only, John Kerr Rose, who had received his A.B. from IU in 1928 and his M.A. in 1931. Rose was not listed in the next Bulletin for 1933, otherwise the faculty remained the same as the previous year.

Very significant changes occurred in 1935 and 1936 in the faculty. In 1935 William Logan was still listed as a faculty member and taught Economic Geology, Mining and Petroleum Geology, and the Indiana Geological Survey (in the summer only). The next year, 1936, Logan was still listed as a faculty member but he is no longer State Geologist, that role being taken over by Ralph Esarey. Esarey now taught Economic Geology and the Indiana Geological Survey. Mining geology was dropped and J. J. Galloway began teaching a course exclusively in Petroleum Geology. Logan is not listed as teaching any courses and in the next year's bulletin his name is also dropped from the departmental masthead as he had retired as a result of poor health. In 1936, both Esarey and Thornbury, who had been instructors for a good many years, were advanced in rank to the assistant professor level. In Thornbury's case this was undoubtedly because he completed the doctoral degree in the Spring of 1936. Esarey never did complete the PhD. Both were to remain active faculty members at IU for many years. During this year no new instructors were added, but the next year, 1937, the two geographers, Visher and Switzer, after many years at the associate professor level, were finally promoted to the rank of professor, promotions that were surely long overdue. A new instructor, Wallace T. Buckley, was appointed
as instructor in geography, the first time that a graduate student had been appointed with a title other than instructor in geology. Buckley had received his B.S., 1929 and M.S., 1930 from the University of Washington and his PhD in 1936 from Ohio State University. He assisted in a large lower division course in Business Geography, open only to students in Business Administration. This same faculty, without change, continued through until the end of the decade, 1939.

During the 1930s decade a total of 19 students received M.A. degrees. Seven students received PhD degrees. The first one was Paris B. Stockdale, who undertook a massive study of the Knobstone (now Borden Group) rocks of south-central Indiana. Unlike many of the other graduate students Stockdale did not do a Masters thesis, but he did do other research, especially on the origin of stylolites. He had a long career as chair of the geology department at the University of Tennessee in Knoxville.

In 1931 Phillip Fix completed a masters thesis on the Knobstone escarpment north of the glacial boundary and John Rose did a masters degree in geology and geography on transportation by pipeline in the United States. This was the final year in which the university listed the titles of all advanced degrees in the official University Bulletin.

Among the undergraduate students, a total of 52 students received A.B. degrees during this 10 year period. A minimum of three and a maximum of seven graduated each year. Of these, 10 of the 52, or almost 20 percent, were women. The great majority of
these students were residents of the State of Indiana. As an example of a typical year, the 1929-1930 year, a total of eight undergraduate students are listed in the bulletin. Of these four did not graduate in geology, so they either dropped out of school or changed majors. Four did receive A.B. degrees.

In 1930 Ralph Esarey returned to IU from the University of Chicago where he had worked towards a PhD degree that was never completed. In 1931 he led a field trip to the Hicks Dome in southern Illinois. In November the department also held its annual southern two-day field trip for four general geology classes. A total of 44 students attended. The route included Columbus, New Albany, English, and Paoli.

During the 1930s SGE sponsored a series of round table discussions for students and faculty. These were called "teas", although the beverage was usually coffee. Topics included black shales, geosynclines, land bridges, dwarf faunas, and J. J. Galloway led a discussion on how to make a living as a geologist. In 1932 one of the teas featured two discussions, the first one on concretions that led to "considerable argumentation" between professors Malott and Galloway. The second discussion concerned isostasy, and Dr. Galloway "expressed strong objections to many phases of the theory". The technician, Howard Legge, commonly made tea or coffee, and very tasty sandwiches for these discussion. The Great Depression is noticed by saying that the students are eating lots of apples. Robert Bates, a long-time professor at Ohio State, set the record by eating 14 apples in
one hour.

