



NMGS NEWSLETTER

VOLUME 17, WINTER, 2014



2014 Officers

President: Virginia McLemore, New Mexico Bureau of Geology & Mineral Resources, New Mexico Tech

Vice President: Mary Dowse, Department of Natural Sciences, Western New Mexico University

Treasurer: David Ennis, State of New Mexico, Mining and Minerals Division

Secretary: Matt Heizler, New Mexico Bureau of Geology & Mineral Resources, New Mexico Tech

Past President: Greg Mack, Dept. Geological Sciences, New Mexico State University

President's Message

Virginia McLemore

The New Mexico Geological Society had another successful year in 2014. In January new officers were elected (see above). The spring meeting and fall field conferences were well attended (see below) and another fine and informative guidebook was published. Barry Kues' special volume of notable geologists was published in 2014 and emphasizes the history of geology and the contributions of those pioneers, including women, to the geological sciences in New Mexico. This book has sold well. A new publication on *Energy and Mineral Resources in New Mexico* will be released in 2015, further emphasizing the past, present, and future importance of mineral resources to New Mexico. Much of this history is directly tied to the New Mexico Geological Society.

Indeed the number of students participating in our society is our strength and legacy. Many of the volunteers that currently assist with the Society have benefited from NMGS scholarships during their studies, myself included. This year we awarded more than \$85,000 in direct research and competitive scholarships. The Society also provided free memberships for students, a reduction in the price of NMGS publications, as well as free attendance to the spring meeting, and scholarships to the fall field conference.

Numerous volunteers have assisted to make this year a success. The officers of the executive committee are listed above and have been instrumental in organizing and moving forward the Society's agenda. Connie Apache serves as the registration chair for the society as a whole, as well as for most of our events and whenever I need anything, she is there with answers, or at least with a name of a person who might know the answer. April Brunson and Alex Holman are in charge of publication sales

and run our publications booth, not only at NMGS events but at various other scientific meetings throughout the year.

The scholarship committee is chaired by Kate Zeigler with Adam Read and Mary Dowse as members and award scholarships not only to university students but also to high school students at Science Fairs and Science Olympiads. The non-profit NMGS Foundation is a separate entity from the Society and manages our assets used to fund these scholarships and other ventures. The board members are Tony Benson, President, John Shomaker, Vice President, Laura Crossey, Treasurer, Frank Ramos, Secretary, and Mary Dowse, NMGS society liaison. The foundation has been very active this year examining various ways to increase and sustain our financial resources, which is over \$1 million. Their efforts are greatly appreciated!

Participation in these events and on the various committees is encouraged as well—just let one of the executive officers know of your interest. I hope to see each of you on the outcrop—either at this upcoming year’s field conference, future field conferences or elsewhere during the year!!!

Membership

The NMGS has 599 members, including 199 Active, 33 Associate, 39 Honorary, 186 Lifetime, and 142 Students.

2014 Annual Spring Meeting

The 2014 Annual Spring Meeting was held on April 11, 2014 in Socorro with 180 attendees. The theme session for the 2014 Spring Meeting was “Synergy between Academia and the Fossil Fuel Industry”. The keynote speaker was Dr. Katherine Giles (University of Texas at El Paso), who has worked closely with the petroleum industry for the past two decades. Kate gave a very insightful address that was equally entertaining. The meeting abstracts are available at <http://nmgs.nmt.edu/meeting/abstracts>.

2014 Fall Field Conference

Every fall since 1950, the Society has held a field conference to some part of New Mexico and, in some cases, to bordering states. From the beginning, the conference has been accompanied by a guidebook with detailed road logs as well as peer-reviewed papers relevant to the region. These guidebooks remain as invaluable references to the geology of the conference study area and most are [available for purchase](#). In recent years, as spiral-bound road log has been published as well as the full guidebook, and these are popular items in our sales inventory. Individual papers can be downloaded by members from <http://nmgs.nmt.edu/publications/guidebooks>.

