2017 DONOR IMPACT REPORT

THE BLUE EVANS STUDENT SUPPORT ENDOWMENT FUND

Prepared for Donors to the Fund
January 2017

> **“ONE OF THE BIGGEST LESSONS CAME FROM OUR EXPOSURE TO A COMPLETELY DIFFERENT CULTURE. MANY STUDENTS HAD NEVER TRAVELLED OUTSIDE OF CANADA, AND VISITING A DEVELOPING COUNTRY WAS AN EYE-OPENING EXPERIENCE.”**
>
> - Adrian Heieis, UBC Mining Graduate
> Field Trip Leader, 2017

BROADENING CULTURAL HORIZONS

Students Travel to South Africa & Botswana

Few individuals ever get the opportunity to explore an underground mine, but in late May of 2017, Adrian Heieis and 34 fellow mining students descended 831 meters below the earth’s surface to tour the Cullinan Mine in South Africa. Apart from its reputation for having produced the largest gem-quality rough diamond in the world – measured at 3106.75 carats – the Cullinan Mine has produced over a quarter of diamonds over 400 carats ever mined in history. It is also the world’s only significant source of the extremely rare and prized blue diamond.

With help from the Blue Evans Student Support Endowment Fund, UBC students were able to visit not one, but four mines (two diamond mines, a copper mine, and platinum mine), along with two universities, two mineral processing suppliers, and two corporate offices.

The trip was dynamic in its educational value, allowing students to see theoretical concepts learned in the classroom being used in practice. Students observed both well-established practices such as block caving and newer processes such as XRF ore-sorting. “To actually walk in a block cave made it much easier to understand and visualize all of the concepts and diagrams” says, Adrian.

Notably, students learned first-hand about the life cycle of rough diamonds, from mining, to sorting and valuation. Perhaps more importantly, the students were exposed to several career paths at a time when they are deliberating their options and starting to plan their first steps after graduation.

TRIP HIGHLIGHTS

831 Meters below Ground

No matter how many books you read or classes you attend, there really is no way to know how it would feel to be in a mine crusher room until you’ve been in one. Students quickly learned that it feels much like a sauna when within minutes, their faces began dripping with sweat.

Standing in a Sea of Diamonds

At DTC Botswana, students were taken on a tour of the sorting area where they were dazzled to observe thousands of diamonds being sorted by size, shape, and colour. A trip highlight for many was being able to hold and examine the diamonds, with the largest stone in hand weighing an astounding 109 carats.

Inside the World’s Richest Diamond Mine

Students were most impressed not by the 2-kilometer wide and 500 meter deep pit, but by the extensive security measures at the Debswana Jwaneng mine. With diamond mining representing 25 per cent of Botswana’s GDP and 85 per cent of export earnings, security of the diamonds are of strategic importance to the country’s economy.

TRIP ITINERARY

MAY 8	UNIVERSITY OF WITSWATERSRAND EXCHANGE
MAY 9	MULTOTEC TOUR
MAY 10	CULLINAN MINE TOUR
MAY 11	TOUR OF METANZA MINERALS
MAY 12	PALABORA MINE TOUR
MAY 15	MGALAKWENA MINE TOUR
MAY 16	JWANENG DIAMOND MINE TOUR
MAY 17	DIAMOND TRADING COMPANY BOTSWANA TOUR
MAY 19	UNIVERSITY OF CAPE TOWN EXCHANGE

THE ROAD TO VICTORY

UBC Walks Away with Top Honours

Heading into the 27th annual Canadian Mining Games with a new and younger team, taking first place was a sweet victory for UBC.

The three-day event, which was hosted at the University of Toronto in May of 2017, is an annual academic and technical competition between students from ten major Mining Engineering programs across Canada. Each year, the top students compete in twenty-five competitions, meeting with industry professionals, and networking with other students who may become future colleagues in a tight-knit industry.

These events often become the cornerstone of a student's undergraduate experience, allowing them to test their knowledge and adaptive capabilities.

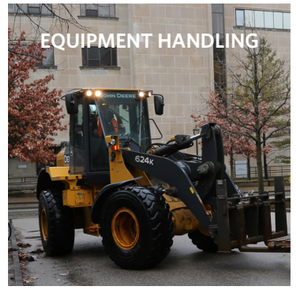
This year, UBC placed in 10 of the 25 competitions, finishing first overall.

