Acknowledgements

Burkhart Mining Society would like to acknowledge its donors from the 2018-2019 academic year. Their generous and continuing support enables Burkhart to provide its members with outstanding opportunities to attend industry and social events, network, and gain out-of-classroom experience.

2018-2019 Sponsors:

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Department of Mining and Minerals Engineering at Virginia Tech
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History

In the spring of 1885, under its previous name of Virginia Agricultural and Mechanical College, Virginia Tech awarded one student with the degree of Mining Engineering. Until this point, the university had only awarded the “Bachelor of Arts” degrees, making this Mining Engineering degree the first engineering degree awarded at this prestigious university. In 1907, the university appointed Dr. Otto Cornelius Burkhart as the head of the newly formed Mining Engineering Department. In 1922, under the advisory of Dr. Burkhart, the Mineral Club of Virginia Polytechnic Institute was formed.

Over 90 years later, and under a different name, the Burkhart Mining Society is the Student Chapter of the Society of Mining, Metallurgy, and Exploration (SME). With over 130 members, Burkhart is one of the oldest student organizations at Virginia Tech and one of the largest mining organizations in the nation.
Mission Statement

The mission of Burkhart Mining Society is to enhance the overall educational experience of our mining engineering students while fulfilling the Virginia Tech motto, “Ut Prosim” or “That I May Serve”. This is achieved by attending national and regional mining conferences, attending on-site tours of mining operations in different sectors of the mining industry, attending presentations by industry professionals, and participating in community service events. Burkhart members are extremely active in Virginia Tech’s mining-related student organizations. These mining-related organizations include: the International Society of Explosives Engineers (ISEE), the SME/NSSGA Student Design Competition Team, the Virginia Tech International Intercollegiate Mining Competition Team, the Virginia Tech Mine Rescue Team, and Mu Nu Gamma Mining Honors Fraternity. Burkhart strives to create a young, well-rounded mining engineer ready for the working world by increasing each member’s knowledge of the industry, ability to build professional relationships, and development of leadership skills.

Burkhart Officers from left to right: Hedvig Unander-Scharin (Treasurer), Cole Thomas (President), Alyssa Gedse (Secretary), Robert Yates (Vice President)
Student Organizations and Teams

The following chart displays the student organizations and teams that Burkhart Mining Society members actively participate in. Burkhart also oversees and contributes to each of the following organizations.

![Diagram](image)
**List of Officers and Representatives**

The following tables display the officers and representative for each respective organization listed in the previous structure section.

**Burkhart Mining Society Executives**

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Cole Thomas</td>
</tr>
<tr>
<td>Vice President</td>
<td>Robert Yates</td>
</tr>
<tr>
<td>Treasurer</td>
<td>Hedvig Unander-Scharin</td>
</tr>
<tr>
<td>Secretary</td>
<td>Alyssa Gedse</td>
</tr>
</tbody>
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**Burkhart Mining Society Committee Chairs**

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camping Chair</td>
<td>Allie Smith</td>
</tr>
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**Beverly Watford Society Executives**

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Leah Frost</td>
</tr>
<tr>
<td>Vice President</td>
<td>Zoe Scopa</td>
</tr>
<tr>
<td>Secretary</td>
<td>Sarah Gorski</td>
</tr>
<tr>
<td>Treasurer</td>
<td>Hannah McNeal</td>
</tr>
</tbody>
</table>

**Mine Rescue Team Executives**

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Robert Yates</td>
</tr>
<tr>
<td>Vice President</td>
<td>Jack Caden</td>
</tr>
<tr>
<td>Treasurer</td>
<td>Matias Marquez</td>
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**NSSGA Executives**

<table>
<thead>
<tr>
<th>Position</th>
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</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Bobby McDonnell</td>
</tr>
<tr>
<td>Vice President</td>
<td>Luke Demusz</td>
</tr>
<tr>
<td>Treasurer</td>
<td>Chris DeMaio</td>
</tr>
<tr>
<td>Secretary</td>
<td>Hannah McNeal</td>
</tr>
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</table>
## Mucking Team Executives

<table>
<thead>
<tr>
<th>Position</th>
<th>Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Luke Farinholt</td>
</tr>
<tr>
<td>Vice President</td>
<td>Brandon Haraldsen</td>
</tr>
</tbody>
</table>