In 2014, the 65th conference was centered in the Alamogordo area, with 132 attendees. The leaders and guidebook editors were Geoffrey Rawling, Virginia McLemore, Nelia Dunbar, and Stacy Timmons. The mountains and basins of south-central New Mexico contain excellent exposures of Paleozoic to Quaternary rocks, complex structure and hydrology, numerous mining districts, and spectacular scenery. The guidebook contains research papers and minipapers on igneous geology, stratigraphy, paleontology, regional structure, geomorphology, speleology, hydrology, economic geology, and the fascinating human history of the region. Brigitte Felix Kludt was the layout designer and Leo Gabaldon and Stephanie Chavez were the cartographers for the 2014 guidebook. Other leaders were Greg Mack, Fraser Goff, Shari Kelley and Connie Apache was the registration chair.

This year's guidebook was dedicated to Fraser Goff, in recognition of his recent thorough and insightful research into the volcanic history of the high country of Sierra Blanca, New Mexico. In addition, Fraser has authored many papers about the geologic history of the Jemez Mountains and Mt. Taylor that appeared in past volumes of the New Mexico Geological Society guidebook.



*Students who received scholarships to attend the 2014 Fall Field Conference.
Many other FFC photos are at: <http://nmgs.nmt.edu/ffc/2014/photos>*

Field Play – A New Smart Phone App

This year, the NMGS Fall Field Conference was supplemented with *Field Play*, an augmented reality geologic field trip application. Developed by UNM Earth and Planetary Sciences PhD student Magdalena Donahue and New Mexico Tech Computer Science PhD student John Donahue, this free, Android-based smartphone/mobile device application will digitally enhance the field experience by promoting scientific education in a way that is personal, interesting, relevant, easily accessible, and scalable to individual interest. Using *Field Play*, participants were given the opportunity to enrich their field experience by exploring interactive submodules that include location-based audio content, augmented reality binoculars, informational text, topographic and geologic maps, and short geological topic and concept YouTube video lessons. These field trips can also be accessed from any location via FieldPlay.org. We look forward to bringing augmented reality field trips to the NMGS FFC this September!

Publications Committee

Nelia Dunbar and Shari Kelly co-chaired the publications committee. In 2015, Virginia (Ginger) McLemore will replace Shari Kelly as co-chair. If any member would like to serve on the publications committee, please contact Nelia, Ginger, or any of the executive committee members.

Publication sales for 2014 were approximately \$22,500. We have sold 62 volumes of the latest special publication 12, amounting to \$1485.

NEW PUBLICATION IN 2014—*A Brief History of Geological Studies in New Mexico with Biographical Profiles of Notable New Mexico Geologists, Special Publication 12*

A new book edited by Barry S. Kues, Claudia J. Lewis, and Virgil W. Lueth that highlights the lives of notable New Mexico geologists was released this year. The book, *A Brief History of Geological Studies in New Mexico with Biographical Profiles of Notable New Mexico Geologists*, contains 42 sketches of the lives of men and women who influenced our understanding of the stratigraphy, structure, paleontology, volcanology, Precambrian geology, geomorphology, geologic history, and mineral, fuel and water resources of the state. The profiles were composed by current geologists who either knew these legendary scientists or were interested in their contributions. The individual profiles are woven together in an historic narrative that traces the evolution of our knowledge of the geology of New Mexico, from Puebloan and Hispanic use of geological materials and the first observations made during the Mexican-American War in the 1840s, to modern studies incorporating plate tectonics, radiometric dating of rocks, and use of advanced analytical instruments. We are sure that you will enjoy this inspirational book.

In addition, NMGS added a website of profiles of geologists not in Special Publication 12. Visit the web site <http://nmgs.nmt.edu/notablegeologists/profiles.html> for the profiles and if you know of a geologist who should have a profile, don't hesitate to write one and send it to Barry Kues or Steve Simpson (see <http://nmgs.nmt.edu/notablegeologists/suggest.html>).

