Dear Alumni and Friends:

We have had an interesting year here at Western Michigan University. The entire campus continues to be stimulated by the very foresighted administration of Dr. Dietrich Heenicke. Within the Department we have been adjusting to Dr. Schmaltz’s retirement, and to an interim Dean of the College of Arts and Sciences. Of all these changes, Dr. Schmaltz’s absence from the Department after some thirty years of “being there” for students, faculty and friends has had the most impact.

Dr. Schmaltz and Marilyn still live at 3719 Middlebury. He taught National Parks and Monuments in the winter semester, led a group down the Grand Canyon in the spring, and continues to be active in departmental activities. We are delighted that he has found a way to be active in two areas that he loves—teaching, and tasting good wines. We look forward to continuing our relationship with him through the Core Lab, Lloyd J. Schmaltz Geology Museum, and in a host of other ways.

We are in the process of adding two new undergraduate majors. Programs in Hydrogeology and Field Hydrogeology have been approved by the College of Arts and Sciences Curriculum Committee and need only to be approved by the University Curriculum Committee before they can be included in the new catalog. These programs will draw on our strengths in water-related sciences, and permit us to educate students for a wide range of careers. The programs were well received by the College committee, and we think that they will fill needs that are not being met elsewhere in Michigan.

We have been able to add some new equipment in the past few months. Although our thin section machine has operated through “thick and thin” since the sixties, we are pleased to be replacing it with a modern device and high quality polisher. We now have a departmental computer laboratory with six, yes 6, Zenith 2421s, three printers, three plotters and a digitizer. Most of the computer equipment has been on order by the University since 1987, and was paid for by the student computer fee.

Departmental research and grant activity remains at a high level. Although individual faculty members are reporting their activities, we should mention some items of interest in several areas of concentration. The Michigan Basin Core Research Laboratory continues to be a focal point for the study of Michigan subsurface geology with substantial support from the petroleum industry. Our tectonics group has received a two-year National Science Foundation grant to continue work in the Rocky Mountains. Geophysics remains a strong area with ongoing research in the San Juan Basin and studies of glacial materials in southwestern Michigan. The department of Chemistry has added a chemical oceanographer, thereby strengthening our geochemistry concentration. The Research Excellence and Economic Development grant continues to provide substantial support for our hydrogeology area, including our water quality laboratory. The search has been reopened for a director of the Institute of Water Sciences, with Dr. Richard Passero continuing as interim Director.
Our individual faculty comments will give you a more detailed view of our activities. We are very busy with faculty and students involved in diverse projects in many areas. We are looking forward to another full year. If you are in the area, please stop by the Department. If you will not be visiting Kalamazoo, drop us a line on the enclosed form and tell us about your activities.

Best wishes,

[Signature]

Core Research Laboratory

The Core Lab has had another excellent year with extensive activity in the research of the subsurface geology of the Michigan Basin. There are presently nine master's candidates working on research projects through the lab. These projects range from a stratigraphic and hydrocarbon potential study of Cambrian rocks to the reservoir characteristics of the Mississippian Antrim Shale.

Karen Mater, who is working on the stratigraphic facies analysis and diagenetic history of the Silurian Burnt Bluff Group, and Brendan Curran, who is studying facies and reservoir properties of the Dundee Formation in the West Branch field, received grants-in-aid support from the American Association of Petroleum Geologists. Brendan has also received research funding from Marathon Oil Company.

Carl Lundgren received major thesis research funding from Mobil Oil Corporation for his work on the St. Peter Sandstone, a natural gas reservoir in Michigan. Carl has also traveled to Mobil's Oklahoma City offices to give three oral presentations on his progress.

Linda Wieczorek received funding from Arco Oil and Gas Co. for her work on the correlation of core data to wireline logs of the St. Peter Sandstone. Linda also received a Graduate College Dean's Research Assistantship to work with Dave Barnes on the St. Peter Sandstone.

The Lab continues to provide service and research to the petroleum industry operating in the state of Michigan. Many industry representatives came to the lab this year to study cores and discuss our research progress. In October, more than 35 geologists and geophysicists visited the lab to observe core and discuss Michigan Basin geology. This was part of a Great Lakes area field trip organized by the First Seismic Corporation, and led by W.M.U. alumnus John Fowler, of Polaris Energy Company. The lab also conducted several research consulting projects for various companies. These projects, under the direction of Dr. Harrison and Dr. Barnes, involved a considerable research contribution by Tim Bellapenna, Karen Mater, Linda Wieczorek and Carl Lundgren.

During the 1988 calendar year the lab has generated more than $21,000 in funding for various research and service projects.
INSTITUTE FOR WATER SCIENCES

W.M.U. established a new institute for Water Sciences to coordinate water research, curricula and public service activities at the University. Research activities range from bioremediation utilizing natural soil bacteria to lab and field investigations of underground leaking tanks. A very well equipped water quality lab is now operational as is a new GIS system (ERDAS) in the Geology Department. Eventually, we hope to offer interdisciplinary masters and Ph.D. degrees in Water Resources Management. With luck, we will have a full-time director by next year.