## Competition Design Team

<table>
<thead>
<tr>
<th>Position</th>
<th>Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Members</td>
<td>Chris DeMaio, Leah Frost, Eric Hakes, Thomas Huddleston, Hannah McNeal, Alex Pfreundschuh</td>
</tr>
</tbody>
</table>
President’s Report

My name is Cole Thomas and it is my pleasure to have served as the President of the Burkhart Mining Society during the 2018-2019 academic school year. This year proved to be one of the most challenging years of my college career, but it was also one of the most rewarding. The Burkhart Mining Society had 40 student members this year, and it was a privilege getting to know each of the students better through this leadership position. I was consistently amazed of how brilliant and knowledgeable the classmates of mine are as well as their willingness and desire to learn. I would like to thank Robert Yates, Hedvig Unander-Scharin, and Alyssa Gedse for leading this organization with me, because without their time and effort this year would not have been such a success.

This year Burkhart worked very diligently to raise money from sponsors and increase our donations from previous years. This proved to be more difficult than in recent years but after some hard work and fundraising through support letters and reaching out to companies, Burkhart was able to secure enough money to send students to the annual SME conference in Denver, CO, and AGG1 in Indianapolis, IN. Our student section of ISEE sent students to the annual conference in Nashville, TN, as well as local mines in the area, and the Bevlee Watford Society was able to provide a field trip to the Hokie Stone Quarry located here in Blacksburg. Working with the student leaders of ISEE and the Bevlee Watford Society was very beneficial to my growth in communication between organizations. In addition to all these trips, Burkhart had 6 members who competed on a design team in the SME/NSSGA Student Mine Design Competition. VT Mining Consultants finished in second place in the competition, falling just 0.2 points behind the winning team. We are extremely proud of how well they did in Denver.

Burkhart believes that it is crucial for our students to have many opportunities to not only connect with industry professionals, but also with one another. As future mining engineers, our classmates will ultimately become our coworkers out in the industry, so it is best to start building strong relationships now. In the fall, we had our annual camping trip as well as tailgates for a few of the home football games. In the spring we debuted Mining Bowling night and enjoyed a late spring camping trip in the Jefferson National Forest. Sometimes as students or even adults, you need to take a break and enjoy the little things in life, and Burkhart’s goal was to help organize meetups and activities. It is truly like a family to me. It was a pleasure getting to fundraise and organize all of these conferences and events during my role as president, and I look forward to staying in contact with the president next year to assist her with any questions that she may have.
Cole Thomas
President
Vice President’s Report

The Vice President’s primary role in the Burkhart Mining Society for the 2017-2018 year was primarily to keep track of and organize volunteer hours. These service hours were tallied throughout the semester. When the time for the SME Annual Conference came around the members with the most service hours got first priority to go on the trip.

Members of Burkhart did 490 service hours in total during the 2018-2019 semesters. These service hours including manning the SME Booth, attending Hokie Preview, attending the mining open houses, attending Hokie Focus, the annual golf tournament, attending Beverly Watford Society recruitment events, helping with the freshman information sessions, attending Big Event, being a designated driver and helping with the company information sessions.

The Burkhart Mining Society also help to organize volunteers at company information sessions. When a company is coming to do interviews they often hold an information session so that students will be more aware of what the company does and what they are looking for. These information sessions have food and drinks during the presentation. The volunteer’s job is to track down the delivery boy for the food, pick up some soda/water, and get paper plates, napkins and forks.

If nobody volunteers for the information session it is the Vice President’s job to volunteer for it. The 2018-2019 semester we had good attendance at the information sessions and plenty of volunteers.

During the 2018-2019 semester working with people and help organizing the events was a pleasure. I learned a lot of people skills and management skills. It was a great learning experience for me.
Robert Yates
Vice President
Treasurer’s Report

This year, the Burkhart Mining Society has continued to grow and offer support to its members. The generous support of our benefactors provided us with $5,300 throughout the year. This money went towards tailgates, new merchandise, and the annual SME conference in Denver, Colorado. We were able to send 24 undergraduate students, including the six members of our student design team.

Other sources of income for Burkhart came from membership dues, merchandise sales, SME conference fees, and the annual spring golf tournament. Membership dues were $60, of which $32 went to SME for national membership. The large surplus of merchandise from previous years required us to only reorder polos in the fall. We held one on-campus merchandise sale. Additionally, we had several alumni orders from the fall career fair and through email correspondence. New polos were ordered in the spring to fulfill the demand due to the SME trip. To better facilitate the online sale of merchandise, we have planned to build a website which will be monitored by a merchandise chair. Next year’s board members have already started working on this website so it will hopefully be fully operational by the fall.

