



MONTANA GEOLOGICAL SOCIETY

NEWSLETTER

Vol 65 No. 3



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P2 / PRESIDENT'S LETTER

Our MGS President discusses the perks of spring & new finds.



P4 / CANTRELL

Join us for our next virtual talk regarding Carbonate Reservoir Quality on March 30.



P5 / NEW ARCHIVE

You can now access past talks on the MGS website as part of your membership.



P7 / TOTY

The application period is now open for the MGS's annual Teacher of the Year Award.

Upcoming Events:

Mar 30 - MGS Zoom Talk- D.L. Cantrell (see page 4)

Guess the View

Where in Montana is this?
Answer on Page 2.

Contact Us:

mtgeo.org / montanageologicalsociety@gmail.com



Add our email address to your contacts so your Newsletters & Luncheon announcements don't end up in Spam!

PO Box 844
Billings, MT 59103

Letter from the Editor

MGS Membership,

With the changing of the seasons brings new opportunity. Snow melts, water flows, channels flood, and erosional forces take reign within the water cycle. As one of my favorite seasons to go rockhounding, new outcrops are born annually as spring is ushered in, and they provide us with great opportunities to get out and collect new specimens for our collections. If you are like me, part of your collection finds itself every spring relegated to the confines of the backyard, as new pieces take their place on the mantle, bookshelf, counter, desk, wherever, really, and despite gone they may be from their sacred spot, they are not forgotten.

With spring erosion, comes spring cleaning. I often find myself strolling outside as the weather clears up, cleaning up the mess left behind after months of snow and sub-zero temperatures, admiring my relegated collection as it looks its best. Freshly rinsed and shiny, prior to taking a baking from the long hours of sunlight and summer heat, and before another layer of leaves and pollen are deposited. It reminds me of old trips to our favorite spots, times with friends and family, like gathering around a fireplace pulling out photo albums. Our nephews and nieces ask us how we remember where they came from, which is usually a simple response like, "You try carrying a heavy rock out of the woods, you won't forget either," or the inevitable, "I just had to have it, and almost fell off a cliff." There are often some piles that go unnoticed, only to be uncovered in future years, rekindling another story.

And this is where we are today, that behind every rock is a story. A story of its origin, a story of its movements, a story of how it got where it is, from creation, to erosion, to rebirth, to a place next to the television or stuck on a magnet on the fridge. Wherever it may be now, the story is always worth telling. Sit down, share a story, and enjoy the moments.

If you happen to find yourself out in the woods and find a great rock or mineral to add to your collection, please share a photo and story with us. We would be more than happy to add your submissions to next month's newsletter! Now I am off to find the next great outcrop. Happy hunting members!

MGS President,
Spenser Kuhn

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*What do you call
an Irish gem that
isn't real?*

A sham-rock

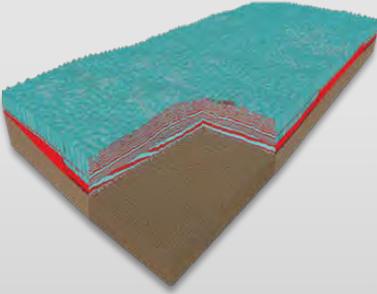
*Have something geological to sell,
give, or find?*

Place a free ad in our MGS Classifieds!

Contact the Newsletter Editor for more information.

New Tools and Approaches in Carbonate Reservoir Quality Prediction

D. L. Cantrell & C. M. Griffiths
March 30, 2021



Synopsis: Reservoir quality prediction has long been the ultimate goal of industry geologists, yet few have achieved this in a truly quantitative fashion. This workshop presents a new approach to reservoir quality prediction that involves the integration of a variety of modeling techniques to understand, quantify and predict the geological processes that control reservoir quality. Since initial reservoir quality is established at the time of deposition, numerical process models are used to predict initial reservoir quality; diagenetic process models are then used to modify these initial results and ultimately produce a quantitative and geologically-based prediction of present-day subsurface reservoir quality.

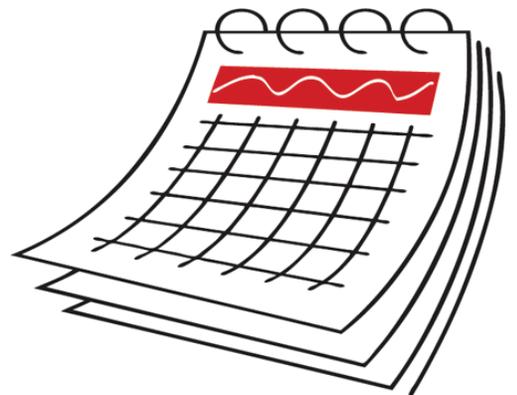


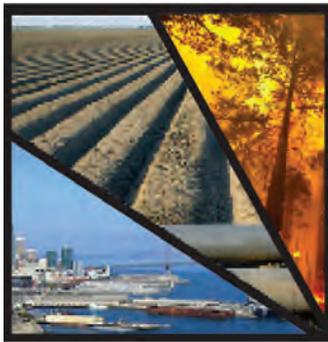
About the Presenter: Dave L. Cantrell has over 38 years of worldwide exploration and development experience in the oil industry. He graduated from the University of Tennessee with an MSc in Geology in 1982, and from the University of Manchester with a PhD in Geology in 2004. Dave began his industry career in 1982 with Exxon where he conducted numerous reservoir characterization and geological modeling studies on reservoirs in the Middle East; the Permian, Powder River, Williston, and Gulf of Mexico Basins of the USA; and the Maracaibo and Barinas Basins of Venezuela; among others. He has been responsible for several studies on large carbonate reservoirs since joining Saudi Aramco in 1997, and lead their geologic R&D groups from 2000-2008. In addition, he served for two years as an Associate Director at King Fahd University of Petroleum and Minerals (Dhahran, Saudi Arabia) and for 3 years (2017-2020) as an adjunct professor at Stanford University, where he lead various educational activities and advised graduate students. He is currently the owner and head janitor of Cantrell GeoLogic LLC.

