

# connect

Volume 21, 2018

**WE ARE  
TECK**

**The Women of Teck**

Celebrating International Women's Day

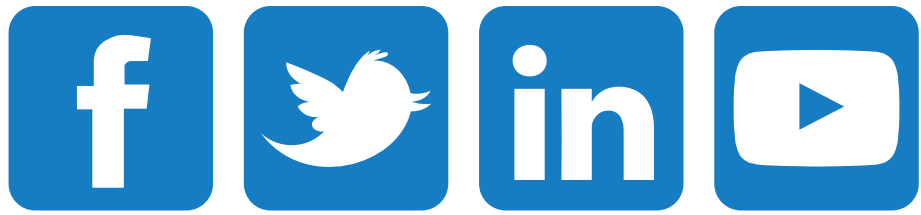
**Diversifying  
Teck's Business**

First Oil at Fort Hills

**Mining New Ideas**

The Unearthed Hackathon

**Teck**



# SEEN ON SOCIAL



The Colander Restaurant has been feeding Teck employees in Trail for more than 40 years. Read about what keeps us coming back.



Congratulations, Team Canada on the gold medal at the Olympic figure skating team event! Watch a video about how Meagan Duhamel and Eric Radford never wavered from their goal of excellence. #PyeongChang2018



ICYMI: Indigenous-owned Twin Sisters Native Plants Nursery celebrates the opening of their second greenhouse and wins the Aboriginal Business Partnership of the Year award.

We're sharing Teck's stories on social media. Visit us online to find these and more.

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 Teck Resources Limited



Teck is excited to be a founding member of the #DigitalSuperCluster, chosen as a supercluster partner by Innovation, Science and Economic Development Canada. Learn more about how Teck is putting ideas and innovation to work in the resource sector to improve safety, environmental performance and productivity.

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## Thank You

Many thanks to those who contributed to and participated in this issue of *Connect*:

Catherine Adair, Community Relations Leader, Trail Operations; Marlena Anderson, Community Relations Supervisor, Highland Valley Copper; Cindy Bohmer, Plant Operator, Elkview Operations; Dallas Cain, Superintendent, Health & Safety, Trail Operations; Alannah Cervenko, Leader, Community Investment and Partnerships, Vancouver office; Chris D’Odorico, Manager of Health & Safety, Trail Operations; Dave Harrington, Senior Technical Analyst, Line Creek Operations; Glenda and Dean Hewitt, retired; Sadie Ismay, Events Planning Lead, Corporate Affairs, Vancouver office; Lisa Larson, Safety Coordinator and Avalanche Forecaster, Sparwood office; Raymond Maloney, Field Technician, Exploration, Europe; Tanya McCarthy, HR Business Partner, Talent Management, Human Resources, Vancouver office; Greg Richards, Superintendent, Knowledge Management, Trail Operations; Victoria Sterritt, Lead, Technology and Innovation, Vancouver office; Allyson Stoll, Metallurgist, Red Dog Operations; Nicole Tapia, Communications Specialist, Corporate Affairs, Santiago office; Elaina Ware, General Manager, Greenhills Operations; Jeff Williams, Environmental Performance Lead, Sparwood office



## On the Cover

Wanesa Anderson  
Heavy Equipment Operator  
Line Creek Operations



# Welcome

**W**e're now well into 2018 and it's shaping up to be another exciting year. Before we look ahead, let's take a moment to look back at what we achieved in 2017.

Commodity prices continued to rebound through 2017, which allowed us to achieve record revenues and cash flow from operations. We also made significant progress towards our 2020 sustainability goals and, most importantly, our safety performance was the best on record.

Achievements like these are critical to the success of our company, and they are made possible by our people and an unwavering commitment to our values and to our objectives. That is why we have chosen "We Are Teck" as the theme for this issue of *Connect* as a way to highlight some of the important aspects that make us who we are as a company.

