

GIFT OF W R LOWELL

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INDIANA UNIVERSITY  
DEPARTMENT OF GEOLOGY



NEWS LETTER No. 8

1959

INDIANA UNIVERSITY  
DEPARTMENT OF GEOLOGY

NEWS LETTER NO. 8

Wm. D. Thornbury, Editor

Contributors

C. W. Beck

C. F. Deiss

J. B. Droste

R. E. Esarey

R. D. Harvey

D. E. Hattin

W. R. Lowell

Judson Mead

J. B. Patton

T. G. Perry

C. J. Vitaliano

Bloomington, Indiana

May 1959

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## SENIOR TEACHING STAFF FOR 1958-1959

Carl Wellington Beck, Professor of Mineralogy  
Charles Frederick Deiss, Chairman and Professor  
of Geology  
John Brown Droste, Assistant Professor of Geology  
Ralph Emerson Esarey, Associate Professor of  
Geology  
Donald Edward Hattin, Assistant Professor of  
Geology  
Wayne Russell Lowell, Professor of Geology  
Judson Mead, Associate Professor of Geophysics  
John Barratt Patton, Professor of Economic Geology  
Thomas Gregory Perry, Associate Professor of  
Geology  
William David Thornbury, Professor of Geology  
Charles Joseph Vitaliano, Professor of Geology

## NON-ACADEMIC STAFF

Bernice M. Banfill, Administrative Assistant  
Theodore H. Appleton, Accountant  
Maynard E. Collier, Analytical Chemist  
Ellen L. Freeman, Librarian  
Jeanette T. Dillion, Secretary  
Herbert P. Dutton, Caretaker, Geologic Field  
Station  
Charles S. Miller, Instrument Maker  
William H. Moran, Chief Draftsman  
Frederick L. Wesemann, Preparator

## TEACHING ASSISTANTS

David R. Berendsen, Evansville, Indiana, B. S.,  
Washington University, 1957. Dave completed  
work for his A. M. in January, 1958. During the  
fall semester Dave assisted in G-101, Physical  
Geology.

Eugene H. Core, West Liberty, Ohio, B. S.,  
Bowling Green University, Ohio, 1957. Gene is  
studying wall rock alternation in rocks around  
Tonopah, Nevada, and will complete his A. M.  
thesis this June. He is assisting in G-100, Geology  
and Man, and in G-101, Physical Geology.

Richard D. Harvey, Evansville, Indiana, B. S.,  
Indiana University, 1956; A. M., Indiana Uni-  
versity, 1958. Dick is assisting Professors Beck  
and Vitaliano in mineralogy and petrology courses.  
He has begun work on his Ph. D. thesis which  
concerns wall rock alternation in rocks of the  
Goldfield District, Nevada. Dick hopes to receive  
his degree in June, 1960.

John Melton, Guilford College, North Carolina,  
B. S., Virginia Polytechnic Institute, 1958. John's  
major interest is in geophysics and he is assisting

Professor Mead in geophysics courses and Professor  
Patton in G-101, Physical Geology.

Howard W. Pee, Spiceland, Indiana, A. B.,  
Indiana University, 1957. Howard hopes to get  
his A. M. degree in June, 1959. During the fall  
term he assisted Professors Beck and Vitaliano in  
mineralogy and petrology courses.

David H. Phail, Southhampton, New York,  
A. B., 1957, Antioch College. Dave will com-  
plete work for his A. M. degree in June, 1958.  
He assisted Professor Thornbury in G-415,  
Geomorphology, during the Fall semester.

Robert G. Pirie, Dundas, Ontario, Canada,  
B. S., McMaster University. Gordon is assisting  
in G-100, Geology and Man, and G-101,  
Physical Geology. His research is concerned  
with petrology of metasedimentary rocks found in  
the Canadian Shield.

Benjamin H. Richard, Schwenhsville,  
Pennsylvania, B. S., Virginia Polytechnic Institute,  
1958. Ben leans toward the hardrock side of  
geology and is assisting in the G-100, Geology  
and Man, course.

William T. Straw, Griffin, Indiana, B. S.,  
Indiana University, 1958. Tom is assisting in  
the introductory courses G-100, Geology and Man,  
G-101, Physical Geology, and G-102, Historical  
Geology.

## RESEARCH ASSISTANTS

Nityananda Bhattacharya, Banaras, India,  
B. S. C., M. S. C., Banaras Hindu University,  
1949, 1951. "Bat" is doing a Ph. D. thesis on the  
petrology of gumbotil. His thesis is being directed  
by Professors Thornbury and Droste. "Bat" expects  
to complete the work for the Ph. D. degree by  
June, 1960.

Alan A. Colville, Gary, Indiana, received  
the A. M. degree in June, 1958, from Indiana  
University. Alan is working for the Ph. D. degree;  
his thesis will be on paleomagnetism of Paleozoic  
and Mesozoic sedimentary rocks located in the  
Geologic Field Station area of southwestern  
Montana. Alan hopes to receive the Ph. D. degree  
in February, 1960. Alan's thesis is under the  
direction of Professor Mead.

Helmo Rand, B. S., 1957, City College of  
New York. He anticipates receiving his A. M.  
degree in June, 1959. Helmo, a holder of the  
Shell Oil Company Fellowship in 1957-1958, is

doing a seismic study of Tertiary sedimentary rocks in the Geologic Field Station area in Montana as well as a magnetic and gravity anomaly study in Indiana under Professor Mead's direction.

Luis Concha, B. S., 1957, Berea College, Berea, Kentucky. Luis hopes to complete the work for an A. M. degree in June, 1960. He is interested in economic geology and petroleum geology and is working under Professor Vitaliano on the compilation of a geologic map of the Paradise Peak quadrangle, Nevada.

Barry Turner Haff, B. S., June, 1957, Trinity College. Barry expects to receive a Master's degree in June, 1959. Barry is interested in paleontology, zoology, and botany; currently he is working on insoluble residue micro-fossils of the Ordovician and Silurian strata of Indiana under the direction of Professor Hattin.

Bernard Karp, A. B., June, 1957, Earlham College. Bernard anticipates completing the work for the Master's degree in June, 1959. His primary interest is paleontology and he is working on the annotated bibliography of Indiana geology for Professor Patton.

Howard W. Pee, A. B., September, 1957, Indiana University. Howard expects to receive the Master's degree in June, 1959. His geological interests are stratigraphy, paleontology, and palynology. Professor Hattin is his advisor.

#### NON-INDUSTRIAL FELLOWS

Richard B. McCammon, Indianapolis, Indiana, B. S., Massachusetts Institute of Technology, 1955; M. S., University of Michigan, 1956. His geological interests are sedimentary petrology, mineralogy, and statistics. Dick's doctoral dissertation, which involves a study of the petrology of the outwash gravels along the Wabash Valley, is being supervised by Professor Thornbury. Dick plans to obtain his Ph. D. degree in September, 1959. He aspires to a teaching career.

Joaquin Rodriguez, New York, New York, A. B., Hunter College, 1955; M. S., Ohio State University, 1957. "Joe's" concentration is paleontology and he expects to receive his Ph. D. degree in September, 1959. His thesis, "Paleontology of the Golconda formation," written under the supervision of Professor Perry, is nearing completion. "Joe" looks forward to a career in teaching beginning with the school year, 1959-60.