In order to send 24 students to the annual conference, each member was required to pay $250 to offset the cost of travel. Total expenses for the annual conference reached $15,200. This included airfare, hotel rooms, a shuttle to the hotel, and conference registrations. The department reimbursed us the cost of the design team’s airfare, hotel, and registration fees.

Our last fundraiser was the annual spring golf tournament. While we had a few players signed up, the event ended up being rained out. However, we still raised $300 through a generous donation. While tournament registrations have been down the past few years, we plan to start asking company representatives next fall at the career fair.

It has been a pleasure serving Burkhart as the treasurer this past year. I have learned a lot through my time here. Although I will be starting my career in the mining industry next year, I plan to be available to help the incoming treasurer with his duties.
Hedvig Unander-Scharin
Treasurer
Secretary’s Report

As the secretary of the Burkhart Mining Society for the 2018-2019 academic year, my role was to serve as an assistant to the President, Vice President, and Treasurer. I also was delegated several tasks by my fellow officers throughout the year. The majority of officer meeting and interaction occurred through weekly meetings, GroupMe, email, and in person conversations between classes.

Burkhart Mining Society held on several general body meetings between both fall and spring semesters. At the meetings the officers explained what events would be held throughout the year such as outreach events, camping, SME Annual Conference, AGG1, merchandise sales, and other social events to try to get the younger classmen involved. All meetings also included refreshments for the members to enjoy.

One of the social events planned for bonding between lower and upper classmen was a bowling night at the Breakzone student center at Virginia Tech. This also included food and beverages for students to enjoy before seniors graduate. Additionally, I organized a mentor/mentee program for some of the younger students to ask questions and seek guidance from the juniors/seniors if needed. This was a way for pairs to earn volunteer hours.

Each semester the Burkhart Mining Society also held merchandise sales. The executive board brought merchandise to sell to the alumni during the mining career fair held in the fall. These sales always bring revenue to our chapter of SME while providing mining department gear for the students.

The 2019 SME Annual Conference was held in Denver this year. The conference provided unparalleled networking opportunities and well as fascinating presentations. I was fortunate to attend the Women in Mining breakfast, the Environmental Scholarship Division Luncheon, the VT Alumni Reception, and the Awards Banquet.

I would like to thank the faculty, staff, and donors of the VT Mining Engineering Department. Without their aid, Burkhart Mining Society may not be able to provide the many unique opportunities it has given me. The conferences and meetings which Burkhart members are able to attend are invaluable experiences for students.
I have enjoyed my time as the secretary of the Burkhart Mining Society. I have made numerous industry connections and gained valuable leadership, organization, and planning skills. I look forward to staying a member of SME as I enter the mining industry after graduation.

Alyssa Gedse
Secretary
Incoming President’s Address

I am very honored to be elected to become Burkhart President for 2019-2020 school year. The ending of this year has had a great transition, thanks to the current officers, so the new incoming executive team can be ready for the fall! We have many plans for the next year that we hope to implement to improve our student chapter of Burkhart at Virginia Tech.

The executive board that is joining me for the next year are a group of very bright and enthusiastic individuals. Avery Martin will be taking over secretary, Alex Norris will be taking over Vice President, and Austin Fox will be taking over as treasurer.

During the end of spring semester, the current Burkhart executives and the new incoming executives have sat down for meetings to discuss ideas for next year. Some of these ideas include; a merchandise website, an alumni email update, mentors for the annual SME conference, business cards for clubs, and a scholarship for Burkhart executive members. The Burkhart scholarship would be from alumni who served on the Burkhart executive board to donate back and try to incentivize students to serve as an executive member on the board. We would like to set up a website for Burkhart that has a merchandise shop available for alumni and students to buy mining merchandise from anywhere and have it shipped to them. We would also like to have an alumni update page within this website, or create a monthly email that will be sent to Burkhart alumni to update them on what our students and our department are doing. We will also continue the Alumni Golf Tournament which is a wonderful fundraiser for the department.

As for the students, we want to have a closer bond and create a family atmosphere. We would like to have more activities available for the students to get to know each other. We plan to have tailgates before VT football games and have a section where students can sit together in the stands as well. We plan to have activities like hiking, bowling, movie nights, and game nights in order to keep and incentivize a great comradery between the students. We will continue to plan and organize a camping trip each semester in the Jefferson national forest for the students. We would also like to participate in campus events that help give back to the Blacksburg community such as the big event and relay for life.