Dr. Richard Passero, Interim Director, and Jean Heald, Secretary of the Institute for Water Sciences.
W. DAVID KUENZI SCHOLARSHIP FUND

The Dr. W. David Kuenzi Fund supports student research in all areas, but because of his great love for sedimentology, students in that area are given a slight preference. Mr. Dan Pingle received the award this year to study aspects of the Beaverhead Formation, a synorogenic conglomerate in southwestern Montana. As many of you are aware, much of Dr. Kuenzi's early research was on Tertiary sediments in the intermontane basins of southwestern Montana. Consequently, Mr. Pingle's research seemed particularly well suited for this award.

We will be soliciting applications for this award before the end of the fall semester so that students will have the period between semesters to develop applications. Your support for this fund will honor Dr. Kuenzi's memory and play a major role in forwarding student research in geology at Western Michigan University.

GEOLOGY DEVELOPMENT AND SCHOLARSHIP FUND DONATIONS

Your generous contributions to the department support a wide array of activities and we appreciate your help. We try to thank each donor, but as with all bureaucracies we do miss someone occasionally. If we missed you, please know that we rely on your support and will continue to make every effort to acknowledge your gifts.

Mr. Jerry Aiken
Ms. Mary E. Alexander
Mr. James Bartel
Mr. Timothy R. Cook
Mr. Michael Cowen
Robert & Beverly Crebb
Mr. Timothy Crawford
Mr. Douglas Daniels
Mr. & Mrs. Paul Daniels, Jr.
Mr. Michael DeVries
Mr. Richard Dickerson
Ms. Ruth Donner
Mr. & Mrs. Thomas Dream
Dr. George Duba
Gary & Mary Duncan
Mr. James Duncan, Jr.
Mr. & Mrs. James H. Duncan, Sr.
Mr. John Duncan
John & Linda (Standing) Elkins
William Emery, M.D.
Mr. Ronald Lee Erickson
Mr. & Mrs. Walter Fingleton
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Dr. & Mrs. Oscar Horst
Mr. & Mrs. Thomas Hyland
Mr. Thomas Kamin
Dr. William Kohlman

Mr. & Mrs. Hilton D. Kuenzi
Mrs. Debra (Yervasi) Lefler
Mr. George McAleeman
Dr. & Mrs. James McLaren
Mr. James D. Meinke
Mr. C. John Miller
Mr. Robert C. Minning
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Ms. Elizabeth J. Oldham
Mr. Glenn Oliver
Mr. T. Michael Pendergrass
James Peterson & Carol Tucker
Mr. Earl A. Schmidt
Mr. William R. Schorger
Mr. Thomas Segall
Dr. Brian R. Shaw
Ms. Julie K. Stein
Dr. Roger Steininger
Mr. & Mrs. James Thorne
Mr. Peter Weege
Mrs. Katharine (Fulk) Whitley
Mr. Benjamin Woodliff
Mr. John A. Yellich
Mr. Harlan Waters

Matching Company Gifts

Cray Research, Inc.
Exxon Education Foundation
The Kellogg Company
Sun Company, Inc.
Union Pacific Corp.
Unocal Foundation
AN UPDATE FROM OUR RETIRED CHAIRMAN...

Dear Friends:

As many of you know, I retired from the Department in January and Marilyn retired from the Michigan Rehabilitation Center for the Blind in April. We have been very busy ever since. I enjoyed teaching, the National Parks class last winter as a part-timer while Marilyn finished her employment. Jim Duncan and I completed another Grand Canyon river raft trip last May. It was one of the most enjoyable we have been on; the canyon was beautiful as usual and the rapids were a lot of fun.

Our new business venture, Tastings, LTD, has kept us pretty busy ever since. We have been involved in the planning and remodeling phase of the building, and because of my enjoyment in working with wood, I made all the tables and the 25 foot long bar. Marilyn applied the seven coats of polyurethane — they shine like glass. Tastings, LTD is a combination wine cellar, deli and bistro. Our major focus is on wine and wine education. We will hold tasting classes in all aspects of wine and champagne. We finally opened the doors on November 11th. I understand the geology graduate students have already found out we serve the best "drafts" in town. I did take time out to serve on the organizing committee for the Kel-Haven Trail State Park, and complete the month-long fund raising campaign. This project ended with a walk/run in which Marilyn finished the 5 mile walk and I did the 5 mile run.

We now expect to have time to do our traveling. We expect to spend January in Largo, Florida, return to Kalamazoo briefly, and then leave for California by way of Missouri, Texas, New Mexico, and Arizona. We will be visiting friends, family and wineries in California, and hope to meet with many of you enroute.