Helen McCammon, Winnipeg, Manitoba, Canada, B. S., University of Manitoba, 1955; M. S., University of Michigan, 1956. Helen's geology major is paleontology, with secondary interests in stratigraphy and zoology. She has devoted the entire academic year, 1958-59, to paleontologic research. Under the supervision of Professor Perry, Helen is completing her doctoral thesis, "Fauna from the Manitoba Group, from Manitoba, Canada." Helen expects to receive her Ph. D. degree in June, 1959, and plans to continue in research.

#### INDUSTRIAL FELLOWS

John Edward Utgaard, Minot, North Dakota, A. B., University of North Dakota, 1958. John held the Standard Oil Company of Texas Fellowship during the 1958-59 academic year. He expects to complete his work for the A. M. degree under Professor Perry by February, 1960. His thesis, "Fenestellid bryozoans from the Glen Dean limestone (Middle Chester) of Indiana," is well under way. John has recently received news of his appointment as a National Science Foundation Fellow for the coming year. He plans to continue toward the Ph. D. in paleontology at Indiana.

Ronald Dean DeRudder, Bloomington, Indiana, B. S., Indiana University, 1958. Ron was awarded the Arketex Ceramic Corporation Fellowship for the 1958-59 academic year. He plans to complete his work for the A. M. degree in September, 1959, and is working under Professor Beck on a problem concerning the relation of minerals to the peeling of glazes. Ron plans to continue beyond the A. M. degree at Indiana.

John Stephen Parker, Logansport, Indiana, B. S., Indiana University, 1958. John holds the Shell Fellowship in Geophysics. John is working on the seismic investigation of the thickness of Tertiary rocks in southwestern Montana, in the vicinity of the Indiana Geologic Field Station. He will continue this work during the summer of 1959, and will complete his work for the A. M. degree shortly thereafter. John plans to return to Indiana in the fall to begin work toward the Ph. D. degree in geophysics.

#### NEW INDUSTRIAL FELLOWSHIP

The Department is pleased to announce that a new fellowship in geophysics has been established at Indiana University, by the California Oil Company. The Fellowship provides \$1500.00 plus basic fees for a first year graduate student interested in geophysics.

## A WELCOME GIFT

The Department was very pleased to receive the gift of a 36-trace refraction seismograph and recording truck from the Pan-American Oil Corporation of Tulsa, Oklahoma. The equipment is now in use in connection with the spring course in geophysics and will be used in Montana during the summertime on the Tertiary project.

## NEW GEOLOGY BUILDING

As this NEWSLETTER goes to press a new building for the Geology Department is passing from the planning to the construction stage. Bids were taken in March for the excavation and footings, and construction will begin as soon as the site is cleared. The buildings that have occupied the ground are being removed, and utility lines are being adjusted to the new structure. It is expected that contracts will have been let for the construction by the time the footings are completed, so that no time need be lost between the two stages.

The building will be on the north side of Tenth Street facing south across the parade ground (see campus map). The six-floor building will have floors 1 to 4 and more than half of the sixth floor finished initially. The fifth floor and part of the top floor cannot be finished as usable space at this time but will provide room for expansion. Each branch of geology will have its own section within the first four floors (see floor plans), and the completed part of the sixth floor will be the library.

The building was planned initially to accommodate our needs until 1970, but budgetary restrictions compelled the University to reduce the space approximately to the amount that will be needed at the time the building is finished. Although this change did not permit us to plan for expansion into new fields, the plans now on the boards will provide very adequately for the proper handling of our present curricular offerings, and will permit us to offer better training within these fields. The date of completion is somewhere between an estimate and a guess, but the building should be completed sometime during the academic year 1961-62.

## RECENT GRADUATES

### A. B. Degree, June, 1958

Olson, Franklin D.

### B. S. Degree, June, 1958

Arnold, Thomas F.

Baker, Jack W.

Baker, Jacob B.

Cutner, Lawrence P.

Derner, George B.

Dixon, Jr., William G.

Duhon, Joseph M.

Gardner, Maxwell E.

Gates, Gary R.

Girdley, William A.

Parker, John S. (with honors)

Pirie, Robert G.

Ransford, John W.

Stangle, William J.

Straw, William T.

Wiley, Richard E.

### A. B. Degree, September, 1958

Carter, James R.

Downen, John D.

### B. S. Degree, September, 1958

Aiken, Jr., Wallace K.

Christensen, Carl W.

DeRudder, Ronald D. (with highest honors)

Noone, William P.

Northrup, Jack B.

Ramsey, John E.

Ward, Garnet, H.

### A. M. Degree, June, 1958

Colville, Alan N.

Elected foreign language option.

- Crane, Ronald C.  
Elected foreign language option.
- Fitch, Richard  
Thesis: A Study of Petroleum Occurrences and Possibilities in the Northeast Vanderburg County Area, Indiana.
- Flanagan, William H.  
Thesis: Geology of the Southern Part of the Snowcrest Range, Beaverhead County, Montana.
- Harvey, Richard D.  
Elected foreign language option.
- Rupert, Gerald B.  
Elected foreign language option.
- Saenger, Robert C.  
Thesis: A Seismic Refraction Survey of Marion County, Indiana.
- Summers, William K.  
Thesis: A Study of the Subsurface Lithology of the St. Louis Limestone in South-Central Indiana.
- Treadway, Keith R.  
Thesis: The Petrology of Glacial Till from Tippecanoe County, Indiana, and Adjacent Areas.
- Wirey, Gary L.  
Thesis: A Subsurface Study of Lower Chester Rocks in the Union-Bowman Consolidated Pool, Pike and Gibson Counties, Indiana.
- Yurkas, George J.  
Thesis: A Petrographic Study of the Elwren Sandstone of South-Central Indiana.

A. M. Degree, September, 1958

- Brueckmann, John E.  
Thesis: Areal Geology of the Gosport Quadrangle, Indiana.
- Cowen, Michael T.  
Thesis: Petrography of the Volcanic Rocks of the Jefferson Island Quadrangle, Montana.
- Frugoni, James J.  
Thesis: A Magnetic Study of Selected Intrusives in Jefferson, Madison, and Gallatin Counties, Montana.

- Gilmore, John W.  
Thesis: Petrology of the Argillaceous Component of the Rosiclare Member of the Ste. Genevieve Limestone in Indiana.
- Henry, Gary E.  
Thesis: The Petrology of the Bethel Formation (Lower Chester) in Indiana.
- Lebauer, Lawrence R.  
Thesis: Wall Rock Alternation in the Big Divide District, Esmeralda County, Nevada.
- Moll, W. F.  
Thesis: A Study of Pinholing in Glazes.
- Scudder, Phyllis J.  
Thesis: Post-Mississippian Topography and Areal Stratigraphy of Vanderburg County, Indiana.
- Warner, Marvin E.  
Thesis: A Magnetic Study of Selected Intrusives In Jefferson, Madison, and Gallatin Counties, Montana.

Ph. D. Degree, June, 1958

- Harrison, Jack L.  
Thesis: Clay Mineral Stability and Genesis During Weathering.
- Pinsak, Arthur P.  
Thesis: A Regional Chemical and Mineralogical Study of Surficial Sediments in the Gulf of Mexico.

