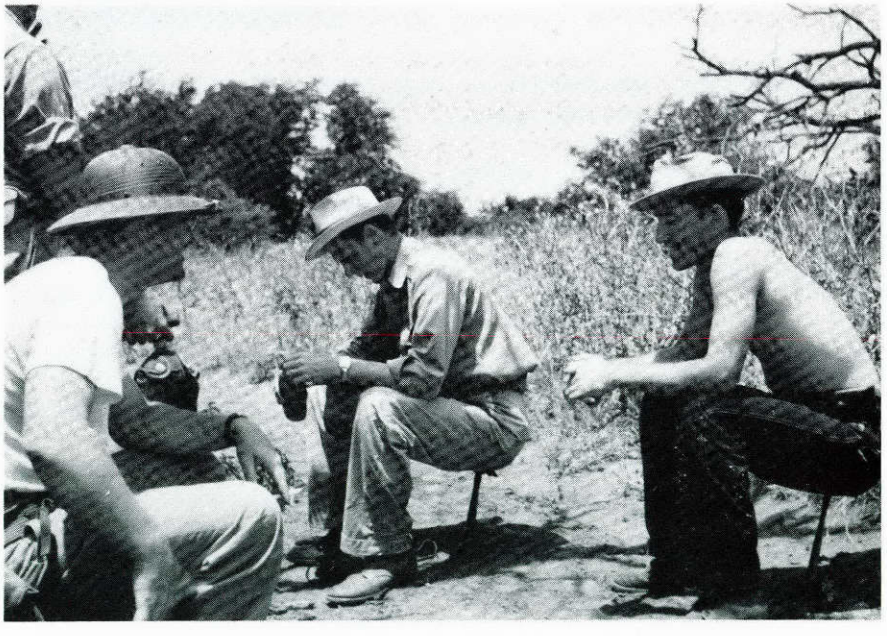
Jerry S. Kier (PhD '72) is a clastic sedimentologist for Reservoirs, Inc. in Houston. "Eight years at Reservoirs looking at sandstone cores from around the world; a new core is still exciting."

Robert J. Killian (BS '77) is a geologist with The Gulf Tide Oil Company in Houston.

Victor L. King (MA '57), senior staff engineer, writes, "Have lived in Bakersfield five years now, after moving from New Orleans. Currently involved with Shell's plans to develop a Monterey Reservoir in the OCS offshore the central California coast. The permit process is interesting, to say the least."

Thomas Kirkpatrick (BS '84) is a geotech for Exxon in Houston, and also is working on his Master's degree at the University of Houston. "Working on a subsurface thesis project in northern California, doing a series of paleogeographic reconstructions of a small basin. I also enjoy scuba diving."

Don K. Kirksey (BS '60) notes, "Recovering from the industry downturn has made new challenges but continue to enjoy exploration on the Mid Continent with Tenneco. Oklahoma City is a good place to live. Three sons are in mid-twenty's and doing fine."



Participants in the 1949 Geology 660 field course take a well-deserved break. (Photo submitted by DeWitt C. Nogues.)

Teresa Klump (BS '85) is an engineering technician at the Texas Water Development Board in Austin.

Vincent S. Kluth (MA '86) is a scientist for General Dynamics, electronics division, in San Diego. "Enjoying job (performing fast finite element algorithm development) and life in a resort town. Wrote paper for photogrammetry convention (ASPRS) in St. Louis in March. Increased levels of seismic activity in southern California region may be due to my imbibing cessation. Considering a 21-month MBA from University of California-Irvine, but California expenses may dictate otherwise."

Robert G. Knabe (MA '54) lives in Houston, where he still has his consulting "shingle" out, but is basically retired.

W. F. Knode (BS '57) is a consultant in Abilene.

Jan Houston Knox (BA '70) continues as a geologist for the Texas Water Development Board in Austin.

Paul Koons (BS '51) teaches at Barbara Jordan High school in Houston.

Erwin K. Krause (BS '49, MA '54), retired in Houston, comments, "Back in 1967, I worked onshore Gulf of Alaska for Sinclair, in 1977 offshore Gulf of Alaska for Arco; 1987 found me there again, doing it the right way, from the decks of the *Royal Princess.*"

J. David Krause (BS '53) is owner of Dave Krause Pontiac-Toyota-Dodge in Denton, Texas. "Car sales have been slow lately. We are like most Texans, anxiously waiting for things to get better. Bessie and I celebrated 37 years of marriage. Stop by when in Denton; better yet 'call for a quote' on your new vehicle."

Edward J. Krish (BS '71) continues as an exploration geologist for Kerr-McGee Corp. in Sparks, Nevada. "The last year has brought many changes. In December I married a wonderful woman named Judy. In May my son, Robert, graduated from high school and is off to study at the University of Oklahoma, and now in June the entire KM-Duluth exploration office is transferring to Reno to join in the current Nevada gold rush."

Nicholas Kuich (BS '60, MA '64) is geological manager for Mobil E&P U.S. in Houston. "Having left Houston 32 years ago to go to the University, I have finally returned. Some changes, but you can still smell Pasadena when the wind's right."

Laurel Lacher (BS '87) is a geophysical assistant for Zonge Engineering and Research Organization in Tucson. "My new job has taken me to various locations for electrical geophysical survey work, including a large open-pit copper mine. In addition to field work, my job involves elaborate computerized data processing and abundant technical writing." Laurel plans to begin graduate work in hydrology at University of Arizona in January.

George A. Laguros (MA '87) is an associate geophysicist for Marathon Oil Co. in Houston, working in the East Africa exploration group.

Leon M. Lampert (BS '51, MA '53) is a geologist for Dalport Oil Corp. in Corpus Christi. "Still 'hunting' for oil and gas in South Texas and southeastern New Mexico. There's a big one there, somewhere. Our daughter, Gail, and baby live in Minot, N.D. Wayne is an attorney in Oakland, Calif., and Ellen is a landman with Conoco in Casper, Wyo. If any of my old friends want to ski or play tennis, call me."

Robert K. Lattimore (BS '56, MA '62), an operations geophysicist for Chevron Overseas Petroleum Inc. living in Walnut Creek, Calif., writes: "A year older, five pounds heavier, not much smarter. Still doing operations--jobs from Papua New Guinea to Colombia. Ann joins me in sending regards to our fellow exes of the late '50's."

Thomas H. Lawrence (BA '32) is retired, and spends his time traveling, fishing, going to football games, visiting and being visited by old friends. "Moved from my home in Miami Beach, Florida to Springfield, Tennessee, my birthplace, in 1980."

Douglas A. Lawson (MA '72) is an associate professor in Applied Earth Sciences at Stanford University. "I will be coordinating research in geophysics, geology and petroleum engineering at the Stanford Center for Reservoir Forecasting."

Royce E. Lawson, Jr. (BS '49) is an independent geologist-geophysicist in Midland who is "still in the oil business—what there is left."

James L. Learned (MA '70) is assistant pastor of membership care in La Crescenta, Calif. "Besides my position of caring for senior citizens and counseling and visiting at the church, I am enrolled at Talbot Seminary, La Mirada, in the marriage and family ministries MA program, planning to graduate in May, 1990."

H. Louis Lee (BS '54, MA '58) reports, "We finished building our new home on Lake Travis in Austin and moved from Houston in February. Still pursuing the oil business but with slightly less vigor. Diversifying into other endeavors until the next boom."

Joseph W. Lee (BS '50) is a geologist working in asset valuation and management for Property Tax Service Co. in Dallas.

Robert A. Lemak (BA '83) writes from Houston, "Houston Hydrocarbons, Inc. is involved in the business of exploration, development and operatorship of oil and gas properties." Bob is vice-president at Houston Hydrocarbons.

Warren Leve (MA '52) is president of FWL, Inc. in Jacksonville, Fla. "Formed a hydrogeology consulting firm four years ago. Wish UT could help me staff some of our offices in Florida-Georgia. Send resumés; would like to have some Tea-Sippers instead of Florida Gators."

Max Levin (BS '47, MA '51) continues as an independent consulting geologist in Midland.

Charles V. Liebscher (BS '46) is retired in San Diego. "Served in the Army Corps of Engineers and USAF civil engineering field from 1941 to 1966. Resided in Germany, France, Greece and Spain from 1966 to 1980. Departed Germany in 1980 to settle in San Diego to take advantage of year-round mild climate. Now spend time on golf courses, plus some traveling. In 1959, qualified and played in British Amateur golf championship in Port Rush, Ireland. At end of May, '88 will visit West Columbia, Texas to attend reunion of 1934 high school class."

Walter S. Light, Jr. (BS '77) is an exploration geologist in Houston. "I am assembling new wildcat ideas in the Wilcox in Goliad County and Lower Cretaceous-Jurassic ideas in RRCD I. I'm looking for some partners to provide additional acreage and seismic funding in these areas. Give me a call if you're interested."

Tim Lignoul (BS '82) writes from Houston, "I have been attending law school at U of H and am earning a joint MBA/JD. I am also law-clerking and loving it. There is life after the oil patch."

J. Ken Liles (BS '50) lives in Frankston, Tex. "Oldest granddaughter graduated from high school in Scottsdale, Ariz. and will attend the University of Arizona on scholarship for scholastic achievement. I retired from Transco Exploration Co. and formed a company, Producing Properties, Inc., with three other explorationists; am now president of the company."

Alsie Linscomb (BS '51) is owner and president of Linscomb O&G Interests, formed in 1984, in San Antonio. He is also half-owner and president of C&L Energy Co., formed in January, 1988. "C&L Energy is an exploration, development and operating company currently involved in

drilling in South Texas. Have two new grandchildren, twin boys born February 17, 1988 in San Antonio. Have one granddaughter in San Antonio and a grandson in Manchester, N.H. That's all --in fact, that's enough. Keep up the excellent work on the *Newsletter*. It is a pleasure to read."

John F. Ligon (BS '81) is exploration manager and partner in Sandalwood Oil & Gas, Inc. in Houston.

Tung-Hung Thomas Lin (MA '84) is a geologist for Bridwell Oil Co. in Wichita Falls.

Eugene Lipstate (BS '49) lives in Lafayette, where he is vice-president of Northwest Oil Co., and president of Lipstate, Inc. "My sweet wife refused to let me semi-retire as I had planned last year. I did scale down and take it a bit easier. If the oil business improves, I hope to be able to respond."

Nancy Green Lister (BA '55) says, "All three sons are in college this year, which is a unique experience. Two are at UT, so it's fun going to football games in Austin and seeing the boys too. Best wishes to the faculty and friends from UT days."

George Livesay (BS '79) is an area geophysicist for Unocal in Midland.

E. R. Lochte, Jr. (BS '56) says, "Since the industry slowdown, have been spending more time at our ranch in the hill country. Am optimistic about the future, especially the gas industry." He lives in San Antonio.

