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**Cover:** Alan M. Cvancara, Fall, 1991. Alan is retiring after nearly 30 years on the UND faculty. We are all going to miss him. See article for more details.
NOTE FROM THE CHAIRMAN
Frank R. Karner

I'm happy to greet you once again and thank you all for the things you do to help the Department. Overall, we're in a period of growth in enrollments and research accomplishment. Graduates continue to be successful professionally and alumni are very supportive. We are continuing in our development of hydrogeology and environmental geology and student enrollment continues to increase in this area. The new Williston Basin Project is getting started and will focus many of our activities in petroleum geology and petroleum engineering. We are actively recruiting majors and graduate students to consider professional opportunities in all areas of resource studies and environmental science. Education of non-majors in beginning classes that focus on Earth and its environment has had strong emphasis. Our new course Geol 103 Introduction to Environmental Issues is highly successful. We continue as major participants in the Integrated Studies Program. Our new program in Environmental Geology and Technology is growing rapidly and we participate in the School of Engineering and Mines' new Ph.D. in Energy Engineering. Some enrollment and teaching highlights are:

- Undergraduate majors more than doubled from last year to 76 this fall with about 20 more considering our four programs.

- Intro courses have grown greatly with fall enrollment increases of 10% last year and 19% this year, even while UND freshman enrollment has decreased 21.8% over the past two years.

- The Department now teaches the largest number of student credit hours in the School of Engineering and Mines amounting to 27-30% of the total for the School. Increasing numbers of majors will maintain and probably significantly increase our contribution to the School.

- Currently 28 students are enrolled in our graduate program. We have been, since 1980, the most productive in total Masters and Ph.D. degrees at UND among the 13 departments with programs in mathematics; engineering; and physical, natural and medical sciences. Last year the department was third in this same group in total number of graduate credit hours behind Chemistry and Biology. We also had the highest graduate credit hours among the five engineering departments making up 38.6% of the total graduate enrollment in the School.

The Department is highly productive in research. Faculty have published extensively and obtained significant grant support as shown throughout this newsletter. A few highlights are: Dr. Will Gosnold received two major UND research awards last year, the Sigma Xi and Burlington Northern awards; Dr. Ron Matheney's newly developed isotope geochemistry laboratory is almost complete; and Dr. Dexter Perkins published 5 papers/abstracts during the last academic year and has 5 more currently in press. Research is a major contribution of the Department to UND and is often accomplished by cooperation with the Energy and Environmental Research Center and the North Dakota Geological Survey. New interactions with Space Studies and the Earth System Science Institute at Center for Aerospace Sciences are being developed.
One faculty member, Alan Cvancara, is retiring after a distinguished career in teaching, research and service. The faculty have voted to seek approval to replace him with a paleontologist and we are currently conducting a search for a new chair with paleontology as the first priority in fields of specialization. I have accepted Dean Henriksen's decision to complete my chairmanship with this seventh year and with great personal anticipation am looking forward to the benefits of a strictly faculty position after 1991-92. The change will necessitate my renewed focus on several teaching and research areas; I am excited about the new possibilities.

As we look ahead, the Department faces opportunities and challenges from many directions and we seek to continue to develop our teaching, research and service interests as North Dakota's largest and most productive geoscience department.

Faculty in 1969. Clockwise: Frank Karner, Lee Clayton, Walt Moore, John Reid, Bud Holland, Wilson Laird, J. Mark Jewett, Al Cvancara, Nick Kohanowski, Ned Noble, Bert Folsom. This picture was taken about 5 years after Al Cvancara joined the faculty.
FRANK R. KARNER STEPS DOWN

Frank Karner will be retiring as Chairman of the Department on July 1, 1992, and a search for his replacement is underway. After having chaired the Department since 1985, Frank is looking forward to getting back to some of his research projects, delayed by his obligations as Chairman. During his tenure as chairman, the Department experienced some exciting and difficult times. The most serious problem was the falling enrollments felt by all geology departments. Through Frank's effort to reach potential students (by letters, by phone, by visits, by advertising, and by increased emphasis on the attractiveness of the introductory courses) our enrollments are surging again. Another product of Frank's efforts was the approval of a new degree, Environmental Geology and Technology, which is attracting dozens of new students to the Department. During the years of low enrollments, Frank persevered to prevent elimination of faculty positions. Whoever is selected to be our new chairperson will have to work very hard to achieve as much as Frank did.

Faculty in 1979. From left to right: Frank Karner, Bud Holland, Don Halvorson, Lee Clayton, Lee Gerhard, Al Cvancara, John Reid, Dave Johnson. Frank and John are the only ones that will be present next year.
ALAN M. CVANCARA RETIRES

After several years of experiencing severe back problems, without finding a cure, Alan Cvancara finally applied for disability retirement, so that he could work at his own pace on his many writing and research projects. Alan graduated from this department with a BS ('55) and an MS ('57). After a stint in the Air Force (57-60) as a commissioned officer, he went on as a Fulbright Fellow to Australia and then completed a Ph.D. at the University of Michigan (1963) after which he joined the faculty at UND. During the next 28 years Alan was recognized as an outstanding instructor, researcher, editor, naturalist, and musician. He has never started anything without intent to become an expert, whether it was learning about wild edible foods, scuba diving, winter survival, clams, sharks teeth, photography, wood carving, or the banjo. His students know him as a meticulously organized and demanding professor.

Alan will be recognized at a Departmental banquet on April 3. All former students are encouraged to plan to attend to thank him for all he has done for the Department and you. If you cannot attend, please send a letter to him c/o John Reid and it will be placed in an appropriate book and presented to him at the occasion of the banquet. If you want more details about the banquet, please drop the Department a note and we will place your name on the mailing list. If you plan to attend and would like to say a few words, let us know, too. We encourage all Alan's students (graduate and undergraduate) to participate.

![Al Cvancara in his office.](image-url)
GRADUATE STUDENTS OF A. M. CVANCARA
(and their theses titles)

1967 Crawford, Jack W., (M.S.) Stratigraphy and sedimentology of the Tongue River Formation (Paleocene), southwest Golden Valley County, North Dakota.

1969 Delimita, John J., (M.S.) Fort Union (Paleocene) mollusks from southern Golden Valley and southeastern Billings counties, North Dakota.

1970 Bickley, William B., Jr., (M.S.) Paleoenvironmental reconstruction of the Late Quaternary lacustrine sediments (Seibold Site) in south-eastern North Dakota.

1973 Stone, William J., (Ph.D.) Stratigraphy and sedimentary history of Middle Cenozoic (Oligocene and Miocene) deposits in North Dakota.

1974 Cook, C. W., (M.S.) A mechanical well log study of the Poplar interval of the Mississippian Madison Formation in North Dakota.

1974 Fenner, William E., (M.S.) The foraminiferids of the Cannonball Formation (Paleocene, Danian) and their paleoenvironmental significance: Grant, Morton, and Oliver Counties, North Dakota.


1975 Kulland, Roy E., (M.S.) Geology of the North Beulah, Center, and Glenharold lignite mines in Mercer and Oliver Counties, southwestern North Dakota.


1977 Wosick, Frederick D., (M.S.) Stratigraphy and paleontology of the Upper Cretaceous Modern Member (Vermillion River Formation) in the outcrop area, northeastern North Dakota.

1978 Okland, Linda E., (M.S.) Paleoecology of the Late Quaternary biota at the McClusky Canal site, central North Dakota.

1979 Groenewold, Joanne Van Ornum, (M.S.) Lexicon of bedrock stratigraphic names of North Dakota.

1979 Malmquist, Kevin L., (M.A.) Paleoecology of late Quaternary molluscan ostracod assemblages from the Norwood site, southeastern Minnesota.

1980 Butler, Raymond D., (Ph.D.) Stratigraphy, sedimentology, and depositional environments of the Hell Creek Formation (Late Cretaceous) and adjacent strata, Glendive area, Montana.

1980 Parsons, Michael W., (M.S.) Distribution and origin of elongate sandstone concretions, Bullion Creek and Slope Formations (Paleocene), Adams County, North Dakota.

1980 Fischer, David W., (M.S.) Paleoenvironmental analysis of the Late Holocene deposit: Stanton site, west-central North Dakota.


1981 Nesemeier, Bradley D., (M.S.) Stratigraphy and sedimentology of the Sentinel Butte Formation (Paleocene) near Lost Bridge, Dunn County, west-central North Dakota.


1983 Zimmer-Dauphinée, Susan A., (M.S.) A survey of 24 elements in North Dakota Lignite (Fort Union Group, Paleocene), and possible geologic implications.

1984 Lindholm, Rosanne M., (M.S.) Bivalve associations of the Cannonball Formation (Paleocene, Danian) of North Dakota.

1990 Silfer, Brian E., (M.S.) Neogastropods (Melongenidae, Fascioliariidae, Turridae) from the Cannonball Formation (Paleocene: Thanetian?), North Dakota and South Dakota.


Cvancara, A. M., Malmquist, K. L., and Hobbs, H. C., 1979, Mollusks from
glacial Lake Aitkin sediments, northeastern Minnesota (Abstract): Minnesota Academy of Science, Abstracts of Papers, 47th Annual Spring Meeting, p. 27.


Hoganson, John W., and Alan M. CVancara, 1990, Late Pleistocene (Illinoian?) molluscs from the Loraff Farm site near Milbank, northeastern South Dakota: Proc. N. Dak. Acad. Sci., v. 44, p. 64.
NOTE FROM DEAN OF THE GRADUATE SCHOOL
Harvey Knull

As students arrive back on campus in the fall, UND "feels" like a university campus. Yet, the University of North Dakota is greater than its students, its faculty, and its staff here; it includes you, the alumni.

You have left the University and done well. That reflects positively on us -- faculty, staff, and students. It also puts us in a good position for the future.

