WESTERN MICHIGAN UNIVERSITY

College of Arts & Sciences

Department of GEOSCIENCES

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Dave Barnes
Associate Professor and Interim Chair

Dear Alumni and Friends of Geosciences,

Most of you are aware that Dr. Alan Kehew has been granted a well deserved sabbatical leave for academic year 2003-04. He is actively involved in several exciting research projects including an ongoing 3-D glacial mapping study in Michigan, bluff stability-dewatering studies along the Lake Michigan coastal bluffs (with Dr Chase), and an exciting initiative for collaborative work with several Universities in Egypt. I am sure that he will be very busy during his sabbatical year!

I was volunteered and selected to act as the Interim Chair of the Department of Geosciences for academic year 2003-04 when the department needed a replacement for Alan. The faculty is very excited about the possibility of seeking a permanent chair from outside the department in the future. We are currently initiating an outside chair search and hope to have the a new chair in place by July 2004 (budget allocations dependant)

The purpose of this note is to inform you of various activities in the Department of Geosciences, and to kick-off an initiative to enhance alumni relations. I hope that closer contact between Geosciences alumni and current/ future students and faculty in the department can be integrated into an aggressive recruitment program for our department and help with ongoing and new fund raising initiatives. I would like to take the opportunity of my brief term as interim chair to describe, prioritize, and initiate these activities. Our departmental faculty are in agreement on the importance of these activities. IMPORTANT: if you have new contact information or can encourage other alumni that you are in contact with to provide updated contact information, please contact the Department office by phone, e-mail, fax, or anything. Thanks for this new contact information.

The Geosciences Department has had a long-standing Advisory Council, a group consisting of both graduates, and of friends of the department that want to support the Geoscience program. These dedicated Council members travel to WMU twice a year, typically during Homecoming and again in the spring to provide support and advice to the department. We appreciate their activities and support. I would like to stimulate and broaden the interest and involvement of other geosciences alumni in our ongoing department activities. It is hoped that this initiative will benefit our alumni, our current undergraduate and graduate students, and prospective majors, especially incoming freshman. The ultimate goal of this initiative is to create a format for more regular and effective interactions between our faculty, alumni, and students. I believe that great value can be derived, for our current students, prospective students as well as alumni through a number of focused efforts.

The following activities are currently being planned:

1. ***A Focused Fund Raising Campaign; Departmental Transportation: target $35,000***

a. Budget issues are major obstacles in the course of our academic mission. Specifically, and most critical in my opinion, is that we are faced with losing the ability to take course-related and departmental field trips, and to provide funds for attendance at professional meetings for our students and faculty. The University no longer maintains a motor pool. We must procure vehicles from out-sourced rental agencies at prohibitively high rates.

b. We hope to develop a significant travel endowment fund to subsidize departmental travel so that we can take our students on course field trips and attend meetings at reasonable expense well into the future. I am sure that all of our alumni have fond memories of geology trips taken while at WMU, and appreciate the educational value of these experiences. In our senior student surveys, our outgoing students routinely comment on the limited field trip experiences and on the value of the few that they were able to take. Attendance at professional meetings by both students and faculty is the best value for your financial donations to the department, since this directly affects the stature and prestige of your alma mater.

2. Departmental Reunion, Open House, and Banquet: Tentative Date April 2 or 9, coincident the "spring" Advisory Council Meeting

a. We hope to facilitate contact between current students and alumni, and between alumni themselves through an annual departmental get-together. This activity would serve the purpose of enhancing the students' appreciation of our department's history, and the success of our alumni, as well as keeping alumni who are prospective employers apprised on our students, our faculty, and their work. Our alumni can provide valuable role models for students considering Geosciences professional careers; whether it is in private industry, environmental geology, energy, secondary education, or in government/regulatory work.

b. The guidance provided by our alumni in career development would be greatly appreciated by students in our department. Information and personal contact with strong students as prospective interns or permanent employees may also be valuable to many of our alumni. Dr Michael Grammer has volunteered to present his AAPG Distinguished Lecture to an alumni group in the near future as a highlight for our first annual Reunion and Banquet, and we hope to get our students and faculty to prepare presentations of their work for display and discussion during this gala affair.

3. Alumni Corner WWW Site: Target Date to receive Information; December 2003. We will send instructions for submission of information in the fall, 2003.

a. We hope to collate the experiences of our alumni through development of a worldwide web-based site with alumni information. This resource will be developed and maintained by the Geosciences Department on our departmental web server and will be strictly voluntary. If our alumni would like to contribute personal, professional, biographic, and contact information we will be pleased to host this in the department. We believe that this information and other more generic professional information will be extremely valuable for a recruitment campaign and for general networking purposes.

4. Geosciences Recruitment

a. We are faced with a shrinking student enrollment. The Geosciences have always had, as a strong academic recruitment draw, professional opportunities after graduation. We need to get the message out to prospective Geosciences majors, especially at the freshman level, what opportunities a geosciences degree can offer them, and some possible professional trajectories. We want our students to take on their major studies as freshmen so that they can grow and mature as committed Geoscientists with future goals in mind. This means that we need to carry our recruitment to the secondary schools: We are lucky, many of our recent graduates are now teaching in the secondary schools and may provide us with access to high school students and early recruitment. I solicit and encourage our Earth Science teachers to step forward and help us with this initiative!

We hope that you will be excited about our Alumni Relations Initiative. I will keep you updated on progress toward the goals outlined here.

Dave Barnes
Associate Professor
and Interim Chair

Greetings from Kalamazoo! As you can see from the front page letter, my activities for academic 2003-04 are quite different than usual. I'm an 8 to 5'er (or 7 to 6'er and weekends) employee since July 1, 2003. No more idle summers hanging around the farm! Well this experience has been just as stimulating as I thought it would be. First, and foremost spending a lot of time at WMU has resulted in a nice blip in professional productivity. I have submitted and had accepted to the Michigan Academy of Arts and Sciences Letters, the manuscript *Shore Protection and Coastal Change on the Lake Michigan Shore: Duck Lake, Orchard Beach State Park, and Onekama, MI*. Many of you participated in fieldwork and data processing during this project in the 1990's. It is finally out (or will be later next year in a special volume on the *Coastal Geology of Lake Michigan)* and I want to thank all the students that helped with this challenging project.

I have been working with Bill Harrison and Rob Gillespie (a recent Adjunct and term appointment faculty member in our department, see his contributions elsewhere in this newsletter) on reservoir characterization in the Dundee Limestone in Michigan. We presented a paper at the Eastern Section AAPG last fall and hope to compile a more comprehensive work on the significance of reactivated basement faults, fractures, and hydrothermal dolomitization in the basin (and the Dundee in particular) this coming year.

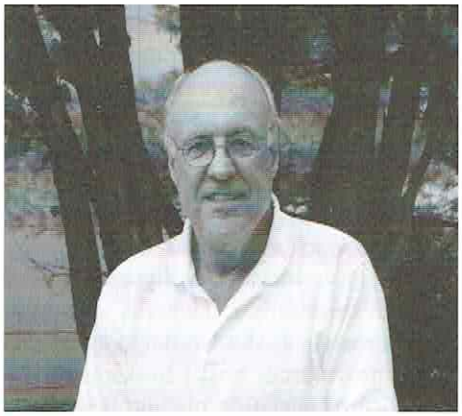
I presented a couple of posters on the BTR Park groundwater quality assessment project at Michigan Academy (with undergraduates Bill Paul and Regan Goodrich) this spring and also at the Midwest Groundwater Conference in Kalamazoo this fall. A graduate student, Jenny McCrary, is in the process of sampling wells in the Park and adjacent Asylum Lake as part of her MS project under RV Krishnamurthy with the intent to follow up on the possible influence of a large leaf composting pile on shallow ground water. Jenny has a number of objectives in her project but is nice to see that the groundwater monitoring activities will continue in our long-term Departmental study area, including investigation of possible leaf composting leachate impacts on heavy metal mobilization in ground water.

Finally, this last year, I have been working on shallow, Pennsylvanian bedrock (the Grand River and Saginaw formations, of Grand Ledge fame) from central Lower Michigan. We (the Michigan basin Core Research Laboratory) have acquired a number of beautiful conventional cores from a shallow groundwater contamination site. On the basis of this material we will be investigating the complex stratigraphy in these shallow bedrock aquifers and possibly substantially revise our understanding of later Paleozoic stratigraphy/geological history in the Michigan basin along with contributing to water supply/contaminant hydrogeology concerns in central lower Michigan. Very exciting.

