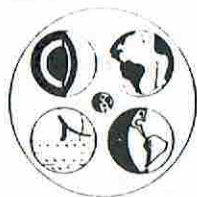


NEWSLETTER



DEPARTMENT OF GEOLOGY
WESTERN MICHIGAN UNIVERSITY
KALAMAZOO, MI 49008

Volume 1 No. 14

December 1989

Dear Alumni and Friends:

Some years, like some children, are just much more active than others; 1989 was one of those. Members of the Geology Community participated in a very wide range of activities, and significant changes have occurred in the department. For alumni, visitors, students, and the faculty (sort of sounds like everybody) the most apparent change was our loss of Carol Harkness to California. For many years Carol was the contact point for alumni, and during the academic year she was most often the person greeting visitors to the departmental office. We wish Carol and her family all the best in this new setting for their lives. Mrs. Joyce Parsons has replaced Carol in the departmental office.

Somewhat less dramatic, but of great importance to our community was the move of Duane Hampton from Western's "professional - administrative" group to faculty status. With this change we now have an all-time high of ten tenure-track faculty positions. Duane's move to faculty status was facilitated by Dick Passero's appointment as Coordinator of the Groundwater Education in Michigan (GEM) program. Dick will also continue as Interim Director of the Institute of Water Sciences until January 1, when Dr. Michael Barcelona takes the reins.

Everyone in the community is now "sitting pretty," thanks to a major gift from the Haworth Corporation to the Western Michigan University Foundation. As you may be aware from other alumni correspondence, this gift was mainly to support the College of Business--we benefited by receiving replacements for each and every office chair in the department. The burden of office work is certainly eased by having a comfortable chair!

Our computer resources continue to expand. The department received a TERRASTATION from TerraSciences, Inc. and a MIRA station from Oklahoma Seismic Corporation. Acquisition of the dedicated computer hardware required to receive these powerful systems was made possible in part by monies donated to the department by our alumni. In addition to these computers, the department added four Zenith 286's; and the GEM grant acquired a Zenith 386 system. The continued rapid expansion of computer applications in all areas, while very exciting, is also very challenging.

Our enrollments are mixed. Graduate enrollments remain strong, but changes in employment opportunities have continued the shift to environmentally-related programs. Earth Science education continues its slow rebound, and the Earth Science (non-teaching) enrollment is an important element of our student group. We have a small, but strong, group of undergraduate geology majors, and the new hydrogeology major has been elected by several students. Visits to the department by representatives from environmental firms and petroleum companies reassure our students and help our recruitment.

We are facing a wide array of challenges. Space has become a critical commodity, we are bulging at the seams and are working with the administration to acquire more office and laboratory space. We must continue to acquire the most up-to-date teaching and research equipment and facilities available. We must continue to work toward stability and balance in our enrollments. The continued increase in faculty research and service activities is very exciting and impacts our community in many ways. We will continue to work toward making our undergraduate and graduate teaching programs the best possible.

Best Wishes,

Tom

Tom Straw

GROUNDWATER EDUCATION IN MICHIGAN (GEM)

Dr. Richard Passero has been appointed director of GEM which is a collaborative effort between the Kellogg Foundation and the Michigan State University Institute for Water Research. Its goal is to promote understanding and protection of Michigan's groundwater resource and has three major projects aimed at the achievement of this goal: (1) a two-county hydrogeological study, (2) a K-12 education project and (3) a G.I.S. (Geographic Information System) under Dr. David Dickason of the Geography Department. The GEM Regional Center, funded by a \$570,000 grant from the Kellogg Foundation, is housed at WMU. The Center will undertake groundwater projects, as well as assist local groundwater education and protection efforts, in nine southwest Michigan counties.

INSTITUTE FOR WATER SCIENCES

Dr. Michael J. Barcelona has been appointed as Director of the Institute for Water Sciences. He specializes in water chemistry and the movement of natural and synthetic compounds in groundwater and was head of the Aquatic Chemistry Section of the Water Survey Division of the Illinois Department of Energy and Natural Resources (ENR). As Director of the two-year-old institute, Dr. Barcelona will coordinate the ongoing water research curricula and public services of scientists from several departments at the University.

