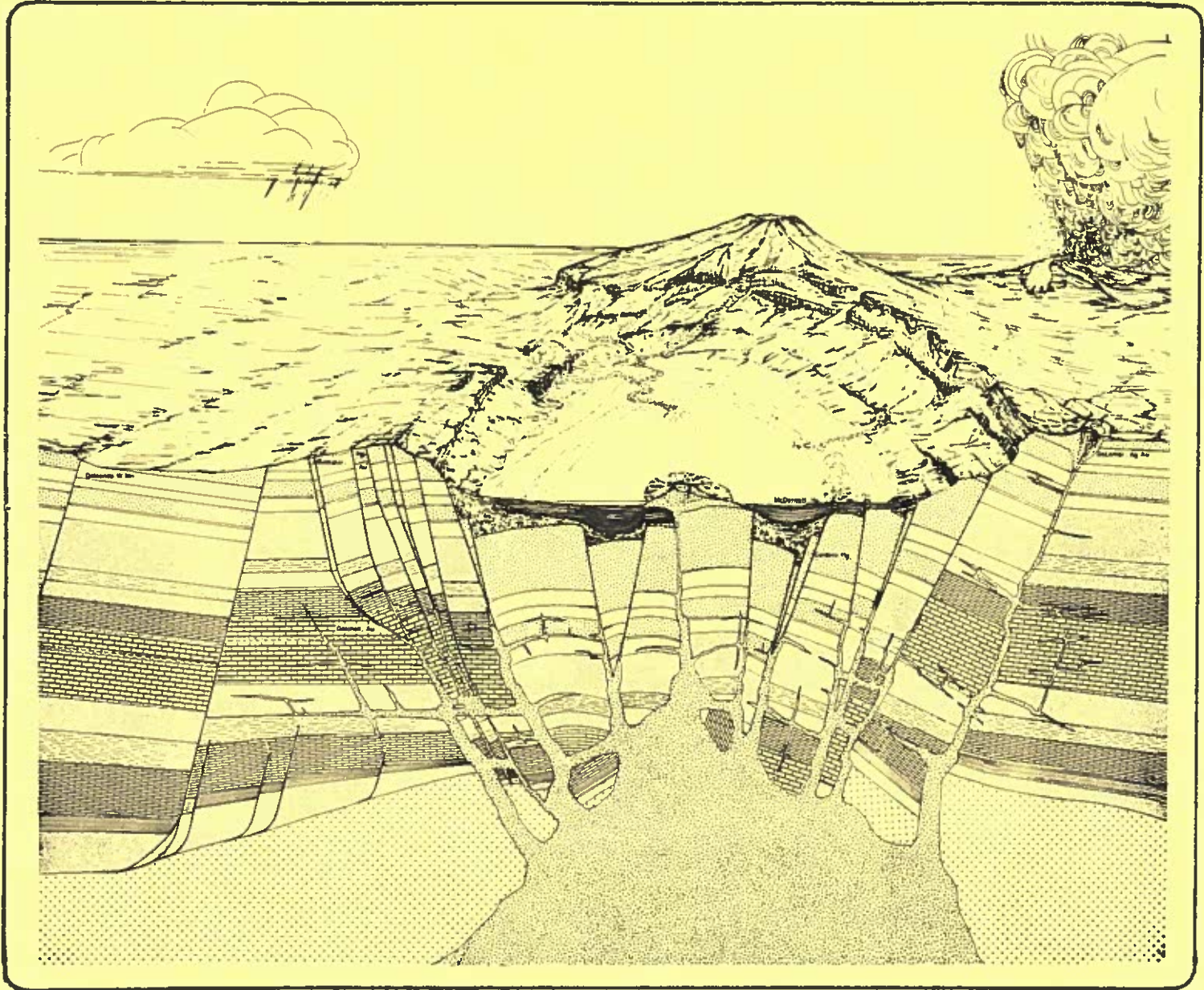


# GVSC GEONEWSLETTER



VOLUME 7 - FALL, 1983

8th ANNUAL GEOLOGY

CHRISTMAS PARTY

For Alumni, Students and other Friends

7 p.m. Tuesday, December 27, 1983

Le Petit Chateau (the old "Little Mexico")  
48th Avenue, 0.3 mi. So. of M-45

Tear off & Return by Friday, December 16, 1983

NAME \_\_\_\_\_

GUEST'S NAME \_\_\_\_\_

Drink Preference \_\_\_\_\_  
Beer Pop Spiked Punch

Cost: \$7.00 per person  
(includes beverages & buffet)

Amount Enclosed \$ \_\_\_\_\_

Make checks payable to: GVSC Geology Club

- - - HOPE TO SEE YOU THERE - - -

If you use this sheet, fold & staple check inside  
with GVSC address out

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## On the Cover:

The caldera gracing our front cover shows the latent artistic talent of Dean VanderMeulen (GV '82) coming into full bloom. This particular rendition of ore formation in a caldera complex was drawn back in Menlo Park, California when Dean was not out mapping. It was used as the frontispiece of a guidebook of reference articles for a USGS field conference on Disseminated Gold in California, Nevada, Idaho and Utah held in June, 1983.

## DEDICATION

We, the faculty and students of the Department of Geology, Division of Science and Math, Grand Valley State College, dedicate this issue to Professor Tom Hendrix in recognition for his contributions to the department and college as teacher, researcher, department chairman, and tireless committee worker.

In 1978 the department lost the services of Dr. Jack Henderson, an outstanding structural geologist and dedicated faculty member. We found ourselves not just without a structural geologist, but with a void in experience, role model, departmental worker and team member. Tom Hendrix filled that void and in 1979 became department chairman. For the last 4 years Tom has guided the department through hard times. With confidence, optimism, organization, purpose and true leadership he has kept us on course.

Now that Tom is out of the yoke of the chairmanship, we can already see new strides and new directions for him. This past summer he was Field Camp Director, University of Oklahoma, and he continues in his national N.A.G.T. role and as U.S.G.S. Cooperative. Tom gives us a "bigness" in spite of our "smallness", and we appreciate it.

Thanks Tom.

## GREETINGS

The 1983-1984 academic year sees the Geology Department as a unit within the new Division of Science and Math. Although this reorganization does not provide an instant solution to past problems, we now have the "science identity" that too long has been absent for us and our sister departments at Grand Valley. We begin again with renewed optimism under a new dean, P. Douglas Kindschi, who, we expect will provide a stronger voice for science and math. Grand Valley, like the nation, has gradually fallen behind in science/math general education requirements, and in maintaining her departments in this area. The new emphasis suggested by geoalumni in last year's survey were prophetic in what educators are coming to realize nationwide. We hope that this year will be a turning point for the sciences at GVSC, and we are pushing hard for restoration of past losses in our area.

You will be pleased to know that Norm Ten Brink has taken the reins of the chairmanship, or the harness as those of us who have been there know. Norm is already aggressively representing the geology faculty's new resolve to improve our area. We've never had a student graduate from the geology/earth science program in whom we were not confident, but past success is no guarantee for future success. As one of our outstanding alumni has indicated --- once you are successful at finding oil, your employer's expectation for future finds is increased! Our own expectation is to equal or improve on what we have provided for our past students. Geology is improving rapidly, and so must we, if our future graduates are to be equal to or improved over those of the past. Michigan is not out of the doldrums of recession, and the trend for higher education in this state as well as all other states (including oil-rich states such as Texas and Oklahoma) is that state institutions must turn to the private sector for support. Our appeal comes at the end of this newsletter.

And speaking of newsletters, the fact that Number Seven in the series is here before you is because of the excellent response by alumni to the call for information. Thanks for your interest in the department, the encouraging comments about past newsletters, and your optimism. The oil industry downturn has caught several people, but it has not dampened their enthusiasm for geology. As we go to press some of you are on the job market, while others are applying to return to school and begin graduate work. We wish you good luck and our help where we can provide it.

Our thanks go to past and present faculty as well as several students who provided copy, and a dedicated corps that helped collate, staple, and label this newsletter. Enjoy.

William J. Neal  
Newsletter Editor

P.S. Don't forget the Christmas Party, Tuesday, December 27th at the LePetit Chateau on 48th Avenue, one block south of M-45 at the west edge of the GVSC campus. See you there.

State (and Future) of the Department:

Perspectives of the New Chairman

by

Norm Ten Brink

The GVSC geology program is still strong and growing in terms of active majors (about 60), faculty efforts, alumni accomplishments, and professional reputation. Most of our graduates continue to be very successful in graduate programs and/or professional careers. Moreover, several "in-house" improvements and developments are occurring. This year, particularly, the following improvements have been accomplished:

1. The "sedimentary lab" is indeed now a true sediments and soils lab, with a full set of equipment that is not only all in one place, but actually is organized for efficient use. (Remember trying to find who left the sed splitter where?) Alumnus Larry Austin contributed greatly to the new equipment and its organization.
2. Two rooms are now fully dedicated to faculty-student research.
3. Tons of miscellaneous rocks and "memorabilia" have been excavated from various nooks and crannies, and a general "clean-up" has taken place. The hallways have even been repainted.
4. Our collections of rocks, minerals, fossils and maps are being updated, cataloged and inventoried under the capable supervision of technical assistant, Mary Simmerer. Student Ross Wagner is now developing micro-computer programs to bring our cataloging and indexing systems into the "modern era". We hope that the new system will let students know precisely where specimens are and how to find them. We also will have an inventory of what is missing and needs replacement.
5. All field equipment is housed in a separate room with newly installed cabinets and shelves. Thanks to Tom Hendrix's and Mary Simmerer's organizational efforts we now know exactly what field equipment we have, where it is, AND what we need.
6. Two new mineral collections have been donated to the department by Mr. and Mrs. Paul Miller and Mr. William Rogan. The collections were appraised by alumnus Tom Bee, who together with Bill, Dick, and students Will Armstrong and Bob Versical spent many hours inventorying and packaging the specimens. Now all we need is a set of suitable display cases to exhibit the gems!
7. The Lucke Reading Room library has been cataloged, reorganized and shelved in a logical manner for easy access by visiting Polish geologist, Wladyslaw Ochocinski ("Slavek"), who is attending GVSC to practice his English language skills while seeking employment in the U.S.A.
8. A new Geology Department Endowment Development Fund has been initiated through a \$1000 gift from alumnus John Dombrowski and his employer, Texaco. The geology faculty has pledged another \$500 to bring the total to \$1500 -- an amount we hope to at least double with your help by the end of the year.

As the old GVSC slogan went, some "good things are (still) happening". However, some very real challenges (threats) to the continued success and future of the department are weighing heavily upon all of us. Particularly, the following critical needs cannot be met by our own "in-house" efforts:

1. The status of the geochemistry faculty position is still unsettled. The geology faculty is well aware of the importance of geochemistry and geophysics to the undergraduate curriculum. That fact was underscored by last year's alumni response as to professional needs that can be met in the undergraduate curriculum. We will continue to try to get the message across to our administration.
2. Support for the sciences at Grand Valley has not kept pace with the real world for several years, and particularly during the recession. Departmental budgets reflect the problem. For example, support for geology is simply inadequate to permit repair and replacement of critical teaching and research equipment (only \$2000 total for equipment and equipment maintenance this year). Again we need administrative support for the sciences. Most importantly, we need to "help ourselves" by generating dedicated geology funding. I appeal to you strongly, therefore, to contribute whatever you can to our newly initiated "Geology Endowment Development Fund". If we can build that fund to even \$5000, and we can,

because the Tremba Scholarship Fund now contains \$6756.54, then the interest alone will equal 20-25% of our present equipment budget (an example of our current equipment needs is listed below).

With the continued support of our best representatives, you our graduates, and the continued dedication of our small but strong faculty, the future is indeed bright for GVSC geology!

Examples of GVSC Geology Department Equipment Needs

Cost	
\$1760	Memory Scout seismic refraction recorder to accompany recently purchased MD-9A seismograph
100	Geophone cable for seismograph
29	Strike plate for seismograph
196	Hammer for seismograph
176	Geophone adapter for seismograph
971	Geophone integrater for seismograph
389	Blaster for seismograph
316	Reverse profiler for seismograph
103	Geophone set for seismograph
90	Extension cable for seismograph
1000	Microscope video camera parts and repair
1200	X-ray diffraction parts and maintenance service
3614	IBM PC with graphics capability and necessary accessories
3500	Bausch and Lomb digitizer and plotter for IBM PC
3000	Specimen display cases for approximately \$50,000 worth of donated mineral collections
400	Four bulletin boards
725	Blu-Ray map reproduction printer
450	Oil staining dispersion objective for petrographic microscope
350	Five-drawer horizontal map case
12,000	Eight Olympus petrographic microscopes
110	Philadelphia stadia rod (surveying)
150	Portable light table (drafting)
75	Two hand levels
525	Five Brunton compasses
3300	Replacement specimens for missing or worn-out map, fossil and mineral teaching sets
9000	Three plane table and alidade sets
180	Two rock saw blades
2400	Two Leitz point-counting stages for petrographic microscopes
1500	Replacement vacuum pump for rock-prep equipment lab
450	Hemisphere for universal microscope stage
300	Map drafting equipment (pens, templates, etc.)
600	Rock crusher-grinder
250	Gerber scale (drafting)

## FACULTY NEWS

### Present Faculty

#### Tom Hendrix

Every once in a while you try something new to break out of the routine (some people call it "rut") that develops. This year my new adventure was directing the University of Oklahoma summer field camp in Colorado. The new part was the area. I had never been in the area of the OU field camp - southcentral Colorado, so I spent the month of June in the Canon City, Colorado area to learn the local geology and to get permission from ranchers to enter their property for new map areas. On July 3rd, 53 Oklahoma students arrived at the camp, and for the next six weeks, six days a week, we trudged the hills around Canon City, mapping the Precambrian igneous and metamorphic rocks, and an abbreviated but very interesting Paleozoic and Mesozoic section of sedimentary rocks. Despite the heat (8 days with temperatures over 100°F and all days with temperatures over 90°F), gnats, and less-than-adequate facilities at the camp (ask Susan Bol what P.O.T.C. means), we managed to get all the map and other projects completed in good fashion. The Oklahoma students were well trained in sedimentary rocks, but much less so in igneous and metamorphic rocks, and some of them showed a general lack of interest in the latter rocks, presumably because of the lack of oil and gas potential in them.