On the home front, our family is enjoying the "quality of life" that folks in Kalamazoo are always talking about. We live in a pastoral, rural setting near the Van Buren county line north of M-43 surrounded by open space and lots of wild life, 11 miles out of the city center. The vegetable garden was ultra productive this year, I put up at least 5 gallons of killer salsa. Teresa bought a caboose, placed it on the edge of our pasture and is renovating it for use as an artist's studio. She has plans to do "creativity coaching" for aspiring artists as well as her own art work in "Katy" in the near future.

The kids seem to be developing a greater appreciation for their home life although it is NEVER easy with a house full of teenagers. Brendan just qualified for the state cross-country meet with a personal best of 17:27 in the 5km regional qualifying race. Lily is a varsity cheerleader this year and developing an impressive repertoire of tumbling routines. Nick has moved to a "big" school (Mattawan Middle School) and has been participating in cross country club. He has done very well and seems destined to follow in his brother's footsteps in high school cross-country. All seem happy and successful in their endeavors. I had back (again) and toe surgery this last year and feel a little bionic (translate: old) but still manage to sailboard, snowboard and snowshoe (sort of!) periodically.

Best wishes to all, send us your (and anyone else that you come in contact with) contact information and hope to see you all at the reunion in the spring.



Ron Chase

During the past year I have spent very little time on campus. For the past two fall semesters (including this one), I have been on research leave doing field work related to the slope stability analysis of Great Lakes coastal bluffs carved into glacial materials. Support for this project from the U.S. Army Corps of Engineers continues to be very strong. Al Kehew and I are currently supervising at three test sites the installation of 27 inclinometer wells that will house approximately 80 borehole inclinometers, an elaborate perched ground water removal system and flow meters, and two complete weather stations. All installations will be controlled remotely via an electrical system that will allow us from campus to monitor ground movements and weather changes, and turn on/off the dewatering systems. When finished, the research will show how the removal of perched ground water can be used as a primary strategy for mitigation of coastal bluff erosion. Graduate students Amanda Brotz and Rennie Kaunda are also being supported by the Corps of Engineers and are contributing to all phases of the project. In addition, Mark Worrall, Bill Bush, and Greg Young have been involved in the project for several years. Back in 1996 when this research got started with a grant from the Army Research Office, we pursued the modest goal of showing the importance of ground water as a contributor to coastal erosion in the Great Lakes environment. From that grant and from subsequent research and publications, the project has mushroomed into a huge outdoor laboratory experiment funded by the Corps of Engineers and directed by Al and myself.

My interests in igneous and metamorphic petrology have been limited lately to the classroom. I continue to teach the traditional optical mineralogy and petrology/petrography (igneous and metamorphic) courses that many of you probably remember. However, these courses will expand in the future to become instrumental mineralogy (instead of optical mineralogy exclusively) and a petrology course that will include some sedimentary aspects. Because of my fall semester leaves of absence, I have not taught optical mineralogy for the past two years. I still maintain my love for the outdoors and for field work as expressed in my two Upper Peninsula field courses.

The Chase family continues to expand. Although there are not yet any grandchildren, there are now two wives (plus mine). Chris was a recent victim of state budget cuts and is not currently teaching. However, she has not yet quit her most challenging job, looking after her child-husband. Karl remains as sales manager for the Peninsula Hotel in downtown Chicago. Andy is driving a taxi in Seattle as he contemplates a career change from computer systems (webmaster) to forestry. Scott is now a practicing physician in partnership with two other doctors in Indianapolis, and a recent groom (September 20) whose wife is a hospital dietician. Jamie is an attorney with Baker Botts, Inc. in downtown Washington, D.C. whose wife is also an attorney associated with Arnold and Porter, across the street from Jamie in D.C. We are all healthy and happy.

Former students - please let me know about you! I can be reached at *ronald.chase@wmich.edu*

Mike Grammer

Greetings Alumni and Friends of WMU's Geosciences Department. It has been a fun-filled first year for me here at Western to be sure, and my second year is starting off the same way. At this point I can say unequivocally that my decision to come to Western was a good one as I am thoroughly enjoying the interaction with students and my fellow faculty members. In the space below I'll try and provide you with a brief overview of the highlights from my first year here at WMU.

In the last year I have taught GEOS 130 (Introductory Physical Geology for Majors), GEOS 131 (Historical Geology) and two graduate Carbonate Sedimentology courses (Reef Builders through Time and Carbonate Depositional Systems). I have two graduate students currently working with me (Tony Sandomierski and Peter Voice), as well as an Honors College student (Audrey Ritter) doing a Senior Thesis.

Tony is working on a reservoir characterization project here in the Michigan Basin, trying to enhance our understanding of Silurian Pinnacle Reefs. Tony has recently received an internship with ExxonMobil and will be joining them next Fall in Houston for 3-4 months. Peter Voice is working on characterizing the paleoceanography of the Michigan Basin during Silurian time using stable isotopic analysis of brachiopods. Both of these guys are great students and are moving well towards their thesis requirements – I'm lucky to have them working with me.

Audrey Ritter is an undergraduate student who was in both my 130 and 131 classes, and who is now working on her Lee Honors College Senior Thesis with me as her Faculty advisor. Audrey is looking at the evolution of phylloid algal mounds (Carboniferous) of the Paradox Basin in the Four Corners region. She is the first, I hope, of many undergraduate students that we can involve in undergraduate research in the field of carbonate sedimentology.

In addition to working with my students on research initiatives, I have also been working on an AAPG Memoir on which I am the lead editor. Despite trying times dealing with authors from 18 papers, the book, which is entitled "Integration of Modern and Ancient Analogs in Reservoir Modeling" should be out in early 2004.

In April last year, Dave Barnes and I took a group of 10 students out to the Four Corners Region for a 9 day field trip. We had both undergraduate and graduate students along as we worked our way from the Jemez Mountains of New Mexico to Shiprock N.M., to the "4 Corners", and then to look at siliciclastics and carbonates in the Paradox Basin, Monument Valley and the Goosenecks area of Utah and Arizona. The trip ended with a visit to Arches National Park followed by Mesa Verde National Park to view sandstones and the remnants of the ancient Anasazi culture. The students presented several talks to the Department upon returning and currently have a poster display of our trip up in the Department that summarizes the trip and highlights the fun of geology for more "potential majors". If you have a chance to come by Rood Hall, I invite you to stop by and check it out.

Lastly, I was on the road quite a bit this past year doing an AAPG Distinguished Lecture tour (2 weeks in the Fall and again in the Spring) and teaching an AAPG course on modern carbonates in the Bahamas in June. For the DL tour, I was invited to visit and give talks to the following universities and groups in the United States, Canada and Mexico: Southern Methodist University; Oklahoma State University; Tulsa Geological Society; University of Kansas; Kansas Geological Survey; Montana Geological Society; Utah Geological Society; University of Colorado; Dalhousie University, Nova Scotia; SUNY Stony Brook; West Virginia University; Pittsburg Geological Society; University of Wisconsin; Michigan Basin Geological Society; Michigan Technological University; University of Miami; Asociacion Mexicana de Geologos Petroleros (Poza Rica and Villahermosa, Mexico); and Pemex (National Petroleum Company), Mexico City. The title of my talk was "Predicting the Distribution and Geometry of Carbonate Platform Reservoirs – Insights from the Integration of Modern and Outcrop Analogs". I have heard from the grapevine that this talk may be on the program for our First Annual Alumni Reunion next Spring so a judicious "caveat emptor" to all who plan to attend.

Best wishes to all and as before, I am looking forward to meeting more of you this coming year.

Johnson Haas

I am very pleased to have joined the Geosciences department this last Fall of 2003, coming from the department of Chemistry at WMU. It was never particularly clear to me why I was in Chemistry, but these things happen and now that error has been corrected. I've joined the Geosciences department as essentially a half faculty member; my other half is in the Environmental Studies program. As a joint faculty member in two programs I am fortunate to have two groups of diverse and intellectually stimulating faculty to work amongst,and two different sets of students to interact with. Because my research applies geochemistry to environmental questions, my joint membership in these two programs is a perfect arrangement for me.

