



# NEBOG NEWS

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## State of Nebraska Board of Geologists

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## Message from the Board Chairman

By Dick Ehrman

In the past few issues of the Newsletter as well as this one, you've read or will read several excellent articles on the practice of geology and how we as Professional Geologists in Nebraska can promote our discipline. Adhering to consistent professional standards ourselves, promoting geology through schools and Scouts, and developing a robust program for certifying Geologist-Interns are all excellent examples of the "how" when it comes to helping share our knowledge and enthusiasm for earth sciences as well as other sciences. Just as important as the "how," is the "why." Why should we promote geology as a body of human knowledge as well as a potential or actual profession? One of the most obvious answers to this question is that, in Nebraska as well as in most other states, it is the law. Nebraska's Geologist Regulation Act states it quite clearly—geology as a practice should be regulated "in order to safeguard life, health, and property and to promote the public welfare..." Whether or not you agree that "regulation" is the same as "promotion" (maybe that argument should be taken up in a future column), it is pretty clear that the law in the Cornhusker State considers proper practice of geology to be an important issue. That, to me, is a very good reason for its promotion. A second

reason for promoting our science is that it seems to fulfill a basic human need for knowledge about where we are and where we come from. Have you ever watched a group of kids in a geology or paleontology museum? Forget for a moment the video games, sports, and other trappings of modern adolescence. Kids seem to be captivated by the wonder and complexity of the natural world around them. What great advances in geology might be achieved if we as professionals continue to captivate kids as well as adults with the wonders of minerals, rocks, fossils, and the like. A related and final reason for promotion of geology is a bit more selfish, but it involves the social and financial support (yes, I'm talking about tax dollars as well as private investment) necessary for the geosciences to advance. I'm reminded of an article I read several years ago about an eminent biologist who, if I remember right, taught at a premier research university, possibly one of the Ivy League schools. One of the unique facets of this professional's career was that he always insisted on teaching at least one section of basic freshman-level introductory biology every academic year. Why would a world-renowned, top-notch scientist who commanded thousands, even millions, of dollars in cutting-edge research efforts, voluntarily give up precious professional time to instruct a bunch of non-majors in the rudiments of cells, taxonomy, and the like? His answer has stayed with me for a long time. His point was that most of the students taking introductory biology would not end up as professional biologists, but would end up as business people, politicians, and taxpayers. That one college biology class might be the *only* exposure they would have to science as a discipline. If they found it to be stupid or worthless, they would be unlikely to support any public or private efforts to improve that science. So, it was vital to this world-class professional to make sure

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that the everyday person (non-scientist) had a positive and clear-eyed exposure to his science, since it would likely translate into public support for biological education and research. In my opinion, that viewpoint is worth remembering. Promote your science to non-geologists and help them understand why it's important. They may be the ones who are paying for your research or your site investigation!

We are all responsible for the advancement of our profession by continuing our own professional development as well as by helping non-geologists understand the importance and downright fun of geology. Please feel free to let your Board know if you have any ideas or suggestions to more effectively accomplish this most important undertaking.



### Former Board Members Honored for Years of Service

At the August 5, 2004, meeting of the Nebraska Board of Geologist's, three former Board members, Bonner Bowden, James Cannia and Karen Amen Jensen were honored for their years of service. Chairperson, Richard Ehrman presented plaques to Bonner Bowden and Karen Amen Jensen. James Cannia was unable to attend because of previous commitments. Mr. Ehrman expressed appreciation on behalf of the Board for their contributing efforts to the organization of the Board during its challenging formative years. He also thanked them for working hard to establish the Board as an entity, providing regulation for the profession and encouraging growth and progress in the science of geology.

Bonner Bowden and James Cannia were two of the original Board members appointed by the governor in the fall of 1998. Bonner Bowden served as part of the Ad-Hoc Committee on Registration formed in 1993 by the Nebraska Geological Society (NGS) to pursue legislation for geologist registration. Passage of LB 1161, establishing the Geologist Regulation Act, became effective in January 1999. Karen Amen Jensen was appointed in February 1999, as public member to fill a vacancy left by Jan McCarty. During 1999, the Board had the overwhelming job of creating fund accounts, forms, a web site, procedures and beginning the work necessary to draft the Rules and Regulations. The dedication and hard work of these members will not be forgotten.

## Geologist-Interns Now Authorized by Passage of LB890

By David Becker

In 2004, the Nebraska Board of Geologists pursued statutory authorization to provide geologist-intern status to applicants who meet the education and examination requirements for registration, but who lack the necessary experience. Our original statute did not adequately authorize this and early draft rules and regulations that would implement an Intern program were returned unapproved by the Attorney General's Office on this basis.

During the 2004 session of the Nebraska Unicameral, Senator Mike Friend introduced a bill, LB 890, which would add language to the statute to allow geologist-interns. A public hearing was held on the bill in January and was unopposed. The Board and the Nebraska Geological Society promoted the bill as a means to enhance the opportunities for young Nebraskans to develop their careers in the state. The bill was advanced through the Legislature as a non-controversial bill and was ultimately passed late in the session. The bill was approved by the Governor in April 2004. Only through the assistance of Senator Friend and his staff, was this bill guided through a very contentious session packed with budget issues.