Allen C. Locklin (BS '54) is president of Locklin Oil Co. in Tyler. "Doing well considering state of the oil biz. Have been actively pursuing the Paris Basin in France for two years. Much oil left to be found. Nancy (Summers) and I have been married 34 years. Our son, Chris, is an engineer with Conoco, is overseas mostly. Married to UT grad, Lisa (Hulsey). Our daughter, Lee Ann, and my geologist son-in-law, Scott Shaver (Texas Tech) have given us Lindsey, Claire and Macy, three lovely granddaughters. Scott works with me, so you see, I've got no real complaints."

John L. Loftis, Jr. (BS '40) is an independent geologist in Houston, and an Honorary Life Member of the UT Geology Foundation Advisory Council.

John M. Long (MA '78) says "all is quiet on the southern front" in San Antonio, where he is a freelance petroleum geologist.

Susan Longacre (BS '64, PhD '68) is senior research geologist for Texaco in Houston. "This seems to have been an exceptionally diverse and busy year, on the professional side. Continued involvement with a giant oil field in Kuwait/Saudi Arabia has me writing reports, supervising reservoir studies, traveling to Kuwait several times in 1987, and preparing a core display for the 1988 AAPG meeting in Houston. Computer liaison activities consume more of my attention; my special concerns are the characterization and transfer of geologic attributes to engineering reservoir simulators. On the home front, Ken continues teaching real estate law courses and is busy with the Civil Air Patrol. At 22, Missy has seen the light and come home from College Station to finish her degree in merchandising at University of Houston. Christi continues at Memorial High, doing well in classes and on volleyball teams. We all still have our health and are working hard on maintaining our senses of humor...wish us luck!"

T. E. (Ted) Longgood (BS '58, MA '60), in Houston, completed 28 years with Exxon in March. "Continuing with involvement in formation evaluation activity as I have for past several years."

E. William Longmire (BS '50) writes, "Have recently lost my wife, Robbie, who helped get me through school, but loving daughter and grandchildren help relieve the pain. Hope to continue to play in golf tournaments around with state with a little fishing thrown in." Bill is retired in Carrollton, Texas.

Jack Loocke (BS '74, MA '78), professional geologist for Sun Exploration and Production Co. in Dallas, is exploring for oil in Sudan, the largest country in Africa.

Stephen E. Lovell (BS '82) is a geological engineer with Tenneco Oil Co. in Bakersfield. "Trying to get used to the California lifestyle. There are enough Texans around to make the change easier."

Robert G. Lovick (BS '51) is a consulting geologist in New Orleans.

Carol MacDonald Lucas (BS '74) is a staff geologist with Transco Exploration Co. in Houston.

Lester E. Ludwick (BS '50) continues to live in El Paso, having retired in 1986 after 32 years in El Paso Natural gas Co.'s reservoir engineering department. He enjoys keeping abreast of oil and gas industry affairs and professional associations and individuals.

Pamela E. Luttrell (BA '73, MA '76) comments, "This year has been full of travel in southeast Asia—interesting from all points of view. We're looking forward to an exciting year of exploration for Mobil." Pam is supervisor, Far East, for MEPSI in Dallas.

Vance M. Lynch (BS '51) is still working for Unocal as vice president in charge of scientific computing in Brea, California. "I enjoy my work but I miss searching the data for prospects." Vance was elected to a three-year term on the UT Geology Foundation Advisory Council beginning in September, 1988.

James I. Lyons (BA '71, MA '75) is a consulting geologist in Reno, Nev. "Well, Steve, Fred, and Eric, I'm back in Mexico again looking for more silver. I was able to visit Cerro de Mercado (thesis area) this year and found the volcanogenic theory healthy, but it has been modified. I hope to see it published this year."

Robert D. Manson (BS '76) is supervisor of pollution control for EG&G Florida, Inc. and lives in Merritt Island, Fla. "Hydrogeology is my new thing. Oil is over. I am in charge of the groundwater for the Kennedy Space Center and Cape Canaveral Air Force Base. Thirty years of neglect has done a number out here. The job is lots of fun and sometimes I get to sit in the Shuttle and pull the levers."

Lester Marshall (BS '37) says he's "74 years old and still hanging in there. Old age is nothing to brag about, but it is better than the alternative. The current down cycle in geology is nothing new; I have seen several of these cycles in years past." Lester is retired from Gulf Oil and lives in San Antonio.

Sabin W. Marshall (BS '52) is manager of geology for Texas Gas Transmission in Houston. "Our last son graduates from high school this June. Then it will be too quiet at home."

Jeffrey G. Martin (BS '84) is a petroleum geologist for Martin Energy Co. in Covington, La. "Working on prospects in South Louisiana to be ready for the next upward cycle."

Mark W. Martin (BS '84) is pursuing the PhD degree at the University of Kansas in Lawrence.

David F. Martineau (BS '60) is "still waiting on the government administration to change their 'policy not to have an energy policy.'" David is exploration manager for Pitts Oil Co. in Dallas.

Leslie F. Mashburn (MA '86), chief geologist for Geochemical Surveys/Golden Geochemical in Golden, Colorado, is developing prospects for oil and gas exploration in North Dakota, Wyoming, Colorado and Texas. "Foreign geochemical survey work has entailed analyzing soil samples for indirect evidence of hydrocarbons in Quebec Province, Canada and Papua New Guinea." In 1987 Leslie

1946 Summer Field Trip, Chisos Mountains--back end of the International truck. L-R: Milton Scholl, Floyd Humphries, Jay Skrabanek, Paul Horn (in car), Furman Grimm. (Photo provided by R. B. Vickers, Jr.)

coauthored a paper with William Duchscherer which was published in the *Association of Petroleum Geochemical Explorationists Bulletin.*

Charles Masterson (BA '85) is project manager of Consolidated Fluidflo Inc. in Houston. He is completing the first year of an MBA program at Rice and hopes to work for Exxon in marketing during the summer. "Our company makes catalyst injection machines for refineries worldwide. Whatever happened to Steve McVey? I haven't seen him since my bachelor party."

W. Dallam Masterson (MA '81) is senior geologist for Arco Alaska, Inc. in Anchorage.

Michael J. Mattalino (BS '81) is an exploration geologist in Houston.

Vaughn C. Maley (BA '26) is retired from Exxon. "Still interested in geology. Make frequent trips to the Big Bend area which I mapped in 1929--long before there was a national park in the area. Now I live in a retirement center in Midland. Active in local charities and play golf twice weekly; present age is 85."

George W. Marshall, Jr. (BA '48) retired from Conoco in 1983. "We are really enjoying retirement. So many interesting things to see and do. . .our Alaska cruise last summer, etc. Thank you for the *Newsletter*. Regards to all." George lives in Houston.

David Martens (BS '84) writes, "I'm beginning my fourth year as a development geologist with Unocal in Houston. I'm also working on a Master's degree in geology at the University of Houston."

Todd A. Mason (BA '87) is an associate at Henry S. Miller Co., industrial division, in Houston.

Sharon Pickett Maxwell (BS '78) continues to live in Dallas. "Son, Nathan David, born 1/20/87. I am quite happy staying home to raise our son, and am also an independent contractor representing two separate companies. Steve finally passed all parts of the CPA exam, and is again also serving as minister of music, now at Sunny Glen Baptist in Dallas. Y'all write."

Paul R. Mayo (BS '50) an independent in Abilene, is "trying to adjust an exploration program to fit present economy. Otherwise everything important, like wife and grandkids, OK."

Merle and **René Curtis McCartney** (MA '85; MA '85) escaped Houston and are happily living and beaching in Corpus Christi. Merle works for Conoco; René is a "spudding" independent geologist.

James D. McConnell (MBA '80), an independent geologist, writes, "After six years with Exxon I volunteered for early retirement in 1986. My wife, Mary, and I traveled in Europe and Africa for awhile. We are now in San Antonio prospecting for oil in South Texas."

Edward McFarlan, Jr. (MA '48) says, "In 1987-88 my 'consulting' efforts were focused on developing the Quaternary stratigraphic framework of South and offshore Louisiana using surface geology and about 400 water wells and oil industry tests. In this endeavor D. O. LeRoy, Exxon Co. U.S.A., joined me as a coinvestigator. During the 1987-88 term I also served as vice president and program chairman for the Houston Geological Society (22 programs) and as chairman of AAPG's action-oriented Committee on Research."

Bill S. McGowen (BS '58) is involved with ranching and investments in Hockley, Texas.

Bill J. McGrew (BS '54, MA '55) is a cattle rancher in Mena, Arkansas.

Wayne Eugene McIntosh (BS '56) "recently moved to Rockwall, Texas with a new wife (Hazel). Kids scattered all over with youngest son, Scott, *still* at UT. I think he could qualify for a homestead exemption soon. Hope to slow down one of these days and travel around and see old friends."

Charles E. McKemie (BS '79) writes from Griffin, Ga.: "Moved back to my hometown last year after the crash and have found a new career as an engineer in automobile manufacturing. I still have a few oil prospects that I'm trying to get drilled in West Texas, though."

W. N. (Mac) McKinney, Jr. (BS '60, MA '63) is manager, exploration offshore, for Sonat Exploration in Houston. "Sonat just reorganized (again). I'm now handling development and exploration."

Jim McLaren (MA '84) writes, "My wife, Nora, and I bought our first house in late '86. Six months later it caught fire. After lengthy restoration, we are back home now and all is well." Jim is staff seismologist for Woodward-Clyde Consultants in Pasadena, Calif.

Peter B. McMahon (MA '84) and his wife, Lori, are expecting their first child in June, 1988. Pete is a hydrologist with the USGS in Columbia, South Carolina.

Jerry A. McNeish (MA '87) is a project hydrogeologist for Intera Technologies in Baden, Switzerland, and is consulting for the Swiss Nuclear Waste Disposal Program.

Jerald E. McQueen (BS '61, MA '63) is vice president, Medallion Oil Co. in Houston.

A. D. McRae (BS '42) is retired from Mobil Oil. He moved from Dallas to Horseshoe Bay, which is near Marble Falls, Texas, late in 1987.

Steven McVey (BS '85) says, "Since graduation I have worked with a couple of independent oil companies here in Austin. I currently work with Daniel Explorations Inc. I married Margie Bradley last November and we're awaiting the closing of buying our new house."

Lee I. Meador (BA '57) is retired in Anacortes, Wa. "Will be teaching one course in geology this spring at Western Washington University at Bellingham."

Joe N. Meadows (BA '62) is an attorney in Waco, Texas.

John A. Means (MA '47) reports "After retiring twice, I am back at work." He continues to live in Richardson.

Charles E. Mear (BA '51, MA '53) writes, "Cross Timbers continues to buy producing properties and drill low-risk wells. One son now teaching at UT Austin in engineering. Three children attending UT Austin. Seven of eight children have attended UT Austin." Charles is vice president of exploration for Cross Timbers Oil Co. in Fort Worth.

