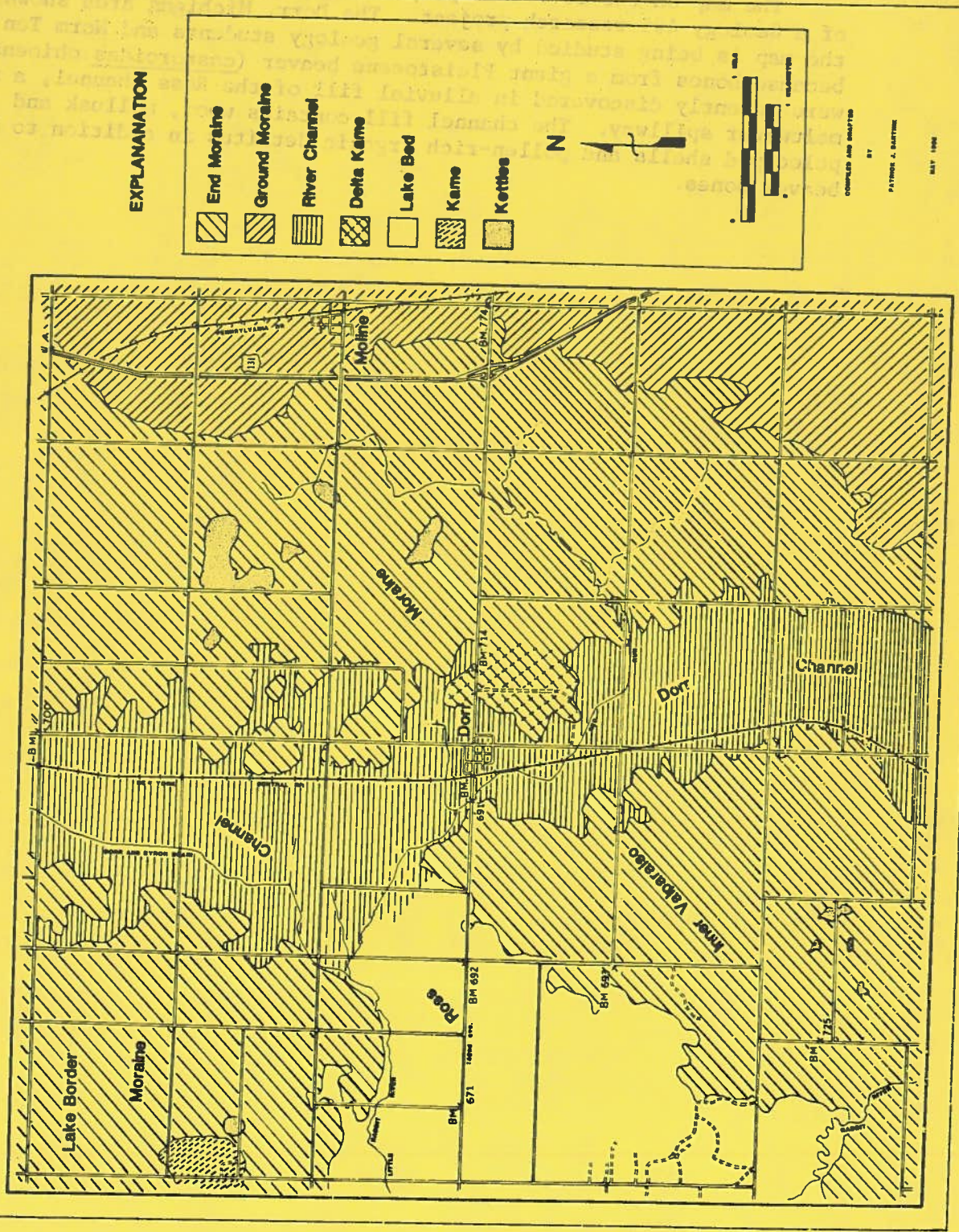


GVSC GEONEWSLETTER

GLACIAL LANDFORMS MAP OF DORR TOWNSHIP ALLEGAN COUNTY, MICHIGAN

PLATE 1



COMPILED AND DRAFTED BY
PATRICK J. BARTON
MAY 1982

COVER ILLUSTRATION

The map on the cover was prepared by Pat Bartnik, '82, as part of a Geology 499 research project. The Dorr, Michigan area shown in the map is being studied by several geology students and Norm Ten Brink because bones from a giant Pleistocene beaver (castoroides ohioensis) were recently discovered in alluvial fill of the Ross Channel, a major meltwater spillway. The channel fill contains wood, mollusk and pelecypod shells and pollen-rich organic detritus in addition to the beaver bones.

GVSC GEONEWSLETTER

Volume 6

Fall, 1982

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IN MEMORIAM

JOHN BECKER LUCKE 1908-1982

John Becker Lucke, 74, first chairman of Grand Valley's Geology Department passed away Saturday, October 2 at his home in Harwich Port, Massachusetts after a long bout with cancer. Johnny, as we all came to know him, was The Department's first chairman. He was brought here in 1964 by then-President Jim Zumberge. He, in his words, proceeded to "build the best small geology department in the country" and spent the next 9 years at that task until his retirement as Professor of Geology emeritus in 1973.

One hardly knows where to begin in describing the career of this active man. Johnny was born in New York in 1908 and graduated from Horace Mann School in New York City. In 1929 he received his BS from Princeton University (maxima cum laude in geologia). In 1933 he received his Ph.D., also from Princeton, after completing a doctoral study on the Barnegat Inlet, New Jersey. Bill Neal says it is a classic investigation of an ocean shoreline using aerial photography. That study was done under the tutelage of Douglas Johnson, then a world renowned oceanographer. Johnny worked in various capacities after graduation in 1933 in both industry and college teaching. His first job of teaching was part-time at John Marshall College in Jersey City, N.J. but he later went to West Virginia University and became a full-time professor of Geology. In 1940 he moved to the University of Connecticut where he founded his first geology department (Grand Valley being his second) and served there until his active duty in the U.S. Navy as a photo interpretation officer in charge of terrain and beach studies at the joint intelligence center in Pacific Ocean areas. This duty was a direct outgrowth of his doctoral work at Princeton. For it he was awarded the Navy commendation ribbon by Fleet Admiral C. W. Nimitz as a lieutenant commander. Upon returning to Connecticut he served as a commissioner on the Geological and Natural History Survey of the state of Connecticut and in 1954 was made director with the title of State Geologist.

One of the most exciting times of Johnny's career must have been his participation as geologist on the National Geographic Society-Woods Hole Oceanographic Institution's Mid-Atlantic Ridge Expedition. In 1948 he accompanied Maurice Ewing, Professor of Geology at Columbia University, on the Atlantis in a pioneer study of the Mid-Atlantic Ridge, a 10,000 mile long mountain range that extends from Iceland to the Antarctic Circle on the bottom of the Atlantic Ocean. This mid-ocean ridge was discovered in the late 1800's and has been connected with the legend of the lost continent of Atlantis, the mythical continent which Plato said sank beneath the waves "in a single day and one fatal night". Their investigation also gathered evidence which later was to be used in America's rather late acceptance of plate tectonics. They did this by supplying much of the information about the bottom of the sea floor that has led present geologists to more readily accept this new all-encompassing geological theory. Another high point in Johnny's career was the year that he spent as a geologist for the National Park Service on the Katmai Expedition in Alaska.

In 1964 he made a decision that was to affect most of those who will read this newsletter. Dr. James Zumberge, president of the new college of Grand Valley, knew Johnny professionally and invited him to apply for the post of Professor of Geology. He proceeded to set up our new department which was then housed in the middle of Lake Superior Hall as a part of the Science Division. In those first years as an effort to "sell" Grand Valley to southwestern Michigan, Johnny presented a TV series called the "10 O'clock Scholar." In this series, which ran for 30 minutes a week for 12 weeks, Johnny and Jim Zumberge did a series called Conversations with the Earth. In 1966 Johnny was instrumental in bringing a fellow shipmate from

that Atlantis expedition in 1948, Dr. Frank Press (President Carter's scientific advisor and now Chairman of the National Academy of Sciences) who was then chairman of the Earth and Planetary Sciences at MIT to dedicate the new Loutit Hall of Science. In 1966 he was appointed chairman of the Geology Department. Johnny continued his voyages over the world's oceans and while at Grand Valley spent from January 1 to June 15, 1969 on a South Pacific cruise dedicated to the 200th anniversary of Captain Cook's first voyage in the Pacific on the ENDEAVOUR. At that time he collected for our department suites of rocks, corals, and shells from the South Pacific. Following his retirement in 1973 he spent time on a number of other cruises of a similar nature. After his retirement he and Virginia moved to a condominium on Cape Cod. Shortly thereafter Johnny suffered the loss of Virginia. We were all relieved when he, after a period of time, met a local Cape Cod resident, Dorothea R. Houghton, and married her. Dot seemed to be just what Johnny needed at that time in his life and she made his last years fruitful and enjoyable.

I was surprised on September 11 of this year to receive a call from Johnny telling me for the first time of his illness and was shocked by the announcement of his death less than one month after that. These words are not meant to do justice to the career of Johnny Lucke, but rather to console those of us whose lives he touched.

GREETINGS

Despite four budget cuts totaling 21.4 percent of our 1982 allocation, your alma mater is still in business and busy preparing for the future. Partly because of the budget cuts and partly because the administration and faculty as a whole finally got fed up with the built-in problems of the cluster college concept, Grand Valley will do away with the separate colleges (CAS, William James, Kirkhof, Siedman) and starting next fall, will become a single college with four divisions (Arts and Humanities, Social Sciences, Science/Math, and Business and Economics). The new Science/Math Division Dean will be P. Douglas Kindschi, currently Kirkhof Dean. There will be a single admissions policy for the whole school, a single general education program patterned after the CAS general education requirements, a single grading policy, and a single personnel policy.