My contact with the Department and University is not ending — it is just changing. I still expect to assist Bill Harrison and Dave Barnes in the Core Lab, and Bob Havir and I have some plans for the Geology Museum.

Marilyn and I would like to express our sincere appreciation to all who have been so kind to us in the letters, awards, and other recognition we have received. Thank you.

Lloyd and Marilyn
Deve Barnes began his third year at Western with continued active participation in the Western Michigan University Core Research Laboratory, sedimentology-subsurface geology program. Six graduate students are involved in subsurface, petroleum geology-related thesis work under his supervision including studies of the St Peter ("Massive" or "Deep" gas play) Sandstone, the Glenwood Formation, the Berea Sandstone and the Antrim Shale Formation. Most of his own research focuses on sandstone diagenesis, clastic sedimentology, regional stratigraphy-sedimentation and hydrocarbon reservoir quality studies.

The last year has been an active one for presentation of research results with invited talks at Miami University, Michigan State, Western Michigan, North-Central GSA and the University of Iowa. Dave co-authored two meeting abstracts with Bill Harrison presented at the SEPM mid-year meeting and the International Ordovician Symposium in St John's, Newfoundland. In addition the Core Lab will be hosting a Core Workshop and Symposium on the Lower Paleozoic of the Michigan basin this December. Dave is also squeezing the final preparation of manuscripts concerning Sequence Stratigraphy in the Ordovician of the Michigan basin (co-authored with Bill Harrison and another scientist) and Diagenesis of the St. Peter Sandstone in the Michigan basin into a busy academic schedule.

Along with Bill Harrison, Dave has helped formulate a new format for graduate courses in the Department in the field of Sedimentary Geology. Dave's newly devised course offerings include "Clastic Sedimentary Petrology" and "Clastic Depositional Systems and Basin Analysis." These courses have had a hard-core following through these hard times in the soft-rock geology world.

Last but certainly not least, the Barnes family welcomed a new daughter, Lilly Atane, into their family, born on All Saint's Day 1988. She is a healthy and welcome addition to the clan.

Ron Chase continues to advance through life on several fronts. His research has taken on sharp focus recently by receiving a $90,000 NSF Research Grant, along with Chris Schmidt, to study the structural involvement of Precambrian basement rocks in the development of small anticlines in the Rocky Mountain foreland. He spent six weeks in Colorado and New Mexico this past summer doing preliminary field work for the project. He presented a paper on that subject at the GSA Convention in Denver this fall. This study will continue for two more years and eventually involve three graduate students and several undergraduates in field and laboratory studies of strain in the Precambrian rocks. Ron's other research pleasure continues to be his investigation of fracture systems in glacial till along the Lake Michigan shoreline. He currently has a research grant proposal in review for that project also.

Ron's teaching continues to be in the "hard rock" area with a diversion this fall into undergraduate structural geology as a "substitute teacher" while Chris Schmidt is on professional leave. Teaching doesn't seem to be enough for Ron. He is also co-authoring (with Lee J. Suttner of Indiana University) a physical geology textbook for Prentice-Hall Publishers. If it can be said in the classroom, why not say it in print also.

Ron's wife, Chris, continues to teach adult education courses in the Kalamazoo region while serving also as a mother of four boys, carpenter, painter, and interior decorator. Seems that Ron and Chris recently purchased a lovely house in an estate sale and are completely renovating the place. Ron's son, Kerl, is a sophomore at Central Michigan University with no declared major. He is considering geology, but can't seem to make that final decision. Son Andy and stepsons Scott and Jamie are all high honors students and varsity athletes at their respective schools. Not all is great and wonderful, however. Ron is one year older, a step slower, and more bald than he was last year at this time.
Since returning to Western from a sabbatical year at Argonne National Laboratory, John Grace has been busy getting used to teaching again. The mineralogy class is smaller than it has been for years, but he is sure enrollment will be going up as there has been a very large increase in the number of freshman expressing an interest in majoring in geology. John has renewed his work in radon geochemistry and presented a paper at the Goldschmidt Geochemistry Conference in Baltimore, Maryland last spring. Many of us in the department have had the radon levels of our homes tested by John.

Gerry Clarkson has been doing well the past year. He has been busy teaching the usual courses in introductory geology and geophysics as well as pursuing various other projects. Work with graduate students has continued mainly in the area of seismic exploration and electrical resistivity along with heat flow and magnetic studies. He has also done some gravity and electrical resistivity surveys on the side as well as continuing research in heat flow and thermal processes. This summer Gerry attended a symposium on coal bed methane which was held in Durango, Colorado. At the symposium he presented a paper on the thermal history of the San Juan Basin. During the trip he and his family spent some time in New Mexico visiting relatives and friends. Speaking of the family, his wife Marie, and daughter Rebecca, are doing well. Marie is occupied with being a wife and mother, and in her spare time continues to work on her masters degree in music therapy. Rebecca is busy being a typical two year old. Her father has been working on her basketball skills but has decided to wait a few months before starting her on differential equations.