Robert Duff Mebane (BS '36) is semi-retired in San Antonio. "Do a little traveling, collecting 'advertiques.'"

Joseph Medina (BS '74) is an area geologist in Houston for Arco.

William J. Meek (BA '55) "received professional designation of Accredited Advisor in Insurance (AAI) last year and I am currently working toward Chartered Property Casualty Underwriter (CPCU). The insurance business is much different than geology, but equally challenging. Third grandson just born on March 5, 1988—Travis Michael Averitt. Everyone is doing fine." Bill operates W. J. Meek Insurance Agency in Arlington, Texas.

Peter Megaw (BA '76, MA '79), a consulting geologist in Tucson, says, "Life continues in the newly revitalized mining business. Off to Australia for Gold '88 and related entertainment. See y'all in Denver for GSA."

Mario L. Messina (BS '59, MA '62) is CEO of Messina, Inc. in Dallas. "Our business has expanded strongly into new areas such as China and the eastern block countries. My wife's restaurant, 'Jennivine' is now ten years old and continues to get rave reviews."

Alice Kleberg Meyer (BA '49) is "alive and well in San Antonio. Am chairman of the board of the San Antonio Museum Association, where I sharpen my hard rock skills I learned at UT."

Harry A. Miller, Jr. (BS '41), independent geologist, is "holding on in Midland, and still participating on the UT Geology Foundation Advisory Council. Also chairman of the Board of Certification, DPA, AAPG."

R. Dick Miller (BS '52) lives in Plano, Texas, where he is senior staff geologist for Geomap Co. "Hope to retire to our place near Georgetown in the next year or so. Sure looking forward to that."

Wayne D. Miller (MA '57), independent geologist, comments, "Everyone here in Midland still staying busy--not sure we are accomplishing what we want to under current economic climate. Have been in Midland now 30 years with last eight as consultant and independent geologist. Cannot complain too much as have turned a few prospects and even had some wells drilled (they are even producing!) the past few months. Family, children and grandchildren, all here in Midland. Still look forward to annual *Newsletter*."

Todd Mitchell (MA '87) writes, "I am attempting to generate petroleum prospects for a private investment company (GPM, Inc.) in Houston. The company's participation in mining ventures has allowed me to learn about economic geology in Bolivia and Costa Rica. Married in spring, 1987 to Beth Ann Janssen (BS '84)."

James R. Moffett (BS '61) is chairman and CEO of Freeport-McMoRan Inc. in New Orleans. "With everyone still on the OPEC roller coaster, I hope students will be told we will need their services in four or five years. Our irrational energy policy will drive us to total dependence on Third World countries, then we will need frantic effort to catch up. Geologists will be the foundation to rebuild the industry."

William A. (Bill) Monroe (BS '63) says, "Here's hoping for a return to favorable economics in the oil and gas business. Then we could go back to work and quit being consultants." Bill lives in Houston.

Evelyn Wilie Moody (BA '38, MA '40) writes, "1987 was a great year. Daughter, Jennifer, received her PhD in archaeology from the University of Minnesota; daughter Melissa, her husband and three children moved from California to Houston; son John, his wife and three children still live in Houston and he continues to do well at Exxon, where he is an attorney in the producing property acquisitions group. I spent summer of '87 in Greece working with the University of Cambridge in Crete part-time and kibitzing with the University of Minnesota in the Pindus Mountains in northern Greece part-time, both with new Dr. Moody, then on my own on the Greek island of Samos and a visit to Turkey. Published a new book (*The Business of Being an Independent--a Road Map for the Self-Employed*) which is very handy for new independents and those independents who want to stay in business. It's available at Earth Enterprises Inc. in Austin. It was a result of a seminar I chaired when I was president of SIPES Foundation. AAPG Bookstore has the tapes of this also. A mini-version seminar was produced at AAPG convention in Houston in March '88. Still have my office at 956 The Main Building in Houston. Come to see me."

Terry Don Moody (BS '86) and his wife, Margaret, are expecting their first baby in June. Terry is a geologist for International Technology Corporation in Austin, working in injection well services for the disposal of industrial waste.

R. McKay Moore (BS '52) lives in Shreveport, Louisiana.

Sara F. Moore (BA '79) is presently attending law school at Texas Tech University in Lubbock.

Terry L. Moore (BS '80), senior geophysicist in Oklahoma City, says, "Cities Service is history. Long live Oxy U.S.A Inc."

Maggie Dalthorp Moorhouse (BS '80) is employed by Exxon Co., U.S.A. as a senior petroleum geologist in Corpus Christi.

Duane E. Moredock (BS '58) is a consulting geologist in Denver. "This year marks my 30th anniversary of graduation from UT. My classmates are getting old."

Francis W. Morgan (BA '39) is a consulting geologist in El Dorado, Kan.

Julian Morgan (BA '49) writes from Houston, "As always, enjoy the *Newsletter*.

Keep up the good work. Bumped into Barth Schorre recently and had a nice visit. He is retired from Exxon and looked great. Still pursuing South Louisiana exploration with Ashland."

Susan J. Deutsch Morris (BS '70) says the family is well. "Bill is 12, and Amanda is 5. Work is slow but is picking up a little. Wish everyone the best." Susan is a consulting geologist/paleontologist in Houston.

Charles P. (Chick) Mueller (BS '60), an independent geologist in San Antonio, is "all settled down in new home, new office, with new wife (also named 'Barbara'). Going back to the basics, putting drilling deals together for sale to investors. Potential investors please call."

Robert Murray (MA '85) accepted a position with Science Applications International Corp. as a staff geologist in Las Vegas.

Heidi J. Nast (BS '79) is conducting doctoral field research in Nigeria.

Richard A. Neeley (BS '86) is currently working toward a Master's degree in geology at UT Arlington.

G. Allan Nelson (BS '47) writes from Denver, "Now in my 31st year as a consultant. It was supposed to keep getting better as I got older. Looking forward to third reunion of famous class of 1947 in Austin in 1990, Dr. Wilson."

Ken Nemeth (MA '76) is job-hunting in Houston. "My wife and I are alive and weathering 'hurricane' Samantha, born last summer. Optimistic energy outlook has brought multiple interviews; no offers, yet."

David C. Noe (MA '84) comments from Austin, "I am doing a lot of records research for Banks Petroleum Reporting Service at the Railroad Commission. I've also begun to search for a sedimentology-related job with the oil companies (keep an eye out for me) and Denise is about to go back to school and finish her four-year degree."

A. P. Noyes, Jr. (BS '55, MA '57) lives in Metairie, La., and operates Pete Noyes, Inc.

David O. Nilsson (BS '61) continues teaching in the Math Department at UT in Austin. "Troop 1 celebrated its 77th anniversary, and my 15th as Scoutmaster on January 30, 1988."

Ron Nordquist (MA '72) is "still doing oil and gas exploration for Tenneco in the Rocky Mountain foreland basins, mostly in Wyoming. Four-year-old daughter, Alice, is growing up fast." Ron lives in Denver.

Isaac W. Norman (BS '48) is executive vice president of Bishop Petroleum Inc. in Houston.

Carol Doran Northern (BS '84) says, "As you can see by my new last name, I've gotten married in the last year. Carl and I will celebrate our first anniversary on November 27, 1988. I'm still working as a geologist with an environmental consulting firm in Atlanta and have returned to school to get a Master's degree in hydrogeology." Carol works for NUS Corporation in Tucker, Ga.

George E. Nowotny, Jr. (BS '55) writes from Tulsa, "Well, I've tried all of the hard ones, oil and gas (energy industry), banking and real estate with some measured success and much anguish. Hard work and a lovely wife does keep one young."

Mark Null (BS '87), an ensign in the U.S. Navy, is beginning nuclear power school in Orlando, Fla.

Bob R. O'Brien (BS '52, MA '56) continues to travel, "which is what a geography professor is supposed to do. Scandinavia last summer and Ecuador this summer, where I hope to climb Cotopaxi and get to Galapagos." Bob teaches at San Diego State University.

John F. O'Donohue (BS '50) is president of Coastline Exploration Inc. in Houston.

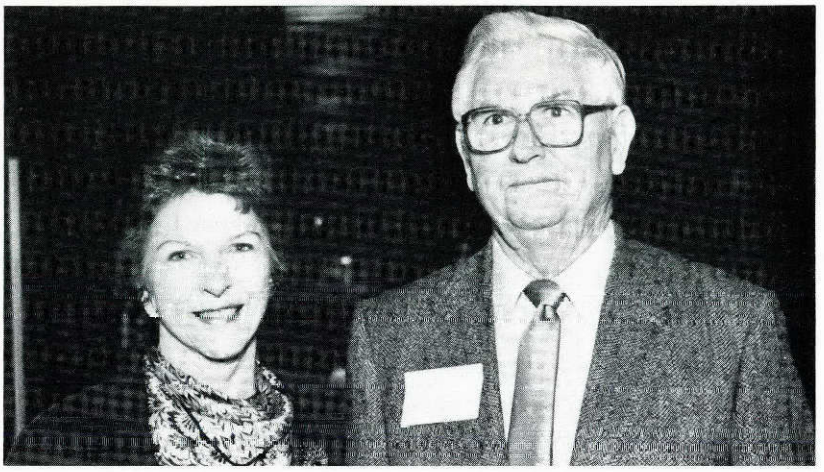
Roy Lee Onstott (BS '78) is a processing geophysicist for PGI Houtex (a seismic contractor) in Houston.

Harold Orr (BS '59, MA '62), exploration project manager for P. T. Stanvac Indonesia in Jakarta, plans to move to Houston during the summer.

Jeff Ottmann (BS '77) is an exploration geologist for Exxon Co. U.S.A. in Houston. "Finally escaped from headquarters, budgets and plans, to working some real geology in eastern Oklahoma and Arkansas. Will be Hawaii-bound as Margaret and I celebrate our tenth anniversary."

Robert D. Ottmann (BS '51) is geologic coordinator in the exploration department at Exxon in Houston. "I coordinate recruiting and other personnel-related matters. Glad to renew contact with the Geology Department after an extended hiatus. The Burnt Orange Geology Department is one to be proud of."

1982 Geo. 660 field camp, section taught by Bill Carlson and Mark Cloos. Front row, l-r: Theresa Harkrader Becker, Tim Lignoul, Kathleen Kerr, Tom Potter, John Thomson, Erik Davidsen, Steve Chastain, Mike Helton, John Newberry. Back row, l-r: Dan Baughn, Becky Houston (Teaching Assistant), Steve Martin, Mary Lyons, Mary Moczygemba, Jimmy Kalinec, Shannon Morrison, Sara Landtiser, Laura Dennison, René Curtis, Ed Hooper, Don Pierini ("The Sports Director"), Kent England, Fred Becker, Don Dunbar, Bill "Kato" Carlson (standing head and shoulders above the rest), Richard Goode, Dave Shomette, and Mark "The Inspector" Cloos.