In 1935 SGE held their initiation ceremony in Mays cave near Bloomington. They were unable to have a summer field party because of budgetary restriction. However, other field trips during this decade included an extensive trip to the Ozarks and one to northwestern Missouri, as well as more local trips in southern Indiana, especially ones concerned with Chester stratigraphy, led by Clyde Malott. In 1936 the department held a five day field excursion to Tennessee and North Carolina.

At the 1936 Christmas party 10 cent gifts were exchanged and after several games and contests Rousseau Flower entertained by playing Christmas carols on his violin. Some of the other members at this time were Tom Dawson and Hubert Latimer.

During the summer of 1937 the Department of Geology was moved from Science Hall to a renovated Owen Hall that had been vacated by the School of Medicine. As the students returned for the Fall semester they were pressed into service to help restore order out of chaos in the move.

In 1938 the SGE sponsored a field trip that covered 1300 miles through Kentucky, West Virginia and Virginia. There were seven members of the fraternity: James Reeves, Tom Dawson, J. B. Patton, Hollis Fender, Walter Spangler, Charles Spencer, and George Heap. After the 1939 initiation in May cave the students returned to Owen Hall for a rabbit supper with the faculty. At the Christmas party gift exchange, where all gifts had to be opened publicly, J. J. Galloway received a first edition of
Ferdinand the Bull. By the end of the decade the weekly "teas", round table discussions, had been replaced by a weekly showing of moving pictures of geological interest.

As the faculty changed and as interests and employment opportunities changed, so also did the course structure and curriculum of the department gradually evolve.

In 1930 Physical Geography was taught by Malott and Thornbury not by the two geographers in the department. The first term on physiography was taught by Malott, and Thornbury taught meteorology the second semester. In addition, Thornbury helped teach University Geography, another lower division course. The first term was principals of geography, the second, economic geography.

During summer sessions a class in general geology was taught but two to four geography classes were taught, probably reflecting the demand for these courses by school teachers taking summer courses. The advanced field work with the Indiana Geological Survey was also offered every summer.

In 1931 the introductory general geology course was subdivided for the first time into general geology and historical geology. This may have been a reflection of the availability of new textbooks. The old mineralogy course that had been on the books for so many years now became Minerals and Rocks--the first time that "rocks" were actually mentioned in a course title although certainly elementary petrography or petrology must have been taught as part of the mineralogy course. In addition, two
new courses for upper division majors were instituted: Geological Problems, apparently designed to give undergraduate students an introduction to research; and Structural Geology was offered for the first time by Ralph Esarey, who also taught the Conservation of Natural Resources. Meteorology now became a course of its own, distinct from University Geography. During Galloway's first year he helped teach the general geology course and he taught the graduate course in paleontology, which had not been offered at the undergraduate level for several years. In addition, Logan's graduate course in mining geology now became Mining and Petroleum Geology, the first time that the oil industry had been acknowledged in a course title. The graduate course that had been named Seminary for so many years was now, for the first time, called Seminar.

In 1933 Meteorology was dropped from the course listings and was replaced by a new course, Weather and Climate. Professor Switzer also offered a new course on the geography of South America to go along with similar courses on North America and Europe. A few years later a course on the geography of Asia was initiated. Only three lower division (100 level) courses were offered, and 10 upper division (200 level) courses were given.

There were separate requirements for receiving the bachelors degrees in geology and in geography. For a concentration in geology the student had to take General Geology, Minerals and Rocks, Structural Geology, Map-making and Map Interpretation, and any other courses that met their needs. In addition they had to
take a year of general chemistry and any courses in mathematics (trigonometry, surveying), physics, astronomy, zoology, botany, or geography that met their needs.

At the graduate level, Galloway had made his influence felt. Cumings' old Advanced Historical Geology, which he had taught for many years now became two courses: 304P concerning Precambrian and Paleozoic historical geology taught by Cumings; and 304M, Mesozoic and Cenozoic historical geology taught by Galloway. In the same way, the old graduate course in paleontology now became two courses: 305P--Paleontology taught by Cumings, and 305M--Micropaleontology taught by Galloway. This reflected Galloway's research interests and also the demand by the oil industry for micropaleontologists. Galloway had taught a similar course at Columbia University before coming to IU. Malott's graduate class in Advanced Physiography became Advanced Regional Physiography although because there are no course descriptions in any of the old university bulletins it is difficult to assess how important this title change may have been in terms of course content.