Bill Harrison's activities for 1988 continue to include teaching of considerable numbers of students in the oceanography classes, as well as major and graduate level courses. He is also continuing as the director of the Core Research Lab.

Bill and Linda traveled to Scotland and Newfoundland this summer. In St. John's, Newfoundland, Bill presented a paper at the International Ordovician Symposium. Bill, Dave Barnes, and several graduate students traveled to Columbus, Ohio for the S.E.P.M. Mid-Year Meeting. Bill co-authored a paper presented by Dave Barnes, and organized an exhibit promoting the Core Lab.

Bill, Dave and several students went to the annual A.A.P.G. meeting in Houston. The Core Lab had an exhibit in the Exhibits Hall and was visited by many people interested in our studies of Michigan Basin geology. Bill said it was great to see the many alumni who also stopped by the booth.
Duane Hampton enjoyed another year of activity in LUST and modeling. LUST, Leaking Underground Storage Tanks, continues to attract him, as well as experiments in the big plexiglass sandbox in the basement of Rood Hall. Duane wrote and presented a paper on this work in November 1988 at the NWA/API Hydrocarbons in Groundwater meeting in Houston. The complete explanation for why the thickness of free petroleum product is several times greater in an observation well than in the sands around the well continues to elude him.

In August Duane tried to measure the actual product thickness at a pipeline product spill site near Constantine, MI. Drs. Passero and Straw ran the drill rig for this effort. The results of this work will be reported in December 1988 at Chevron Oil Field Research Company in Los Angeles and at the fall 1988 meeting of the American Geophysical Union in San Francisco. Also in the LUST area, Western will offer a one-day seminar in March 1989 on the new EPA rules for underground storage tanks.

Duane continues to model groundwater flow on various computers. He is working on his Ph.D. dissertation, which includes a finite element model study of coupled heat and water flow in unsaturated (or saturated) soils. He gave a paper on validating this model in May at a meeting in New Mexico. He expects to finish his Ph.D. by April 1989. He also teaches the groundwater modeling class, which will be greatly enhanced this year by the availability of a new computer lab.

A small classroom, 1132 Rood, has been equipped with 6 Zenith micros, 3 printers, 2 HP 7475A plotters, 9 chairs, a large screen monitor and a Bernoulli Box. Each Zenith has an 80286 processor, a coprocessor, a 40 Mb hard disk, 1 Mb RAM, an EGA monitor and a 3 1/2" high density floppy drive. One unit has a mouse and one has a 5 1/4" floppy drive. The department was also given a $3000 budget to purchase geological software, which was quickly spent. The lab is already in use, even though some of the items are not here yet.
The past year for Al Kehew was just about as hectic as the previous one although he and his family are beginning to feel more settled after being in Kalamazoo for more than two years. Professionally, there were several highlights during the year. One was the publication of General Geology for Engineers by Prentice-Hall last January. Although it almost killed Al to get it written, it's nice to see it finally in print. Sales have been very encouraging so far, which also helps to ease the pain of the writing and editing process. Another bright spot was Al's permanent appointment to the faculty. While he continues research under the Research Excellence grant, he will become a regular faculty member if and when the grant is terminated. Now all he has to worry about is getting tenure.

Research during the year focused on the Schoolcraft area with Tom Straw and on the Science for Citizens project with Dick Passero and others in various departments on campus. Work in the Schoolcraft area consisted of installation of monitoring wells for the purpose of working the physical and chemical characteristics of groundwater flow in a large glacial outwash fan. This project gets more interesting all the time as Al and Tom begin to interpret the data being gathered. They expect it to be a long-term project and should have some initial results to report in next year's newsletter. The work this past year was funded by a grant from the Michigan State Institute of Water Research.

The Science for Citizens project, which is now known as the Michigan Groundwater Survey, will be a fantastic source of groundwater data when it is completed. Al and others are just beginning to look at the chemical data in terms of the geology of the aquifers and the nature of the flow systems. This year's work was funded by an interim grant from the Kellogg Foundation following completion of the initial 3-year grant. A new proposal to Kellogg for continuation of the project is in the works.

Al's wife Kay changed jobs during the year, moving to a position as In-Service Director at Ridgeway Manor Nursing Home, which is located near the University on West Michigan Ave. A big advantage in this job is the regular weekday schedule, although full-time work with three kids at home and a geologist who doesn't spend enough time at home sometimes makes Kay wish she could be a resident instead of an employee at the nursing home. Daughters Melissa and Michelle are both attending Kalamazoo Valley Community College this year. Four-year-old Elizabeth continues to amaze her parents with the amount of energy she generates.