About the time you read this account, Nina and I will be making final preparations for our Christmas trip to Senegal, Africa to visit our son, Mike, who is in the Peace Corps. This means, unfortunately, that we will miss the department Christmas party and all of you who will make the pilgrimage back to Allendale to see old friends. Let me wish you all a happy holiday season and prosperity in the new year.

#### Publications

Chase, R.B., and Hendrix, T.E., 1983, Road Guide to the Geology of South-Central Colorado, Univ. of Oklahoma, 177p.

#### Bill Neal

Can life become busier? Can my office become more cluttered? You already know the answers!

Winter semester 1984 is sabbatical leave time for me, so I've spent a great deal of time in the last year and a half trying to line up some ducks (proposal writing). The good news is that I've received a Fulbright-Hays travel grant to go to Yugoslavia. The bad news is that I haven't got a duck in line over there so I may not go

For sure, I will continue on the "Living with the Shore" book series which is progressing very slowly, again in part because we've spent a great deal of time writing proposals to support the work. The project did take me along the east Florida coast in July (not the time of year to go to Florida) from Key Biscayne to Fernandina Beach, and along part of Chesapeake Bay's Maryland shore in August, to Lake Erie, and some time at Duke University as well. I still have thoughts about studying gypsum fabric, and there are heavy minerals in case everything else fails. What transpires in the coming year is uncertain, but I expect a busy, instructive, productive sabbatical -- returning saner and enthusiastic for the next crop of geology students.

Just to indicate how slow the book series is going, I can't add any new titles from last year, but the four references listed as "in press" last year can now be updated as follows:



Neal, W.J., Blakeney, W.C., Pilkey, O.H., Jr., and Pilkey, O.H., Sr., 1983 (Dec.), Living with the South Carolina Shore: Duke University Press, Durham, NC

Pilkey, O.H., Jr., and Neal, W.J., 1983, Man Versus the Sea at the Shore; Chapter 6, in Ragotzkie, R.A., editor, Man and the Marine Environment: CRC Press, Inc., Boca Raton, FL, 208p.

Pilkey, O.H., Jr., Pilkey, O.H., Sr., Pilkey, W.D., and Neal, W.J., 1983 Coastal Design: A Guide to Builders, Planners and Homeowners: Van Nostrand-Reinhold Co., New York, NY

Morton, R. A., Pilkey, O.H., Jr., Pilkey, O.H., Sr., and Neal, W.J., 1983, Living with the Texas Shore: Duke University Press, Durham, NC, 190p.

(New York, Louisiana, East and West Florida, and Alabama-Mississippi are scheduled for next year.)

### Dick Lefebvre

As the years pass I find these "annual activities inventories" more and more difficult to start, especially if I want it to be different than all those of past years. When I read over the completed newsletter, however, I never cease to be impressed with the role it plays in stating what our department is all about. With that as incentive I will now launch into another of these diatribes hoping I don't sound too "cute" too often.

In my research I've been doing the things I said I was going to do in last year's newsletter (I re-read it to be sure). They include: co-leading a GSA pre- (Salt Lake City) meeting field trip to the Craters of the Moon and Great Rift area, and writing the "Geologic Story of Craters of the Moon National Monument". The trip was in May and the first draft of what will be a USGS Bulletin is in - almost. At least I procrastinated long enough so that Watt's name won't grace its pages! I'm pleased to have a couple of people interested in illustrating the book and hope I can work with both of them. I was, not surprisingly, prompted to ask Dean Vander-Meulen, GV '82 to do some of the illustrations after seeing his caldera drawing. You saw it on the cover of this newsletter. If things can be worked out with the USGS, some of Dean's handiwork will be in the book. The other illustrator is a student, Debbi Metivier, in my Geology 100 class who has done a considerable number of drawings of natural scenes and objects in New England, Alaska and here at Hoffmaster State Park where she works part time.

My research goals for the next year are to go back to the remote sensing now that we better understand the geology of the Craters of the Moon and see what I missed in my first analysis in 1975. To do this I need computer and equipment capabilities beyond those here at Grand Valley. Bob Vincent, President of Geospectra in Ann Arbor, has let me use their DiPix for this purpose when it's not being used for company business. It is not easy finding times when I'm free and their computer is free. A solution may have presented itself in a letter from two geologists at the Open University in Great Britain who asked if I wanted to collaborate on a proposal to NASA to use one of the Side-Imaging-Radar (SIR) shuttle missions to image Craters of the Moon as well as some other areas in South America. Coincidentally they have a DiPix also, so it may be possible to have them do the computer enhancements at their facility and only use Geospectra's to better enable me to communicate with them.

The IBM PC I've ordered (at a discount through our Bookstore) will spur my research, teaching and personal interests. It hasn't arrived yet, but I should get it this fall. In preparation, I participated in the NAGT workshop at the GSA meeting in Indianapolis and last year I attended a Chatauqua on interfacing instruments with microcomputers. This past summer I attended two very big computer graphics-oriented shows in Chicago and Detroit. The possibilities that micros in the classroom present excites me. There are many uses for graphics in geology; e.g., 3D concepts (crystals, indicatrices, maps, block diagrams).

The Lefebvre household has changed considerably over the past year. All three "children" are away at college - Lauryl (Geology) and Curt (Electrical Engineering) at Michigan State and Jeff (Industrial Engineering) at the University of Michigan. Sandy is still at H and H Plastic, and is now the supervisor of personnel services. This means that the house is pretty empty with only furry Fluffy Powder Ruff holding down the fort. Sir William left us last summer after a prolonged illness.

To all of you from all of us, have a rewarding and exciting new year.

#### Publications

with Kuntz, M.A., Mabey, D.R., Champion, D.E., Stanley, W.D., Spiker, E.C., McBroome, L.A., and Covington, H.R., 1983, Geologic and Geophysical Maps of the Great Rift Instant Study Area, Blaine Butte, Minidoka and Power Counties, Idaho, USGS Map MF-1462-A

with Kuntz, M.A., Champion, D.E., King, J.S., and Covington, H.R., 1983, Holocene Basaltic Volcanism along the Great Rift, central and eastern Snake River Plain, Idaho: in Geol. Soc. America Guidebook-Part III, Geologic Excursions in Volcanology: Eastern Snake River Plain (Idaho) and Southwestern Utah; G.S.A. Rocky Mountain and Cordilleran Meeting, Salt Lake City, Utah, May 2-4, 1983.

#### Norm Ten Brink

A quick reflection over the past year leaves four "major" personal and professional "events" standing prominently in my mind. I've decided to share a bit of each of those four events with you here, and I hope to share them more fully with many of you at our annual Christmas Alumni Reunion.

In January, 6 year's of research work on the Alaska Range reached a major end point. The "draft final report" on "North Alaska Range Geo-archeological Studies" was completed and submitted to the National Park Service and National Geographic Society. What a monumental task! Many of you were directly involved in the work, and the entire present department was involved in final compilation of 20 copies of the 2-volume, 600-odd page tome. A hearty thanks to all of you who contributed so much to making the North Alaska Range Project a success! (The glacial chronology we developed for the Alaska Range is even included as "Table 1" for those who might be interested in such "recent stuff".)

In May another long-term goal, but of a very different nature, was finally realized: our cabin on Hamlin Lake, near Ludington, reached a stage of completion sufficient for occupancy. Memorial Day weekend marked our first actual residence in the new structure, which still smelled like a freshly sawn log. (Probably because sawdust and shavings were still in abundance in many corners, cracks and crevices.) Few, if any, events in my life will equal the enjoyment and satisfaction derived from the hours spent with my family and friends in that cabin -- indeed a life-long dream that has come to fruition.

Less than a week after our first weekend in the cabin, 1983 graduate Mark DeKruyter and I were on our way to Alaska for the third "major event" of the year. (Ask Mark about this one sometime.) We spent the next six weeks mapping the surficial geology of four quads in the Kenai Peninsula -- a true "blitzkrieg" day and night effort. Despite numerous hazards from helicopters, tourists, kodiak bears, U.S. Fish and Game Wildlife beaurocrats and sled dogs on the roof, we did accomplish the job. (Of course Mark was up until the wee hours of the morning he left for grad school at U.W., Milwaukee in order to transfer the last photo work to the map.) At any rate, we learned a lot, and the Alaska Geological Survey definitely got their money's worth. The Alaska Survey will be publishing the maps sometime this year.

After a two-week respite back at the Hamlin Lake cabin, I assumed the duties of GVSC Geology Department Chairman - THAT was DEFINITELY the fourth major event of the year! All my research work came to a dead halt, and by September 15th, I had already begun to long for next May -- give me the Alaskan tourists and sled dogs running on my roof at 2:00 a.m.! (You can read further about "event 4" in my "state of the department" message.)

See you all at the Christmas Party I hope. If not, stop in anytime you can.

### Publications

- in preparation with Bijkerk, A., Holocene glacial chronology of the northern Alaska Range: Arctic and Alpine Research.
- submitted with Waythomas, C.F., Late Wisconsin glacial chronology of the north-central Alaska Range: Geol. Soc. America Bull.
- submitted with Ritter, D.F., Paraglacial fan development related to the Wisconsin glacial history of the Nenana Valley, north-central Alaska Range: Journal of Geology.
- in press with DeKruyter, M.H., Surficial geologic maps of the Kenai B-1, B-2, B-3 and B-4 Quadrangles, Alaska: Alaska DNR, Div. of Geological and Geophysical Surveys, 4 maps at 1:63,360 scale.
- in press Glaciation of the northern Alaska Range, in "Glaciation in Alaska", T.D. Hamilton and R.M. Thorson, eds., Univ. of Alaska Press.
- 1982 North Alaska Range Project draft final report on 1978-1982 geo-archeological studies: Nat'l. Geographic Soc. and Nat'l. Park Service, 595p. plus 8 maps at 1:63,360 scale.
- 1982 with Waythomas, C.F., and Ritter, D.F., Surficial geology and placer deposits of the Livengood B-3, B-4, C-3 and C-4 Quadrangles, Tanana-Yukon upland, Alaska: Alaska DNR, Div. of Geological and Geophysical Surveys, 17p. plus 4 maps at 1:63,360 scale.
- 1982 with Welsch, D., and Goodwin, R., Late Quaternary glaciations of the Talkeetna Mountains, Alaska: Geological Society of America Abstracts with Programs, v. 12, no. 6, p. 353-354.