MYSTERY EVENT #1

Two competitors take part in a mystery event.In 2017, the challenge was to create and present a one-year business plan.

STOCK MARKET CHALLENGE

Teams compete by creating a fictitious stock portfolio. The best performing stock portfolio in the months leading up to the games, wins.



MINERAL ECONOMICS

Using financial evaluation methods, two members from each team are tested on their ability to make well-analyzed mining investment decisions.

SPEECH COMPETITION

A member from each team tests his/her oratory prowess.

DRILL & BLASTING

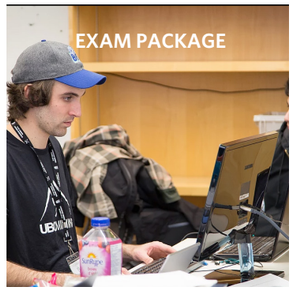
Students compete to engineer a drill and blast design and set up.

BOAT RACING

Teams race miniature boats across a pond.

MINERAL PROCESSING

Two participants compete in mineral extraction problems involving flow chart design and mass balancing



MINE DESIGN

Four team members must design a mine.

HEALTH & SAFETY

Two participants work through a case study on a health and safety problem at a mine site.

EQUIPMENT SELECTION

Two team members must optimize a mining fleet based on two different mining methods and create a daily and weekly schedule including a cost analysis.

ROCK MECHANICS

Teams showcase their ingenuity when it comes to controlling and understanding in-situ stresses, underground openings, rock bursts, and ground control.

MYSTERY EVENT #2

The second mystery event is usually a fun, athletic challenge involving the entire team. In 2017, students engaged in a fun competition of archery tag.

ENVIRONMENT & SUSTAINABILITY

Participants must solve a case study on sustainable development.

MINERAL IDENTIFICATION

One participant from each team showcases his/her geology skills by identifying various minerals, rocks, and/or soil samples.

VENTILATION

Two team members are given a problem that requires them to redesign, fix and/or expand a ventilation system for a mine or particular mine heading.

PROMINE CHALLENGE

Teams complete a list of tasks using the Promine software (ex. entering and manipulating survey data, modelling ore bodies, etc.)

CRISIS MANAGEMENT

Two participants must quickly address a situation that poses potential harm to an organization.

MINE TO MILL INNOVATION

Teams complete an economic evaluation based on the production models and create a report to show the costs/ benefits of the mine to mill integration.

UBC PODIUM FINISHES

3rd **Mineral ID**
Callum Williamson

2nd **Mystery Event #1**
Marko Pudar and Alexa Dumaine

3rd **Stock Market Challenge**
Jacob Yeung

1st **Equipment Handling**
Darcy Sepkowski & Douglas Kao

2nd **Sustainable Development**
Koen Dunieveld and Elaine Baluyut

2nd **Speech Competition**
Veronica Knott

3rd **Ventilation**
Alexa Dumaine & Cathy Lu

1st **Mine to Mill Innovation**
Veronica Knott & Jacob Yeung

1st **Crisis Management**
Adrian Heieis & Veronica Knott

3rd **Health and Safety**
Dylan Kiselbach & Elaine Baluyut

Underground at the Edger Mine in Denver, Co.

The UBC team at the 2017 MERD competition in Denver, Co.

MINE RESCUE

Fostering a Strong Culture of Safety among Future Engineers

When danger strikes, a speedy and safe rescue effort can mean the difference between life and death. Adequate training is essential, as rescuers must be available and ready to respond at a moment's notice. When safety is paramount, investing in training across the board is critical to the successful realization of value in a challenging operational environment.

Mine rescue contests and simulations are a vital part of the training process, and ensure that teams receive hands-on exposure to a range of potential hazards and mine emergency scenarios. Only through practice and repetition can students truly prepare themselves to face high-stakes, emergency situations.

After two years of rigorous training, placing second at the biennial intercollegiate Mine Emergency Response Development (MERD) that was hosted in Colorado in February 2017 was an incredible victory and learning experience with only one returning member from the team that competed in the 2015. Far beyond bragging rights, participating members walked away with strong principles of mine rescue and a deep-seated respect for safety that they will carry forward in their careers.

The team uses funding provided by the Blue Evans Student Support Endowment Fund to pay for the costs associated with mine rescue training and competition expenses. Training provided by mining companies is generally provided free of charge, so the majority of expenses are travel related as most mines are in remote locations.