NEW PUBLICATION SCHEDULED TO OUT IN 2015—*Energy and Mineral Resources of New Mexico*

Special Publication 13—Energy and Mineral Resources of New Mexico—will be a comprehensive summary of New Mexico's energy and mineral resources to accompany the volume on New Mexico's Geologic History (Special Publication 11). Virginia McLemore, Maureen Wilks, and Stacy Timmons are the editors with Brigitte Felix Kludt doing the layout design. The book will begin with an Introduction by Virginia T. McLemore. Chapters include:

- Petroleum Geology of New Mexico by Ronald F. Broadhead
- Coal in New Mexico by Gretchen K. Hoffman
- Uranium Resources in New Mexico by Virginia T. McLemore and William L. Chenoweth
- Metallic Mineral Deposits in New Mexico: An Overview by Virginia T. McLemore and Virgil W. Lueth
- Industrial Minerals and Rocks of New Mexico by George S. Austin and Virginia T. McLemore
- The Valles Caldera (Baca) Geothermal System, New Mexico by Fraser Goff and Cathy J. Goff.

This volume benefitted from technical editing from the Technical Communication Editing class at New Mexico Tech, taught by Steve Simpson. The volume should be out by the end of 2015.

On-line Voting

The online ballot for choosing members of the Executive Committee and the Foundation is available at: <https://nmgs.nmt.edu/ballot>. Members will need to log in to complete the online ballot.

Please vote by January 6, 2015.

Thanks to Dave Love who counts the ballots and provides the executive committee with a final report.

Scholarships

Student Grant-in-Aid Proposals for research grants, the Kottlowski Research Award, and the Pipkin Undergraduate Research Awards must be submitted through the NMGS web site: <https://nmgs.nmt.edu/scholarships/application>. The deadline this year is Friday, February 20, 2015.

2015 Annual Spring Meeting

The Annual Spring Meeting will be held on Friday April 24, 2015 at Macey Center in Socorro, NM. The theme will be *Paleoclimate: Is the past a key to the future*. Peter Fawcett is the program chair and Connie Apache is the registration chair.

2015 Fall Field Conference

The 2014 NMGS Fall field Conference will examine the geology of the Las Vegas area and southern Sangre de Cristo Mountains. The conference will present diverse geology, from the Proterozoic crystalline basement through Phanerozoic stratigraphy to younger igneous intrusive and extrusive rocks and showcase spectacular views of Hermit's Peak, the Sangre de Cristo Mountains, the Mora River Valley, and the High Plains grasslands. The call for papers is at <http://nmgs.nmt.edu/ffc>. Co-editors are Jennifer Lindline and Mike Petronis (both at New Mexico Highlands University).

Future Spring Meetings and Fall Field Conferences

In 2016 the fall field conference will be in the Belen area under the leadership of Shannon Williams and Bonnie Frey. If you have an idea for future spring meetings and fall field conferences please contact members of the executive committee.

2014 NMGS Honorary Member—Nelia Dunbar

Nelia Dunbar received her Honorary Member certificate from NMGS President Virginia McLemore during the NMGS banquet in Alamogordo, New Mexico. Nelia was honored for her outstanding work in organizing the operating funds of NMGS, many years as organizer of the Spring meetings, establishing scholarship criteria, publications chairman, and service on the Executive Committee.



FINAL NOTE

L. Greer Price, director of the New Mexico Bureau of Geology and Mineral Resources and State Geologists announced that he will retire on June 30, 2015. The posting for Greer's successor can be found at <http://geoinfo.nmt.edu/DirectorSearch>. We encourage the NMGS members to reach out to qualified candidates in an effort to create a large candidate pool. The Bureau Director position has always been a strong supporter of our society and we expect that this will continue with the new director.

The members of the NMGS Executive Committee hope you have a Happy Holiday season and wonderful New Year! Join us in 2015!