### Recent Grants

- |      |  |          |
|------|--|----------|
| 1983 | Alaska DNR, Division of Geological and Geophysical Surveys, Grant #CC10-1188: "Surficial Geology of the Kenai, Alaska B-1, B-2, B-3 and B-4 Quadrangles" | \$18,756 |
| 1982 | Alaska DNR Division of Geological & Geophysical Surveys, Grant #82-1290: "Surficial Geology of the Livengood, Alaska B-3, B-4, C-3 and C-4 Quadrangles"  | 12,000   |
| 1981 | National Geographic Society Grant (GVSC 20-2371) "Data Reduction and Reporting Phase of the North Alaska Range Project"                                  | 14,150   |
| 1980 | National Park Service Contract CX-0001-9-0032 (GVSC 20-2370) "Completion of North Alaska Range Project Geo-Archeologic Studies"                          | 59,986   |

TABLE 1. Summary of Northern Alaska Range Glacial Advances and C<sup>14</sup> Dates on Advances

		Local names used in specific valleys by other authors	Regional, informal nomenclature used in NARP studies and this paper	General age limits of advances (yrs. B.P.)	*C <sup>14</sup> dates on advances in specific localities in yrs. B.P. (C <sup>14</sup> lab no.)	Source locality of C <sup>14</sup> date	
HOLOGENE			Muldrow Foraker II Peters Yanert II Foraker I Yanert I	100-120 360-410 2,000-2,300 2,500-2,700 3,500-3,700 6,000+?	>250+90 (A-2162) >1,900+100 (A-2163)  -3,490+95 (I-11171) >5,850+130 (A-2147)	Foraker R. Foraker R.  Foraker R. Yanert Fk.	
	LATE WISCONSIN	"Wonder Lake" Glaciation (McKinley River; Reed, 1961)  Donnelly Glaciation (Delta River; Pewe, 1965, 1975)  Riley Creek Glaciation (Nenana Valley; Wahrhaftig, 1958)	McKinley Park Glaciation	McKinley Park Stade IV	9,500-10,500	>9,250+120 (B-4775) >9,580+100 (USGS-655) >9,860+140 (I-10535) <10,370+150 (I-10536)	McKinley R. McKinley R. Delta Ck. Little Delta R.
				McKinley Park Stade III	11,800-12,800	>12,240+180 (I-10532) >12,340+205 (GX-6284)	Teklanika R. Teklanika R.
				McKinley Park Stade II	13,500-15,000	>13,270+40 (QL-1368) >13,580+90 (B-4773) =13,500+420 (I-10698) >13,500+100 (QL-1365) <14,800+650 (GX-2177)	Toklat R. Nenana R. Yanert Fk. Teklanika R. Little Gerstle R.
McKinley Park Stade I				17,000-25,000	>18,260+120 (A-2270) =17,800+290 (I-11228) =19,700+200 (USGS-656) <24,900+200 (QL-1369) <25,300+950 (GX-2179)	Nenana R. McKinley R. McKinley R. Little Delta R. Little Gerstle R.	
EARLY WISCONSIN	Delta Gl. (Delta River; Pewe, 1965, 1975)  Healy Gl. (Nenana R.; Wahrhaftig, 1958)	McKinley Park Glaciation	Early Wisc. III(?)	certainly >40,000 probably >49,000 possibly =60,600+?	>28,750+400 (A-2269) >40,000 (I-10679)	Toklat R. Delta Ck.	
			Early Wisc. II		>43,600+700 (QL-1370) >49,100+1100 (QL-1366) -1000	Sushana R. Toklat R.	
			Early Wisc. I		>57,600 (QL-1367) =760,600+4900 (QL-1371) -3000	Teklanika R. Toklat R.	
PRE-WISCONSIN	Dry Creek Glaciation (Nenana R.; Wahrhaftig, 1958)  Browne Glaciation (Nenana R.; Wahrhaftig, 1958)  Upper Nenana Gravel Formation (Nenana R.; Wahrhaftig, 1958)	McKinley Park Glaciation	Pre-Wisconsin III	?			
			Pre-Wisconsin II	?			
			Pre-Wisconsin I	late Tertiary			

The symbols >, ≥, <, ≤ and =, which precede each C<sup>14</sup> date, indicate the stratigraphic age relationship between the dated sample and the glacial advance. For example, sample B-4775 (9,250+120) is from the base of a channel fill that stratigraphically overlies MP-IV drift. Therefore, the date provides a minimum limiting age for the MP-IV advance; i.e., the advance occurred >9,250+120 B.P., as indicated by the symbol in the table.

## Past Faculty

### Jack Henderson

Jack completed the field work for his Nova Scotia project this past summer. The focus of this work is to determine the control and timing of gold-bearing quartz vein emplacement through detailed field mapping and fabric analysis. He continues to use Grand Valley students as field assistants and there is a growing alumni group who have benefited from these unique field learning experiences.

Meanwhile back in his Ottawa office, Jack is busy completing maps and reports on his Baffin Island work, as well as the Nova Scotia project. Those full summer field seasons lead to a back-log of office work! And you can't keep a field geologist at home in the summer --- in spite of a comment attributed to Jack that he intended to stay in Ottawa this summer, he's scheduled to participate in other Survey field projects this coming summer.

### Gary Jacobs

The biggest change for me this year was a change in jobs. I left Rockwell Hanford Operations to accept a position at Oak Ridge National Laboratory in Tennessee during August. At Oak Ridge, I will be able to pursue basic research related to toxic and nuclear waste management at a personal level. At Rockwell I was limited to administrative and management activities. At this point in my career, I consider the opportunity to do basic research on practical problems very stimulating and important to my future development. Most of my research activities will be in the areas of 1) geochemical modeling, 2) rock-water interactions, 3) ground water geochemistry.

The travel highlight of the year was a one-week trip to Paris for a waste management conference. I, and four other U.S. scientists represented the U.S. at a small (approx. 30 people) workshop sponsored by the Organization for Economic Cooperation and Development on nuclear waste repositories. Needless to say, the trip was a lot of fun - but too short!

My family, now stabilized at 4 (me, Karen, Luke (4), and Chelsea (2)), is looking forward to living in East Tennessee. The Great Smoky Mtns. are a wonderful escape from the hot and humid weather during the summer and during the fall they are simply spectacular!

Best of Luck Grand Valley!

### Ed Tremba

During the last year I have been occupied with documenting the results of project E.A.S.I. (Eniwetok Atoll Seismic Investigation) and proposing and planning a follow-on drilling program. Project E.A.S.I. consisted of about 140 miles of seismic data, mostly reflection, and some refraction. The data were collected in an attempt to use stratigraphy to define the effects and mechanisms of nuclear cratering. An E.A.S.I. Phase I and II technical report (1982) documents the field aspects and preliminary seismic reflection results. I just submitted a draft of the final E.A.S.I. technical report to our editing staff.

I was dismayed to learn this spring that my part-time teaching position with UNM geology department would not be renewed next fall. However, I immediately decided to use the "spare-time" to plan and build a greenhouse attachment for our house. I'm happy to report that the framing is now complete. You're all welcome to come to Albuquerque to lend your thermal mass to our place anytime.

This winter, I have joined Toastmaster's International. Currently, I am the educational vice-president of the Kirtland MC's Club. Rose is also a member. We escape from the kids every Thursday for lunch and Toastmaster's.

As I await the fall fishing in the mountain streams of New Mexico, I still reflect on the golden years at Grand Valley, not so much the buildings, the landscape, or even the teaching, but the genuine feeling of a total learning experience with some outstanding individuals. Please let us know when you plan to visit Albuquerque.

## ALUMNI NEWS

This year we are listing only those persons for whom we have news (direct, indirect and the usual rumors). No addresses are listed, but if you wish to contact a fellow alumnus or alumnae, either contact the department or Mary Neal, College Relations, 24 Zumberge (the GVSC alumni office). We are trying to keep our mailing lists current (so the Ron Green's of the world don't get left out)! Please notify us or the alumni office when you address changes.

### Alcott, Lorraine - Geology 1981

As a second-year graduate student at Kansas State University, Lorraine is busy as a teaching assistant and taking courses, including hydrogeology from Dr. Henry Beck. She says she now knows why Norm finds groundwater so interesting. This summer she began a thesis on the distribution of rare earth and other elements within the rocks of SE Missouri's lead-zinc district, seeking solution path(s) and source rock of the ore fluid. Her plans are to finish by August 1984 and seek employment as a geochemist.

### Anderson, Dave - Geology 1980

Dave reports that he's traded in his cowboy hat, boots, and saddle for a bass boat, a year's supply of seafood gumbo, and 10 yards of mosquito netting. This reflects his move from Texas to Lafayette, Louisiana. The oil field slowdown sent Dave looking for greener pastures. As a service engineer with Christensen Company, he is working offshore and determining directional drilling information through mud pulse telemetry. He's still single, and hurricane tested (Alicia)!

### Arnold, Mark - Geology 1975

Mark hasn't written to us in a long time, but several people provide us with reports and rumors regarding Mark. If anyone is in the market for a slightly(?) damaged sailboat, contact Mark, or visit Mobile Bay. We've also learned that Mark and wife Linda are multiplying -- the parents of three cute blond sons. Why blond we wonder?

### Austin, Larry - Geology 1974

Larry and Herm Delano are very busy with work for their company (Aqua-Tech Geotechnical Consultants, Inc., 523 Clayton, NW, Grand Rapids, MI 49504). They are involved with hydrogeology projects regarding landfills, waste water treatment facilities, and water supplies. Recently Larry was on a radio talk show in connection with a multi-county ground water study in SW Michigan. He and his wife, Mary, enjoy traveling and spent some time in Alabama and Florida earlier this year (pick up Mark Arnold rumors?). Larry was recently accepted by the American Institute of Professional Geologists (#5181), and is also involved with the Technical Section of the Michigan Well Drillers Assn.

### Baker, Tim - Geology 1977

Tim is a geologist with Dart Energy. The Tim Baker's are happy to announce the arrival of their new Korean daughter, Katie (5 months old as of August 27). The Baker's are all happy, healthy, and feeling good about life! And we're glad they are! Congratulations.

### Baldwin, Tom - Geology 1979

Somewhere in Houston a geologist goes about disguised as a petroleum geophysicist for Amoco Production Company. We know its Tom, and we enjoy his cryptic messages, but will not repeat his graffiti! Our spy tells us that Tom recently purchased a corvette fulfilling one of his long-term dreams..

### Bartnik, Pat - Geology 1982

Indirect information tells us that Pat is working in a hospital in the Royal Oak, Michigan area, and that he has even passed through the Allendale area. Stop in and see us, Pat!

Bee, Tom - Geology 1973

Tom's been in business for himself for six years! Topaz Mineral Exploration (605 Hillcrest, Grand Haven, MI 49417) specializes in rare minerals and classic Michigan specimens including copper and its associated minerals. From time to time the department calls on Tom's expertise for appraisals or identification. Tom has joined the "strive for healthy body generation", is active in Y-activities, and travels (California, Arizona, Keweenaw), including joining this fall's UP mineralogy field trip. He roused out some alumni for our fall department picnic, and we'll see Tom at the Christmas party.

Bierlein (Thompson), Wendy - Geology 1977

Wendy is a full-time housewife and mother to two-year old son, Caleb. The Thompson's farm in the Richland, Washington area, but Wendy plans to return to the job force in a few years, possibly after graduate work in engineering. In February 1983, Rockwell Hanford Operations Energy Systems Group published a report prepared by Wendy while she was geologist on the Basalt Waste Isolation Project. The report was on the drilling history of one of the boreholes associated with the study of basalts at depth as a permanent waste repository.

Bijkerk-Kauffman, Ann - Geology 1980

With the master's degree completed, Ann remains at the University of Arizona to work on a Ph.D. She's been working on a manuscript for the G.S.A. Bulletin.

Bishop, Mark - Earth Science 1974

Mark left Dart Oil and Gas in May to take a position with Hovinga Business Equipment of Grand Rapids as copier sales consultant for Ottawa and Allegan counties. The Bishop's are expecting number two, to join the rapidly growing Benjamin. We enjoyed Mark's visit to campus.

Bol, Susan - Geology 1982

Susan's picture graced the pages of the Grand Haven Tribune in July in a press release announcing that she was a recipient of the Phillips Petroleum Foundation Scholarship at New Mexico State University. This is a high honor for Susan and will help pay for the thesis work!

Bowden, Doug - Geology 1974

Doug continues the search for precious metals in Nevada and the Great Basin, particularly for hydrothermal gold deposits. We enjoyed a brief visit at G.S.A., and hope that he and his wife had a good return visit to Michigan. Perhaps our cover will answer all of Doug's questions, or he can send suggestions as to where we can straighten Dean VanderMeulen out!

Bravender, Lynn (attended 1975-77)

No direct word from Lynn, but he was featured in a recent Grand Rapids Press article along with two of his buddies. It seems they have an extraordinary talent for restoring fine old houses! In the article Lynn indicated he was an unemployed geologist (even though his degree is biology), but we regard him as a man of many talents and hope he finds his way back into hydrology.

Christrup, Eric - Earth Science 1974

Eric lost his father in June, but he reports that he and Elaine are doing fine. We missed seeing Elaine at the fall picnic! Eric is still teaching in Coopersville Area School System, and spelunking when he finds time to escape to Karst country.

Coleman, Jeff - Geology 1981

Jeff is still working wells out of Houston (offshore) and recently was promoted. Unfortunately, he, his motorcycle, and an obstruction came to a standoff. The obstruction won and Jeff was laid up for some time with a broken collarbone. Tough way to go on vacation.

Demorest, Nancy - Geology 1981

After returning from field work in N.E. Maine, Nancy claimed she could almost kiss the streets of Boston. That's understandable considering that she fell into the Penobscot River wearing a full pack and was swept away in a strong current. In her words "I damn near drowned!", and it's probably funny only in retrospect. Other hazards were bear, moose, black flies, and the kind of "stir-crazy" sensory deprivation you get from being stuck for too long in the middle of nowhere! (Nancy tells better field deprivation stories than Norm) She now thinks she is meant to be an "office geologist", however, that will have to be at a later time because Nancy was to be co-leader (co-author) of a N.E.I.G.C. field trip in October. Thesis completion is scheduled for March 1984, but "see you all at the Christmas party" first.

Dexter, Jim - Geology 1977

Jim joined the S.L.U.G. (Society of Laid-back Unemployed Geologists) as the Bendix N.U.R.E. program ends. He did some claim staking in Montana, and reports the fishing in Colorado is great! Jim has impressive credentials and we're including his publication list here as a reflection of what he's done, and likely to do.