JOURNAL CLUB

Thirty-one speakers addressed the Journal Club during the 1958-59 academic year. Among visitors to the campus were six speakers from neighboring universities, two from industrial organizations, one from New Zealand, one from Brazil, and five A. A. P. G. Distinguished Lecturers. Professor Donald E. Hattin was Committee Chairman, with Professor Wayne R. Lowell serving as Vice-Chairman. Student members of the committee were Richard Harvey, President of the Indiana University Chapter of S. G. E., John Melton, and Donald Wirth. Harvey arranged the four S. G. E.-sponsored Journal Club programs; Melton operated the projection equipment; and Wirth handled publicity.

September 15	Professor Charles F. Deiss Department of Geology Indiana University	Introduction of Faculty and Graduate Students.	November 10	Professor George K. Neumann Department of Anthropology Indiana University	"The Influence Of Immediate Postglacial Conditions on the Settlement Patterns of Early Amerind Groups"
September 22	Professor Charles J. Vitaliano Department of Geology Indiana University	"The Geology of New Zealand"	November 17		
September 29	Dr. M. L. Thompson Illinois Geological Survey Urbana, Illinois	"Fusulinid Paleontology"		Mr. Seymour Greenburg Indiana Geological Survey Bloomington, Indiana	"Petrography of some Indiana Sandstones"
October 6	*Mr. Arlo Landolt Astronomy Department Indiana University	"A trip to the South Pole"		Dr. Alan T. Broderick Inland Steel Corporation Ishpeming, Michigan	"Geological and Geophysical Techniques used in Iron Explo- ration"
October 13	Professor Donald E. Hattin Department of Geology Indiana University	"A Geologist on Mt. Washington"	December 1	Professor E. N. Cameron Department of Geology University of Wisconsin	"Some Problems of the Bushveld Complex, South Africa"
October 20	Professor Thomas G. Perry Department of Geology Indiana University	"Fossils from the Tennessee Glades"	December 11	Professor E. W. Heinrich Department of Mineralogy University of Michigan	"Geology of the rare-earth elements"
October 21	Dr. Karl F. Dallmus Distinguished Lecturer A. A. P. G.	"Mechanics of basin evolution and its relation to the habitat of oil in the basin"	December 15	*Mrs. Dorothy Vitaliano U. S. Geological Survey Bloomington, Indiana	"Geological Abstracting"
October 27	Professor L. I. Briggs Department of Geology University of Michigan	"Evaporite Facies"	January 5	Dr. W. J. Wayne Indiana Geological Survey Bloomington, Indiana	"Revision of Pleistocene nomenclature in Indiana"
November 3	Professor Alan Spry Department of Geology University of Tasmania	"Problems of Tas- manian Precambrian geology"	January 13	Dr. Frank Conselman Distinguished Lecturer A. A. P. G.	"Future of American petroleum geology"



February 2

Dr. John D. Winslow  
Indiana Geological Survey  
Bloomington, Indiana

"Mechanics of  
compaction"

April 13

Mr. Robert C. Kingsbury  
Department of Geography  
Indiana University

"Cartography"

February 9

Professor Paul R. Shaffer  
Department of Geology  
University of Illinois

"Resurrected  
erosion surfaces"

April 20

Professor James E. Canright  
Department of Botany  
Indiana University

"Some appli-  
cations of  
palynology to  
the stratigraphy  
of Tertiary  
sediments in  
northern South  
America"

February 16

Mr. G. K. Guennel  
Indiana Geological Survey  
Bloomington, Indiana

"Palynology,  
principles and  
applications"

April 27

February 23

Mr. Henry H. Gray  
Indiana Geological Survey  
Bloomington, Indiana

"Application of  
statistics to the  
correlation of  
of coal beds by  
means of miospore  
assemblages"

Professor George P. Woolard  
Distinguished Lecturer  
A. A. P. G.

"Crustal  
structure of  
the earth as  
revealed by  
gravity and  
seismic studies  
with isostatic  
implications"

March 5

Professor Lowell R. Laudon  
Distinguished Lecturer  
A. A. P. G.

"Tectonic history  
of the western  
Pacific States"

May 4

Dr. Robert H. Shaver  
Indiana Geological Survey  
Bloomington, Indiana

" The ostracod;  
a poor, mis-  
understood  
crustacean"

March 9

Professor Hilgard O'Reilly  
Sternberg  
Centro de Pes Quisas de  
Geografia de Brasil  
University of Brazil

"Amazonian  
Geomorphology"

May 11

Mr. Seymour Greenburg  
Indiana Geological Survey  
Bloomington, Indiana

"Origin of  
clay deposits  
of Gardner  
Mine Ridge,  
Indiana"

March 16

Mr. Max Abrams  
National Gypsum Corporation  
Shoals, Indiana

"Some aspects of  
gypsum mining"

May 18

\*Mr. Jack Conley  
Department of Geology  
Indiana University

"Techniques of  
Aerial mapping"

March 23

\*Mr. Paul E. Killinger  
Unitarian Fellowship  
Bloomington, Indiana

"The eruption of  
Paracutin"

May \_\_\_

Rev. Daniel Linehan  
Distinguished Lecturer  
A. A. P. G.

"Exploration  
of Anarctica"

April 6

Professor Don L. Frizzell  
Department of Geology  
Missouri School of Mines

"Fish Otoliths"

\* S. G. E. -sponsored programs.

## FIELD TRIPS

Ten graduate students and two undergraduates accompanied Professor Donald E. Hattin on the third annual regional stratigraphy field trip to Tennessee, Arkansas, Oklahoma, Kansas, and Missouri. The group studies Paleozoic and Mesozoic stratigraphy, paleontology, and structure of the western Valley of Tennessee, Ouachita Mountains, Gulf Coastal Plain, Arbuckle Mountains, Criner Hills, Great Plains, Prairie Plains, and Ozark Mountains. Costs on this eleven-day, 3100 mile trip were held down by camping in state, national, and roadside parks. A sixty page guidebook containing maps, structure sections, stratigraphic sections, and road logs was provided for the participants.

Students of hard rock geology spent five days in the Michigan Peninsula region last April. The three car loads of students and Professor Vitaliano encountered heavy rain the first day and deep snow during the morning of the second day. After that, the weatherman cooperated satisfactorily. In addition to seeing a lot of good Precambrian geology, including the Rapakivi granite near Wausau, Wisconsin, the basic Keeweenawan lavas, and copper deposits of the Calumet region, the group was introduced by Dr. Alan Broderick, to a Welsh delicacy, "hot pasties", a lunch well suited to a cold day.

## ALUMNI LUNCHEON

The largest and one of the most interesting of our geology alumni luncheons was held at noon, Tuesday, March 17, the second day of the annual meeting of the A. A. P. G. in Dallas, Texas. The luncheon was held in the Engineers Club's private dining room and both the surroundings and food were excellent. The group was particularly appreciative of the good taste and generosity of Lester Logue and H. H. Bradfield, who made all arrangements and served as hosts.

In his remarks following the luncheon, Dr. Deiss stressed the fact that the new geology building, construction of which is about to begin, is a measure of the confidence of the University Administration in the program of the Geology Department. He also emphasized the fact that the geology faculty is constantly seeking ways to improve geology teaching and offerings at Indiana University. Dr. Lowell commented briefly upon the progress and activities of the Geologic Training Station in Montana and Dr. Patton discussed curricular changes and the attempts to establish an honors program for superior students majoring in geology. Twenty-nine persons attended the Dallas luncheon and it is hoped that

next year's luncheon at Atlantic City may exceed this year's in size.

