

March 2019



MONTANA GEOLOGICAL SOCIETY NEWSLETTER

Vol 63 No. 4

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P2 / PRESIDENT'S LETTER

Our President discusses
upcoming activities for
geologists &
science-enthusiasts alike.



P4 / LUNCHEON

Send in your RSVP for
the upcoming March
MGS Luncheon
featuring guest speaker
Julia Reece.



P5 / APRIL DATES

We have two MGS
luncheons scheduled
for April that you won't
want to miss!



P9 / CALL FOR PAPERS

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

Upcoming Events:

- Mar 28 - MGS Luncheon - Julia Reece (*see page 4*)
- Apr 17 - MGS Luncheon - Sara Magallon (*see page 5*)
- 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,

March is always a busy month in academia. Science fairs, undergraduate research conferences, and the end of the semester is looming. The weather appears to be trending towards warm and the daylight hours are increasing and everyone with cabin fever just wants to go outside and not think about work. I do hope that all of you are able to enjoy a few minutes of reprieve before winter decides it's not quite over yet.

As March ends and we roll into April, the MGS has a few talks planned that I hope you will join us for. The ScienceExpo is approaching and I can't wait to talk to the future geologists of Billings and the greater Montana area.

MGS President,

Sarah Friedman

2018-2019 MGS Officers

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*He just couldn't put
it down.*

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

Place a free ad in our MGS Classifieds!

Contact the Newsletter Editor for more information.

MGS Luncheon Meeting

Thursday, March 28th, 2019

12:00 PM at the Billings Petroleum Club

Save the Date!

RSVP – montanageologicalsociety@gmail.com



JULIA REECE

INTERNATIONAL OCEAN DISCOVERY PROGRAM (IODP) LECTURER

Mud and Bugs Under Stress: Compression of Marine Sediments Beneath the Seafloor

Fine-grained sediments such as mudstones are the most common sedimentary rocks preserved close to Earth's surface. Mudstones are very susceptible to developing significant amounts of overpressure because their low permeability and high compressibility prevent pore fluids from draining. This can result in seepage, submarine landslides, or damage to offshore infrastructure. Additionally, mudrocks are fundamentally important as source, seal, and shale gas/oil reservoirs in petroleum systems or as seals for anthropogenic-related storage. In spite of the importance of mudstones to significant hazards and industry endeavors, a systematic, process-based understanding of the controls on hydromechanical properties in mudstones remains elusive. To study these questions Dr. Reece fabricates mudstones in her laboratory from natural, marine sediments, acquired through the International Ocean Discovery Program and its predecessors, using a technique called resedimentation. Resedimentation simulates the natural process of deposition and shallow burial under controlled conditions, is repeatable, and eliminates the problem of coring disturbance associated with testing on intact cores. Therefore, resedimentation is an ideal method for the study of fundamental mechanical behavior of marine sediments. In combination with microscale imaging techniques it also reveals how porosity, permeability, and fabric evolve with burial. Dr. Reece particularly focuses on the interactions between fine-grained detrital particles, microorganisms, microfossils, and pore fluid and their roles in early diagenesis. Here, Dr. Reece will present results from investigations of early chemical and physical diagenesis using mudstones from the Gulf of Mexico (IODP Expedition 308) and offshore Japan (IODP Expedition 322).

Biography

Dr. Reece is an assistant professor in the College of Geosciences at Texas A&M University and studies the hydromechanical behavior of marine sediments. She was a Schlanger Ocean Drilling Fellowship recipient and participated in two IODP Expeditions (Expeditions 308 and 322).

Mark your calendars for these upcoming MGS Luncheons!

Wednesday, April 17th


Sara Magallon

Talk title: *"Investigation of Rigid Block Motion using a Shake Table and Discrete Element Methods"*

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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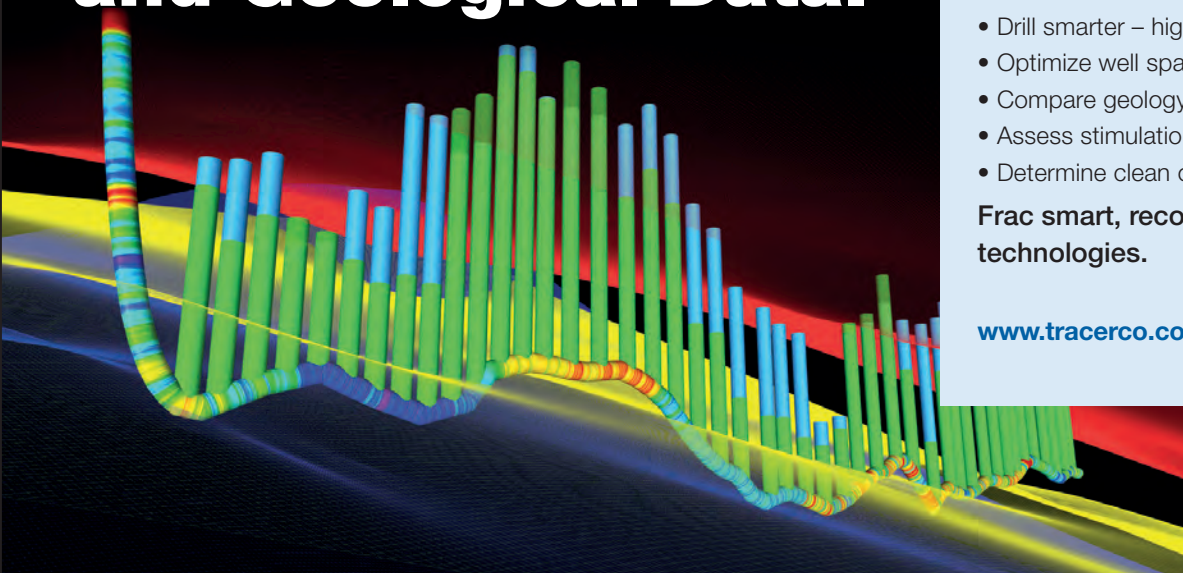
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fourteenth
annual
**Earth Sciences
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Colloquium**

Location:

**Student Union Building, Ballroom A
Montana State University
Bozeman, MT**

When:

**WEDNESDAY, April 17, 2019
8:30AM until 7:30PM**

- Highlighting student research in the Earth sciences
- **Free and open to the public**

-
- **Research presentations**
 - **Pro-Panel Discussion**
 - **Free banquet dinner**

*Full schedule online:
montanaesc.wordpress.com*



**Keynote Lecture
by Dr. Sara Wylie**

Assistant Professor
Sociology & Health Science
Northeastern University

*Author of **Fractivism: Corporate Bodies and Chemical Bonds**.
An ethnographic study of the role science based NGOs played in the emergence of public concerns about the human and environmental health impacts of chemicals used in natural gas extraction, particularly hydraulic fracturing.*



April 17 2019 **6:30 PM**

Keynote address @

For more information, please contact
msu.earthsciences.colloquium@gmail.com

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:

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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

TECHNICAL CO-CHAIRS

Mike Bingle-Davis Stephen Whitaker
mikeb@kirkwoodcompanies.com swhitak2@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/>

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If so, we'd like to see them!

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