

AIPG at Michigan Technological University

Fall 2018 – Spring 2019

Annual Report

President: Evelyn Jobe *Evelyn Jobe*

Vice President: Quelyn Bekkering *Quelyn Bekkering*

Secretary: Allan Kambindama *Allan M. Kambindama*

Treasurer: Siena Meekhof *Siena Meekhof*

March 30, 2019

Michigan Technological University

Houghton, MI 49931



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1. Inclusive Dates of the Year Being Reported

The National AIPG Executive Committee chartered the Michigan Technological University Student Chapter on October 18, 2017. Michigan Technological University (MTU) recognized the chapter on November 17, 2017. The MTU AIPG Student Chapter continued activities through the 2018/2019 academic year once classes resumed with a university wide Student Organization event called K-day to recruit new members. Weekly field trips lasted through the fall and indoor activities, such as guest speakers, began in the winter. For this reason, the 2018/2019 annual report will include information from September 2018 to March 2019 with highlighted dates as follows:

September 22, 2018: High Rock Bay Field Trip

October 20, 2018: Copper Falls Field Trip

February 19, 2019: Chapter Sponsor Visit and Guest Presentation

March 9-16, 2019: Spring Break Field Trip to Arkansas

March 28, 2019: New Officer Election and Geology Jeopardy

2. Membership

2.1 Chapter Officers

2018/19 School Year

President	Evelyn Jobe	etjobe@mtu.edu
Vice President	Quelyn Bekkering	qrbekker@mtu.edu
Secretary	Allan Kambindama	amkambin@mtu.edu
Treasurer	Siena Meekhof	smmeekho@mtu.edu

2019/20 School Year

President	Dustin Helmer	drhelmer@mtu.edu
Vice President	Sienna Meekhof	smmeekho@mtu.edu
Secretary	Makala O'Donnell	mmodonne@mtu.edu
Treasurer	Emilie Pray	empray@mtu.edu

2.2 Chapter Sponsor

Dave Adler, CPG -11377

DAdler@Manniksmithgroup.com

2.3 Faculty Sponsor

Dr. Chad Deering

cddeerin@mtu.edu

2.4 Section President

Amy Hoeksema, CPG-08902

Amy.Hoeksema@cmsenergy.com

2.5 Chapter Members

Total number of members: 56

Abi Raetz	Evelyn Jobe	Melanie Zondag
Abigail Friedl	Fritz Jaeger	Martine loevaa
Alexander Dartt	Grace Ojala	Michele Reaume
Allan Kambindama	Hannah Hunt	Natasha Timkovich-Camp
Allyson Hartz	Ian Gannon	Nick Potter
Andrew Cooper	Janayna Manuel	Noah Marino
Anthony Bashur	John Hagopian	Quelyn Bekkering
Arie Ruiter	Kate Thayer	Rebekka Guyon
Aritra Ghosh	Katie Kring	Rush Rodwan
Becca Hamel	Kira Koboski	Sentle Hlajoane
Benjamin Neely	Korrina Young	Sienna Meekhof
Bruce Bilgreen	Kyle Walker	Sophie Mueller
Cosmo Trikes	Leah Meek	Tyler Maiers
Daniel Trekas	Lily Sparks	William Cornillie
denada planaj	Maddie Pugh	Zach Daining
Dorival Silva	Maddy Anderla	Zach Westphal
Dustin Helmer	Maisy Snyder	
Dyani Stewart	Makala O'Donnell	
Elana Barth	Marissa Schorr	
Emilie Pray	Max Douglas	

3. Chapter Activities

September 22, 2018: High Rock Bay Field Trip

High Rock Bay is a well-known and secluded beach along the eastern most shoreline of the Keweenaw Peninsula. The MTU Student Chapter was accompanied by the Chapter Sponsor, David Adler, to collect agate, quartz, and other minerals along the beach as well as observe the exposed Copper Harbor Conglomerate and Lake Shore Traps which are interbedded lava flows in the Copper Harbor Conglomerate.



Figure 1 Students at High Rock Bay



Figure 2 Coastline view of High Rock Bay with students collecting agate

September 20, 2018: Chapter Sponsor Visit

The Chapter Sponsor, David Adler, visited during the MTU Career Fair to mentor students in career-related matters including resumes, interviewing, job markets, and internships. On September 20th, a meeting was called where David Adler shared his presentation on the Michigan Section's "Hard Rock and Heavy Metal" summer field trip in Marquette, Michigan. David Adler also brought back many samples from this trip and donated some of them to the Student Chapter to sell in the Rock and Mineral Show fundraiser.