This last year has been a productive one for me and for my research group. At the 2002 annual meeting of the GSA in Denver I presented results from some of my experimental work investigating the dependence of chemical speciation on the reductive bioavailabiltiy of oxidized uranium to anaerobic bacteria, while my Master's student Abe Northup gave a talk on some related work, looking at the influence of chelating organic ligands on microbial uranium reduction. It was a great GSA trip, and I was fortunate to bring along not only Abe, but also my undergraduate assistants Jessica Schoonhoven and Nancy Morgan, who were coauthors on my presentation.

My work includes not only lab work, but also field work. After the Denver GSA we made a brief stop for fieldwork high in the Colorado mountains, at a location of natural uranium accumulation in a montane peat bog. We hope to glean, from analyzing the sediments from this bog, a better understanding of how our lab results can be translated to a real field setting. In December of 2002 I and Dr. Koretsky took our student laboratory assistants to do field work at a coastal saltmarsh in Georgia, to sample and analyze sediments for major and trace elements and for nutrients. This work was part of a study investigating the effects of plants on sediment geochemistry in oxic/anoxic muds.

In March I attended a workshop conference in Ascona, Switzerland, where I presented some of my work on uranium-bacteria interactions, to an audience of primarily trace element geochemists, principally from EU and FSU (Former Soviet Union) nations. Radionuclide and heavy metal contamination is a major issue in Europe, especially Eastern Europe, and conferences such as this one bring together specialists to present, discuss and hash out new and interesting ideas in trace element biogeochemistry.

Also in March I was honored by an invitation to join the editorial board of Geochimica et Cosmochimica Acta, the premier journal for international geochemical research. Alongside my duties as editor of the Geochemical Society

publication The Geochemical News, I have a fair amount of editorial responsibility. It should come as no surprise to anyone that in academia building name recognition, and a professional reputation, can depend on politics as much as on science. My editorial work puts my name and that of WMU in front of my peers, who might remember that when they're called on to review my grant proposals...

This fall I've been busy in the lab with some new undergraduate assistants. Tristan Brown is an Environmental Studies major working with me on experiments measuring heavy metal adsorption onto bacteria, and Suzanne Anderson is an ENVS and Biology double major working on a study of arsenic chemical speciation in aquifers. Suzanne plans to graduate in December, and go on to get her Ph.D. in Botany.

In terms of university goings-on, I'm pleased to report that the new Geochemistry major, which Dr. Koretsky and I designed, is on the books and accepting majors. We've already gotten a few students to sign up, in fact. And there is good news to report from Environmental Studies, where we have hammered out a new curriculum that is now under review. This new curriculum in ENVS is richer in science, more rigorous, and will challenge our students to become conscientious, knowledgable citizens who are part of the solution, not part of the problem.

Finally, I'd like to thank my colleagues in Geosciences for letting me join them in Rood. Now I can work once more alongside folks who actually know what rocks look like, who don't shake their heads at my office posters of dinosaurs, and who don't knit their brows in confusion when I discuss the concept of "field work". It is a welcome and refreshing change.

Duane Hampton

This year I have become the only Hydrogeologist, since Dr. Kehew is on a well-earned sabbatical and Dr. Cassidy is on leave of absence in Quebec. I find myself teaching Hydrogeology and Advanced Hydrogeology in the same semester. I'm not sure whether it's the novelty of it all or my age-addled brain, but some days I struggle to remember what I said to which class when. By the way, I decided to add a lab component to Hydrogeology, which I have thought for years we ought to do.

Yesterday I read articles written by C.V. Theis, a great American hydrogeologist, in 1940 and 1967. He was on top of his game to the end. I hope I can maintain some modicum of his clarity, incisiveness and intellectual rigor to the end of my career. I am only 50, so that is a big challenge.

I am excited about a pending trip to Egypt in December, 2003. Drs. Kehew, Sauck and myself are going along with Laura Sherrod, a doctoral geophysics student. Our 16-day trip will take us to the western part of the Sinai peninsula. We will look for groundwater-supply sources there. Of course we will work with colleagues from an Egyptian university. Working with them is an important part of this project which Dr. Kehew spearheaded.

Drs. Cassidy, Kohler (Biology) and I finished an applied research project early this year. Together with Dave Beck, a Masters student, we conducted field and laboratory trials of geotextiles as a means of dealing with contaminated stream and lake sediments. Geotextiles are plastic fabrics used in soils. Our use is to cut off contaminated sediments from the food chain, from animals that feed in these sediments and from those that eat them, so we can protect human health and the environment. Dr. Cassidy showed that two different chemical oxidants, ozone and CHEMOX®, almost completely break down two PCB congeners in the lab in a month. Dave Beck showed in the lab that geotextiles were about 93% effective in stopping critters from moving out of sediments. Our field experiments in Gull Creek showed that geotextile patches were about 95% effective in reducing critters underneath relative to uncovered control patches. Now the trick will be to get follow-up funding to take this idea to the next level.

I continue to work on free product research. This year I presented a paper at the annual NGWA/API Hydrocarbons conference on bail-down testing. I hope to secure a supply of resin-coated sands which are hydrophobic to use in further field tests of hydrophobic gravel packs for free product monitoring and recovery wells and trenches. Hydrophobic sands are frustratingly hard to obtain. I have toyed with the idea of starting a business to stock and supply them to consultants, but I don't have the guts to do that yet.

My best wishes to all of you alumni and friends. We continue trying to shape the next generation of geoscientists, and would like to hear from you as you consider what worked in your WMU experience and what was missing.

Bill Harrison

Well this is my last newsletter as a Geosciences faculty member at WMU. It is somewhat bittersweet to be retiring after 30 years of teaching, but there are still lots of things do especially with the Michigan Basin Core Research Laboratory. Although I will not be teaching in the Department I will still be the Director of the Core Lab and will continue to be involved in research projects relating to oil and gas exploration and development in Michigan. We are heavily involved in a fund-raising campaign to build a new building for the Core Lab. To date, about $125,000 has been pledged toward a goal of $2.5 million. We are actively working with the Michigan Oil and Gas Association and the WMU Foundation to raise the money. I taught the normal load of Evolution and Invertebrate Paleontology during the Fall semester, but was not on appointment during the winter semester. Linda and I had a wonderful trip to Bavaria in Southern Germany in May and returned to the Black Forest for a short visit over Thanksgiving. We did some hiking in the Bavarian Alps and found some great out of the way spots and nice small towns. The food and wine are fantastic there.

Robb Gillespie and I have been busily traveling around the country giving presentations about horizontal drilling activity in Michigan. Robb gave talks at the AAPG Pacific (San Diego) and Mid-Continent (Tulsa) Sectional meetings and I presented at the AAPG Eastern Section in Pittsburgh and the Ontario Petroleum Institute meeting in London, Ontario. I also gave a talk at the North-Central GSA in Kansas City in the Spring on the newly published Michigan Lexicon of Geologic Formations. This was a joint project of the Michigan Basin Geological Society and Michigan Geological and Land Management Survey in which I participated. It was over ten years in the making, by provides a valuable new resource about Michigan Stratigraphy.

We also began a new project for the Core Lab by starting to scan all the Oil and Gas wireline logs for the State of Michigan. The Michigan Geological and Land Management Survey is funding the project. We have already scanned about 7000 logs with the help of several very dedicated students. We expect to have over 45,000 logs in the final collection when completed.

In addition to staying on as the Director of the Core Lab, I will be granted Faculty Emeritus status. I think that means I am now one of the old guys who wanders aimlessly around campus or sits in the Library and stares into space. Well, hopefully not yet. It has been absolutely fabulous here at the "good old Geology Department" for the last 30 years. Now I have to go and clean out my office, I should be done in the next few months (yeah, right!).

Alan E. Kehew

Hi Friends and Alums,

I am writing you this year from my sabbatical, which I began July 1 after six and a half years as Chair. The purpose of this sabbatical is to re-focus my energies on research and publication, which sort of got mired in the administrative swamp. I was beginning to feel if I didn't do this now, the science would have left me totally behind. With three major projects on my plate a sabbatical couldn't have come at a better time.