Geology will make the transition with little or no changes. We are still plugging along with four faculty members and about 45 majors. The drive to secure a geochemist is not dead yet, but until the financial situation in Michigan improves, it is definitely on hold. We have experienced a 50 percent turnover in our majors group in the past year with 18 graduated and 7 lost to diverse reasons such as transfer and stop-out/drop outs. The losses have almost been made up for by a larger-than-average freshman and transfer group. Consequently we have big freshman and sophomore classes but smaller than average junior and senior groups. Dick is busy breaking the new group in in Physical Geology and Mineralogy.

Thanks to those of you who took the time to complete and return the alumni questionnaires this past summer. We were gratified at the generally positive nature of the responses. We had felt (hoped?) that most of you had had a good experience here but it was a shot in the arm for us to have those feelings confirmed. Of course, we are not without problems and your comments have helped us recognize at least the following shortcomings:

1. Improve geowriting skills of students
2. More geochemistry
3. Add geophysics
4. Better career guidance
5. More emphasis on hydro and engineering
6. More emphasis on computer applications
7. Lots of field trips and field methods
8. Drop 499; strengthen 499 (mixed signal here)

Of course, most of the above require \$ and that's hard to come by in Michigan these days. Some wag anticipated this however, and suggested that "... (someone) rob a bank..." Any volunteers?

The 1982 Christmas party will be Monday, December 27 at the former Little Mexico Restaurant on 48th Avenue just west of campus. It is now called the Le Petit Chateau. Plan to join us there if you can. We hope to make this the biggest and best get-together ever.

ABOUT THE FACULTY

Tom Hendrix - 1982 has been a year of travel for me and several members of my family. I, my wife (Nina) and youngest daughter (Lori) spent Christmas 1981 and the first week of 1982 in Stuart, Florida with my parents who have recently retired to that Atlantic-coast city. The weather was summer-like the whole time we were there and that was enjoyable, but we missed seeing the alums at the Christmas party, and Christmas without snow just didn't seem right. We will stay in Michigan this year. In May, Lori and I went on the department trip to Montana (see separate account, this newsletter), and then in July Nina and her parents and I visited New England and Nova Scotia. I was able to spend a day in the field with Jack Henderson and three Grand Valley students - Jerry Naski, Steve McCollough and John Freeland who were summer field assistants of the Canadian Geological Survey helping Jack map the lower Paleozoic Meguma turbidite sequence along the southeastern coast.

This fall my wanderings will be confined to the GSA meetings in New Orleans and the annual structure trip to Baraboo.

1982 saw completion of the central Montana neotectonic project with the Montana Bureau of Mines and the USGS. A 1:250,000-scale map and explanation of "active" faults in this area should appear in time as a U.S.G.S. Miscellaneous Series publication.

This past year I also continued the Summer Field Course Clearinghouse Service for NAGT and the Summer Field Training Program for NAGT and the U.S. Geological Survey. The former lines up the field camp slots for students in the spring and the latter selects outstanding summer field course graduates for summer jobs with the U.S.G.S. I'm pleased to report that two Grand Valley students - Gregg Swayze ('82) and Dean VanderMuelen ('82) - were selected for jobs with the Survey this past summer. Way to go, guys!

Dick, Bill and Norm are walking around with anxious looks these days because I have announced that this year will be my last as chairman. After four years of paper shuffling I will be happy to pass it on to one of these lucky fellows. I hope to see many of you at the Christmas party December 27.

Dick Lefebvre - Much of my time this past year was spent on the East Central Section of the National Association of Geology Teachers. After stepping down from the presidency last spring, I assumed the editorship of the newsletter for the next three years. The Section finished the 1981-82 year off with a very successful meeting at Purdue University on April 30 - May 1. That meeting featured creationism, the eruption of Mt. St. Helens, microcomputers in the classroom and the Crustal Evolution Education Project (CEEP).

Immediately after that meeting we set out on the Montana trip but I'll let you read all the gory details in another part of this newsletter. Another trip that I've taken since our last newsletter was one to the Upper Peninsula with the Mineralogy class this fall. That too is covered in another part of the newsletter.

Well, we can't forget Idaho. My research in Idaho, which has been a part of my life now for the last 7 years, is coming to fruition with a series of maps and publications. This past summer I went back to Idaho for a couple of weeks for consultation with the naturalist in the National Park Service on a popularized publication that I'm writing for the USGS. This USGS bulletin is one of the series of bulletins that are now being written for many national parks and monuments. Typically they're titled "The Geologic Story of ...". I also looked at the photography that they have at the monument headquarters for possible inclusion in the bulletin. The rest of

the time was spent preparing a field guide for a trip that will be associated with the joint meeting of the Cordilleran and Rocky Mountain sections of the Geological Society of America. We had this accepted by the GSA last Spring. The field guide is entitled "The Holocene Basalt Volcanism of the Eastern Snake River Plain, Idaho". That will be a pre-meeting trip that will begin in Pocatello, Idaho on April 30 and end up in Salt Lake City on May 1. The joint meeting will then be held in Salt Lake City through May 4. Will any of you be there?

Of a more personal nature but still somewhat geological I suppose, was my internment in the hospital for a couple of days trying to pass a kidney stone. I guess this shows that I've learned well after all these years and that I can now produce my own. Our family is becoming more mobile now. Lauryl has gone off to Michigan State where she's studying geophysics. She finally got away from her old man! Jeff is here at Grand Valley, looking around for a major. Both Lauryl and Jeff went on the Montana trip. Curt is a senior in high school and plans on a career in electronics. He went through a stimulating Outward Bound experience last summer. Sandy is still in Personnel at H&H Plastics where things are hectic during these economically depressed times. For those of you that I don't see at the Christmas party because you can't make it, may I wish you a Merry Christmas and a prosperous New Year.

"From Bill" - The big news from the Neals is a beautiful little package named Anna Kate Block - our grand-daughter. Now can you imagine Mary and I as grandparents? Time is passing!

My principal project is the continuation of the production of the coastal guides. Duke University Press is publishing the series, beginning with a reprinting of "Currituck to Calabash". The Texas and South Carolina volumes are "in press", and I am currently working on Alabama-Mississippi. Of course, courses come first, so progress is very slow.

I've enjoyed seeing several of you at various meetings from last Spring's regional G.S.A. meeting at Purdue, to the Int. Assoc. Sedimentologists meeting in Ontario, to the New Orleans G.S.A. meeting. Those sessions also have been especially important in terms of "keeping up" with the advances in sedimentary geology. Last March I attended a short course (AAAS) at the University of Iowa on "Science, The Media, and the Public", and the coastal project has taken me back to North Carolina for a couple of visits.

The trip of the year was last winter's vacation to France and Belgium to visit our oldest daughter, even though it meant missing the Christmas party. This year will be different - - - the Christmas Party is at the top of the list - - - See you there!

Jack Henderson - This spring I began a 2-year mapping program in the Eastern Shore area of Nova Scotia. With the help of Steve McCollough, Jerry Naski and John Free-land, we made very good progress on our principal objective which is to define the origin and distribution of the gold that has been mined in the area since about 1880. We are leaving no stone unturned, so to speak, and are looking for structural (naturally), stratigraphical, sedimentological, and metamorphic(-al) controls to the mineralization. For me it is a nice change from the isolation and climate of the arctic, but I'll be happy to go north again in a few years.

About Norm - Personally, it has been a banner year in many ways. Most exciting for our family has been the first stage of fulfillment of a life-long dream - we bought 15 acres on the north shore on Hamlin Lake, near Ludington, and started our "wood-land hideaway". At this point we have a well, electricity, a storage barn, a dock, boat, and camping facilities. Hopefully, by next Fall, I'll have the cabin completed, but in the meantime, the excellent fishing, hiking, skiing, and deer hunting are keeping us more than satisfied. With our two boys, Andy and Ryan, already 8 and 5 years old, we have had some very rewarding outdoor family times, and we are looking forward to many more before they will quickly become too old for "Mom and Pop Weekends".

Professionally, it has been a full and varied year. I am continuing to write up the results of my 5-year North Alaska Range project (NARP) with the draft maps and reports due to the National Geographic Society on January 1st, 1983. There are so many different results from that project that I'll simply urge you to keep your eye on journals such as Quaternary Research, Arctic and Alpine and the GSA Bulletin, where you can read the results yourself during the next year. (I've been writing up that stuff so continuously this summer and fall I can't stand to write about it again here.)

Aside from the NAAP work, the most interesting project in the past year was a two-month mapping effort in the Livengood, Alaska placck mining area. The Alaska Division of Geological and Geophysical Societies (DGGs) needed a surficial geologist to decipher the fluvial and periglacial history that has controlled gold placer formation, and who could be better suited for such a challenge than GVSC alum Chris Waythomas, who has mushed through the Alaska Range with me since 1978. Chris was in the midst of finishing his M.S. thesis on Alaska Range Quaternary work, but he and his advisor at S.I.U., Dale Ritter, both responded to my call for help and grabbed their goldpans as they headed north. With a little input from Ritter and me, Chris carried out the detailed mapping of four quadrangles, outlining an interesting and complex set of problems. (We even solved a few of those problems.) In any case, the DGGs is now supporting Chris' Ph.D. work at the University of Colorado. If Chris hires me as his assistant next summer, and if we find some gold, you might hear the rest of this story next year.