October 21, 2018: Copper Falls Field Trip

The Student Chapter and Geology Club at MTU the Copper Falls in Eagle River, Michigan to spend the day searching through stamp sands for discarded native copper, calcite, quartz, epidote, prhenite, pumpellyite, datolite and native silver. The area is great for exploring and rich in mining history.



Figure 3 Students at Copper Falls in Eagle Harbor, Michigan

November 8, 2018: Chapter Sponsor Presentation

The Chapter Sponsor, David Adler, visited to give a presentation on the Gordie Howe International Bridge Project which will connect Detroit, Michigan to Windsor, Ontario in Canada. He showed many images of the bridge and hazardous waste material that was being cleaned up around the project area. The presentation gave geological engineering students some insight into career options for the future, especially at Mannik & Smith Group. Inc. The Chapter Sponsor also met with chapter members for assistance with career-related matters including resumes, interviewing, job markets, and internships.

December 7, 2018: Rock and Mineral Show Fundraiser

The Student Chapter and Geology Club at MTU held the annual Rock and Mineral Show where members of both organizations were encouraged to donate any specimens to sell during the event. One student member went as far as making necklaces out of specular hematite and other rocks she had collected. All of the money made from the fundraiser went to funding the Spring Break Field Trip planned for March of 2019.

January 16, 2019: General Meeting

The first meeting of the new year was designated for planning activities for the rest of the academic year. We began planning a more in-depth itinerary for the Spring Break Field Trip, came up with some indoor activities the Student Chapter was interested in, and began getting student members interested in running for an officer position.

February 19, 2019: Chapter Sponsor Visit and Guest Presentation

The Chapter Sponsor, David Adler, visited during the week of the MTU Spring Career Fair to once again help students with resumes and other career related writings. In addition, he also put together a list of employers who were attending the upcoming Career Fair that would be looking for students in the Geological Mining and Engineering Sciences Department (GMES). This list was available during the meeting for students to use as a guide during Career Fair. We also had a guest speaker, Ashley Miller who graduated from the MTU GMES Department in 2016 and is now working for Mannik & Smith Group. Inc. in their Hancock, Michigan office. Her presentation focused on the early 2018 gasoline spill clean up that occurred near the mouth of the Sturgeon River on US 41 just south of Chassell, Michigan. Ashley Miller addressed the emergency response work she did and the the processes it took to clean up the area.

March 9-16, 2019: Spring Break Field Trip

During the week of Spring Break 2019, the Student Chapter teamed up with the Geology Club to take a trip to Hot Springs, Arkansas and the Ozark Mountains. The purpose of the trip was to give students an opportunity to discover geology outside of Michigan. Many students in the club have been enthusiastic about rock and mineral collecting for many years but have primarily never left Michigan for it. Similarly, many of the required geology classes have

outdoor labs that focus on local geology and the field courses offered are also based on local geology. The goal was to broaden students' perspectives on geologic formations and gain experience with different types of landscapes.

Students camped in Hot Springs National Park for three nights where they focused on the geothermal features of the area while enjoying the history and luxury of the bathhouses in historic Hot Springs. Students also took a day to travel to the Crater of Diamonds State Park to hunt for diamonds. After visiting Hot Springs, students also camped in Jasper, Arkansas in the Ozark Mountains for three nights where they hunted for quartz crystals and were given a tour of Blanchard Springs Cavern. The geology in this area, especially karst geology, is very unique compared to the Precambrian geology in the Keweenaw. The last leg of the trip was to Elephant Rocks State Park in Missouri and to the Cahokia Mounds State Historic Site in St. Louis Illinois. Throughout the trip, the eight-person team grew closer together and learned about camping, teamwork, and most importantly geology.



Figure 4 Students panning for diamonds at Crater of the Diamonds State Park, AR.



Figure 5 Students at posing in front of a natural hot spring at Hot Springs National Park, AR.



Figure 5 Students posing inside of Blanchard Springs Cavern, AR.



Figure 6 Students posing at Elephant Rocks State Park, MO.



Figure 7 Students Posing at Cahokia Mounds State Historic Sight, St. Louis, IL

March 28, 2019: New Officer Election and Geology Jeopardy

This meeting was called to officially elect new officers for the 2019-2020 academic year. New student members showed enthusiasm in becoming more involved with and improving the Student Chapter. Afterwards, a game of Geology Jeopardy was played with friendly competition and chocolate prizes.