Dombrowski, John - Geology 1973

Two years ago John was successful in helping a team of explorations make a California offshore discovery for Texaco. Now he's experiencing the "increased expectation" syndrome that usually follows from supervisors. Most of us have experienced something similar -- if you do a job well, then you must have time/ability/industry to do more! John has also learned that two cannot live as cheaply as one (who starts these myths?). Both he and Julia work full-time in petroleum geology, but John still finds time to keep in touch with old friends including Dr. Larry Paul of Grand Rapids. These old "roomys" have each found success in their own fields, but haven't forgotten their origins. Off-the-record, John has proposed a GV geology alumni drinking society (We could make official what may already exist.). Thanks John for helping us kick off our new development fund!

Doublestein, Jeff - Earth Science 1979

Jeff returned to Allegan and joined the family's kitchen business about three years ago, and has purchased a home there.

Fegel, Larry - Earth Science 1973

Larry is still in the Grand Rapids School System and involved in education through the Blandford Nature Center.

Feyen, Al - Earth Science 1972

After a long hiatus it was good to see Al at the fall picnic. Some people seem not to age, and Al is such a person. He's working in electronics these days, and life is agreeing with him.

Freeland, John - Geology 1982

John tried the New Orleans scene after graduation in search of a job with an oil service company. Although he was not successful there, he learned about floods, life on the delta, and cajun cooking. John is now at Eastern Michigan University working on teacher certification.



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- 1983, Evaluation of uranium anomalies in and adjacent to the Tusas Mountain Granite, eastern Rio Arriba County, New Mexico, in Reports on investigations of uranium anomalies: U.S. Department of Energy Open-File Report, in press.
- Dexter, J. J., Fukui, L. M., Girdley, W. A., and Ruzycki, C. A., 1983, Road log From Dewey Bridge to Grand Junction by way of the Dolores River, Coates Creek, Glade Park, and the Little Park Road: Grand Junction Geological Society Guidebook, Northern Paradox Basin - Uncompahgre Uplift, in press.
- Dexter, J. J., 1983, National parks and monuments of Wyoming: Rocks and Minerals, September-October issue.

Green, Ron - Geology 1978

Ron finished his M.S. in geophysics at Utah in 1981 and has been at the University of Arizona since then. His family status remains the same (Tidwell sends his regards). Ron reports that he is working on vapor transport of contaminants in unsaturated rocks. He also complains bitterly about missing newsletters, so we're asking everyone not to let Ron know that the Christmas party is December 27th. We'll notify him on January 15, 1984.

Grodecki, Steve - Geology 1975

Steve is an oilfield geologist for Curtis E. Turney out of Oklahoma City. He reports dismally slow drilling activity, but they're still prospecting. He notes that "although plenty of 'yankees' moved down here during the boom years, I have yet to meet a fellow GVSC grad. They must know better than to move to a desert climate in a land-locked state", which is probably true. Patty Videtich is the only other Okie we know. Steve and Sandra are in the long slow process of adopting a child. We'd repeat Steve's request to let them know of anyone wanting to give up their kids except Oklahoma probably isn't ready for a population explosion.

Hall, Jack - Geology 1977

Jack is making good progress on his Ph.D. thesis, working on Conodonts from the Southern Appalachians and presenting papers. He presented an abstract at the 1983 Northeastern G.S.A. meeting on "Conodonts from the Centerfield and Stone Mill Limestones from Central New York", and was co-presenter of "Upper Ordovician to Middle Silurian Trace Fossils of Virginia and West Virginia" at the National G.S.A. Barb and Jack are the proud parents of a baby boy, Matthew, born on May 3rd.

Haskins, Roger - Geology 1973

Since May 1982 Roger has been in the U.S. Bureau of Land Management's Washington, D.C. office. As staff geologist he is revising Federal mining regulations, publishing (in press) a handbook on current geophysical systems being used in the mining industry, putting together another on mineral examinations of mining claims, and working on budgets. The Haskins' maintain an "open door" policy for "known" visitors to Washington, D.C. area, enjoy traveling in the east, doing carpentry, and Roger is a serious builder of model ships. Roger and Sue are also great spontaneous hosts for parties!

Hazard, Bill - Geology 1979

Bill is now working for IDS (Investors Diversified Services, Inc.) a well-known company that offers a variety of investment services and financial services including personal financial planning. Someone of you may want to avail Bill's services (office phone: 616-942-0920). Not every geology graduate goes the geology route but we enjoy keeping in touch with all of our graduates. Thanks for keeping in touch, Bill.

Hewlett (Kampa), Julie - Geology/Anthropology 1977

Julie continues as staff geologist for Bowser-Morner, Inc. out of their Toledo office. Her work is with solid and hazardous waste sites. Daughter Becky is in second grade this year and "has her mother's artistic talent and a penchant for collecting rocks" which must come from both Paul and Julie!

Hoving, Sheryl - Earth Science 1977

Sheryl continues with Shell Offshore, Inc. out of New Orleans as a production geologist, spending more time onshore now, but still visiting rigs occasionally for logging and coring. One such occasion was interrupted by an evacuation to avoid Alicia. Onshore Sheryl works on enhanced oil recovery field studies, and a wide variety of outside activities including exercise class, canoeing, "tubing", water skiing, concerts, picnics, advising for Junior Achievement, and hosting out-of-town visitors.

Jordon, Mark - Geology 1977

This December should be graduation time for Mark if he managed to complete his M.S. thesis at Arizona State. He continues working as a geologist for the Arizona State Land Department. Mark inquires whether or not "Jim Schulz made any money on the chain letter he sent me"? Probably not if everyone else lost their copy as Mark did. Mark reports also that he's been working with sub-surface-rights exchanges between B.L.M. and Arizona which will allow enhanced Management of resources. In May or June of 1984 Mark may swing through Michigan on his crosscountry trip aboard his "big motorcycle".

Kampa, Paul

Paul is in charge of the waste water treatment plant in Clinton, MI. He is working on his class B sewage plant operator's license. Last year he became a certified volunteer fireman and basic emergency medical technician.

Kimball, Greg - Geology 1978

In November 1982 Greg went to work for the South Dakota Department of Water and Natural Resources where he is project hydrologist for the Water Resources Institute out of Brookings, SD. He's working on a ten year project to determine impacts on surface water, soil, and ground water from agricultural practices. The project area covers 83,000 acres with an initial set up on 10 sites of 10-30 acres each where the farmer is practicing what they're interested in monitoring, and where the geology is favorable. Greg's office is at the South Dakota State University so he's taking advantage of the opportunity and auditing courses in limnology and statistics. He and Laurie are also looking after one-year old Cory, so we know they're both busy. Greg advises students interested in hydrology to hang in there because the market will open up again.

Leistico, Marlene - Geology 1979

As area field geologist for the Michigan DNR, Marlene is regulating oil well drilling and production in Ionia, Kent, Ottawa, and Muskegon counties. Maybe in a couple of years one of those wells will be on the GVSC campus and it will bring her "home". Marlene reports that daughter Ann is now a sophomore at Michigan State University.

Lyons (Tobin), Billie - Geology 1983 (we hope)

Even though Billie's just finishing a couple of I's, we list her here among the "old timers" because she's been out in that real world for some time now. Billie married David Tobin in July of 1982, and they're expecting "a baby or two" in December. If twins is the case they'll have their hands full, but they're in training for it. David is in graduate school at Michigan State (environmental monitoring through the use of remote sensing). Billie is a full-time geologist with Smith Petroleum Company in Grand Rapids. Little Bill is four years old and attends Hill Community Child Care Center. And, more Tobin's will soon arrive!

Mackiewicz, Nancy - Geology 1980

After finishing her thesis at Northern Illinois, Nancy treated herself to some time off and traveled to New Zealand and the South Pacific. The thesis resulted in a paper "Genesis of interlaminated glaciomarine sediment in Muir Inlet, Alaska" which will appear early next year in a special issue of Marine Geology. Nancy says she's an "unemployment statistic" but is working part-time at NIU doing pipetting for a paleontological project. Nancy asks Judy Sorvari to contact her and let her know what she's doing.

Marcus (Haskins), Sue - TJC Geology 1973

Sue reports that as BLM geologist she's been working with other federal agencies to find ways to evaluate mineral potential on federal lands. Wilderness study areas are the most controversial of these lands. She notes that a good information source is "Minerals Data Source Book" published this year by the U.S. Bureau of Mines. It lists sources for all sorts of mineral data. Contact the U.S. Bureau of Mines, or Sue at the Bureau of Land Management (690), 18th and C Sts., NW, Washington, D.C. 20240. She says that she and Rog enjoyed last year's Christmas party. (We enjoyed their party at G.S.A., but we've requested that Sue be banned from the La Scala.)

Mark, Joe - Geology 1982

Joe began a Master's program at Western Michigan. He says "it will be something glacial" --- does that mean Joe is going to do his graduate work very, very slowly? He says "Hello to Rosey, Moses, and faithful Indian companion Cisco" (Dudley, Beav, and Hawk should note that imaginative nicknames are nothing new.). He also asks "Ron Sheets do you still have my slides from field camp?"

Markley (Coveau), Sally - Group Science 1973

In June Sally assumed responsibility for the Central Chicago sales territory of American Medical Systems, a division of American Hospital Supply Corporation. She says "Happily, my husband, Rich, and I both received promotions during the same month to the same city and our move from Cincinnati has been a wonderful experience. Sally and Rich stopped by GVSC on August 13th (sorry we missed you Sally).

Martin, Linda - Geology 1979

As a geologist with Amoco, Linda reports there is "life after thesis". She's working in a Paleozoic Projects Group looking for oil and gas in the Appalachians, and has been in the field a few times to look at rocks. Linda says that living in New Orleans is an adventure.

Mason, Dale - Geology 1980

Dale is finishing his thesis work (University of Wisconsin-Milwaukee) on shape analysis of Lake Michigan beach sands. He recently presented a seminar for the GVSC department on his research.

Matthews, Mike - Geology 1970

Mike is an environmental engineer for the Tennessee Valley Authority out of Chattanooga, TN. He is helping to develop a program for TVA in groundwater management. During the past year he's worked on assessing the current situation on groundwater in the seven TVA states. Mike's wife, Susie Jo (Kelly) is attending the University of Tennessee at Knoxville to become a veterinarian.

Morris, Mike - Geology 1970

The big news from Mike and Carol is the birth of their son, Sean Michael, on July 15th!

Naski, Jerry - Geology 1982

Jerry is in his second year of graduate school at Brown University, investigating tin saturation and partitioning of tin between peraluminous and peralkaline granite melts (under Dr. Paul Hess' project on melt structure). Jerry notes "historically, geologists have called it experimental petrology, ask a chemist and they'll tell you its inorganic physical chemistry; ask a physicist and they'll tell you material science", but to Jerry its all of these as he scales the walls of science -- that's the nature of geology. So far, the connections between melt structure and tin deposits are following their predictions. The work is funded by the D.O.E.. Jerry plans to be at this year's Christmas party.

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Pearce, Suzanne - Geology 1981

Suzanne is back in Grand Rapids where husband Elliot teaches. She's still working on her Master's thesis (Southern Illinois) but is a geologist with Smith Petroleum, "learning the business".

Peterson, Virginia - Geology 1980

We think Ginny is nearing completion of thesis work at the University of Massachusetts. She visited the department during the past year.

Sartoris, Doug - Geology 1976

After a long hiatus with no news from Doug, its good to have an update. In October of 1982 he went to work for a small oil and gas independent in Corpus Christi, Texas (C-K Resources). After six years in "hard-rock" geology he made the move to oil. Maybe he won't be on the move so much now. In December 1982 he married Kay Trout. (Bring your bride and come to visit West Michigan, Doug.)

Sharpton, Buck - Geology 1979

No official word, but indirectly we know he's still at Brown working on the Ph.D.

Shoemaker, Craig - Geology 1976

As he nears thesis completion for the M.S. Degree, Craig has accepted a full-time position at Southern Illinois University as their lab analyst. Diane is also finishing her thesis, and now teaches fifth grade in a community near Carbondale.

Smith, Greg - Earth Science 1976

On August 6th Greg married Deborah Lynne Riker in Grand Rapids. They visited Glacier National Park on their western honeymoon, and Greg thinks they'll return again next summer. This year begins Greg's 8th in the Grand Rapids School System and for the first time he's teaching all earth science classes (that puts Greg's skills to excellent use -- perhaps he'll send us recruits!). He's also coaching junior-varsity football at Central High School (more GV recruits?). Greg and Debby visited the department recently. Greg continues his education working on a Master's in Educational Administration at Central Michigan University.

Stolarz, Rick - Geology 1980

After finishing his M.S. in September 1982 at Southern Illinois, he went to work as a production geologist for Sun Exploration and Production Company out of Corpus Christi, Texas. Currently he's working his thesis into a publication co-authored by his advisor, Dr. Jay Zimmerman, for "Contributions to Arkansas Geology - Volume II". (We enjoyed Rick's visit to the department.)