RECENT FACULTY PUBLICATIONS

Tom Hendrix

with Johns, W.M., Straw, W.T., Bergantine, R.N., Dresser, H.W., McClernan, H.G., Palmquist, J.C., and Schmidt, C.J., 1982, Neotectonic features of southern Montana east of 112°30' west longitude: Montana Bureau of Mines & Geology Special Paper 91, 79 p.

Dick Lefebvre

with Kuntz, M.A., Champion, E.C., Spiker, E.C., 1982, Time, Volume, and Composition History of the Craters of the Moon Lava Field, Geol. Soc. Amer. Abs. with Programs.

with Kuntz, M.A., Champin, D.E., Covington, H.R., 1982, Geologic Map of the Craters of the Moon, Kings Bowl, & Wapi Lava Fields and the Great Rift Volcanic Rift Zone, Idaho, U.S. Geol. Surv. Miscellaneous Investigations Series, Map I - (in press).

Bill Neal

Neal, W.J., Blakeney, W.C., Pilkey, H.H., Jr., and Pilkey, O.H., Sr., in press, Living at the South Carolina Shore: Duke University Press, Durham, North Carolina.

Morton, R.A., Pilkey, O.H., Jr., Neal, W.J., and Pilkey, O.H., Sr., in press, Living at the Texas Shore: Duke University Press, Durham, North Carolina.

Pilkey, O.H., Jr., Pilkey, O.H., Sr., Pilkey, W.D., and Neal, W.J., in press, Living Near the Beach: VanNostrand Reinhold Co., New York, New York.

Pilkey, O.H., Jr., and Neal, W.J., in press, Man Versus the Sea at the Shore: CRC Coastal Volume (title not available).

Pilkey, O.H., Jr., and Neal, W.J., 1982, The Folly of Stabilizing Oregon Inlet: Southern Exposure, v. 10, no. 3, p. 10-12.

Pilkey, O.H., Jr., Neal, W.J., and Myers, D.C., 1981, America's Beaches: An Endangered Species: Sea Grant Today, v. 11, no. 6, p. 14-16.

Pilkey, O.H., Jr., Neal, W.J., Pilkey, O.H., Sr., and Riggs, S.R., 1980, From Currituck to Calabash: Living with North Carolina's Barrier Islands (second edition): reprinted by Duke University Press, Durham, N.C., 244 p. (1982)

Norm Ten Brink

Holocene glacial chronology of the Alaska Range: 1982 INQUA Congress, Moscow (invited paper to be published in proceedings volume).

with Waythomas, C.F., 1982, Late Wisconsin glacial chronology of the north-central Alaska Range: Geol. Soc. America Bull. (Submitted).

SCHOLARSHIPS

Edward L. Tremba Geology Scholarship Endowment

The appeal in last year's newsletter for contributions to help us build the Tremba fund to \$4,000 was so successful that we have gone over the \$5,000 mark! Our sincere appreciation to all those noted below who have contributed to the fund since last year. The current balance of the fund is \$5,006.71. Just as important, the fund has generated \$483.05 in interest to July 1, 1982. This amount will be awarded to a deserving student later this academic year.

Contributors to Tremba Fund, Fall 1981 to Fall 1982:

Patricia Videtich

Conoco, Inc.

Mr. & Mrs. Edward L. Tremba (Sr.) (twice)

Norm & Shirley Ten Brink

David S. Anderson

Dresser Foundation, Inc.

Larry Flynn

John Dombrowski

Texaco, Inc.

Tom & Nina Kendrick

Tom Bee

Students in Geology Holding Scholarships, Fall 1982

I. Tremba Scholarship - (to be named next semester)

II. GVSC Presidential Scholarship

Jim Tourville

III. Geology Scholarship

Kenneth Bevis

Blaine Campbell

Rich Christensen

Sue DeBoer

Mark DeKruyter

Mike Gallagher

Bruce Jones

Mike Patterson

Ron Sheets

John Tweddale

Mark Wallinga

Greg Wilson

IV. NAGT Summer Field Course Scholarship

Mark DeKruyter

V. NAGT-USGS Cooperative Summer Field Training Internship

Gregg Swayze ('82)

Dean VanderMuelen ('82)

VI. Tulip City Gem and Mineral Society Scholarship

Mike Gallagher

GEOLOGY MAJORS, FALL SEMESTER 1982

<u>Name</u>	<u>Class</u>		
Armstrong, William	2	Linder, Jip	2
Anderson, Kevin	2	Minnick, Todd	3
Baxter, Christine	4	Moore, Michael	2
Bernethy, Patrick	3	Nyhoff, John	3
Bevis, Kenneth	1	Patterson, Mike	1
Brooks, Bob	1	Schwanger, John	3
Byle, Sue	3	Shea, Anita	1
Campbell, Blaine	2	Sheets, Ron	4
Campbell, Judy	3	Slaughter, Dana	2
Christensen, Rich	3	Snyder, Pamela	2
Gnossen, Carl	2	Tebor, Steve	3
Cousineau, Tim	4	Thomas, Pam	2
Dean, Brian	3	Tourville, James	3
DeBoer, Sue	4	Tursky, Bernard	2
DeKruyter, Mark	4	Tweddale, John	2
Drenckpohl, Mike	2	Varin, Renee	3
Etter, Dave	1	Versical, Bob	2
Gallagher, Mike	4	Viger, Sazy	3
Glupker, Jeff	2	Wallinga, Mark	4
Holden, Mary	2	Wilson, Greg	4
Jones, Bruce	3		

FIELD CAMPS - SUMMER 1982

<u>Name</u>	<u>Sponsoring School</u>	<u>Site</u>
Sue DeBoer	Northern Arizona University	Arizona
Bill Hunsberger	Northern Arizona University	Arizona
Mark DeKruyter	Michigan	Wyoming
Joe Mark	Hope College	Colorado
Ron Sheets	Hope College	Colorado
Mike Gallagher	Indiana	Montana
John Freeland	Maine	Maine
Lauryl Lefebvre	Eastern Illinois	Black Hills
Craig Swanson	Michigan State	Wisconsin/ Michigan

1982 GRADUATES - THEIR DESTINATIONS

1982 must go down in history as an unusual year. It was the best of times and the worst of times in the petroleum industry, bad times in the minerals industry and continued recession time for other geotechnical areas. The 1982 graduates face a tougher job market, but they all look like candidates for success. Given the fact that you "hung on" in school, you'll "hang on" in the real world!

The other unusual aspects of this year's graduates is the number - - 15, and the fact that some of our "professional" students finished! Could they be the models for the Doonesbury cartoon characters? No names please; you'll recognize them.

About half of the graduates have gone on to graduate school, or are now seeking entry to graduate programs. Lorraine Alcott is at Kansas State University, Susan Bol is at New Mexico State, Las Cruces and says all is going well, and Ingrid Verhagen gives a similar report from the University of Minnesota at Duluth. Jerry Naski spent the summer working with Jack Henderson in Nova Scotia before going on to Brown University. Craig Swanson entered the University of Idaho after working part time for Smith Petroleum Co., and Gregg Swayze entered the Colorado School of Mines after spending the summer as a field assistant for the U.S.G.S. in Montana. Gregg is now competing with Norm in the category of best bear story. Dean VanderMeulen also worked for the U.S.G.S. and has landed a temporary job with the survey out of the Menlo Park, California office. Dean has been mapping volcanic deposits in northern California and will eventually return to graduate school. Joe Mark and John Free-land ARE CURRENTLY SEEKING ENTRY TO GRADUATE PROGRAMS. John was part of the Grand Valley contingent aiding Jack Henderson in his Nova Scotia mapping. Steve McCullough was also part of the mapping team, and recently presented an excellent seminar to the department outlining his summer experience. Jerry, John, and Steve join a select group of alums who have been Jack's field assistants in various projects. We salute Jack Henderson for providing this opportunity.

Several graduates have aggressively gone in search of employment including Par Bartnik, Bill Hunsburger, Judy Savari, and Steve McCullough. The results aren't in yet, but its much tougher to find employment now than it was a year ago. Some of these individuals will return to graduate school in the long run. Janet Tower was working for a company in Texas, but we've lost contact with Janet. Larry Bilsky is headed for the San Francisco area and entry into a geology graduate program in the Bay area.

We wish all of you luck and success. Our final request is that you keep in touch with the department in the years to come.