CORE RESEARCH LABORATORY

The Lab has had another excellent year with extensive activity in the research of the subsurface geology of the Michigan Basin. In December, 1988 a symposium and core workshop was held at the Fetzer Center, in association with the Michigan Basin Geological Society. This symposium was on the Lower Paleozoic Rocks of the Michigan Basin. It was attended by over 100 people from industry, state surveys, and academia. Papers were presented on the first day in an A.A.P.G.-style session, and the second day consisted of a core workshop on 10 cores from the W.M.U. Core Research Lab. Dave Barnes, Bill Harrison, Linda Wieczorek and Carl Lundgren were involved in presenting papers and organizing the core workshop.

There are presently ten master's candidates working at various of levels completion on research projects through the lab. Theses projects range from a stratigraphic and hydrocarbon potential study of Cambrian rocks to the reservoir characteristics of the Mississippian Antrim Shale.

Karen Mater is working on the stratigraphic facies analysis and diagenetic history of the Middle Silurian Gray Niagaran and Manistique Group. Karen received generous support for this research from Miller Oil and Miller Energy Companies this year.

Brendan Curran is studying facies and reservoir properties of the Dundee Formation in the West Branch field. Brendan has also received research funding from Marathon Oil Co.

Carl Lundgren has 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. Carl has now left campus to apply his hard earned geological knowledge with Petrostar Oil and Gas Corporation in Traverse City.

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 is in the final stages of writing her thesis. Linda spent much of this last year learning the TERRASCIENCES workstation for the analysis of oil and gas data. She is now our local expert.

Jeff Cottingham is finishing his thesis on the Hydrocarbon potential of the pre-St. Peter formations in the Michigan basin. When last seen he was on his way to California to work for the U.S.G.S. in Menlo Park. Jeff's Thesis research was funded by Tenneco Oil Co.

Tim Dellapenna is presently working hard on his thesis evaluating the lithofacies and hydrocarbon production characteristics of the Antrim Shale. Tim has managed to get most of the cores from that formation. Tim is working closely with people at the Gas Research Institute to help evaluate the potential of this unusual gas reservoir. His work is partly funded by G.R.I., Terra Energy and Miller Oil. Tim also received an A.A.P.G. student grant-in-aid this year.

Dave Balthazor is well immersed in analysis of the Berea Sandstone in the Williams Field. With over 20 cores in this field Dave has had his hands full with core descriptions and thin sections. Dave is working closely with Maness Petroleum who has provided lots of digital data for the TERRASCIENCES workstation.

Rusli Adam is working closely with Dave Barnes on quantitative reservoir analysis of the St. Peter Sandstone from the cores in the lab. Analysis of capillary pressure and pore geometry in these rocks is the present avenue of interest.

Joe Smigiel continues with his work on the Glenwood Formation and he also received an A.A.P.G. grant-in-aid.

Tim Turmelle is working hard on a thesis on the lithofacies, diagenesis, and reservoir characteristics of upper Cambrian and Lower Ordovician carbonates in northern Ohio, while working full time as a geologist at Peninsular Oil and Gas.

Jim Kaeter is the newest addition to this rogues gallery. Jim comes from upstate Minnesota and is interested in a thesis on carbonates.

The Lab continues to provide service and research to the petroleum industry operating in the state of Michigan. Many representatives from industry came to the lab this year to study cores and discuss our research progress. The lab also conducted several research consulting projects for various companies. These projects are under the direction of Dr. Harrison and Dr. Barnes.

In December 1989 the lab co-sponsored, with the Michigan Basin Geological Society, a Pore Geometry and Reservoir Analysis Seminar. Mr. Dan Hartman from Fredericksburg, TX, conducted the basics of the seminar and Dave Barnes provided case examples from the Michigan Basin St. Peter section. A core workshop on the second day was organized by Dave Barnes and Linda Weiczorek. About 50 people were in attendance.

GEOLOGY DEVELOPMENT AND SCHOLARSHIP 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. Please accept our sincere thanks for your generous support.