Suntken, Loyal - Anthropology/Geology 1976

Loyal has returned to the reformed Elfex Geophysical, Inc. (Denver/Abilene). He invites any of you involved in the oil exploration business to drop him a line (P.O. Box 4545, Midland, TX 79704; phone 915-682-4236) if you would like a brochure or information on horizontal electrical surveys (Loyal knows this procedure well and believes in its success!). He says "thanks" for this free advertisement, and says hello to former profs., colleagues, friends, and ol' ping pong partners. (Anyone who beat Loyal at ping pong probably isn't included.)

Swanson, Craig - Geology 1982

Craig hasn't wasted any time at the University of Idaho. He's trying to complete his Master's in Hydrogeology by December 1983. Craig says he'll be looking for employment in both the NW U.S. and perhaps in British Columbia because "Elizabeth my wife is Canadian, Eh!" He advises students that there are some jobs now in the discipline, and more on the horizon. "Don't neglect considering this field when considering your future. I'm not giving the hard sell, only advising where I see opportunity in the next couple of decades (albeit, my vision is biased and perhaps myopic)." Craig's thesis topic is possible groundwater contamination in a proposed subgrade disposal pit for uranium mill waste tailings, Fremont Co., Wyoming. He asks if John Freeland's behavior has been appropriate? John is supposed to understand this psychologev "talk"!

Swayze, Gregg -- Geology 1982

Gregg lists his occupation as "professional T.A.". Currently he's gathering data (summer '83 field season) on 2.2 Ma Red Creek rocks of northeastern Unita Mountains. He notes that Gary Jacobs would be proud of him doing geothermometry and working with T/P conditions of the alumino-silica triple point. Has Kyanite-Andalusite-Sillimanite system (Jerry Naski would be excited too he claims). Gregg decided to conclude his field season after being chased by 1) tornado, 2) lightning, and 3) flash flood; all in one day!

TenHarmsel, Ron - Geology 1979

MAPCO, Ron's former employer, shut down their Billings, Houston and Midland offices, and laid off its entire Billings staff this past year. (Hope no one has stock in this one.) So Ron's in a holding pattern, and on the job market. Wife, Judy and 2 year old Lauren are doing very well. The family enjoys Billings, and camping and fishing in the mountains. At last report, Ron had a "chant drum" so we expect a whole series of changes to occur, direct from the Great Spirit.

Tondu, Joe - Geology 1973

In the last newsletter the request went out to Joe: "give us some news", so we got both barrels! Joe's observations raise a point: for the class of 1973 its your tenth anniversary! "Its been 10 years since I graduated from GVSC. It's one thing to be out of high school for 10 years, but 10 years out of college -- that's almost adulthood!! That puts me at about the age of most of my college professors when I was in their classes. Or at least I think so as us mere plebeians wouldn't dare ask those who walk on water such a presumptuous question as one which referred to age. Oh that does bring back those memories of fear!

Now that I have come back to earth, I should give you that little up date. After graduation from UT I worked for about three years for Getty Oil. When I left, I went out on my own as an independent oil operator. Translated that means seat-of-pants geologist for hire. I felt pretty good about my geology, but I sure did have a lot to learn about business.

I got fairly lucky and drilled a couple dozen wells, more of which were good than bad and that got the ball rolling. Like any true entrepreneur -- the latest buzz word for promoter -- I just couldn't stop and I had to try my hand at the big time. So I created a small oil company and took it public on the Vancouver Stock Exchange. Last spring I sold it and did fairly well on the transaction.

The big news, of course, has been the downturn in the oil industry. I could write a book on that subject. Because I moved very quickly, laid off all but four people, paid off most of my debt and went to a strong cash position, I have come through the downturn relatively intact. An awful lot of my peers were not so lucky. One thing is certain, the oil industry is in a depression -- one which, at this time, there is no end in sight.

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Those opportunities include continued work in oil and gas acquisition, occasional drilling, and a venture into gold mining. Joe predicts that the Goliath Mine in Hemlo on the north shore of Lake Sueprior will be as big as its name!

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Swayze, Gregg - Geology 1982

Gregg lists his occupation as "professional T.A.". Currently he's gathering data (summer '83 field season) on 2.2 Ma Red Creek rocks of northeastern Uinta Mountains. He notes that Gary Jacobs would be proud of him doing geothermometry and working with T/P conditions of the alumino-silica triple point. Has Kyanite-Andalusite-Sillimanite system (Jerry Naski would be excited too he claims). Gregg decided to conclude his field season after being chased by 1) tornado, 2) lightning, and 3) flash flood; all in one day!

TenHarmsel, Ron - Geology 1979

MAPCO, Ron's former employer, shut down their Billings, Houston and Midland offices, and laid off its entire Billings staff this past year. (Hope no one has stock in this one.) So Ron's in a holding pattern, and on the job market. Wife, Judy and 2 year old Lauren are doing very well. The family enjoys Billings, and camping and fishing in the mountains. At last report, Ron had a "chant drum" so we expect a whole series of changes to occur, direct from the Great Spirit.

Tondu, Joe - Geology 1973

In the last newsletter the request went out to Joe: "give us some news", so we got both barrels! Joe's observations raise a point: for the class of 1973 its your tenth anniversary! "Its been 10 years since I graduated from GVSC. It's one thing to be out of high school for 10 years, but 10 years out of college -- that's almost adulthood!! That puts me at about the age of most of my college professors when I was in their classes. Or at least I think so as us mere plebeians wouldn't dare ask those who walk on water such a presumptuous question as one which referred to age. Oh that does bring back those memories of fear!

Now that I have come back to earth, I should give you that little up date. After graduation from UT I worked for about three years for Getty Oil. When I left, I went out on my own as an independent oil operator. Translated that means seat-of-pants geologist for hire. I felt pretty good about my geology, but I sure did have a lot to learn about business.

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Now for the big news! Joe and Linda are the proud parents of Austin Mitchell Tondu, born August 23, 1983. Joe says he's quite a boy "and has definitely changed my lifestyle---for the better!"

(We should get such long letters from everyone -- thanks Joe)

Tower (Robinson), Janet - Geology 1981

Janet married Joby Robinson on July 23, 1983. Joby's also a geologist, and hails from North Carolina. They're living in Lansing and were departmental visitors early this school year. Janet keeps in touch with teammates Lorraine Alcott and Jeff Coleman.

VanderMuelen, Dean - Geology 1982

The former "ghost" of the department continues his work with the U.S.G.S. including the first project that he can call his own. He is mapping and assessing the economic value of a BLM proposed wilderness area covering about four 7½ minute quadrangles in the central Pueblo Mountains, southeast Oregon. Dean notes "the geology is diverse both lithologically and structurally. The western portion of the range is a stack of ash flow sheets, the central section is basalt flows onlapping metamorphics, the eastern portion is the collapsed west wall of the Pueblo Caldera. The entire Pueblo block is tilted 15° to the west. Love it!" (Dick thinks this is a description of heaven.) Dean spent four weeks alone, mapping -- and he survived being with himself that long in the field, including having to listen to himself sing! Work will continue in the spring.

Graduate school plans will wait for fall 1984. Dean is "looking forward to seeing everyone at Christmas." Thanks for the front cover, Dean.

Verhagen, Ingrid - Geology 1982

Another '82 grad, Ingrid reports she's begun her thesis at the University of Minnesota, Duluth. She spent two weeks trying to find the elusive contact between the Negaunee Iron Fm. and a diabase sill to prove her contact metamorphism/metasomatism hypothesis, and taking lots of samples that are now being thin sectioned. Ingrid thinks that the poor exposures, massive man-eating insects, and swamps of the U.P. build character. Back in Duluth, she lives on Lake Superior's shore with an inspiring view that includes passing eastern European grain ships. (Watch those suckers for us, Ingrid)

Versluis, Pete - Geology 1981

A conversation with Pete's cousin, Chad, tells us he's working in Michigan. Chad, incidently, was a geology major at GVSC before transferring to Marietta, Ohio into petroleum engineering (he's back at GVSC for one term before returning to Ohio).

VerWoert, Dan - Geology 1970

Dan is a groundwater geologist with Brown and Caldwell out of Walnut Creek, California. Dan moved from Denver in 1981, a timely move, to begin work in the Topics Management Department investigating groundwater contamination in the San Francisco Bay area. His family enjoys California, but they miss their country living in Michigan. They visited Michigan in August including a stop at the GVSC bookstore for t-shirts and jackets (wear them proudly in California!). and returned west via the Badlands, Rushmore, Tetons, and Yellowstone (6,628 miles roundtrip). Dan says it was a nongeologists tour, but don't bet that he wasn't looking at the geology while everyone else watched the buffalo! Dan displays his AIPG shield with pride (#6320).

Vrona, John - Geology 1977

John recently joined Wolverine Gas and Oil Company, Inc. out of Grand Rapids as exploration geologist. John began with Sunoco in Houston, moved to San Francisco where he worked for Sohio and wife Fran with Chevron. He worked on Prudhow Bay development and then with the North Alaska exploration group. Family ties in Michigan brought them home, and after a stint with Miller Brothers, John joined Wolverine. And what's nice about Michigan -- well, John's bagged a buck this fall.

Waggoner, Guy - Geology 1976

No word, but spys tell us he's still at the University of Rhode Island.

Walters, Jim - Geology 1970

Jim continues teaching at the University of Northern Iowa. This summer he attended the Fourth International Conference on Permafrost in Fairbanks, Alaska where he presented a paper on sorted patterned ground features in the High Valley/Tangle Lakes region of south-central Alaska. Jim was part of the GVSC alumni contingent at this year's GSA.

Waythomas, Chris - Geology 1979

Chris just finished up a bunch of loose ends on Alaska -- report for Norm's project and SIU thesis. He's into his Ph.D. program at the University of Colorado and still running marathon distances. He will be visiting GVSC soon and presenting a seminar during his stay here. Chris was also at the GSA meeting in Indianapolis.

Werkema, Mike - Geology 1981

Mike is still looking for that elusive job. He co-authored a paper at the recent GSA (Mechanisms of Rock Deformation in Basement-Involved Thrusts of Southwestern Montana).

Werner, Al - Geology 1979

Al visited the department after the GSA meeting, and kindly presented a seminar. After being layed off by Shell he decided to pass up opportunities with other companies and re-enter graduate school. He's currently an auditor at Rice (Dr. John Anderson's course), and has his sights set on the University of Colorado. If so, the old Werner-Waythomas team will be back in action (shouldn't someone warn University of Colorado?)

Wolfe (Mason), Lynette

Lynn visits the department now that the Masons are in Montague. She's a busy mother to a 10 month-old daughter! (Keep Dale going on the thesis, Lynn!).

## 1983 Graduates --- Their Destinations

The economy remains as a tough hurdle for new graduates. The old professor's sage advice that one needs a master's degree as an entry into the professional job market was never truer, and its tough even with a masters. We see more people in holding patterns, waiting a year to begin graduate work, staying longer in graduate school.

Even counting some "holdovers", we have a low number of graduates this year, reflecting the two-year trough in majors enrollment trend that we see repeated over the years, but cannot explain. Mid-year graduates and "incompletes" cloud the picture as exactly who graduated when.

Tim Cousineau is still in the area -- working, and perhaps not yet completely "graduated", while Billie Tobin has just finished the "left-over" courses. Billie is working as a geologist for Smith Petroleum. Mark DeKruyter entered graduate school at the University of Wisconsin, Milwaukee after working as Norm's field assistant in Alaska. Mark is a teaching assistant at UWM. Mike Gallagher is in the holding pattern, perhaps he'll decide to shoot for graduate school next year. Mike is doing roofing (We seem to have lots of graduates who have carpentry skills.), and someone seems to be drawing him back to the Allendale area so he visits the department occasionally. Ron Sheets finished mid-year and spent the summer in Nova Scotia as a field assistant to Jack Henderson. Ron was a guest student at Ohio State last spring, and entered the regular graduate program this fall. Mark Wallinga and Greg Wilson completed field camp during the summer and are working locally for a year, but plan to enter graduate school next fall. Greg is auditing Oceanography.

We wish all of this year's graduates good luck and success. Keep in touch.

### Summer 1983 Field Camps

The past summer saw one of our smallest groups going to field camp.

Tim Cousineau and Rich Christenson - Mesa College  
Mark Wallinga and Greg Wilson - Albion College

Both camps are out of Colorado, with travel to other states. Mark and Greg received National Association of Geology Teachers Scholarships to continue a long list of such honors earned by previous GVSC geology students.

The 1984 field camp group is going to be one of our largest ever.

Several of our majors or last-year graduates had field experiences of great value. Bruce Jones and Ron Sheets worked with Jack Henderson in Nova Scotia. Mark DeKruyter worked as Norm's field assistant in Alaska. Steve Tebor worked on a geophysics crew out of Wyoming. Renee Varin helped park rangers at Hoffmaster Park develop educational programs. Will Armstrong traveled to the Grand Canyon. And last, but not least of summer experiences, were wedding bells for John Nyhoff (John and spouse honeymooned in California), and the same for Greg Wilson. Best of wishes to grooms and brides. And the same to Sue DeBoer, soon to be a bride.