The first project is the glacial geological mapping program, funded through Michigan Department of Environmental Quality and USGS, which is now in its ninth year. I am presently in the second year of mapping in Allegan County, with the able assistance of Mike Durham, one of the current graduate students involved in this project. Kyle Roslund is also working on drumlins that occur in both Allegan and Van Buren Counties. Brian Bird is finishing his thesis on Van Buren County and Steve Beukema graduated last summer, also with a thesis on Van Buren. Andy Kozlowski, who is in his second year of a faculty position at Susquehanna University, will be finishing up his dissertation very soon (right Andy?). In July, we presented several papers at the International Quaternary Association meeting in Reno, and Andy did a very nice poster at the Binghamton Geomorphology Symposium. Both Andy and I (with students) will be submitting papers to a special edition of *Quaternary Science Reviews* based on the poster session we were in at INQUA.

As I write this, a major phase of field work is in progress for the Allegan County Bluff Dewatering project that I am involved with. Ron Chase is the PI. We are currently installing vibrating wire piezometers, inclinometers, and dewatering wells so that we can dewater active landslides and monitor what happens. This is a very large-scale project (see photo below) funded by the Corps of Engineers. The instrumentation phase alone is about a half million dollar contract to STS consultants, under the supervision of us and the Detroit District of the Corps. One of the Corps people we get to work with is Ron Erickson, one of the department's "more

senior" alums. The crane shown lifts the drilling platform into place so that we can drill on the 30 degree sloping bluff face. It's really exciting to see this unique project finally happen. Several graduate students are also involved in this project.

My third project is the WMU-Suez Canal University - South Valley University hydrogeology coalition, funded through the US State Department. I made a planning visit to Egypt last December to try to finalize our objectives for this project. That's me below soaking up history and culture at Karnak Temple in Luxor.

Because of the events in Iraq, we had to postpone our planned trip to Egypt last spring. The group from Suez Canal U planned to come this past summer, but the visa process took too long for them to arrive in time for the Hydrogeology Field Course, and only two of them were able to come for a two-week period. The current plan is that Duane Hampton, Bill Sauck, Laura Sherrod (PhD student) and I will be going in December for two weeks to explore for groundwater in the Sinai desert. In March, Mike Barcelona, two grad students (Steve Beukema and Jenny McCrary) and I will make a second trip to South Valley University in Upper Egypt to try to delineate a groundwater plume from a sewage treatment plant. Finally, 10 Egyptians will come to Kalamazoo next summer for the hydro camp. I'm keeping my fingers crossed that all of this will happen. I will give you an update next year.

Some of my other sabbatical objectives are to revise my geology-for-engineers textbook, learn a little GIS, and chip away at the backlog of papers I should be writing.

At home, Kay is back at work as an RN at a senior citizen residence in Kalamazoo on the 3 to 11 shift, after a sabbatical of her own while youngest daughter Liz was in high school. With this schedule, we don't see each other much. Liz is attending WMU with a current interest in journalism. One of our two older daughters, Michelle, moved back to Kalamazoo last year, and Melissa, the other, continues to live in Maine. One of my personal objectives for sabbatical was for Kay and I to take a trip or two to some places we wouldn't ordinarily get to go. Nothing has materialized yet due to our busy schedules, but I'm still hoping something will work out.

Michelle Kominz

Greetings, friends and alumni of the Western Michigan University's Geology Department. After 6 years at WMU I feel like an institution here. Before last year I had thought that life was full. I did not know the meaning of the term.

Being both graduate advisor and the departmental seminar coordinator was tough enough in the fall semester. Come spring (formerly winter) term the glauconite really hit the fan! I found myself teaching my graduate class and two 175-student classes of ocean systems in addition to the undergraduate and graduate seminar course on top of running the seminar and looking to admit new graduate students, not to mention having to do our first ever annual evaluation of the current group of graduate students. Fortunately I had help in the form of one super-TA for ocean systems (Andy Hudak). Andy learned to write a mean multiple guess exam under my tutelage. Despite my own certainty that I was about to go insane, classes seem to have been successful and the seminar quality and attendance were high.

When that first-ever annual evaluation came along the MS graduate students found out, much to their shock and awe (never having taken GEOS 322 = Ocean Systems) that I really am a remarkably mean person. The upshot is that everyone is on schedule towards an efficient MS program.

This year my load has reverted to normalcy, a relief. Last year's Introductory Geophysical Exploration project performing surveys of the Gibbs House, for the Anthropology Department was quite successful. So this year we are trying to look at a few problems that faculty and students performing a hydrological background study of WMU's new Business Technology Research Park have identified. So far it looks like we need to go back next year and try again, but it has been a learning experience and that is the main point in this class. My class this year is small but dedicated so there is plenty of hands-on opportunity when we go into the field.

Teaching only one class of 250 students in oceanography feels like a breeze after two groups of 175. Also, after doing it for 5 years it's pretty straight forward. None-the-less I always seem to be learning new things, so I'm not ready to give it up. Someday maybe I'll even get to go on an oceanography-related field trip myself.

I have two more IODP SSEP meetings before meeting my obligation to read and evaluate proposals for the new "Integrated Ocean Drilling Program." Last year's fall meeting was in Montpelier, France and the spring meeting was in Niigata, Japan. Aside from keeping in touch with the latest geological oceanography research, I've learned a little bit about the geological setting of southern France and northwest Japan and I've learned about the

making and consumption of wine and sake. This coming November I will be in Boulder at the University of Colorado evaluating proposals with my fellow SSEP members.

The highlight of my research activities was delivering 3 talks (oral, poster and written) at the Gulf Coast Section of SEPM's Perkins Research Conference last December in Houston. It was a tribute to sequence stratigraphy so I was able to present my work on sea-level change, a paper on the entire New Jersey sea-level project for my colleague, Ken Miller, and the implications of my work for the sequence stratigraphic paradigm. I ended up looking like a keynote speaker when all 3 oral presentations were back-to-back and spent much of the rest of the meeting hob-nobbing with Pete Vail and the movers and shakers of sequence stratigraphy. Meanwhile a new borehole is being drilled in the coastal plain of New Jersey, targeting the Cretaceous part of the record. After a week's delay due to hurricane Isabel, drilling has been underway for a few weeks as of this writing. So far loose sand has resulted in less than 50% recovery. They have penetrated the K/T boundary just above 600 ft depth and will continue well into the late Cretaceous. It will be a long time before ages and water depths are available for my analyses but a funded NSF grant and hard working super-senior, Jake Marson, are allowing me to generate preliminary analyses of the data.

My ridge volume project with Chris Scotese is still in its infancy. In fact, my main success to date was in getting one program administrator at NSF to agree to look at the proposal we wrote. It turns out to be too interdisciplinary to fit into any program and 3 program directors agreed that it fell in their program but none felt theirs should take the lead. I am expecting to give a background talk on this project at the department seminar series in the Spring (formerly Winter) Term.

I remain web-mistress and treasurer for Western's chapter of Phi Beta Kappa. Last Summer I term, I rotated off of the steering committee for the College of Arts & Sciences Women's Caucus.

My downhill racing times continue to go down. This year I made it out of the "recreational" classification and into the "expert" level and was 23rd fastest of 82 women in my 5-year age bracket in the nation. At the Rec Sports Center I got "into" Pilates, which, when taught by the right instructor, has a great deal to do with my ability to continue aerobics classes with the undergraduate students. This year Pilates is being taught through Zest For Life (a program for staff and faculty) and I am always there.

With the joy of home ownership I've learned to mow and rake the lawn, prune bushes and fight the eternal fights against weeds, floods and pests. The other thing that homeowners seem to do is to spend all of their free time and money on home improvement. I have some ideas, but have not yet taken that plunge.

Carla Koretsky

Greetings friends and alumni. This has been a year with some difficult times for me. As many of you know, my father died very unexpectedly this March, while I was away at a conference in Switzerland. I would like to thank the faculty, staff and students here at WMU for their tremendous sympathy and support.