CHRISTMAS PARTY 1981

Forty-four people attended last year's Christmas party on Saturday, December 26, 1981 at Allendale Meadows Trailer Park Recreation Building. This number was down from last year's 76 attendees but that didn't seem to dampen the evening's festivities. Twenty of the 44 were Grand Valley alumni who came from places as far away as Boston, Florida, Houston, Alaska and yes, even Allendale! Dave Anderson came in his Christmas present that he bought himself with all his new found wealth. Larry Flynn came all the way from Alaska to bring me an obscene rock. Mike Gallagher was there although he slept through most of it. He forgot to bring his guitar to give us the famous Faculty Rag number he made up - maybe we can prevail upon him this year. Dave and Glenda Rogers dropped in (from Florida!) for a few minutes and Dave mentioned that he had been in contact with Frank White in California and hopes to get together with him the next time he's out there. Bill Hazard came all dressed up to show us that Amway was his way. He was nice enough to offer us the use of his cottage on Lake Michigan for a picnic like the good ole days. Patty Videtich came, Ph.D. in hand, to tell us that she likes her new job. Rick Stolarz was there telling us that he was going to go off to Sun Oil. Ingrid Verhagen and Steve McCollough worked hard on the clean-up committee after the party. Jeff Wollett and his wife, Mandy, were there and we appreciate all the things Jeff did for us before and during and after the party, especially getting us the facility in which to hold it. Jerry Naski ran the show from the door and took in all the money - he's since gone off to Brown University! Shirley and Norm Ten Brink worked very hard in the kitchen preparing food and cleaning up as did Lauryl Lefebvre and Sue DeBoer and maybe some others I've forgotten. Students came with Norm as early as 3:00 to set it all up. Eric and Elaine Christrup were there; Eric is still teaching in Coopersville. Of course Tom Bee was there with his penny jar looking for Eric. Roger Antonides and his wife, Linda, walked in from their home just across the field. Leading the Carbondale group were Suzanne and Elliot Pearce, Elliot with his new haircut and without his mustache and Suzanne in her preppy bra. Craig and Diane Shoemaker, also from Carbondale now, both arrived on the scene as did that menace of Carbondale, Sheryl Hoving. Nancy Demorest came back from Boston College to see what she was missing. Bill Humsberger came to invite people over to his place to continue the party. Mark DeKruyter was there but I can't think of anything that he did that was especially significant. Dale and Lynn Mason, our old faithfuls at these things, showed up. Joanne Ward said she would but didn't and so did Buck Sharpton. Ron TenHarmsel came to announce the birth of his new baby girl. Ginny Peterson was there and stayed awake all night. Larry and Mary Austin, old faithfuls at these get-togethers, were there in force but Marlene Leistico who said she'd show up - didn't - I guess has been so busy working for the state. Chris Waythomas, now in a Ph.D. program at Colorado, was around a few days before the party but was unable to come to it. Greg Kimball, who is working on his MS. at the University of Wisconsin also visited us just before the party. Susan Bol was there and so was John Freeland but including them in the same sentence has no significance. And, oh, yes, Ingrid Verhagen and Bill Hazard were there. I know I've listed them once but I have to list them twice because I forgot them last year. Dean VanderMuelen came with a friend, Keith Hills, from Michigan State who was at the University of Alaska field camp with Dean. Judy Sorvari brought a friend by the name of John Williams.

Financially the Geology Club broke even. Two of the attending alums ended their evening with checks written out to the Tremba Geology Scholarship Fund. Lots of information was exchanged, things such as the pros and cons of graduate schools and employers. If I've forgotten anybody this year, don't tell me about it.

G.V.S.C. GEOLOGY CLUB NEWS

The 1981-1982 geology club gave us an exciting year. The officers of the club worked very hard - Gerry Naski led the club as President, Bill Hunsburger as vice-president and Sue DeBoer as secretary-treasurer. The first official committee was elected with our very own Tim Cousineau heading up the party committee. But the club wasn't all parties for Gerry worked very hard on the mineral property display that was displayed at the 1981 Holland Rock and Mineral Show and is now proudly displayed in the geology department.

The annual fall picnic was a festive affair complete with the popular volleyball game, where Dick LaFebvre proved once again he has more moves than a case of exlax. The athletics of the club didn't stop there, but continued with a softball game between the Biology Club and us. We all knew we had no chance of winning that game as the keg showed up when we were about to begin. But it was a good time for all involved (Hic).

The annual Christmas party held Dec. 27th was also a great success, enjoyed by all.

Susan Boil hosted the senior party for the second time - good thing she graduated or she might be cleaning up after her third! The gag gifts were presented to the seniors with some especially appropriate ones - make sure you ask Pat Bartnik about his "Giant Beaver Sights" next time you see him. Also ask Greg Swayze if he's finished his "Inquisitive Boy" books.

The year was completed with a fabulous trip to Montana.

Once again we thank Gerry for all his work to make last year a great year for the club. There is the promise of more of the same excitement, challenge, and great parties this year.

THE MONTANA TRIP, MAY 1982

Early on the morning of May 5, 1982, seventeen hardy students and two instructors (Dick Lefebvre and Tom Hendrix) boarded GVSC bus #2 and headed west for Bozeman, Montana. In preparation for the trip we had removed four sets of seats from the back of the bus and had installed 4x7 foot sheets of plywood over the several tons of personal gear and camping equipment loaded aboard for the trip.

Thirty-seven hours and 1600 miles later, we arrived at Bozeman Hot Springs Campground seven miles west of Bozeman and set up camp. Highlights of the trip were sardine-cheese-garlic powder sandwiches of Mike Gallagher which grossed out the entire bus, Dean VanderMuelen's amazing ability to sleep soundly on the not-so-stable plywood platform, the almost endless games of eucher and hearts, Gallagher's lusty and sometimes bawdy songs, and Dick's late night gas stop at a non-credit card service station in South Dakota.

The trip had a two-fold purpose. First we wanted to attend the Rocky Mountain Section, GSA meeting at Montana State University in Bozeman on May 7 and 8, and we wanted to study the geology of the eastern and northern Tobacco Root Mountains about 60 miles west of Bozeman.

The hot springs at the campground provided luxurious relief for the travel-weary group when we arrived Thursday night. A 200-plus-foot-deep well in Quaternary gravels taps 137°F water at the site. This water is mixed with 40°F water from the adjacent west fork of Gallatin River to provide five pools of water where the water temperature is graduated from about 50°F to 115°F. The brave? or hardy? or foolish? souls such as Dick Lefebvre, Steve McCollough, Bob Versical and Will Armstrong quickly learned to plunge from the 115°F pool into the 50°F pool and back to achieve the maximum benefits of thermal shock. Other, more conservative souls such as John Freeland and Tom Hendrix were content to soak placidly in the 115°F pool until the weariness of travel faded away. Most evenings the hot springs pool is open from 7:30 - 11 p.m. but Friday and Saturday are tricky. The owners are 7th Day Adventists so the pool closes from sundown Friday until sundown Saturday. We noted with some irony, however, that the campground stayed open during these "holy" hours. They were nice accommodating folks, however, and later were to prove of considerable help when we ran into bus trouble.

The GSA meetings in Bozeman on Friday and Saturday, May 7 and 8, were a well attended, vigorous, informative experience for all of us. Two geology faculty members - Dick Lefebvre and Norm Ten Brink were co-authors of papers that were read of listed on the program. Also four students - Mike Werkema ('81), Steve McCollough ('82), Ingrid Verhagen ('82) and Mike Gallagher ('83) were contributors to maps and cross sections of the Jefferson Canyon area that found their way into the meeting field trip guidebook. During the meeting Mike Gallagher was heard refusing the free vegetable and fruit dishes with the comment "...these things upset my stomach!"

When we arrived in Montana the weather was typical of early May - partly sunny days with highs in the 60's or 70's and cool nights - but on Friday and Saturday it gradually deteriorated into cold rain. For the most part the odd assortment of tents housed everyone adequately, except for Tom Hendrix who insisted on sleeping on the bus. He said he had a cold and didn't want to infect any tentmates (actually he had forgotten to bring a tent!). Also the food groups worked out before the trip began functioned smoothly except for the Lefebvre-Hendrix group and the McCollough-Campbell twosome who developed an affinity for cooked meals at the Kozy Korner Cafe about a quarter mile up the road from the campground. Steve McCollough and Judy Campbell, in addition, developed an affinity for each other and a bar across the road from the cafe. We think Judy was buying.

Sunday morning, May 9, the cold rain turned to snow and by the time we finished breakfast and broke camp, a half inch of the stuff was on the ground. Our trip west was delayed for about two hours by a soft front tire which fortunately was spotted by ex-truck driver, Elmo Ivey before it went flat. Acting on a helpful tip from the campground owner, we drove 8 miles north to Belgrade, Montana and found a truck stop where the punctured tire was sealed.

Then it was west through the snow and fog to the Madison Canyon-Norris Pass area for several memorable stops in Precambrian gneisses, epidote pods and Tertiary granodiorite. The last stop was highlighted by an ambush snowball fight that was repulsed by a suicide charge led by Mike Gallagher, Mark DeKruyter and Jeff Lefebvre. The day ended with a quick stop in the Jefferson Canyon to study a very coarse and very thick Belt (Late Precambrian) fanglomerate. Nineteen cold, weary and hungry souls gratefully tumbled into the Chief Motel in Whitehall, Montana at the end of that day! A few, notably Tim Cousineau, Suzy Viger and Dean VanderMuelen had enough energy left to check out the bars after supper.

Monday and Tuesday, May 10 and 11, were spent east of Whitehall in intermittent snow and rain showers studying a Paleozoic and Mesozoic section replete with numerous andesite sills, folds, faults and an angular unconformity. Dick Lefebvre became a bus driver par excellent during this time and everybody gained about 10 pounds (5 each foot) trudging the montmorillonite-rich dirt (mud!) roads and slopes of the area. Finally on Wednesday, May 12, the sun reappeared for good and the temperature rose to a pleasant 65°F. By that time we were busy mapping the "J" structure at the eastern end of Jefferson Canyon. One trip over "Confusion Hill" and "Hernia Gulch" convinced most students that the real world of geology is considerably more complex than textbooks and lectures make it appear. Two interesting, non-geological happenings during our two-day stay in the "J" area were Mike Gallagher's discovery of a pair of undershorts he had "lost" in the area the summer before while assisting Steve McCollough and Ingrid Verhagen in a plane table mapping project there (no, there

was nothing unethical or immoral about it, just disgustingly personal) and a truly miraculous find of a wallet lost by Dean VanderMuelen. Kevin Anderson deserves credit for the recovery of the wallet. On one of our days in the "J", Dick was diverted to Butte to replace the exhaust system of the bus.

