

University of Utah SME Chapter Report

2019-2020

By

Chapter President

Chase Carroll



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2020-2021 Chapter Officers

Hunter Fowles — SME Chapter President

Hunter (age 24) is a sophomore in the Mining Engineering department. He transferred from Snow College in Ephraim, UT, last year. He is from Delta, UT, and he grew up working on and driving heavy machinery at his family's farm. His interests include waterskiing, powerlifting, hunting, fishing, and just about anything outdoors. He anticipates graduating in Spring 2022.



Zach Brown - SME Chapter Vice President

Zach is an upcoming Junior in the Mining Engineering department. Zach (age 20) grew up across the globe from Arizona to Lima, Peru. He is a 4th generation miner, continuing his family legacy. His interests include snowboarding, backcountry skiing, fishing, and camping. He anticipates graduating in Spring 2022.



Rebecca Ray - SME Chapter Treasurer

Rebecca is a junior in the Mining Engineering department. She came to the University of Utah in 2016. She is currently the President of the University of Utah Mine Rescue team. Rebecca grew up in Springville, UT, and was always looking for abandoned mine shafts and drifts. She enjoys swimming, hiking, rock climbing, camping, and mine rescue. Rebecca is expecting to graduate in Spring 2022.



Annika Peterson - SME Chapter Secretary

Annika is an upcoming junior in the Mining Engineering program at the University of Utah. She enjoys spending her time outdoors and with her family. She is excited to be involved in the SME Utah Student Chapter and continue her education through her internship with AMES Construction this summer.



Emily Ballard - SME Chapter Activities Coordinator

Emily (age 19) just finished her freshman year in the Mining Engineering department and is expected to graduate in Spring 2023. She grew up in Ogden, UT, and loves the mountains. Emily learned to ski at the age of three and spent her high school years working as a children's ski instructor at Snowbasin Resort. She is excited to see where life takes her in the world of mining.



Membership

2019-2020 Executive Committee

The chapter officers for the 2019 and 2020 school year were:

Chase Carroll — SME Chapter President

Stephen Hall — SME Chapter Vice President

Jaron Mcdougal— SME Chapter Treasurer

Rebecca Ray — SME Chapter Secretary

Griffin Manninen — SME Chapter activities Coordinator

Mikhail Kazimirov — SME Mining Engineering Rep.

The chapter's faculty sponsor for the 2019-2020 school year was Dr. Mike Nelson. The chapter's SME Young Leader Sponsor was Ph.D. student Aaron Young. The chapter did not receive support or contact from the Utah Section for the 2019-2020 year.

2019-2020 Chapter Membership

Robert Weyher

Jack Petersen

Philip Holdsworth

Gates Campbell

Benjamin Bonney

Matthew Savas

Bilguunkhavar Erdenekhuyag

Stephen Hall

Chase Carroll

Marc Freddy Sime

Brady Walton

Rebecca Ray

Trey Campbell

Elaheh Talebi Esfandarani

Shantae Lee

Hayley Wallin

Lucas Johnson

Travis Brammer

Khalid Alabri

Hiago Antunes Amador De Oliveira

Spencer Gordon

Mikhail Kazimirov

Ivan Draskovich

Joseph Rhoades

Belinda kyeremeh

Emily Ballard

Zachary Brown

Dan Christensen

Chandler Millar

Hunter Fowles

Annika Peterson

William Riley

Paige Estep

Jared Carson

Harrison Trent

Sebastian Escobedo

Kelley Anne Severinsen

Abdulrahman Alyousef

Alberto Puga Mireles

Richard Ahadjie

Joao Marques

Narmandakh Sarantsatsral

Hussein Alzakwani

Chad Huish

Travis Tamowski

2019-2020 Chapter Activities

Park City Miner's Day

Each year the Rotary Club and the Utah Section of SME put on a Miner's Day event in Park City, UT, to celebrate the history of the area. This year a hand full of students met up at the event. They enjoyed the parade in the morning and helped with the drilling and mucking competition in the afternoon. Students volunteered to be judges and timers for the event. Miners Day is an annual event that the University of Utah Chapter looks forward to helping with each year.