The faculty activity in the Geology Department has been intensive with respect to the graduate program, especially in recruiting new students -- an activity which takes a lot of time and energy. If you can identify prospective students, you would help that cause immeasurably.

The total enrollment in the Graduate School this fall is approximately 1,200 in 47 master's programs and 16 doctoral programs. We currently have 23 graduate students enrolled in Geology, which has graduated 91 master's students and 45 doctoral students.

The faculty in Geology can feel proud of these achievements, and, together, we look forward to more. To promote graduate education, your Geology faculty have applied for funds to directly support graduate students in Geology, but they are also negotiating to develop interdisciplinary research programs.

We encourage activities of this type, and I ask that if you are aware of opportunities for graduate students, the potential for research, or the like, please notify us. Regardless, keep in touch.

Al Cyancara lecturing. Al is the most organized teacher the department has ever had.
BUSY YEAR FOR THE DEPARTMENT

We seem to be busier than ever this year. Perhaps it is because there are so many "extra" important things going on. Some of them are:

ABET REVIEW: By the time this letter is mailed to you the Department will have already been evaluated for re-accreditation of its Geological Engineering curriculum. On September 29 and 30 a team arrived on campus, one of whom was a geological engineer. The written report is expected sometime after the first of the year. Much preparation has gone into planning for this important review. Many courses had to be revised to include what is defined as "Design Component", the most vague, but most looked at part of our courses. We will report the results to you later.

CHAIR SEARCH: Another more important activity is an outside search for a new Chair. The committee, composed of John Reid, chairman, Phil Gerla, Will Gosnold, and Pat Videtich (for the Department), and John Blumle, NDGS, and Frank Beaver, EERC, have been meeting to initiate that search process. Our obligation is to search for the best-qualified candidate, regardless of field of expertise. Of course, we have need for someone to continue the paleontology program, vacated by the retirement of Alan Cvancara, and we have great need for someone to help carry the load in the environmental geology area (Phil Gerla is heavily overloaded by the significant increase in numbers of majors (graduate and undergraduate) in that broad field. There is much concern that the paleontology program will disappear at UND. It will not! There are alternative plans to prevent this! So, if you feel led to apply for the Chair position, or you know someone you can recommend, let us know and we will send specifics to you or them.

OUTSIDE REVIEW: The last time the faculty sat down together to reassess its directions and goals was about 10 years ago. In preparation for a Retreat to attempt this again, a team of three or four selected geologists from around the country will be invited to visit and make its own assessment of our strengths and weaknesses and to suggest changes and opportunities. This review is expected to occur sometime before december.

PLANNING RETREAT: On the basis of the ABET Geological Engineering program and the outside department reviews, the faculty will attempt to define new directions for the Department for the next decade, if possible. Although the traditional areas of geology will probably continue to be offered at UND we must face the fact that presently high enrollments in the environmental fields, especially hydrogeology, will affect what we can and ought to do. The planned retreat, therefore, is crucial to the future of the Department.

We'd like to hear from you! Please fill out, and send in, the info sheet on the last page of this newsletter.
FACULTY HAPPENINGS

This year has been good for outdoors research. Phil Gerla reports that more rain has led to dramatic rises in the water tables at some of the wetland areas he is studying. (He also reports increases in mosquito numbers!) The wetland hydrologic cycle is “more dynamic than what we expected,” says Phil. Phil has a paper now in review for the Journal of Wetlands. Phil has a couple of graduate students working in the field as well: Mike Strobel, supported by the USGS, has started work on the hydrology of lacustrine sediments in the central Red River Valley. Allen Comeskey and his field helpers are working in Agnes Marsh, halfway between Larimore and Inkster. They report both mosquitoes and moose.

Ron Matheny is also involved in groundwater research. He is co-investigator with Phil on a project titled “Ground and soil water movement in discharge wetlands, Red River Valley, North Dakota.” The project is funded by the ND Water Resources Research Institute. Ron has a recent publication in Isotope Geoscience. Like some others on our faculty, Ron spends a great deal of time advising students—he presently is the only advisor for the B.S. in Environmental Geology and Technology degree program. Ron is also trying to finish setting up his isotope lab in the former geochem lab on the second floor of Leonard Hall.

Will Gosnold spent most of the summer at the Lawrence-Livermore Labs in California. He was working on a petroleum maturation project along with Jerry Sweeney. Here at UND, Will has been taking his geophysics class outside to do hands-on projects in recent years. Last fall, they measured a series of gravity profiles across a buried stream channel in northeastern ND. Sid Anderson reports that the channel, which is of Mississippian age, may be several kilometers wide and is at least 200 meters deep. The 1991 class will continue the survey along Minnesota highway 200, and then interpret the data. Will is hoping that they can develop a paper for publication.

Nels Forsman has continued to work on mapping the K/T boundary in North Dakota, with Ed Murphy and John Hoganson. The rain, reports Nels, “has left fossils all over the place.” Nels continues to be active in the Integrated Studies program, and has been making guest appearance on public radio. He also has co-authored a poster session (GSAC-Dallas) with Hoganson and Murphy.

Dex Perkins has continued with his research in the Trans-Hudson Orogen of Saskatchewan. In the early part of the summer, he took a rock climbing vacation and taught Geology 103-Experimental Issues (see article in this newsletter). Later, he and 5 students spent several weeks north of Flin Flon. The project, which has been going on for 5 years, may be winding down in “a year or two.” Dex is also still actively pursuing thermodynamic models for high-grade minerals. He is just coming off a year’s sabbatical and as a result has 8 publications published or in press so far in 90-91.

John Reid has been continuing with his workshops on shoreline erosion. He offers them yearly to Army Corps of Engineer people in Illinois, Nebraska and Oklahoma. He is now in the second year of a project south of Pierre SD, on Lake Sharpe, quantifying erosion mitigation techniques. He has also attempted to core on Lake Sakakawea, but was unsuccessful because the drill core stem wobbled all over in 100+ ft of water. (John suggested that Dex might want to dive down and hold it for him.) John is also reorganizing the remote sensing course to include people from Geography and Space Studies. Both of Barbara’s parent passed away this past year, necessitating several trips to Boston.

Pat Videtich has this year’s travel award. She has been to
Czechoslovakia, Poland and Hungary. Over the summer she worked on the Williston Basin Project. Three graduate students plan to do Williston Basin subsurface projects: Mike Wetmore (Mission Canyon), Jon Fox (Red River), and Yanen Chen. Pat is teaching petroleum geology, for the first time in several years, and has 10 students. They plan on going on a field trip to help Mike "hit pay dirt" at a drill site.

Rich LeFever has been continuing with his research on the Williston Basin. His recent publications include "Petroleum Potential of the Little Missouri National Grasslands" (NDGS Report) as well as "Newburg and South Westhope Oil Fields, Bottineau County, North Dakota, U.S., Williston Basin," with Julie (in an AAPG Treatise on Petroleum Geology). Rich has also been working with Will on geothermal resource projects. Rich spends lots of time advising students, and is presently on 6 doctoral or masters committees.

Min Chu reports that he has been here 10 years--they've been good years. His son, Mark, is attending Central High School and wants to become a pilot. Minh says he didn't work very hard or play very hard this summer--spending time in front of the computer screen. He's working on a project involving the use of microwave heating for enhanced oil recovery. He plans to continue in this line of research in the next several years.

Sundar Saluja, our other engineer, has been very active this year. He has attended meetings all over, including a U.S. Bureau of Mines workshops in Minneapolis and Denver, Blasting Seminars/Workshops in Orlando FL, and The 78th Indian Science Conference in Indore, India. While in India, Sundar presented a talk to the First Children's Science Congress: "Inner Environment of Human Mind and Society." Sundar has co-authored a Japanese translation of a book on the mechanical properties of rock, and has presented a handful of papers. Sundar continues as advisor to SME and AIME, and has organized several field trips to Manitoba.

Frank Karner, as well as all his chairman duties, has been doing other things. He taught Geology 101 this summer and is teaching petrology this fall. He led a fieldtrip to Canada this summer and again this fall. Frank has been putting in a lot of time emphasizing student recruitment. He has a new graduate student (who he shares with Steve Benson), Lingbu Kong, working in coal geochemistry. He has also been appointed to the AAPG Environmental Geology Committee.

Bud and Mardi Holland are keeping busy, too. Bud says the reason they didn't appear on television at the Rose Bowl is because they "didn't make it to California last Christmas as planned. Mardi's mother was hospitalized just as we were about to leave; and while she is back in her own home, her condition has kept us from traveling as much as we'd like. We did fly to Philadelphia for Mardi's high school reunion and got to visit both of our boys--Erik in Milwaukee where he is entering graduate school at U. of W., Milwaukee, in public history. I refereed a couple of manuscripts for the Paleontological Society and did some volunteer library research for Cross Ranch (ND Nature Conservancy). Mardi continues her volunteer work for Meals on Wheels."
RECENT FACULTY PUBLICATIONS


M. H. Chu, HP 41 CV/X Program for Air/Gas Drilling: submitted to World Oil.


W. D. Gosnold, Jr., Climate change and subsurface temperatures in the north central Great Plains: J. Geophys. Res. (in revision).


ALUMNI CHALLENGE

Do you know the origin of the Glotkin Award? (See alumni news notes for Wilson Laird and Kent Madenwald.) An appropriate prize will be given to the first person to respond with the correct answer. We are also interested in knowing of any winners you can remember. Another appropriate prize will be awarded to the person who can list the most winners—and what they won it for. Get your entries in early—in case of a tie, the first person to respond wins.
RECENT THESSES


1991 Elliott, Mark C., (M.S.) Erosion of fractured banks, Lake Sakakawea, ND. Chairman: J.R. Reid

Two figures from Steve Braun's thesis. Residual Bouguer gravity anomalies over the Shell Golden Reef in northwestern ND. Data are the same in both figures; the 3-D view on the right was made looking northwest (see arrow).
ENVIRONMENTAL GEOLOGY GOING WELL

During the last decade, we have all heard more and more about environmental problems. Air, water, energy resources, food, etc.—these topics seem to appear in the news every day. As you have read elsewhere in the newsletter, we have a new degree program (Environmental Geology and Technology) which is very popular—one reason our undergraduate enrollment is going up (see chart below). But, we are doing more.