Now that the bill has been passed, the revisions to the statute take effect on January 1, 2005. Our web site will include the revised statute at that time. The Board encourages newly graduated (or soon to be graduated) geologists to seek geologist-intern (GI) status. A degree meeting the education requirements for registration (30 semester hours with at least five of seven core courses), passage of the ASBOG<sup>®</sup> Fundamentals of Geology (FG) examination, and reference letters from two geologists familiar with the applicant's work are all that is required to be recognized as a GI. The standard application fee of \$50 is required, but there are no annual fees associated with the GI. Once the GI has obtained the required experience (five years of progressively responsible work), the GI may apply to take the ASBOG<sup>®</sup> Practice of Geology (PG) examination and, upon passage and submission of additional reference letters, be registered as a professional geologist in Nebraska.

If you have any questions, please contact the Board at [geology@nol.org](mailto:geology@nol.org).



## Meet Our New Board Members



### Andrew E. Grimm

Andrew E. Grimm, the Board's new public member, was appointed on April 23, 2004. Mr. Grimm has held positions in various law firms in Omaha and served as Senior Vice President/Chief Legal Officer for the Nebraska Health System. In 1999, he started his own law practice. He specializes in health care in the areas of nonprofit corporations, taxation, federal and state reimbursement, compliance and corporate governance. Mr. Grimm obtained his Bachelor of Arts degree at the University of Nebraska at Omaha, and his Juris Doctor, at Creighton University College of Law in Omaha in 1971. He belongs to the Omaha, Nebraska and American Bar Associations, the American Health Lawyers Association, the Nebraska Hospital Association and the Hospital Financial Management Association.

Mr. Grimm's knowledge of law will be a welcome addition to the Board, but he also has a personal interest in Geology. His wife, Laura Banker, received her Bachelors of Science and Master's Degree from the University of Nebraska at Omaha, Geography/Geology Department where she studied under Dr. Jack Shroder. Laura is employed by the U.S. Army Corps of Engineers as a GIS Analyst. Andrew and Laura reside in Omaha, Nebraska.



### Jeffrey S. Johnson, Ph.D.

Dr. Jeffrey Johnson was appointed to the Board on April 23, 2004. His educational, teaching and consulting experience in the field of geology, as well as his conviction for strengthening the practice professionally will help the Board establish Nebraska as a state with sound geologic practices. He feels strongly that geologists play a crucial role in interpreting potential threats to the public and state resources, and that Nebraska Geologists have a tremendous opportunity to be tops in the nation for understanding surface and underground water interaction. Dr. Johnson obtained his Bachelor of Science degree in Geology at the University of Wyoming in 1983. He received his Master's degree in 1986 and his Doctorate in Geology in 1991 at the University of Nebraska-Lincoln. He has designed and directed surface and subsurface hydrogeologic, geologic and environmental investigations throughout the Midwest and has coordinated with respective state agencies, EPA Region VII, and the U.S. Army Corps of Engineers. He has also served as a visiting instructor with the Department of Geology at the University of Nebraska-Lincoln. Dr. Johnson is currently employed at Olsson Associates in Lincoln, Nebraska, as the Vice President/Regional Manager and as the

Team Leader for the Environmental Services Team. He is a member of the Geological Society of America, the American Institute of Professional Geologists, the Lincoln Chamber of Commerce, the National Ground Water Association and the Downtown Lincoln Rotary Club.

Jeff and his wife, Holly, have two children; Molly, age six and Ben, age two. The family shares their lives with an array of family pets, including two horses, a donkey, two dogs and one cat. Jeff enjoys outdoor sports such as hunting, fishing and horseback riding. He stated that he has spent a lot of time teaching his children to fish with only minor injuries, but it has given him a lot more gray hair.



### Susan Olafsen Lackey

Susan Olafsen Lackey was appointed to the Board on April 23, 2004. She brings geological project management experience that she has obtained in Nebraska, New Hampshire, Connecticut, California, Virginia, Georgia and South Dakota. In 1991, Ms. Olafsen Lackey accepted a position with the University of Nebraska's Conservation and Survey Division in Norfolk. A large part of her work is public service, providing natural resource data and analyses to agencies, industry, and land owners. She is presently working with the Upper and Lower Elkhorn Natural Resources Districts to install monitoring wells to enhance the National Resource Districts water quality and water level monitoring programs. She is also working on the Grout Study with the Nebraska Well Drillers Association and the Health and Human Services System. When asked for a simple explanation of her work, she just says, "translation." Ms. Olafsen Lackey had the opportunity to be an exchange student in Lima, Peru in 1976 and later attended the Huari and Chanca Expedition in Peru in 1981. She graduated from the South Dakota School of Mines and Technology with a Bachelor of Science degree in Geological Engineering in 1982. Ms. Olafsen Lackey has taken graduate level courses in remote sensing, groundwater and well logging. In the summer of 1990, she completed the Oklahoma State University course entitled, "Practical Approaches to Groundwater Hydrology and Contamination."