Alumni

Mr. Michael R. Adamczyk
Mr. James R. Bartel
Mrs. Robin Geesey Bartel
Mr. Gary J. Boerner
Mr. Tim R. Cook
Mr. Robert W. Crabb
Mr. Doug Daniels
Mr. Paul A. Daniels, Jr.
Mr. Leroy DeNooyer
Mr. Michael DeVries
Mr. John C. Elkins
Mr. Ronald Lee Erickson
Mr. Walter G. Fingleton
Mr. William B. French
Mr. Michael J. Gallagher
Mr. Dennis N. Gaulden
Mrs. Marl K. Hall
Mr. Thomas D. Hylland
Mrs. Debra A. Lefler
Mrs. Gayle M. Lopiccio
Dr. Robert D. Lopiccio
Mr. Bruce McCloud
Mr. J. Philip McLaren
Ms. Lynne A. McLaren
Mr. James D. Meinke
Mrs. Suzanne K. Merrill
Mr. James H. Nidy
Mr. Brian Shaw
Dr. Roger C. Steininger
Mrs. Katharine F. Whitley
Mr. David W. Young

Friends

Mrs. Colleen P. Duncan
Mr. James H. Duncan
Dr. Lee C. Gerhard
Ms. Linda K. Harrison
Mr. William B. Harrison
Mr. Robert D. Havira
Mr. James A. Helwig
Mr. Joseph S. Hobin
Dr. Oscar Horst
Dr. Alan E. Kehew
Mrs. Kay A. Kehew
Mr. James C. Peterson
Mrs. Carol J. Tucker

Corporations

Amoco Foundation, Inc.
Dell Engineering, Inc.
Dresser Foundation
Union Pacific Corp.
Waters Rock Shop

Matching Company Gifts

Amoco Foundation, Inc.
Conoco Inc.
Exxon Education Foundation
W.K. Kellogg Foundation
Mobil Foundation, Inc.
Union Texas Petroleum

Grants

Amoco Foundation, Inc.
Upjohn Company

FACULTY BRIEFS

Dr. David Barnes presented papers at the AAPG meeting in San Antonio, TX. and the GSA meeting in St. Louis. He is on the FRCASF committee and the WMU Faculty Senate. Dr. Barnes has several publications in review. He won a PRF Grant of \$20,000 and participated in the Ocean Drilling Program of the U.S. Science program in coordination with Texas A&M Research Foundation this past summer. He spent the summer on a ship doing Neogene Volcaniclastics in the Sea of Japan.

Dr. Barnes was a Distinguished Lecturer - Alumni Series at San Francisco State University.

As noted last year there is a new addition to the Barnes family as Dr. Barnes describes her: a happy healthy "berserker" of a one year old.

Dr. Ronald Chase is on sabbatical during the 1989-90 academic year. He is compiling data that he and Chris Schmidt obtained last summer during their field work out west for the NSF grant funding research on basement cored folds.

His work continues on the text he is writing.

Dr. Gerry Clarkson attended the Rocky Mountain Section, AAPG in Albuquerque, NM, where he presented a paper; attended a symposium in Lansing, MI, entitled, "Michigan: Its Geology and Geologic Resources;" and attended a short course at NWWA in Columbus, OH.

He traveled last summer to Socorro, NM, and Denver, CO, for continuing research on the San Juan Basin with Dr. Marshal Reiter (New Mexico Bureau of Mines) and Ben Law (USGS).

Dr. John Grace attended the Mineralogical Society of America workshops on diffraction techniques, and presented papers at the Geological Association of Canada meeting in Montreal and at the GSA meeting this fall in St. Louis. He continues his Environmental Radon Studies in Southeast Michigan research.

Probably the most important thing to happen to **Duane Hampton** is that now he can put Dr. in front of his name and Ph.D at the end of it. He completed his Ph.D at Colorado State University in May.

Dr. Hampton attended a meeting entitled, "Solving Ground Water Problems with Models" in Indianapolis, an EPA Kerr Lab Ground Water



Dr. Duane Hampton

Research Seminar in Oklahoma City, a Nuclear Waste Isolation meeting in Las Vegas and presented papers at the Pacific Section of AAPG at Palm Springs, CA, at the IAWPRC meeting at Stanford in Palo Alto, CA, at the Midwest Ground Water Conference in Kalamazoo, and at the EPA Underground Storage Tanks meeting in Tucson. He conducted a one-day workshop on underground storage tanks, was on the program committee for the Midwest Ground Water Conference, attended short courses at Indianapolis, attended an EPA seminar in Chicago, and gave a talk to the Geology Department at Brigham Young University.