On a much more positive note, the students in my research group have accomplished some great things this year. Doug Miller, an undergraduate biology major who worked in my lab for the last three academic years and the last two summers, has graduated and gone on to the "real world". He will be greatly missed by all of us. Before leaving, Doug won the WMU Student Employee of the Year award for 2002-2003. Congratulations again, Doug! Amy Nowakowski, an undergraduate with dual majors in geology and environmental studies, also graduated and will be much missed around the lab. Congrats to Amy on being chosen as the Geosciences Presidential Scholar! Noah Ndenga is in the final stages of writing up his thesis. Noah has been looking at seasonal changes in trace metal speciation in the sediments of two local sites: Kalamazoo River and Kleinstuck Marsh. Abe Northup is also nearly finished, and with the addition of Johnson Haas to the Geosciences faculty, I can now stop pretending to be Abe's primary advisor and let Johnson take the credit! Abe and Johnson have done some very interesting work looking at microbial uranium reduction in the presence of complexing ligands. I am also pleased that

Soumya Das and Hailachin Mengistu, both PhD candidates, joined my research group this summer. Soumya and Hailachin plan to study metal adsorption using surface complexation modeling methods.

As usual, I did quite a bit of traveling this year. Most of my group as well as Johnson Haas and his students made the trek to Denver GSA. Abe and Noah both gave outstanding oral presentations. On the way back home, we stopped and did a little field work with Johnson's group, in a marsh with naturally high uranium concentrations. At least I think it was a marsh – it was tough to see under all of that ice and snow(!). I also presented work at the ASLO Aquatic Sciences meeting in Salt Lake City this February and gave an invited lecture at the U. of Idaho Geology department in November. Students Doug, Amy, Jessica, and Nancy, and Johnson and I were at Sapelo Island for part of winter break (including New Year's) to complete field work for a study of trace metal speciation in vegetated and unvegetated sediments.

I am very pleased that after much university paper-pushing the department officially has a new undergraduate major in Geochemistry. I think this will be a terrific and quite novel major that will take advantage of our current strength in geochemistry and biogeochemistry.

Finally, for those of you who are aware of my extracurricular activities, my off-the-track thoroughbred has been diagnosed with some serious arthritis,

which is an occupational hazard for racehorses. So, no jumping career for Jasper, although he'll still be a fine dressage and trail horse. To keep life interesting, I am in the process of saddle-breaking another young horse, aptly named "Havoc". I'll report on the results in next year's newsletter...

R.V. Krishnamurthy

The past year was a mixed bag, a "normal year" one might say. Student-related activities accounted for much of the "successes". Loago and Ahmed went full steam ahead with the determination to complete their PhDs and graduate in good time. Both their researches have opened up some excellent opportunities to launch collaborative programs with their respective countries, Botswana and the United Arab Emirates. Loago's work had a touch of serendipity in that we found that his study area is sitting on a geological "hot spot". There are parallels from Cameroon where disaster struck several years ago in the form of carbon dioxide that spewed from a lake. Ahmed moved a step closer to determining the causes of groundwater problems afflicting that nation. They both will carry very rewarding experience and valuable information related to ground water issues when they head back.

Another unexpected activity was the involvement of students from the local Kalamazoo Area Math and Science Center in two projects using stable isotopes. The first one, involving four students, applied isotopic techniques to study food adulteration. The project enabled these talented students to work in a sophisticated laboratory and hopefully will stimulate them further to pursue science. The second project, more than by sheer chance, involved my son Rohan working on a project in collaboration with NASA. NASA's Space Biology program incorporates extensive studies to understand photosynthesis under micro gravity. This is intended to enable future space research involving large number of scientists to develop a self-sustaining extra-terrestrial ecosystem. Rohan investigated carbon isotope fractionation in plants grown in the Space Shuttle under micro gravity to examine if photosynthesis under those environments exhibits any unique fractionation effects. In all probability, this is the first study of its kind and certainly a challenging one for a high school student! This project won the second prize in the Biochemistry category and was placed 9th in the overall category at the Intel State Science Fair in Detroit. This project will be strengthened by some more experiments and presented at the Science Talent fair next year. A poster based on this project was also presented at the College of Arts and Sciences poster presentation and received the Dean's Appreciation award.

Closely following all the joyous expeditions was the shadow of a tragic event in the shape of Anthony Marfia and his untimely disappearance from this earthly abode. Always a difficult but acceptable personality, Anthony was driven by a passion to contribute something tangible and not so fleeting to the annals of hydrogeochemistry. Contribute he did, by completing a well-rounded masters thesis dealing with isotope geochemistry of natural waters in Belize. As Providence would have it, he did not wait to see his efforts being recognized in the form of his M.S. degree or in the form of a publication that has been accepted by Applied Geochemistry. May his soul rest in peace.

Lest I should appear to be gloomy, I end this with a joke prompted to be recalled by teaching experiences in the undergraduate class. A geology professor was known for handing tough exams and for not allowing any retakes. After the final exam one semester, two students turned up and said they missed the final because they had a flat tire while returning from a visit to meet their friend who was in the hospital. The professor, much to their surprise agreed to let them take the exam again after the weekend. Our two friends spent a great deal of time preparing for the final since they were sure the exam will be extra tough. On the appointed day, the professor said they would have to sit in separate rooms to make sure there was no cheating. They did and the professor handed over the test to them. Much to the students' surprise, the test consisted of just one sheet of folded paper without apparently much writing inside. Anyway, they opened the test and there was only one question, "Which Tire"?

William Sauck

Hello former students and friends. Fall Semester of 2002 brought up Seismic Methods in the two-year geophysics rotation, as well as the usual large section of GL100. The seismic class was able to do full multi-fold CMP reflection work with our roll-along switch and 48 geophones, using the 12-gauge Buffalo gun as a source. For some reason they all like to play the part of shooter. Midway through the term I suffered a fall at home (combination of a ladder, oak tree, and chainsaw) that resulted in reconstruction of my right hip, a cast on my right wrist, and the forced use of a walker and crutches for three months. Fortunately, Robb Gillespie was able to take over the GL100 class, while I struggled on with the Seismic class. After a Christmas trip to Brazil and warm water therapy in the

equatorial Atlantic, my recovery went quickly and I am happy to report that after 6 months I was pretty much back to normal. During Spring Semester 2003 (formerly Winter Semester) I taught Gravity & Magnetic Methods (and GL100). During the Summer II term I helped with the Surface Geophysics module of the Hydro Field course.

In March, a paper which originated from a Field Geophysics (2002) GPR project on a coastal dune near Holland was presented at the Michigan Academy of Sciences meeting. A geophysics student (L. Sherrod) also presented another paper at the annual SAGEEP meeting in San Antonio. Our group (Sauck, Atekwana, Cassidy, Werkema, and students) continued working on the various ramifications of bacterial degradation of LNAPL (hydrocarbon) contaminated sites. One paper was published in the Jour. of Environmental & Engineering Geophysics, and another more recently in Geophysical Research Letters. Dr. Kehew's Egypt project had several of us scheduled to spend the month of May doing geophysics in the SW Sinai and in the Eastern Desert near Luxor. However that trip had to be delayed because of the hostilities in Iraq. A smaller group will probably work in the Sinai in Dec., 2003.

On the home front, Elen had a 15 pound liposarcoma removed from the back wall of her abdomen in May, recovered quickly, and is now very much more like she was when I met her 26 years ago. Christine has finished her first year in the doctoral program in clinical psychology at Clark University, and Carolyn finished her BS in mechanical engineering at the U of M (Ann Arbor). Eric slept a lot and grew a lot so that now at age 17 he is my height, wears size 13 shoes and functions frequently as self-appointed critic of his parents. I guess that goes with the turf of being a HS senior. He does very well academically and plays a mean trumpet. Our oldest son, Jeff, stops by occasionally with his wife and our first grandson (who was born 10 days after the World Trade Center attacks). At the end of the summer I spent a month with Elen in Brazil visiting her family (Belem, Sao Luis, Cabo Frio, Sao Paulo, Rio de Janeiro). While in the latter two cities, I spent several days with Franklyn Legall (who defended his doctoral thesis in Nov., 2002) at two of the sites which The Gillette Company had assigned to him. I think he likes Brazil, as he has found reasons to go to Brazil every month!