Beginning in 1939 the department listed, for the first time, a Masters degree in geography. Prior to that all advanced degrees were only offered in the geologic areas.

There were also significant changes in the requirements for the PhD degree. Prior to 1932 the degree was offered in the fields of "stratigraphic geology, physiography, paleontology, and economic geology". No formal courses were specifically required for the degree although the total number of credit hours required
for the degree was set by the Graduate School. It is interesting that whereas one could get a PhD in the field of stratigraphic geology the department had never offered a course with the word stratigraphy or stratigraphic in the course title. Stratigraphy was clearly included within the graduate courses in historical geology.

In 1932 specific courses were required for all students in the PhD program. The six courses so required were: Economic Geology and Advanced Physiography, both 200-level classes; Advanced Historical Geology, Paleontology, Seminar, and Research. In other words, Logan, Malott, Cumings, and Galloway controlled the courses that all PhD candidates had to take. The next year the Indiana Geological Survey class was added to this list. The following year Map-making and Map Interpretation was added to the list. The next thing that happened was that both Advanced Historical Geology and Paleontology were each split into two courses, thus adding two more required courses to the PhD listing. In 1936 the Indiana Geological Survey was dropped from the list. By the end of the decade Economic Geology had also been dropped. These changes represented a distinct change in teaching and research philosophy, from one where the student was free to take any courses that carried graduate credit and could thus concentrate on research, to one where all students were expected to have certain kinds of training but not other kinds. The earlier pattern was very similar to the graduate program used in most European universities to the present day, whereas the later
program was similar to the kind of PhD program that has become standard in most American institutions.

Beginning in the late 1930s the department became more and more involved in offering a geography course that was tailored for business majors. In 1936 this was called Economic Geography and enrollment was restricted to students in the School of Business Administration. Three faculty members were involved in teaching the course, a serious drain on faculty time. The next year the title was changed to Business Geography.

By 1938 the department offered four 100-level classes and 16 200-level classes. This, despite the fact that the number of students graduating had not increased.

The Decade 1940-1949

This was a decade of momentous change, both for the University and also for the Department of Geology and Geography. The occurrence of World War II and the aftermath of that war, especially the GI Bill, was part of the reason for very significant changes. For the department the other great change was the retirement of E. R. Cumings as chair and the appointment of Charles Deiss as the new chair. Deiss was a new broom, sweeping many older ideas and long-established aspects of the department out the door. No other ten-year period witnessed so many changes in the department.

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THE STAFF

One of the key elements in any successful university
department is the technical and support staff members
who make the essential teaching and research functions of the
department work. It is hard to know where to place this segment
of the history, but it does need to be summarized in one coherent
section rather than being scattered piecemeal through the text.
During the 19th century and the early decades of the 20th century
the department had no staff or a single staff member. From 1918
to 1935 Howard Legge, whose official title was preparator, and
who apparently did prepare thin sections of fossil bryozoa for E.
R. Cumings, was the only non-faculty employee. Legge also
performed many other roles within the department, many of which
would not have been in his job description. For instance, the
minutes of the meetings of Sigma Gamma Epsilon during its early
years from 1926 to 1933, repeatedly mention the sandwiches, tea
and coffee that Legge prepared for their meetings.

As far as can be ascertained from Cumings' annual reports
and budget requests to President Bryan, there was no secretarial
help within the department. Cumings and Malott apparently had
their own typewriters and did all of their own typing. There was
also a departmental typewriter available to the graduate students
for use in preparing their theses. The university also had for
some number of years a campus-wide typing pool that would prepare
documents for faculty. Presumably geology faculty utilized this
service although there is little direct evidence for this. J. J.
Galloway had learned how to type in high school and he apparently
worked his way through IU by his typing skills.
This all changed when Charles Deiss became chair in 1946. He first employed a secretary, Miss Dorothy Lentz. Two years later, in 1948, she was still working for Deiss as Mrs. Dorothy M. Heavin. Another secretary during this time was Verna Sykes. Deiss also hired a technician in 1947 to replace Howard Legge, J. D. Snider. Snider only stayed one year and was replaced in 1948 by Ross Hickam. In addition to technical work Hickam was the business manager at the field station. In 1957 Hickam experienced a serious stroke at the station and was hospitalized in Butte.