Dr. Hampton received from research grants from EPA, Amoco and the Upjohn Company this year. Field work was done at a pipeline spill site in Constantine, MI, and field research opportunities will be explored at that site and at Air Force bases in Michigan. He is refining the Aquifer Dipstick and will file for a patent on it. Graduate students at various stages of thesis completion under Dr. Hampton's direction are Ross Wagner, Tim Adams, Kathy Hewitt (who is almost finished), Steven Ricci and Hugh Heuvelhorst.

Hydrogeology was taught this year in the evening to 38 students representing a number of towns in the southwest Michigan area.

Dr. William Harrison continues as Director of the Core Research Laboratory with five salaried graduate student researchers working on projects. As usual Dr. Harrison has managed to solicit research funding from private industry for several of his students. His research continues with Michigan Basin Petroleum Geology.

Dr. Harrison attended the GSA Annual Meeting in St. Louis, the Ontario Petroleum Institute in London, Ontario, and the AAPG meeting at Bloomington, IN, and presented papers at each meeting. December of 1988 he convened and presented a paper at a two-day symposium entitled, "The Lower Paleozoic Symposium and Core Workshop." This December he and Dr. Barnes convened a two-day seminar on Pore Geometry. He co-authored a paper with Jeff Cottingham, and papers were published in the American Gas Association Proceedings, the Ontario Petroleum Institute Proceedings, and for the AAPG. He attended a short course on carbonate petrology at the GSA meeting in St. Louis and a core workshop at the Ontario Petroleum Institute.

Dr. Harrison serves on the AAPG Distinguished Lecture Series Committee, the AAPG Academic Liaison Committee, the Michigan Basin Geological Society and the Eastern Section AAPG Executive Committees. He is Secretary of the North Central Section of the Paleontological Society, publishing editor of the Michigan Basin Geological Society, and of the newsletter of the Eastern Section AAPG.

Dr. Harrison is studying and developing technology in vintage wines produced from southwest Michigan. Naturally our social events are benefiting from this personal interest.

Dr. Alan E. Kehew attended the GSA North Central Section meeting at Notre Dame and presented a paper on road salt contamination. He co-authored two papers, one with graduate student

Marge Brewer and another with a former student from the University of North Dakota, and presented them at the Michigan Groundwater Conference which he convened. There were 200 people at the conference in Kalamazoo despite a snowstorm. He attended an EPA seminar on remediation in Chicago, IL, an NWWA short course on isotopes in Orlando, FL, and an NWWA short course on geochemical modeling of ground water in Columbus, OH.

Dr. Kehew has been elected to the management board of the North Central Section of the GSA.

He helped organize and teach a short course in groundwater statistics for county sanitarians which was sponsored by the Michigan Ground Water Survey and Science for Citizens. Along with Dr. Straw and Dr. Schmaltz, he led a glacial field trip for the Michigan Basin Geological Society. Dr. Kehew has published a paper on groundwater contamination from sewage lagoons in Ground Water and a paper on catastrophic floods in The Canadian Geographer.

A second year of funding was received from the Water Resources Institute at Michigan State University for the Schoolcraft Aquifer project he is working on with Dr. Straw.

Research continues on the Schoolcraft Aquifer and on groundwater chemistry of Southwest Michigan with data from the Michigan Groundwater Survey.

A family vacation to Maine last August helped Dr. Kehew rest up and prepare for his very busy fall schedule. Kay is still Assistant Director of Nursing at Ridgeview Manor. Daughter Melissa is currently living at home and working. Her twin, Michelle, has her own apartment and attends Kalamazoo Valley Community College. Elizabeth started her academic career last fall in kindergarten.

Dr. Richard Passero continues his work as Interim Director of The Institute for Water Sciences, and as Manager of the Water Resource Center. He also has accepted appointment as Director of the new GEM (Groundwater Education in Michigan) grant.