Skeet Shoot Fundraiser

In the past, the chapter's activities have been limited due to funding. This year the University of Utah SME Student Chapter set out to try a new way of raising money. The executive committee realized that those who work in the Utah mining industry would likely enjoy a clay shoot. The goal was to clear \$10,000. We scheduled the clay shoot for September 20th and watched as the Utah mining industry jumped at the opportunity to participate and support in any way possible. I (Chase Carroll) didn't sleep for many nights because I was so stressed about getting enough teams together to make it a worthwhile event. It was also very stressful because we didn't pull the trigger on planning the event until the end of July, which left us a month and a half to get the word out and organize the shoot. Many companies became event sponsors. Ames Construction sponsored the clays, Granite Construction the lunch, Utah American Energy the drinks/snacks, and FLSmidth sponsored the clubhouse. We also had other individuals give very generous donations. In total, we had 60 industry professionals, and 15 students participate. The University of Utah Student Chapter was able to exceed its goal and raised over \$10,500 thanks to the local mining industry





Late Night Study Groups

There were too many late-night study groups to count this year. We had a large group of seniors, and we all got through our last year with a lot of Chinese food and energy drinks.



The Honerine Mine Exploration

The U of U SME Chapter had the privilege of driving an hour out of Salt Lake City and exploring an old mine called the Honerine. Our professor Dr. Nelson gave us a history lesson on the mine and the district before we went and explored the old audits. The U of U Chapter has received the rights to use this old mine as a student laboratory for underground surveying and potentially a practical mine class. Exploring this mine gave some of the freshmen students a lot of excitement to continue pursuing a degree in mineral extraction.



MEC Mineral Kits

This year our chapter volunteered to help the MEC with their booth at the National Science Teachers of America (NSTA) annual meeting in Salt Lake City. Students helped make a thousand mineral kit boxes that were given to science teachers from around America. Many were also given to parents who home school their children and had no other source for information about rocks and minerals. We helped collect all the minerals from local mining operations and then used the motivating power of free pizza to get members of our chapter to help us fold all the boxes. With a little engineering magic, we made quick work of folding one thousand boxes. This year's conference was a huge success, and all the kits were handed out by the second day of the conference.

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SME NE Minerals Education Coalition

MEC engages more than 730 teachers at NSTA area conference

by Rebecca Smith and Tanya Kries, MEC Coordinators

Teachers from as far away as the Cayman Islands came to Salt Lake City, UT to attend the 2019 National Science Teaching Association (NSTA) Area Conference Oct. 29-30. Among the booths of science-teaching materials, curriculum-sales tables and makerspace demonstrations, stood a long line of teachers eager to get their free rock and mineral kits from the Minerals Education Coalition (MEC) booth. In the end, all 1,000 boxes that were diligently assembled by students from the University of Utah Mining Engineering Department were claimed by more than 730 teachers.

The kits were made possible by the donation of materials and by the volunteers who gathered, hauled and collected the buckets of inch-sized samples, so that teachers could fill each designated cell in the box with the appropriate specimen. Each teacher also received a key that identified the samples, described how the materials are mined, how they are used and how to incorporate the samples into a lesson in the classroom. The Salt Lake City NSTA booth provided basalt, gold ore, copper sulfide, granite, gypsum, quartzite, salt (halite), phosphate, bituminous coal and a polymetallic sulfide.

As the teachers worked their way down the line, they had the opportunity to ask questions of the volunteers. Aaron Young, SME member, Ph.D. Fellowship Program participant and one of the volunteers, explained that by volunteering in this capacity he recognized the value of the work of MEC: "I think a lot of the mining industry has a hard time understanding why doing MEC outreach is so important. For me, the value comes in seeing the expressions on the faces of the people I talk to who, until talking to me, were totally unaware of how much society needs mining."

Also included in the teachers' experience at the booth was an opportunity to learn about MEC's online competition for students in grades K-12, Mine Mining Near Me. They learned about the resources available to them on www.mineralseducationcoalition.org that are not only free, but are aligned with all state and national standards. In all, the booth provided a wealth of information that can enrich earth science education for hundreds of teachers and for thousands of students.

