

December 2018



MONTANA GEOLOGICAL SOCIETY

NEWSLETTER

Vol 63 No. 1



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In the first of her letters as President, Sarah looks forward to the future of the MGS & shares student photography.



P5 / IN THE NEWS

Read up on the latest developments & findings in the geology-focused scientific community.



P4 / OILIES

Another successful Oilies party this year, with photos to prove it! You can still send donations to the MGS by mail or Paypal.



P10 / SCHOLARSHIP

It's that time of year -- time to apply for the MGS Scholarship Awards! Please pass on this application to students you know who could use assistance.

Contact Us:
mtgeo.org / montanageologicalsociety@gmail.com

Find us on 

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

PO Box 844
Billings, MT 59103

President's Letter

Membership,

It is with great excitement that I greet you as the new President of the MGS. I would like to give a little recap about the past year and future goals I have for the MGS in this letter.

A little over a year ago a survey was offered to the membership. This survey asked for input on the long-term direction of the MGS. Members felt that there should be emphasis placed on community outreach, educator support, and social and educational opportunities for our membership. Over the last year, the MGS has supported a field trip for Billings West High School, voted to support an educator workshop out of the Yellowstone Bighorn Research Association field station in Red Lodge, and helped bring in luncheon speakers for our membership.

This year we will continue to make decisions based on the responses from this survey. I, personally, am excited to find more volunteer opportunities. I hope to engage the greater Billings community with the geology that surrounds them everyday.

Switching gears, I would like to share some images from my Mineralogy class's final project. I gave my students some small unknown mineral crystals and asked them to identify the mineral. One of my students took a beautiful picture (Figure 1) of her specular hematite in the Scanning Electron Microscope. The results were very nice images of the platy crystals that formed her specimen.

Wishing you all a Happy Holiday Season,
Sarah Friedman

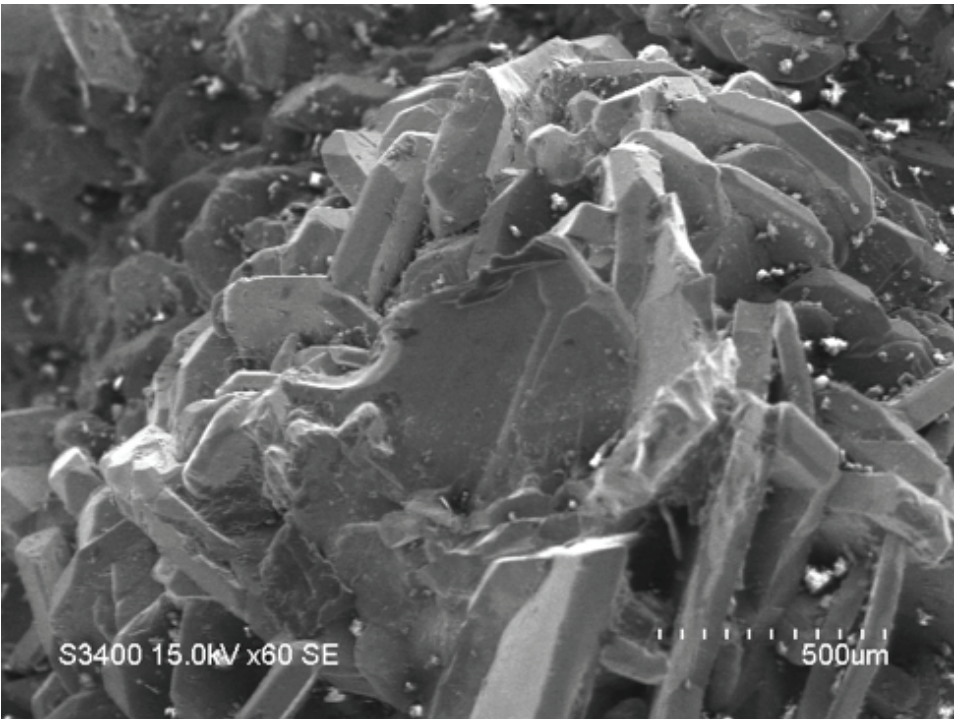


Figure 1. Specular hematite at 60x magnification in Scanning Electron (SE) mode. The SE image allows for the topography of a specimen to be imaged, in this case revealing the platy crystal form that gives specular hematite its glittery luster.

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little bit wacke.*

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or find?*

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Contact the Newsletter Editor for more information.

2018 Oilies

*Thanks to everyone who made
this year's Oilies Party a Success!*



“Machine learning-detected signal predicts time to earthquake”

“Machine-learning research reveals the detection of seismic signals accurately predicting the Cascadia fault's slow slippage, a type of failure observed to precede large earthquakes in other subduction zones.”