He has won one of six awards from GEM in the "individual" category for his work on Aquipro, a computerized groundwater model that translates basic groundwater data into a prediction of an area's vulnerability to contamination.

Dr. Passero continues to serve on the Michigan Hazardous Waste Siting Board, the State Groundwater Data Base Advisory Board, and the

Kalamazoo County Solid Waste Management Board. His publications include, "Groundwater in Southwest Michigan" with Dr. W. Thomas Straw and "Environmental Geology" for *Geotimes* with Dr. Alan Kehew. The REF (Research Excellence Fund) has been renewed by the Michigan Department of Management and Budget. He has also worked on several groundwater projects with Dr. Straw and Dr. Kehew. He has completed an EPA report on the hydrogeology and groundwater contamination of the Walker Oil Field and is continuing research on Aquifer vulnerability and the KL Landfill.

Dr. Christopher Schmidt spent last summer in New Mexico, Colorado, Wyoming, and Montana working with Dr. Chase and graduate student Paul Genovese on basement-cored folds. This research was funded by a NSF Grant that Dr. Schmidt and Dr. Chase were awarded two years ago. Dr. Schmidt, as usual, has had a very busy year. He presented three papers at various meetings and co-authored five others. He attended GSA meetings at Spokane (Rocky Mt. Section) and St. Louis (where he chaired a tectonics session), the Montana Geological Society Centennial Field Conference in Bozeman, MT, the Tobacco Root Geological Society Field Conference in Dillon, MT, the Basement Tectonics Conference in Butte, MT, and was a visiting scholar speaker at the University of New Mexico.

Next spring Dr. Schmidt and Dr. Chase will convene a symposium on basement behavior in the Central Rockies for the Rocky Mt. Section of the GSA.

Dr. Schmidt has been invited to present a paper at an international conference on granites in Liverpool, England, this coming January.

On the personal front Dr. Schmidt is still participating in a long distance marriage and is commuting to Las Vegas where Carolyn, Charlie, and Gene are living.

Dr. W. Thomas Straw attended the AAPG meeting in San Antonio, the North Central GSA - NGAT, the GSA meeting at St. Louis (where he presented a paper on geological education and attended a short course on Managing Hydrologic Research), the Midwest Groundwater Conference at WMU (where he presented a paper and chaired a session), and the Michigan Lakes and Streams Association, Inc. annual meeting at Hickory Corners, MI. (where he presented a session). He presented a paper at the NAGT regional meeting at Notre Dame, and convened and presented two papers at the Wetlands Conference in Troy, MI.

Dr. Straw led the Michigan Basin Geological Society Field Trip ("Glacial Geology in Southwestern Michigan") with Alan Kehew and Lloyd J. Schmaltz.

He was invited to attend and participate in a wetland-upland transition workshop in Tallahassee, FL, participated in a landmark court case in wetlands law in Chicago, IL, and was in Montana in August to attend the 40th anniversary of the Indiana University Geologic Field Station as a member of the department council.

Dr. Straw is a member of the AAPG Hydrogeology Committee and Alumni Council of the Department of Geology at Indiana University. This year his publications include "Groundwater in Southwestern Michigan" with Richard Passero and an abstract for the Midwest Groundwater Conference. Dr. Straw has received a grant from the State of Michigan to study the effect of undercurrent stabilizers on Lakes Huron and Michigan and currently has two graduate students (Bob Tolliver and Richie Laton) working on the project with him. His and Alan Kehew's IWR grant to study the Schoolcraft Aquifer has been continued and graduate student Bill Steinmann is assisting them. Jody Johnson, an undergraduate student is working on a glossary of wetlands hydrology at Dustin Lake with Dr. Straw's guidance.

The purchase of a new boat was necessitated by the sinking of the pontoon boat late in the fall despite the valiant efforts of Bob Tolliver, Richie Laton, and Dr. Straw. Rumor is the old boat has been renamed Titanic II.