Sue and her husband, Perry, live on a small farm by Winside, Nebraska. She jokingly remarked, "We have seven kids, all four legged and furry: four fat cats, one lab puppy and two spoiled horses." Her hobbies are work, reconstructing the "stead," riding horses, baling hay, and when the house is finished will be getting back to restoring antique furniture.



*Teach your children  
What we have taught our  
children—  
That the Earth is our mother.  
Whatever befalls the Earth  
Befalls the sons and  
daughters of the Earth.  
If men spit upon the ground,  
They spit upon themselves.*

*This we know.  
The Earth does not belong to  
us;  
We belong to the Earth.  
This we know.  
All things are connected  
Like the blood which unites  
one family.  
All things are connected.*

*Whatever befalls the Earth  
Befalls the sons and  
daughters of the Earth.  
We did not weave the web of  
life;  
We are merely a strand in it.  
Whatever we do to the web,  
we do to ourselves . . .*



*Our dead never forget  
this beautiful world  
that gave them being.  
They still love its  
verdant valleys, its  
murmuring rivers,  
its magnificent mountains,  
sequestered vales  
and verdant lined  
lakes and bays,  
and ever yearn  
in tender fond affection  
over the  
lonely hearted living,  
and often return  
from the happy hunting  
ground  
to visit, guide, console,  
and comfort them.*

- Chief Seattle -



## **Earth Science Education and Career Counseling for High School Students**

By David Becker

One aspect of being a professional is to promote and explain our field of study to a new generation. Perhaps some of our registrants owe, in part, their career to someone from the working world who took an interest in them and encouraged them to pursue geology. We can and should reach out to the geologists of tomorrow and better inform students who will pursue other fields.

Unfortunately, many secondary schools do not offer earth science courses or lump them together with other aspects of physical science or geography. In some cases where there is an earth science course, the best and brightest students are directed to chemistry and physics instead. Many high school science teachers are diligently trying to convey earth science concepts in their classes, but have questions regarding current events, class demonstration materials, or field trips.

There are many ways that working geologists can become involved to improve awareness of earth science at the high school level. Look for existing programs to link professional geologists with high school teachers. In Nebraska, the Nebraska Earth Science Education Network (<http://nesen.unl.edu/>) offers resources for teachers. Professional geologists can join to assist in this effort. In Omaha, the Boy Scouts Mid-America Council offers a program to bring professionals together with high-school teachers. For those registrants outside of Nebraska, you may want to contact your local school district career counseling office to see if there are similar programs. Professionals can also become active in providing input on earth science curriculum through local school boards.

The Explorer Post program is a nationwide career-development effort organized through the Boy Scouts. Each year, high school students are surveyed regarding their potential career interests and lists of students with interests in specific areas are developed from the replies. These lists are used as a basis for inviting students to participate in a 6-8 week (or longer) Explorer Post on a specific career. Professionals then present various aspects and requirements for a career in that field. In Omaha, for example, over 130 high school students indicated interests in geology, geophysics, or paleontology; yet there is no earth science post. In contrast, there are at least five posts for engineering and architecture and even more for law. Efforts are being made to develop an earth science post in Omaha as a means for reaching out to those students. If you are interested in the Explorer Post program, contact your local Boy Scout council. If you are in the Omaha area and are interested in helping start an earth science post, feel free to contact me at [dave.j.becker@usace.army.mil](mailto:dave.j.becker@usace.army.mil) or the Boy Scouts Mid-America Council.

We can all make a difference in educating the next generation. Consider how you can help.

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### **Promoting Professionalism**

By Jim Cannia

As professional geologists we have a common goal to provide excellence in our work and to build confidence in the public. When they see your seal on your work, they can be confident of its integrity. Your Board is here to provide the standards that all geologists within Nebraska work under. Toward that end, we have developed standards that will provide Nebraska and the nation with the best professionals in the field.

To be a registered geologist in Nebraska, you must have completed a curriculum of study ending in a bachelor of science or arts, with not less than 30 semester hours of geology. The applicant must have completed a group of core courses including mineralogy, petrology, structural geology, stratigraphy-sedimentology-soils, field methods, and physical geology. These are also the basic classes from which the Fundamentals of Geology (FG) test is developed. An article on the ASBOG test in this newsletter goes into greater detail on this subject. Testing is a requirement of any person seeking registration as a

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## **Promoting Professionalism...**

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Professional Geologist in Nebraska. The board is a full member of ASBOG® and therefore is part of the national testing program. The test, given nationwide, is an important part of your professional status. By passing the exam you are qualifying yourself for licensure in all other states that are ASBOG® members, without further examination. The majority of states that require registration are part of this organization. The ASBOG® test is a two-part test consisting of the Fundamentals of Geology (FG) section and a Practice of Geology (PG) section. As a new geologist coming out of the university, you may take the FG test as soon as you graduate.

After you have gained five years professional experience you may take the PG section of the test. Remember, if you do not pass the exam the first time, you may retest. The experience you gain from the first test will prepare you for the second examination. Other applicants that have professional experience meeting board approval will be allowed to take test sections at the same time. If you are a professional from another state and have passed the ASBOG® test or an equivalent exam approved by the board you may be registered without exam. There are three different paths available to become a Professional Geologist in Nebraska.