Dick Passero spent most of this past year as interim director of W.M.U.'s new Institute for Water Science. His primary responsibility was to organize the Institute office and coordinate a search for a permanent full-time director. The University interviewed three candidates, two of whom were outstanding, but unfortunately neither could be enticed to leave their present situations. The search, therefore, continues. In addition, Dick has been working on aquifer vulnerability maps in southwest Michigan.

Dick's wife, Ginny, completed her doctorate in science education and is still teaching in Bronson's nursing program. His daughter, Kathy, a recent M.S.W. graduate, is working for Corporate Travel Magazine in New York City. The highlight of the year was their assault on the Big Apple to find Kathy an apartment not lined with gold. It turned out to be a sixth floor, pre-WWII walk-up with a bedroom smaller than his office. If things don't change, it appears that people will be sleeping standing up in New York City—whether they can afford it. Kathy's work as an assistant editor, however, is interesting and professionally rewarding.
Western Michigan University

GEOLOGY COMMUNITY

1972

Back Row Standing: John Grace, Phil Mariotti, Lloyd Schnaitt, James Smith, Charles Schamberger, Dick McGhee, George Grover, Bruce McLeod, Tom Robyn, Dick Passero, Charlie Cochrane, Jim Nelke, Rich Blenn, Dave Kranz

Third Row Sitting: Doug Daniels, Betty Garrett, Sandy Scheetz, Carol Beach, Sue Leachner

Third Row Standing: Bob Navin

Second Row Sitting: Rich Saunders, Tom Straw, Cathy Rieve, Jerry Allen, Bill Jaehnis, John Malanchak

Second Row Standing: Margory Cook, Charles "Chick" Crevels

Front Row Sitting: Bill Landers, Brian Shaw, John Finnock, Mike Moss, George Schlegel, Mike Cote, Steve Armstrong, Bill Coons, Joe O'Sullivan, James Stachler
Many changes have occurred this past year for Chris Schmidt and his wife Carolyn Rutland. Chris has acquired a $90,000 NSF Research Grant, along with Ron Chase, to study the structural involvement of Precambrian basement rocks in the development of small anticlines the Rocky Mountain foreland. Carolyn took a job in Las Vegas during the fall of 1987 - here is a recent synopsis of her job functions as seen in the Oberlin Alumni Magazine:

CAROLYN RUTLAND is a senior staff geochemist for Science Applications International Corp. (SAIC), located in Las Vegas. Her position is related to high-level nuclear waste disposal. She says that SAIC is the T&MSS contractor for the NNWVI Project managed by the WMPO of the U.S. DOE, NNO. NNWVI Project work is sponsored by the OCR under ORNL at DOE/HQ. As a geochemist in the SIB of the TISD at SAIC, she is responsible for the integration effort of the geochemical aspects of lithologic/mineralogic investigations and of investigations in sorption and solubility in the NNWVI Project. She works with NNWVI participants (i.e., LASL, SNL, LLNL, and the USGS) as part of the CWRMP. She will colead a joint IGC/IACEE field trip on the ENWBLB in 1989. Her second EOC is Mar. 29, 1988.

Quite a mouthful! Needless to say, Chris is on leave this semester to spend time with his wife and family. He became a father once again last spring when another son was born. Chris will be back in January to teach during the winter semester.

Tom Straw is working on wetlands to occupy a significant portion of his time. He and Alan Kehew received an Institute of Water Research grant to study the very prolific Schoolcraft aquifer system. Tom continues to consult for the U.S. Army Corps of Engineers on wetlands hydrology applied to policies governing wetland delineation. He has projects in California, Illinois and on the northern Atlantic Coastal Plain and barrier island complex in Delaware. The Illinois project is part of a "landmark" legal case in wetlands law. Tom says that it is a far cry from "L.A. Law." He was invited to review the department of geology at Kent State where he gained insight into how a small department manages an outstanding undergraduate program and a Ph.D. program. He is especially excited about advising individuals in the "Second" masters degree program, and is pleased to report that everyone who has completed the program is now employed. Tom has noted a steady increase in the number of Earth Science Education majors with a surprising increase in the number of students electing to minor in this area. This increase is reflected in a near record enrollment in Physical Geology. As in past years, this program is attracting bright, energetic individuals who will have significant impact on our public schools over the next three decades.
Bob and Barbara Havira spent a pleasant portion of summer 1988 documenting the European concert tour of the Kalamazoo Junior Symphony Orchestra. Secretary Carol Harkness arranged for Bob to make a photographic record of the trip, and Barbara to go as journalist. The group of 74 teenagers, and all of the instruments and paraphernalia of a symphony orchestra, traveled through Germany, Belgium, Luxembourg, the Netherlands, and England.

