



Arizona Geological Society Newsletter

ARIZONA GEOLOGICAL SOCIETY, INC., TUCSON, AZ

SEPTEMBER 2010

September 7, 2010 DINNER MEETING

Marcia McNutt, USGS Director, will speak on the response to the BP oil spill in the Gulf of Mexico.

Where: Sheraton Four Points Hotel, Wild Cat Room, 1900 E. Speedway Blvd. in Tucson

When: Cash Bar at 6 pm, Dinner at 7 pm, Talk at 8 pm.

Cost: With reservation, members \$24, guests \$27, Students \$10.

Without a reservation a \$3 surcharge will be added (if the hotel is able to accommodate you).

RESERVATIONS: CALL 520.663.5295 by 5 p.m. on September 3, 2010. Indicate low-salt, vegetarian, or vegan meal preferences. A coffee/salad/roll/dessert option is also available for \$18. Please cancel if unable to attend.

The hotel cannot guarantee that meals will be available without a timely reservation.

ABSTRACT

USGS Science in the Gulf - The Deepwater Horizon Oil Spill

Marcia McNutt, Director, U.S. Geological Survey

In the wake of the massive BP oil spill scientists and citizens have a torrent of questions, ranging from how the use of massive quantities of dispersants affects nature's ability to break down oil to why oil plumes from deep-sea spills act in unexpected ways to the range of toxic effects of the oil on beaches, coastal wetlands and wildlife. USGS can assist in finding the answers to these and other related questions—answers that will give regional and national leaders insight into how best to respond to, and recover from this tragedy.

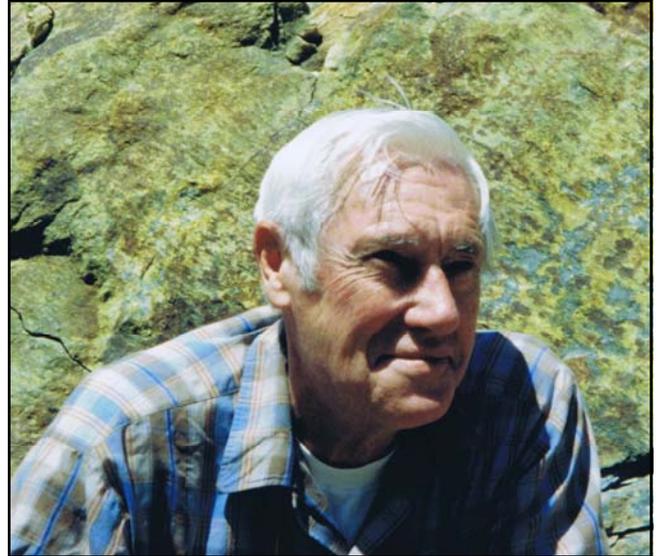
Marcia McNutt received a bachelor's degree in Physics from Colorado College and a doctorate in Earth Sciences from Scripps Institution of Oceanography. As Director of the USGS, she is responsible for leading the Nation's largest water, earth, biological science and civilian mapping agency in its mission to provide the scientific data that enable decision makers to create sound policies for a changing world. She previously served as president and chief executive officer of the Monterey Bay Aquarium Research Institute (MBARI), in Moss Landing, CA.

Dr. McNutt has participated in 15 major oceanographic expeditions and served as chief scientist on more than half of those voyages. She has published 90 peer-reviewed scientific articles. Her research has ranged from studies of ocean island volcanism in French Polynesia to continental break-up in the Western United States to uplift of the Tibet Plateau.

She is a member of the National Academy of Sciences, the American Philosophical Society, and the American Academy of Arts and Sciences. She was awarded the Macelwane Medal by the American Geophysical Union in 1988 for research accomplishments by a young scientist and the Maurice Ewing Medal in 2007 for her significant contributions to deep-sea exploration.

September Member Spotlight—John M. Guilbert

John M. Guilbert was born in 1931 in Dedham, Massachusetts. He received a B.S. in Geology in 1953 from the University of North Carolina-Chapel Hill. From there he went to the University of Wisconsin-Madison, where he received an M.S. in Geology in 1957 and Ph.D. in Economic Geology with a minor in Physical Chemistry in 1962.



From 1957 to 1965 John was a member of the team at Anaconda's Geological Research Laboratory in Butte, Montana that determined that the depth of ore-bearing veins was limited due to geochemical factors. After his stint at Anaconda, John spent the remainder of his distinguished career at the University of Arizona. While there, he co-authored the classic (and still very current) economic geology text, *The Geology of Ore Deposits*, with Charles Park, making his name familiar to geologists throughout the world. He retired from U of A in 1993, but he remains busy with a variety of activities, including consulting.