As Professional Geologists, you can take pride knowing that you are promoting professionalism by being a registered Geologist in Nebraska.



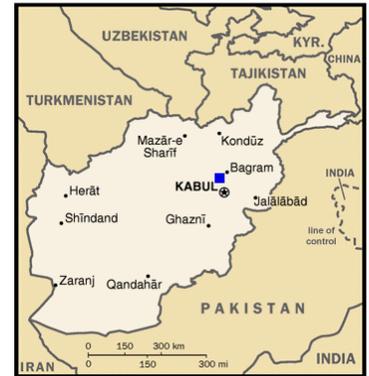
**Photo by Dr. Nan Lindsley-Griffin**

View along Snake River below Merritt Dam, Southwest of Valentine, Nebraska

## AFGHANISTAN RESOURCES AND RECONSTRUCTION: BETTER LATE THAN NEVER?

By Dr. John (Jack) Shroder

On a recent trip to Kabul to meet with the U.S. Geological Survey (USGS) and to check on reconstruction progress, I found the city jam packed with returned refugees and legions of country people who have come to the city, where slightly greater security exists. The bombed-out city, where the garbage was not cleaned up for over a decade, is now a fetid swamp of humanity, with a new rush-hour traffic snarl of SUVs and trucks belching diesel exhaust. New buildings are springing up everywhere, as the war rubble is cleared away, and the people contemplate hope for a real future. Kabul University, my old campus from the 1970s, is a green haven in the storm of the surrounding destroyed city. The campus is filled with students again, with only a few veiled figures visible. The English department faculty has as many as 700 majors eager to learn the new language of power and education. The geosciences department once again has an association with the government of Germany, who mapped much of the southern two thirds of the country before the Soviet invasion of 1979 and subsequent wars.



Efforts by USGS to study the resources of Afghanistan necessary to boost its economy are at last underway. Efforts to obtain funding continued from 2002 into the first part of 2004. After what were reported to be interminable negotiations and briefings, USAID finally funded the oil and gas resources assessment nationwide. The total funding was about \$2 million for a 20- to 22-month effort. The funding agreement was not finalized until March 2004, but the work actually had already started in August and September 2003, with a trip by three USGS oil and gas specialists to Afghanistan. In February 2004, the USAID Mission-Kabul decided to provide 2004 funding of \$5 million for six months to initiate a USGS study of earthquake hazards, geospatial infrastructure development, mineral, coal, and water resources, and capacity building or training. USGS had initially asked for \$70 million.

To initiate the USGS activities in Afghanistan, a team of nine USGS scientists headed by Jack Medelin (from whom much of this information was obtained) traveled to Kabul during the spring of 2004. The team included specialists in coal, minerals, earthquakes, GIS, remote sensing and geologic mapping. The team spent more than two weeks in Kabul visiting more than 15 Afghanistan government organizations, several development bank offices, numerous NGOs and foreign donor organizations. They discussed facilities, data and information availability, and the quality and quantity of staff to work as counterparts to foreign scientists. Several team members and Afghan geologists actually visited mineral and coal deposits outside of Kabul with heavily armed security escorts. In June 2004, the scientists finalized a detailed work plan with USAID to establish USGS in Kabul on an ongoing basis. On January 31, 2004, Said Mirzad, who was the head of the Afghanistan Geological Survey over 30 years ago before working for USGS in the United States, became the first USGS employee assigned to Ambassador Khalizad's staff in Kabul. The new U.S. Ambassador, Zalmay Khalilzad, who was also born in Afghanistan, asked him to become his new Senior Advisor for Natural Resources. When I visited Mirzad at the heavily fortified U.S. embassy in Kabul in late May 2004, he wanted to know how soon we could start educating Afghans in English language instruction and remedial geosciences. A 25-year gap in training of modern geology had occurred during years of war. Mirzad's request echoed some of my efforts over the past 30 years, since the late Chris Jung and I first started the Afghanistan Studies Center at the University of Nebraska at Omaha in 1972. Our activities in the country had involved provision of education to a host of Afghan teachers, as well as the publication of textbooks in Dari and Pushtu, and my publications on bootstrap rebuilding Afghanistan with its own natural resources. Several years ago, USGS selected our Complex Systems Lab as the Regional Center for Afghanistan and Pakistan in their Global Land Ice Measurements from Space Project, which is funded by NASA. We have regular access to the terabytes of ASTER satellite data from Afghanistan that is actively pouring down from space. We are negotiating a new contract for further analysis of glaciers, snow and ice, water, hazards and education, although the USGS has already had to cancel one of our final funding meetings because USAID has been dragging its financial feet.

In these efforts, the Afghanistan organizations that USGS will most likely be working with are the Ministry of Water, Irrigation and Environment, the Department of Cartography and Geodesy, and the Afghanistan Geological Survey. The ministry is in the best shape of these groups. It has already started the rebuilding and revitalization process and its physical facilities are in reasonable condition. On the other hand, the Afghanistan Geological Survey is in a depressing shell of a building with no electricity, plumbing, furniture or equipment. Electric wires were stripped out of walls for resale on the black market in Pakistan. All the windows were blown out and are yet to be replaced. The Department of Cartography and Geodesy has a workforce of about 700 and an intact building. The

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## Afghanistan Resources...