NEWS FROM THE SUPPORT STAFF

The secretaries, Beverly Britt and Carol Harkness, continue to provide fantastic support for faculty and students of the department. Bev recently purchased her first home, and found a geological formation inside of her hot water heater. Oh, all the joys of home ownership she'll discover in the years to come!

Besides working part-time, Carol is a busy wife, and mother of two teenagers. Her daughter Hilary is a high school senior, a national merit semi-finalist, and concertmaster of the Kalamazoo Junior Symphony Orchestra. Tim and Carol chaperoned the orchestra's concert tour of Europe and England last summer, and thoroughly enjoyed traveling with the group. A relocation move to northern California is in Carol's near future. Everyone is invited to visit her in the Redding area. The department will surely miss her after depending on her the past 10 years.

John Waltz continues his support in the Groundwater Research Center, and Joan Heald was hired as secretary for the Institute for Water Sciences.

SECOND MASTERS DEGREE PROGRAM

Two years ago we began a twenty-hour "Second Masters" degree program to capitalize on our growing strength in hydrogeology and the widespread demand for people trained in this area. Our first candidate graduated in December, 1987 and since that time several other individuals have completed the program. Graduates have taken jobs in such diverse places as Seattle and Annapolis. All graduates have been placed, and the program is continuing with five students now enrolled and several others planning to enroll.

GEOLOGY/ EARTH SCIENCE CLUB

The Geology/Earth Science Club is again underway with a number of activities planned for the 88-89 academic year. The Advisory Council meeting in September was instrumental in obtaining student opinions on current departmental policies and protocol. In addition, the Council offered to critique graduate and undergraduate resumes and cover letters, the goal being to make the individual student as marketable as possible.

Projects to raise money include collecting pop cans discarded in the department, a raffle planned for the winter semester, and the development of a budget which will be submitted to the Student Advisory Council which is aimed at securing some of the approximately $75,000, collected through the student activity fee, for Geology related endeavors.

Socially, the Geology Club held an annual ice breaker, and pizza/beer bash. Future events include the annual graduate vs. undergraduate football game, the Togo/Grinch, and other potable diversions.

President: Eric Fohle
Vice President: Michele Adams
Secretary: Mike Leahy
Treasurer: Daniel Bannan
AWARDS & SCHOLARSHIPS

Arco Oil and Gas Co., Research Assistantship
Linda Wieczorek

Marathon Oil Research Assistantship
Brendan Curran

American Association of Petroleum Geologists Grants
Brendan Curran
Karen Mater
Carolyn Knight
Robert Versical

National Association of Geology Teachers Summer Field Camp Award
Catherine Edgar

Desk & Derrick Education Trust Scholarship
Karen Mater

Miller Energy Research Assistantship
Karen Mater

Society of Professional Well Log Analysts Student Award
Linda Wieczorek

Petro Star Energy Tuition Scholarship
Linda Wieczorek

Peter Weege Grand Canyon Scholarship
Brendan Curran

Senior Honor Award
Lori Wenz

W. David Kuenzi Research Scholarship
Daniel Pingel
Brendan Curran

Advisory Council Scholarship
Andy Swartz
Catherine Edger

Graduate College Dean's Research Assistantship
Linda Wieczorek

Graduate College Student Research Grant
Paul Micciche
Brendan Curran
Barry McBride

Kalamazoo Geological & Mineral Society Summer Field Trip Scholarship
Catherine Edger
Mark Vincent

Shell Assist Grant
James McNamara
Brian Roth
Ron Herrygers

Tenneco Oil Co., Research Assistantship
Jeff Cotttingham

1988 SPEAKERS PROGRAM

Dr. Fred Heck, Northwestern University: "Jurassic Tectonics of the Western Great Basin, Humboldt Range, Nevada."

Ms. Susan M. Landon, Amoco Production Co., Houston, TX: "Oil and Gas Exploration in a Frontier Province."

Dr. John W. Bartley, Assistant Professor, Hope College: "Growth Patterns in Permian Bryozoa."

Dr. Joyce M. Budel, Research Associate, Geology Department, University of Michigan: "Fluid Migration during Deformation, Wyoming Overthrust Belt."

Dr. Karl Hertz, Jr., Assistant Professor, Miami University of Ohio: "Origin of Evaporite Type Playa Cycles and Associated Eolian Sandstones (Triassic), Fundy Basin, Nova Scotia."

Besides the seminars presented by outside speakers during the past year, there were eight graduate students who gave thesis presentations, and three faculty members who provided seminars on their areas of research.
ALUMNI LINES

Since leaving WMU, Mary Alexander (MS 68) has taught physical sciences in junior and senior high school, and at the junior college level. In 1974, she accepted a position at TRW as an associate engineer in nuclear hardness and survivability. This job concerned the nuclear weapons effects on the geology in which the weapon system was placed as well as the weapon system itself. Mary retired from TRW in 1986 and since then has been traveling, goofing off and having a good time!