Mr. Tim Dellapenna working at the new TERRASTATION

Western Michigan University GEOLOGY COMMUNITY

1973



Back Row: Phil Mariotti, George Grover, Mike Cote, Gary Miller, Charlie Cookman, Doug Daniels, John Heinisius, Charlie Scharnberger, John Pinchock, Lloyd Schmaltz, Dave Steffe, Jim Peterson, Mike Wireman, Phil McLaren

Third Row: Lorene James, Gayle Nelson, Rich Saunders, Betty Garrett, Jim Schmidt, John Grace, Jean Shquist, Debbie Holmes

Second Row: Bob Havira, Steve Vealey, Jim Staebler, Art Vlahos, Tom Straw, Paul Bosch, Bill Middleton, Don Fingleton, Brian Shaw, Mike Moss

Front Row: Julie Garrett, Dick Passero, Tom Belchak, Mike Pfander, S. Putney, George Fingleton, Bill Johans, Bill Coons

Not Pictured: Dick McGhee, Dave Kuenzi, Julie Stein, Nancy Meade, Sue Kaschner, Jerry Allen, Bill Landwer

Bob Havira (the sometimes friendly technician) is continuing his love/hate relationship with computers. Many times he has come very close to trashing at least one of the departmental machines and is now seriously considering having one of the ailing units "put down."

Last summer Bob had the good fortune to attend an intensive, week-long workshop for photographic educators at the Rochester Institute of Technology (NY). "We had a grueling (sometimes 20 hours a day) schedule; but exciting and stimulating."

Bob sends best wishes to all.

NEWS FROM THE SUPPORT STAFF

As noted earlier in the Newsletter, Carol Harkness is no longer working in the department. She went to California to enjoy the earthquakes.



Mrs. Joyce Parsons

We do have a new secretary, **Joyce Parsons**, who has picked up the reins and is doing an excellent job. Joyce completed a Secretarial

Science AAS Degree at Kalamazoo Valley Community College this December. She lives in Schoolcraft and has three daughters, Katie, Becky and Jennifer; husband Ed works at Allen Testproducts as director of quality control.

As noted last year, **Bev Britt** bought a home and it has proven to be similar to the one in the movie "The Money Pit" - this year a new roof, removal of the sky light (which leaked) and painting. However, like a new mother, Bev is still pleased with the baby.

GEOLOGY- EARTH SCIENCE CLUB

The Geology-Earth Science Club is back to take on the 1989-1990 academic year. The club has 45 members - 24 graduate students and 21 undergraduates. They have published a listing of all members available upon request and posted it in the geology reading room.

Currently the club is working on several fund raising projects including morning doughnut and coffee sales (hot chocolate is also available) and collection of returnable cans and bottles. The club artists are designing a club T-shirt, which should be completed by winter semester. Discussions are under way for other fund raisers, such as a raffle, bake sale, mineral swap and/or sale, and a book sale.

The annual "ice-breaker" was held in September at the Green House on Steers St. courtesy of the department. It gave everyone a chance to rub elbows with the faculty and meet the new students in the department. In October the club held the annual Halloween bash. The Toga/Grinch Christmas party was held in December. The spring awards banquet is held at the end of the winter semester to announce the Club's new officers and recipients of department scholarships/awards. The Geology-Earth Science club officers are:

Wendy Manial	President
Justin Sutton	Vice President
Rosetta Bredael	Secretary
Jim Finetti	Treasurer

The editor would like to take a few lines to thank Wendy for her help with the department Christmas Party and the numerous other times she has given us a hand, usually with little notice, this fall. Thanks - we appreciate your help!

AWARDS & SCHOLARSHIPS

Undergraduate:

WMU Undergraduate Research and Creative Activities Award

Jody Johnson

Senior Honor Award

Kate Edgar

Kalamazoo Geological & Mineral Society Summer Field Trip Scholarship

David DeVries

Mike Leahy

College of Education Scholarship

Bruce Gillett

Honors College Undergraduate Research Scholarship

Jody Johnson

Graduate:

Graduate Research and Creative Scholar Award

Barry C. McBride

AAPG Grants-in-Aid

Daniel Pingel

Joseph Smigiel

ARCO Grant

Joseph Smigiel

Gas Research Institute Grant

Tim Dellapenna

Michigan Basin Geological Society Student Grant

Karen Mater

Society of Petroleum Engineers Grant

Karen Mater

Graduate College Student Research Grant

Tim Dellapenna

David Balthazor

Karen Mater

W. David Kuenzi Award

Linda Wieczorek

Who's Who in American Colleges and Universities

Joseph Smigiel

1989 SPEAKERS PROGRAM

Dr. James R. Boles, University of California, Santa Barbara. "Diagenetic Mineral Reaction Reveal Rates of Fluid of Oil Emplacement."