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Use our convenient online renewal system at mtgeo.org, or print & complete the renewal form at the back of the Newsletter!





AIPG 2021

Role of Geoscientists for Resiliency, Sustainability and Opportunities in a Changing Environment

October 23-26 • Sacramento, CA



Call For Abstracts / Student Poster Contest

AIPG is currently accepting abstracts for oral presentations and poster presentations for the 58th American Institute of Professional Geologists' National Conference that will be held in Sacramento, California, from October 23-26, 2021.

The national conference provides opportunities to present and learn from experts in various geology and geoscience fields, with networking opportunities throughout the conference. Earn CEUs too!

How To Submit an Abstract

To have your abstract considered for an oral presentation or poster presentation, please complete the Abstract Submittal Form by the deadline of June 7, 2021. Abstracts must be in Word format, single-spaced, 12 point Times New Roman, and should not exceed one page. No tables or pictures will be accepted. You will be notified by June 21, 2021, if your abstract has been accepted. Technical presentations will be scheduled for Monday, October 25th, and Tuesday, October 26th. Posters will be presented on Monday, October 25th. Authors who wish to publish a paper in AIPG's *The Professional Geologist* (TPG) can contact AIPG for additional information at aipg@aipg.org.

AIPG will review, edit, and publish a digital pdf of the Conference Abstracts on their website and in the Conference App. A printed program will also contain all accepted abstracts.

An author who submits an abstract must have the intentions of attending, registering, and presenting at the conference once the submission is accepted for either an oral presentation or poster presentation. Repeated or consecutive last-minute cancellations by presenters may result in future submissions being denied.

Excerpt taken from website at: <https://aipg.org/page/2021CACallforAbstracts>

**For more information on student posters or to submit abstracts,
please visit the URL above.**

Application form for Montana Geological Society K-12 Earth Science Teacher of the Year Award

*What better way to promote earth science in the state of Montana
than to recognize and reward those who do it every day?*

The MGS applauds the hard work of outstanding **K-12 Earth Science Teachers** in Montana. Each year Teacher of the Year (TOTY) applications are reviewed and the most deserving candidate is selected by the MGS Awards Committee to receive \$1000. The MGS winner is then eligible to apply for the regional Teacher of the Year Award (an additional \$2000) through the Rocky Mountain Section of the American Association of Petroleum Geologists (RMS-AAPG). The winner of the RMS-AAPG award becomes the RMS-AAPG nominee for the national American Association of Petroleum Geologists award, which is \$6000 (\$3000 for the teacher and \$3000 for their school). That's the potential for \$9000 in cash awards!

If you teach and promote Earth Science in your classroom or in the outdoors, the MGS encourage you to apply for the TOTY Award. The following completed application form and letter of support is all you need. The 2021 Application Deadline is May 31, 2021.

Qualifications for Nomination

- Teaching must be at a Montana accredited school, any level from K-12.
- Minimum 3 years teaching experience.
- Teaching at least one unit per year on natural resources, defined as:
 - 1) Organic materials such as petroleum, natural gas, and coal,
 - 2) Inorganic substances such as mineral ores, building stone and aggregates,
 - 3) Energy resources from the earth such as geothermal energy.
- Teaching should relate to the scientific study of natural resources, and may include their origin, extraction, historic use, and present use.
- Teaching should also include the use of earth science for decision making related to the preservation of the environment, reclamation, and conservation of resources.

Teacher Contact Information

Name of Teacher	
School	
School Address	
City, ST Zip Code	
Home Phone/Work Phone	
E-Mail Address	

Additional Teacher Information

Current Position	
Grades Taught	
Number of Years Teaching	
Degree(s) Earned	

Applicant's Statement

Please attach a short, succinct statement (no more than 500 words) describing your qualifications. In the statement, please discuss, with regard to the natural resources unit, your:

- Teaching philosophy
- Methods
- Course content
- Creative or innovative projects
- Ability to balance economic, societal, and environmental issues
- Objectivity
- Class size(s)

Letter of Support

Include one letter of support from an administrator, fellow teacher, or other person/organization familiar with your teaching philosophy and style. The letter should describe the applicant's qualifications as "Teacher of the Year" in Earth Sciences. We are particularly interested in what the applicant does to promote geologic education and increase student interest in geology. The statement should include the applicant's name, be signed by the letter's author, and should be returned with the rest of this application form.

Name of Letter of Support Author	
Phone Number	
Email address	
Relationship to Nominee	

MGS can accept applications in any standard format by email to: montanageologicalsociety@gmail.com or by regular mail to:

MGS
P. O. Box 844
Billings, MT 59103

2019 Deadline: Nominations must be RECEIVED by midnight, May 31, 2021

MGS expects an award to be made by June 15, 2021.

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Degree #1 _____

Degree #2 _____

Degree #3 _____

MONTANA GEOLOGICAL SOCIETY

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2006 AAPG Datapages - MGS Publications DVD (MGS Member price)		\$150.00	
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Shipping and Handling charges - \$5.00 per CD/DVD \$8.00 per book			
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