In response to the growing concern and interest, often expressed by UND students, for the last few semesters we have been teaching Geology 103: Introduction to Environmental Issues. Pat Videtich started the course and Dex Perkins is now teaching it as well. It has been a terrific success!

As anyone who has taught introductory-level courses can attest, it is often hard to get responses from the students. Not so with Geology 103. The students are concerned about environmental issues, and it shows in the way they listen and respond.

Geology 103, as originally taught by Pat and continued by Dex, combines all the mostly timely and relevant parts of physical geology with current environmental issues. The students are concerned about the issues, and this class helps them understand just what is involved. In one sense, we have been successful in finding a way to convince non-scientists that physical geology is important.

This fall semester, for the first time, Dex (with Scot Stradley from the Economics Department) is also offering an honors seminar: Introduction to Environmental Thought. Dex and Scot report that the students are working hard, having a great time, and learning a lot by reading the works of such authors as Karl Marx, Arthur Lovejoy, Rachel Carson, Ed Abbey, Alston Chase, etc.

If you have any ideas or suggestions as to how we can continue to ride the wave of environmental enthusiasm and concern, let us know. Environmentally oriented classes are important, timely, informative, and fun to teach.
LEEPS AND OTHER LECTURERS

We have been fortunate to have many outstanding guest lecturers this year. Many of them have been speakers in our LEEPS (Leading Edge of Earth and Planetary Science) Lecture Series. LEEPS is jointly sponsored by our Department, the UND Energy Research Center, the UND Office of Research and Program Development, and the ASAPD (Advancing Science Excellence in North Dakota) Program. Some of the titles and speakers during 90/91:

"Geological and geophysical applications of the global positioning system." Carlos L.V. Aiken, University of Texas at Dallas. (LEEPS Lecture)

"Climate Effects of the 1783 Laki, Iceland, eruption." Chuck Wood, UND Space Studies Department.

"Application of steady-state unsaturated flow monitoring techniques to quantify soil hydraulic changes in an artificial recharge basin." Bill Schuh, North Dakota State Water Commission. (LEEPS Lecture)

"Shallow snow stratigraphy in Greenland and Antarctica: deposition vs diagenesis." Mike Strobel, UND Department of Geology and Geological Engineering.

"Information specialist--alternative career for geoscientists." Joanne Lerud, Colorado School of Mines. (LEEPS Lecture)

"Wetlands soils and hydrology." Jim Richardson, North Dakota State University. (LEEPS Lecture)

"Evidence for massive crustal imbrication, nappe tectonics and early mylonite zones in accreted juvenile terranes of the Trans-Hudson Orogen." John Lewry, University of Regina.

"Differing ways of viewing the anatomy of North America (with a biased emphasis on the important bits)." John Lewry, University of Regina. (LEEPS Lecture)

"Pliocene-Pleistocene sea-level and glacial history of the Bering Land Bridge: paleoclimatic implications." Julie Brigham-Grette, University of Massachusetts, Amherst. (LEEPS Lecture and Association for Women Geoscientists Foundation Speaker)

"Arctic antics." Julie Brigham-Grette, University of Massachusetts, Amherst.

"Greater Yellowstone, an uncertain future." Ed Lewis, Greater Yellowstone Coalition. (LEEPS Lecture)

"Transient response of the hydrologic system to global climate change." Jack Hess, Desert Research Institute. (LEEPS Lecture)

"Hydrology of lakes and wetlands with emphasis on ground-surface water interaction." Tom Winter, USGS, Denver. (LEEPS Lecture)

"Forcing of Late Cenozoic climate changes." William Ruddiman, Columbia-Lamont
Geological Observatory.

"Plio-Pleistocene glacial cycles." William Ruddiman, Columbia-Lamont Geological Observatory. (LEEPS Lecture)


"Wellhead protection in fractured aquifer settings." Ken Bradbury, Wisconsin Geological and Natural History Survey. (LEEPS Lecture)

"Thermal maturation of petroleum source rocks." Jerry Sweeney, Lawrence Livermore Laboratories. (LEEPS Lecture)

"Geomorphic processes at an alpine treeline in Glacier National Park." David Butler, University of Georgia. (LEEPS Lecture)

"Birth and death of the Japan Sea." James Ingle, Stanford University. (LEEPS Lecture and Joint Oceanographic Institutes, Inc./U.S. Science Advisory Committee Distinguished Lecturer)

"Probing the interior of the earth." Don Anderson, California Institute of Technology. (LEEPS Lecture)
NEW DIRECTIONS AND USES OF THE PALEONTOLOGICAL COLLECTIONS

Joe Marsh

Energy and Environmental Research Center

Some recent events suggest that now is the time to rethink what we are doing with the Department's fossil collections. The collections were obtained and curated through the long-term efforts of Bud Holland and Alan Cervana, and their students. Additional donations were made by the staff of the North Dakota Geological Survey (NDGS) and other interested individuals. These well-documented collections represent the best and most complete record of surface bedrock fossils from North Dakota. Since Bud has retired, and Alan will retire at the end of this year, new management must take over.

As well as personnel changes, there are other things that will affect the future use and status of the Departmental collections. The departure of the NDGS to Bismarck, and subsequent legislation giving fossil permitting authority on state land to the NDGS, means that NDGS is now required to maintain representative collections of fossils found in North Dakota. This mandate should not conflict with the maintenance of collections at UND, because the UND mission is fundamentally more academic and research-oriented. NDGS will focus more on the general public's education. All primary and illustrated type specimens will continue to be housed at UND.

Of great significance is that during the last session of the legislature a bill passed in the Senate, but failed in the House, that would give management of state fossil collection to a museum to be built in Dickinson. The museum would, by all accounts, emphasize economically (i.e., tourist) interesting fossils (e.g., dinosaurs). When this proposal is resubmitted by proponents at Dickinson State University next session, both the NDGS and UND responsibilities for scientific management of fossil collections may be severely, if inadvertently, jeopardized. If funded, the museum would likely preclude state funds going to the UND and NDGS educational and research collections.

In response to these events, and because of the public's awareness of paleontology as a science (if only because of dinosaurs), the Department needs to present its earth history and paleontology mission more openly and clearly. The importance of the existence and significance of the UND collections be recognized state-wide. The collections must be reorganized to be a recognizable and accessible museum collection. UND can provide an education and research outreach program by providing access to fossils and data through a computer network.

Plans for these programs are under discussion, and we hope to move quickly. Geology alumni are asked for their financial and other (e.g., fossil contributions, letters when needed, etc.) support to help revitalize our paleontological collections. We need to demonstrate to the rest of UND, and the state, that we are committed to maintaining the Department's collections as the number-one fossil repository and teaching/research facility in North Dakota.
HONOR ROLL OF PATRONS

In order to recognize and honor contributors to the Department of Geology and Geological Engineering, the Geology Alumni Advisor Committee has designated the following donor categories: Life Patron--$10,000; Honor Patron--$5,000; Sustaining Patron--$1,000; Patron--$500. All contributions to the Department are accumulative and applicable toward the next larger category. Many companies match, or double or triple, your contributions. Gifts may be sent directly to the Department or channeled through the UND Alumni Office to any Department fund, and may be designated for a specific purpose if the donor chooses. You may be assured that your donation will be used for the purpose you designate. To express our continued appreciation and gratitude for their generous gifts to the Department, the names of our Patrons will be listed in every issue of Alumni News.

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<td>Robert K. Aaker</td>
<td>Dr. &amp; Mrs. Alan Cynacara</td>
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<td>Robert Absey</td>
<td>Dr. J. Mark Erickson</td>
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<td>Raymond L. Blum</td>
<td>Dr. &amp; Mrs. Lee Gerhard</td>
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<td>Dr. John L. Carter</td>
<td>Kurtwood S. Hillman</td>
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<td>Diane Catt</td>
<td>Dale E. Lalim</td>
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<td>Dr. &amp; Mrs. E. A. Noble</td>
<td>John W. Oty</td>
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<td>Dr. &amp; Mrs. Sundar Saluja</td>
<td>Raymond Sinkbeil</td>
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<td>Everet Wilson</td>
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<th>Special Corporate Donor ($25,000 or more)</th>
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<td>Amoco Foundation, Inc.</td>
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<td>Exxon Education Foundation</td>
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<td>Phillips Petroleum Company</td>
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<th>Corporate Donors and Contributors</th>
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<td>Atlantic Richfield Foundation</td>
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<td>BP America, Inc.</td>
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<td>E. I. Dupont deNemours &amp; Co.</td>
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<td>Enserch Exploration</td>
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<td>Gulf Oil Foundation</td>
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<td>Harris, Brown, and Klemer, Inc.</td>
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WON'T YOU HELP?

The State of North Dakota has had a reasonably good financial year. As a result, we have not had our budgets slashed as close to the bone as in some recent years. Still, we are woefully short of funds in many areas. Our equipment funds, for example, add up to less than 10% of what we have on our highest priority list! Supplies and communications budgets are going to be exhausted again by mid-winter. Travel monies are almost non-existent.

We have some very loyal alumni. Without their contributions we wouldn't be able to do have the things we do. If you have never contributed to the department before, we'd like to ask you to consider joining them. If you are one of the regular contributors, we can't express our thanks strongly enough.

Below is a list of recent donors (9/1/90-9/15/91). If you find any errors in the list, please let us know—we want to make sure it is always up to date.