Dr. John D. Edwards, AAPG distinguished lecturer. "Divergent Margin Basins."

Dr. Lee Gerhard, Kansas Geological Survey. "Geology in the 21st Century."

Dr. Edward Hansen, Hope College. "Fifteen Miles Down and Millions of Years Ago: Can We Understand High Grade Metamorphism?"

Dr. Grahame Larsen, Michigan State University. "Hydrogeologic Problems of Low Level Nuclear Waste Disposal in Michigan."

Dr. Gail Mahood, Stanford University and University of Michigan. "The Relation Between Magmatism and Basin-and-Range Extension."

Ms. Sharon Mason, Environmental Control Engineer, Ford Motor Co., Dearborn, Michigan. "Methods for Remediating Contaminated Soils and Groundwater."

Dr. David McConnell, University of Akron. "The Interrelationship Between Stratigraphy and Deformation Mechanisms in Basement-Cored Folds of the Rocky Mountains."

Dr. Carolyn Rutland, Senior Staff Geochemist, Scientific Applications International Corp., Las Vegas, Nevada. "Technical Aspects of High Level Nuclear Waste Disposal."

Dr. Stephen Stahl, Central Michigan University. "Jurassic Winnemucca Fold and Thrust Belt of North Central Nevada: Implications for Mesozoic Tectonics in the Great Basin."

Dr. Warren Wood, U.S. Geological Survey. "Lakes Solutes & Groundwater: Hydrologic Control Over Deposition of Commercial Sodium Sulfate." and "Matrix Porosity: Documentation & Effects on Reactive Transport in a Clastic Aquifer."

In addition to these outside speakers, one faculty member and two graduate students gave presentations.

ALUMNI-FORMER FACULTY NOTES

James Barnett has moved back to Kalamazoo, and is working locally for a consulting firm.

Ted Bodnar, a graduate of the Second Masters program returned for a visit and is working as a hydrogeologist for Baker Engineers, Merrillville, IN.

Neil Carey visited Michigan to attend Bill Morris's wedding.

Cole Chambers is working for Meyer Tisco and Hinds in Farmington Hills, MI.

Rich Christianson is working for Baker Engineers, in Merrillville, IN, as a hydrogeologist.

Dennis Curran of Canoni, Inc. is working as a hydrogeologist in California and spoke at the seminar program.

An indirect report has it that **Lisa Dalin** is living in the Los Angeles area.

Robert DeBoer visited the department this past August. Robert is finishing his Master's Degree in Mining Geology at Colorado School of Mines.

Scott Dennis is Manager of Hydrogeological and Ground Water Modeling Services and Assistant Director of the Geology Group of EDI Engineering & Science which is now a part of WW Engineering & Science.

Dave DeVries is working in sunny southern California.

Andy Duwelius, a Second Master's graduate, is working in the Hydrogeology section of Geosciences Research Associates (part of WW Engineering and Science) and was recently transferred to their office in Bloomington, IN.

Michelle Fults is working for the State of Virginia and is living in the Virginia Beach area.

Michael Gallagher visited the department this past June on his way home from vacationing in Ireland.

Betty Garrett blew through this fall. She is still doing contract thin-section analysis for archeologists in between her travels. Betty is out of her mobile home into an apartment in 1990.

Dennis Gebben was recently named President of EDI Engineering & Science which is now a part of WW Engineering & Science.

Paul Goudreault has been named manager of Delta Environmental Consultants, Inc. St. Paul, MN, district office. He has been involved in remedial investigations of ground water for Superfund projects in Minnesota.

Scott Green is living in the Ann Arbor area and works for Groundwater Technologies, Inc.