Thursday, May 13 saw us heading west over the Boulder batholith, into Butte, and then south to the Big Hole Canyon east of Glen. A \$12.00 purchase of gas at the Glen General Store was paid for in cash by Tom Hendrix when the credit card was repulsed by the crusty old proprietress with the comment "... oh hell, I don't take those damn things...". Thursday afternoon and evening were spent in one of the more remote but geologically spectacular spots in the Rocky Mountains - Sandy Hollow. Looking for all the world like the setting for a grade B Hollywood western, this dry, sagebrush and dwarf juniper area contains an almost perfectly-exposed anticline and a spectacular thrust fault that peeled the nose and eastern limb of the anticline back in accordion-like folds and thrusts over a décollement surface in Cretaceous limestone and shales. Late Eocene columnar basalts rest unconformably on the Laramide structure. As you might suspect, Dick Lefebvre headed straight for the basalt. That night the group slept on the trace of the Sandy Hollow thrust fault under a starlit sky. All that was missing were coyote calls and the Norman Luboff choir!

Sandy Hollow represented the "farthest point out" for the trip. After a very careful drive back out to the Big Hole Road (known locally as the Burma Road) the group did a short cross section exercise on an overturned anticline with a small back-limb thrust, stopped briefly at house-sized disharmonic folds in Cretaceous limestones, observed small thrust faults in bedded chert of the Phosphoric formation (Permian) and then made a loop south and east through Dillon, Montana and onto Sheridan Montana. There we stopped at the Sheridan Bakery and Fountain for lunch and a hearty welcome from the parents of Joe Mark ('82) who moved to Montana in 1981 and took over the bakery-cafe in Sheridan. Our welcome was complete with a GVSC-decorated cake baked especially for our arrival. Thanks Joe and Henrietta Mark!

At this point we were at perhaps the high point of the trip. The weather was glorious; we had seen spectacular geology; and we were looking forward to beautiful scenery and challenging geology in the Madison and Gallatin valleys to the south and east. But old bus #2 had other plans for us. Jeff Lefebvre was driving when 20 miles south of Sheridan the gears on the automatic transmission started to go out first high, then second and finally even low as we limped into Nevada City. This restored old western town had not yet opened for the tourist season but two workmen were busy moving furniture nearby and they gave us a line on a garage about 6 miles back up the road. Fifteen dollars and one hour later we knew nothing more about the problem but found that the bus did go - albeit very slowly - in low gear again. So,

with our intrepid driver, Dick, at the wheel we continued on south for another two miles into Virginia City and started up the long grade to the pass between the Alder Gulch and the Madison Valley. Finally, about half a mile out of town, the transmission began to make threatening, growling noises and we knew we had had it. A helpful, if not altogether friendly policeman happened by and took Tom back to Virginia City where he began negotiations to have the bus repaired or towed or something. The closest International Harvester dealer (in Belgrade) begged off, leaving us at the mercy of the M & W Wrecking and Repair Service of Bozeman, 85 miles away. And did they ever come through in flying fashion along with Joe Mark and several of his displaced Michigan Montanans. The wrecker was there within 2 hours of our breakdown and Joe and friends showed up 30 minutes later to haul the gear and students to Bozeman and the Hot Spring Campground. When we got there the campground manager went out of his way to make us feel welcome.

The second miracle of the trip occurred next morning when we learned that M & W had a rebuilt transmission to replace the one that had torn itself up. Several frantic phone calls later, Tom located President Lubbers on the golf course in Grand Rapids and secured permission to commit \$3500 of the college's money to replace the transmission. Well, not the college's money initially, rather a personal check that would be covered by the college by the time it cleared the bank back here. The M & W manager approved the deal (Tom has such an earnest, honest face) and by Sunday morning the bus was back on the road for another non-stop trip. This time Dick was left alone with the responsibility of getting the bus back because Tom had caught a plane in Bozeman on Sunday morning to get back to GVSC to insure transfer of money to his bank account and to start a summer session course he thought he had on Tuesday (the course was cancelled Saturday by the Dean!).

At 4:30 Tuesday morning, May 18, a very sleepy group of GVSC geologists pulled into Loutit Hall to end a memorable two week trip. For several of the students it served as a useful primer for the summer field course taken later this past summer. For everyone it was a refreshing way to end the academic year, even with the bus troubles.

MINERALOGY FIELD TRIP

I'd intended to take the Mineralogy class to Bancroft, Ontario this year but that didn't work out so we went back to the Upper Peninsula. This time we were assisted by the leadership of Tom Bee, who has spent many hours in that area hunting minerals. The guidebook was called "Neophytes Delight, A Do-It-Yourself Geology Field Trip". It was led by Tom and me, with teaching assistant Greg Wilson to do all the dirty work. I planned the trip thinking that we could take a couple of vans if the class was large enough. It turned the class was plenty large enough because with all the people in the class, plus Tom and Greg and I the total was 25. Four students didn't go on the trip so our final total came to 21, so we would need 2 vans. I can't imagine why I didn't consider a bus. Maybe you can find the answer somewhere in this newsletter, but it just never entered my mind to take a bus until I met with the class and we started discussing cost, two vans being more expensive than a bus, two vans being much smaller than a bus, two vans requiring twice as many chauffeur-licensed drivers as a bus, etc. The inescapable conclusion was that we should take a bus! And so, early in the morning on Sept. 16 all 21 of us piled on one of the infamous Grand Valley busses. These busses really are quite nice for field trips if only they were more reliable. As soon as we started this bus it immediately became obvious that the exhaust pipe had a hole in it. But we had the bus loaded by this time and decided to chance it and not let people sleep too long! We eventually lost that leaky tailpipe before we got to the bridge. Shades of Montana! Otherwise the trip to the Upper Peninsula was relatively uneventful. The students were kept somewhat busy with their guidebook along with a little card playing in the aisles and some singing by our visiting guest minstrel, Mike Gallagher.

We arrived in Marquette with rather sunny skies but with evening fast approaching and after making a stop at Presque Isle we stopped at a mall on the west side of Marquette. Most of us went in to eat except for our minstrel who crouched over his campstove in the middle of the mall parking lot to cook his famous Montana brew. Before he was hauled in for vagrancy we left for the Houghton Hancock area where we were to stay the night at the cabin of the family of one of the students, Jim Tourville. By the time we arrived in the little town outside of Hancock called Dollar Bay, the rain had started and midnight was fast approaching. To our surprise, Jim's aunt and uncle told us that they had found a lodge for us to stay for the first two nights. It was the Swedish "Runeberg Lodge" of Dollar Bay. It has many similarities to the old Negaumee Fire Station including a large dance floor where everyone could stretch out, men's and ladies' rooms (no showers however) and even a kitchen downstairs. It was a delightful way to begin the field trip. Not surprisingly, there was an immediate scouting party organized to go down to find the one bar in town (one block away). The party, not surprisingly, consisted of Craig Vanden Berge, Tom Rollo, and Pat Bernethy amongst others and by the time the rest of us unpacked & got down there, they had introduced themselves to the locals by challenging them to pool and showing them what lousy players they were. The night was rather uneventful and we went to bed at a reasonable hour, of course, and got up at 6:00 a.m. for our 1st day in Copper Country.

It was Calumet for breakfast and from there we went to our favorite 1st stop for Keweenaw trips, Bumbletown. There we looked at the Portage Lake lava series and got an overview of the area. We walked down over the lava flows to the conglomerate waste pile at the bottom of the hill where the students were to collect their first mineral. For most of them that was the rather obvious chrysocolla that is so prevalent at that stop. Our next stop was the Ahmeek Mine just outside of Ahmeek where 4 more minerals were to be collected. Here they could choose from calcite, copper, occasional datolite, lots of epidote and laumontite and quartz. By this time the rain had started to fall and it was dampening the spirit of our trip considerably. Oh yes, I forgot to say that we had picked up 30-some pasties that morning in Calumet so we had our lunch with us. Pasties jokes and mispronunciations abounded. Even though we couldn't eat under sunny skies, we did enjoy the pasties on the bus.

At this point the clouds were so low that we felt like our bus had sprouted wings. Contingency plans were considered; one of them was whether to go to Becky Ruonavaara's parent's camp on Lake Superior to have a sauna at the end of the day. We would try to do that after we went all the way to the tip of the Keewenaw Peninsula. The other was whether to make one more quick stop and then go back to the very impressive Michigan Technological Univ. mineral museum. After considerable heated discussion we decided to do the latter, and so we went on to the Cliff Mine. There we found some fairly nice prehnite, copper and laumontite and then headed back to Houghton and the museum. After enjoying the museum we went to Becky's parents who had invited us to their house. It's located only a few miles from the lodge where we were staying. This is the second case of a student in the class having relatives in the area. We were told that a sauna was available but that was not the end to this surprise invitation. After allowing us all to have a sauna in their basement, this wonderful family took us to their dinner table and fed the entire group plus all of the Ruonavaara's who were there and even their little friends from the neighborhood! The menu: fresh lake trout and blueberry pie! It was truly one of the highlights of the trip or for that matter one of the highlights of my college field trip experiences. A wonderful family with a wonderful heart. We all signed their guestbook with its hundreds of names and left them at 10:00 that evening: 22 clean, full, and happy souls.