Robert K. Aaker
Dennis A. Braaten
John L. Carter
Stanley A. Erickson, Sr.
Kurt & Diane Hillman
Bryan Johnsrud
John W. Oty
Hugh and Ruth Palmer
Mrs. Charles H. Waldren

**Individual Contributors**
- Terry Bailey
- David W. Brekke
- Clarence "Kelly" Carlson
- Dr. Rodney M. Feldmann
- Kyel R. Hodenfield
- Dr. Wilson M. Laird
- Howard & Linda Okland
- Dr. and Mrs. John R. Reid
- Raymond F Sinkbeil
- William M. Boettger
- Dr. Frank P. Caramanica
- Joel A. Degenstein
- Dr. Thomas M. Hamilton
- Dr. F. D. Holland, Jr.
- Dale E. Lalim
- Margaret O. Oros

**Corporate Contributors**
- Amoco Foundation
- ARCO Foundation
- Chevron Corporation
- Conoco Inc.
- Freeport-McMoran Inc.
- Exxon Education Foundation
- Phillips Petroleum Co.

Al Cvancara and students at work.
LOTS OF CHOICES TO MAKE

There are many different accounts that have been established to which you may contribute; they are listed below. Two new endowment funds, resulting from the recent deaths of two of our alumni, are described in more detail. You can contribute to anyone of these funds simply by letting us know which you prefer.

Department Funds

Department Development Fund
F.D. Holland Jr. Geology Library Endowment Fund
Geology Field Studies Fund (field trips and meetings)
N.N. Kohanowski Memorial Fund (student and faculty support in mining/economic geology, geochemistry, petrology, or mineralogy)
Carbonate Geology Studies Fund
Sedimentology Lab Fund
Stable Isotope Geochemistry Fund

Scholarship Funds

Joel Degenstein Scholarship Fund (field camp)
C.B. Folsom Memorial Fund in Petroleum Engineering
Bernold M. Hanson Scholarship Fund (petroleum geology)
Henry Hinds Scholarship Fund (junior or senior geology major)
Reba A. Laird Fund (scholarships for women)
Hugh and Ruth Palmer Scholarship Fund (petroleum geology)
Harold J. Polta Memorial Scholarship Endowment Fund (junior or equivalent)
Emil and Audrey Stoltz Geologic Engineering Scholarship Endowment Fund (mining engineering)
Ernest Tisdale Memorial Scholarship Fund (petroleum geology)

Terrance F. Anstett Memorial Scholarship Endowment

The Terrance F. Anstett Memorial Scholarship Endowment has been established by Terry's parents and sister in order to honor and remember their late son and brother. Terry, who was born in Grand Forks in 1951, attended the University of North Dakota (BS Geol. '73). He went on to receive masters and PhD degrees from the University of Wisconsin. Terry worked for the Bureau of Land Management, the Bureau of Mines, and the University of South Dakota at Vermillion, before his death. While at UND he was a multiple letter winner in track and cross country.

The scholarship fund will be used to fund scholarships for two kinds of students: Geology (or intended-geology) majors who are of good character and who demonstrate academic aptitude in the sciences, and, in alternate years, for student athletes participating in track and field at UND, who have a good academic record.

William F. and Inez L. McDonald Endowment

Inez L. McDonald has established the William F. and Inez L. McDonald Endowment in order to honor her late husband William. The fund will be used...
to support Geological Engineering at UND. Bill McDonald was born in Valley City in 1897. He received a BSMIE degree from UND in 1922. He went on to teach in North Dakota Schools, and served as principal in Leal and Dazey. In 1934, he began work for the U.S. Army Corp of Engineers at Fort Peck, Montana, and with a few breaks worked for them until 1966.

Fall social gathering in the Department. In the picture are Will Gosnold, John Reid, Sean Lucy, Pat Skibicki, Mike Sonderman and an unidentified student.
Scholarship and Award Recipients

Scholarships

Boise Scholarship
Jennifer Berkey
John Kay
Jason Tveter

Degenstein Field Geology Scholarship
Steve McLean

Stanley A. Erickson Environmental Science Award
Dean Goebel

Estwing Pick Award
Eric Brevik

C. B. Folsom, Jr. Memorial Scholarship
David Rylance

Bernold M. Hanson Scholarship
Darren Haddeland

Henry Hinds Scholarship
John Kay

Reba A. Laird Scholarship
Cindy Heiser

MMRRI Scholarship
Daryl Heinen
Tim Gerlach

Hugh & Ruth Palmer Scholarship
Jonathan Ellingson
Daryl Heinen
Steve McLean
Patrick Skibicki
Leon Vetter

Harold Polta Scholarship
Jeanie Votava

Rocky Mountain Coal Mining Institute Scholarship
Jonathan Ellingson

Ernest Tisdale Memorial Scholarship
Darren Haddeland
Charles Henry Waldren Memorial Scholarship
Jennifer Berkey
Eric Brevik
Sean Lucy (1990-91)
Jeff Snyder

Geoscience Awards

C.B. Folsom, Jr. Award:
Patrick Skibicki
Leon Vetter

Reba A. Laird Awards:
Susan Carlson
Debbie Holst
Sean Lucy
Samantha Roberts
Michelle Rolland
Patrick Skibicki

Bernold M. Hanson Award:
Susan Carlson
Michele DeWeese
Christine Hagen
Debbie Holst
Kale McNaboe
Michelle Rolland

Hugh & Hugh Palmer Awards:
Stacy Harwell
Taylor Henning
Bernard Lenz
Sean Lucy
Steve Mattson
Jason Tveter

Another view of the Fall social gathering. Pat White, Stan Pence, Pat Videtich, Jeff Snyder, Ron Matheney, and several unidentified students are present.
ALUMS AND OTHERS AT GSA LAST FALL

Alums, faculty, students, and friends seen at meetings of GSA and related societies, Dallas, 1990
(*presented paper, poster session, or led field trip)

Ashworth, Allan
Beaver, Frank*
Bergan, Gail*
Deal, Dwight*
Erickson, J. Mark
Feldmann, Rod*
Forsman, Nels*
Gosnold, Will*
Gustavson, Tom*
Hoganson, John*
Holland, Bud & Mardi
Karner, Frank
Kehew, Alan*
Kerans, Charlie*
Kroeger, Tim

Laird, Wilson M.
Larsen, R. Al
LeFever, Rich
Lerud, Joanne*
Lobdell, Fred
Meek, Rob
Murphy, Ed*
Parsons, Mike
Pederson, Darryll*
Perkins, Dexter*
Sakreiter, Don
Schulte, Mitch
Scott, Mary*
Sigsby, Bob & Connie
Tinker, John* & Christine
Wilken, Kent

SEE YOU IN SAN DIEGO!

Several of our faculty and students will be giving papers at GSA (Oct 21-25) this year: Mark Elliott and John Reid, Gale Mayer and Phil Gerla, Will Gosnold (with Mike Bauer of the University of Virginia), and Dex Perkins. We hope to see you at the talks, but also be sure to note the invitation, below:

ADMIT ONE
(OR TWO OR THREE)

GSA ALUMNI
GATHERING
GOSNOLD/PERKINS HOTEL ROOM
RAMADA BAYVIEW HOTEL
San Diego CA
OCT. 22, 1991, 5:00 PM
ALUMS AND OTHERS AT AAPG LAST SPRING

The following UND alumni, faculty and friends participated in activities at the American Association of Petroleum Geologists National Convention in Dallas TX, April 7-11:

Sid and Mary Anderson
Wally and Marlys Dow
Lee Gerhard
Bruno and Marilyn Hanson
Tom Heck
Chuck Juni
Frank Karner
Linda Okland
Randy Stephens
Laramie Winczewski

NORTH DAKOTA FOSSILS HELP ALASKA SCHOOL KIDS

At her request, the Department finally got together a box of fossils and sent it to Linda Okland for use in teaching historical geology to earth science teachers. She also intended to share the fossils with the Alaska Geologic Society for their speakers' kits, used when their members talk about geology to elementary school children. Most of the specimens were dredged from the corners of Bud Holland's former office, when he moved out. Dollars contributed by alumni paid for the shipping (it costs lots of $$ to ship rocks to Alaska), so you all helped with this project!

College for Kids, Summer, 1991. These young geologists are eating their cake and studying the "principle of superposition" according to their teacher, Allen Comeskey (one of our graduate students). The kid, second from the left, is the son of one of our present faculty. Do you know which?

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Wilson Laird married Margaret Ray on November 30, 1990, in Kerrville TX and then went on a Caribbean cruise. After visiting his children this spring, they summered at Long Lake near Bimidji. Wilson wants to know whatever happened to the Glotkin Award? Does anyone know who (and when) the last winner was?

Ned Noble, former Department chairman and NDGS Director, recently received the Department of Interior's Meritorious Service Award for his contributions to the U. S. Geological Survey's energy resources programs and his direction of a coal resource program for the Geological Survey of Pakistan. He is a geologist for the USGS in Reston VA, where he and Polly live. Congratulations.

Bert Timm (BA '39) has been teaching physical and historical geology at CCCC after an interesting 42-year career in petroleum exploration management. He recalls his days at UND with Drs. Foley and Demorest, and all the long field trips they took. He followed their lead, taking his classes on long trips to study the Lower Paleozoic of southern Oklahoma and the Mesozoic of north Texas.

Bob Plunkett (BSMIE '40), Gilman Ritter (BSMIE '49), Stan Sorensen (BSMIE '40), Margaret Oros (BA '39) Paul Ducharme (BSMIE '40) and Ed Simpson (BA '40) all got together during alumni days last October at UND.