John and his late wife, Mary, raised three children, Anne, Linda, and Paul. He lives in Tucson with his partner, Jan Harelson. John shared his story, along with his infectious love of life, from his summer home in New Hampshire.

How did you first become interested in geology? An asthmatic 12-year-old, I was sent in 1943-44 to the Little Outfit School near Patagonia, where the asthma vanished. On horseback pack trips into the Santa Ritas, Huachucas, and Patagonias, I became fascinated by all the rock types and colors, prospect adits, small mine dumps, etc. That was probably the first time I asked, "Why would anyone dig here?"

What was your first job? After lawn-mowing and paper routes, working as a 17-year-old go-fer during the summer of 1948 at a family camp in Maine. Nice granites, nice clams, nice first girl, but not for me.

What was your first job as a geologist? First came a summer of doodle-bugging ("Seismometer Placement Engineering", or "Jug-Hustling") in the Kansas-Oklahoma oil patch for Tulsa-based Republic Exploration in the summer of 1952. Then in summer 1954, I worked for Vernon Pick and Leo Miller (Pick Uranium Co.) exploring exposed paleostream beds on mesa cliffs for reduced-zone wall-rock alteration and associated Colorado Plateau uranium deposits around Grand Junction, Colorado. My die was cast.

What is your most memorable field experience? Waking up in a tent in northwestern Argentina on a United Nations Development program mission during my first sabbatical in 1976, stepping outside to a total déjà vu that I was at Silver Bell, and going a few steps to be astounded by the same cactus (cardon), same colors, same alteration! I was an early visitor to a prospect called Bajo de la Alumbrera, with Lowell-Guilbert zoning as if made in Hollywood and (ultimately) 900+ million tons of Cu-Au ore. I was happy to help get it financed and developed in the mid-1990s into an open pit mine that is still in production.

What do you consider your greatest professional achievement? Without a doubt, my greatest professional achievement is that I was fortunate to be able to touch and constructively inform so many undergraduate and graduate students, both in the classroom at the amazing University of Arizona and throughout the world, with *The Geology of Ore Deposits*, with our 17 global U of A Economic Geology field trips, and with worldwide academic and corporate cooperations. What a life!

What about your greatest achievement EVER? My greatest achievement(s) EVER have to include my self-determination to be my family's first member to get a PhD, to have been integral to

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Member Spotlight—John M Guilbert (continued)

really understanding the Butte system, to have won a faculty position at UA, to have collaborated with Dave Lowell in our 1970 and subsequent papers, to have worked hard and well at family and career, and to have established a significant professional profile. Also, I am thrilled to have won a Second Love in Jan Harelson, following Mary's death in 2004. Again I say, what a life!

What are your hobbies? Being a Study Group Leader (and Study Group participant) at Tucson's Osher Lifelong Learning Institute, still involving Geology but also Archaeology, Anthropology, American History, and general science. Also reading, the Red Sox, and woodworking.

Water, Whiskey or Wine? After answering these questions? Whiskey! Normally, water with wine at meals.

Thanks, John!

Do you know someone who would be an interesting subject for a "Member Spotlight" column? Email his/her name and contact information to ajones@clearcreekassociates.com.

Welcome New AGS Members!

- Barbara Carroll, Principal, Geografx GIS Services
- Karin D'Agostino, Staff Geologist, Anadarko Petroleum Corporation
- George Copenhaver, consulting geologist, Santee, California

Arizona Department of Mines and Mineral Resources. . .

will move to their new offices at 1520 West Adams in Phoenix effective September 27, 2010. This location is just across the parking lot north of their old headquarters. Their services will remain unchanged. ADMMR provides information and assistance to the mining and exploration industry. A growing digital library of government publications is now online at www.mines.ag.gov.

Barbara Murphy Elected President of AIPG



Congratulations to **Barbara H. Murphy**, long-time AGS member, who was recently elected as national president of the American Institute of Professional Geologists (AIPG). She will serve as president-elect in 2011 and as president in 2012. AIPG, founded in 1963, is the largest association dedicated to promoting geology as a profession, emphasizing competence, integrity, and ethics. It has nearly 6000 members in the U.S. and abroad. AIPG adheres to the principles of professionalism of geological scientists in all branches of the science with members employed in industry, government, and academia. Ms. Murphy has been an active member of AIPG in the Arizona Section and at the national level for many years. She is employed as a Senior Geologist with the consulting firm of Clear Creek Associates in the Scottsdale, AZ office where she manages environmental and hydrogeological projects.