MINING ENGINEERING STUDENT STRIKES GOLD

MEET VERONICA KNOTT

ENGINEERS CANADA 2017 GOLD MEDAL STUDENT AWARD RECIPIENT

In the spring of 2017, not long after moving to Ontario, Veronica Knott became the unfortunate victim of a break in. Among the stolen items from her apartment was the Engineers Canada 2017 Gold Medal Student Award she had received only a few weeks prior.

It's no secret on campus that the UBC Mining Engineering student is passionate about her chosen field, and it comes as no surprise that her dedication to create an inclusive, diverse, and positive student community has garnered the attention of Engineers Canada. Among three women recognized in 2017, Victoria received top honours for her leadership in inclusivity and diversity engagement during her time at UBC.

Veronica has served in several leadership roles, including captain of the UBC Mining Games team. Among her honours are the 2016 Nestor Korchinsky Award and Rick Hansen Difference Maker Award.

WHY UBC?

VK: I was actually unsure about what topic to study — let alone what school to attend! In the end, I decided to pursue engineering and after that, the decision was easy. UBC has an amazing engineering school that is unparalleled in its industry relations. As well, I was so excited for the opportunity to come here from Toronto and study in this beautiful city. I actually didn't visit UBC until after I had already accepted. I showed up and it rained the whole weekend but I still fell in love with the campus, the student leaders I met and the city of Vancouver.

HAVE YOU ALWAYS WANTED TO BE AN ENGINEER?

VK: I honestly never considered being an engineer until my final year of high school. I had always been good at science but I didn't know what to do with it. That was when my high school physics teacher talked to me about engineering. She showed us that it was about solving real world problems and instantly I was intrigued. I did some research and I realized this was exactly the profession I was looking for.

I was lucky enough that my parents had encouraged me to continue taking all the sciences so I had all the courses necessary to apply to UBC. In my outreach to high schools, this is the biggest thing I've heard. That girls, and guys, stop taking science courses early on and don't realize all the amazing doors it can open. That's my biggest piece of advice, keep your options open.

WHAT WAS IT LIKE HOSTING AND WINNING NATIONAL MINING GAMES AT UBC?

VK: I was in Materials Engineering until I transferred into Mining. I was pretty certain Mining was the department for me but part of me was still uncertain. When I got to compete in the Mining Games in 2016, it proved to me that I'd made the right decision. The technical competitions were exciting and educational and the people were fantastic. We had students from ten different engineering schools in twenty-one different competitions and UBC placed first overall. As Co-Captain of the team in 2017, bringing home a second consecutive first-place win was an amazing feeling.

A Quick Study with Veronica Knott. Retrieved from: https://www.ubc.ca/about/a-quick-study/veronica-knott.html>

STUDENT DEVELOPMENT SNAPSHOT

Your contribution to the Blue Evans Student Support Endowment Fund continues to ensure that UBC mining engineering students are able to launch their careers with more than just textbook knowledge and the ability to pass a test. In 2017, we were able to invest more towards helping students develop soft skills that employers expect from today's engineers. With your support, UBC students are doing amazing things, inside and outside the classroom.

PROFESSIONAL DEVELOPMENT REPRESENTATIVE

The Professional Development Representative (PDR) is responsible for creating and organizing opportunities for students to develop non-academic skills to help increase their employability. Funds allocated to the PDR help subsidize costs associated with events, creation and printing of student business cards, compiling the resume book, and fees associated with professional development opportunities throughout the year.

CONFERENCES TRAVEL FUND

Each year, students are encouraged to attend out-of-town conferences such as CIM AGM, SME and PDAC. These are important networking events that help attendees build important relationships with industry to secure jobs upon graduation. In addition, technical courses offered at the conferences allow students to keep up-to-date on best practices throughout the industry. The fund can also be accessed to help support students attend one-off events related to their professional development.

2ND YEAR DEVELOPMENT FUND

The 2nd Year Development Fund is used to subsidize events that help to keep new mining engineering students engaged and help them adjust to life at UBC. Apart from organizing mixers where they can interact with upper year students and faculty in a more relaxed environment, funds are also used for workshops and extra group tutoring sessions to help with subjects that they may find challenging.