Sid Anderson (PhB '51), now retired from the NDGS, is firmly ensconced in Rm 322C (former petroleum engineering lab in NW corner of Leonard Hall) where he has finished work (with Julie LeFever, NDGS, and Carol Martinuk of the Manitoba Dept. of Mines and Energy, Petroleum Division) on a cross section along the U.S.-Canadian border. He says that he has a couple of small projects cooking with Lee Gerhard and Dave Fischer (MS '80) in southwestern ND where they have identified unusual, past, up-and-down activity. Sid continues active on the AAPG Core Preservation Committee and involved in the Western Interior Cretaceous Project. On 5/8/91 Sid and Mary became grandparents to Jennifer's little girl, Sydney Marie Hegland.

Calvin Truax (BS '51) continues to work for the Wyoming highway department as ex-civil engineer turned administrator. Cal and his wife visited the department in August. Cal fondly recalled Wilson Laird, Nick Kohanowski and the white wooden buildings which housed the Department and the Survey.

Harald Haraldson (BS '52, MS '53) has been pretty much confined by illness to his home in Northwood ND this fall and late summer. Good luck, Harald.

Alan Cvancara (BS '55, MS '57) is planning to retire from the UND Department of Geology and Geological Engineering. (See cover photo and article in this newsletter.)

Jack Kume (BS '58, MS '60) continues as a hydrologist for the USGS in Lakewood CO.

Kent Madenwald (MS '62) lives in Fremont CA. He says we didn't include enough spaces on our alumni information form to list all his children. He is consulting in the geological environmental, mechanical, and asbestos areas. He recalls the
time that Nick Kohanowski planted dehydrated vegetable soup in his back yard and
couldn't figure out why there were no plants. (He earned a Glotkin Award for
that episode—see news note for Wilson Laird.)

Wayne Beeks (BSMIE '62) and wife, Karen, are now living in Jakarta, Indonesia.

Neil Sherrod (MS '63) is Vice President and Senior Engineering Geologist with
Empire Laboratories, Inc., a geotechnical engineering and materials testing
company headquartered in Fort Collins CO. He reports that the company is doing
well and that he is continuing his education in Environmental Law at CSU. Neil's
wife, Barbara, has published 6 books under the nom de plum of Barbara Neil.
They have two daughters: Nancy, a sophomore at Boulder, and Ruthie, 8th grade.
Congratulations, Neil, on your success!

Rod Feldmann (BS '61, MS '63, PhD '67) vacationed in Spain with his family in
'90. He then spent 6 weeks on an NSF-supported study of Antarctic fossil crabs
at the British Antarctic Survey, Cambridge, UK. Following that he gave a talk
at the International Crustacean Conference in Brisbane, Australia, and went SCUBA
diving on Australia's Great Barrier Reef. This year he did fieldwork in Tierra
del Fuego, Chile, sponsored by the National Geographic Society. Rod had 8 papers
published in 1990 and several already this year. By the time you read this, he
will be the President-elect of the Paleontological Society.

Sam Harrison (MS '65, PhD '68) is the owner of Harrison Hydrosiences of
Saegertown PA. He left teaching at Allegheny College after 20 years (see note
about Mark Lord). He says that he hopes buffalo boulders and side hill gougers,
as well as snort, will still "embellish the geomorph curriculum there."

Mark Erickson (MS '68, PhD '71) has been working on a fossil gastropod paper with
Brian Silfer (MS '90).

John Bluemle (PhD '71) has been appointed State Geologist and Director of the
NDGS in Bismarck. Congratulations, John!

Roger Reede (BS '59, MS '67, PhD '72) continues to teach at Southwest State
University, with much of his time being taken as director of the planetarium
there. He organized a reunion of alumni and faculty of their field camp in the
Black Hills in the summer of '90. Roger has assumed the Chair of the Department
for the next two years. Meanwhile, Karen is the school system's occupational
therapist and adjunct speech pathologist. Their three children have all left the
nest and are working in Minneapolis or Arizona.

Frank Schulte (BS '65, MS '71, PhD '72) still travels the world for ESSO
(Siberia, eastern Europe, South America, etc.) Cindy still works for Atwood
Oceanic. Daughter, Maren, graduated 8th out of 500 in her class, was a National
Merit Scholar, and is now enrolled at Notre Dame in Chemical Engineering. Their
second daughter, Jennifer, is in junior high school.

Barry Burkhardt (BS '72) is currently the Forest Geologist in the Wasatch-Cache
National Forest in Utah. He works mostly with oil and gas leasing on the north
slope of the Uinta Mountains.
Bill Stone (PhD '73) took a position in January as Senior Hydrologist with Newmont Gold Co., of Elko NV. Duties include overseeing regional hydrology efforts and investigating the impact of mining on the overall hydrologic system.

Frank Caramanica (PhD '73) is the geologist at ResTech, Houston. He is expanding the geologically-oriented dipmeter business, much to the consternation of the wireline service companies. Judy has been working again as a librarian after an 18-year hiatus. Both Frank and Judy went to the AAPG meeting in San Francisco last year, and saw old friends. Son, Al, is a senior in high school and plays saxophone in the band.

Deb Levchak (BA '73, JD '76) continues to work as staff attorney for Basin Electric in Bismarck. She works on environmental and employment law.

Bruce Olson (BS '74) is still a computer operator for Planning Research Corporation at the Cavalier Air Force Station. He is into horses, owning three, and takes part in lots of parades, trail rides and horse shows.

Fred Wosick (BS '74, MS '77) has become Manager of Oil Operations for the Fidelity Oil Group. Fred is a member of the Department of Geology and Geological Engineering Advisory Committee.

Linda Okland (MA '78) won the 1990 AIPG Public Service Award for her efforts in science education. She and Howard (MS '78) live in Anchorage AK. Howard started working for the Alaska Oil and Gas Conservation Commission in January, doing geologic computer applications. Linda has taken a leave of absence from ARCO to take a job as project manager for the Alaska Science Alliance. The Alliance is a consortium of educators, businesses, industry, professional societies and community groups with a science education focus. Congratulations, Linda, and good luck!

Gary Winbourn (BS '78) is now with Braun Environmental Laboratories in Bismarck.

Paul Schiffelbein (MS Ex '79), senior consulting statistician for DuPont, was back in school this past spring at the University of Delaware (part time) working on an MS degree in animal science. He has also begun a two-year assignment supervising a Quality Engineering Group at DuPont's Medical Products site in Glasgow DE.

Dan Young (MA '80) is senior hydrogeologist at TERRASAT in Anchorage AK. He spends his time exploring for ground water, doing site assessments and cleaning up hydrocarbon contamination.

Palmer Bailey (BS '70, BSEG '80, MS '80) wrote in his Christmas letter that he taught a field course to West Point cadets in Colorado (Cripple Creek, Florissant fossil beds, Great Sand Dunes National Monument, Garden of the Gods, Cave of the Winds, etc.) "A great way to teach geology!" Palmer and Bonnie have bought an old ranch near Homer AK and hope to retire there some year in the future. He is still assigned to West Point, teaching geology and physical geography.

Kathy Logan (MA '81, JD '90) is the new Polk County MN solid waste officer. Prior to moving to Polk County, Katherine was working on water issues for the
North Dakota Department of Health and the North Dakota Water Commission.

Cheryl Maldonado (BS '81) has traveled a lot since she left UND. After living in Germany and the Azores for a while, she and her husband are now in Clovis NM. "Probably the last stop." When last we heard, Cheryl was pursuing a teaching job at Eastern New Mexico University.

Randy Rickford (BSGE '81) has been promoted by AMOCO and transferred to Rawlins WY.

Paula Leier-Engelhardt (BS '82) and Steve live in Little Suamico WI. Paula is working as an environmental geologist for STS Consultants, Ltd., of Green Bay.

Laramie Winczewski (BS Ed '72, MS '77, PhD '82) finished his first year with Landmark Graphics, developing software for exploration and production aspects. He is the sole source for the data model for the next generation of their products. Laramie continues to be very active in the Petroleum Industry Dictionary Group, developing a standard dictionary for the industry (and academia). He is also the chairman of the AAPG Subcommittee on Data Models and works with the other AAPG computer committees. The aim is to "make it more comfortable for geoscientists to move data and interpretations through their working environments." Donna, as a CPA, continues in accounting at First City Bank. T.J., their son, is now 14 and in the Gifted and Talented Program. Daughter, Rachel, is in the first grade and competing with her brother with straight A's.

Mark Hanson (BS '82) finished his masters degree at CSM where he worked under Tim Cross. He is currently working for Shell Western in Houston, working under another UND alum, Jim Smallwood (BS '54). Most of his work involves gas exploration in the Anadarko Basin. Lenora and Mark have a daughter, Bethany Rose, born 5/5/90.

Bret Fossum (BSGE '82) is still working in the offshore Gulf of Mexico. He is currently studying "application of geopressure occurrence to hydrocarbon exploration and subsequent basin analysis."

Rob Kuttes (BSGE '82) is working in Kansas City. He says he "finally got a job where they'll call me a geological engineer (in waste management)!" He will finish up an MBA degree in December.

Pat Sogard (BSGE '82) works as an attorney in Grand Forks. He says: "I still shudder when I think about the Petrology Field Trip of fall '80 when we spent the weekend in tents huddled together to keep warm and out of the rain in rural Kenora."

Carrie Krause (BS '83) continues to work for the Wells County Soil Conservation District in Fessenden.

Ed Murphy (BS '79, MS '83) and Becky are the proud parents of Edward Paul (named after Ed's father) born May 3, weighing 7lbs 12 oz. Ed continues with the NDGS in Bismarck.
Mary Dietz Rerick (BS '84) is continuing as a graduate teaching assistant in the Math Dept. at UND.

Dan Shide (BSGE '84) is currently employed by the Navy. He works on environmental compliance for the Naval Air Station at Point Mugu in California, dealing with hazardous waste, superfund, environmental compliance, etc.