Joy and Bill Payne at Department Open House, November, 1987.

Philip Oviatt (BA '78) is an exploration geophysicist for Union Pacific Resources Co. in Houston.

Woody Pace (BS '85) comments, "I have completed my Master's thesis at Mississippi State University. After a grueling two years in the Bahamas studying Recent carbonate sedimentation, it's finally over. I met my beautiful wife, Gena Pace, in Mississippi and have recently moved back to Houston to begin work as a geophysicist for Marathon Oil."

Gaston H. Parrish (BA '20), retired in Corpus Christi, says, "I always enjoy receiving the geology *Newsletter*. Wish more former geology students would send in their information cards."

Dorothy Slator Paterson (BS '77, MA '80) writes from London, "My husband, Malcolm, and I are currently completing year number three in working the North Sea with Chevron. We are expecting our second little 'dual citizen' in April, 1988; our first was a girl, Audrey, born August, 1986. We've enjoyed our time overseas, but miss our friends back in the States."

Mike Pattarozzi (MA '75) is a lieutenant in the Englewood, Colorado fire department. "The fire service is still exciting to me, due to its ability to constantly change and offer new challenges. Tracey and Laura are maturing into lovely young ladies. Chris and I have rediscovered the joys of sailing."

Jacob L. Patton (BA '32, MA '32) is an independent and consulting geologist in Tyler. "We go visit our children and grandchildren in Dallas and Houston, and are active in our church. When you get to be 80 there's not a lot one can do. I go to my office every day and usually confer with my Dallas retainer."

Tom S. Patty (MA '68), consultant/petrographer for Erlin, Hime Associates in Austin, continues to "investigate concrete and construction materials failures using petrographic microscopy. The construction 'slump' has impacted the concrete consulting business in a big way. Hope to see a turn around soon."

Bill R. Payne (BA '40, MA '41) attended the UT Geological Sciences open house last November and the AAPG National Convention in March. "I was hoping this year to see many of my 'old' schoolmates of the thirties. Saw very few. Either they have passed on or they may be just getting too old to travel. A pity! I enjoy the *Newsletter* every year. Keep it coming."

Steve Payton (BS '78) lives in Midland, where he is an independent geologist.

Stephen G. Petmecky (BS '85) and his wife, Karen, announce the birth of their first child, a son named Carl Andrew, born on 7/26/87. "We are ecstatic. Last year, I worked my last job as a diver with Martech, Int. and left the company to be able to spend more time at home. I have spent this past school year working as a science teacher at Rice Junior High in Austin, and plan to obtain a teaching certificate before this year is out. Keep up the good work on the *Newsletter*."

Benjamin J. Petrusek (BA '42) is enjoying his retirement from Amoco and continues to live in Metairie, La.

Van A. Petty, Jr. (BS '40, MA '41) is an independent geologist in San Antonio.

Loren Phillips (BS '82), geologist for the U.S. Army Environmental Hygiene Agency in Maryland, is enjoying his job in the environmental field and sends greetings to Jack Sharp.

George B. Pichel (BS '51), a consultant in Dana Point, Calif., "spent November to June cruising the West Coast of Mexico on our 37 ft. sailboat 'Beleza,' a great adventure."

Donald F. Pierini (BS '82) writes, "I quit Amoco Production Co. and am working for Advantage Resources doing both geological and geophysical prospecting. I have 1.0 wife, 1.0 kid, and 1.0 dog and I live in the Denver area. Life is great."

Gerald S. (Jerry) Pitts (BS '54) is president of Pitts Energy Co. in Midland. "Our company continues to drill wells in Ward County, Tex. We drilled four producers in 1987, one in the first quarter of 1988. We have three more to drill this year with four planned for 1989 in the same field. It is unusual to be able to drill commercially productive wells in these days of unstable oil and gas prices. Hope to see oil and gas prices improve this year."

Nick Pollard (BS '84) is a reservoir geologist at Midcon Corp. in Houston. "Still putting the finishing touches on my thesis, but fortunate enough to have gotten a job before being totally finished with my MS in geology from University of Houston."

Robert B. (Bob) Porter (MA '51) writes, "Received a successful kidney transplant at UTMB Galveston in September, 1987 and everything is working great! Grandson Turk McDonald is on football scholarship at UT Austin. Made football All State at DeSoto his senior year, and is now earning honors on the baseball team, which is in 5-A baseball playoffs at the time of this writing. Getting my old energy back, but son, Rob, is working me hard. Having a landman for a boss (and son) is double tough. If any of you know about a better deal, please let me know. Money not critical. Sure have appreciated many fine letters, cards and calls from old UT friends since last *Newsletter*." Bob is an independent geologist in Midland.

J. Eric Pressler (BS '68) is "generating prospects in the South Texas area and selling the prospects to individual investors and to companies interested in participating in the evaluation of the prospects." He is an independent geologist in Houston.

John Proctor (BA '50) says, "My oldest daughter has completed her second year at UT. My youngest daughter will enter UT in the fall. Probably I will be in Austin more than in Dallas. Like everyone else, I'm waiting for the price of oil to increase." John is a petroleum engineer for the U.S. government in Dallas.

Leo Pugh (BS '52) reports in from Houston, "Still working in the seismic business.

Oil business is definitely picking up again in Gulf Coast area after two years." Leo is vice president of sales for Gulf Coast Geo Data Corp.

Walter K. Rainbolt, Jr. (BA '57) is president of Dynamic Exploration, Inc. in Lafayette.

Clyde M. Rascoe (BS '49) writes from San Angelo, "My daughter, Lori Potter (UT Arlington '86), presented me with my first grandchild, a beautiful (of course) baby girl." Clyde is president of Merit Oil Co.

Loren Hopkins Raun (BS '86) is working on a Master's in environmental science and engineering at Rice University in Houston. "Plan to graduate in December, '88. Thesis involves statistical analysis and classification system for a hydrogeologic data base."

Robert Randy Ray (BS '74) is a geophysical petroleum consultant in Lakewood, Colo.

Mary Jean Redfield (BA '37) continues to live in Austin.

H. Clay Reichert (BA '38) says, "My age is now expressed in geologic terms." He is an independent petroleum geologist in Lafayette.

William M. Reid (MA '68, PhD '72) comments, "After being an independent in California and teaching at San Diego State in 1986/87, I'm now an independent in Austin, where my children live."

Charles B. Renaud (BS '49, MA '50) is managing Renaud Minerals, Ltd., a family royalty company, and enjoying the semi-retired life as an independent in Midland.

Kirk W. Rexrode (BS '84) writes, "Hi y'all. I'm still mapping structures in Pleistocene lacustrine deposits near the Salton Sea in southern California's Imperial Desert. I will show how the structural fabrics have kinematic significance resulting from a proposed right lateral shear couple in the crystalline basement rocks. I believe this subsurface wrench fault is a strand of the Clark fault which is part of the San Andreas mega-shear." Kirk is a graduate student at San Diego State University.

W. F. Reynolds (MA '53) continues as a partner with J. C. and W. F. Reynolds Oil Producers in Wichita Falls, and is active on the UT Geology Foundation Advisory Council.

James V. (Jim) Richards (BS '56) began consulting for Weeks Exploration in February for special projects. I'm busy in South Louisiana and offshore for Weeks and in Texas for myself. Looking to have at least ten wells drilled this year. Looking for my best year for larger reserves. The action is picking up again." Jim is a consulting geologist in Houston.

Frank M. Richardson (BS '57) is "really enjoying my new position as senior staff geophysicist at Elf Aquitaine Petroleum in Houston. Jean and the children all doing fine."

Debra Louise Richmann (MA '77) is senior geologist and group leader at Radian Corp. in Austin.

Gary Richter (BS '79) lives in Houston.

Wade C. Ridley (BS '53, MA '55) is president of Ridley Oil Corp. in Tyler. "Have enjoyed working with Dr. George Hamm on the Development Board of UT Tyler, the fastest-growing university in the UT System, and another asset for Tyler, the garden spot of Texas. Eldest son, Tom, is landman for our company; younger son, Clark, is in residency at U.S. Naval Hospital, San Diego; wife, Mary, is learning to fly."

R. Barrett Riess (BS '86) is studying to complete a Master's degree at Stephen F. Austin State University in Nacogdoches, Tex. "This will build my credentials and buy time until the industry starts to recover and new opportunities arise, hopefully. I'm learning lots of geology."

Virgil H. Roan (BS '49) is a geologist with Roan Royalty Co., Inc. in Ardmore, Okla.

Edwin C. Robinson (BS '50) took early retirement from Unocal International in July, 1986 and moved to Carlsbad, Calif. with his wife, Edith. "Am thoroughly enjoying the good life in north San Diego County."

Ron S. Robinson (BS '58) is a partner in Robinson-Buchanan Real Estate in El Dorado, Ark. "Son Jeff sailing with the U.S. Navy and will be married this September. Adrienne finishes Master's in Christian Education in May and 'baby' Paige is a teaching assistant at LSU working on her Master's in engineering. Carolyn and I have raised three children, so now we're starting on cattle; hope the price of beef stays up."

Margaret Anne Christie Rogers (BA '64, MA '69) Lives in Los Alamos, N.M. "My company, Margaret Anne Rogers & Associates, Inc. (MARA, Inc.), offers consulting services in the fields of environmental studies, waste management, environmental auditing, biochemical toxicology, OSHA and safety regulations compliance, quality assurance, geology and hydrology. In the last few years have 'gotten in touch' with some Cretaceous rocks again, but most were not limestones. I have an active interest in volcanology. Anyone who would like to take a look at the Jemez Mountains should get in touch (505/662-6574). Still have work to get out on them, maybe at the 1989 IAVCEI in Santa Fe. Gave a paper recently at the GSA Rocky Mountain Section Meeting in Sun Valley on the use of the geochemically inert zone for design of intermediate depth and shallow-land waste burial facilities in semiarid and arid climates. Saw Don Winston there. He's still enjoying Montana and doing a lot of work with Precambrian rocks."

Lucy Owings Ross (BS '50) is president of Deltex Royalty Company in Colorado Springs, Colo.

Peter D. Rowley (PhD '68) writes, "Last June, Mary Siders and I got married; Mary

Department Open House, November, 1987. L-R: Bill Muehlberger, Bill Gipson, Sally Muehlberger, Leta Gipson.

began work in the fall on the PhD in geochemistry at the University of Colorado. I am mostly mapping in the Caliente caldera complex, Southeast Nevada." Pete is a geologist with the U.S. Geological Survey in Denver.