4. Member Activities

Katie Kring – Geological Engineering Graduate Student and Founding Secretary of the MTU AIPG Student Chapter

“Michigan Tech awarded me a Summer Undergraduate Research Fellowship (SURF) in 2018. I completed the research over the summer, wrote my results in the fall, and during Spring Break I presented my research to the Michigan Basin Geological Society. After graduating with my bachelor’s degree in Geological Engineering in December, I began pursuing a master’s degree at MTU. As a graduate student I am a teaching assistant for GE 2000: Understanding the Earth. This summer I am looking forward to a geomechanical engineering internship with Freeport McMoRan at Chino Mine in New Mexico.”

Sienna Meekhof – 2018/2019 AIPG Student Chapter Treasurer

“From May to October of 2018, I had the amazing experience of working for the Adventure Mining Company in Mass City, Michigan. I was a tour guide for five to six months, which required we know the geology of the Keweenaw Peninsula as well as how this geology affected the history of the State of Michigan economically and culturally. The Copper Country is gorgeous to hike around in, and perfect for mineral collecting-especially if you are looking for copper nuggets that form into their perfect, native, cubic structures. Several guests would come from all over the country to learn about the general mining process of copper in the Keweenaw and adventure into the depths of the mine by repelling safely down one of the old air shafts. I even got the honor of identifying minerals for guests and showing them the start of stalactites that will eventually form long after we’re gone. Not only was I able to help tourists grasp a better understanding for how our peninsula was able to form in such a way that would create a historic boom that led to today’s mining ghost towns, but I was able to take our Geology and AIPG Student Chapter at MTU to explore the wonderful world many miners built years ago to exploit a natural resource many would find hard to believe would actually form in the magma flows we once had. The knowledge I gained from this experience was equal if not greater than what I have learned in the classroom and will be an experience I will remember for a lifetime.”

Evelyn Jobe – 2018/2019 AIPG Student Chapter President

“During August of 2018 I travelled to Guatemala to conduct research on Volcán de Fuego with faculty from MTU, University of South Florida, and the local volcanologists. Our research purposes were to sample pyroclastic flow material from the June 3rd, 2018 eruption and assess the grain size of each sample compared to where it was found to then map the areas of lahar threats for the surrounding communities. I was challenged both mentally and physically and learned so much in a very short time. I was able to learn a lot about the local culture and broaden my view of the world. It was an amazing experience with a lot of hard work that paid off and brought me so many new memories.”

Quelyn Bekkering – 2018/2019 AIPG Student Chapter Vice President

“In August 2018 and March 2019, I had the opportunity to travel to Guatemala to work on the recent Fuego eruption that occurred on June 3, 2018. The August trip mainly focused on sampling matrix and some clasts from block and ash flow, as well as lahar deposits. This recent March trip focused on sampling larger blocks in order to conduct thin section analysis and bulk rock composition. My main task was to measure deposit thickness so that our team would have “ground truth” to correlate with newly generated DEMs. During both trips I got to work with many new people from around the world, and was fortunate to experience a side of Guatemala that most people will never see. I learned a lot about group collaborations and volcano monitoring, and made some great new friends and memories!”

5. Secretary’s Report – Allan Kambindama, MTU AIPG Student Chapter Secretary for 2018/2019

As Secretary of the AIPG Student Chapter at Michigan Tech, I was responsible for keeping track of all relevant chapter-related information. I took and compiled meeting minutes to document the chapter meetings and activities. Using the meeting minutes and emails exchanged with chapter members, I then developed this annual report. I also reached out to the chapter members via email to collect summary descriptions of activities that members participated in individually throughout the academic year. After developing this annual report, it was reviewed and approved by the Student Chapter Executive Committee, as noted in Section 7 of this report.

6. Treasurer's Report – Sienna Meekhof, MTU AIPG Student Chapter Treasurer for 2018/2019

In June, 2018 the AIPG Michigan section provided the MTU Student Chapter with \$1000, allowing the chapter to host a wide variety of fun, educational events, and an AIPG bank account was officially set up for this chapter. Our Chapter Sponsor donated \$250 to help fund the Spring Break Field Trip which was deposited February 2, 2019. In March, eight members of the MTU Student Chapter went on the Spring Break Field Trip to Hot Springs and Jasper, Arkansas. Members were asked to pay \$110, largely to cover food expenses, in order to participate in this unique experience. The rest of the trip expenses—lodging, vehicles, gas, and activity fees—required all the funds left from the Michigan Section's funding as well as what was produced from our fundraising events. The Rock and Mineral Show fundraiser generated \$163 and the t-shirt sales generated about \$72 of profit after breaking even. The Student Chapter does not enforce membership fees; hence fundraising and scholarships will be necessary to support the Student Chapter for this summer and following academic year.

7. Attest the report has been approved by the Chapter Executive Committee

The Chapter Executive Committee approves this report as indicated by their signatures on the cover page.