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problem, however, is that their equipment is museum-age. Electronic technology has passed them by. Tightly controlled by communist-era officials in the 1970s, this agency regarded all large scale maps as state secrets. That attitude has propagated forward into the 21st century as well. Although some secretive Afghan officials are reported to be disturbed about it, other agencies have implemented more transparent means to access the data. It was in part to circumvent the difficulty of inadequate or secret maps and other previously classified and unavailable information that the Afghanistan Information Management Service (AIMS) and the Afghanistan Research Evaluation Unit (AREU) have been set up with U.N. and USAID backing. The services are actively producing high-quality, GIS-based maps at many scales, with new computer and training programs in newly configured labs with software operating licenses from a major American GIS firm. A primary mandate is building information management capacity among the employees of the new government of Afghanistan by providing training, coordination, general advisory work and consulting. Geology maps will be a later addition. Currently, Landsat-based terrain maps, with a variety of GIS overlays of political boundaries, roads, trails, village names, and land cover types, are available at low cost or free to their sponsoring agencies. AIMS and AREU were set up as the best available libraries of materials on reconstructing Afghanistan. Their foundation was most of the surviving library of the British government that once ruled colonial Afghanistan, with the exception of the once comprehensive topographic map collection, which seems to have disappeared. The huge and equally comprehensive development library of USAID in Kabul, in the intervening quarter century since they were in Afghanistan, seems to have disappeared; jokingly it is said, into the same dim warehouse of the U.S. government as that portrayed in the movie, *Indiana Jones: Raiders of the Lost Ark*.

Afghanistan is far from the reasonably safe place to work that it once was when I drove and walked with my field counterpart and translator for a company 26 years ago. Still, with adequate precautions and sufficient information about conditions, coupled with a security detail, geoscience fieldwork is possible. Thus in spite of the fitful start of resource assessment noted in some of my publications last year, analyses now underway may be producing results that will finally produce the jobs and revenues to bring the country out of its darkest age. With the recent restoration of the *loya jirga*, or town-meeting type of democracy, which Afghanistan was known for, and the promulgation of a new constitution, the country may at long last rejoin the company of civilized nations.

Keep your fingers crossed.

## THE ASBOG® EXAMINATIONS

By Dr. Nan Lindsley-Griffin

(Approved for publication by ASBOG®)

The ASBOG® (National Association of State Boards of Geology) examinations have become the national standard for evaluating professional competence for licensing or certification. Given twice annually (in October and March) on the same date and time in all ASBOG® member states, the exams consist of two parts: the Fundamentals of Geology (FG) and the Practice of Geology (PG). The FG exam is designed to assess knowledge attained during the completion of the baccalaureate degree in geology, and the PG exam is designed to evaluate skills and knowledge developed during the first five years of professional geological experience. Most states require applicants to have completed the baccalaureate degree or to be within a semester of completion before attempting the FG exam. In many states the PG exam is not open to applicants until they have completed five years of experience. Some states also require an additional state-specific exam.

**ASBOG® member states** (as of October 1, 2004) include:

Alabama, Arizona, Arkansas, California, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Kansas, Kentucky, Maine, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, North Carolina, Oregon, Pennsylvania, Puerto Rico, South Carolina, Texas, Utah, Virginia (optional registration), Washington, Wisconsin, and Wyoming.

### How are the topics on the exam chosen?

(Information in the 2005 TAS Survey Press Release)

The National Association of State Boards of Geology (ASBOG®) develops and provides the professional licensure examination used by 28 state boards that license geologists in the United States. The examination item bank is constructed and maintained by a committee of geologists from consulting, academia, and government. All aspects of examination development and validation are guided by psychometricians under contract to ASBOG®. The examinations are developed using the guidelines established in the Standards for Educational and Psychological Testing (1999), published by the American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education, ensuring legal defensibility.

Responses to a national Task Analysis Survey (TAS), which is conducted every five years, guide the topic content of the examination. The goal of the TAS is to bring the topic distribution of the questions on the examination into conformity with the reality of current practice and teaching. Questionnaires were sent in 2004 to 200 randomly-selected geologists licensed in each of the 28 US jurisdictions, as well as geoscientists in 10 Canadian Provinces. Included in the TAS was a special supplemental distribution of 500 questionnaires directed to academicians, whether licensed or not, so that ASBOG® could better relate professorial classroom practice to licensure examination.

## How are ASBOG® exams put together?

Any professor will tell you that there's no such thing as a perfect exam. Although ASBOG® has a test bank of questions that have accumulated over the past decade, the test bank is continually being reevaluated and improved, and the questions on individual exams are carefully critiqued. This is done by the professional psychometricians in conjunction with the Council of Examiners (COEs), composed of a representative from each state board, plus Subject Matter Experts (SMEs). All of these volunteers are registered professional geologists themselves. COEs and SMEs meet at workshops held twice a year, about a month after each national exam. Typically, some 15-20 experts will focus on each of the two exams, keeping in mind that the FG exam is testing the knowledge that a properly trained geologist with a baccalaureate degree would have, and the PG exam is testing the skills needed by the working professional after five years of experience.