Adjunct Professor

Robb Gillespie

Greetings, friends and alumni: It has once again been a fun-filled, action-packed year. I've been teaching Introductory Geology each semester and have begun teaching Ocean Systems this semester. Dr. Michelle Kominz has been very gracious letting me sit in on her Ocean Systems lectures and supplying me with notes, web page materials, videos, lecture props and what not. The plan is for me to teach two sections of Ocean Systems next fall when she goes on sabbatical. This spring semester will find me filling in for Dr. Alan Kehew who is currently on sabbatical. I'll be teaching his Geomorphology class for him and Peter Voice will be taking care of the lab. Teaching these two classes brings me full cycle in my geological career. My first geology class was Oceanography, a class that convinced me to change my major during my junior year from pre-Med to Geology. My graduate work centered on geomorphology and sedimentation/ stratigraphy culminating with my Ph.D. dissertation concerning the glacial stratigraphy of south central New York. Now I get to teach my first two loves - life is good.

Dr. Bill Harrison and I collaborated on a presentation for the Petroleum Technology Transfer Council (PTTC) concerning the effects of horizontal drilling technology on oil and gas exploration and production in the State of Michigan. We have each given the presentation a number of times. I presented it to a workshop at the American Association of Petroleum Geologists (AAPG) Western-section last spring in Long Beach, CA, and most recently at the AAPG Mid-continent meeting in Tulsa, OK. It has been well received and is giving Michigan oil and gas a lot of publicity. The PTTC is using our presentation as the lead for a new web page they are beginning in conjunction with the Department of Energy (DOE).

Dr. Dave Barnes, Dr. Bill Harrison and I are taking our work on the Dundee reservoir at Buckeye Field to the next level. We are hoping to present it as a poster along with specific rock cores at the National AAPG convention next April in Dallas, TX. I suspect we'll be driving (e.g. - hauling cores) rather than flying to this one.

Efforts to fund a new Core Lab are shifting into high gear. The Michigan Oil and Gas Association (MOGA) is now involved. The first two donations have been pledged and we are now $100,000 toward our goal of $2.5 million. The next few months will be very exciting as the campaign gets underway. Although Bill Harrison is retiring from the Geosciences Department at the end of this semester, he and Linda are going to be staying here to take care of the Core Lab. This is definitely a win-win for all of us.

The new house continues to insure that I will be working for the rest of my life. After a muddy winter and spring, we finally got drains installed in the driveway, re-engineered grades and got it paved. Some of the rear deck is getting built, and yes, it is the deck for the hot tub that will be delivered next week. I still have plenty of dead trees to cut down and my chain saw is no longer in "like-new" condition. And the leaves are falling and piling up and winter is just around the corner. And then I can start finishing off the basement. And then . . . . . And then . . . . . And then . . . . . .

Michigan Basin Core Research Lab

Linda Harrison is doing a masterful job managing the lab. She supervises 11 work study students who have spent hundreds of hours cataloguing, inventorying and generally organizing all the vast collections in the Lab. They are also building searchable databases listing all the data that we have in the lab. The indices they are creating are being posted on the Core Lab and PTTC web sites. (http://www.wmich.edu/geology/corelab/corelab.htm) (http://wst023.west.wmich.edu/pttc1.htm).

Linda is also the major liaison between the Core Lab, the Michigan Oil and Gas Association and the WMU Foundation during our capital fund-raising project to build a new Core Lab. She has spent a lot of time preparing packets, documents and brochures for potential donors.

In late summer we received a second shipment of Marathon Oil Company's core collection from Michigan. It included all their wells from the Trenton/Black River formation in Albion-Scipio and Stony Point fields. Cores from other formations and fields were also among the 52 pallets that are now in the Core Lab. Dave Barnes and I also recently rescued a couple of nice collections of shallow environmental cores in the Pennsylvanian Saginaw and Grand River formations from near Lansing. Those units are fresh water aquifers in the Lansing area and having some rock material will provide excellent resources for future geological studies of depositional systems and stratigraphic relationships. MichCon recently donated their complete paper wireline log collection for Michigan wells. It is currently being inventoried and consists of over 20,000 logs. We also received a second nice collection of geology and hydrogeology reference books from Mark Buddy. These will be added to the large library that we already have in the Lab.

The Lab continues to be the Michigan Basin Center for the PTTC (Petroleum Technology Transfer Council) and has extensive interaction with the members of the petroleum industry about Michigan oil and gas. This year we conducted three workshops for the PTTC and the Michigan petroleum industry. The first one in early spring was a joint activity with the Northern Michigan Society of Petroleum Engineers and consisted of an operator's forum and presentations of case studies about horizontal drilling applications for Michigan. Over 200 people attended the all-day event in Mt. Pleasant. In July we hosted a national PTTC traveling workshop on Produced Water. In September, We joined with the Michigan Oil and Gas Association in presenting a series of applied lectures and a core workshop on the Trenton/Black River Fractured reservoirs in Michigan. Nearly 100 people attended.

Many visitors came to the Core Lab this year, including U.S. Congressman Fred Upton to discuss Michigan energy issues, the National Energy Bill and how the Core Lab can play a role in Michigan's energy future. He appears to be a strong supporter for our activities. Geologists from oil and gas companies in Colorado, Texas, Pennsylvania and Michigan visited the lab to acquire data and look at core material. Three geologists from the USGS also visited to get data in preparation for their revision of the Michigan Basin Petroleum Province document for the Survey.

Activities at the lab have never been more diverse and exciting, even our website for the PTTC is receiving over 4000 hits per month. We are continually filling requests over the phone and by email for data about Michigan petroleum reservoirs and geology. I have the feeling that there won't be any slowdown in my workload when I retire from teaching, it will just be transferred to the Core Lab.

DISTINGUISHED LECTURER

Michael Grammer, geosciences has been named a 2003 Distinguished Lecturer for the American Association of Petroleum Geologists.

A total of five to seven lecturers are chosen annually from the 35,000 member association for this honor. During his lecture tour of North America, Grammer will travel around the nation and to Mexico to talk about "Predicting the Distribution and Geometry of Carbonate Platform Reservoir: Insights from the Integration of Modern and Outcrop Analogs."

He will speak to the following institutions and groups: Southern Methodist University; Oklahoma State University; Tulsa Geological Society; University of Kansas; Kansas Geological Survey; Montana Geological Society; Utah Geological Society; University of Colorado; Dalhousie University, Nova Scotia; SUNY Stony Brook; West Virginia University; Pittsburg Geological Society; University of Wisconsin; Michigan Basin Geological Society; Michigan Technological University; University of Miami; Asociacion Mexicana de Geologos Petroleros in Poza Rica and Villahermosa, Mexico; and Pemex, the National Petroleum Company in Mexico City.

Grammer joined the WMU faculty in September of 2002.

Article from the Western News, April 10, 2003, volume 29, number 14.

SPECIAL DONATION

R.V. Dietrich, emeritus professor of geology at Central Michigan University, recently donated minerals to the Lloyd J. Schmaltz Museum. Several of these samples have appeared in publications of Dietrich. Some are rare or otherwise exceptional specimens and come from around the world. Many are great teaching specimens, showing the fundamental properties needed to introduce students to mineralogy. Among the collection are many pseudomorphs (minerals altered after crystallization) and are very unusual. A few specimens are unique in that they were collected by well known geologist such as W.C. Brogger, Alfred Knopf, and Richard Flint. We appreciate this donation and look forward to using it to help expose students to mineralogy.

CONGRATULATIONS!

Best wishes to graduate student Andrew Hudak on his October wedding and to graduate student Laura Sherrod on her November wedding!

CONFERENCE

The Department of Geosciences and the MDEQ sponsored the 48th Annual Midwest Ground Water Conference at the Fetzer Center, October 1-3, 2003.

Geosciences Department Staff

Kathy Wright	*Administrative Secretary*
Beth Steele	*Newsletter Editor*
	Dept. Secretary
Brian Bird	*Technician*

Steve Beukema, Ph.D. Candidate

Hello everybody. It's another busy year filled with many exciting activities. I'm happy to say that this past summer I finished my thesis with Dr. Kehew on glacial stratigraphy in Southwest Michigan and I graduated with an M.S. in geology. I've decided to stick around for a few more years to work with Dr. R.V. Krishnamurthy on the application of stable isotopes of C, O, and H on recent climate change. Currently R.V., Dr. Kehew, Dr. Ashok Singhvi (Physical Research Laboratory, India), and I are attempting to do some dating of key stratigraphic units in the glacial deposits in Southwest Michigan by means of optically-stimulated luminescence (OSL) dating. In addition to this, I'm looking forward to doing some research in Egypt in the spring as part of the WMU-Egypt hydro coalition. I also recently started working a few hours per week for the Remediation and Redevelopment Division of the MDEQ in Kalamazoo. And, naturally, school/research/work needs to be balanced by the piano. My piano efforts are currently being guided by Phyllis Rappeport, a professor emerita here at WMU. To sum things up, I'm learning all too well the meaning of the commonly-heard quote: "Remember, anything more than 4 hours of sleep per night is a waste of time!"