Present at the luncheon were: Dr. Deiss; Ralph Esarey, D. V. Carter, R. L. Kidd, John Moore, Phillip J. Lane, Ned M. Smith, Frank E. Kottowski, H. H. Bradfield, Rosalia Rooney, Lawrence Rooney, Seymour S. Greenburg, Richard Fitch, Gary E. Henry, Paul Kelly, Kenneth Waters, Fred Schweers, Tom Hiestand, Dwight Mauck, W. A. Thomas, Glenn G. Bartle, Elmer L. Lucas, L. L. Logue, John B. Patton, Wayne R. Lowell, Charles F. Passel, Robert A. Bieberman, Robert B. Sublett, James Rush.

## SIGMA GAMMA EPSILON

Rho Chapter of Sigma Gamma Epsilon at the present time has twenty-seven active members. Eight new members were initiated in the fall and a banquet was held in their honor after the initiation ceremony. Two of the new members are from Indonesia and one is from Thailand. Other foreign countries represented in our present membership are Canada and India.

The Chapter's activities during the year consisted of the traditional events as well as some innovations. One of the traditions continued, after its revival last year, was the S. G. E. fall mixer held early in the year. Just before Christmas vacation, the annual Christmas party was given. The entire affair was highly successful but the parody on the weekly faculty meetings was especially well received.

Some new activities were introduced this year. During the spring semester, the Chapter initiated bi-weekly "slide talks" given by members at Chapter meetings. Talks on England, Japan, the Grand Tetons, and Death Valley were given and well received. Early in the semester the Chapter held a party for members and their wives or dates. The wives supplied the food and the Chapter supplied the beer. During the year the Chapter attempted to supplement its income by selling hand lenses and field notebooks. This venture has met with considerable success.

The officers of the Chapter are: Dick Harvey, President; Don Wirth, Vice-President; Gordon Pirie, Secretary-Treasurer; and Dave Phail, Corresponding Secretary-Editor.

## THE LIBRARY

The Geology Department Library, slowly but surely, continues to fill the gaps in important

journals and books. The addition of 1062 volumes brought the book and serial holdings to 22,479. The map collection now totals more than 25,000 as the result of the acquisition of approximately 2600 maps during the past year. Noteworthy among the library's acquisitions are several retrospective bibliographies, which aid in the search for geological information published everywhere, during the past century and a half.

A major project under way at the present is the expansion of the library's exchange program. During the past summer, a committee of the Indiana Geological Survey reviewed the library's exchange and subscription lists with the aim of discovering gaps in our worldwide coverage and improving our acquisition procedures. Material already acquired through the expanded exchange program is proving to be very valuable.

Influenced by the increased awareness among American geologists of research in the Soviet Union, we have added numerous translations of Russian literature to the library. Included in this group are the *International Geology Review*, *Geokhimiya Geologiya Nefti*, *Proceedings of the Academy of Sciences of the USSR*, *Geophysics Series*, *Geological Sciences Sections*, and *Bulletin of the Academy of Sciences of the USSR*. The library subscribes also to such Russian journals as *Geologicheskii Sbornik* and *Neftyanoe Khozyaistvo*.

Richard Walker, Geology Librarian since 1955, left Indiana University last June to take the post of Librarian in the Physics Department at the University of Illinois. Our new Librarian is Miss Ellen Freeman, a much travelled Kentuckian. Miss Freeman attended public school in New Orleans, Louisiana. She attended Newcomb College (Tulane University) and the University of Houston, where she received her B. A. degree in 1955. She was Assistant Librarian in the Reference Department, Houston, Texas, Public Library from 1946 to 1957, with primary responsibility for Government Documents and Geology Collections. She attended Columbia University School of Library Science in 1957-58 and received her M. S. degree there.

Prospects for continued improvement of our library are bright. With completion of the new geology building, library space will be nearly tripled over what it is at present and this will make possible further expansion and improvement in the library facilities.

## GLOBETROTTERS (NOT THE BASKETBALL VARIETY)

Professor Wayne R. Lowell, his wife, and three sons (ages 10, 12, & 16) spent three months during the summer of 1958 traveling by plane around the world. Flying on thirteen different airlines, they visited eighteen countries: Scotland, Ireland, England, Belgium, Netherlands, Germany, Switzerland, Italy, Greece, Turkey, Egypt, Pakistan, India, Thailand, Philippines, Hong Kong, Japan, and Hawaii. Their itinerary also included stops in Lebanon, Syria, and Jordan, but these had to be omitted because of the fighting in Beirut.

The Lowells stayed a month in Thailand where Dr. Lowell accompanied another American geologist and a Thai mining engineer on a trip from Bangkok through north Thailand into Laos to study the geology and mineral resources of that region.

## GEOLOGIC FIELD STATION

Summer field camp was held from June 14, to August 6, 1958. Forty undergraduate and graduate students were enrolled in the course G-429, "Field Geology in the Rocky Mountains". Of these students, twenty-one were from Indiana University and nineteen from other universities, including Augustana College, Colorado State University, Earlham College, Harvard University, University of Massachusetts, Montana State University, Mount Holyoke, Notre Dame, University of Pittsburgh, University of South Carolina, University of Virginia, and Washington State College.

Staff members for the field course included Robert Fields and Robert Weidman of Montana State University, Raymond C. Gutschick of Notre Dame, (Acting Director) Richard Lounsbury of Purdue University, and Judson Mead of Indiana University.

In general the course work was about the same as in previous years, except that one day per week was devoted to an all day geologic problem designed to test the progress being made by each student in field mapping and comprehension of structures. Addition of the field program in geophysics represents an expansion of the teaching program into advanced field problems. It is hoped that in the near future similar graduate programs in other branches of geology will be undertaken at the Field Station.

Graduate students' activities at the Geologic Field Station are on the increase. The addition of a thin section preparation room and a geophysics laboratory to the facilities has provided the means for extending the graduate program. Alan Colville, who is working toward his Ph. D. in structural geology and geophysics, is currently investigating the paleomagnetic characteristics of the sedimentary rocks in the vicinity of the Field Station, in an attempt to unravel the fault movements involved in the Tertiary deformation of the area. One summer's work has revealed many interesting aspects of this problem and it is hoped that the first phase will be completed during the coming field season. The geophysics laboratory at camp makes it possible to measure the paleomagnetic orientation of samples immediately after they are collected in the field.

John Parker and Helmo Rand, graduate students in geophysics, spent the last summer doing seismic work in the Tertiary near the Field Station. An attempt is being made to measure the thickness of the Tertiary rocks that fill the numerous valleys of the area. John Parker will head the seismic crew again this coming summer. Further detailed geologic mapping is planned to investigate the structural relationships between the Tertiary rocks and the older Paleozoic and Mesozoic rocks that surround the valleys. The results of this work combined with the results of the seismic program will shed new light on the structural history of this important section of the Rocky Mountains.

#### LOST SOULS

We lack addresses for the following persons. If any of you can inform us as to their whereabouts, please do so.

Robert R. Meyers

Col. Charles W. Bicking

Herman C. Engles

Margaret C. Kuzmitz

Herman Martin

Frank E. Mitchell

Don L. Green

Jee-Hing Wo

Thomas M. Hendrickson

Mrs. A. P. McMann

Mrs. Harold D. Rose

#### VITAL STATISTICS

##### BIRTHS

Mr. and Mrs. George Puscas - a son, Gregory Vic, May 24, 1958.

Mr. and Mrs. Arthur Fritz - a daughter, Anna Louise, June 26, 1958.