To read the article, please visit:

<https://www.sciencedaily.com/releases/2018/12/181218093045.htm>

“Alaska earthquakes offer new insight into improving hazard assessment”

“Earthquake hazard assessment often overlooks intra-slab earthquakes. EarthScope Transportable Array data for the 2016 Iniskin and Nov. 30, 2018 Anchorage earthquakes in Alaska offer new insight into potential causes of heavy shaking from these intra-slab events.”

To read the rest of the article, please visit:

<https://www.sciencedaily.com/releases/2018/12/181211122442.htm>

“Brilliant iron molecule could provide cheaper solar energy”

“For the first time, researchers have succeeded in creating an iron molecule that can function both as a photocatalyst to produce fuel and in solar cells to produce electricity. The results indicate that the iron molecule could replace the more expensive and rarer metals used today.”

To read the article, please visit:

<https://www.sciencedaily.com/releases/2018/11/181130111640.htm>

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Montana Geological Society 2018-2019 Annual Research Scholarships

Purpose

The Montana Geological Society (MGS) is a non-profit organization created in 1949 "...to promote interest and research in geology and allied sciences and their practical application, and to encourage fellowship and cooperation among the members." This annual award supports these goals by providing financial assistance for up to two student dissertation, thesis, or senior projects involving Montana geology and by providing a venue for students to present their work to geology professionals in Montana.

Award

Up to two scholarships, one for \$2,000, and one for \$1,000, may be awarded each year to the most qualified applicants. The successful applicants agree to present their research results at a luncheon meeting of the MGS in Billings, MT, and will receive reimbursement for travel expenses to and from Billings in addition to the scholarship amount.

Basis of Award

All projects will be reviewed by a committee composed of Officers and Board Members of the MGS. The award will be made based on project merit, difficulty, and innovation appropriate for the applicant's educational level. Projects in the early to middle stages of research will receive preferential consideration over those at or near completion. The awards will only be made to fully qualified and deserving applicants, if any, as determined by the committee.

Eligibility

Scholarships are available only to full-time students working toward a BA, BS, MS, or Ph. D degree in an accredited geology or earth science program at a Montana college or university. The research area must be based at least partially in the state of Montana.

Application Packet

Applicants must submit **1.)** a **brief** cover letter that summarizes the applicant's educational background, current student status (B.S., M.S., Ph. D), anticipated graduation date, and research interests. Include name, mailing address, email address, and phone number, **2.)** a **short** (300 words or less), **concise** summary of their approved or proposed project that includes study area, purpose, and applicability of research to Montana geology, along with an advisor's signature, **3.)** a work flow timeline, and **4.)** an estimated itemized annual budget which specifies how the funds from this award will be used. The budget must include the amount and source of all other project funding.

Deadlines

Applications can be emailed (preferred) or mailed. Emailed applications (as attached file(s) in any standard format) must be sent to montanageologicalsociety@gmail.com no later than 11:59 p.m., **January 31st**. Mailed applications must be post marked no later than **February 1st**, and should be addressed to: Montana Geological Society, PO Box 844, Billings, MT 59103. Awards will be announced and payment made in the form of a check to the successful applicant no later than **April 1st**.

Happy Holidays!

from the MGS

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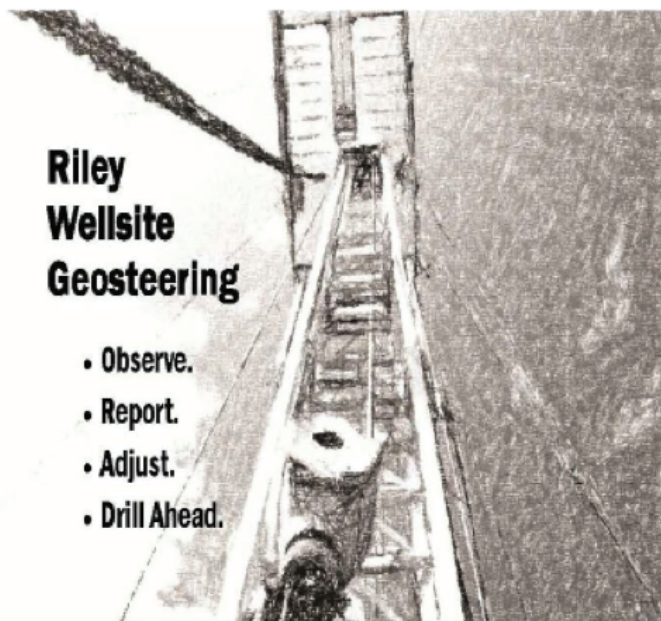
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MONTANA GEOLOGICAL SOCIETY

P.O. Box 844

Billings, MT 59103

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First Name _____ **Middle Initial** _____

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AAPG Member (please circle) YES NO

Education (School, Degree, Year)

Degree #1 _____

Degree #2 _____

Degree #3 _____

MONTANA GEOLOGICAL SOCIETY

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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	
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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	
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1991 6th International Williston Basin Symposium		\$20.00	
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