

NEWSLETTER

Vol 63 No. 3

Inside this Issue:



P2 / PRESIDENT'S LETTER

Our President is looking forward to warmer weather as snow blankets our state & many more.



P5/LUNCHEON

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



P7 / COLLOQUIUM

Hosted by Montana State University, the Earth Sciences Student Colloquium is scheduled for April 17.



P7 / CALL FOR PAPERS

Check out deadlines and additional information for the upcoming Field Conference of the Tobacco Root Geological Society.



Mar 28 - MGS Luncheon - Julia Reece (see page 5)



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 F y@gmail.com PO Box 844 Billings, MT 59103



President's Letter

Dear Membership,

What a cold and snowy month it has been! I yearn for the warm days of summer, so that I may see all the Montana rocks in their glory. Instead I find myself traveling south, to Palm Springs, CA, only to have this weather follow me! It feels as if there is no escape. The dry desert landscape is covered in a dusting of snow, and the rocks are hiding from me!

All I can do now is look forward to all the events planned for in the Spring. Field trips with students, community event projects to work on, and that wonderful sun with long daylight hours! It can't get here fast enough for me.

Stay warm everyone!

MGS President,

Sarah Friedman

2018-2019 MGS Officers

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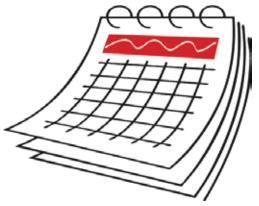
Past President

Felipe Pimentel

It's not too late! Don't forget to...

Renew your MGS Membership!

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



MGS Classifieds

Who's Who of the MGS

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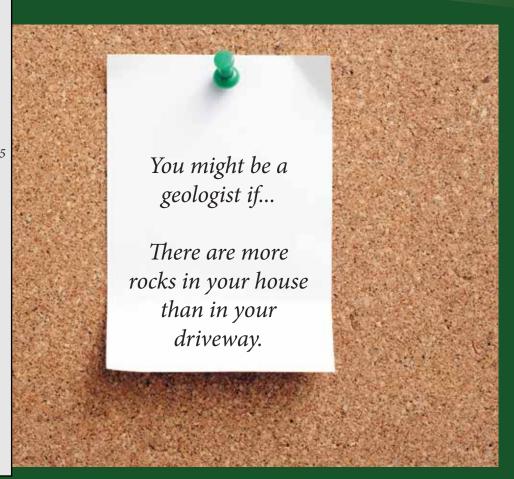
PUBLICATION SALES

Doretta Brush

259-8790

NEWSLETTER EDITOR

Jessica Renstrom 208-2504



Have something geological to sell, give, or find?

Place a free ad in our MGS Classifieds!

Contact the Newsletter Editor for more information.

In the Community

Looking for Judges!

2019 Science Expo March 22-23, 2019



The 2019 Science Expo is a fantastic opportunity for local youth to display their hard work, creative abilities, and scientific interests. This event also provides MGS members with the incredible opportunity to connect with local students and serve the community as judges. They are currently seeking volunteer judges in the industry to help judge student posters.

Past volunteers from MGS have had a wonderful time viewing students' ideas and were impressed by the array and quality of projects.

Judging is on Friday, March 22nd, orientation and dinner (provided for free) starts at 5 PM. Activities usually wrap up by 9 or 10 PM.

If you're interested in volunteering as a judge at this year's Science Expo, please visit:

http://www.msubillings.edu/scienceexpo/judges.htm

When prompted with "I wish to judge..." members should select "special industry awards"



Thank you!

Thanks to your membership

& contributions, we are able to make an impact in students' lives.

The photo to the left showcases notes of gratitude sent to the MGS for a recent donation for a class trip for Billings West High.

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).



406.259.4124

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fourteenth annual

Earth Sciences Student 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.



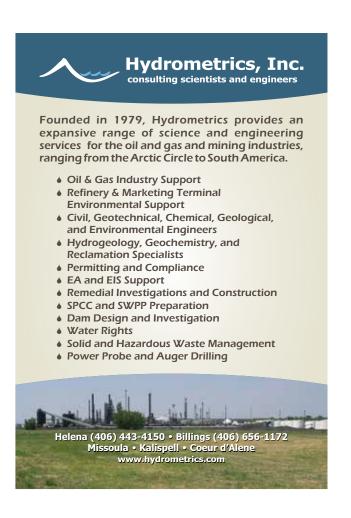
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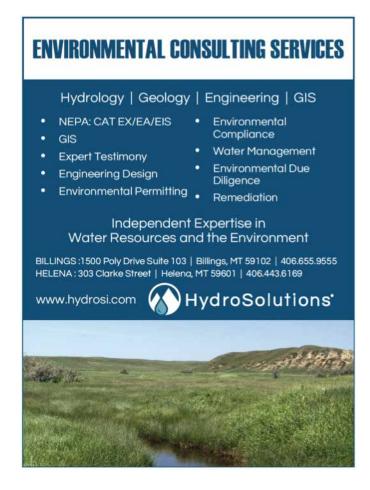
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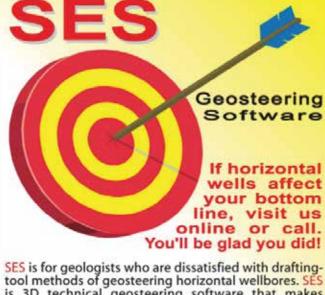
6:30 PM