E. Charles Arruda (MS 80) has been working in the recording business — playing music and keeping happy. Charlie, his wife Ann, and baby Brendan are living in Houston. Charlie has been thinking about pursuing a new endeavor — that of a secondary school educator. The corporate world was a bit restrictive and cumbersome to Charlie, and he feels teaching is the answer to how he can direct his energies and curiosity for the sciences.

James Bohlin (MA 68) teaches 9th grade earth science, and oceanography to 11th and 12th graders at Brockton High School. His interests include physical oceanography, coastal processes and marine geology. Jim reports he moved to a new home in Lakeville, MA.

Visiting the department after a very long absence was Paul Bosch. Paul is married and has been working for the USGS on assignment in Saudi Arabia.

Dave Bradfield (BS 85) is in the New England area working for a geophysical survey corporation.

Three alumni are working for Keck Engineering: Jim Brode (BS 83) and Mick Lynch (BS 81) work at the Kalamazoo office, and Mark Stewart (BS 82) is in their Williamston, MI office.

Jim Cline visited the department recently. He is working for De Lisle Associates in Kalamazoo.

Tim Cook (BS 78) is a petroleum geologist for Amoco Production Company in Houston. He has been exploring the Cretaceous and Tertiary trends of Texas. He is interested in petroleum exploration, geopressure, carbonate and siliciclastic sedimentation, and remote sensing.

Eric Condic (BS 84) is now associated with the Library system at Oakland University.

Lori (Chambers) Cotton (BS 86) married Brian, a graduate of Eastern Michigan University with a degree in Industrial Tech., in October 1987. Lori has kept busy as a teacher for an adult education program, and as a substitute teacher. She plans to pursue graduate studies.

Steve Culver (BS 85) finished his M.S. degree at Wright State University. He is working for TENNECO Exploration and Production as an exploration geophysicist in San Antonio, TX. Congratulations, Steve, on your marriage over the summer!

Robert DeBoer (BS 85) hopes to do research in rock mechanics and structural geology. When we last heard from Bob he was working on an M.S. degree in mining engineering at the Colorado School of Mines. He now has underground experience in the Edger Experimental Mine in Idaho Springs.

Michael DeVries (BS 85) finished his stint as a topographic engineer with the U.S. Army at Fort Hood, Texas this past summer. Dave plans include returning to school for an M.S. and pursue his interests in sedimentary geology and basin analysis.

Ruth Donner (BS 41) is retired, but went on an archaeological dig at Grand Valley the summer of 1987.

George Duba (MA PhD 81) is vice president of Tech Law, Inc. in Lakewood, CO. Current projects involve Superfund site investigations and cost recovery research projects.

Jim "Tex" Ferrito is a hydrogeologist for Aquatic Systems, Inc. working out of their main office in Ludington, MI. Scott Park, Eric Montgomery, and Dave Skrocki are also staff geologists there.
A letter describing "a year in the life of" Nate Fuller found its way to the department early in 1988. His memories revolved around the many trips he took during the year. He got up to Ann Arbor and gave a paper, and to Bowling Green for a short course. The theater continues to be a large part of Nate's life; he enjoys building sets, setting lights, and doing administrative work.

Betty Garrett was up from Albuquerque in October to visit family, the Geology Dept., and the autumn leaves. She continues to do occasional work on the petrographic analysis of source material in prehistoric ceramics from sites mostly in the Four Corners area, and is currently working on ceramics from Portugal. Betty is also vice president of the California Academy of Sciences and is doing a project on the volcanic ash ejected from the Jemez Mountains that turns up in ceramics in the northern Rio Grande Valley. For R&R she sailed the Bahamas in February on a 42 ft. ketch. On a recent visit to the San Francisco Bay area she visited Sue (Kashner) Jogoda (BS 73) and Gail (Emmons) Austin. Sue is preparing exhibits for the Lawrence Hall of Science at Berkeley, and Gail works for an accounting firm in downtown San Francisco.

Rumor has it that Mike Goff (BS 86) is in the Florida area and Pat Ellsworth (BS 77) is somewhere in Utah.

Fred Beck (BS 82) is now teaching geology at Ferris State in Big Rapids, MI.

Dave Howell (MS 87) is working on his doctorate degree at the University of Illinois in Urbana.

Brian Jeffs (BS 86) was a grad student at Bowling Green when we last received annual report information from him. His interests include geobotany, remote sensing, and stratigraphy/sedimentation. Thesis: Stratigraphic and Petrographic Investigation of the Michigan Basin. Jeff reports that Frank Geracl is in Torrance, CA working in the area of car design.

When we last heard from Matt Kepilinski (BS 86), he had a graduate assistantship with the geology department at Northern Arizona University as a lab T.A. and computer technician. His thesis topic is Neotectonics and Hydrothermal Features of Yellowstone Lake, it involves putting a new bathymetry map of Yellowstone Lake together from 28 kHz profiling system, and Rocky Mountain foreland tectonics (of course!).