REMEMBERING BLUE

Jim Gowans, Former Student, Shares His Memories of Blue

For former student, Jim Gowans, helping to create the Blue Evans Student Support Endowment Fund was an absolute no-brainer. Reflecting on a career that began at UBC, Jim recalls how Blue's dedication to developing students whom he affectionately called "his kids" left a lasting impression.

During a time when class sizes were still small, Blue confidently guaranteed each student a scholarship and a job upon graduation. "We were lucky to have Blue. He would strong-arm mining companies to give to scholarships and line up job opportunities, so you could get help paying for school and get industry experience" says Jim.

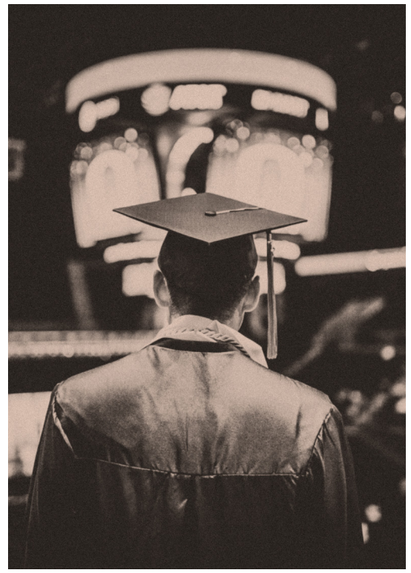
Crediting Blue for inspiring much of his philanthropic involvement with UBC, Jim joked that while it was Blue's efforts that instilled a sense of obligation in him to support the next generation of engineers, he wouldn't have put it past Blue to outright tell his students to give back. "That's just how he was", he adds.

On contributing to the fund, Jim felt it was an easy decision to make and says, "Blue was a real champion for his students. Back then he did it through sheer force of spirit and personality. That's why it made so much sense to create this fund in his name".

“BLUE REALLY ENJOYED DEVELOPING HIS STUDENTS. I GUESS I TOOK IT AS AN EXAMPLE OF WHAT WE SHOULD ALL BE DOING, AND I SEE A LOT OF MY PEERS WHO SHARE THAT SAME SENSE OF DUTY. IT WAS CLEARLY BLUE'S PHILOSOPHY. I BENEFITTED FROM THAT MINDSET, AND I'VE ALWAYS FELT IT WAS MY OBLIGATION TO DO THE SAME.”

2017 FUND ALLOCATION

Grad Trip	$7,500
Conferences Travel Fund	$5,000
Mine Rescue	$3,500
Mining Games	$3,500
Mining Club	$3,500
Professional Development Representative (PDR)	$1,055
Safety	$1,000
2nd Year Development	$1,000
Total	**$26,055**



ENDOWMENT SNAPSHOT

FINANCIAL UPDATE

New Donations and UBC Contributions to Principal in 2016/2017	$32,500
Total Donations and UBC Contributions to Principal since Establishment	$725,137
Market Value as of March 31, 2017	$853,636
3-Year Average Market Value as of December 31, 2016	$800,308

BUDGET 2017/2018

Spending Allocation (4% of 3-Year Average Market Value)	$32,052

SUMMARY

UBC's endowment is professionally managed by UBC Investment Management Trust (IMANT). For information to UBC's endowment management performance, responsible investment strategy and overall program please visit www.support.ubc.ca/endowments. UBC remains committed to the long-term objective of protecting the value or the endowment and will continue its prudent spending policy and investment program.

BLUE EVANS & HIS LEGACY

It is fitting that the legacy of a popular professor who helped forge the professional paths of his students—and helped build the reputation of the UBC Mining department—should live on to support the careers of today's mining engineering students.

Following a long career in the mining industry throughout Australia, Canada and the United States, John "Blue" Evans was appointed head of the Department of Mining Engineering in 1969. During his nine years at UBC, Blue proved to be a dynamic presence on campus, conferring on his students his considerable industry and technological knowledge.

"Blue was a great mentor, supporter and role model for young adults who aspired to become engineers," says former colleague Alf Hills. "He put so many students on a successful career trajectory."

After Mr. Evans passed away on June 5, 2011, Alumni and friends established his legacy by creating the Blue Evans Student Support Endowment Fund. Blue's strong leadership, experience and camaraderie continues to provide our students with critical, career-building opportunities to interface with industry.

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