W. Wayne Roye (BS '51) is an independent petroleum geologist in Midland.

Mary Dalton Ruckman (MA '38) says, "I still live in Karnes City, Texas, but am now a widow. Haven't been active in geology in years, but John Bianchi (consulting geologist in Karnes City and a UT graduate) and I taught three eighth grade earth science classes last week. We had a ball (I have a grandson in eighth grade)."

Carolyn Rutland (MA '79) is a senior staff geochemist with Science Applications International Corporation in Las Vegas. Her current position is related to high-level nuclear waste disposal.

Lloyd S. Ryman (BS '38) is retired in Sugar Land, Texas. "No exciting news. Still visit Europe two or three times a year. Purchased a 'pied-a-terre' in Marbella, Spain. Decorating it provides something to do while we are there a couple of months each year."

Floyd F. Sabins (BS '52) is a senior research associate for Chevron Oil Field Research Co. in La Habra, CA. "Second edition of my book *Remote Sensing--Principles and Interpretation* was published in 1987. Taught remote sensing short course for AAPG in Jakarta and participated in NSF-sponsored workshop in Bangalore, also in 1987."

Paul F. Sagasta (MA '84) is a geophysicist for Unocal International in Los Angeles. "There are still unexplored regions in the world. After 2 1/2 years in seismic processing, I'm back in geophysical interpretation in the Latin America group."

Rafik Salem (PhD '73) says, "The name of the game in the oil business now is 'it's how little you spend, not how much you save!' That's why I abandoned the downtown office and built a room above my garage to get rid of the lovely overhead. Others have realized earlier what was happening, but as usual, I was too busy to notice things!" Rafik is a geologic consultant in Fort Worth.

Martin P. Sander (MA '84) is a research assistant at the Paleontology Institute and Museum at the University of Zurich, Switzerland.

Jack S. Sanders (BS '57) is a petroleum geologist in Dallas. "Enjoying another Texas spring with wife and two teenage sons. Ought to be out on a rig instead of in (under paper)."

Kenneth Sands (BS '78) writes, "I have been lucky to be able to work and live in the East Texas area. For the last couple of years I have been with Ralph Spence, an independent located in Tyler."

Judith A. Schiebout (PhD '73) continues as director of the LSU Museum of Geoscience in Baton Rouge. "Research on Big Bend fossils continues, and this spring a five-week run of the traveling display, 'Lives of the Dinosaurs' kept me especially busy. My parents are in good health now. My father has recovered from replacement of most of his aorta and his left hip."

Jack R. Schmid (BS '51) is vice president of Saab Oil and Gas Inc. in Dallas.

Frank X. Schloeder (BS '79) is a geologist with Roadrunner Energy Inc. in Tulsa. "Have taken the opportunity of the oil recession to start up an oil company with three other geologists. The realization that I hadn't gotten to my level of success because someone gave me a meal ticket, but rather that I had earned that position through successful effort was just the encouragement I needed to venture forward and do the same for myself. Thanks, UT, for providing the training to do so."

Tom Schneider (BS '50, MA '51), self-employed geologist in Midland, is "working on a few selected prospects, ranching, land development and operating a few properties."

Joel D. Schneyer (MA '84) reports, "On May 6th of 1988 I will graduate from the Colorado School of Mines with a second Master's degree, in mineral economics. Got married 8/22/87 to Laurie Lynn Black on a wet morning in Boulder." Joel is a geologist with I. P. Petroleum Co. Inc. in Englewood.

Paul E. Schnurr (MA '55) says he "tried retirement, but could not adjust to the excitement of watching the hearses take friends to the cemetery. Enjoying work again, do some traveling, and praying that the price of oil will go up." Paul is chief geologist for NGC Energy Co. in Fairfield, Calif.

E. E. Schultz (BS '47) is living in Ojai, California. "Pauley Petroleum was taken over and my job moved out of state - I'm looking for another position."

Frank Schulte (BS '55), financial consultant in Houston, is "still enjoying making money for clients. Daughter, Susan, and son, Craig, turning out well. Stocks I like: Wolver-INE Exploration, DI Industries."

Rubin A. Schultz, Jr. (BS '61) writes, "Still with the Highway Department in Corpus Christi; plenty of work maintaining our highways. The family is fine. Nancy and I are planning our annual trip to Maui again this summer." Rubin is a maintenance construction superintendent.

Christy Schweikhardt (BS '83) comments, "1988 looks like it is going to be a good year. At work, American International is planning an increase in drilling activity in both Texas and southeast Colorado. I am excited about being a part of this program. I have moved—bought my own home in July, 1987." Christy is an exploration geologist for American International Energy Corp. in Houston.

Eugene P. Scott (BS '56) is "still attempting to resolve and bring about a 'fair share' settlement, under the Mineral Interest Pooling Act of the State of Texas compulsory pooling laws, to the very lengthy 'force' pooling hearing proceeding matters before the Railroad Commission concerning the Exxon-Lichtenberger mineral fee 197.9 acre section, Seven Sisters, East Field, Duval County. Hopefully this is the year, for it's indeed been a rather long and arduous ordeal to say the least." Eugene is an independent/consulting petroleum geologist in Corpus Christi.

John E. Seale (BS '41) is retired but still does a little consulting in Houston.

George C. Seibert (BS '60) is president of King Oil Tools, Inc. in Humble, Texas. "Business is good with water well and ground water monitoring well products; also doing contract machining for aircraft industries. Three grandchildren."

Louie Sebring, Jr. (BS '41, MA '47) is an independent consulting geologist in Corpus Christi. "Waiting for repeal of WPT and bursting of the gas bubble. Son Earl, also a UT graduate, is exploration manager for Permian Basin and MidContinent including Michigan, for Wagner and Brown in Midland. A fishing trip to Argentina was the highlight of the year, but it did uncover some deficiencies in fly fishing technique that we will rectify, hopefully, by attending fly fishing school this spring. For the first time in many years, Betty and I are taking care of no one but ourselves. We are a little lost."

Paula Wright Sessions (BS '84) writes, There are quite a few hydrology/environmental opportunities in South Florida. If any of my old friends visit the Miami area, give me a call. (We have a big Texas Exes group down here.)" Paula is lab coordinator and geologist/environmentalist with Clark Engineers Scientists in Miami.

Kenneth O. Seewald (graduate student '61-'64) is owner of Seewald Energy Co. in

San Antonio, and lives in Boerne. They are looking forward to seeing all their friends in April at the AAPG annual convention in San Antonio.

Charles R. Sewell (MA '55, PhD '63) is owner of Sewell Mineral Exploration in Tucson. "I remarried after Maggie's death. Married Louise Worthington, a special old flame from my old home town, whom I had not seen in 32 years. Life is great again. Children: Mike, married and a hydrologist in Phoenix; Scut, married with two boys, now drilling water wells in Nevada and California; Beth, sociologist and part-time Master's student at Arizona State University; and Ginger, working on an MBA at SMU, should graduate in August, '88."

George B. Sewell (BS '54), consulting geologist in Denver, is working primarily Williston Basin and Piceance Basin. "Surviving and still single. Love to see old friends from UT."

John S. Shambaugh (BS '49, MA '51) is retired from Exxon and lives in The Woodlands, Texas. "Always enjoy the *Newsletter*. Wish more Exes would continue to write in."

William W. Sharp (BS '50, MA '51) is an investor and petroleum geologist in Dallas. "The best is now. Vacations in Europe, included in 1987-88 *Who's Who in Southwest*; my oldest daughter is a fine attorney."

Stephen L. Shaw (BS '71, MA '74) is a senior staff geologist for Meridian Oil in Midland. "I am continuing to be active in the West Texas Geological Society. I was in charge of the program for our luncheons last year, and I'm treasurer of the society this year. I saw several old friends this year (some as speakers for WTGS), and I always enjoy them."

Don B. Sheffield (BS '58) writes, "The geophysical business is seeing the light at the end of a very long tunnel. For four years we have looked for a glimmer of hope. Exploration is on the way back." Don is president of Geosource Inc. in Houston, and is an active member of the UT Geology Foundation Advisory Council.

William T. (Bill) Sherman (BS '51) is still trying to "patch it up in the oil patch" as a self-employed geologist in Houston.

George H. Sherrill (BS '50) is an independent in San Angelo who is still drilling a few wells in West Texas.

J. David Shetler II (BS '84) is a geologist for Sun Exploration and Production in Dallas.

Elgean Shield, Jr. (BS '53), president of Shield Development Corp.in Houston, says "On May 18 last the youngest daughter, Shelly, delivered a grandson on my birthday. Now have two grandsons and two granddaughters, all looking forward to attending UT. Business is slow in the oil patch but still promoting oil deals on the Gulf Coast with Shield Development Corp."

Charles Sicking (PhD '80) is principal research geophysicist for Arco in Plano.

Samuel J. Sims (MA '57) continues to work as a consultant in southeastern Pennsylvania, and lives in Bethlehem.

Clint Simmons (BA '82) writes, "Mary Ann and I are proud to announce the birth of our second son, Nicholas Lee." Clint is a geologist for Minahan Resources, Inc. in Corpus Christi.

Scott Simmons (BS '87) is a Master's student in geology at SMU in Dallas. "I will spend the summer of 1988 researching the cyclic control on carbonate diagenesis in the eastern Big Horn Basin of Wyoming."

Robert (Samson) Singer (BS '61) says we "need higher prices for oil and gas if the oil companies are going to find enough reserves to replace production." Sam is manager of reserves and acquisitions for Pennzoil in Houston.

Harry H. Sisson (BS '40) is retired in Houston. "We closed our consulting office in Town and Country and built a nice office onto our brick garage. I spend about six hours a day in the office. We travel more, but it's hard to find the time in our busy calendar. We did enjoy the 'Canadian Rockies' vacation trip and we are planning another to Hawaii again. I am spending more time with our investments, which include the farm and oil properties. With a patch here and there, Nancy and I keep active with walking daily, church work, and friends. We still enjoy our grandchildren, who are mostly grown now, either in college or going soon. I believe 1988-89 will be good years; let's go for it!"

David K. Skidmore (BS '76) is president of Skidmore Exploration, Inc. in Nocona, Texas.

Steve Slaten (BS '82), a hydrogeologist for the U.S. Environmental Protection Agency in Dallas, "gave up on the oil business. Future now appears much more secure, and almost as exciting. Bonnie and I take little Sam (two years old) to Austin whenever possible."

1946 summer field camp. L-R: Gordon McNutt, Earl B. Knott, Chuck Forney (in car), Abdullah Tariki, R. B. Vickers, Paul Horn, Doug Keenan. (Photo contributed by R. B. Vickers, Jr.)

Marriott Wieckhoff Smart (BS '57) is director of the library/information center at Cyprus Minerals Co. in Englewood, Colo. "Denver's economy is still pretty bad. My company has been growing by acquisitions. It has been pretty interesting. The mining industry seems to be better right now, at least for gold and some metals. Still don't see much improvement in energy. Good luck to everyone."