The SMEs begin by taking the most recent exam in their focus area (FG or PG). After an hour or two to read and answer the questions, they go down the list and item-by-item give their answer. If all the SMEs agree on the correct answer, that's a good sign – the item is well written and clear. If the SMEs disagree on the correct answer, both the item and its key are subjected to intense scrutiny. Comments written by examinees on specific items are read to the group at this time and their concerns are addressed. If an item has two possible answers the group may decide to double-key it, or even to discard it from the exam. This is rare – but in such cases the exams are re-scored. No item that has performed poorly is ever returned to the test bank. If the SMEs feel that any item is vague, out of date, or inappropriate in the light of current professional practice, it will be revised or even discarded and replaced with one or more new items appropriate for that task. The SMEs also review items selected for the next upcoming examinations. Items are selected randomly from each of the test bank categories by the psychometricians, in percentages based on the exam blueprints developed from the task analysis study. The SMEs read each item on their focus group's draft exam critically for clarity, applicability, and correctness. Questionable items are revised or replaced before the new exam is finalized. SMEs are encouraged to bring new items to the workshop as well as to write additional items for future use. This can be a very humbling experience, because every new item (as well as every revision) must be approved by three other SMEs, each of whom is free to "improve" your original item. By the time your original write-up works its way around the table back to you, it may be unrecognizable – but it probably will be much better than you thought it was!

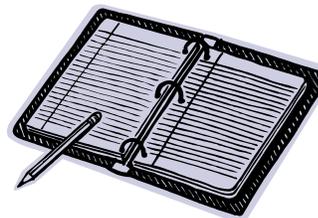
ASBOG® and the Council of Examiners have strict guidelines concerning confidentiality, so please don't ask your Nebraska COEs and SMEs for specifics about the exams. For examples of the kinds of questions you might see on the exams, as well as other information about the exams, log on to the ASBOG® web site at <http://www.asbog.org>.

## How are the topics on the exam chosen?...

*(Information in the 2005 TAS Survey Press Release)*

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A licensure examination is a high-stakes examination, so the survey is serious and detailed. The questionnaire lists typical tasks performed by geologists in their daily practice. The people surveyed may be asked to rank such things as time spent doing the task, its importance, and its impact on the public health, safety, and welfare. The questions on the supplemental survey sent to academicians will be identical to those on the general survey. However, academicians will also be asked to rank time spent teaching concepts related to the tasks on the questionnaire. The results of the TAS will be completed in the late spring of 2005 and will be utilized in developing the examination blueprint for the October 2005 administration of the national examinations.



## Renewal Information

In October of 2004, renewal notices were sent to all licensees. Renewal licenses are valid for one year. The renewal fee is due on or before December 31, 2004. Those who have not received a renewal notice or have an address change please notify the office by email at [geology@nol.org](mailto:geology@nol.org).

Those who become licensed prior to December 31 of each year will be sent a renewal notice.

### How to Renew a License

- Complete and make any changes to the renewal form on or before December 31 and return with the \$55 fee made payable to the: Nebraska Board of Geologists.
- A renewal card with your expiration date and receipt is sent after payment is received.
- All renewal notices are sent out on an annual basis in October of each year.

### Penalty Information

After 12/31/04, add \$5.00 for any month or any part of a month, up to \$55. After 4/1/06, a new application will be required.

**Nebraska Board of Geologists  
Professional Geologist Examinations**

Plans are in progress for the March 4, 2005, Nebraska ASBOG® Exam. The Association provides exams for State Boards of Geology (ASBOG®) at a fee established by their Board. The exam fees on the registration form below reflect the cost from ASBOG®. The reservation fee covers the proctor and other administering costs of the exams. Applications must be submitted and approved before registering for the exams. The final date to submit exam fees to the Nebraska Board is January 17, 2005, so applications need to be completed by the first week in January. Please remember all fees are non-refundable and not transferable.

Arrangements can be made to take the Nebraska exam at another state Board's examination site (e.g. Wyoming), provided they are also an ASBOG® member. If you require this option or would like more information please contact us by email at [geology@nol.org](mailto:geology@nol.org)



**2005/2006 ASBOG® Schedule**

Friday, March 4, 2005                      Friday, March 3, 2006\*  
Friday, October 7, 2005                  Friday October 6, 2006

Examination "site" information can be downloaded from the website at <http://www.geology.state.ne.us/board/nbg.htm>.