Proposed Slate of 2011 Officers & Councilors

Don't miss the September 7 dinner meeting, where we will be voting on the 2011 Slate of Officers, as listed below. If you are unable to attend the meeting, you can get a ballot online at the AGS website (www.arizonageologicalsoc.org). Ballots must be emailed to Alison Jones (ajones@clearcreekassociates.com) or faxed to Alison (520-622-4040) before 5 p.m. on September 7, 2010.

President	Greta J. Orris, U.S. Geological Survey
VP Programs	Robert J. Kamilli, U.S. Geological Survey
VP Field Trips	Doug Shakel, Retired
VP Marketing	Ann D. Pattison, Independent
Treasurer	Coleen Brown, Retired
Vice Treasurer	Michael Conway, Arizona Geological Survey
Secretary	Alison H. Jones, Clear Creek Associates
Vice Secretary	David F. Briggs, Independent
Past President	Mark D. Cocker, U.S. Geological Survey
Councilor 1 (11-13)	Anthony B. Williams, Diligent Investor
Councilor 1 (11-13)	Robert E. Powell, U.S. Geological Survey
Councilor 2 (10-12)	Jeffrey Cornoyer, Rosemont Copper
Councilor 2 (10-12)	Claudia Stone, SRK Consulting
Councilor 3 (09-11)	M. Lee Allison, Arizona Geological Survey
Councilor 3 (09-11)	Diana C. Kamilli, Retired

Serving on the AGS Executive Committee is interesting and fun. If you think you may be want to serve as an officer or Councilor in the future, please mention it to any of the current officers.

Geologic Time Scale Update

In July, the USGS published Fact Sheet 2010-3059 titled "Divisions of Geologic Time—Major Chronostratigraphic and Geochronologic Units", providing the latest time scale endorsed by the USGS. The USGS Geologic Names Committee and the Association of American State Geologists worked together to develop the revised time scale. Significant changes include the timing of the start of the Pleistocene (it was earlier than we thought) and the Holocene (the base of which is now defined by abrupt climate change indicated by ice cores from Greenland). You can download a copy of the fact sheet at <http://pubs.usgs.gov/fs/2010/3059/pdf/FS10-3059.pdf>.

In Memoriam

Gretchen Luepke Bynum, 66, longtime AGS member, died peacefully on Saturday, July 3 in Fremont, CA. Gretchen attended the University of Arizona where she earned her Bachelors and Masters degrees, both in Geology. She then began a 32-year distinguished career as a geologist with the USGS in Menlo Park, California. During her career, she published numerous scientific papers, edited many books, and attended numerous international geological conferences. After retiring in 1999, she continued with the USGS as an emeritus working on various projects. She was a mineral collector who exhibited at the annual Tucson Gem and Mineral Show where she won numerous awards. She loved the outdoors and supported many environmental organizations.

Gretchen is survived by her husband Robert F. Bynum, her sister Kristin Coleman, and her brother John Luepke. Donations may be made in Gretchen's memory to The University of Arizona, Department of Geosciences.



Educational Opportunities

The University of Arizona Lowell Institute for Mineral Resources is offering three courses during the Fall of 2010:

- September 24-25: Introduction to Engineering Contract Law
- October 1-2: Modern Corporate Organizations in the Mineral Industry
- November 12-13: Basic Concepts in Mineral Economics

The courses can be taken for credit or not, on-site or live via video conference or internet streaming. For more information contact the Lowell Institute for Mineral Resources (520.621.5292) or visit the website at www.IMR.arizona.edu.

FIELD TRIP TO AJO!!!

The New Cornelia open pit copper mine at Ajo ceased operations in 1985, but the property is still protected and re-searched by Freeport-McMoRan, the company that acquired Phelps Dodge in 2007. AGS members Ralph Stegen and Will Wilkinson of Freeport-McMoRan have kindly put together a trip to the New Cornelia mine for AGS.

The trip is scheduled for **October 16, 2010**. We will meet at **9 a.m.** in Ajo at a to-be-designated location. Participation is limited to 20 people. Bring your own personal protective equipment (PPE)—steel-toe boots, hard hat, and safety glasses. **PPE is absolutely required**, and no one will be allowed on the trip without it. A **\$30 fee** is payable upon arrival at the assembly point on 16 October.

If you wish to drive out on Friday, October 15, be advised that motel rooms in Ajo may be in short supply. So reserve early or plan to stay in Gila Bend.

Please check the AGS website for more details and to reserve your spot on the trip to this fascinating mine.