Teachers line up to get mineral samples.



www.miningengineeringmagazine.com



SME members R. Wendi Gonsky and Emily Rose answer teachers' questions at the MEC booth.

From a volunteer's perspective

Ahni Samal reports — "It was a pleasure working with Tanya Kries, the MEC Outreach Coordinator, and helping the MEC at the NSTA Salt Lake City area conference. I'm looking forward to another opportunity next year, and I learned a few things today."

- MEC is playing a huge role in providing support and resources to teachers at this conference.
- Science teachers are thrilled to make their own rock box, which needs a great deal of support from volunteers, like myself.
- The science teachers have a lot of questions. We can try to answer some of their questions. It is truly fun chatting with them.
- SME members can do much more in providing support to the MEC. We all can contribute to the greater cause of educating the next generation of scientists and engineers.

Thanks to volunteers

MEC would like to thank the following volunteers who helped in the planning, storage, hauling, box making, set-up, booth hours, teardown and shipping to make this possible: Wendi Gonsky, Aaron Young, Ahni Samal, Paula Elam, Shawn George, Jamie Dunton, Dean Grenier, Kathleen Tate, Rebecca Swale, Corbin Jensen, Steve Trappes, Erin Rose, Laura Meier, Chase Carroll and the University of Utah Mining Engineering Department.

A big thank you also to the following companies for their generous donations: Barr Engineering, who provided all boxes, printing, stickers and mineral guides, FL Smith, Broomco Utah Operation, Nevada Gold Mines, Richmond Minerals and USG Corp.

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December 2019

Trapper Coal Mine

This year our previous chapter president, Jarom Gleed, organized a field trip to the Trapper Coal mine in Colorado. We rented two vans and made the five-hour drive to Craig, CO. We stayed in a motel, and the next morning we had an incredible tour of the mine. This was the first time at an open-pit dragline coal operation for all our students.

Trapper was very accommodating and let us climb up on one of the draglines. We had a large portion of our group that were freshman students, and I think that this trip was instrumental in retaining those students.



Halloween Party

This year the Chapter had a costume party and caramel apple bar.



Morton Salt

We had the privilege to visit a unique mining operation in Utah. We visited Morton Salt in Grantsville, UT. We were able to see where they pump the saltwater from the Salt Lake, concentrate it in evaporation ponds, and then harvest the salt. They also took us through the washing and packing plant. This was a great tour with a small group of students. They fed us lunch and as poor, hungry college students that might have been the best part. One student fit in so well with the staff they offered him an internship on the spot.





Komatsu Equipment Company

The Komatsu Equipment Company invited a group of our senior members out for a tour of their rebuild shop in Salt Lake City. We had a hands-on tour of how Komatsu operates its business in the western united states. They loaded us up with great Komatsu swag, and after the tour, they took us to a local bar for dinner and drinks. This was a great networking experience for the seniors of our chapter.



Dyno Nobel

Dyno Nobel gave us a tour of their testing facility in Saratoga Springs, UT. We took a big group of students, and they split us up into three groups. We toured the emulsion lab, the testing range, and we got an overview of the operations that Dyno Nobel has around the world. At this facility, almost everyone there has a Ph.D. in Chemical Engineering. They did an excellent job of getting the science to a mining engineer's level, and we had an enjoyable time. The highlight of the tour was the blasting bunker. They even let a few of the students set off the explosives. This was another amazing tour by our local mining vendors.



SME Annual Conference and Expo

The SME Conference was the pinnacle of all our activities. We were able to send over 30 students to the conference. These students were fully funded because of our incredible efforts with the fundraising. Phoenix was a great venue, the weather was perfect, and we enjoyed swimming and all the great restaurants. The U of U Chapter organized a bar and game night at the Lucky Strike bowling and bar. We had a huge turnout, and almost every school was present for drinks and fun. All our student members came home from the conference with a long list of contacts, memories, and lifelong friends.