Before 1951 Bernice Banfill was the administrative assistant for the department and she continued in this role in 1964 when the new Geology Building was dedicated. A secretarial position for Professors Esarey, Mead, and Perry was approved in 1950 but who occupied this position is not now known. Another possible early staff person may have been Glenn F. Simpkins, who was at the field station in Montana in 1950 handling financial matters at the station, but he apparently did not last very long. In Deiss' report to President Wells in 1951 he says that he (Deiss) stayed in the house at the field station with Mr. Vry, the station caretaker at that time, and that he hoped he did not inconvenience Mr. Vry as Mr. Simpkins had done. The implication is that Simpkins is no longer with the department. In the 1952 alumni newsletter, the first one issued, the non-academic staff is listed as Maynard Coller, chemist; George Ringer, photographer; and William Moran, draftsmen, but there surely were
other staff members, other than these three technical members. In 1953 Virginia Langdon is secretary, and she was followed in 1954 by Virginia Crider. Bernice Banfill administrative assistant, Theodore Appleton, accountant, and Ross Hickam, preparator. In 1956 Charles Miller is listed for the first time as instrument maker. In 1957 Patricia Anderson is the secretary, replacing Mrs. Crider, and she was replaced by Jeanette Dillion. In 1958 Ross Hickam has been replaced as preparator by Frederick Wesemann, but he only lasted one year. The next year Leonard Neal is the preparator and he remained with the department until his retirement. In 1960 Joan Justus is the secretary, replacing Jeanette Dillion. In 1961 Marguerite Trisler is listed as a clerk-typist. She later became an accountant for the department and the geological survey, along with Ted Appleton.

The 1964 program for the building dedication lists the following staff members for the department: Appleton as accountant; Bernice Banfill, administrative assistant; Maynard Coller as analytical chemist; Alan Horowitz as curator of paleontology; Charles S. Miller, instrument maker; and Leonard Neal, as preparator of thin sections. These six persons, plus 15 faculty members constitute the 21 persons on the departmental payroll. In sharp contrast there are 51 technical and professional staff persons listed in the dedication program for the Indiana Geological Survey.

In 1977 the non-academic staff of the department is listed as: Thea Brown, 3rd floor secretary; Maynard Coller, chemist;
Becky Crouch, Kenneth Denson, Sandy Douthitt, 5th floor secretary; Jeanette Hartgraves, administrative assistant and chair's secretary; Dwight Hazen, electronics and geophysical technician; Mary Iverson, graduate and undergraduate records secretary; Betty Lucas, Water Resources Institute secretary; Kathy Martindale, field station and 4th floor secretary; Charles Miller, instrument maker; Barry Smith; James Tolen, draftsman; and Derrell Weaver, X-ray and microprobe technician.