One of those aspects featured in this edition is our commitment to creating a more inclusive and diverse workforce. In "Laying the Foundation" we take a historical look at how the role of

women in the mining industry and at Teck has evolved. And while there have been many positive advances in this area, it remains clear that there is more work to do. In "Advancing the Diversity Dialogue" we learn more about how an inclusive and diverse workforce can lead to improved health and safety performance, increased innovation and productivity, and better decision-making.

Another area we will be focused on advancing in 2018 is strengthening our culture of innovation. Finding new ideas to improve safety, sustainability and productivity will increasingly become an important part of maintaining our competitiveness and continuing to grow within our industry.

That spirit of innovation was at the heart of the Unearthed Hackathon, which Teck sponsored in Vancouver, B.C. this past October. In "Mining New Ideas at the Unearthed Hackathon" learn more about how the mining industry and technical experts worked together to help solve some of the challenges and opportunities facing our industry.

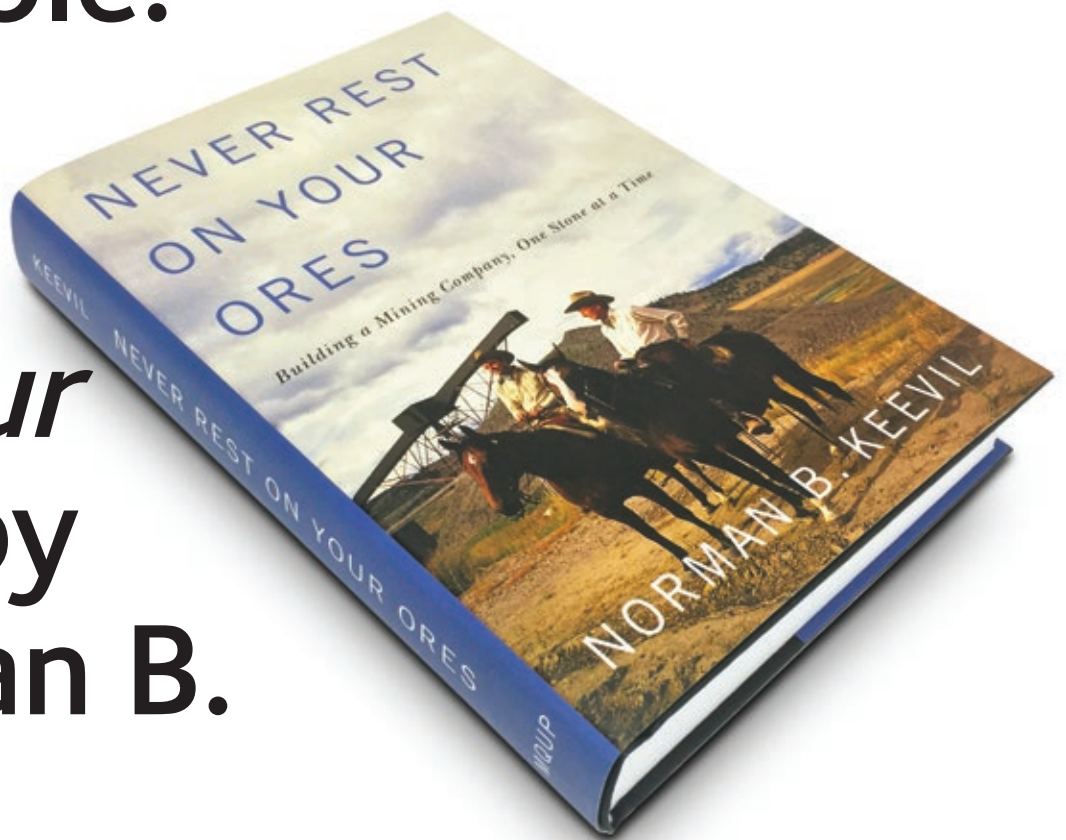
Our Excellence Awards program is another strong example of how we celebrate the outstanding innovations, achievements, and leadership of our employees in these and other areas. To learn more about this year's recipients, please see the insert *Recognizing Excellence*.