Bryan Johnsrud (BSGE '84) is a project engineer for Andrews Environmental Engineering in Springfield IL, specializing in solid waste, landfill design, engineering services and remediation of contaminated sites.

Krista (Richter) Doebbler (BSGE '84) is living in Sacramento CA where she works for the U.S. Bureau of Reclamation as a hazardous waste coordinator. When she and her husband, Scott, can escape they get into the mountain biking, skiing and hiking things.

Neil Korsmo (BS '84) is now park ranger at Capitol Reef National Park in southwest Utah, having moved from Hot Springs National Park in Arkansas in 1990. He is involved in inventoring abandoned uranium mines within the park.

Tom Obelenus (MS '85) has been promoted to acting System Manager for his division of the Defense Mapping Agency, in a new state-of-the-art mapping center, about 500 yds from the USGS in Reston VA. His responsibilities include maintaining system hardware and software, assisting users, creating accounts, and monitoring system resources and security. Shanna left her job with an international bank consultant firm and is administrative assistant in the marketing division of Versar, Inc., a nation-wide environmental risk-management firm.

John Hoganson (PhD '85), paleontologist with the NDGS, has a new office and lab space in the Heritage Center in Bismarck. He aided in setting up a widely acclaimed fossil exhibit there, worked on getting a fossil *Metasequoia* log displayed on the Capitol grounds, and lectured on ND fossils to a standing-room-only crowd at the Center.

Larry Thrasher (MS '85) continues as BLM’s hazardous material coordinator, inspecting abandoned mine sites in the Safford AZ district for reclamation compliance. He also restored and evaluated a mammoth leg bone found south of Safford.

Brian Sandberg (MS '85) is back working for Conestoga Rovers Assoc. He and Heidi live in Circle Pines MN. They are enjoying their first child, Peter, born 10/17/90.

Rob Meek (BS '85) dropped us a postcard while on a geology field trip in Nova Scotia. He was enjoying seeing "real" geology again. Most of the time Rob does 3D seismic imaging for Mobil.

Tim Thomas (BSGE '85) is a captain in the U.S. Air Force. He and his wife, and three children, are living at Williams Air Force Base in Arizona.

Jenny Yearous (BS '85) is a graduate student and research assistant in the Department of Sociology/Anthropology at the University of Mississippi.
Frank Beaver (MS '84, PhD '86) continues as Director of the Mining and Minerals Resources Institute at the EERC in Grand Forks. Frank recently donated several sets of magnificent slides of Hawaiian volcanic activity to the department.

Debra Alexander (Ex '87) is still in Richland WA, working for Westinghouse Hanford. She is in charge of the company’s program for implementation, training, etc., related to federal regulations for hazardous waste operations and emergency response. She is involved in an effort to clean up 45 years of waste from the AEC/DOE production of plutonium. She is completing an MS degree in Environmental/Hazardous Waste Management.

Terry Johnson (BSGE '87), his wife, and two children, live in Fargo. Terry works as a Project Manager for Twin City Testing Corp.

Mark Lord (MS '84, PhD '88) and Patty are enjoying the Meadville PA area, having succeeded Sam Harrison (MS '65, PhD '88, see note elsewhere in this newsletter) in the Department of Geology and Environmental Science at Allegheny College. He especially enjoys the closeness to students.

Katie Luther (MS '88) and Mark (MA '88) continue to work in Bismarck. Katie is an environmental scientist for the Division of Water Quality of the ND Health Department, working on the Wellhead Protection Program. Mark is with the North Dakota Geological Survey, supervising drilling programs. Another grad, Chris Roob (MS '87) is also an environmental scientist for the Health Department.

Jeff Maletzke (MS '88), with Donohue, spent most of the summer and much of the fall working out of town on hydrogeological projects. He and Penny have bought an old house and are busy fixing it up. Penny continues to coach volleyball at Sheboygan and works as a physical therapist aid, instructor of first aid/CPR, exercise consultant for weight loss classes, etc.

Earl Woolsey (BSGE '89) works for a local Grand Forks company, Technology Applications Group, Inc. They are working to develop paint-adhering and corrosion/abrasion resistant coatings for aluminum and magnesium alloys. He and his wife bought a house and are enjoying (?) fixing it up.

Nate Hunke (MS '89) and Jeanette write that their two boys, Zach and Emanuel, are moving quickly into national recognition, with Zach performing in "A Stranger Within", with Kate Jackson and Ricky Schroeder, and doing commercials for Lava soap, and Emanuel in a commercial for Target and Fischer-Price! And, oh yes, Nate loves his job.

Randy Burke (PhD '89), NDGS geologist, has been joined in Bismarck by his wife, Meg, who is teaching biology at the University of Mary this year, instead of at UND; they have bought a house in Mandan.

Brian Silfer (MS '90) is working for an environmental firm in Reston VA while readying a fossil gastropod paper for publication. (See note on Mark Erickson).

James Cron (BSGE '90) is a member of the Mobil Exploration & Producing U.S., Inc.'s Houston West Acquisition Team. He is operations engineer in the West Ranch Field in Vanderbuilt TX where he lives.
Moira Campion (EX '91) is working for the Minnesota Department of Natural Resources on their sensitivity mapping project. She and Paul Bulger (MS '87) live in St. Louis Park MN. Paul works for STS Consultants as a hydrogeologist. Some other alums in the area include Doug Beckwith (BS '84), Larry Quandt (MA '90), John Betcher (BS '71), and Steve Giddings (MS '86), all of whom are working at the Minnesota Pollution Control Agency. Also in the cities area are Dave Ronnei (MS '87) who works for Delta Environmental, Brian Sandberg (MS '85) working for Conestoga Rovers Associates, John Dahl (BS '87) and Jeff Solheim (BS '89) who work for Terracon and Cammie Pederson (BSGE '89) who works for GME. Mark Millsop (MS '85) also works for GME, but in Crosby ND.

Typical hard-rock geologist.
Aaker, Robert K. (BS Geol 1949)
Aase, Glenn D. (BSMIE 1961)
Achttien, Donald B. (BSMIE 1953)
Ackerman, Daniel J. (BS Geol 1971)
Adams, Jimmie L. (MST 1969)
Adolphson, Donald G. (BS 1957)
Albers, Daniel C. (BSMIE 1960)
Alexander, Debra J.
Alkofar, Anton R. (BS 1958 MS 1969)
Allen, Joseph C. (BSMIE 1929)
Alpha, Andrew G. (BS 1934 MS 1935)
Anderson, Alan R. (BSGSE 1982)
Anderson, Ben A. (BSMIE 1938)
Anderson, Curtis A. (MS 1976)
Anderson, Curtis R. (BSGSE 1972)
Anderson, Douglas B. (BS 1975 MS 1988)
Anderson, Jr., Henry W. (BS Ed 1953)
Anderson, Garth S. (MS 1980)
Anderson, Orin J. (PhB 1961)
Anderson, Richard J. (BS 1981)
Anderson, Robert O. (BS 1981)
Anderson, Rolf C. (BSMIE 1933)
Anderson, Sidney B. (PhB 1951)
Archbold, Michael F. (BS 1968)
Armentrout, Howard D. (PhB 1954)
Armentrout, Ralph H. (BSGSE 1977 BS 1977)
Arndt, Michael B. (PhD 1975)
Arnold, Arthur B. (BS Geol 1950)
Badley, David A. (BSGSE 1983)
Bailey, Terrence P. (BS 1970)
Bakke, Arne A., Jr. (BS Geol 1982)
Bakken, Wallace E. (BS Geol 1958 MS 1960)
Balcom, Robert J. (BA 1976)
Baldwin, Rae Ann
Ballard, Frederick V. (MA 1963)
Barbie, Dana L. (BSGSE 1976)
Barke, Walter B. (BS Geol 1950)
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2873 Chamise Way Hemet CA 92543
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12231 N 19th St #216 Phoenix AZ 85022
274 6th St SW Dickinson ND 58601
PO Box 134 Williston ND 58801
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3558 Basswood Circle SW Prior Lake MN 55372-2300
4008 Crestridge Drive Midland TX 79707
1043 Oakcrest Casper WY 82601
1710 No 23rd St Bismarck ND 58501
409 SW Red Hills Drive Dundee OR 97115
2508 S 10th Street Grand Forks ND 58201
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106 Washington Harbor Washington DC 27889-4582
4100 Shiloh NE Albuquerque NM 87111
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13355 W 72nd Circle Arvada CO 80005
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15606 NE 40th St #D-315 Redmond WA 98052-5250