Tommy T. Smiley (BS '51) is retired in San Antonio.

Anne E. Smith (BA '83) writes, "After four years of working for numerous oil companies, I am finding that working for an environmental firm can be fun, too." Anne is a geological consultant for I.T. Corp. in Austin.

Brian A. Smith (PhD '86) lives in Oak Ridge, Tenn., and says, "I am presently working with Bechtel on some projects involving radioactive wastes that were injected into a deep shale formation at Oak Ridge National Laboratory. I am back in the hills of East Tennessee where I grew up, and am spending most of my spare time caving and camping."

Bruce Dixie Smith (BS '58) is a partner in Fulbright and Jaworski in Houston. "I am still practicing admiralty law in Houston. My wife, Marja, and I have become interested in ancient history, so we travel in the Mediterranean area at every chance we get."

Daniel L. Smith (BS '58), executive vice president of Texoil Co. in Houston, has had a "fun year as president of the 4,600 members of the Houston Geological Society. The highlight of the year was hosting the 1988 annual convention of the American Association of Petroleum Geologists."

Debra A. Smith (BS '82) writes, "Unfortunately, I'm no longer searching for hydrocarbons; however, my job enables me to arrange transportation from the wellhead to the consumer for natural gas. So I'm still in the game but in a different capacity." Debra is customer services representative for Transcontinental Gas Pipe Line Corp. in Houston.

J. T. Smith (BS '50, MA '55) took early retirement from Sun Oil Co. in December, 1987, and now lives in Fredericksburg in the beautiful Texas Hill Country.

Paul K. Smith (BS '84) is a graduate student studying public administration at the University of New Mexico in Albuquerque. "This summer I'm going to McHenry, Illinois to manage a lakefront recreation park."

A. Richard Smith (BS '64) writes from Houston, "Consulting is so much better than real work!"

Harry L. Smith (BS '51, MA '56), an oil operator in Boerne, Texas, "just got back from a vacation in New England and points east. Their economy is healthy and work is plentiful. We got a lot of sympathetic looks when the Easterners found out we were in the oil business in Texas."

Frederick C. Smyth (BS '47) is retired in Dallas.

Edmund D. Sneed (MA '55) is region exploration manager for Marathon Oil Co. in Houston.

John L. Snider (MA '55) continues to enjoy retirement life in Pineville, La.

Fred R. Snyder (BS '82) says, "I was employed until 4/88 by Radian Corp. in Austin as a hydrogeologist, where I conducted groundwater investigations in the western and eastern U.S. Presently employed by Kennecott Utah Copper as a hydrogeologist in their environmental division. Spending my spare time mountain biking, playing competitive ultimate frisbee, skiing and traveling--it sure is a rough life, but somebody has to do it!" Fred lives in Salt Lake City.

Jairo M. Souza (MA '82) since May, 1986 has been working in the processing and interpretation of 3D data in the Campos Basin, the most prolific basin offshore Brazil. He lives in Rio de Janeiro.

Howard Speer (BS '56) is first vice president of Dean Witter Reynolds in Dallas. "One son graduated this year from Texas A&M in architecture, another from the University of Colorado in business. Cash flow should improve. Best to all."

Steve Speer (MA '83) is "staying busy with Yates looking for oil and gas in the Rocky Mountain region. Even though economics are tougher than ever, we're expanding our efforts and drilling good prospects in more areas. It's been real fun, challenging and interesting to say the least. Therese and I have Sarah (7), Janine (3) and one more due any day, and we're all doing great." Steve is division geologist for Yates Petroleum Corp. and lives in Roswell, N.M.

Fred D. Spindle (BS '49) writes from Sugar Land, Texas, "Now that the globe-trotting phase of life is over, we are finally seeing the U.S. by car. I anticipated boredom after 38 1/2 years with Marathon, but we both are amazed at how pressed for time we seem to be; the Sunday paper seems to come every other day."

Scott Dunbar Spradlin (BS '75, MA '80) is an exploration geologist for Exxon Co. U.S.A. in Houston. "Reorganization now places Alaska and offshore California in my area of responsibility. As if the Gulf of Mexico wasn't busy enough. Luckily, my job in business analysis is challenging and rewarding. My oldest child turns 15 this year (born while at UT)—gad, has it been that long? Has anyone seen John Herwig?"

Richard Stancliffe (MA '84) is a geological engineer with Shell Offshore, Inc. in New Orleans. "Kathleen and I are happy to announce that we now have four children: Michael (8), Erica (6), Troy (3) and Jason (1). We would love to hear from any old friends (504/391-1710)."

Earl B. Stanford (BS '51) is retired in Ennis, Texas.

John F. Stanford, Jr. (BS '49) is retired in Austin. "My wife and I celebrated our 40th anniversary May 27th with a party at Balcones Country Club."

Sara S. Avant-Stanley (BS '78) writes, "After taking a year and a half off to play mommy and the subsequent oil bust, I've embarked on a new career in the medical field. I perform various vision tests and assist in surgery. I've relegated my rock hammer to nailing pictures for the present. . .not much use for it in cataract surgery. Rick and the kids (Blair, 4; Jorden, 1 1/2) are fine. Come see us if you're ever this way." Sara is an opthalmic medical assistant in Natchez, Miss.

Theodore E. Stanzel (BS '56), a consultant in Houston, remains "involved in energy developments in anticipation that near-term trends will turn upwards. The industry needs more exploratory activity so our non-productive expertise can be utilized in the search for the earth resources."

Frederick L. Stead (MA '50) is still consulting in Dallas.

Burgess H. Stengl (BS '85) is currently working on his Master's thesis in the energy and mineral resources program at UT Austin under the direction of Dr. W. C. J. van Rensburg. "Hope to finish by August, 1988."

James Stimac (MA '83) writes, "Since leaving UT I've worked at Stanford University studying volcanic rocks from Pantelleria, Italy, Unocal Geothermal, the Arizona Bureau of Geology (mapping in west-central Arizona), and Battle Mountain Gold Company (exploring for gold in Nevada)." Jim started a PhD program at Queen's University in fall 1987, studying volcanic rocks from Clear Lake, Calif.

Bill St. John (BS '58, MA '60, PhD '65) is CEO and Director of Primary Fuels, Inc.

1946 summer field camp. Stop between Alpine and Terlingua. L-R: Alvin Candela (back), Charles Forney, Bill Seidl, Lawrence Ethridge, John Means, Fred Schultz, Earl B. Knott, Tom Culbertson. (Photo contributed by R. B. Vickers, Jr.)

in Houston. "Had open-heart surgery in May, out of hospital in six days—a great adventure, and I slept through the whole thing! Can't wait to see what happens to oil/gas business in '88." Bill was awarded the AAPG Distinguished Service Award at the 1987 annual meeting.

Preston A. Stofer (BA '57) is currently "involved in a redfish hatchery in Port O'Connor, Texas (trying to help Mother Nature)."

William T. Stokes (BS '50) writes, "This past year has been interesting with my retirement from the King Ranch. Fifi and I have had the opportunity to travel. We enjoyed our AAPG buddies at the trustee meeting in Colorado Springs. AAPG meeting in Houston was great, especially seeing a number of our classmates at UT. The Advisory Council for the Geology Foundation is very special to me." Bill continues to live in Dallas.

Michael Stowbridge (BS '82) says, "I'm working here in Austin with Keith Graham, Jr. at Keith Graham Oil Co. Living in Austin again, since January 1, reminds me of the good friends and good times I had at UT."

Robert E. Stowers (BS '61) continues to live in Houston, where he is exploration manager, West Africa, for Tenneco Oil.

Robert E. Stowers II (BA '86) is at Mississippi State University, "finishing up Master's thesis and looking for a job to start paying off accumulated debts. Attended AAPG convention in Houston; enjoyed seeing friends and professors. Lisa and I send our best to everyone."

Michael W. Strickler (BS '78) is manager of exploration for Trafalgar House Oil and Gas, Inc. in Houston.

Hal Stubblefield (BS '54) says, "Family doing fine, daughter Susan (UT '81) married and living in Houston; daughter Amy (Baylor '83) married and living in Kansas City; son Stuart currently a senior at UT; wife Barbara recently went back to work (paying job, that is) after ten years as housewife. Mosbacher still very active in Gulf Coast exploration." Hal is vice president of exploration for Mosbacher Energy Co. in Houston.

Paul D. Suddath (BS '76) is an independent geologist in Abilene.

Lindsay Lloyd Tade (BS '72) lives in Houston.

George W. Taylor (BA '49) is retired from Exxon and lives in Georgetown, Texas, and is "happy to have my health."

James B. Tartt (BS '48) is enjoying retirement in Houston.

Dick Teel (BS '39) is employed by Petroleum Information as a consultant, primarily working on new applications for well data and production. "Will make my sixth safari to Africa in September with my No. 1 son." Dick lives in Houston.

C. B. (Tim) Thames, Jr. (BS '53, MA '57) is an attorney and independent producer in Bismarck, N.D. "Every time I've drilled a well in the last three years, the price of oil has dropped substantially within weeks. Should be able to get industry support for a modest program of *not* drilling wells, then expand. We are surviving and will overcome. Best wishes to all."

Keith Thompson (MA '85) is with Water Resources Associates in Austin.

John D. Tuohy (BS '39) is "sitting here on a two-acre hillside on Canyon Lake trying to grow trees, shrubs and flowers on this Lower K outcrop and of course, when we sometimes are successful, the deer eat them up. Family doing very well, golf game getting poorer." John is retired in Canyon Lake, Texas.

Billy D. Thomas (BS '49) was offered early retirement from the Railroad Commission of Texas as senior staff geologist and director of technical hearings. He continues to live in Austin.

Thomas B. Curlee (BS '56) is a petroleum geologist and consultant in Oklahoma City, "still enjoying good health, golf, like the *Newsletter*, like to see those articles about UT, particularly the study targeting Ellenburger zones by Kathy Shirley in the AAPG Explorer, December, 1987. Good job by the Bureau."

Jene C. Thomas (BA '86) left I.T. Corporation in December, 1987 and went to work for the Texas Water Commission Austin district office. "I'm working with the UST program and Hazardous Materials Spill Response."

Susan L. Thompson (MA '85) is a geologist at Arco Oil & Gas Co. in Midland.

T. J. Thompson (BS '57) enjoys getting the *Newsletter*, and checking up on his "ex-rich" classmates. He is owner of Toro Exploration Co. in Dallas.

Bert C. Timm (MA '41) says, "The Feds did it again. FERC's new regs shut down my gas business so I'm happily teaching

geology as I did at UT before WWII." Bert is an instructor at Collin Community College in Plano, Texas.