Some of us did go for a run that night before our sauna and many went across the street to a rather spectacular 120' waterfall capped by flows of the Portage Lake Lava Series. It is just a couple hundred yards from the Ruonavaara's house. That night we tested the bars again and found them to be a bit livelier because it was now Friday. Some of our crew engaged in darts with the locals and even the local pool hustlers were back. Even some of our own turned out to be hustlers, especially guys like Bob Versical in bumper pool. The next morning we had to clean the Runeberg Lodge so that it was better than we found it.

Then it was off to iron country. We drove down to the Michigamme area and made the Staurolite Schist stop just outside of Michigamme. It is now nearly blocked off from the road by a small corral. I guess civilization (!) marches on. We went from there to the Michigamme Mine waste dump by the famous Mt. Shasta Restaurant Site where they shot much of the movie, The Anatomy of a Murder. That place is now so fenced off that it required us to go far back into the woods where we made our way around one of the fences and even then we had to go through 5 or 6 other fences in order to get back to the dump pile. While we were doing that, others were climbing the fence by the restaurant and were waiting for us. Some of us wished we had done the same, especially in retrospect because this was the site of one of those happenings that most geology profs. live in fear of, that of a student falling off a ledge. Todd Minnich was the unlucky student who got too close to the edge of the pit and fell some 10-15 feet. He didn't hurt himself from the fall until he fell forward after he landed and cut his knee. He ended up with a considerable slice across the front of his knee which required some 10 giant stitches at the hospital in Ishpeming. While the students looked for minerals at that spot, I took Todd into the hospital and left him there, telling him we would return!

After picking the students up at the Mt. Shasta Restaurant we made one more stop at the Champion Mine just outside of Champion where specular hematite abounds and so do many other minerals including garnet, ankerite, andalusite, calcite, chlorite, the feldspars and grunerite, ilmenite, molybdenite, siderite and pyrite to name a few. This is truly a spectacular specular hematite stop and the rest of the specimens make it a really classic stop. We finished there and went on to pick up Todd who was OK.

From there we went on to Harvey just outside of Marquette where we prevailed upon a third student's relative! Bob Versical's brother has a cabin in the boondocks outside of Marquette and offered us his facilities for that night's lodging. We stopped at the mall again outside of Marquette and bought bratwurst and buns and some liquid refreshment. After the only 2 girls on the trip, Judy Campbell and

Becky Ruonavaara, finally figured out how they were going to use the one and only outhouse without a door, we were able to get on with things. A hotdog roast capped a very memorable evening.

The next day we drove back and stopped at our final student's relative's house; Bruce Jones' parents in Reed City offered their hospitality with cider. Finally we came into Grand Valley relatively unscathed but a bit tired on a Sunday evening. A little too tired to have to face classes the next day.

Professor Smith and West, veteran students at such meetings, passed information well and touched all of the bases (papers, computer meetings, student activities, and catching up on the accomplishments of their former students). These conversations were rewarded by seeing several Grand Valley alumni who were in on their way to the big leagues. Experienced players included Barry Viskochil and Cheryl Hovig. Barry is with General Research and Cheryl is working as a company representative to investigate new products. Cheryl is an education-education geologist for Shell, out of New Orleans. She pulled the grandstand play by arriving the second day of the meeting via helicopter from an offshore drilling platform. Your reporter was unable to get either Viskochil or Hovig to reveal any of their teams' plays.

Several rock's prospects were on hand. Ginny Peterson, Craig Short, and Sandra Vance were making the rounds, leaving the gaps in the schedule sessions and exhibits areas. Kator has to that they look training camp notes and visited in the laboratory of the French Quarter. Ginny is a student's graduate at the University of Massachusetts, while Craig and Sandra are working on Masters degrees at Southern Illinois University. All expect to finish their degrees during the coming year.

Linda Taylor has a shared time spent at the University of Wisconsin, Linda was on the interview circuit. And Ann Birkhoff also will finish her Master's degree at Illinois with Linda's plan to move to another institution and continue for the Ph.D. degree. Ann was working on one of the exhibits.

Two times Linda's wife the meeting because they were on the train line. Jack Simpson of Brown University took his wife (Shirley Jacobson), and Henry Dutton of Brown College cancelled her plans due to illness. Sorry they couldn't be at the meeting.

The meeting itself consisted of an extensive array of technical sessions, symposia, poster sessions, special presentations, formal and informal discussions groups covering every aspect of geology. The afternoon taking place in the various exhibit buildings were our authors most exciting. The origin and evolution of species was presented through their respective history and stratigraphic record in various paleontology, paleontological-paleontology theory in organic evolution, new emphasis on examining causes of widespread extinctions, and detailing work examples of extinction groups in the fossil record. It was particularly interesting to see the relationship of the earth sciences. Topical presentations, and deep-detailed presentations were presented within the sessions. Several from the crowd, creating a potential revolution within the sciences that will reach the impact of plate tectonics. These sessions are only a few of the advances that will continue to revolutionize geology. It was historical geology that is right on our minds. It is time to buy a new copy and it for hours to come in a certain faculty you may be missing an opportunity to keep up in the race. The time keeps getting more complicated, resulting better always.

1982 GSA MEETING

The Sports Report

Right in the middle of baseball's world series and the doldrums of the NFL strike, the talk in New Orleans Superdome was of rocks instead of jocks! The occasion was the 1982 national GSA meeting; geology's Pro Bowl. Grand Valley was well represented.

Professors Hendrix and Neal, veteran starters at such meetings, paced themselves well and touched all of the bases (papers, council meetings, alumni events, and catching up on the accomplishments of their former students). These player-coaches were rewarded by seeing several Grand Valley alums who are in or on their way to the big leagues. Experienced players included Patty Videtich and Sheryl Hoving. Patty is with Conoco Research and attended the meeting as a company representative to interview new prospects. Sheryl is an offshore-production geologist for Shell, out of New Orleans. She pulled the grand-stand play by arriving the second day of the meeting via helicopter from an offshore drilling platform. Your reporter was unable to get either Videtich or Hoving to reveal any of their teams' plays.

Several rookie prospects were on hand. Ginny Peterson, Craig Shoremaker, and Suzanne Pearce were making the rounds, learning the game in the technical sessions and exhibits area. Rumor has it that they broke training camp rules and yielded to the distractions of the French Quarter. Ginny is a Master's candidate at the University of Massachusetts, while Craig and Suzanne are working on Masters degrees at Southern Illinois University. All expect to finish their degrees during the coming year.

Linda Martin has achieved free agent status. With a fresh M.S. degree from the University of Vermont, Linda was on the interview circuit. And Ann Bijkerk-Kauffman also will finish her Master's degree at Arizona with immediate plans to move to another institution and continue for the Ph.D. degree. Ann was working at one of the exhibits.

Two alums didn't make the meeting because they were on the injury list. Buck Sharpton of Brown University broke his ankle (playing football?), and Nancy Demorest of Boston College cancelled her plans due to illness. Sorry they couldn't add to the meeting.

The meeting itself consisted of an extensive slate of technical sessions, symposia, poster sessions, special presentations, formal and informal discussion groups covering every aspect of geology. The advances taking place in the various subdisciplines make our science most exciting. The origin and evolution of suspect terrains as reconstructed through their tectonic history and stratigraphic record is revamping paleogeography. Punctuated-equilibria theory in organic evolution, new emphasis on examining causes of widespread extinction events, and detailing more examples of transition groups in the fossil record is drawing paleontology back into the mainstream of the earth sciences. Tectonics, geophysics, and deep drilling are pushing the geological frontier downward into the crust, creating a potential revolution within the science that will equal the impact of plate tectonics. These examples are only a few of the advances that will require continued new thinking in geology. If your historical geology text is eight to ten years old, it is time to buy a new one! And if you haven't been to a meeting lately you may be missing an opportunity to keep up in the race. The game keeps getting more complicated, requiring better players!

Next year's GSA meeting will be in Indianapolis. We hope to see a very large group of "old timers" at next year's training camp!

ALUMNI AND FRIENDS

Once again we present a hodge podge of news gathered via letters to the department, visitors, chance meetings, meetings, and the usual nasty rumors (for which we the editors take no responsibility, nor will we give our sources). Apologies if some of this is old news or incorrect. Please give us an update!

Alcott, Lorraine Geology. 1981

Lorraine is a graduate student at Kansas State University, just settling in to the new responsibility of a teaching assistantship. The department misses the "terrible triangle" of Alcott, Coleman, and Tower!

Anderson, Boyd Group Science. 1975

We haven't heard from Boyd for awhile. Maybe this year's Christmas Party?

Anderson, Dave Geology. 1980

Dave is a field engineer with Dresser Atlas. He visited the department during the summer, but the only one at home was Aldo Calla, department mascot.

Antonides, Roger Geology, 1972

After not seeing someone who lives so near for so long, Roger became a familiar face in the department again during the past year. After some "refresher" work, he went to work for Long Well Logging; first in Oklahoma, and now in Michigan. Drilling may be down in Michigan, but Roger isn't seeing any shortage of work!

Arnold, Mark Geology, 1975

We know mark is still in the Mobile, Alabama area because an alumnus crossed paths with Mark; Mark recognized Dawn Vander Zouwen's Geoclub T-shirt in a Mobile store. She said he was involved in some coastal work. Where are you Mark?

Atwell, William Earth Science. 1974

Bill is now project engineer with LECO Corp. in St. Joe.

Aungat, Steve Geology. 1981

If Steve's plans worked out he should be taking graduate courses at the University of Colorado. Steve's wife, Pam, has opened her own investment and insurance company in Denver. Their daughter Lindsay is one year old.