Mr. and Mrs. James Wilson - a son, John, June 7, 1958.

Mr. and Mrs. Robert Sublett - a son, Steven Wood, September 11, 1958.

Mr. and Mrs. Carroll Roberts - a son, Cyrus John

Lt. and Mrs. Jack W. Stover - a daughter, Carol Louise, March 3, 1958.

Mr. and Mrs. James Batchelor - a son, John David, October 21, 1958.

Mr. and Mrs. Richard E. Kirk - a daughter, Lisa Ann, April 18, 1958.

Mr. and Mrs. John P. Kipta - a daughter, Diane, September 18, 1958.

Mr. and Mrs. Howard W. Peirce - twins, Kim and Bret, June 15, 1958.

Mr. and Mrs. George Herr - a son, George, Jr., April 3, 1958.

Mr. and Mrs. Howard Pee - a son, Daniel Howard, May 8, 1958.

Mr. and Mrs. Victor E. Olsen, Jr. - a daughter, Ruth Ellen, November 6, 1958.

Mr. and Mrs. Wesley Williams - a daughter, Tammy Anne, March 3, 1958.

Mr. and Mrs. Wayne Erickson - a son, David Wayne, June 27, 1958.

Mr. and Mrs. Dallas Fiandt - a son, Wesley James, October 20, 1958.

Mr. and Mrs. Ferol Fish, a daughter, Molly Ann, February 27, 1959.

Mr. and Mrs. Gary L. Wirey - a daughter, LeAnn, March 13, 1958.

Mr. and Mrs. Jack L. Nelson - a daughter, Margaret Anne, December 29, 1958.

Mr. and Mrs. James A. Smith - a daughter, Valjean, July 10, 1958.

Mr. and Mrs. William G. Dixon, Jr. - a daughter, Rebecca Sue, September 1, 1958.

Mr. and Mrs. George T. Moore - a son, January 7, 1959.

Mr. and Mrs. Don Six - twin boys, David and Stephen, June 30, 1958.

Mr. and Mrs. Robert E. Sargent - a daughter, Jo Ann, May 8, 1958.

Mr. and Mrs. George Nevers - a son, Gregory Brian, September 18, 1958.

Mr. and Mrs. James Noel - a son, July 10, 1958.

Mr. and Mrs. Karl Frielinghausen - a daughter, March 24, 1958.

Mr. and Mrs. Robert Saenger - a son, Brian

Prof. and Mrs. T. G. Perry - a daughter, Paula Linda, January 9, 1959.

Mr. and Mrs. S. R. Hollensbe - a daughter, Heidi Ann, October 5, 1958.

Mr. and Mrs. Jack W. Wells - a daughter, Gretchen Ann, September 19, 1958.

Mr. and Mrs. E. W. Christensen - a daughter, Sara Kay, August 23, 1958.

Mr. and Mrs. Neil R. Schemehorn - twin boys, Arthur and Brian.

#### NEWS ITEMS

James Noel is head of the reserves and interpretation section of Lagunillas and Bachapuerto districts of Venezuela for the Creole Petroleum Corporation.

John Huddle has been transferred to Washington as the result of the closing of the Lexington, Kentucky, branch office of the U. S. G. S. His work on the coals of eastern Kentucky will be continued from Washington. He reports that he gets in an occasional visit with Dr. Cumings,

former head of the Geology Department.

Ronald K. Ogle and Miss Loree Kraut were married in Logansport, Indiana, July 13, 1958. Ron recently transferred from New Orleans and Pan-American to Port Lavaca, Texas and Magnolia

James R. Dodd hopes to receive his Ph. D. at California Institute of Technology in 1960.

Samuel L. Riely was married to a Louisiana girl on January 3, 1959. He is presently working for the Magnolia Petroleum Company on offshore geology.

Dale Kline writes from Bakersfield, California, that his family is still enjoying life there. The Klins now have three boys and three girls in their family.

H. H. Bradfield is feeling that thrill that comes with becoming a grandfather. A granddaughter, Connie Elizabeth, was born last September.

Wes Peirce is still with the Arizona Bureau of Mines at Tucson. He seems to enjoy Arizona climate and geology.

George Herr continues to work for Victor Chemical Company in the phosphate field of middle Tennessee.

Howard Pee has accepted a job in the Palynology section of Shell and will begin work for them at Baton Rouge, in June.

Jack Stover is an Air Force jet instructor at Furstenfeldbruck, Germany.

Harold (Diz) Deane reports that the I. U. geology alumni chapter in Bakersfield, California is doing well. In addition to "Diz", Dale Kline, "Chris" Christensen, Bert Hale, Chuck Reynolds, and Dick White live in Bakersfield. Jay Leith, former member of the I. U. Geology Department joined the Bakersfield group last summer. Your editor and his wife spent a most enjoyable Fourth of July week-end at the Deanes last summer and talked over old times with the Bakersfield bunch.

D. V. Carter is another member of the proud grandfathers club. He has a grandson, age 6, and a granddaughter, age 3.

Bob and Doris Bieberman report that they are still plugging away at Socorro, in the "Land of Enchantment". Not plugging too many dry holes we hope.

All of us take pride in the fact that six of our graduates received National Science Fellowships this year and are using them to work toward their Ph. D. degrees. Jack Pickering is attending Stanford University; James R. Dodd is at California Institute of Technology; Gordon Grender and Ferol Fish are at Pennsylvania State University; Ralph Hunter is at John Hopkins University; and Martin Prinz is at Columbia University.

Mrs. Paul (Ruth Tweedy) Landis is our prime candidate for the proud grandmothers club. A son, John E. Curtis II, was born in October to her daughter in the Bloomington Hospital. Her daughter and son-in-law are both I. U. students.

N. A. Parker seems to have his hands in several operations. He holds titles of one sort or another with the Kewanee Oil Company, Carpc-Kewanee, Inc., and Electrofrac Corporation.

Bill Rawles paid a brief visit last summer to our Geologic Field Station in Montana and was duly impressed with its facilities. How about coming a little farther east and visiting your old stomping grounds and friends in Bloomington?

Mary V. Payne writes from Corpus Christi, Texas, that although she is doing essentially the same work as before that she is still enjoying it. She has a daughter who is a sophomore in high school.

Carl W. Myers is currently stationed at Bunker Hill Air Force Base in Indiana, and is navigator on a KC-97 aerial tanker.

Dick Schweers has been transferred to the new Dallas Division of Texaco Company and is handling geological exploration in east Texas, northern Louisiana, Mississippi, Arkansas, and Alabama.

John R. Taylor, Jr. writes that he is in charge of the I. U. Founders' Day dinner at Cincinnati. Branch McCracken is to be their speaker. Maybe "Mac", while he is there, can talk Oscar Robertson into spending his senior year at I. U.

John Cleveland expects to get his master's degree in economic geology this spring at the University of Wisconsin. His future plans are as yet indefinite.

Larry and Buddie Rooney left Libya last June and after spending July and August in Europe returned to the States in September. Larry is at present teaching at the University of Texas and Buddie is working part-time for the U. S. G. S. at the Balcones Research Center in Austin, Texas.

Thomas E. Green was married to Clara Byars, December 20, 1958.

Arch Addington reports that he has completed 31 years of teaching geology at Fresno State College, California, and next year he will be retiring.

Fred D. Meyer is at present in Libya on a two year contract with NAMCO, which he will complete the first of the year.