After Bernice Banfill, Doris Hughes, Jeanette Hartgraves, and Sarah Burton have been administrative assistants in the department. Other secretaries have included Eleanor Adamowski, Barbara Tarrant, Rodney Ward, Ardella Held, Cindy Fisher, Elaine Oehmich, Donna Harbstreidt, Erneesteen Hale, Zora Hays, Margaret Kerns, Rosemary Lind, Nancy Matson, Patricia Richardson, Ann Richer, Virginia Scatena, Jodie Shircliff, Millicent Skinkie, Janet Smith, Cleta Whitehead, Cynthia Blair, Jo Ann Bullard, Rosemary Clarke, Linda Coffin, Patricia Dembinski, Betty Densmore, Joan Didier, Jean Ecker, Marlene Ellsworth, Harriet Ferguson, Elaine Fry, Ruth Fulk, Janice Goble, Faye Adams, Tracy Barrington, Anne Bridges, Rhonda Chaabane, Janina Fitzgerald, Pat Gerth, Kaye Jobe, Lorraine Richardson, Andrea Scoble, Jane Tube, Anne Turner, Janet Walls, Denise White, Debbi Pryor and Jean Reese. Mary Huntworth, Jan Griffin, Jackie Case, Kathy Martindale, Kay Kinder Ströhm, Andrea Scoble, Anne Turner, Jane Isaacs, Debbie Still, Janice Harste and Kim Schulte have been secretaries for the Field Station or for 4th floor faculty or
both. Martha Smith and Mary Iverson have been the chairman's secretary, and Mary is now keeper of the student records, and has the longevity record currently in the department, 32 years. Patty Byrum is now the chair's secretary and has been with the department for 12 years. Fifth floor secretaries have included Karen Walker, Mary LaRue, Sandy Douthitt, Wanda Pennington, Sharon Kirkman, Lori Canada, now on the fourth floor, and Anne Leinenbach.

Other support staff have included Jack Haddan in hydrogeology; Bill Bruce, Cheryl Metz, and Gary Bayer, thin section technicians; Paul Lechler and Steve Schere in geochemistry; Alan Schroder in geophysics; Stephen Taylor and Roger McCay in electronics; and Ron Newlin.

Other current staff members are Ruth Droppo, geochemistry secretary; Candace Franz, secretary for Haydn Murray; Gillian Leonard in the departmental office; Mark Glistrap, chemist; Jon Fong and Julie Primack in geochemistry; Brian Snow, computer systems; Steve Studley, mass spectrometer technician; and Terry Stigall, electronics technician.

For many years George Ringer was the photographer for both the department and the geological survey. He retired in 1984 and has been replaced by Barbara Hill and John Day. Jim Tolen was the departmental draftsman for many years. Kim Sowder currently does departmental drafting.

The faculty at the start of the decade was the same as in
1939 except that one instructor, Chauncy Dennison Harris, was added in geography. Harris had received his A.B. in 1933 from Brigham Young University, as well as an A.B. from Oxford University in 1936, and a PhD from the University of Chicago in 1940. He helped teach Business Geography and also taught a class on Centers of Trade and Industry.

In 1941 E. R. Cumings was on leave during the second semester. By 1942 the University was in full wartime mode. Programs for Army Enlisted Reserve, Reserve Officers Training Corps, a Naval V-7 program, a Marine Corps Candidate Class and special programs in medicine and dentistry had been established. By far the most significant faculty change that occurred in 1942 was that E. R. Cumings stepped down as chair, although he continued on the faculty as a professor. Clyde Malott was appointed chair for the 1942-43 year. By 1942 Instructor Buckley had been promoted to Assistant Professor, Instructor Harris was no longer part of the faculty, and a new assistant professor, Robert Ellery Bates (A.B., 1932, M.A. 1932, Indiana University; PhD. 1939, Columbia University) and a new instructor in geography, Edward L. Ullman (B.S. 1924, University of Chicago; M.A., 1935, Harvard University) are listed in the Bulletin but both are on leave for government service.

By 1944 the University had trained 5,008 men and women for the Navy and Marine Corps, 1000 Army officers, 4,000 Army Specialized Training Program, as well as Navy V-12 students in medicine and dentistry. In addition the University offered
classes in more than 70 Indiana cities for war industry workers, and about 13,500 people took advantage of this opportunity. War related courses were taught at IU Extension Centers in East Chicago, South Bend, Fort Wayne, Indianapolis, and Jeffersonville. In the Geology and Geography department Buckley joined Bates and Ullman in the military but all older faculty members remained in their teaching roles. In the Army Specialized Training Program on campus no geologists were employed but an Acting Professor of Geography, Otis Willard Freeman; and an Acting Instructor in geography, Charles Carl Bazja, were employed. Both Esarey and Thornbury were promoted to the Associate Professor rank and Malott was now termed the Acting Chairman, apparently in anticipation of hiring a new chair in the near future.