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1583 S Spruce St Denver CO 80231
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15925 Wingdale Dr Houston TX 77082
1025 10th Street NW Minot ND 58701
5561 Nason Ave NE Rogers MN 55374
7862 Valencia Way Englewood CO 80112
5321 J Penrith Dr Durham NC 27713
101 East 22nd Court Owasso OK 74055
351 S Brandon Loop Bismarck ND 58501
18103 36th Ave W #204 Lynnwood WA 98037
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2106 N H St Midland TX 79705
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6000 Reims Rd #4406 Houston TX 77036-3056
6083 Evergreen Street Portage MI 49002
328 High St Abbottstown PA 17301
4319 Woodland Pk Brownwood TX 76801
8103 Twinning Oaks Spring TX 77379
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TX Bur of Economic Geol Austin TX 78712
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1420 N 13 Street Bismarck ND 58501
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Manning, Dean E. (BS 1976)
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Marafi, Hussein S. (MS 1969)
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Marchell, Kirk A. (BSGE 1981)
Martin, Calvin W. (BS 1975)
Masson, Andy
Mathison, David J. (BS Geol 1971)
Mayer, Gale G. (MS 1988)
McCabe, William J. (PhB 1953)
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McCurran, James D. (BS 1986)
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Meek, Robert A. (BS 1985)
Meiers, Monte C. (BS 1974)
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2113 6th Street NW Minot ND 58701
2022 Happy Hollow Cir. Rawlins WY 82301-4003
1155 Lakeside Dr #504 Grand Junction CO 81501
11420 53rd Ave N Minneapolis MN 55442
RR1 Box 42 Carrington ND 58421
2119 Ave F East Bismarck ND 58501
1036 Key Street Houston TX 77009
1316 20th Ave NE Rochester MN 55904
723 Ironwood Richmond TX 77469
505 Plum Avenue Grand Forks ND 58201
7313 Franklin Circle Eden Prairie MN 55346
415 Fraine Barracks Rd #306 Bismarck ND 58504
RR 1 Millarville AB TOL 1KO CANADA
51
Rosow, Robert J. (BA 1975)
Roswell, Malcolm D. (BSMIE 1958)
Roth, Kathleen A.
Rott, Gerald M. (MS 1980)
Rouzi, John
Rovenko, John M. (BS 1979)
Rovenko, Ronald J. (BS 1977 BSGE 1982)
Royse, Chester F. (PhD 1967)
Rupp, Gillette E. (BS Geol 1950)
Rusk, John H. (PhB 1958)
Russell, Alice (BA 1949 MA 1950)
Russell, Dennis L. (BSMIE 1957)
Rygh, Marvin E. (BSGE 1982 MS 1990)
Sabby, John M. (BSGE 1982)
Sabo, Joe (Ex 1956)
Sackreiter, Donald K. (MS 1973 PhD 1975)
Salisbury, Richard A. (MA 1966)
Salomon, Nena L. (BS Geol 1974)
Samuelson, Wallace J. (BS Geol 1950)
Sand, Mary
Sandberg, Brian (MS 1985)
Sand, Jeffrey J. (BSGE 1984)
Sanderson, Chad M. (BSGE 1985)
Sandy, Bruce G. (BSGE 1982)
Savage, Merle J. (BSGE 1967)
Sawatzke, Kimberly W.
Sawatzke, Thomas G. (BSGE 1986)
Scardigli, Wayne E. (BSGE 1968)
Scattolini, Richard (MS 1972 PhD 1978)
Schaan, Cory J. (BS 1985)
Schafer, Edwin H. (BS 1981)
Schiffelbein, Paul A. (MSEx 1979)
Schimelfenig, Carrie (BS 1983)
Schley, Carleton C. (PhB 1969)
Schmid, Jacqueline S. (BSGE 1984)
Schmid, Roger W. (BS 1960)
Schmidt, Orval L. (BSMIE 1957)
Schmitt, Craig R. (BS 1970)
Schmitz, Emmett R. (MS 1955)
Schnacke, Arthur (MS 1982)
Schneider, Gregory J. (Ex 1953)
Schneider, Joel D. (BSGE 1984)
Schofield, Ronald G. (BS Geol 1958)
Schott, David W. (BSGE 1981)
Schulte, Frank J. (BS 1965 MS 1971 PhD 1972)
Schulze, Henry W. (BSMIE 1951)
Schumacher, Sara J. (BS 1984)
Schumacher, Thomas D. (BSGE 1985)
Schumann, John R. (Ex 1963)
Schwartz, Danny L. (BS Geol 1975)
Schwartz, Dirk A. (MS 1987)
Schwartz, Guy L. (BSGE 1983)
847 S Naples Way Aurora CO 80017
Bach Eagle Bay BC V0E 1T0 CANADA
2150 Ridge Drive #37 St Louis Park MN 55416
3909 Adidas Ave Bakersfield CA 93313
PO Box 1437 Bigfork MT 59911
900 43rd St SE Minot ND 58701
4112 Brookhill Rd Tuscaloosa AL 35404-441
1430 Maple Valley Rd SW Olympia WA 98502
4310 Annwood Circle Spring TX 77573
757 8th Ave W Dickinson ND 58601
SEE FYTEN
5205 Gulf Pl West Vancouver BC V7W 2V9 CANADA
2700 Stephen Street Bismarck ND 58501
4415 Northcrest Drive #2022 Midland TX 79707
Box 11 Suite 13 SS 3 Calgary AB T3C 3W9 CANADA
1266 Pioneer Dr Richmond TX 77469-6568
1825 S Endicott Denver CO 80226
SEE GRILLEY
6308 S Hulen Ft Worth TX 76133
3611 Belmont Rd. Grand Forks ND 58201
10196 Kissell Ave W Circle Pines MN 55014
7004 Quailwood Dr Bakersfield CA 93309
3006 16th Ave South Rochester MN 55901
1399 Mira Flores Santa Maria CA 93455
7291 South Highland Drive Littleton CO 80120
8759 W Cornell Ave #22 Denver CO 80227
8759 W Cornell Ave #22 Denver CO 80227
7109 NE 244th Street Battle Ground WA 98604
16246 Alametos Dr Houston TX 77083
2512 S 23rd St Grand Forks ND 58201-6431
RR 1 Box 266 Zap ND 58580
4 Star Pine Road Wilmington DE 19808
SEE KRAUSE
14166 SE Hawthorne Court Portland OR 97233
2348 Hood Ave #6 Richland WA 99352
1920 Catherine Drive Bismarck ND 58501
14315 Heritage Court Wichita KS 67230
821 36th Ave S #2 Grand Forks ND 58201
2633 S Balsam Street Lakewood CO 80277
8110 Oak Moss Dr Spring TX 77379-4587
1460 W 72nd Ave Denver CO 80221
1102 Ave B Bismarck ND 58501
1812 Bay Shore Rd SW Calgary AB T2V 3M1 CANADA
6 Periwinkle Littleton CO 80127
343 Fawnlake Houston TX 77079
1219 Vista Circle Globe AZ 85501
4208 Upton Ave S Minneapolis MN 55410
1628 Oakland Dr Bismarck ND 58501
1666 Clarendon Drive Lewisville TX 75067
1600 Preston Trail Ft Collins CO 80525
1200 Galapago #610 Denver CO 80204
1100 Leeward Box 1527 Kenai AK 99611
52
Schwenn, David D. (BS 1986)
Schwenn, LaRaee J. (BS 1986)
Scott, Mary L. (MS 1972)
Seelig, Keith D. (BS 1983 BSGE 1983)
Seidel, Robert E. (PhD 1966)
Setterlund, Richard B. (BSME 1957)
Sevigny, Kevin J. (BS 1986)
Sherrod, Neil R. (MS 1963)
Shide, Daniel T. (BSGE 1984)
Short, Harry W. (PhB 1956)
Siebens, Charles J. (BS 1977)
Sigsby, Robert J. (PhD 1966)
Siler, Brian L. (MS 1990)
Sillerud, Jerroll G. (BSGE 1978)
Simonsen, Eric J. (BSGE 1985)
Simpson, Howard E. (BA 1940)
Sinkbeil, Raymond F. (BS 1949)
Sjodin, Michael R. (BSGE 1985)
Skene, George W. (BSME 1937)
Skibicki, Michael J. (BSGE 1986)
Slama, Louise A. (BS 1973)
Smallwood, James C. (BS Geol 1954)
Smith, Carole J. (BS 1953)
Smith, Gordon A. (BSME 1958)
Smith, Gregory W. (BSGE 1987)
Smith, Leonard J. (BS 1950)
Smith Louis D. (BS Geol 1970)
Smith, Richard D. (BS 1967)
Smith, Wayne G. (BSME 1959)
Smyers, Larry E. (MS 1979)
Sogard, Patrick O. (BSGE 1982)
Solheim, Dale S. (BS Geol 1958)
Sorheim, Jeffrey (BSGE 1989)
Sorensen, James A. (BS 1991)
Sorensen, Vernon S. (BSME 1940)
Sorum, Jack (BSGE 1983)
Sowokinos, Janice
Spaeth, Richard N. (BS 1972)
Stadium, Mark A. (BSGE 1983)
Staiger, LeRoy A. (BA 1970)
Stallman, Gerald M. (BSGE 1982)
Stallman, Tim L. (BA 1975)
Stancel, Steven G. (BS 1974)
Steadman, Edward N. (MA 1985)
Stefanovsky, Gary L. (BS 1983)
Steig, Wade D. (BA 1979)
Steiner, Mark A. (MA 1978)
Steinle, Kirk M. (BSGE 1985)
Stephens, Randall (MS 1986)
Stevenson, Robert J.
Stiening, Jodie D. (BSGE 1984)
Stone, William J. (PhD 1973)

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802 E 10th St Grafton ND 58237
1201 Buttonwood Drive Ft Collins CO 80525
728 Cento Lane Santa Paula CA 93060
724 Santa Ana Lane Concord CA 94518
12447 Wedgehill Lane Houston TX 77077
10 Crestone Woodlands TX 77331
1963 B Villa Ridge Dr Reston VA 22091
1401 Aineslee Midland TX 79701
1214 Lorraine Drive Grand Rapids MN 55744
2020 Washington Avenue Golden CO 80401
480 Kendall St Lakewood CO 80226