Keith Treadway is still employed by the Pasotex Petroleum Company, a subsidiary of Standard of California, in Oklahoma City. He is taking night courses in law and expects to obtain an LL. B degree by 1962. Whether he then expects to become a practicing lawyer or is merely preparing to become an oil company executive he does not say.

Richard L. Bowen recently accepted a position with the Gulf Oil Company for overseas exploration work. His first assignment will take him to Luanda, Angola (Portugese West Africa).

David Boots writes that he is currently doing electrical engineering work in Pasedena, California.

John L. Bible has recently formed his own company, "Bible Geophysical Company, Inc.", Houston, Texas, and is doing gravity and magnetic surveys and interpretations.

Jack McIntosh writes from Mount Carmel, Illinois, that he attributed I. U. 's mediocre basketball success this year to lack of that well-known Mount Carmel graduate, Archie Dees.

John R. Harris has transferred his operations to Casper, Wyoming, and seems to like it out there in the wide open spaces.

Donald Cameron is in charge of paleontologic work for the California Company for southeastern Louisiana.

Charles V. Solbrig is still working for the Marquette Cement Company at Des Plaines, Illinois.

John A. Dunn is at Vernal, Utah, with the Carter Oil Company.

Don Triplehorn is beginning work on his Ph. D. degree at the University of Illinois, and hopes to complete it in 1961. He reports that Dick Walker, former geology librarian at Indiana University is in school there, too.

Craig B. Hatfield is at present stationed at Ft. Lewis, Washington. He expects to complete his army service in July and return next fall to I. U. to start work on his master's degree. He is still unmarried.

As a counselor for foreign students at I. U., Walter Burnham says he sings the praises of geology as a broadening course for any student.

Eugene Lennart is at Indianapolis with U. S. Steel Supply, a division of U. S. Steel Corporation. He says that they are going to be happy to supply a lot of the steel for the new geology building.

Al Rudman continues his work with the Geophysics section of the Indiana Geological Survey.

Ed McKay is the McKay in McKay and Littlejohn, consulting geologists at Robinson, Illinois. He would like to have any of his old friends stop in and see him, if passing through Robinson.

Marion Fidler, Executive Vice-President of Rocky Mountain Fuel Company, has been transferred from Rock Springs, Wyoming, to the general office of the company in Salt Lake City. Your editor and his wife had a very pleasant visit with "Fid" and Mrs. "Fid" at the G. S. A. meeting in St. Louis.

George Nevers has recently been transferred to Albuquerque, New Mexico.

Dick Erd is working on borate and saline minerals for the U. S. G. S. at Menlo Park, California. He reports that Helen Beikman is also in this branch office of the U. S. G. S.

Dan Tudor visited the Department in the early fall, while in Indiana on his vacation. We keep hearing good reports on him.

Bert and Phyllis Renzetti visited the Department during the Christmas holidays. At that time they were located at Union City, Tennessee, working for Kaiser Aluminum and Chemical Corporation. They left around March 1, for Belem, Brazil, where Bert will search for bauxite.

Mrs. Ted Crampton (Janet Wirt) and her husband have left Holyoke College. Her husband is a captain in the army and is now stationed at Fort Belvoir, Virginia, where he is engaged in processing scientists for the army.

Dick Fitch expects to complete his army service in May of this year.

Don Buchholz writes from Balmerton, Ontario, that it was 52° below at the time of his writing. He is working in the engineering department of New Dickenson Mines Ltd.

Maurice McClain reports from New Orleans that he is living it up in the French Quarter of New Orleans and working on Louisiana salt domes as an avocation.

Ralph Hunter visited the Department during the Christmas holidays, but missed seeing most of the members of the faculty. He expects to be married in September, and receive his Ph. D. degree at John Hopkins in 1960. He is working on the Clinton iron ores as a thesis problem.

John Kipta is still busy in general contracting at Munster, Indiana.

Wes Williams is located at Greenville, Kentucky, and says that they are still getting oil wells. He would like for any of his old friends to stop in and see him.

Gary Wirey has left the Texas Gas Transmission Corporation and opened an office as a consulting geologist at Princeton, Indiana.

Jim Smith is still with Rocketdyne working on rocket propulsion.

Donald C. Burditt was married April, 1958, to Patricia Sesselman of Nutley, New Jersey. He recently completed a six months course in geodesy and photogrammetry at Ohio State University and is not assigned to SAC Headquarters at Offutt Air Force Base.

Don Six was transferred last fall to Santa Maria, California, where he is District Geologist for the Texaco Company.

Bob Grosjean is still at Houston, Texas, as Vice-President of Mound Company.

Frank C. Green retired last June from the Missouri Geological Survey.

Harlan Logan is Vice-President for research for General Foods. He has seven daughters, two granddaughters, and one grandson. We hope that grandson isn't too badly spoiled.

Bennie Edwards is doing exploration work in Mississippi.

Dwight Mauck is still located in Fort Worth as Division Exploration manager of the Pure Oil Company.

Wayne E. Fowler transferred on March 15, to New Orleans.

Mrs. Friend (Caroline Hemingway) Kierstead is still teaching full time at Smith College, but to recover from the strenuous winter term, she and her husband took a 12-day West Indies-South America cruise.

Steve Theodosis has just completed three years of mapping for Shell in New Mexico. He plans to present a paper on the Melrose, Montana, area at the May meeting of the Rocky Mountain section of the G. S. A. in Missoula, Montana.

Marshall Harrell reports that last August he moved from San Antonio, Texas, to Brenham, Texas, which is about 70 miles northwest of Houston.

Hollis Fender, as of March 2, moved from Oklahoma City, to Wichita, Kansas. He is still with Sinclair.

Bud Sorgenfrei was recently transferred from the Lafayette, Louisiana, office of the Texas Company to New Orleans.

Don Devening reports that all is well with him and family in Jena, Louisiana.

During the past year Bob Shrock acted as Chairman of Section E, of A. A. A. S.

M. A. Newnum is completing his 38th year of teaching, 29 of which have been at Pontiac High School, Pontiac, Illinois.

Frank Kottlowski visited the campus last June, but found few of his old friends around. He practically had to hire a guide to find his way around the campus. Come back again, Frank, when we are all at home.

George Yurkas is still with Gulf at Crane, Texas. He must like it there for he recently purchased a home in Crane.

Addison King has transferred his activities from Morgan Coal Company to Stonefort Corporation of Indianapolis. He recently spent several months in Florida developing limerock road base material operations.

Marvin E. Warner is working for Shell in Farmington, New Mexico. He expects to take that

long walk down the aisle in June with Deloras M. Braun of El Paso, Texas. Miss Braun was a 1958 I. U. graduate.

Dr. Eula McEwan is enjoying her retirement in Lincoln, Nebraska.

As of April 1, James C. McCulloch became Assistant to the Chief Geologist, the Carter Oil Company, Tulsa, Oklahoma.

Another person enjoying retirement is Mrs. Ersie (Viva Dutton) D. Martin. She and her husband are enjoying square dancing and bridge in Santa Barbara, California.

Malcolm Boyce is still doing subsurface work in the Juno (Val Verde) Basin and enjoying it. He reports that some big gas discoveries have caused the basin to boom. He expects to be transferred to Midland, Texas, sometime in June.

Horace Rankin has retired from his work with Shell and is living in Midland, Texas.