Bill French is working as a private consultant after leaving Wilkins and Wheaton Engineering.

Steve Hoin is Manager of Geophysical Services of WW Engineering and Science.

Brian Jeffs is a geologist with the DNR, Hydrogeological Unit, and conducts groundwater contamination investigations statewide in Michigan. He was at a seismic course (certainly appropriate) in Sunnyvale, CA, during the October earthquake and was about 15 miles from the epicenter. Lucky Brian! Brian noted in his letter that **Kevin Kincare** and **Mike Baronoski** work with him at the Rose Lake office.

Bruce Jones is working as a geophysicist at WW Engineering & Science.

Jeff Hawkins has left Wilkins and Wheaton Engineering to begin a hydrogeologic section of Envirologic.

Stan Leja is working as a geophysicist for WW Engineering & Science.

Don Leske and his wife had a son earlier this year. His name is Jack Joseph Leske.

From an unnamed source the department has learned that **Barry McCool** is working for Geraghty and Miller in Detroit.

Per indirect information the department has learned that **Randy Milstein** left the DNR to return to the academic world in pursuit of his Ph.D. Good luck, Randy!

Bob Minning, a former part-time instructor in the department, is Executive Vice President and Chief Operating Officer for Summit Environmental which recently acquired EDI and other companies in the WW Engineering & Science organization.

Eric Montgomery is working in Boston for an engineering consulting firm.

Scott Park is living in Lansing and works for an engineering consulting firm there.

David Piotrowski is in the Chicago area and visited the department this past summer to do some work on his thesis.

Eric Porcher works in Minnesota for the state's Department of Natural Resources.

From an unnamed source, the department has learned that **John Rodman** has left the DNR for private industry.

Sue Rezek, working for Baker Engineers, Pittsburg, spent six months in Germany at a workshop.

Tom Sherman spent October 19-November 20, 1989, in Japan as a guest of the government on Law of the Sea and environmental matters. They discussed pollution control, handling and disposing of toxic wastes and ocean resource management. Tom was able to visit Osaka, Hiroshima, Nagoya, Kyoto, Hokkaido and Yokohama. He enjoyed his trip immensely.

Chuck Soule and his wife Cathy had a daughter, Elizabeth Alice, on June 13, 1989. She weighed in at 7 lbs., 13 oz. Congrats!!

Kevin Sullivan works for Miller Brothers in Traverse City, Michigan.

Dennis Tripp, a Second Masters graduate, is working in Merrillville, IN, as a hydrogeologist for Baker Engineers.

Terry Wagner is still working as a hydrogeologist with R.M.T., Inc. in Madison, WI. She sees Dr. Sauck and his family who are also in Madison.

Michael Wireman is working for the EPA as head of a technical group to six states in their efforts to assess and protect groundwater resources. He has been with the EPA for over two years. Mike is very active in skiing, climbing, and running.

Ross Wagner (MS pending) is working at Geosciences Research Associates (part of WW Engineering and Science) in Grand Rapids in the hydrogeology section.

Michael Wolf, Second Masters graduate, is working at Geosciences Research Associates (part of WW Engineering and Science) in Grand Rapids in the hydrogeology section.

Carol Harkness was in town December 15-18 and visited the department several times. It was great to see you Carol - we know you really came back to enjoy the snow!



Karen Mater using the new Thinsection equipment

We hope that you will consider making a contribution to the Geology Community. You may do this by sending a check to the WMU Foundation, made payable to the Department of Geology.

You may specify that your donation go to the Department of Geology Development Fund or the W. David Kuenzi Scholarship Fund. The Development Fund is used to support a wide array of activities, including undergraduate scholarships, student travel, supplemental support for equipment purchases, student activities and a variety of projects for improvement of teaching and research in the Department. The Kuenzi Fund is used to support graduate student research with emphasis on students studying sedimentology.

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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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

We are anxious to keep your current address on our mailing list and, therefore, ask for your cooperation in advising us if you move. Also, if you know of other alumni who do not receive the Newsletter, please send their names and addresses; we would like to add them to our file.

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Return to: Dr. W. Thomas Straw, Chair
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