Cumings became Professor Emeritus on July 1, 1944. Otherwise the faculty remained the same. But, beginning in September, 1945 Charles Frederick Deiss (A.B., 1925, Miami University; PhD., 1928, University of Michigan) became the new chair of geology and also the new State Geologist and Director of the Indiana Geological Survey.

Indiana University and the Indiana Geological Survey

The organizational relations between the University and State of Indiana agencies concerned with geology were sufficiently complex that it seems appropriate to devote a special segment of this history to the relationship. A brief
summary of this history is provided by Patton (1988). Prior to 1919 there was only the most tenuous interaction between the Department of Geology and the Indiana Geological Survey. State Geologists had been listed as *ex officio* members of the IU faculty but they in fact had no role within the University. This was true for both Owen brothers when they were State Geologists, for Edward Cox, John Collett, Maurice Thompson, S. S. Gorby, Willis Blatchley, and Edward Barrett. During the pre-1919 era the closest working relationship occurred when W. S. Blatchley was State Geologist. He utilized the research of many IU students and faculty to produce a series of important economic and scientific reports on the geology of the State. Blatchley had been termed the greatest all-purpose naturalist produced in Indiana (Melhorn, 1967). Indiana students who worked and published under Blatchley's supervision as State Geologist, in addition to Call, Siebenthal, Kindle and Newsom, all mentioned above, include L. C. Ward, who published on road materials and soils in Indiana, A. C. Veatch, who published on Indiana geomorphology, and L. F. Bennett, who published several short papers on various aspects of southern Indiana geology. C. W. Shannon published on iron ores in Indiana and L. C. Snider did research on soils and peat deposits.

However, none of these students surpassed Blatchley in their contributions. He published on modern insects, caves and their fauna, modern amphibians and reptiles, clay deposits, and many other geologic topics. He published over 80 papers on Indiana geology, either alone or with co-authors, between 1896 and 1939.
Beginning in 1890, by act of the legislature, the position of State Geologist became a state-wide elective office. In his paper on the centennial of Indiana geology Blatchley's opening sentence is "A wise man once said that the Good Lord made the Geology of Indiana simple so that it could be easily understood by the State Geologists elected by the people."

The state-wide election of State Geologists in Indiana was unique and unprecedented among the States. The situation arose in 1889 from conflict between Republican Governor A. F. Hovey and a Democratically controlled legislature. The General Assembly passed a law, over the governor's veto, in 1889 making the State Geologist position a state-wide elective office. The previous State Geologist, Maurice Thompson, had resigned a year early, in 1889, and Hovey appointed S. S. Gorby to take his place. Gorby stepped down and John Collett was appointed to the post until the election of 1890. In 1890 S. S. Gorby ran on the Democratic ticket and won with 232,000 votes. John M. Coulter ran as a Republican, Joseph Moore on the Prohibition ticket and Edward S. Pope on the People's ticket. Moore came in last with 11,000 votes. In 1894 W. S. Blatchley won as a Republican, his main opponent being Eli T. J. Jordan, a Democrat. Edward Kindle ran on the People's ticket. In 1898 Blatchley won again, with Edward Barrett his chief opponent. The vote was fairly close: 294,000 to 263,000. Four others ran on the Prohibition, People's, Socialist, and Socialist/Labor parties. Apparently Blatchley was the only one of the six with any geological training. Blatchley continued
to win until the 1910 election when Barrett finally upset him by 12,000 votes. Barrett won again in 1914 but was beaten in the 1918 election, the last one held for State Geologist, by Louis Roark, 295,000 to 247,000.

Barrett was basically a politician and was untrained as a geologist and did not hold a college degree. He felt that he was in a difficult position succeeding the very successful and popular Blatchley. Barrett's tenure was not very productive and in strong contrast to the important contributions under Blatchley's reign. During his years the main publications were soil surveys of various counties. It is clear that E. R. Cumings thought that Barrett was unfit to serve in this post.