The incoming Burkhart executive board and I are very excited for the next year. We want to thank the current Burkhart executive officers for helping us transition into our
roles and teaching us everything we need to know to be successful in the next year. I hope that the connections these students make in Burkhart will follow them into their careers and for their lives. I am grateful for the help of Cole Thomas and Dr. Westman, along with Michelle Crotto, who have helped me to start planning and implanting ideas for next year. As Burkhart President, I am excited to serve and give back to the mining community. I hope that our students thrive in this atmosphere and have everything they need to succeed and become a valuable asset to the mining community and field.

Allie Smith
Incoming President
The Bryan Smith Aggregates Society, the student chapter for the National Stone, Sand, and Gravel Association (NSSGA), was officially installed in the 2017-2018 school year. NSSGA voted on and approved the student organization in January, 2018.

Because of our new organization status, we focused on only one event: the AGG1 conference in Indianapolis, IN. The previous Agg1 trip was in Houston, TX during the 2017-2018 school year. We were able to send a total of 11 students to the 2019 conference. Those students were Isaac Clizbe, Luke Demusz, Kyle Dyer, Jake Gusler, Baxter Jones, Louise Koepele, Matias Marquez, Avery Martin, Michael McCampbell, Bobby McDonnell, and Kelsey Popolizio. We were able to send all eleven students with no travel or lodging costs because of NSSGA’s reimbursement of $5,000. Next year, we are hoping to send around 8-10 students again.

During the conference, students manned the Virginia Tech Department of Mining and Minerals Engineering booth. The students also roamed the conference when not manning the booth. Other events that they attended while at the conference include the ROCPAC reception, Young Leaders reception, and a variety of AGG1 academy sessions. Below is the booth and attendees from the conference.
Mine Rescue Team Annual Report

The Mine Rescue Team is a student team that mimics the training of a real mine rescue team. The team has two coaches, Don Hager and Gerald Saunders. They are both retired coal miners who were on mine rescue teams. The team undergoes classroom training where we learn about gas classification, containments, explosive mixtures, map symbols, ventilation basics, and mine rescue basics. Field training is also done. The team navigates through a simulated mine disaster and deals with roof/rib tests, gas checks, and stop/advance calls. Each semester the team meets up with other schools including University of Kentucky, West Virginia University and Pennsylvania State University to compete in a Mine Rescue Competition. Each team is given the same problem and is graded on how well and efficiently they navigate the problem. The Mine Rescue Team is an amazing networking tool. It is also a great way to learn teamwork. The mine rescue team traveled to the Buchanan Mine in the Fall 2018 semester. The team toured the mine and then competed against the other schools. During the Spring 2019 semester the team traveled to Penn State University. Once there the team competed against the other schools in the competition. The mine rescue team is a great organization that builds teamwork. It has been a great learning opportunity.
Mucking Team Annual Report

The mucking team consists of a group of students who have a passion for mining, and celebrate that passion by competing in old-style physical mining events like Swede Saw, Jacklegging, Gold panning, and more! This year, the mucking team saw an increase in underclassmen participation with over 10 new team members. The team participated in 2 competitions this year, where they competed head-to-head against other college teams in 7 different events. The mucking team sent one team to compete for their first time in Kentucky in the fall of 2018. Another 6-member men’s team was sent to the annual international intercollegiate Mining Competition in Reno, NV, where they placed 10th overall against 18 other schools. With four out of the six members being first-time competitors, our team showed outstanding improvement throughout the semester. With an increase in underclassmen team membership over the year, the Mucking Team plans to send at least two teams to each event next year, including a co-ed or a women’s team.
Design Competition Team Annual Report

This year, Virginia Tech sent one team to the SME/NSSGA Design Competition at the 2019 Society for Mining, Metallurgy, & Exploration (SME) Conference in Denver, Colorado. The “VT Mining Consultants” team took 2nd place!

Design Competition Team Members from left to right: Thomas Huddleston, Alex Pfreundschuh, Leah Frost, Chris DeMaio, Hannah McNeal, Erik Hakes
Closing Remarks

I hope this chapter report has shown what the Burkhart Mining Society has done this past year. We strive to bring Virginia Tech Mining and Minerals Engineering students together and help them develop into successful industry professionals. This year was very successful. I hope that the officers next year will uphold Burkhart Mining Society values and have the most successful year yet.

Sincerely,

Cole Thomas
President
Burkhart Mining Society