**\*PLEASE NOTE:** The fee will be increased to \$150 for the March 3, 2006, Fundamentals (FG) Examination.

**Fee Schedule**

<b>Application Fee</b>		<b>\$50.00</b>
<b>Licensing Fee (payable upon approval of application)</b>		<b>\$240.00</b>
<b>TOTAL</b>		<b>\$290.00</b>
<b>Other Fees</b>		
<b>Annual Renewal Fee</b>		<b>\$55.00</b>
<b>Expired Registration Penalty \$5 fee per month, not to exceed \$55</b>		
<b>Temporary Permit License Fee*</b>		<b>\$175.00</b>
<b>Emeritus Fee (lifetime fee)</b>		<b>\$25.00</b>
<b>Certificate of Authorization for Organization (2 year period)</b>		<b>\$100.00</b>
<b>Examination Fees:</b>		
<b>Fundamentals (FG)</b>		<b>\$125.00</b>
<b>Practice (PG)</b>		<b>\$150.00</b>
<b>Both (FG &amp; PG)</b>		<b>\$275.00</b>
<b>Reservation Fee (For one or both tests)</b>		<b>\$35.00</b>
<b>Duplicate Certificate Fee</b>		<b>\$15.00</b>
<b>Licensee Listing</b>		<b>\$25.00</b>

\*A Temporary license is good for one project only and for a period of one year. An individual or company may receive a temporary license once in each 3-year period. If you do not have an active PG license in another state, you must apply for registration in Nebraska on our regular application form.

**NEBRASKA BOARD OF GEOLOGISTS  
Examination Registration Form**  
(Please use one form per individual registrant. Copy as needed.)

Name \_\_\_\_\_ PG# \_\_\_\_\_

Mailing Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_ Phone \_\_\_\_\_ Fax Number: \_\_\_\_\_

Company Name \_\_\_\_\_ E-Mail \_\_\_\_\_

Mail Examination Fees to: State of Nebraska Board of Geologists  
P.O. Box 94844  
Lincoln, NE 68509-4844

**I will take the: (Please check all that apply) \*\*\* Exam fees must be paid by January 17, 2005, for the March exam.**

FG Exam (8:00 – 12:00) (\$125.00)     PG Exam (1:30 – 5:00) (\$150.00)  
Reservation Fee is \$35.00 (For one or both exams)

Please direct any questions to Sandra Weaver via e-mail at [geology@nol.org](mailto:geology@nol.org) or phone at 402-471-8383.

## RECIPROCITY AND COMITY – DEFINED

The Board spent a great deal of time discussing the issues of reciprocity and comity before coming up with our current policy [see below]. According to Webster's New World Dictionary, *reciprocity* refers to equivalent or interchangeable things; *comity* (in law) is the principle by which courts in one jurisdiction may accept decisions made under the laws and decisions of another jurisdiction. Although the concepts are similar, they are not quite the same, and even ASBOG® states have not been able to agree on a uniform application of reciprocity/comity. The main reason for the difficulty is that each state's law (or province, territory) is slightly different than the others.

The Geologists Registration Act (Nebraska Statutes 81-3501 to 81-3541) lists four requirements for professional registration: 1) character; 2) B.S. degree in Geology; 3) 5 years of post-baccalaureate experience working in geology; and 4) passing scores on examinations covering the Fundamentals of Geology and the Practice of Geology. Although the Act does not specifically define either reciprocity or comity, it does state that the first three criteria...

"may be considered by the board to be fulfilled if the applicant maintains a current certificate of licensure to practice geology issued pursuant to the authority of any state or possession of the United States or the District of Columbia based on requirements that do not conflict with the Geologists Regulation Act and were of a standard not lower than that specified in the applicable licensure in effect in this state at the time the certification was issued."

In other words, we are authorized to offer reciprocity (but not comity) provided the applicant has been licensed elsewhere on the same basis as Nebraska registrants, AND HAS TAKEN THE ASBOG® EXAMS OR THEIR EQUIVALENT.

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## RECIPROCITY POLICY

The Board's position is that reciprocity will be granted if the applicant for reciprocity meets the following requirements listed below:

### To Apply for a PG License:

1. Must have a current geologist registration or license in good standing in another state. (Contact your local state board of registration and ask them to send a "verification of your registration" and good standing to the address below).
2. Submit a completed application form with a \$50.00 application fee to the Nebraska Board of Geologists. (Transcripts or letters of reference are not required at this time if in good standing).
3. Must have passed the ASBOG® examinations Fundamentals of Geology and Practice of Geology, or their equivalent. (The Board may waive the requirement for passing the ASBOG®

examinations or equivalent, if the applicant has continuously held a geologist registration or licensure in good standing since December 31, 1991. Such applicants may be asked to submit additional material, including transcript or letters of reference.)

4. Meet the Nebraska statutory education requirement: Have "...a minimum of thirty semester hours or forty-five quarter hours of course work in geology and have received a baccalaureate or advanced degree in geology or a geologic specialty...."
5. Meet the Nebraska statutory requirements for experience: "...a documented record of a minimum of five years of progressive experience, obtained subsequent to completion of the education requirements, in geologic work of a grade and character which indicates to the board that the applicant is qualified to assume responsible charge of such work upon licensure as a geologist."

An application packet and verification form may be downloaded from our website. <http://www.geology.state.ne.us/board/app.htm>.