Ernest Kern (MS 72) is in the Earth Sciences Department at Southeast Missouri State University. He recently finished a 3 year, $750,000 NSF/Missouri Dept. of Education grant project to enhance science instruction in Missouri elementary schools. The project went well and was recognized by the U.S. Department of Education as one of 23 exemplary national programs. Ernie has also been doing consulting work for NSF and the American Meteorological Association.

Peter Klemkowski (BS 85) and Tom Moore are working for Testing Engineering and Consultants in Troy, MI. Kevin Mackey, who used to work for the same firm, is now living in Boulder, CO.

Steve Kremers (BA 79) continues to live by the shores of the world's largest estuary-the Chesapeake Bay, with wife Deborah, daughter Jaye P. (5 years) and son Ross (3 years).

J. Philip McLaren is Professor of Biology at Eastern Nazarene College in MA. He teaches Oceanography, Marine Biology, Tropical Marine Biology ad Tropical Natural History, Ecology and Botany. Phil also teaches two courses a year in Belize where the barrier reef system is the best in the west. He continues to be extremely concerned about teacher preparation and teacher in-service training, and has written a series of articles called "Beach Basics for the Classroom" - it's aimed at teachers from junior high up. Phil has chartered the Research Vessel WESTWARD (125' schooner) out of the Woods Hole for ten days in the Bahamas for Feb, 1989.
Randy Milstein (BS 79) is a geologist for The Michigan Geological Survey in the subsurface and petroleum geology unit. His interests are in the Cambrian stratigraphy of the Michigan Basin and cryptoexplosion-erosion structures. News worthy items include: Compiler - Southern Peninsula of Michigan Sesquicentennial Bedrock Geology Map of Michigan; Speaker - AAPG Eastern Section; Abstract - Lunar & Planetary Science XIX; and Author - GSA Centennial Field Guide, North-Central Section.

Jerry Nuss (BS 82) formed Nuss Exploration in July 1987. Good luck, Jerry, discovering oil and gas!

Mike Pendergrass (BS 80) is a geologist with Unocal, International Division in Los Angeles. His work includes southern and central Africa exploration, and he is interested in well log analysis and computer applications. He was married in January 1987 to Karen Hirayama, a native Californian.

Russell Perigo (BS 77) moved to Pasadena, CA just in time for the 5.9 magnitude earthquake in October 1987. He has taken a job in the numerical analysis of remotely sensed data. Russ lives at the base of the San Gabriel mountains now - a radical change from the plains of Texas.

Jim Peterson (BS 71 Earth Science, MA 74 Geology) is an exploration geologist for Avem Resources Inc, in Denver. His interests lie in stratigraphic traps, especially in carbonates.

A quick visit to the department by Dave Russell (BS 85) this past spring was enjoyed by all. Dave is working in the Des Moines, Iowa area.

William Schorger (BS 77) has his own consulting firm, ECHO-TECH, in Colorado. Interests include: geophysical data acquisition/instrumentation, parameter selection, putting together spec programs and quality control of field operations and data processing. Bill fielded a program in Michigan in 1987 with First Seismic Corp. (Denver) as his partner. He worked in Newaygo, Mecosta and Oceana counties.

Gary St ksiak is still working in Houston for Marathon, but he does miss New England. Gary is married and his wife is expecting a baby soon. Gary has designated Dec. 12 at 9 pm as the projected arrival time!

Sunny Thiessen (BS 87) is at the University of Alabama. Last year Sunny helped organize a new campus organization, the Campus Peace and Justice Coalition. She also played in a local "jug band." She intends to do her thesis on a multi-layer Riedel shear experiment.

Kurt Weber (BS 86) and Kurt Warning are working for an environmental engineering firm located in Farmington Hills, MI.

Steve Wilmeth (BS 75) is an independent geologist on retainer to a company in Dallas. Steve tells us that Bob Zamboris and Steve Tripp are now living in Woodlands.

After finishing her time with the Peace Corps in Kenya last December, Bridget Wisniewski (BS 85) moved to Seattle and worked for the National Park Service during the summer as a ranger in the Glacier Peak Wilderness area. Bridget enjoyed a wonderful summer checking trails for lost hikers and wayward bears. She plans to be a ski bum for the winter, pounding her face into the powdery slopes of Oregon.
If you wish to make a donation and have it be used for a specific purpose, please check the item(s) you want to contribute to and list the amount. Make checks payable to the Department of Geology and send to:

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_____ Senior Honor Awards ($50)
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_____ Geology Museum Specimens

Equipment Needs

_____ Video camera ($750 - $1000: for use in making instructional tapes)
_____ Video tapes ($200 each: to replace aging film for instructional purposes)
_____ Television monitors