

April 2019



MONTANA GEOLOGICAL SOCIETY NEWSLETTER

Vol 63 No. 5



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Our President discusses
a science-laden &
baking- filled week.



P4 / SCIENCE EXPO

Read on for the
highlights of this year's
Science Expo, held at
MSU-Billings.



P7 / TOTY

Applications are now
being accepted for the
2019 MGS Teacher of
the Year award.



P9 / CALL FOR PAPERS

Check out deadlines &
additional information for
the upcoming RMS-AAPG
Section Meeting.

Upcoming Events:

Apr 25 - MGS Luncheon - Chris Steuer (*see page 5*)

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!*

Find us on 

PO Box 844
Billings, MT 59103

President's Letter

Dear Membership,

I would like to start this letter out by thanking two members, Kevin Chandler and Michael Pasecznyk, for helping to judge the science projects at the ScienceExpo last month. The sharing of science is the last part of the scientific method and it's great to show that the geological community supports these budding scientists. For those of you who couldn't make it, please keep this event in mind for next year!

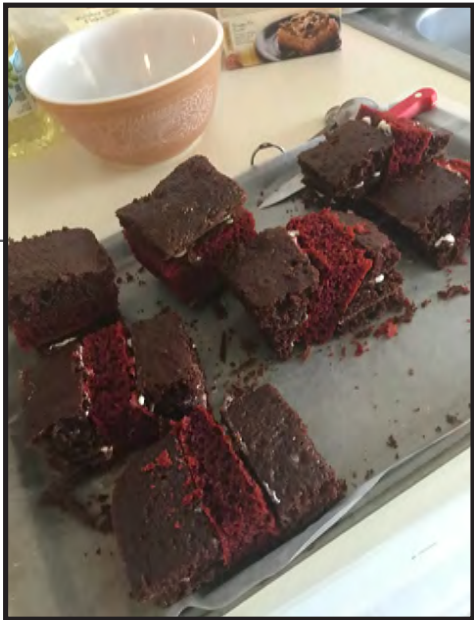
Another event we just had at MSUB was the Chemistry Magic Show with breakout sessions in other science areas. Every single 5th grade class from the Billings area came to campus to celebrate science with MSUB faculty. I was able to provide a groundwater lesson, courtesy the MBMG, to over 150 students in two days!

I baked over 20 cakes the other weekend, stacked them in transgressive and regressive sequences, made "intrusions" and faults with them. My students then "drilled" holes into the cakes with straws to reveal the patterns that can be created by geological processes. It was a pretty fun project and I believe my students learned about relative dating from this lab.

In membership news, we have 2 speakers lined up this month. Both speakers are winners of the MGS scholarships, it would be great to show them your support by attending their talks!

Enjoy the weather!

MGS President,
Sarah Friedman



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buy for the
dark room?*

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or find?*

Place a free ad in our MGS Classifieds!

Contact the Newsletter Editor for more information.

Science Expo Recap - 2019



A huge thank you to all of our MGS Volunteers! At this year's Science Expo, the MGS awarded four students with outstanding projects in earth or environmental sciences:

3rd Grader Berns received \$25.00 for the project titled "Mini Pip Poop As Biomass Energy"

5th Grader Danica received \$50.00 for the project titled "Wiggly Worm Wee"

7th Grader Callen received \$75.00 for the project titled "Does Elevation Affect Snow Water Equivalent?"

11th Grader Madisynn received \$100.00 for the project titled "Methane Remediation (Sensation)"


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From the desk of Dean Christine Shearer

Apr. 5, 2019

Dear All at the Montana Geological Society -

Thank you very much for your wonderful donation to the Science Expo last month! Once again, the event was a complete success. My favorite part, aside from seeing the students' projects, is watching them come up on stage to receive their awards. Thank you very much!


Christine

RSVP now for the upcoming MGS Luncheon!

Thursday, April 25th

Chris Steuer


Talk Title: *"Sequence Stratigraphic Framework of the Late Devonian (Frasnian) Duperow Formation in Western and Central Montana"*



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**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 2019 Application Deadline is May 31, 2019.