## Donations to the Department

Fund development is noted elsewhere in this newsletter, but special attention also should be given to non-cash gifts or "in kind" contributions to the department. Specimens, equipment, books, models, maps, and services are essential in meeting our educational goals. 1983 was a banner year for this area of giving by some special friends of the department and alumni as well.

### Miller Collection

Mr. and Mrs. Paul Miller of Big Star Lake donated a beautiful and valuable collection of minerals which we hope to have on display by next fall. Although small in total volume, the collection is rich in its representation of Michigan's mineral varieties including scarce specimens no longer to be found (from old abandoned mines). Mrs. Miller is a person with a talent for selecting specimens of unusual beauty and form, so the collection is very "showy", as well as including specimens suitable for the teaching collections (a few fossils, rocks, and artifacts were included).

Mr. Miller's career began in the 1920's, first in the aggregate business, and later running his own road construction contracting business out of Sparta, Michigan. His work took them to different parts of the state, and during the time the Millers lived in the Upper Peninsula they collected from mine workings, and made friends with miners who kept an eye open for specimens for them. Paul and his wife are both pilots, and for many years flew to rock and mineral shows, or to Canada on collecting trips. They've traveled widely in other parts of the world, and brought back minerals as souvenirs. Their thirty years of knowledgeable and highly selective collecting now has provided Grand Valley mineralogy students with an opportunity to see a broader range of nature's handiwork. Eventually, when the collection goes on display, all of the GVSC community and visitors to our campus will be able to share in the beauty of the Miller's "natural art" collection.

Hats off to Dick, Bill, Tom Bee, and students Bob Versical and Will Armstrong for their efforts in cataloging, packing, and transporting the collection. The many fragile specimens required special handling. Tom Bee furnished flats, and Jack and Bette Weerstra donated special packing material. This collection, along with the Rogan Collection, has initiated a general inventory of all of the department collections, and planning for additional display cabinets.

Thanks Mr. and Mrs. Miller!

### The Rogan Collection

The Rogan collection is one of wide variety and great bulk including many "over-size" specimens. Without solicitation on our part, Mr. William Rogan of Rockford, Michigan called us and said he would like us to have his mineral collection for educational purposes. Apparently he bestowed this very valuable collection on Grand Valley because he remembered that our first president, James Zumberge, is a geologist. We're not too fussy about reasons, and we gratefully accepted it!

Tom Bee (Grand Valley '73) second-year students Will Armstrong and Bob Versical, and Dick drove two trucks out to Rockford on a cold January day, unprepared for the surprise that awaited them. In one day they loaded a pick-up and a cargo van with as many mineral specimens as they could hold without breaking their springs! Mr. Rogan collected extensively from Mexico, once owned a mine in Idaho, and lived for a time in California. The collection includes mini-collections of Fluorite (Illinois), Selenite Roses (Mexico), and Agate (Mexican, Indian and African). The Mexican specimens are rich in Endlichite, Malachite, Koettigite, Wulfenite in addition to the Gypsum (selenite) and Agate mentioned above. Other unusual specimens

are a 140 pound piece of jade (Nephrite) from California and a 250 pound piece of petrified wood from Arizona. The collection even includes dinosaur bones and coprolites (70 pounds of the latter, n.s.). If all that isn't enough (100's of pounds of specimens aren't mentioned here -- only the highlights), Mr. Rogan also donated lapidary saws, grinders, polishers, buffers, laps, tumblers and even blades and grit to go with them. This equipment expands our "saw room" capability and provides backup units in the case of the rotap. A simply "thank you" sounds inadequate, but we and all future Grand Valley students do indeed thank you from the bottom of our hearts, Mr. Rogan! Parts of this collection now resides in and completely fills all our available display space --- come and see it. Many more specimens from the collection will eventually go on display when additional cases are added. Together with the Miller and Goettman collections, this puts us in the mini-museum volume of materials!

### Other Materials

Someone should total all the "little" items Tom Bee has given to the department -- it would equal "a lot". Tom's most recent gift is a set of crystal models for teaching -- an important replacement item for Dick's mineralogy. We also "horse-trade" with Tom from time to time, so he's one of the department's hidden resources in Western Michigan.

Larry Austin is another local resource who provides shared equipment, books, talks, and on occasion provides Bill with "unknowns" for size-analysis in sediment. In the same vein, thanks to Lauryl Lefebvre for obtaining some surplus reference materials from MSU, and to the faculty for journals and reference materials.

Finally, but not leastly, are those of you who not only visit the department, but come with a seminar in hand. To mention only the most recent, Al Werner and Dale Mason (and the promise of Chris Waythomas) is not to slight several of you for past talks. Thanks to all.

## SCHOLARSHIPS

### Edward L. Tremba Geology Scholarship Endowment

1983 was a year of continued growth for the Tremba Scholarship endowment. We started the year (as of the 1982 Newsletter) with a balance of \$5006.71 and the current balance is \$6756.54, a growth of \$1749.83. An additional \$200 is pledged to the fund by Conoco on a double match, so by the time you get this Newsletter the balance should be close to \$7000! Thanks to all the contributors listed below and to the contributors of past years for making this scholarship endowment the success story it has become.

Last April the department made its second award from the fund - a scholarship in the amount of \$480 to Greg Wilson, a senior whose major interest is in hydrogeology. This year and in subsequent years the interest from the fund will allow us to fix the amount of the award at \$500, our initial goal. As the fund builds toward \$10,000 we will probably make multiple awards, but the final decision on that hasn't been made. An alternate strategy would be to initiate another fund, a development fund for field trips, faculty and student research, equipment, etc., while allowing the Tremba fund to grow to or beyond the \$10,000 level. This strategy is discussed elsewhere in the Newsletter.

Contributors to the Tremba Scholarship fund since the 1982 Newsletter are listed below:

Patricia Videtich (twice)	Larry Flynn
Conoco, Inc.	Tom Bee
Shell Companies Foundation	Tom Hendrix
Dick Lefebvre	Al Werner
Bill Neal	

### Students in Geology Holding Scholarships, Fall 1983

1. Tremba Scholarship - Greg Wilson
2. GVSC Presidential Scholarship - Timothy Gray
3. Upper Level Merit Scholarship - Molly Holden
4. Geology Scholarships

Ken Bevis	Bruce Jones
Judy Campbell	Leslie Ritter
Rich Christensen	Luanne Teesdale
Marty Damon	Doug Thompson
Sue DeBoer	John Tweddale
Brad Garmhausen	Bob Versical
5. NAGT Summer Field Course Scholarships

Mark Wallinga
Greg Wilson
6. GVSC (summer) Geology Scholarships

Rich Christensen
Mark Wallinga
Greg Wilson
7. Tulip City Gem and Mineral Society Scholarship - Greg Wilson

Student to Student Funding Schedule, Fall 1991

1991-1992 year 2 continued amount for the year. Both...  
The total amount of the year 2...  
and the amount of the year 1...  
The amount of the year 2...  
The amount of the year 1...  
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The amount of the year 1...

1991-1992 year 2 continued amount for the year. Both...

1991-1992  
1992-1993  
1993-1994  
1994-1995

1991-1992  
1992-1993  
1993-1994  
1994-1995

Student to Student Funding Schedule, Fall 1991

- 1. 1991-1992 - 1991-1992
- 2. 1992-1993 - 1992-1993
- 3. 1993-1994 - 1993-1994
- 4. 1994-1995 - 1994-1995
- 5. 1995-1996 - 1995-1996
- 6. 1996-1997 - 1996-1997
- 7. 1997-1998 - 1997-1998
- 8. 1998-1999 - 1998-1999
- 9. 1999-2000 - 1999-2000
- 10. 2000-2001 - 2000-2001

1991-1992 year 2 continued amount for the year. Both...

Geology Majors - Fall 1984

(Class status: Expected graduation date)

Armstrong, Will - '85	Moore, Michael - '85
Ashley, James W. - '87	Murmurian, Dickran - '86
Bernethy, Patrick - '84	Nyhoff, John - '84
Bevis, Ken - '86	Pater, Tim - '87
Beyer, Alisa - '86	Patterson, Mike - '86
Boatman, Eric - '86	Ritter, Leslie - '86
Brooks, Bob - '85	Rollo, Tom - '84
Campbell, Blaine - '85	Roslaniec, Mark - '84
Campbell, Judy - '85	Salinas, Philip - '87
Canfield, Jeff -	Shamo, Robert - '87
Christenson, Rich - '84	Smith, Andrew - '87
Crossen, Carl - '85	Smith, Daniel - '87
Crandall, Kevin - '85	Snyder, Pam - '86
Damon, Martin - '87	Tebor, Steve - '84
Davis, Dale	Teesdale, Luanne - '87
DeBoer, Susan - '84	Thompson, Doug - '87
Dryer, Rich - '87	Tourville, Jim - '84
Frimodig, Mark	Tuck, David
Garmhausen, Brad - '87	Tweddale, John - '85
Gimborys, Michael	VanderBerge, Craig - '85
Glupker, Jeff - '86	VanderKam, Lori - '86
Gray, Timothy - '87	Varin, Renee - '85
Grumley, Larry - '86	Versical, Bob - '85
Holden, Molly - '85	Viger, Suzanne - '85
Huyser, Mark	Wagner, Ross
Jones, Bruce - '84	Yoshida, Karen - '87
Linder, Jim - '85	
Lumney, Kevin - '86	
Minnich, Todd - '85	
Moe, Eric - '85	



## The 1983 G.S.A. Report: Halloween in Indiana

Indianapolis, Indiana may not seem to be a likely spot for a national meeting, but excellent facilities and few "outside" distractions provided the setting for a successful convention. Over 1,200 papers in symposia, poster sessions, and regular section meetings provided a broad sampling of the rapid advances in an array of geosciences. Geology is stepping up onto the next plateau of knowledge as we look deeper into the crust and at the finer details of shallower, more familiar rocks. Geophysics and geochemistry are at the forefront, but not just in the sense of specialized subdisciplines. Clearly, all of the subdisciplines of geology are making use of these areas of applied science.

Grand Valley was well represented at the meeting. Several alumni were in attendance, including Jack Hall and Mike Werkema who were authors of papers. Dick, Bill and Tom represented the faculty, working to keep pace with the discipline, as well as participating in the work of the National Association of Geology Teachers in which they hold offices. Six current students attended their first national meeting in which they could experience the sense of "professionalism" that the department strives to instill.

The highlight of the meeting was Grand Valley's reunion party. Dick and Bill began an inventory of alumni on their arrival, and it was soon clear that we had a modest representation that warranted a reunion.

Thanks to Patty Videtich, we were provided an ample space in which to meet (Dick and Bill's quarters were in the "low-rent district" and not too spacious); and thanks again to Patty as well as Roger and Sue (Marcus) Haskins, we had ample refreshments! So, while the larger institutions hosted centralized alumni gatherings on the evening of October 31, Grand Valley's participants held their more lofty position in the Hyatt to the proceedings below, without envy. It was a Halloween to remember!

For the faculty (Dick, Bill, Tom and spouse, Nina), it was a time to catch up with the progress of our alumni. In addition to Patty Videtich (Conoco Research) and the Haskins' (Bureau of Land Management), other alumni present were Jack Hall (Ph.D. candidate, Ohio State), Jim Walters (Professor of Geology, Northern Iowa University), Chris Waythomas (Ph.D. candidate, University of Colorado), Mike Werkema (recent M.S., Western Michigan), and Al Werner (formerly with Shell Oil; currently enrolled at Rice University). Our special guest was John Zumberge, geologist with Cities Service Company, who told us of the early days at Grand Valley when he worked at clearing brush on the early campus. Ken Helmold, also with Cities Service, and Lee Allison (Ph.D. candidate at the University of Massachusetts) rounded out the guest list, and were made honorary alumni before the evening ended (unofficially and off the record)!

Students Will Armstrong, Mike Gimborys, Mike Moore, Wladyslaw Ochocinski, Renee Varin, and Craig Vandenberg enjoyed an opportunity to chat with geologists in industry, government agencies, academia, and graduate programs. They also heard some stories about their professors which couldn't possibly be true!

We missed Doug Bowdon and his wife at the party, but a few of us did get to visit with Doug during the meeting and catch up on his activity in western mining. Such visits with alumni, and our colleagues in industry, government, and other institutions is one of the rewards for attending meetings. Of course, listening to papers and visiting displays is the central focus of such conventions, and we are now enjoying the sharing of what we've learned.