There were some difficulties between Barrett and the IU Geology department, especially with regard to Barrett's second four-year term of office. In early 1914, before the primary and general elections of that year, there was a move afoot to enter another candidate on the Democratic ticket to oppose Barrett in the primary election. Barrett thought that IU and specifically the Department of Geology was behind this move. The other candidate was L. G. Beatty, president of the local steamfitters and plumbers labor union in Indianapolis. His self-proclaimed qualifications for the position was that he was a reader and student of geology, although he, like Barrett, had no formal training in the subject. Barrett complained about this to John W. Cravens, who was both with the University and with the local Bloomington newspaper. Barrett won the primary and also the
general election of 1914.

Immediately after being elected and during the meeting of the new General Assembly, in February, 1915, Barrett once again believed that IU and the Department of Geology were working against him. He wrote to Cravens that there was agitation for consolidation of the various scientific agencies in the State House into a single large Department, or to transfer these activities to the scientific departments of the State schools. In other words he thought that the State Geologist's office might be transferred to the Department of Geology offices in Bloomington. He received assurances from Cumings, Beede, and other IU officials that such was not the case. It is clear, however, that there was continuing pressure for reorganization of many of these aspects of State government. According to Melhorn (1967) Cumings had reached agreement with then Governor Ralston as early as 1915 to discontinue the elective process for State Geologist. For some reason this change did not take effect until April, 1919.

Finally, after the next election in 1918, there was in early 1919 a far-reaching re-organization of State government. The old Indiana Department of Geology and Natural Resources was abandoned and a new Division of Geology within a new Department of Conservation was created. In the election of 1918, Louis Roark, who had an A.B. degree and who was a first year assistant professor in the Department of Geology ran for the State Geologist's office and won the election. However, this elective office was abolished before he could even be installed. When the
re-organization became effective, the Governor appointed another
IU faculty member, Professor William N. Logan, to the position of
State Geologist, rather than Roark. Roark had apparently resigned
from, or been let go by, IU and was a 1st Lieutenant in the U. S.
army. He later returned to IU, not as a faculty member, but as a
graduate student, and completed a Masters degree here in 1921. He
had a successful career in the oil business.

Logan served as State Geologist until his retirement in
1936. He was succeeded as State Geologist by Ralph Esarey,
another IU faculty member. Interestingly, the younger Esarey was
married to Logan’s daughter, Lois Lucene Logan.

This unprecedented close relationship between the Department
of Geology and the State Department of Conservation was
summarized in a plan of cooperation, established in 1919,
outlined below.

Logan was to be State Geologist. His teaching was not to
exceed six hours a week, and the remainder of his time would be
devoted to the Division of Geology. The equipment, library, and
laboratories of the Department of Geology may be used by the
State Geologist. Other members of the geological staff of the
University may cooperate in the work of the State Geological
Survey, providing such work does not interfere with their
University duties. The salaries and expenses of staff members and
advanced students while engaged in field work and all expenses
incurred in research work for the Survey, shall be paid out of
the funds of the Commission. The amount set aside by the
Conservation Commission for State geological work is an equitable part of the entire appropriation and providing that an additional sum equivalent to the amount of the present salary of State Geologist be added each year to the said equitable part for State geological work, the University agrees to pay the salary of the State Geologist.