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	

Tobacco Root Geological Society 44th Annual Field Conference Deer Lodge, Montana, July 25-28, 2019

Deer Lodge is central to the Boulder Batholith and Elkhorn Mountains volcanic field, the Anaconda Metamorphic Core Complex, the Gold Creek placer mines, and the Butte and Anaconda mining districts and their notorious industrial superfund sites. Deer Lodge is also home to the Old Montana Prison and the Grant Kohrs Ranch National Historic Site. It is the ideal base camp for a diversity of geologic field trips and outdoor adventures.

The regional geologic history is rich and varied. Cordilleran folding and thrusting was accompanied by emplacement of the Late Cretaceous Boulder Batholith and Elkhorn Mountains volcanic field. The comagmatic batholith and volcanic field preserve an unusually complete record of Cordilleran continental arc magmatism. Eocene collapse of the fold-thrust belt was marked by caldera-forming eruption of the Lowland Creek volcanic field, extension along low angle detachments, and formation of Anaconda Metamorphic Core Complex. Precious and base metal mineralization—including formation of the Butte Hill copper deposits—accompanied every stage of contraction, collapse, and magmatism.

The region is still seismically active, continuing the basin-and-range-style block faulting that created deep basins in the Deer Lodge, Elk Park, and Whitetail valleys, and lateral transtension in the Lewis and Clark Zone.

Contacts:

Kaleb Scarberry, field trip and paper submissions

kscarberry@mtech.edu

(406)496-4743

Colleen Elliott, logistics

celliot@mtech.edu

(406)496-4143

Want to help with the conference? Contact Sandy Underwood at

SandyUnderwood903@hotmail.com

Petr Yakovlev, logistics

pyakovlev@mtech.edu

Venue:

Powell County High School

709 Missouri Ave, Deer Lodge

Accommodations and Meals: There are two camp grounds in town, and rustic camping in the nearby Deer Lodge National Forest. For attendees who eschew camping, hotels and restaurants could be a more civilized option. We recommend making reservations early. See more details at the 2019 TRGS web address for this (<https://www.trgs.org/field-conference>). Details on catering will be published with the formal conference registration announcement on June 1, 2019.



AAPG ROCKY MOUNTAIN SECTION ANNUAL MEETING

SEPTEMBER 15-18, 2019, CHEYENNE, WYOMING

CALL FOR PAPERS

DEADLINE MAY 31, 2019

The AAPG Rocky Mountain Section with the Wyoming Geological Association invite abstract submissions for the 2019 meeting in Cheyenne.

TECHNICAL SESSIONS

1. History of Exploration and Production in the Rockies
2. Carboniferous of the Northern Rockies
3. Seismic Application in the Rockies
4. Clastic Resource Plays of the Rockies
5. Exploration and Production in the Powder River Basin
6. Advances in Geologic Storage
7. Total Petroleum Systems
8. Mud Rocks in the Rockies – Lessons Learned and Recent Innovations
9. From Basins to Wells; Structural Geology and Geomechanics
10. Special Topic – A Tribute to Bill Cobban and his Contributions to Stratigraphy
11. Tight Oil Plays
12. Reservoir Characterization and Completions for Tight Plays

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mikeb@kirkwoodcompanies.com switak2@uwyo.edu



WGA
Attn: RMS 2019
PO Box 545
Casper, WY 82602

Instructions for Authors - Submit abstracts via email with subject line "AAPG RMS Abstract Submission" to aapgrrms2019@gmail.com. Indicate whether it is oral or poster. Please submit as .doc file. Abstract text is limited to 2,000 characters (not including spaces).

For more information check out the conference website - <https://rmsaapg2019.com/>

Do you have photos of past MGS events, MGS members, or Montana geology?

If so, we'd like to see them!

For a chance to have your photo featured in the MGS Newsletter & MGS Facebook page, please submit your photograph(s) and full name to montanageologicalsociety@gmail.com



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Billings Gem & Fossil Show

May 4-5, 2019

Saturday, May 4 10:00 am – 5:00 pm

Sunday, May 5 10:00 am – 4:00 pm

Adult Admission \$3.00
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MONTANA GEOLOGICAL SOCIETY

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Degree #2 _____

Degree #3 _____

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2006 AAPG Datapages - MGS Publications DVD		\$180.00	
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