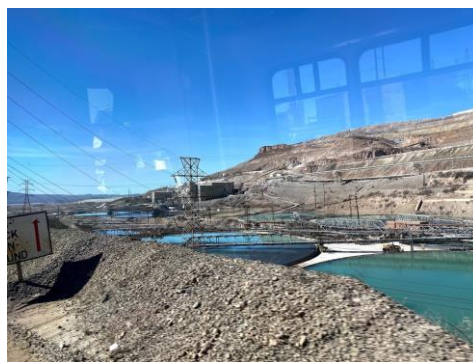
Resolution Copper

After the conference, we rented a couple of vans and headed to the Copper Triangle. Our first stop was Resolution Copper. Zach Brown was an intern for Cementation last year, and he was able to get a personal tour of the surface facilities.



Morenci Copper

After we visited Resolution, we headed to Morenci. We spent the night in the local hotel and played a few rounds of bowling at the brand new bowling lanes. We had a personal tour of the operations from drilling and blasting all the way to electroplating copper anodes. This is a once in a lifetime experience that will remain with our students forever.



Treasurer's Report – Jaron Mcdougal

The 2019-2020 school year was very productive for the University of Utah SME Student Chapter. We have improved our year-end balance significantly from \$2,306.36 last year to \$9,766.18. Our efforts proved very beneficial to our members, and we are leaving next year's chapter with the ability to double what we did last year for fundraising. Our most significant fundraising event was a skeet shooting event with representatives from the mining industry and support companies in attendance. The chapter successfully raised over \$10,500, and students were given great opportunities for networking. All students that volunteered at the skeet shoot were rewarded by having their registration fee to the SME conference in Arizona covered by the chapter. Another significant source of funds was from the University of Utah Student Groups Association. We applied early in the year and received \$7,700 to pay for travel to the SME conference. The only detail is we had to pay for everything out of pocket, and we could only be reimbursed after the event. We did not know this when we booked the flights and hotel and put it all on Chase Carroll's credit card, and he had to carry the balance for over four months because COVID halted all university spending. We recommend that next year's SME Executive Committee be more careful when using university funds, so no one has to carry such a large amount for that long.

As treasurer, I got the support of our president to start a student food and snack station. This was established in the SME lounge. We identified the need for easier access to food and snacks. In our building, we don't have vending machines or a store, and the next closest building with food is a fifteen-minute walk. We started with \$30 and put some margin on the products so we could continue to buy more and better things. It was an instant success, and within a few weeks, we had a very healthy supply of food and snacks. Each time we ran low on supplies, Chase Carroll, and I would head to Costco and load up with everything from energy drinks to frozen burritos, typical college food. We even bought a few fridges and a coffee maker with the profits. The week after the SME Conference, Utah had a 5.7 earthquake that damaged our building, and we were not allowed back inside. A week after that, we went on spring break, and when we were scheduled to come back from spring break, the campus had been closed due to COVID 19. Our building is still closed, and all our money and food remains in the student lounge. We were on track to have a \$1000 dollar turn around by the end of the year. We started with very little and have grown it into something that all the students enjoy with all proceeds going back to the students. We have excluded these funds from our financial

statement because we are unsure of the actual amount, and we will not have access to our building until the fall semester. The student snack area has been one of the most successful things to help keep student morale high, improve student production, and comradery in the chapter.

Overall the chapter brought in \$22,494.70 and spent \$(15,034.88). We are leaving the chapter in excellent financial standing, and we have set up an event that will help the chapters' financials to remain strong year over year.