Austin, Larry Geology, 1974

igan 49504

Larry is launching his own business with partner Herm Delano. Aqua-Tech Inc. will be doing geotechnical consulting, particularly in the area of geohydrology, landfills, and other ground water problems.

Baker, Tim Geology. 1977

Tim is a geologist with Dart Oil and Gas.

Baldwin, Tom Geology, 1979

Tom is a geophysicist with Amoco in Houston, processing and interpreting Gulf Coast seismic data. He visited the department during Fall '82 registration, trying to pass himself off as a freshman. We know he's in the big time because he's making mortgage payments. In spite of your title, Tom, we know you are a geologist, at heart.

Bartnik, Pat Geology 1982

Bedsun, Dave Geology, 1978

The last report from Dave was that he was still working for Ed Tremba, as well as working towards a Master's degree in Civil Engineering.

Bee, Tom Geology, 1973

Tom visits the department occasionally so we keep track of his progress. Topaz Mineral Exploration, Tom's company, continues to grow, and now sells specimens to museums worldwide. If you're seeking an elusive mineral for your collection, Tom's your man. Thanks Tom for the two fine New York Survey volumes on eurypterids, donated to the department. Tom is currently writing a paper on the secondary minerals of the Copper Regions of Michigan (new occurrences). He also participates in three major mineral shows per year in Detroit, Michigan, Tucson, Arizona, and Rochester, N.Y.

Bierlein (Thompson), Wendy Geology, 1977

We haven't heard from Wendy this year, but we wonder if she's still working on the Basalt Waste Isolation Project. If so, have you crossed paths with Gary Jacobs?

Bijkerk (Kauffman), Ann Geology, 1980

Ann continues her progress toward the Master's degree with plans to go on for a Ph.D.

Bilsky, Larry Geology, 1982

Bishop, Mark Earth Science, 1974

Mark reports he's working the production end of the oil business in a field capacity while Dart weathers a cut-back in activity. For part of the year Mark was engineer in charge of the Southern Michigan Reef Trend and the Illinois Basin. He noted Dart has had successes in the Illinois Basin, including "wildcatter of the year" honors from the Illinois Oil and Gas Association. Mark's wife Jeanne has finished her Master's degree in motor development at Michigan State. Son, Ben, is now a toddler!

Bol, Susan Geology, 1982

Susan is enjoying her course work and T.A. duties in graduate school at New Mexico State University, Las Cruces, N.M.

Booker, William Geology, 1970

Reports by alumni and Grand Rapids Press accounts have convinced us that Bill is alive and well and working as a geologist in Michigan. He was working for the state and may still be.

Bowden, Doug Geology, 1974

No news from Doug. Are you still there?

Bowen, Scott Geology, 1978

Via our spies in Houston, we know Scott is still there; helping Shell find oil.

Bowles, Harry (Bud) Earth Science, 1972

Bravender, Lynn (attended 1975-77)

Brimmell, Art Geology, 1970.

As far as we know Art is still with Prein and Newhof.

Broughton (Pedden). Jill Geology, 1975

Brown, Leo Geology, 1972

Burgess, Rhoda (attended circa 1976-77)

Rhoda is employed as a legal secretary in downtown Grand Rapids. She was seen at Grand Valley's first basketball game in the new fieldhouse with her two very grown up children. Rhoda can't believe - like the rest of us - that she's getting that old! She and Sheryl still talk once a week via phone lines between G.R. and New Orleans. She says she'll be at the Christmas Party.

Bryam, Hal

Has anyone seen Hal?

Cates, Delores TJC Geology, 1977

c/o Department of Geology, University of New Mexico, Albuquerque, New Mexico
Delores has been in New Mexico for over a year now. Her interest /87131 in Basin and Range silicic volcanism (ash-flow tuffs, ignimbrites, nuee ardentes, etc.) led her back to school where she is now working on a Masters degree. Before leaving Nevada, she reports having seen Larry Fultz.

Chase, Joe Geology, 1981

Where'd you go, Joe?

Christrup, Eric Earth Science, 1974

Eric is still teaching at Coopersville. It seems that everytime he visits the department, there are no faculty to be found. We're here Eric! Thanks for leaving a note on the board.

Cline, Cathy Geology, 1978

Cathy has recently joined the DNR as a geologist monitoring oil wells in Ottawa, Montcalm, and Kent Counties. There are now three alumna with the DNR. Maybe someday one of these women will become director!

Coleman, Jeff Geology, 1981

Jeff called recently to let us know he's still out there, logging wells, both onshore and offshore.

Corbett, Larry Earth Science, 1973

Larry continues teaching at East Kentwood High School. He is also active with a group trying to restore an old dam to its hydroelectric generating capacity; a positive action in the field of alternative energy sources!

Curtis, Tom Geology, 1969

Are you still in the Air Force, Tom?

Decker, John Geology, 1979

We haven't heard from John lately. Drop us a line John.

Degnon, Lesley (attended 75-76)

The last we heard Lesley was making her way up the management ladder at MacDonalds.

Demorest, Nancy Geology, 1981

Nancy continues her master's work at Boston College. She began her thesis field work this summer on the petrology and provenance of the Allsbury Formation in N.E. Maine. She reported earlier that she's undergone a metamorphosis and learned to cook!

Dexter, Jim Geology, 1977

Jim is still working for Bendix Field Engineering Corporation. He reports the N.U.R.E. program is winding down, and that he is presently involved in analysis of hydrologic and air borne radiometer data to produce uranium anomaly maps at a 1:500,000 scale. Statistical techniques are being utilized on stream-sediment data in the search for uranium and other strategic elements. Jim's work has taken him to the southern Virgin Mountains in southeastern Nevada. Thanks, Jim, for the beautiful Azurite specimens you donated to the department.

Dombrowski, John Geology, 1973

John married Juli Dana this past February in Redlands, California. Julia is a descendent of the famed mineralogist Dana, of Richard Henry Dana, author of "Two Years Before the Mast", and her father is chairman of the Geology Department at University of Redlands. In addition, she has two sisters studying geology. Best of all, Julia is a geophysicist with Texaco. But wait; This is John's news spot. Besides hanging around with that certain geophysicist, John has been involved in Texaco's recent Santa Barbara Channel discovery! All of this is confirming our image of the stereotyped California dream! Lastly, Bill Neal wants to know how John survived rooming with Larry Paul during his days at GVSC?

Dornbos, Del Earth Science, 1976

Doublestain, Jeff Earth Science, 1979

Fegel, Larry Earth Science, 1973

Larry has joined the staff at the Blandford Nature Center.

Feyen, Al Earth Science, 1972

Filymer, Dick TJC Geology, 1978

Fink, Ray Group Science, 1971

Flynn, Larry Geology, 1981

Larry continues his progress toward the Master's degree. He called in October of this year to tell us it was 0° F with a foot of SNOW on the ground.

Francis, Shirley Anthropology

Shirley continues her work as health co-ordinator in Grand Rapids. During the past year there was a feature article in the Grand Rapids Press on Shirley and Simon and their family; a tribe within a tribe.

Freeland, John Geology, 1982

Fultz, Larry Geology, 1977

The last report we've had was that Larry was working for Lacana Exploration Company.

Gebben, Dennis Geology, 1969

Denny is Vice President in charge of geologic services in a subsidiary of Williams and Works, Environmental Data Incorporated. He will complete 8 years of service on the Zeeland, Michigan City Council at the end of this year.

Geldersma, Bruce

Green, Ron Geology, 1978

We believe Ron received his MS from The University of Utah. He runs so fast we can hardly keep up with him.

Grodecki, Steve Geology, 1975

Hall, Jack Geology, 1977

Jack is working on his Ph.D.

Ham, Tom Psych./Hist./Earth Science, 1978

Harshfield, James Geology, 1972

Hartsock, Gary Geology, 1979

Haskins, Roger Geology, 1973

Roger and Sue (see Marcus) have transferred to the BLM's headquarters office in Washington D.C. Roger is now technical specialist in the Mineral Resources Division, updating regulations on mining claim recordation and a host of other things. Can we rest easier knowing the Haskins are in control? We think so, and expect to see them occasionally when they visit Grand Rapids!

Hazard, Bill Geology, 1979

Hewlett (Kampa), Julie Geology/Anthro., 1977

Hiler, James Earth Science, 1974

Hoving, Sheryl Earth Science, 1977

Sheryl completed her Master's work at Southern Illinois University this past summer and joined Shell Oil's New Orleans petrophysics section. She's seeing a lot of offshore duty ---logging, watching movies, and eating. We understand why she loves her work! While going through some of her Shell training she's visited Houston, including some other GV alumni now with Shell. She says "those turkeys" (Al Werner and Scott Bowen) have acquired lovely ladies who "are terrific people". She also has learned who Bum and Snake are! Odd names for saints.

Hull, Doug Geology, 1977

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Hunsberger, Bill Geology, 1982

Hunt, Herb Geology, 1969

On the way back from the Mineralogy trip Dick and a busload of students passed Herb in his scout car alongside M-45. Luckily they were within the speed limit because Herb just loves to catch his old GV "friends" zipping through Walker!

Huyser, Dave Group Science, 1968

Johnson, Dave Geology, 1974

Jordan, Mark Geology, 1977

Mark is the geologist in charge of oil and gas leasing for the school trust lands of Arizona; 12 million acres with 6 million acres under active

(continued)

lease. He also manages some 600 mineral leases. In his spare time, Mark hopes to finish his Master's degree by December and look after his new house.