Craig M. Topham (BA '77) is a geophysicist at Western Atlas International in Houston. "I've been in the special processing group at Western seven years, inversion processing primarily. Hobbies include roller skating, piano, and voice. Steve Cumella, where are you?"

Donald H. Torgerson (BS '52) is retired from Dowell and lives in Littleton, Colorado. "Retired and did some traveling the first year, but have been ill the last six months so unable to travel so far. Big hello to all and if you come through Denver, give me a call."

Traci Elaine Trauba (BS '85) started a new job in January with The Travelers Insurance Companies. "I am now an environmental claim representative. Also moved into a new apartment in May." Traci lives in Houston.

Everette J. Travis (MA '51) is retired in Buchanan Dam, Texas, and plans to see the geology of the Balkans and Yugoslavia during the summer.

Galen Treadgold (MA '85) says, "I was married in 1987 to Teresa Maria Carreon and we're expecting our first child. I'm working as the coordinator of AVO (amplitude variations with offset) projects in Arco's geophysical analysis group in Plano."

Lloyd Rex Travis (BA '48), an independent and consultant in Houston, is "still plugging away in the oil exploration business and planning on 1988 being better than 1987. Keep up the good work on the *Newsletter*, as you always do an outstanding job."

Robert F. Travis (BS '57) is vice president of exploration for Royal Oil & Gas in Corpus Christi. "I'm still looking for oil and gas and I'm still looking for redfish--my priorities are changing, though--I would rather find redfish."

Raymond R. Trollinger, Jr. (BS '60) owns Raymond R. Trollinger, Jr. Investments in Dallas.

Roy W. Tronrud (BS '40) continues to travel a bit and play a lot of golf since his retirement as a geophysicist from Sun. He lives in Richardson, Texas.

Arthur J. (Art) Tschoepe (BS '51) is an independent geologist and oil operator in Corpus Christi. "Enjoying eight beautiful grandchildren while living with a fantastic grandmother."

Michael Jan Turk (BS '83) is currently stationed in Bangkok, Thailand, working on delineation and development of Unocal's Gulf of Thailand concessions. "Visitors to the Far East, get in touch!"

Edd R. Turner (BA '43) says, "I am not involved in geology except for a field trip now and then around the Hill Country. The big change in activity has been in politics. On May 10, 1988, I was elected mayor of the City of Kerrville." Edd is an Honorary Life Member of the UT Geology Foundation Advisory Council.

LeRoy J. Tydlaska (BA '49, MA '51) continues his consulting business in Louisiana. "Nothing new from New Orleans. Business is still slow but looking better. If oil gets to $20/bbl this year I may even have to go back to work."

James R. Underwood, Jr. (BS '49, MA '56, PhD '62) is a professor of geology at Kansas State University, now serving 27 months as program manager for NASA's planetary geology-geophysics program. "Working and living in Washington is great fun. . .as Margaret observes, 'the place where the local and national news are the same.' Daughters Marion, Andy, and Beth are in college. Lovable old dog, Geraldine, went to the Big Doghouse."

Don Urbanec (BS '60, MA '63) writes, "By the time this *Newsletter* is published, I'll have two daughters at UT Austin. During 1987 I helped give birth to Mina Energy, which owns and operates oil wells in five South Texas counties. Both, my daughters and Mina Energy, are hoping oil prices move up in 1988." Don's company is in San Antonio.

Robert D. Valerius (BS '59) is an independent petroleum geologist in Corpus Christi.

Bruce R. Van Allen (MA '78) is a minerals analyst for Tenneco Minerals Co. in Lakewood, Colo.

Amy Wharton Vanderhill (BS '83) writes, "Jim and I are doing great way out west in Midland. We are settled into our new home, starting a garden and still repainting. I am now a production geologist working fields in the Horseshoe Atoll for Mobil."

James B. Vanderhill (PhD '86) is a student at UT Permian Basin. "I am fulfilling the requirements for a teaching certificate and enjoying domestic life with Amy and the cats."

David W. Vernon (BS '79) is a consulting geologist for Baruch-Foster in Dallas.

Harry A. Vest (MA '59) is retired from Conoco and lives in Houston. "Enjoyed seeing many 'old' UT friends and profs at the AAPG annual convention. Hope to do it again in S.A. next year. Got two boys at UT Austin and another one will be in fall, '89-- first two in business, but hope the last one wises up and gets in geology or at least petroleum engineering."

R. B. Vickers (BS '47) writes from Abilene, "Nothing new this year other than the normal extended family adventures."

Louita Dodson Wilson visited the Department in the spring to view the exhibit featuring two intaglio rings she recently donated to the Department.

Kenneth D. Vogel (MA '85) is senior geologist, geological operations, offshore Alaska division for Exxon in Houston. "Summer fieldwork in Alaska's interior and winter wellsite duty on the North Slope were highlights of the past 12 months. Ryan turned three years old and Eric celebrated his first birthday in 1988. The kids kept Laura busy while Daddy was traipsing through Alaska."

William Vrana (BA '39) is a consulting petroleum geologist in Corpus Christi.

William R. Waddell (BS '38) lives in Houston. "I am still doing some geological work, drilling about one well a year. I am spending more time at our Lake Conroe house, less time geologizing and ranching. The six grandchildren are a real joy."

J. C. (Rusty) Walter III (BS '80) is executive vice president of Walter Oil & Gas Corp. in Houston. "Drilling wells in the Gulf of Mexico with my father and three other geologists, including David Pustka (BS '76)."

Preston M. Walters (BS '73) writes: "I am still working for Unocal in Houston, currently in the development department of the Texas offshore. It was great seeing so many friends at the AAPG convention last spring. Dawn and I are 'thirtysomething' with two kids, two-car garage and one dog. April '87 saw the arrival of our second child, Joshua. Alissa, now eight, was excited about a baby brother, until he started walking. These two keep Dawn busy but she still manages to teach some CPR and first aid courses for the Red Cross."

Anne Walton (MA '86) says, "I am working on my PhD on the rodents of the Miocene La Venta fauna, Colombia, a good place for field work. For almost a year now, I have been engaged to Mario DePillis." Anne is a student at SMU in Dallas.

Bernie Ward (BA '55), an independent in Tyler, says his last child, daughter Alice, graduated from UT this spring with a degree in elementary education. She hopes to teach in Austin.

Bill and **Kathy Agnew Ward** (BS '55, MA '57; BA'57) continue to live in New Orleans, where Bill is professor at the University of New Orleans. "Enjoyed reading Hay-Roe's account of the SGE picnic in 1955, the year I was initiated...a memorable event. In those days Kathy wasn't allowed to join the all-male SGE, even though her grades were much better than those of most of us. Spent the summer on Mallorca, where Bill collected from spectacular sea-cliff exposures of the Upper Miocene reef complex."

Daniel L. Ward (BA '49, MA '50) is retired in Grand Junction, Colo., "trying to get birdies and rainbow trout."

Joe Harold Edgar Ward (BA '38, MA '40) is president of Geo Energy Corp. in Midland. "Celebrated 50th wedding anniversary on September 4, 1987. Married to Charlotte M. Ward (UT '39)."

Ralph H. Warner (MA '61) is "still looking for the imminent 'good days' in the oil business. Joys and sorrows of the 'sandwich generation' are being experienced with the advent of additional grandchildren and caring for aging parents. Marilyn and I have found great satisfaction in youngest daughter, Julie's, completion of freshman year at UT."

Leslie Leland Warren (BS '85) is a geological technician at Zickha Energy Co. in Houston. "Over the last year I was able once again to find work in our industry as have several friends. Scott and I are busy making plans for the house we will build in Weston Lakes about a year from now and would like to say hi to all the 1985 and 1986 graduates."

Bill D. Watson (BS '58) is retired in Dewalt, Texas. "Consulting business has just about dried up-- therefore getting in lots of golf."

John Allen Watson (BS '56) is a hydrologist for the Texas Water Commission in Austin. He has been participating in the excavations of the Creation Evidences Museum in the Cretaceous Glen Rose Limestone, and has interesting discoveries to share with those interested (c/o 8302 Daleview Drive, Austin, 78758).

John E. Watson (BA '72) lives in Evergreen, Colo., where he is CEO of Horizon Gold Shares. "Lots of travel this year to Australia, New Zealand, Switzerland and South Africa. Business is going well with two gold mines on line and a third on the drawing board. Horizon became a publicly traded company last year and the red tape is driving me nuts."

O. D. Weaver (BA '46, MA '47) is working "primarily in France in the Aquitaine, Paris and Jura Basins; will drill our first test well in 1989." He lives in Houston.

Suzanne Dallas Weedman (BA '70) still lives in State College, Penn. "I've finally finished the PhD at Penn State, just in time for my older daughter, Diana (17), to enter there as a freshman. Sylvia (12) is in junior high, and Dan is planning to build a telescope in Texas."

Steve and **Kathy Hubby Weiner** (MA '81; BS '83) comment, "Steve is currently working exploration on the King Ranch. We are the parents of Thomas Neil Weiner, who will be one on 4/4/88." Steve is a senior petroleum geologist with Exxon Co. U.S.A. in Houston.

Bonnie R. Weise (BS '74, MA '79) continues her work as a consultant in San Antonio.

Ed Welder (BS '49) retired from the U.S.G.S. in February, 1987 and lives in Albuquerque, New Mexico. "My principal work with the USGS consisted of geohydrologic studies in the Green River basin of Wyoming and the Roswell and San Juan basins of New Mexico."

Charles L. West (BS '52) has been associated with Beach Exploration the past ten years as a full-time consultant in Midland.

Joe O. Wheeler (MA '56) writes, "After 11 years with Exxon and 19 years with Arco, I retired temporarily in 1985. Since August, 1985 I have been screening prospects and mapping for Bechtel Investments. We are active in the Gulf of Mexico and onshore from Florida to the Rio Grande, including the Mesozoic trends. Have four great offspring ages 20 to 28. Best wishes to you all." Joe lives in Houston.

Richard O. Whitaker (BS '50) retired in Houston on January 1, '88 and is now trying to get set up to do a little traveling.

Leslie Pittman White (BS '56), a geologic advisor for Exxon Co. U.S.A. in Houston, comments, "Thanks for hosting the cocktail party and breakfast at the AAPG. It was great seeing old friends again."

Steven L. White (BS '78) is a consulting geologist in Tyler.

Charles D. Whiteman, Jr. (BS '58) lives in Baton Rouge, where he is a hydrologist with the U. S. Geological Survey.

F. L. Whitney (BS '43), retired in Kerrville, Texas, says he enjoys the *Newsletter* and learning all about former classmates and friends.

Marion Isabelle Whitney (BA '30, MA '31, PhD '37) is retired from Central Michigan University and lives in Shepherd, Michigan. "I am still doing wind erosion research. I was invited to give a paper on the history of my research at the 1987 GSA meeting in the symposium on the history of arid lands studies, ancient and modern. Also this March, I gave a paper on the origin of mima mounds."