Brian Bird, MS/PhD Candidate

Hello once again. I'm finally getting closer to wrapping things up on the glacial stratigraphy of the Lawrence, Paw Paw, and Decatur quadrangles - then it's off to the dissertation. I will be looking at deformation caused by the Lake Michigan Lobe of the Laurentide Ice Sheet. Pretty exciting stuff, the deformation seems to be pervasive throughout the area and it has not been looked at in great detail in the past. As far as the Technician position is concerned it's been a rather busy time. I recently organized the Geochemistry Lab in Rood and it is now in working order. The 2003 hydrogeology field course was successful. We had many outside students, a couple as far away as Boston, MA and Rhode Island this year, and I've actually have started planning next year already. Make sure to check out the web page at http://www.geology.wmich.edu/fhydro. I would appreciate any feedback on the web page so be sure to drop me a line. I've only had one tour of the museum so far this semester, but I'm sure they will pick up soon. Dr. R.V. Dietrich from Central Michigan University recently donated some minerals to the department and I will be placing some of them in the museum soon. Check out the Lloyd J. Schmaltz museum online at http://www.geology.wmich.edu/museum/index.html it's still under construction but is updated often.

Soumya Das, PhD Candidate

This is time to say hi to all of you again. I would also like to say hi to the new comers and welcome them to the family of rocks and fossils. Last year has passed by in a flash. Taking classes and teaching optical mineralogy and petrology during fall and winter respectively kept me busy. I have really enjoyed teaching those two courses. I am fortunate having students like Chris, Scott, Roger and Zack in both of these courses. We went for a fieldtrip to Missouri with Dr. Chase and had really a good time by camping and doing field works. This summer, I started working on my research with Dr. Koretsky. I tried to duplicate some of the earlier experiments. She helped me a lot to set up those experiments. I really appreciate her sincere help. This gave an ample opportunity to work in the lab and get accustomed with the lab procedure as well as to run an experiment. I worked on Pb adsorption on HFO (Hydrous ferrous oxides) with different Pb concentration and results we got so far are very promising. Pb adsorption is studied with variation of pH from 2-6.5. Pb adsorption increased with increasing pH as expected. We will try set up an experiment where we can study adsorption of heavy toxic metals on mixed mineral assemblages. Not too much work has been done so far on mixed mineral assemblages. So there is plenty of work to do. Let's hope for the best. That's all I got from here. See you guys around.

Hailachin Mengistu, PhD Candidate

Hi everybody,

It's been a wonderful year for me. I've learned a lot both academically and socially!! It took me quite a long time to be able to socialize and enjoy life with people. While I was TAing the Field Geophysics class, it occurred to me that a good geologist/geophysicist needs muscle! I guess it should be included as one of the ten commandments.

I am about to finish my course work next semester and start the big job of research and writing my dissertation. My short research with Dr. Koretsky is quite encouraging. The project was about making a surface complexation program (JCHESS) to do Arsenic modeling. However, my idea of doing saltwater intrusion modeling seems to lose momentum due to many reasons. I am benefiting from my position as TA in senior classes, it makes me revise and arm myself with hardrock geology, which was about to be totally forgotten.

Otherwise everything is going fine and I am looking forward to seeing what my accomplishments are in the forthcoming days.

Tony Sandomierski, MS Candidate

I find it difficult to believe that my first year has passed at Western already. With all the deadlines, meetings, proposals, etc., one simply loses oneself. Upon reflection, I find that this year at Western has been the greatest year of my life, both professionally and personally. My wife, Beth and I were blessed with a boy, Hunter Ephraim, on October 30, 2003. He is indisputably the happiest baby anyone has ever met. My wife is finishing her math degree, and we should graduate at the same time. The last year has provided me with more insights and opportunities than in the last six years of my college career. The Geology Club field trip to the Four-Corners Region, was simply world-class. I personally saw more rocks

and geology in three days than in three years stomping around the U.P. at Michigan Tech. The Kentucky field trip was as fun as it was enlightening. The time this summer I spent at the Core Lab, working with the Harrison's, was an invaluable precursor to my research. Dr. Grammer's new research lab, with the greatest of technologic tools, makes me feel like a kid in a candy store. Luck once again shined on my family and myself with the offer of an internship with ExxonMobile after an AAPG meeting in Pittsburgh. The Geology Department at Western has provided me with unimaginable opportunities and has been good to me if, for no other reason, than the fact that my wife and I have yet to pull out a "winter coat".

Laura Sherrod, Ph.D. Candidate

The geophysical lab experiment at Haenicke Hall has drawn to a close. I spent a large portion of the summer processing geoelectrical data from this experiment. The data support the conductive plume model and Dr. Sauck gave the first presentation of the results at a geophysical conference in Brazil in September. Further compilation of biological and chemical data has yet to be performed before publication. I have also participated in a variety of geophysical fieldwork, from a cemetery to an air force base to a city park. Time-lapse resistivity data at Wurtsmith Air Force Base in Oscoda was used to show plume movement over the course of seven years, the VRPs at the city park in Carson City continued to show bioremediation at work in zones of hydrocarbon contamination, and burial sites in Ottawa County were imaged through a 2D pole-pole resistivity survey.

Casey Smith, MS Candidate

I was busy this summer with my internship at Lacks Enterprises in Grand Rapids, which gave me a hands-on look at how industry handles it's environmental issues. With the days of unregulated sludge disposal behind us, Lacks is now trying to clean up its past problems and be proactive as far as preventing future contamination problems. I was involved in groundwater sampling, data analysis, and remediation work during my summer at Lacks and am continuing my involvement with the company throughout the fall with the hope of full time employment upon graduation. I am planning on finishing up classes this fall and hopefully graduating this December with a Masters Degree in Earth Science.

Spring Awards Ceremony

Diane Dubois

Dave Eagle

Dr. Kehew presenting Soumya Das with an award

A great smile from Elen Cutrim with son, Eric

2003 Geosciences Department Awards

Graduate Research and Creative Scholar Awards
Andrew J. Hudak
Abraham M. Northup

Graduate Student Teaching Effectiveness Award
Laura A. Sherrod
Peter Voice

Presidential Scholar
Amy Nowakowski

Senior Honor Awards

Earth Science
Jeremy Jones

Earth Science Education
Lauren Ballema

Geology
Amy Nowakowski

Geophysics
Diane Dubois

Advisory Council Field Camp Scholarship
Scott Badham
Soumya Das
Amy Nowakowski

Laton Field Camp Scholarship
Roger Bajorek
Amy Nowakowski

W. David Kuenzi Memorial Scholarship
Jenny McCrary

Lloyd Schmaltz Award
Bill Paul

Lloyd Schmaltz Museum Award
Soumya Das

Distinquished Student Service Award

The Kalamazoo Geological and Mineral Society Scholarship
Tsigabu Gebrehiwet
Amy Nowakowski

Recent Graduates

Bachelor's Degree Recipients

Earth Science Majors
Brandon J. Baker
Lauren M. Ballema
James G. Beissel
Lucy E. Bland
Scott R. Carrico
Scott W. Corrie
David A. Geiger
Nathan L. Johnson
Christopher W. King
John P. Lentsch
Ryan D. Long
Karen D. Middaugh
Luke A. Prowse
Jessica M. Schoonhoven
Brooke A. Steinberg
Alexander S. Wallace
Stephen J. Williams
Jonathan E. Wojtowicz
Matt M. Wrubel

Geology Majors
Kristoffer Hinskey
Scott Hughey
Jennifer Hurst
Justin C. Vetter

Hydrogeology Majors
Shawn N. Holman
William T. Paul

Geophysics Majors
Scott T. Jones
Hoa X. Luu

Master's Degree Recipients

Earth Science
Anthony Marfia
Nora Rooney
Natalie Williams

Geology
Steve Beukema
Kurt Carlson
Kennedy Mwanda
Eric Wallis

Ph.D. Degree Recipients
Franklyn Legall
D. Dale Werkema

Amy Nowakowski receiving the Presidential Scholar Award from Interim President Daniel Litynski (left) and Senate President Peter Krawutschke.

alumni news

Beno Thomas, M.S. 1994
Congratulations to Beno and Julie Thomas! A baby girl, Jordyn Susan Thomas, was born to them on April 18, 2002. Beno is currently working as a network Manager for Kutztown University.