Thus was the first close relationship between IU and the State Geological Survey to be formulated and put into effect. This relationship has endured ever since, to the present day, when the Geological Survey is a research unit of the University. The situation changed when Louis Roark, a young faculty member at IU, ran for and was elected as State Geologist in 1918, but he never got to serve. The elective office was abolished, he went into the Army, and the Governor appointed William Logan, an IU professor of geology, as the new State Geologist. Logan served in this role until his retirement in 1936. He was replaced by Ralph Esarey from 1936 until 1945. While these professors were State Geologists it should be pointed out that they were never also chairs of the Department of Geology, this post being held until 1942 by E. R. Cumings. During the Logan-Esarey years the offices of the Survey were in Indianapolis--only the State Geologist resided in Bloomington. The staff consisted of from two to four members. According to John Patton (1977) the Survey almost became defunct during World War II. The staff evaporated through the draft, resignations and retirements. Little constructive geological research or service for the citizens of Indiana was
accomplished. At the same time, the department was still in a pre-war state, with little new initiative. The University and the Indiana Department of Conservation collectively agreed to strengthen both units by combining the roles of Chairman of the Department of Geology and of the State Geologist-Director of the Geological Survey, both to be headed by one new person. When Deiss first took over, the Survey had a single section—Petroleum—headed by Ralph Esarey. In 1947 Deiss persuaded John Patton, a former student at IU, to return from the oil industry to Bloomington as head of a new Industrial Minerals section. He was the entire section. Esarey had two staff members—both women. These four plus Deiss constituted the entire Survey. Deiss had the offices of the Survey moved from Indianapolis to the IU campus in 1947, shortly after he arrived. The Survey members were not housed in one building but were scattered in offices around campus where available. At the same time Deiss had the regulatory duties of the Survey—permits and so on—transferred to a new agency, the Division of Oil and Gas, which was created May 1, 1947. The Survey became a research and service unit of government and the name was finally changed from Division of Geology to the Indiana Geological Survey in 1951.

John Patton (1977) says that he moved the Survey down from Indianapolis physically, with a moving van, in two loads in the late summer and early fall of 1947. In 1952 Patton became as Associate Professor of Economic Geology in the department and also was Principal Geologist of the Survey. Patton became State
Geologist upon Deiss' death, in 1959 and remained in this position until his retirement. He was replaced as State Geologist and Professor by Norman Hester in 1986. Deiss and Patton supervised the expansion of the Survey from a staff of 4 to a technical and professional staff of over 50. They also oversaw the consolidation of the Survey into a single new wing of the Geology Building.

Deiss had been chair at the University of Montana before accepting the Indiana position. Deiss brought with him two new professors, Eugene Callahan, Professor of Economic Geology, beginning January 1, 1946, and George Tobias Faust, Professor of Mineralogy beginning February 1, 1946, who resigned effective at the end of that Spring semester.

Concomitant with Deiss assuming the position of chair, the old Department of Geology and Geography finally separated into two departments, effective in the 1946-1947 academic year. By this time the old department had been teaching 10 undergraduate courses in geology and 14 such courses in geography.

J. J. Galloway was on leave in military government service from July 15, 1945 to May 6, 1946. Clyde Malott had not been in good health for some time, which may have been part of the reason for going outside the department for a new chair. By the 1947-1948 year he was reduced to half-time status and officially retired, for health reasons, on June 27, 1947. Two new graduate student instructors were hired for the 1947-1948 academic year,
George Edward Ericksen for second semester only; and Paul Dean Proctor.

By 1948 two more faculty had been added at the associate professor rank. Brian Harold Mason was the new professor of mineralogy, and Charles Joseph Vitaliano was a new associate professor of geology. Ericksen continued as an Acting Instructor for the second semester only, and one new instructor was hired, Carlton James Leith.

In 1949 Callaghan resigned, Leith was promoted to Assistant Professor but he resigned at the end of the 1948-49 year. John Barrett Patton was newly appointed as an assistant professor.

So, by the end of the decade, there were only two professors, Galloway and Deiss; there were four associate professors: Esarey, Mason, Thornbury, and Vitaliano; and Patton was the only assistant professor. There were no instructors.

The outstanding feature of the students in the geology department was the fluctuation in enrollments during the 1940s. At the undergraduate level the number of graduates stayed the same as in previous years for the first nine years. There were five graduating seniors in 1940, three in 1941, and five in 1942. Then the military draft and World War II began to be felt. There were two graduating seniors in 1943 and three in 1944. The numbers remained low for the next four years: four in 1945, three in 1946, three in 1947, and five in 1948. But then the impact of the end of the war and the enormous success of the G.I. Bill can be seen. There were 24 graduating seniors in 1949, four years