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## COMPLAINTS

By Jim Cannia

The Nebraska State Board of Geologists exists to protect the public health and safety of the people of Nebraska. This citation from the law outlines the responsibility of the board:

**81-3502. Geology; regulation; prohibited acts.** In order to safeguard life, health, and property and to promote the public welfare, the profession of geology is declared to be subject to regulation in the public interest. It is unlawful for any person to (1) practice or offer to practice geology in this state, (2) use in connection with his or her name or otherwise assume the title professional geologist, or (3) advertise any title or description tending to convey the impression that he or she is a licensed geologist; unless the person is duly licensed or exempt from licensure under the Geologists Regulation Act. The practice of geology and use of the title geologist is a privilege granted by the state.

In the few years we have been active as a Board, several complaints have been investigated. Mainly, these complaints involve unlicensed individuals allegedly practicing without a license or advertising themselves as a geologist. All cases brought before the board are investigated as quickly as time permits. As of this date, only one investigation has resulted in a warning letter to the offending party.

Please take note that the board will act quickly to investigate all complaints presented. As professional geologists, we all have a duty to be aware that people practicing outside the law are subject to having a complaint filed against them and possible action taken by the Board. The Board is your vehicle to protect your profession. Allowing people to violate the law weakens us all.

## LICENSURE UPDATES

August 1, 2003 through December 6, 2004

**Mark G. Densmore**, Springfield, IL **12/6/04**

**Nicholas L. Marcelletti**; Royal Oak, MI; **9/13/2004**

**Kevin B. Hopkins**; Wichita, KS; **8/26/2004**

**David M. Miller**; Old Bridge, NJ; **5/17/2004**

**Dwight Douglas Haney**; Olathe, KS; **5/10/2004**

**Dietrich H. Whitesides**; Centennial, CO; **5/10/2004**

**Robert T. Miller**; Omaha, NE; **5/7/2004**

**David Lee Doyle**; Bowling Green, KY; **4/23/2004**

**Mark P. Molinari**; Seattle, WA; **2/17/2004**

**Michael R. Daugherty**; Fremont, NE; **1/28/2004**

**Dawn R. Stock**; Omaha, NE; **1/15/2004**

**John J. Wyciskalla**; Des Moines, IA; **1/7/2004**



**Congratulations to those that passed the  
March 2004 and October 2004 ASBOG® Exams!**

### Fundamentals of Geology Examination

Brett A. Fishwild, Omaha, NE  
Robert G. Goodwin, Fremont, NE  
Dwight D. Haney, Olathe, KS  
David M. Miller, Old Bridge, NJ  
Kathleen A. Olson, Omaha, NE  
Lauren P. Tice, Omaha, NE  
Dietrich Whitesides, Centennial, CO

### Practice of Geology Examination

Clint P. Carney, Fort Collins, CO  
Brett A. Fishwild, Mission, KS  
Robert G. Goodwin, Fremont, NE  
Dwight D. Haney, Olathe, KS  
David M. Miller, Old Bridge, NJ  
Robert T. Miller, Omaha, NE  
Kathleen A. Olson, Omaha, NE  
Steven M. Peterson, Holdrege, NE  
Dietrich Whitesides, Centennial, CO



Photo by Dr. Nan Lindsley-Griffin

View of cliffs and scenery around Fort Robinson State Park  
near Chadron, Nebraska

## WHO SHOULD BE REGISTERED IN THE STATE OF NEBRASKA?

### THE GEOLOGISTS REGULATION ACT [81-3501 through 81-3541]

**Purpose:** to safeguard life, health, and property and to promote the public welfare through the regulation of the profession of geology.

**Board of Geologists:** established to oversee the registration and licensing of professional geologists for the state of Nebraska, and to enforce the Geologist Regulation Act. In general, if you are a geologist whose work is in areas affecting public health and safety, you should be registered. Examples include, but are not limited to, geologists working in environmental geology, engineering geology, and hydrogeology.

**A Geologist** is a person who is qualified to practice geology by reason of special knowledge and use of the earth sciences and the principles of geology and geologic data collection and analysis acquired by geologic education and geologic experience.

**Geology** means the science which includes treatment of the earth and its origin and history, in general: investigation of the earth's constituent rocks, soils, minerals, solids, fluids including underground waters, gases, and other materials; the study of the natural agents, forces, and processes which cause changes in the earth or on its surface; and the application of this knowledge of the earth.

**The Practice of Geology** means "any service or creative work if the adequate performance of the service or work requires geologic education, training, and experience to include such services or creative work as geological consultation, investigation, planning, surveying, mapping, and inspection of geological work, and the responsible supervision thereof, the performance of which is related to public welfare or the safeguarding of life, health, property, and the environment and teaching, including research and service, of advanced geological subjects." [81-3515]

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### Nebraska Licenses Not Renewed for 2004

William G. Alexander, CO ■ John E. Buckley, NE  
Edward M. Fenk, NY ■ Ronald L. Grubbs, TX  
Jason B. Hellman, NE ■ Karen A. Phillips, CO  
Kay L. Tauscher, CO

### Nebraska Licenses Lapsed on 4/1/2004

Richard J. Newill, CO ■ Raymond R. Burchett, AZ  
Grant Ming Yang, WA ■ Rick O. Horner, KS