Shannon Wong, MS 2002
Sunny Greetings from Oakland, California! All is well here on the west coast. I am enjoying my job as staff geologist at Uribe and Associates. The commute is wearing me down so I hope to be moving before summer. My office is by the marina, a 10-minute bike ride from Jack London Square (Oakland's equivalent of Fisherman's Wharf).

John Bailey, 1985
I graduated from WMU in 1985 and started working at the Kellogg Company. I started out in their Quality Department in the Battle Creek plant, but transferred to R&D after my first year. I spent the rest of my career there until October 2001. I was one of the original developers of Nutri-Grain Bars and a few other Kellogg products. After leaving Kellogg's (due to corporate downsizing and the acquisition of Keebler), I consulted for a year while I finished up my Masters Degree in Food Science at MSU. I graduated last May! I was definitely one of the older students in my class!! Last October I accepted an offer to work for a west coast flavor company - Western Flavors and Fragrances. I am currently selling flavors back to the people that I used to work with at companies like Kellogg's, Smucker's, Keebler, Frito Lay, etc. Now I get to use my 17 years of technical experience to sell and to help them with technical problems . . . and I love it! But I do tend to travel quite a bit . . . I travel somewhere every week. I manage my own schedule so I try to be around for my daughters' athletics events and other important dates. (I have three girls - ages 16, 14, and 10). My wife is very understanding . . . she's a terrific mom/wife! I also decided to run for election last year . . . now I'm on the Board of Education for Harper Creek Community Schools. (That is where my wife and I came from.) That experience has been a real eye-opener! As you know, we are facing difficult financial times and we still have to deliver a quality product to the students/community. I certainly hope the economy gets turned around soon!

advisory council news

The Geosciences Advisory Council sends Holiday Greetings to faculty, staff, students and alumni.

The Advisory Council met on April 11, and again on October 10, 2003 to celebrate the Centennial of Western Michigan University. We met with the students and faculty to exchange ideas. The Council maintains a strong interest in the activities of the Geosciences Department, and supports the University administration on all current projects. The Council is working with the WMU Foundation to establish an endowed scholarship for geoscience students, and is also funding annual financial awards given to students for Field studies and for the spring Field Camp. We strongly endorse the establishment of a new Core Laboratory, and will be working with both the Foundation and the Faculty in seeking funding for the facility.

The Geoscience Department continues to provide both educational and practical training for undergraduate and graduate students, a compliment to the attitudes and dedication of the faculty. We were pleased to have Dr. Bill Sauck and Dr. Carla Koretsky provide an overview of their research projects and their teaching programs at the spring and fall meetings, respectively. Their teaching programs provided insight to the educational and practical aspects of their research.

The April meeting included discussions concerning scholarships, department funding and faculty activities.

A review of University actions to implement the new Core Laboratory facility was presented to the Council by Dr. William Harrison and he also reviewed a fund raising initiative.

The Council and the faculty applauded retired Department Chairman, Dr. Lloyd Schmaltz and his wife Marilyn for their commitment of substantial funds toward the new facility. The Council will work with the Foundation and with the Geosciences Department to support the funding effort for the new Core facility.

The Council will also continue to focus on financial support for students, and for the establishment of an endowed scholarship.

John A. Yellich, Chairman
Thomas C. Kamin, Secretary

Field Trips

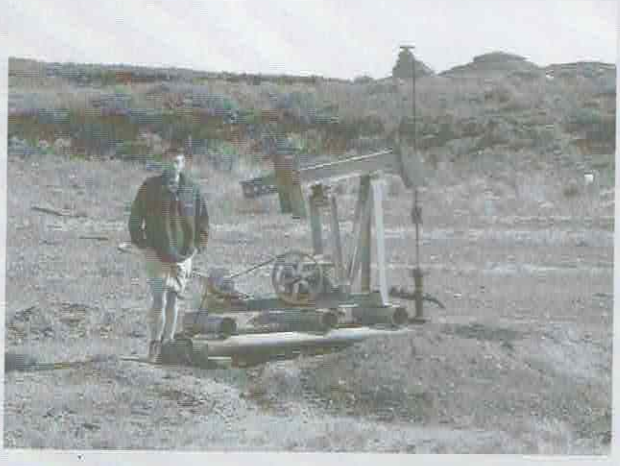
Missouri Field Trip with Dr. Chase

Soumya Das and Dr. Chase

Abandoned Granite Mine

The Faculty and students bring back great pictures from their class trips and Geology Club trips! It was hard to choose, but we had to share some of them!

Utah Trip with the Geology Club



Peter Voice alongside a tiny oil well

View of Goosenecks

Rafting

View of Tyuonyi Pueblo

View along the San Juan River

View of Cliff dwellings in Bandelier Tuff with Danielle Odette

Group examining the oolitic shoal facies at Eight Foot Rapids

View of Monument Valley

Cliff Palace at Mesa Verde

Group photo

View of Goosenecks along the Colorado River from Dead Horse Point

Outstanding Alumni Academy

The Department of Geosciences held an Induction Ceremony and Reception on October 10, 2003 to induct one new member into our outstanding alumni and to showcase his distinguished career in the field of Geology. Jeff Hawkins received a certificate and an award presented by Dr. David Barnes, Interim Chair, Department of Geosciences.

Jeff Hawkins is President, Founder and an owner of Envirologic Technologies, Inc. and West Michigan Drilling, a 30-person full-service environmental consulting and services firm and environmental/geotechnical drilling firm, respectively. At Envirologic, Mr. Hawkins has primary responsibility for marketing and business development, technical oversight and shares responsibility for the overall functions of the company. Mr. Hawkins has 18 years of experience providing environmental consulting services to Commercial, Industrial and Governmental clients. His experience includes: Hydrogeologic Investigations, RI/FS activities, Phase I/II Environmental Site Assessments, Risk-Based Corrective Action, Environmental Audits and Compliance Assessments, EMS Development, Brownfield Redevelopment, Sustainable Development and the application of Innovative Remediation Strategies. Many of these activities have involved State and /or Federal enforcement actions. Mr. Hawkins' expertise has been applied at petroleum sites, former manufactured gas plant sites, food manufacturing and distribution, metal forming and treating sites, pharmaceutical sites, waste TSDF facilities, forest products and many others throughout Michigan and the Midwest. Mr. Hawkins is a member of many associations and serves on various committees for organizations representing environmental issues affecting businesses and the community. He served on the Board of Directors and was a Past President of the Environmental Management Association and is a member of the Advisory Council for the Geosciences Department at Western Michigan University. He has also served as a faculty member for the Michigan Economic Development Course at WMU for the last four years teaching a course on Issues in Brownfield Development. Additionally, Envirologic is active with the West Michigan Sustainable Business Forum.

Mr. Hawkins has a BS Degree in Geology from Southern Illinois University (1983) and an MS Degree in Earth Science from Western Michigan University (1995). He continues his education through various courses and environmental conferences, including EMS and ISO 14000, Brownfield Redevelopment, Manufactured Gas Plant Investigations and Remediation and Sustainable Development. He has traveled to Canada and Mexico to pursue international opportunities and alliances in the environmental industry.

donations for 2003

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.

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make a contribution for 2004

We hope that you will consider making a contribution to the geosciences community. You may specify that your donation go to the Department of Geosciences Development Fund for any of the purposes listed, or write in a selection of your choice.

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.

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***To support student and faculty travel, field trips, student and faculty research, and visiting speakers**

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Geosciences Community 2003

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Department of **GEOSCIENCES**

mailing list

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 this newsletter, please send their names and addresses, we would like to add them to our file.

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Return to: Dr. David Barnes, Department of Geosciences, 1187 Rood Hall
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