Thomas Hiestand, of Denver, invites anyone interested in the 1859-1959 Rush to the Rockies celebration to get in touch with him before heading west to see it.

Visitors to the Department during the past year include:

Bill Dixon	John McCormick
Don Roemerann	Jerry Rupert
Joe St. Jean	Ferol Fish
Jim Wakeman	Al Rommel
Bill Moll	Larry and Buddie Rooney
Ralph Hunter	John Cleveland

Maybe there were others that we do not know about. Lets make this list longer for next year.

Jim Koenig and Clara May Tillson of Amherstburg, Ontario, were married April 26, 1958. In June, Jim completed training in meteorology at the Navy P. G. school at Monterey, California. He is now research meteorologist for Navy Weather Research Facility in Norfolk, Virginia, with Lt. J. G. rating. Jim claims he now knows why they have hailstorms in Montana.

Marty Prinz, who is working on his Ph. D. degree at Columbia University, spent the past summer in the Beartooth Mountains working on his thesis problem. He will return there for further work during the coming summer.



Teruo Yamamoto is working as geologist for the U. S. Forest Service out of Vicksburg, Mississippi, and is doing soil moisture and soil strength research for the Army Engineers.

Dr. and Mrs. R. E. Deane visited friends in the Department and in Bloomington last fall on their way to the G. S. A. meeting in St. Louis. They are always welcome, even though we do not believe all those tall Arctic stories of Roger's.

Joe St. Jean, now on the faculty of the University of North Carolina, presented a paleontologic paper before the Geological Society of America at its November meeting in St. Louis.

Jack Wells writes from Caracas, Venezuela, that he was transferred during the past year from work as a geophysical interpreter to work on surface geology.

Frank H. Williams is manager of the Larsen-Hogue Electrical Company in Los Angeles.

James Wakeman is working in geophysics for the Texas Company out of Houston, Texas.

John E. Ramsey and Miss Sharon Lee Perkins of Indianapolis were married on August 23, on the campus in Beck Chapel.

Dr. Galloway keeps working away on his stromatoporoid research with his customary vigor and enthusiasm.

Willis Smith is certainly seeing the world as he continues his service in the Air Force. Last year he was in Germany; this year he writes from Korea.

Alan S. Horowitz, now located in the Denver Research Center of the Ohio Oil Company, co-authored a paper entitled "Mississippian Bioherms of Southwestern United States" that was presented at the Dallas meeting of the A. A. P. G.

Harry Kugler reports that he is enjoying (?) doing surface geology in mountainous British Columbia with only some 950,000 acres to survey.

The Elbert Hales and their four boys are still enjoying the salubrious climate of Bakersfield, California.

Ted Ross is anxiously awaiting for that word from Uncle Sam that his services are no longer needed. He thinks that three summers in Kansas are enough to last him a while. He expects to return to I. U. next fall for graduate work.

Bill Von Osinski will soon move from Midland, Texas, to Amarillo, where he will begin his duties as Development Geologist for Hamilton Brothers Ltd.

E. P. Hunt is now living at Stanford, California. His 16 mm. documentary colored film "Indians of the Andes" is now being shown. It deals primarily with Indian life and ceremonies.

Gerald Rupert and Robert Saenger are members of the same crew and share the same office in Ardmore, Oklahoma.

Thomas Mooney indicates that all goes well with him and his family in Burbank, California.

John G. Barr is still with the Standard Oil of California as District Geologist for Washington and Oregon. He says he has not found much oil but is enjoying spending the company's money looking for it.

Rex Rader is still in Tulsa, Oklahoma, as Head of Engineering and Geological work for Indiana Oil Purchasing Company. His son, Jack, graduated from I. U. in journalism last June and his daughter is a sophomore at Mary Washington College, Fredericksburg, Virginia.

Roger L. Battin writes that his Ph. D. thesis is to be published as a bulletin of the American Museum of Natural History. It deals with the gastropods of the Permian.

Perry Holloway says that things are going fine in the consulting business and that he has recently moved into new offices in the new petroleum Tower Building in Shreveport.

Jim Powell is operating as a consulting geologist out of Columbia, Tennessee.

Frank Rago is still with the Texaco Company at Sterling, Colorado.

Paris Stockdale is working on the final draft of his report on the "The Chattanooga shale as a source of uranium".

James Niehaus reports that a letter from Jose Cavalante indicated that Jose is teaching English in Forteleza, Brazil.

Karl Frielinghausen is now a consulting geologist working primarily in Wyoming.

Ralph L. McDonald has been located at Vernal, Utah, for the past two years in charge of the Sohio Petroleum Company's office there.

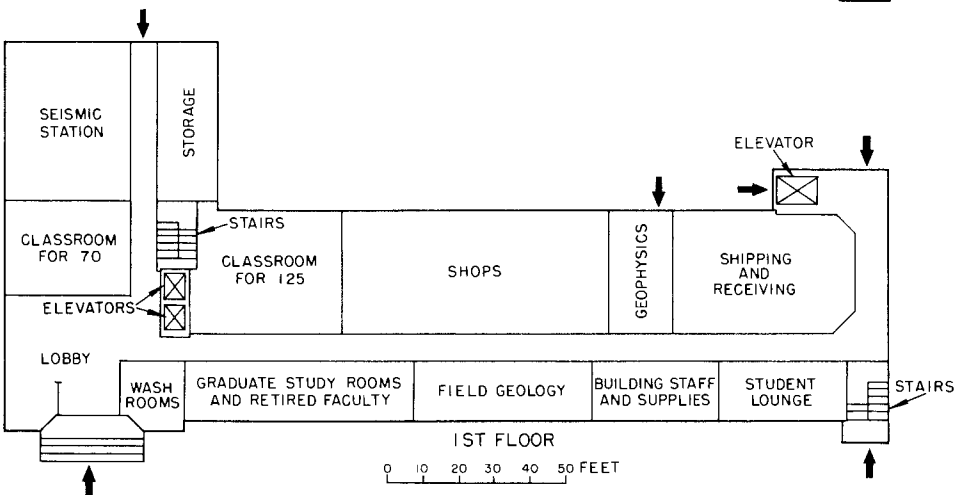
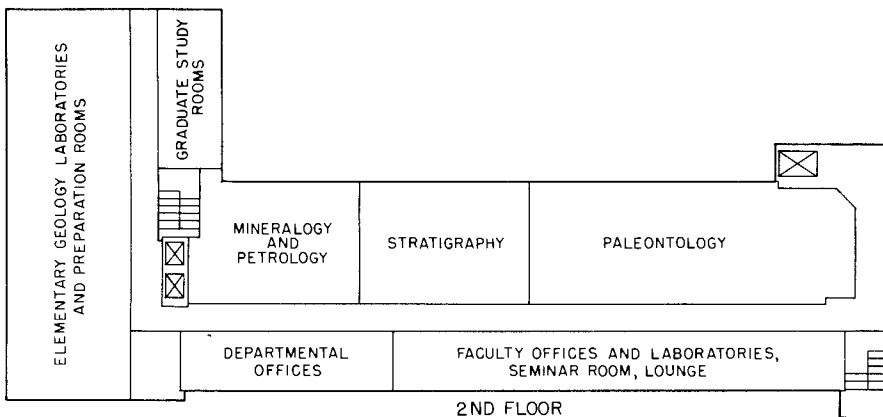
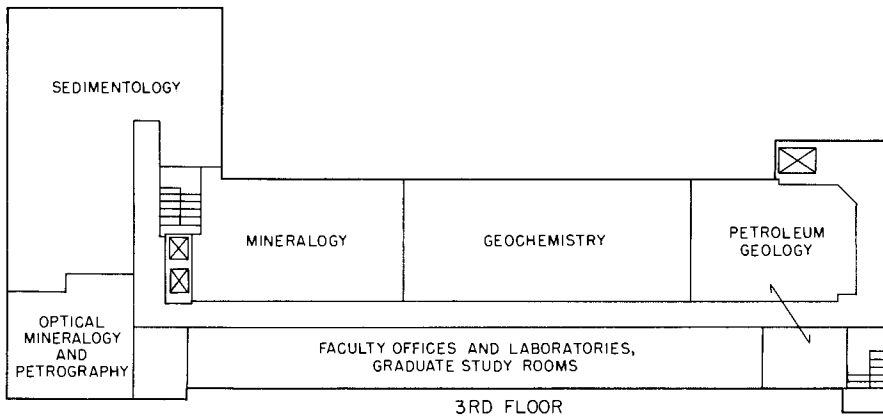
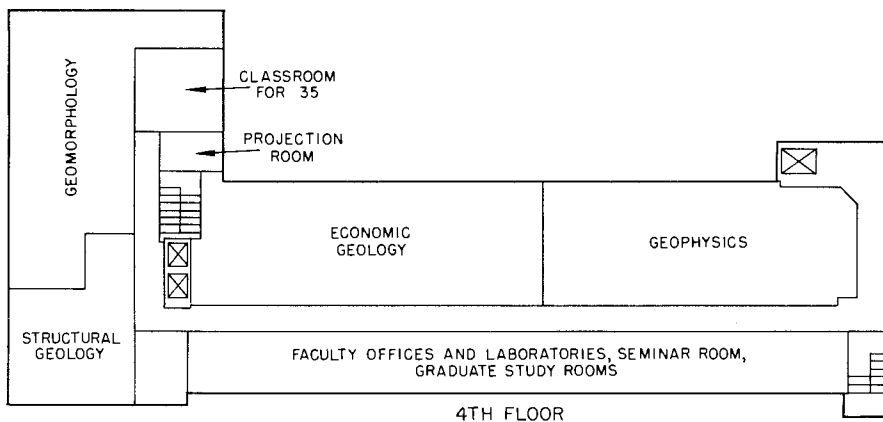
Ken Waters resigned from the California Company in June, of 1958, to accept a position with Hope Natural Gas Company, a subsidiary of Consolidated Natural Gas Company. Hope Natural Gas Company only recently opened a New Orleans office for the purpose of seeking gas reserves in southern Louisiana and off shore.