Kaminski, Mike Geology, 1974

Kampa, Paul

Kelly, Diane Geology, 1978

Kimball, Greg Geology, 1978

Greg completed his Master's thesis at the University of Wisconsin in groundwater and has joined the ranks of the employed. Greg presented an excellent seminar to the department last year. Thanks Greg, and good luck in your new job.

Korving, Geri Earth Science, 1973

Lach (Packer), Pat Group Science, 1969

Lack, Monica Geology, 1979

DNR geologist - one of the Triumvirate

Leistico, Marlene Geology, 1979

DNR geologist - The other "one" (See Cline and Lack).

Losey, Tim Geology, 1968

Lugthart, Doug Geology/Anthro., 1969

MacKiewicz, Nancy Geology, 1980

Nancy continues to progress toward her Master's degree. She presented a paper "Laminated Ice-proximal Glacimarine Sediments" at the International Association of Sedimentologists Meeting in Hamilton, Ontario in August.

Marcus (Haskins), Sue TIC Geology, 1973

When the Haskins moved back East, Sue joined the BLM's new Division of Geology and Mineral Assessment. She is developing technical standards and criteria for minerals data that will be used in land use planning. That's an important task in the administration of public lands, especially in view of the fact that the Bureau controls over 50% of the land west of Denver.

Mark, Joe Geology, 1982

Markley (Coryeau), Sally Group Science, 1973

Martin, Jeff Geology, 1975

Martin, Linda Geology, 1979

Linda has finished her Master's degree at the University of Vermont and is now in the job market. She saw Bill & Tom at GSA in New Orleans & said "Hi" to all.

Mason, Dale Geology, 1980

Dale is finishing his Master's thesis on Recent sediments in West Michigan. Dale and Lynn (White) visited the department this past year, and ran into Bill and Mary Neal during the summer in Montague.

Matthews, Mike Geology, 1970

McCollough, Steve Geology, 1982

Morris, Mike Geology, 1970

Mike is a geologist for Omni Petroleum Corp. out of Allegan, and has been having some success in Michigan. Omni, thanks to Mike, donated some well logs and cuttings to the department for use in the Sed.-Strat. course. Mike dropped by this fall and described how much he and Carol are enjoying their lovely home on Lake Michigan and how much they enjoy having all their long-lost friends visit them! They've suddenly become very popular.

McComber, Margaret attended (circa 197)
We assume Margaret is still in Indonesia.

Naski, Jerry Geology, 1982

Jerry is in his first year of graduate work at Brown University and doing well we hear.

Olsen, Ken Earth Science, 1973

Page, Richard Geology, 1971

Pearce, Suzanne Geology, 1981

Have Suzanne tell you about her taxi ride with Rhodes Fairbridge in New Orleans.

Pedden, John Geology, 1975

Perry, Lyle 1977

Peterson, Virginia Geology, 1980

Ginny has stopped by to tell us about her MS research. Luckily for her its in metamorphic terrain near U. Mass.

Plomp, Pete Geology, 1978

Pete's been running the family carpentry business for the last couple of years, but is considering a return to geology.

Reck, Don Geology, 1974

After teaching at Sul Ross, Don moved on to the greener pastures of the petroleum business.

Rogers, Dave Geology, 1969

Rutherford, Julie Geology, 1982

Dick and Bill saw Julie at the Purdue North Central GSA meeting where Julie was giving an invited talk in the "Women in Geosciences" section. Dick and Tom (and families) saw her and her family at the Fallsburg Art Festival.

Sartoris, Doug Geology, 1976

Satterfield, Gloria Group Science, 1971

Schriber, Craig TJC Geology, 1978

Schulz, Bob. Geology, 1975

At last report Bob is a partner in his petroleum service company.

Schulz, Jim Geology, 1977

Jim is still working as location manager for the Chrysler advertisements we see on T.V. He visited the department last summer and told us all about Ricardo Montaban.

Sharpton, Buck Geology, 1979

Our message to Buck and family is "to hang in there", and we hope your ankle is all healed. At last report Buck had a paper submitted to the Journal of Geophysical Research on the stratigraphy and structural evolution of Southern Mare Serenitatis; after earlier papers in Geos and the Proceeding of Lunar and Planetary Geology.

Shoemaker, Craig Geology, 1976

Craig has launched his thesis research on the relocation of earthquakes along the northern California coast. He's into computers as well as being the SEM operator. Craig and his wife, Diane, both expect to complete their Master's theses by this coming June. What's this we hear about your Halloween hijinx, Craig?

Sief, Carl (Sr.)

Siersma, Andy

Sims, Fran Geology, 1978

Sinke, Robert Earth Science, 1973

Smith, Greg Earth Science, 1976

Smith, R.C. Earth Science, 1977

Sorvari, Judy Geology, 1982

Judy is working at Blodgett Hospital in Grand Rapids.

Spruit, Jeff Geology, 1975

Jeff is a petroleum geologist after completing his Master's at Western Michigan University. Thanks for the barite specimen, Jeff!

Stolarz, Rick Geology, 1980

Swanson, Craig Geology, 1982

Swayze, Gregg Geology, 1982

Gregg is working on his MS at Colorado School of Mines. The last we heard his topic was narrowed down to "The Geology of the Earth".

Swayze, Mike Geology, 1980

Suntken, Loyal Anthropology, 1976

The big news from Loyal is that he is no longer single. Congratulations to the bride, Millie, and groom! Loyal took some time off from LaJet Geophysical to go field tripping with Tom Bee in Arkansas, and visited the department while this writing was in progress! Loyal's been running electrical surveys in the Illinois Basin.

TenHarmsel, Ron Geology, 1979

Ron is exploration geologist for Mapco, Inc., headquartered in Tulsa. The Billings' office is in charge of Rocky Mountain region exploration and the Williston Basin, Ron's project area this past summer. Ron and Judy are enjoying the west and learning to parent year-old daughter Lauren.

Thorpe, Doug Geology, 1974

Tondu, Joe Geology, 1973

Thanks, Joe, for the maps and kind remarks in the questionnaire. Next time, give us some news!

Tower, Janet Geology, 1981

Janet was with Walthall Consultants out of Midland, doing well-site work in Texas and New Mexico. Janet's long-term plans included graduate school. Where are you Janet?

Vanderlaan, Steve Group Science, 1974

VanderMeulen, Dean Geology, 1982

After a successful summer job with the USGS, Dean is continuing work on volcanic mineral deposits in Nevada.

Vandervelde, Brenda Geology, 1982

VanderZouwen, Dawn Geology, 1981

Dawn is doing thesis work in marine geology using seismic stratigraphy.

VerHagen, Ingrid Geology, 1982

Ingrid has started work on an MS at the University of Minnesota, Duluth. She mentioned that her first field trip consisted mainly of basalts with associated structures and plutonic rocks. Now she knows why Dick always told her that there was a Heaven beyond Grand Valley.

Verseput, Tim Geology, 1978

Versluis, Pete Geology, 1981

Verwoert, Dan Geology, 1970

Dan is reported to be nappy in his position as project manager with Brown and Cadwell in Walnut Creek, CA.

Videtich, Patty Geology, 1976

Research exploration geologists travel the world, and Patty certainly gets around. Bill Neal visited with Patty at the IAS meeting in Hamilton, Ontario and we saw her again at GSA in New Orleans. Her work has taken her to Europe and all over the U.S.A. She was a participant in the Second SEPM Conference on "Stable Isotopes in Sedimentary Geology" in Vail, Colorado, and also reports that she's learning about fluid inclusions.

Vrona, John Geology, 1977

Waggoner, Guy Geology, 1976

It was too good to finally get a letter from Guy! He's completing his Ph.D. work on North Atlantic rocks, including isotope work. Watch for papers soon to appear! Guy visited Alaska last June including Cordova, the Kenai Peninsula, and Denali Park.

Walter, Jim Geology. 1970

Here's another Alaska story. Jim spent the summer in the Tangle Lakes region of south-central Alaska investigating sorted patterned ground features. One of the field trips of the 4th International Permafrost Conference (Fairbanks, 1983) will feature Jim's study area. His wife Bonnie and children joined him for a vacation in the wild after field work.

Ward, JoAnn Geology, 1975

After a long drought it was great to hear from JoAnn, if only a page! JoAnn left Texaco in 1980 and moved to Denver to join the Denver Research Institute as a research geohydrologist. The Institute is a contract research facility associated with the University of Denver. Jo Ann is studying the effects of MIS retorting of oil shale on ground water/mineralogy interactions in the Piceance Basin.

Waythomas, Chris Geology, 1979

Department of Geology, University of Colorado.

Chris is starting his Ph.D. in the Arctic and Alpine Research Institute.

He spent the past summer in Alaska initiating an investigation of surficial placer gravels for the Alaska Division of Geologic and Geophysical Surveys. His research will continue in this area next summer.

Werkema, Mike Geology, 1981

Department of Geology, Western Michigan University, Kalamazoo.

Mike is finishing up his MS at Western and is presently interviewing for a job.

Werner, Al Geology. 1979

Al is a Geologist with Shell oil.

White, Frank Geology, 1969

Wiley, Ken WJC Geology, 1979

Ken is working toward completing his Master's degree in 1983.

Williams, Richard Earth Science, 1973

Wolfe (Mason), Lynette Geology, 1980

Lyn continues to help put Dale through school!

Woerns, Rolf Geology, 1970

Wregglesworth, Dana Geology, 1978

Zuider. Dave Geology

- Dave's sister keeps us posted on his progress. How about a communication straight from you, Dave?

Zuidgeest, Robert Group Science. 1975