## 1982 CHRISTMAS PARTY

The Seventh Annual Geology Holiday Party was marked by record high temperatures, rain, a lower than average turnout, and a distinct lack of dampened spirits. Some 50 students, alums, faculty, staff and other friends of the Geology Department attended this past year's party at a new location, Le Petit Chateau on 48th Street in Allendale. There were approximately twice as many alumni as current students; the actual ratio was 20:8, and this has been a pattern for most of the past parties. At least 5 alumni were there who attended the first party in 1976, namely Larry Austin, Tim Baker, Tom Bee, Julie Rutherford, and Loyal Suntken. Tom Bee has an unbroken string of 7 straight parties. Laurels for the oldest graduates of Grand Valley again went to Dave and Glenda Rogers; Glenda actually graduating in 1968, a year before Dave. Two 1973 graduates who had not had a chance to attend past parties because they were residing in the western part of North America, both in Canada and in California, were Roger Haskins and Susan Marcus. Roger graduated from Grand Valley College of Arts and Science Geology Department in 1973 and Susan from Thomas Jefferson College in the same year. They now live (together - as man and wife) in the Washington, D.C. area where they transferred with BLM (Bureau of Land Management).

All the faculty and staff were able to attend and a number of their family members were present. Dean VanderMeulen told us about how much fun it has been to map volcanics including calderas in Oregon, and Lorraine Alcott told us how excited she was about the emphasis on paleontology in the educational systems of Kansas (something she had been warned about by Lefebvre who went through that at the University of Kansas many years ago). Mineralogy students Judy Campbell, Kevin Crandall and Craig Vandenberg came to drown their sorrows and seek consolation. We learned more about seismic stratigraphy from Dawn VanderZouwen, and about Boston fashion from Nancy Demorest. John Nyhoff didn't show nor did Patrick Bernethy or Jeff Spruit, but we got their money anyway! Sue DeBoer volunteered to take the empty beer bottles back - she was assisted by Mark DeKruyter. Mike Gallagher finally consented to entertain us with his musical(?) talents. Tim Cousineau dodged Greg Wilson who was collecting money. Timea Henderson came by to say Hello to old friends, and John Freeland and Pat Bartnik came all the way across the state to bid us a Merry Christmas as well. Dart Oil sent two representatives: Tim Baker and Mark Bishop (and even more importantly - their wives Mean Mary Jean and not so mean Jeanie). Steve McCollough, thought to be lost in the wilds of the upper Peninsula arrived on the scene with his ever present roving eye. Loyal Suntken finally found out about the Christmas party by receiving his first newsletter! Probably because she had to sleep a while before coming to the party, Ginny Peterson arrived sometime after midnight. Jeff Woollett was only there one-half the night. Luckily during that time he set up and took down his stereo system. Thanks Jeff! In between those two events, he was reachable only by dogsled or parapsychology.

Now it's time to think about getting into the holiday spirit(s) again, so plan to be with us this coming December 27th!

## The GVSC Geology Club News

The Geology Club for the 1982-83 year was led by two Presidents due to Ron Sheets' December graduation. Greg Wilson left his position as Secretary-Treasurer to fill the office, while Judy Campbell remained the Vice President. Will Armstrong was then voted into the Treasurers job for the winter semester.

Some of the highlights of the year included, of course, the annual fall picnic. Held at Tom's house, the evening featured a chili potluck dinner, and the volleyball net was surrounded most of the time. About the only time the net wasn't attended was during the destruction of the Biology Club on the softball diamond. The keg didn't seem to be as much of a handicap as last year; Geology triumphed 14 to 6.

A later challenge from Biology to a bowling tournament was met by a stunning two-tenths of a pin victory for the Geo-Club thanks to the fine performance of Bill "Brunswick" Neal and crew. Another athletic challenge, but this time from the Chem Club, proved to be no threat as the Geo Club, led by Bruce Jones, Todd Minnich and Greg Wilson, rolled to a ten point basketball victory. It looks like the infamous "Women's Tug-of-War" trophy has found a home in room 118.

Mineralogy and Petrology post-exam parties, and the Geo Club winning \$50.00 in Bob Versical's Super Bowl pool all led up to the senior party. Held at Will Armstrong's Rich Street apartment, the party for the relatively few graduating seniors proved to be a fine way to close out the year. I wonder if Mike Gallagher ever told his field camp instructor that he finally found his pair of underwear they were looking for in the summer of '82. They (his undies) actually came home with the spring field trip group to await Mike's graduation.

This year's new officers are President Bob Versical, Vice President Suzy Viger, and Secretary-Treasurer Molly Holden.

The 83-84 year started off traditionally with the fall picnic hosted this year by Dick. He managed to keep all of the guests happy with volleyball, ping pong, and his own supply of beer and pop while everybody was beginning to question the whereabouts of the late arriving keg. Finally, Jim Tourville rolled up with the barrel just before a search party was to be dispatched. We checked to make sure the contents were still full because we couldn't figure out why he was two hours late. Once again this year a chili supper was enjoyed, and a few more games of volleyball were completed before the rain came down. The weather didn't dampen anyone's spirits as we moved under the deck and inside to close out the evening.

One of the major goals of this year's club is to help fund a spring field trip to the Ozarks. Norm got us going by donating \$100.00 to the field trip fund for help with building a retaining wall at his new cottage. Despite a late arrival, volunteers Pat Bernethy, Mike Moore, Will Armstrong, Bob Versical, and Loutit Hall technician Jeff Woollett completed a good part of the project. Other fund raising ideas include the preparation and sale of some agates for Christmas presents, parties, a raffle, and bake sales. Another goal for this year's club is to bring in more outside speakers for the winter seminar sessions.

Well, we are all looking forward to having an exciting, challenging, and rewarding club year.

## 1982-1983 Guest Speaker Program

Last year's seminar program drew from the pool of geologic talent in the West Michigan area. We kicked off the invited speakers program with a visit by our alumnus, Tom Bee who told us "All you ever wanted to know about Pseudomorphs but were afraid to ask". In November we were treated to the first of several seminars that focused on economic geology. Gary Thompson, consulting geologist, spoke on "Palynology in Oil and Gas Exploration", providing insights into an aspect of paleontology that we rarely cover. Tom Segall, State Geologist and Chief of the Geological Survey Division, Michigan Department of Natural Resources, outlined the "The Michigan Geological Survey --- Role and Functions". His presentation, and the discussion that followed, allowed us to learn how a state survey functions, and the tasks carried out by survey geologists. The Lansing connection continued in November as our attention turned to igneous rocks. Dr. Tom Vogel of Michigan State's Geology Department, presented an excellent lecture on "Ash Flow Tuffs --- Why We Study Them". Dick Lefebvre already knew the answer, but the rest of us learned a great deal!

Dr. John Grace of Western Michigan University was the first guest of the Winter Semester. John spoke on "The Antrim Shale -- A Resource for the Future", and we ventured back into the Paleozoic, the black shale problem, and economic geology. In the cold of February, Dr. Jim Clark, Calvin College's newest geologist, spoke on his research "Isostasy and Global Sea Level Changes". Those of you who are following Neogene sea level change history should read Dr. Clark's published work.

Jim Watson, Smith Petroleum geologist, closed the year with a presentation on "Independent Oil Companies -- Methods and Comparisons to Major Oil Companies", stressing that undergraduates need to concentrate on developing skills in communication, problem solving, and mapping. Billie Tobin and Suzanne Pearce are working for Smith Petroleum and are sure to learn some subsurface geology from Jim.

We extend our thanks to all of the speakers noted above; for their formal presentations as well as for taking the time to share in informal discussion, including a glass of good cheer.

## Reefers on the Run

by

John B. Tweddale

On the weekend of April 23-24, 1983 Dick Lefebvre, Lauryl Lefebvre, Greg Wilson, Blaine Campbell and I travelled south to Indiana. Why would a group including Grand Valley students and staff drive so far when final exams were due to begin the following Monday? We were lured by the ever-present quest for knowledge. Fort Wayne's Indiana University-Purdue University campus hosted a symposium of the East-Central National Association of Geology Teachers on the "Geology of Paleozoic Rock Resources and Energy Resources in the Southern Great Lakes Region (with emphasis on the Silurian System)".

The focus of the meeting was on "tools for teaching" - information useful for both college geology teachers and secondary earth science teachers. Jack Sunderman coordinated the meeting and field trip which occupied the weekend. During the course of these two days, we were exposed to a wealth of information on carbonate rocks and impressed by the spectacular examples of such deposition on the borders of the Michigan Basin.

A series of seminars were held on Saturday, dealing with reefs, pinnacle reefs, evaporites, petroleum, gas, coal, limestone and economic geology in general. All of the talks were enlightening and obviously were based on some very detailed research; but the most fascinating presentation was given by Shell Oil geologist Alan L. Rolph - a young man with a good knowledge of geology and an even better knowledge of public relations. He gave his talk on "Deposition, Diagenesis, Detection and Development of Niagian Pinnacle Reefs in the Northern Michigan Basin". Rolph used abundant diagrams and photographs (including pictures of well cores) to illustrate his points and leave his listeners hungry for more information.

After the discussions were concluded, the "GVSC clan" drove back to our lodging - the Red Roof Inn. Dick returned for a banquet on campus, but we students lagged behind and gorged ourselves at a local eatery. (Why aren't there many "all-you-can-eat" restaurants in Michigan?) Saturday night, Blaine and I tried to study for our Sed-Pet exam.

On the subject of Sed-Pet, our own sedimentologist-stratigrapher, Bill Neal, couldn't attend this conference because of an untimely illness. Dick, however, was able to provide the additional insight that we needed to understand why reefs form and why they're important.

Sunday we finally handled and identified the rocks we had been talking and debating about the previous day. Our stops were concentrated in the Fort Wayne-Huntington-Largo-Wabash areas of the Upper Wabash Valley. Field locations included the May Stone Quarry, the Hanging Rock Reef southeast of Largo, the Wabash Railroad Reef, and the Shanty Falls Reef. The lithostratigraphic units identified were the Louisville Limestone, the Wabash Formation, the Detroit River Formation, and the Traverse Formation. Brachiopods, crinoids, gastropods, corals, and stromatoporoids were the abundant fossils. This day of climbing and examining rocks completed a superb presentation of Silurian strata of the midwest and their geologic implications.

A beautiful spring day graced our return trip, complete with a drive through some of northern Indiana's Amish communities. Everything had gone smoothly and we had learned much. Dick, however, seemed disappointed in the symposium - he must have expected at least one seminar on "Michigan Volcanism During the Silurian".

After describing the conference and relating the concepts we had learned, Blaine and I were relieved when Bill allowed us to take the Sedimentary Petrology final exam later in the week. Higher education does have its advantages, after all.

## Indiana Field Trip

Late Friday evening, April 15, a Grand Valley bus lumbered into McCormick State Park. It deposited about 20 students down the road from the park's inn, where it would spend the night along with Bill Neal, and Tom and Nina Hendrix. The students left in the cold without a stop at any convenience store quickly got a fire started and sent out a couple of parties in search of liquid refreshments. The two groups who set out on foot soon returned by car, thanks to some friendly natives, with plenty of supplies to make the 30° temperatures a little more bearable.

The next morning after a hearty breakfast, the Grand Valley group set out to study the local geology. The day was filled with limestones, fossils, floodplains, roadcuts, reservoirs, lost rivers, and finally a stop at Elrod Cave.

The group arrived at a rural farm where the Wesley Chapel Gulf, the largest sinkhole of the Lost River drainage system, was located. An estimated 720,000 cubic feet of limestone was removed by solution here. The Lost River makes a temporary rise at the southern end of the gulf; this area was flooded at the time we visited.

Bill got a nice picture of a vortex where the river made its way back underground. Tom then led a group of some of the braver souls, or those equipped with mud gear, through Elrod Cave. Our fearless leader escorted the group through the underground maze without any lost souls or casualties, but there were reports of deadly gas in one of the caverns. The hardened group surfaced face to face with Bill's 35 mm.

That night Tom's daughter, Lori, had a very pleasant party for the group at her Bloomington apartment. This topped off the day perfectly.

Sunday was spent at two locations; the Illinois Central Railroad cut west of Solsberry, and at the Cagle Mill spillway. Here our field trip ended and back to GVSC we headed.

A Trip to the McCrone Institute  
or  
The day my kidneys almost burst  
by  
Anonymous

An optical mineralogy class joined by a number of upperclass volunteers and an additional prof. with a day off spent a whirlwind day in Chicago visiting the McCrone Institute.

They had the good fortune to be the classroom guests of Walter McCrone himself who proceeded to educate, charm and bedazzle them with his optical wizardry via TV-microscope set-up similar to the one in 118 Loutit. Dispersion staining and crystal rolling were just a few of the techniques demonstrated. As if that wasn't enough, they were also treated to pizza and pop as Walter McCrone answered questions which centered mainly around his participation in The Shroud of Turin controversy. As the lone dissenter (among 20-30 scientists) to the Shroud's authenticity, he presents a well substantiated case for the use of the optical microscope in investigations of this sort (in addition to all the fancy SEM's, TEM's, XRF's, etc.) His research facility, McCrone Associates, does not lack for these sophisticated tools, it has them all and even some not in the books. The interesting thing about the facility is that each instrument room has a polarizing (= petrographic to us) microscope in addition to the instrument to which the room is dedicated.

Now I suppose you want to hear the "rest of the story". Well it seems that it would have been a shame to be that close to the Field Museum of Natural History without partaking so they scheduled a quick (1 hour) tour before it closed. Of yes, they drank a few soft drinks while there. Needing sustenance, they then headed for Chinatown before the return trip. The choice was clear for some - and great Chinese food won out. For some it was even more clear (read - hazy) and they chose option 2 - beer.