U of U SME 2019-2020 Financial Statement

| | 2019 SME | August | September | October | November | December |
|--------------|-------------|-------------|--------------|---------------|--------------|--------------|
| Revenue | | \$ 20.00 | \$ 12,375.00 | \$ 100.00 | \$ 520.00 | \$ - |
| Expenditures | | \$ (307.25) | \$ (682.95) | \$ (1,287.27) | \$ (202.92) | \$ (37.14) |
| Month End | \$ 2,306.36 | \$ 2,019.11 | \$ 13,711.16 | \$ 12,523.89 | \$ 12,840.97 | \$ 12,803.83 |

| | 2020 SME | January | February | March | April | May |
|--------------|--------------|--------------|----------------|-------------|-------------|-------------|
| Revenue | | \$ 195.00 | \$ 7,710.70 | \$ - | \$ - | \$ 1,574.00 |
| Expenditures | | \$ - | \$ (12,517.35) | \$ - | \$ - | \$ - |
| Month End | \$ 12,803.83 | \$ 12,998.83 | \$ 8,192.18 | \$ 8,192.18 | \$ 8,192.18 | \$ 9,766.18 |

Secretary's Report – Rebecca Ray

As secretary, I was responsible for taking meeting notes, sending out meeting reminders, keeping track of boot points, sending out and creating sign up sheets, and any other task or assignment given by our president, Chase Carroll.

The SME student chapter president met once a week to discuss fundraising, field trips, volunteering opportunities, service opportunities, parties, internships, how funding is divided and spent, and how to get more students involved.

Vice President's Report – Stephen Hall

The SME student body accomplished many goals this year. Fall 2019 semester started with planning and carrying out the first annual SME Skeet Shoot. This event allowed students to interact with professionals from the industry and learn about internship and job opportunities. This fundraiser raised over \$10,500, making it possible for many of our students to attend the SME annual conference at the lowest cost to them in the history of our chapter. After the fundraiser, the SME student body worked on planning several trips to various mines in the Salt Lake area. Each field trip allowed students to see different types of mines and mining operations. Ultimately, these field trips' goal was to expose students to real-world applications of what they are learning in the classroom. As the SME annual conference came closer, the SME student body divided and conquered tasks. These tasks included reserving hotel rooms, planning for food, and helping students schedule flights. Chase Carroll, President of SME, did most of this work. After the SME annual conference, a new board was elected 2020/2021 school year.

As SME Vice President, my primary responsibility was to support my fellow board members with their assigned duties and projects. I motivated Chase Carroll to move forward with the skeet shoot. Chase was the main force behind the fundraiser. We hope that the SME Skeet Shoot will become an annual fundraiser to raise money for students to go to the SME Annual Conference. Although the COVID-19 pandemic resulted in an abrupt end to our regular routine, I learned a lot about myself during my time as vice president. I strengthened my skills in how to communicate and work as a team effectively.

Letter From Young Leader Sponsor



Aaron Young
PhD Graduate Fellow
Mining Engineering
The University of Utah
Aaron.S.Young@utah.edu

Dear SME Student Chapter Annual Report Review Committee,

Five years ago, I submitted a report on how I believed that the Utah student chapter under my leadership was the best ever. Today I know I was wrong. Under the amazing leadership of Chase Carroll, the student chapter is stronger than it ever was under my leadership. It has improved by an order of magnitude. The Skeet Shoot fundraiser was such a phenomenal success that I am confident it will become a tradition.

The success of the Mine Rescue team would not have happened without the support of the student chapter and the incredible efforts of these college students. The Mine Rescue Team went from never having fielded a team to winning the intercollegiate competition at the SME annual meeting. They went from asking the industry for hand-me-downs to now supporting and helping other teams with equipment.

If there is any question as to whether this group of students did enough to qualify for chapter of the year, simply ask Tanya Kriss about how the NSTA in SLC went as a result of the student's efforts. Look at the percentages of Utah students that attended the annual meeting in Phoenix, my guess is that the percentage turnout for Utah was among the highest its ever been. Look at how little support or guidance these students receive from their local chapter.

Perhaps the greatest indicator that our students deserve the chapter of the year award is that on the first night of the Annual meeting, when there was no other corporately sponsored activity for students to attend. All the other student chapter leaders took their queue from none other than Chase Carroll for where to send their students to have a completely organic night of intercollegiate comradery.

I am sure every mining department has been affected by COVID, but I doubt any other mining department have had their campus buildings damaged by an earthquake to the point that they are no longer fit for entry. This year's chapter has shown they will sustain themselves come whatever may.

Sincerely,

Aaron Young