Matthew K. Wickham (BS '85) is working in Austin as a geologist for McCulley, Frick and Gilman, Inc., a water consulting firm specializing in hazardous waste.

Frederick W. Wiegand, Jr. (BS '69) is a law student at Thurgood Marshall School of Law in Houston. "Am studying hard in law school while the oil business recovers. My family is fine. I attend the

Houston Geological Society meetings now. My title in the U.S. Army is Reserve Attaché Honduras. I go to Washington, D.C. during the summers."

Morris S. Wiginton, Jr. (BS '58) is an estimator of structural steel for John Dollinger, Jr. Inc. in Beaumont. "The past 6 1/2 years I have been working for my son-in-law's steel fabrication company. I was glad to leave the hectic years in Houston. We will retire here soon, our children are scattered all over. I no longer have any close relatives living in Austin and both parents are deceased, so I don't expect to visit there much."

Brad Wilkinson (BS '86) is a hydrogeologist in Houston.

A. B. (Bo) Williams (BS '53) is retired in Sequim, Washington.

Dan W. Williams (BS '56) is a geologist for Marinex Petroleum in Houston. "Remain active in Spain, England, North Sea as well as Texas, Louisiana and Montana. Drilling more dry holes than oil and gas wells but working to change that. Just acquired 1.1 million acre petroleum licenses in Belize, Central America. Hope to change our luck."

James L. Williams II (BS '81) is in exploration/exploitation geology in Corpus Christi. "The South will rise again and the petroleum industry will come back; as with all things, it's just a matter of time!"

James Richard Williams (BS '50) lives in Bullard, Texas, where he is retired but still consulting, mostly in North Texas. "I work about five days a month and spend rest of time with golf, fishing, hunting and keeping the yard at Emerald Bay."

Jean Ott Williams (BA '44) has retired to the Hill Country in Wimberley, Texas where she maintains a small consulting practice in water and related land resources. "I am enjoying four children and five grandchildren with a sixth on the way."

John B. Williams (BS '43) is an independent petroleum geologist in Houston.

UT Geology Summer Field Camp, 1942. Base camp at Brady, Texas. Homer C. Wilson (BS '42) with skin of rattlesnake found at fossil site in Brady Mountains.

Robert R. Williams (BS '54), geological consultant in Dallas, says he had a busy year in '87 and hopes '88 will be the same.

Susan Williams (BS '86) is a flight attendant with American Airlines, and lives in Charlotte, N.C.

Eddie A. Williamson (BS '69) is division exploration manager, offshore Louisiana, for Amoco Production Co. in New Orleans. "Recently became a member of the UT Geology Foundation Advisory Council. Looking forward to renewing old acquaintances at future meetings."

Jerry Bob Willman (BS '79) is president of W. W. Cattle and Oil Co. in Menard, Texas.

James C. Willrodt (BS '77) says, "Hello to all my old classmates. I am still working in the international drilling scene, although since corporate reorganization the company is Exxon Co. International now, and not Esso Exploration Inc. I got married a little over a year ago and Karen and I are making our home in Houston."

Clayton H. Wilson (BS '83, MA '85), a senior geologist with Exxon Co. U.S.A. in Houston, is "still working offshore exploration in the Gulf of Mexico. Our second son, Forrest James, was born in April, 1987. With two toddlers we sure have our hands full. I've remained very active in the Volunteer Fire Department, and Lorri teaches part time. Best wishes to all." Clayton lives in Spring.

Douglas H. Wilson (BS '80) is a senior geologist for Arco Oil & Gas Co. in Lafayette. "Last year I began working offshore for Arco. The deepwater frontier of the Gulf of Mexico is the scene of some of the most intriguing geologic history I have ever worked on. Becky and I celebrated our seventh wedding anniversary and we are enjoying sailing in Vermillion Bay."

Homer C. Wilson (BS '42) continues to "take pleasure in viewing those geological features introduced in Geology I. Last year, glaciers in Alaska (spectacular), Glacier National Park, this year plan to visit Grand Tetons and Dinosaur National Park." Homer is retired and lives in Dallas.

James Lee Wilson (BA '42, MA '44) is very busy writing and leading field trips in Mexico, New Mexico and Europe. Doing a poor job of retirement." He lives in New Braunfels, Texas. Jim was presented with honorary membership in the AAPG in 1987.

Louita D. Wilson (BS '40) is enjoying life in San Antonio, as well as old and new friends.

William Feathergail Wilson (BS '60, MA '62) is vice president of exploration for Placid Oil Co. in Dallas. "Struggling through a historic low point for exploration. Recently working Africa, Turkey and the deep water Gulf of Mexico (Green Canyon)."

Wynant S. Wilson (BS '53) is retired in Abilene. "Have three sons, one graduate of Texas Tech working in Midland, one

senior at Hardin-Simmons and one sophomore at Ouachita Baptist University."

C. Robert Winkler, Jr. (BS '50), general partner in Richards and Winkler in Midland, says, "Partner, Jim Richards (BS '58) and I continue developing prospects in West Texas and South Texas."

Kristina Witt-LaRue (BS '83) is a hazardous and solid waste permit technician for the Texas Water Commission in Austin.

James Wittke (PhD '84) is on the staff of the Department of Geology and Geophysics at the University of Wyoming in Laramie. "I run the electronmicroprobe lab and help run the mass spectrometer lab. Am enjoying Laramie very much. Anyone passing through should stop by. Hoping to get involved in local geology projects, State Line Kimberlites and more exotic locales (Tobago), while keeping a finger in Arizona geology."

Jim F. Womack (BS '54) is a partner in Tower Exploration Co. in Houston.

Amy R. Wood (BS '85) is a fuels analyst for the City of Austin Electric Department.

Robert L. Wood, Jr. (BA '56) is executive vice president, Occidental Oil and Gas Corp., and president of Occidental Crude Sales, Inc. in Houston. "Still selling Oxy's crude oil world wide and hoping the market will return to some measure of stability before I retire."

Arnold Woods (MA '81) is "still buzzing back and forth to West Africa, but I'm going on to Sicily at year-end for an offshore well. Trying desperately to understand computers and learn Italian. Hope to co-author a paper reinterpreting part of central California in time for the San Francisco AAPG Convention." Arnold is a senior geologist for Conoco in Ponca City.

Charles F. Word (BS '37) says "No change from last year. Still enjoy good health, golf, hunting, fishing, and travel." He is retired in Conroe, Texas.

David L. Work (BS '84) finished his thesis under Bob Berg at A&M and married Becky Miller in March. He is delighted to be employed by Anadarko Petroleum Co. as an offshore exploration geologist, and lives in Houston.

Charles E. Workman (MA '61) is a high school math teacher in Corpus Christi.

Dan M. Worrall (PhD '79) writes, "My family and I are comfortably settled back into Houston after an enjoyable assignment in New Orleans. Please send my greetings to fellow alumni friends of the Franciscan. I have many fond memories of sunny days in blueschist country with John Maxwell and the gang."

Danny G. Worrell (BS '80) is a student at the University of Houston Law Center.

John B. Wright (MA '56) is a consulting petroleum geologist in New Orleans.

Phil Wyche (BS '51) is retired from Gulf Oil Corporation and lives in Austin. He continues to be active on the UT Geology Foundation Advisory Council.

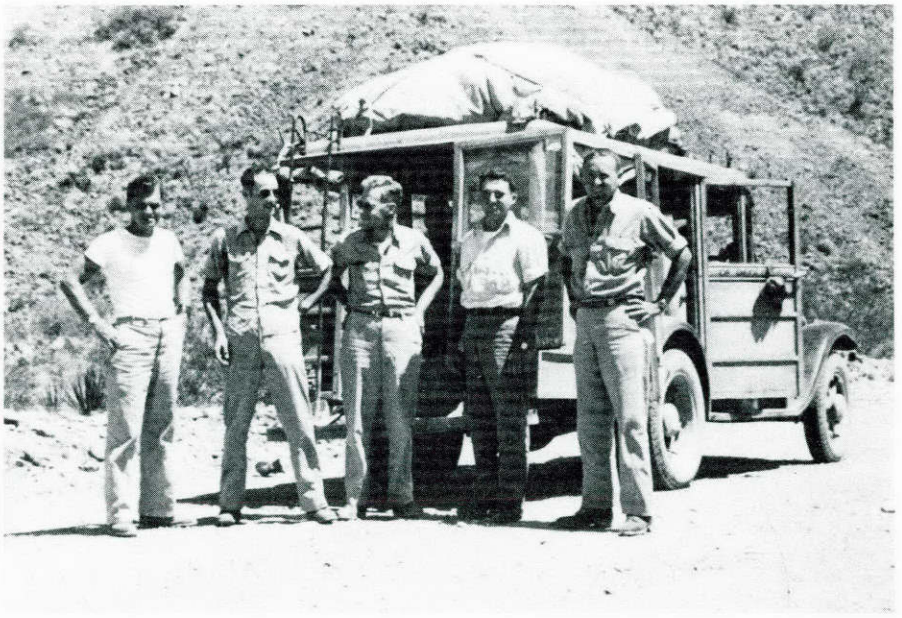
John C. Yeager (MA '60) lives in Lafayette, and is a geologist with Arco Oil and Gas Co.

Thomas A. Yoakum (BS '57) is doing a lot of traveling these days for Sun Co. out of Dallas. "I have responsibility for California and South Texas—talk about different styles of geology."

William C. Young III (BS '62) is vice president of production for Challenger Minerals, Inc. in Houston.

Robert L. (Bob) Zinn (BS '52, MA '53) writes, "My exploration interests have broadened recently beyond the Texas and Louisiana Gulf Coast areas to southwest Alabama and Mississippi. I remain married to the same lovely wife of 33 years and am greatly enjoying two grandchildren." Bob is an independent producer in Houston.

Kevin L. Zonana (BA '82) is employed as a cartographic database analyst for Zycor, Inc. in Austin. "About to complete my Master's of applied geography at SWTSU concentrating in computer cartography and remote sensing."



1946 summer field camp. Road in Big Bend. L-R: Bill Miller, J. Skrabanek, Milt Scholl, Bob Vickers, Hal Holland. (Photo contributed by R. B. Vickers, Jr.)

A Final Note...

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 files.

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 students, and teaching and research equipment - and others.

CAN WE COUNT ON YOUR SUPPORT ?

If so, please use the enclosed remittance envelope indicating the designation of your gift or mail to:

The University of Texas at Austin
Geology Foundation
P.O. Box 7909
Austin, Texas 78713-7909

Editor and Contributor: Joyce E. Best
Assistant Editor: Scott K. Schroeder
Photographer: David M. Stephens

CONTENTS