Eventually the time came to depart, for Allendale was a long way off in the direction of the North Star. On into the rush hour traffic as only Chicago can dish it up. No let up. Pop/fizz/beer doing their job, inexorably. Pleading with prof/driver (read professor-driver not professional driver) to find a gas station - any exit will do -- any tree will do. At last in midstream, so to speak, well into Indiana where out-of-state vehicles are scrutinized more carefully (i.e., Michigan state vehicles). A STOP. The doors burst (no pun) open and four headed for the rear of the abandoned gas station - wait, restrooms are locked in abandoned gas station. What now - a light from afar - but getting nearer - and brighter - and louder. H.S., its a helicopter.

Meanwhile back in the van, Lefebvre in the white-hot panic of a Michigan City prison breakout urged the driver to flee the scene -- leaving the beer buckets to their fate. But the driver didn't panic, and waited for his charges. Neal may not pit stop too often, but he's a good get-away driver!

Moral: If you can't stand the light, don't go behind a tree, OR  
A geology student's relief is a helicopter pilot's delight (pee light), OR  
Microscopes, Museums, and Chinese beer don't mix.

## Geology Endowment Development Fund

### Need

If you've read all but this last section, you've caught the two not-so-subliminal messages of this 1983 newsletter. The first is that faculty-student-alumni-friends of this department are more than casually tied to each other -- we hope to celebrate that with as many of you as possible at the annual Christmas-New Year Holiday Reunion Party (Reservation Return Form enclosed). The second is the need for your support.

Support takes many forms -- communication, advice based on experience and wisdom, service, or contribution be it cash or "in kind". Our needs are many and do not diminish with time. Norm outlined position and equipment needs in his chairman's assessment. Our alumni have told us what we need to do to keep pace and improve. We hear the same message from the profession. And our students have some insight into what's best for them, and petition for such. As Norm put it, we must get that message to our administration, and we must help ourselves.

### Perceived Base of Support

Ed Tremba recognized that we had to establish development goals, and thanks to him we began the scholarship fund that bears his name. Jack Henderson pushed for and won a broader base of scholarships that continue to support quality students in our program. Jack continues to provide educational opportunities for some of our students as field assistants, recognizing that educational needs go beyond the classroom. Joe Tondu recently suggested that alumni in the petroleum business ought to start a "send a prof to AAPG" fund, recognizing the need for faculty to be professionally up-to-date versus growing travel costs. Tom Bee provided a set of crystal models for our mineralogy course when he perceived a need. Patty Videtich and Roger Haskins and Sue Marcus sponsored a gathering for alumni, students, and faculty at the recent GSA meeting to provide for professional exchange of ideas in a social setting. Earlier Roger and Sue visited the department and left detailed instructions on how to seek employment with federal agencies, because they're there and know its a confusing process. Dale Mason and Al Werner were recent visitors to the department and gave a special message to our students -- they gained much here and were back to give something in return. All of these men and women are investing in our collective future. We believe that all of our alumni, faculty, students and friends have and will continue to invest similarly.

### The Fund

Like Ed, Jack, and the rest, we see the present as an opportunity for the future. We must start now to build for our future needs. Therefore we are establishing the Geology Endowment Development Fund. This fund ultimately will provide support for departmental needs as perceived by the faculty, and which cannot be met out of regular departmental funds. Examples include equipment, honoraria for guest speakers, underwriting departmental field trips, faculty development through attendance at meetings, short courses, field conferences, and research.

This fund is not meant to compete with or replace the Tremba Geology Scholarship Fund, and will not be used for scholarships. We solicit continued support for the scholarship fund, but believe that the new fund broadens the base of interest and appeal to potential givers which includes alumni, faculty, friends, students, and industry. Only interest from the fund will be used as needed after the principal has reached the \$5000 to \$10,000 range. There will be no upper limit on the growth of the endowment. We expect the fund to reach \$6000 within two years -- a realistic goal, and a reasonable base on which to grow.



### A Challenge to You

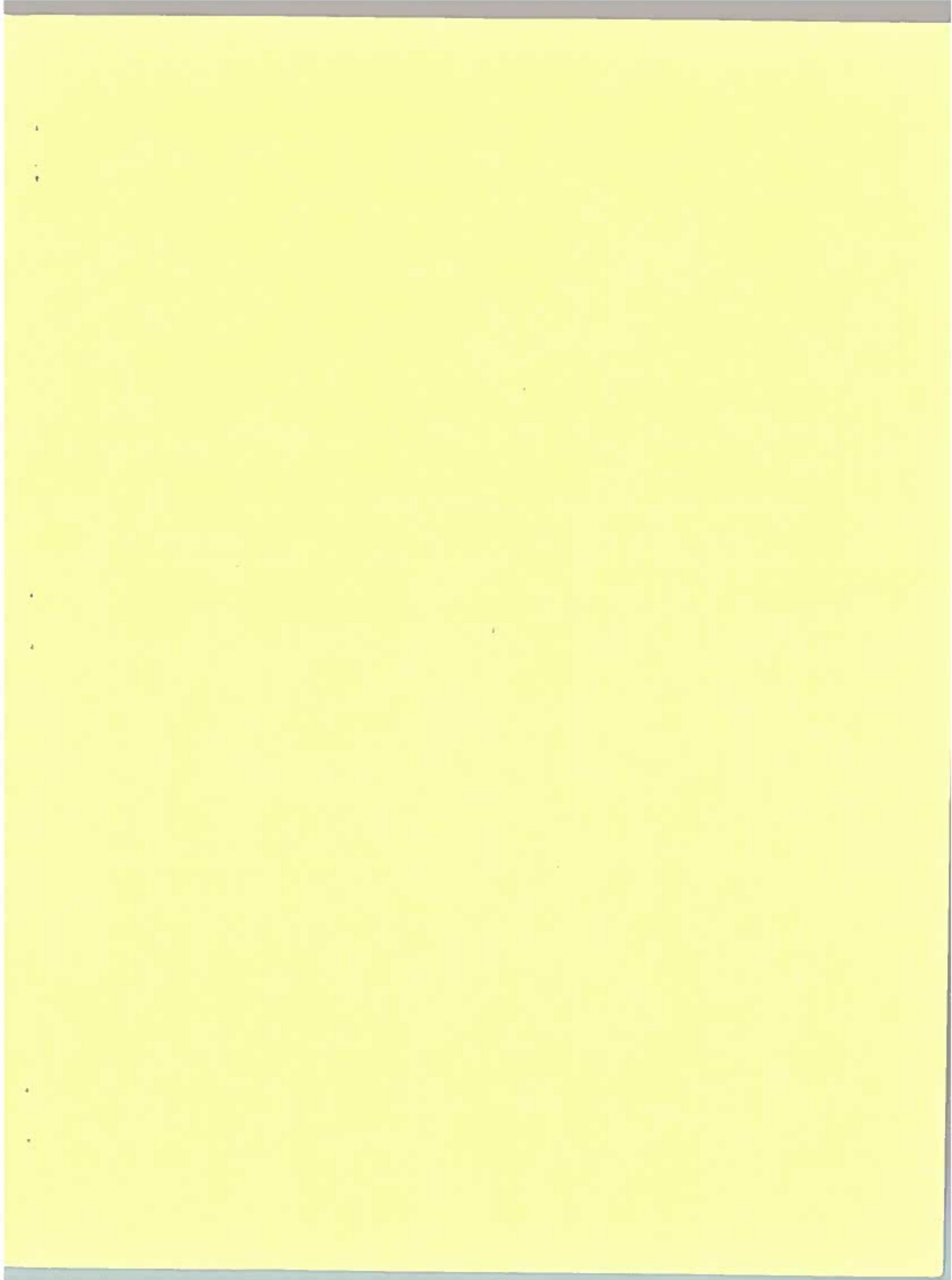
John Dombrowski through a match from his company, Texaco, and the current faculty are initiating the fund with contributions totaling \$1500. We challenge our alumni to collectively match this amount over the coming year for a goal of \$3000 by the end of the first year! A secondary goal is to establish a high percentage of contributors, so don't be embarrassed to give only a dollar --- it tells us you care and helps meet this latter goal.

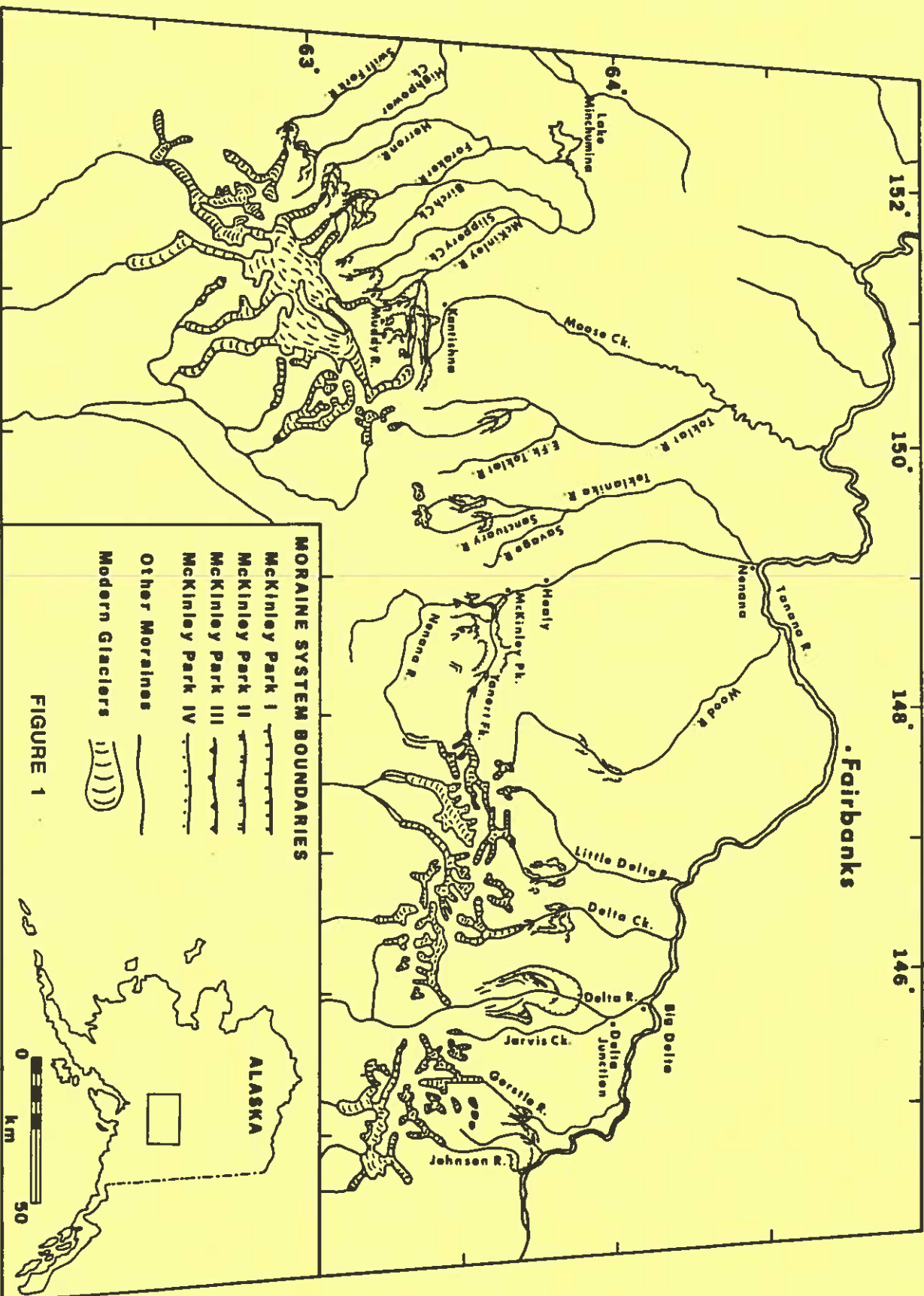
### GVSC Foundation

The Geology Endowment Development Fund will come under the auspices of the Grand Valley State College Foundation. Contributions of \$25.00 or more entitle you to membership in the Foundation. Membership benefits include a gift in recognition of your support (these increase in value in proportion to the level of your gift), an invitation to the spring luncheon held on alternate years, and (for contributions of \$200 or more) an invitation to the enrichment dinner held every other year. Alumni will also be recognized within the alumni association organization for GVSC. And don't forget, your contribution is tax deductible (residents of Michigan can also deduct on the state form under gifts to colleges).

### Meet the Challenge

Contributions may be sent directly to the Geology Department or the GVSC Development Office. Be sure to designate your gift either for the Geology Endowment Development Fund or the Tremba Geology Scholarship Fund if you prefer. Thanks for helping us get a new project off the ground.





LATE WISCONSIN MORAINES IN THE NORTH-CENTRAL ALASKA RANGE  
 Mapped by Norm Ten Brink, Chris Waythomas and Al Werner during the North Alaska Range Project,  
 which is funded by the National Geographic Society and National Park Service.