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

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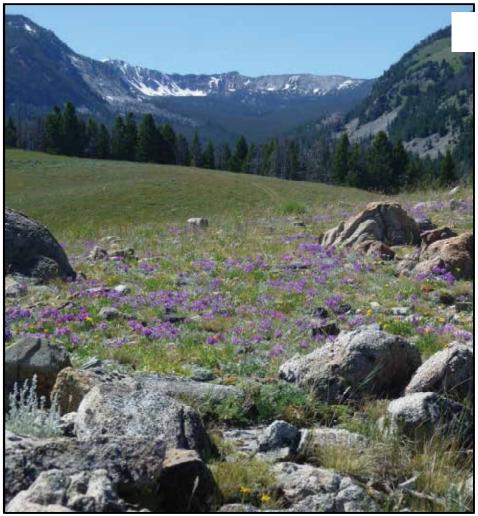
Interested in placing an ad?

Contact Jessica Renstrom at montanageologicalsociety@gmail.com with your ad, or request pricing to create one for your business or event.

2019 Advertising Rates: Full Page - \$100/month Half Page - \$50/month Quarter Page - \$25/month Business Card- \$10/month

All ads must be prepaid.
Send payment to:
MGS, PO Box 844
Billings, MT 59103

TOBACCO ROOT GEOLOGICAL SOCIETY 44th ANNUAL FIELD CONFERENCE DEER LODGE, MONTANA, JULY 25–28, 2019



Flint Creek Range west of Deer Lodge

CALL FOR FIELD TRIP LOGS, PAPERS AND CONFERENCE VOLUNTEERS

Join us for the annual TRGS Field Conference in Deer Lodge this July. We welcome proposals for field trips, posters, and papers about any aspect of the geology surrounding Deer Lodge. Field guides, abstracts, and papers will be published in *Northwest Geology*, the annual publication of TRGS. Please contact Kaleb Scarberry (kscarberry@mtech.edu) by **March 15, 2019** with your proposed titles. Submission guidelines are posted at https://www.trgs.org/northwest-geology. All manuscripts and road logs must be received by **April 15, 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 celliott@mtech.edu (406)496-4143

Petr Yakovlev, logistics pyakovlev@mtech.edu

Want to help with the conference? Contact Sandy Underwood at SandyUnderwood903@hotmail.com

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.

Hotels:

Western Big Sky Inn 210 N Main St, Deer Lodge, MT 59722 (406) 846-2590

Travelodge by Wyndham Deer Lodge Montana 1150 N Main St, Deer Lodge, MT 59722 (406) 545-2858

Budget Inn 809 Main St, Deer Lodge, MT 59722 (406) 846-2810

Campgrounds:

Indian Creek Campground 745 Maverick Ln, Deer Lodge, MT 59722 (406) 846-3848 http://indiancreekcampground.net/

Deer Lodge KOA 330 Park St, Deer Lodge, MT 59722 (406) 846-1629 https://koa.com/campgrounds/deer-lodge/

Bernie & Sharon's Riverfront RV Park Garrison MT, 11 miles north of town http://www.riverfrontryparkmt.com/

Racetrack Campground
Deer Lodge National Forest
12 miles south and west of town
https://www.fs.usda.gov/recarea/bdnf/recarea/?recid=5746

Lost Creek State Park
30 miles south and west of town
http://stateparks.mt.gov/lost-creek/

MONTANA GEOLOGICAL SOCIETY

P.O. Box 844

Billings, MT 59103

Membership Renewal

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Degree #2		
Degree #3		

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PUBLICATION		PRICE	TOTAL	
2006 Montana Oil & Gas Fields CD		\$65.00		
2006 AAPG Datapages - MGS Publications DVD		\$180.00		
2006 AAPG Datapages - MGS Publications DVD (MGS Member price)		\$150.00		
2000 50th Anniversary Symposium		\$20.00		
1999 Thrust Systems of the Helena Salient		\$20.00		
1998 8th Int'l Williston Basin Symposium		\$20.00		
1998 8th Int'l Williston Basin Symposium Core Workshop		\$20.00		
1997 Big Horn Basin Symposium		\$20.00		
1997 MGS-TRGS: The Edge of the Crazies		\$20.00		
1997 AAPG - Rocky Mtn. Section Meeting / Abstract Volume		\$10.00		
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