3000 Rankin Road NE Minneapolis MN 55418
202 Planters Drive Victoria TX 77904
SEE MAIXNER
2202 Parkdale Kingwood TX 77339
SEE PENDER
47 S Clair Ave #505 Toronto ON M4V 3A5 CANADA
5868 Cty Rd 45 S Brainerd MN 56401
900 Lanier Blvd #9 Brunswick GA 31520
P O Box 277 Jackson CA 95642
184 Park Estate Place Calgary AB T2J 3W1 CANADA
P O Box 100779 Anchorage AK 99510
300 E 2nd Ave Dubuque IA 52001-3144
302 Alpha Ave Grand Forks ND 58203-1617
812 Granger Road Detroit Lakes MN 56501
3500 English St St Paul MN 55110-5224
600 S 3rd St #9 Grand Forks ND 58201
6993 Sandcastle Drive Carlsbad CA 92009
P O Box 9 Martin SD 57551
3501 7th Ave W Grand Forks ND 58201
2261 Fall Creek Court Grand Forks ND 58201
6604 95th Pl NE Marysville WA 98270-2459
6202 Bradley Drive Corpus Christi TX 78414
El Rancho Motel Riverton WY 82501
1603 Marion Dr #A Jefferson City MO 65109
1880 Arapahoe Street #2003 Denver CO 80202
RR 1 Box 44 Arvada ND 58214
RR 1 Box 236 Bismarck ND 58501-0719
3036 NE Tyner Street Minneapolis MN 55418
12065 W Bowles Place Littleton CO 80127
5233 W 82nd Street Apt #7 Bloomington MN 55437
1555 Poydras #1051 New Orleans LA 70112
1165 S Oak Park Ave Oak Park IL 60304
251 Northridge Hills Grand Forks ND 58201
P O Box 669 Carlin NV 89822-0669

53
Stordahl, Gerald L. (MST 1969)
Storhaug, Dennis G. (BS 1970 BS Geol 1977)
Strand, Gilman A. (BA 1939)
Strecker, Erwin J. (BS Geol 1950)
Streich, Eldon A. (PhB 1969)
Streifel, James E. (BSMIE 1963)
Streibel, Edmund L. (BA 1980)
Strong, Gary R. (BS 1972)
Strube, Delton D. (MS 1979)
Sturn, Stephen (MA 1982)
Suess, John M. (BSGe 1983)
Sullivan, Raymond W. (BSMIE 1928)
Sunderland, Gary L. (BS Geol 1971)
Sunnergren, Edwin C. (MST 1968)
Swenson, Karl F. (BSMIE 1956)
Switzer, K. Bruce (BS 1966)
Syvertson, David L. (BSGe 1980 BS 1980)
Tesarowski, Chester S. (BA 1967)
Thomas, Timothy M. (BSGe 1985)
Thompson, Gary G. (BS Geol 1962)
Thompson, Jack C. (PhB 1949 BS Geol 1950)
Thompson, Stephen C. (MS 1984)
Thomte, Dennis L. (BS Geol 1957)
Thrasher, Lawrence C. (MS 1985)
Timm, Elbert C. (BA 1939)
Tinker, John R. (MS 1969 PhD 1970)
Tokach, Kenneth C. (PhB 1965)
Trapp, John S. (PhB 1967)
Traynor, Patricia (BS 1974)
Traynor, Terrance O. (BS Geol 1977)
Trubitt, Robert C. (BS 1980)
Trimble, William C. (BS 1954)
Trostgruben, Eldon W. (PhB 1971)
Truxal, Calvin O. (BS Geol 1951)
Tschida, Edward A. (BS Geol 1957)
Tuthill, Samuel J. (MA 1963 PhD 1969)
Twomey, Christopher A. (PhB 1971)
Ulmer, James H. (MS 1973)
Uran, Daryl L. (BSGe 1986)
Utgaard, John E. (BS 1958)
Valvik, Jeffrey (MA 1990)
van Alstine, James B. (MS 1974 PhD 1980)
Van Ornun, Joanne (BS 1971 MS 1979)
Vanderzon, David D. (PhB 1969)
Vandersluis, Heidi N. (BSMIE 1960)
Van Ness, Juliette (BS 1983)
Verner, Lanny D. (BS 1978)
Vickers, Jeffrey P. (BSGe 1978)
Vig, Reuben J. (BSMIE 1937 MS 1963)
Volghe, Harold E. (BSGe 1984)
Waldren, Delores (Mrs. C.H.)
Walker, Daniel M. (BS 1970)
Walker, Thomas F. (MA 1967)
Wallick, Brian (MS 1986)
Walsh, Robert G. (EdD 1975)
Wangerud, Kenneth W. (BS Geol 1974)
Warburton, Stanley M. (BS Geol 1951)
Wartman, Brad L. (MS 1983)
Waters, Douglas L. (MS 1984)
Waxvik, John N. (BS Geol 1965)
Weaver, James G. (PhD 1967)
Webster, Mark H. (BS Geol 1984)
Webster, Rick L. (BS 1980 MS 1982)
Wehrfritz, Barbara D. (MS 1978)
Weinlader, Jonice (EK 1973)
Welander, James D. (PhD 1970)
West, Jay A. (BS 1985)
Wenban, Richard V. (BSMIE 1986)
West, Edmund G. (BSMIE 1959)
West, Roger G. (MST 1969)
Wetzel, Mark O. (BS 1987)
Wheeler, Raymond D. (PhB 1964)
White, Stanley F. (MS 1980)
Wake, Kent W. (BS Geol 1984 BS 1986)
Wilkie, Kenneth G. (PhB 1953)
Wilkinson, Michael (MS 1982)
Williams, Barrett J. (BS 1958 MS 1960)
Williams, David (MS 1984)
Wilson, Robert G. (MS 1967)
Wilson, Barry J. (BS Geol 1983)
Wilson, Everett E. (BS Geol 1956 MS 1958)
Wilson, James W. (BS Geol 1976)
Winburn, Gary D. (BS Geol 1978 MS 1986)
Winterer, Timothy R. (BSMIE 1959)
Wockovich, Marvin R. (PhB 1953)
Wold, Paul D. (BS 1949)
Wolff, Robert A. (BS Geol 1982)
Woods, Mary L.
Woolsey, Earl (BS Geol 1989)
Wosick, Frederick D. (BS 1974 MS 1977)
Wyborny, Sylvester J. (BSMIE 1958)
Wylie, Jan O. (BS 1971)
Yearous, Jenny D. (BS 1985)
Young, Daniel R. (MA 1980)
Zabel, Dean A. (MS 1979)
Zejudik, Roger C. (BS Geol 1957)
Zich, Terrance J. (BS Geol 1977)
Ziebart, Harold C. (MS 1962 PhD 1972)
Zimmerman, James T. (BS Geol 1955)
Zodrow, Dwain M. (BS Geol 1950)
Zygarlicke, Christopher J. (MS 1987)
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2225 Orchard Street Lake Charles LA 70601
583 Pearl Street Monterey CA 93940
12211 Woodchase Dr Anchorage AK 99516
5401 Wilcox Tav Ct Fairfax VA 22030
512 Pearl Circle Elkhorn NE 68022
524 4th St Thompson ND 58278-4224
7727 Kleingreen Spring TX 77357
29495 Golden Crt Cyn Rd #86-498 Golden CO 80403-8106
SEE SOMOK/NS
919 East Mount Faith Fergus Falls MN 56537
710 Mill St Snohomish WA 98290
15986 77th Street South Haven MI 49090
57620 Ramona Road Spokane WA 99204
2601 Fairway Drive Moorhead MN 56560
420 North 15th St Bismarck ND 58501
RD 1 Box 25 Dolgeville NY 13329
346 Meadowcreek Dr Duncanville TX 75137
3441 Knob Oak Dr Grapevine TX 76051
Box 524 Black Diamond AB TOL DNO CANADA
4200 The Woods Dr #B-919 San Jose CA 95136
2757 Arlounge Drive Tucker GA 30084-2514
1839 61st Ave North St Cloud MN 56301
1614 Rickey Road Charlottesville VA 22901
15935 Wingdale Drive Houston TX 77082
6404 Kensington Court Oklahoma City OK 73132
48 W Broadway #2406 N Salt Lake City UT 84101
1227 Pocatello Dr Bismarck ND 58504
12614 Vindon Dr Houston TX 77024
45 Verbalee Lane Hillsborough CA 94010
3104 Hamilton Way Casper WY 82001
1061 E Sandpiper Drive Temple AZ 85283
4415 Crown Point Road Mandan ND 58554
SEE SCOTT
901 S 11th St Grand Forks ND 58201-4449
220 E Brandon Drive Bismarck ND 58501
1021 Oak Grove Detroit Lakes MN 56501
1805 Country Club Road Cleburne TX 76031
1817 Jackson Ave E Oxford MS 38655
4203 Iowa Drive Anchorage AK 99517
320 Felspar Ridgecrest CA 93555
3082 North Shore Dr Bellingham WA 98226
414 Laredo Dr Bismarck ND 58504-7211
7352 S Delaware Street Littleton CO 80120
6905 Edenvale Blvd Eden Prairie MN 55344
1112 South Main Minot ND 58701
835 Great Plains Ctr Grand Forks ND 58201
GEOLUMN I NFORMATION FORM

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Residence Address ___________________________ Street Address ___________________________ City ___________________________ State ___________ Zip ___________

Business Address ___________________________ Position ___________________________ Business Telephone ___________________________ Area ___________ Number ___________

Company Address ___________________________ City ___________________________ State ___________ Zip ___________

Permanent Address (or name and address of parents, nearest relative, or someone who will be able to reach you):

Telephone ___________________________ Number ___________

Name ___________________________ Relationship ___________________________ Area ___________ Number ___________

Street Address ___________________________ City ___________________________ State ___________ Zip ___________

Degree ___________ University ___________________________ Year ___________

College or College or University ___________________________ Year ___________

Degree ___________ University ___________________________ Year ___________

College or College or University ___________________________ Year ___________

Spouse ___________________________ Name ___________________________ Year of Wedding ___________

Children ___________________________ Name ___________________________ Birth Date ___________________________ Name ___________________________ Birth Date ___________________________

Name ___________________________ Birth Date ___________________________ Name ___________________________ Birth Date ___________________________

On the back of this sheet please send us any news of your "doings" to be included in the next issue. Tell us about some incident or recollection you remember from your days in the Department, e.g., the time Bud Holland shot a hole in his car. Or, in any event, return this sheet so our records will be more complete and current. We want to hear from you!