Paul Proctor is keeping busy in his new job as head of the Department of Geology at Missouri School of Mines. In addition to a general strengthening of the Department, he is trying particularly to build up their work in geochemistry and geophysics.

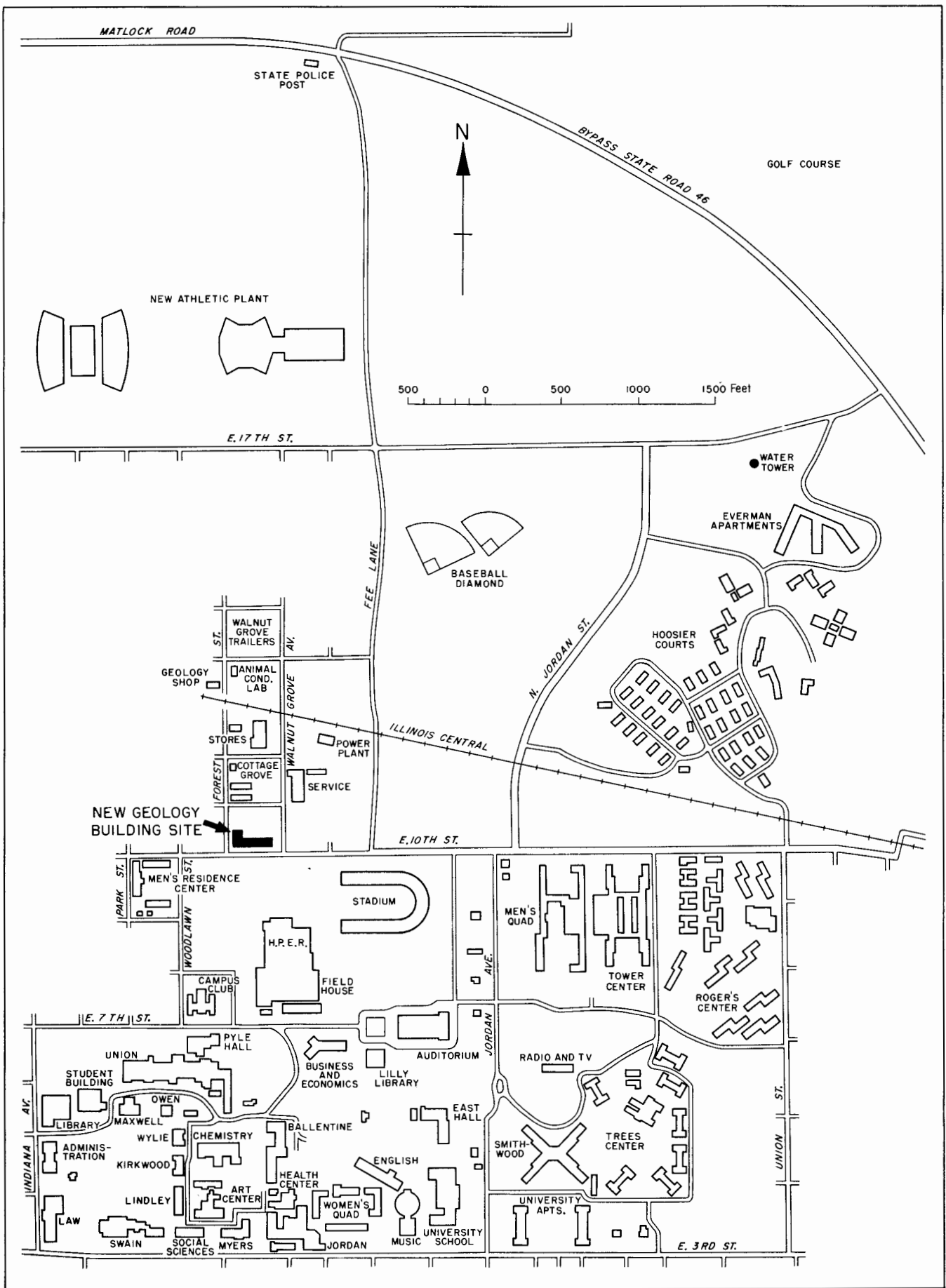
Elmer L. Lucas, Professor of Geology, University of Oklahoma, is serving this year as president of the Oklahoma Academy of Science. He will spend part of the coming summer at Pennsylvania State University as a member of the instructional staff of a National Science Foundation institute in science and mathematics.

Neil Schemehorn was recently transferred from New Orleans to Metairie, Louisiana, where he is working on offshore stratigraphy.

Alan J. Rommel is working as an independent geologist in the Illinois Basin and is located at Evansville, Indiana.



FLOOR PLANS OF NEW GEOLOGY BUILDING



MAP OF BLOOMINGTON CAMPUS SHOWING LOCATION OF NEW GEOLOGY BUILDING