And finally, as a result of the hard work of hundreds of employees across Teck, we were able to share in an important milestone earlier this year, as the Fort Hills oils sands project achieved first oil. In "Diversifying Teck's Business: First Oil at Fort Hills" learn more about Fort Hills and the role one of our Excellence Awards winners—Carlos Opazo—had in this successful project.

Thank you to all the women and men featured in this issue of *Connect*, and to the thousands more throughout our company. Your commitment every day to living our values, to building our culture of innovation, and to creating a safe and inclusive work environment for everyone shines in these pages. It also defines who we are—and together, we are Teck.

Don Lindsay  
President and CEO

# Now Available: *Never Rest on Your Ores* by Norman B. Keevil



*Never Rest on Your Ores*, a new book by Teck chairman Norman B. Keevil, is a lively and detailed look at how Teck was built from the ground up.

Covering 100 years of Canadian mining and business history, the book discusses the discovery and building of mines, the mechanics of financing in a volatile and cyclical industry, and the role of mergers and acquisitions in building a Canadian mining company.

It provides a unique behind-the-scenes look at the business leaders, politicians and colourful characters who have played a key role in shaping Canada and the global mining industry.

Copies are available in major bookstores or can be ordered directly from the McGill-Queen's University Press website at [www.mqup.ca](http://www.mqup.ca)



# Laying the Foundation

A Historical Look at Women in Mining in Canada



As a result of efforts by women and men who pressed for progress, gender equality in the workplace has been greatly improved over the last century in many industries, including mining.

While women played important roles in mining in the early colonial days—some prospected, owned mines and raised capital, while others provided services to miners through hotels, stores and roadhouses—in 1877, women were legally restricted from working in underground coal mines in British Columbia. Nationally, this same restriction was legislated with the passing of the *Ontario Mining Act* in 1890, which included “the prohibition of any girl or women in or about any mine.”

Amendments to the Act in 1912 allowed companies to begin hiring women in technical or clerical capacities, but it wasn’t until a temporary lift of the ban during the Second World War that women were hired for operational positions. Women were encouraged to enter the workforce, and their response was swift and enthusiastic, rushing to work in a number of areas, from plant maintenance to stenographic services. Some were also trained as emergency response volunteers.



For Teck specifically, women in Trail and Kimberley, B.C. made significant contributions in support of community war efforts, which opened doors to wider possibilities of future employment. Although the number of female employees in mining decreased after the war, as men who had left roles to join the Armed Forces returned from overseas, the belief that women were not suited for certain jobs had been amply disproved.

The 1970s marked the next significant shift towards workplace equality, as human rights legislation that included gender as grounds for discrimination was enacted for the first time in Canada, and in 1974, Teck (Cominco Limited at the time) petitioned the Worker’s Compensation Board for an exemption in order to hire women. Women then began taking on roles at surface sites and in underground mining in 1978.

The changes outlined here are just a few of the many that have taken place since the 1900s, and while much progress has been made, there is still more to do. As the next phase of progress takes shape, it will be built on a strong foundation laid by those early women in mining. ■

A version of this article was originally published in *Connect*, Volume 9.

For more stories from the *Connect* archives, visit [teck.com/connect](http://teck.com/connect)

# We Are... The Women of Teck

March 8 marks International Women's Day, a day that celebrates the social, economic, cultural and political achievements of women while also focusing world attention on areas requiring further action.



**Marlena Anderson**

**Community Relations Supervisor  
Highland Valley Copper**

"International Women's Day is about recognizing and celebrating our accomplishments, our contributions, as well as our diversity. It's continuing to strive for equal opportunities, while supporting women breaking barriers and girls in their pursuit of opportunities. Teck's approach to inclusion and diversity is about setting the stage for change. The advice I would give other women joining our industry is to be bold and stay strong."



**Erin Lee Buck**

**Metallurgical Engineer-in-Training  
Pend Oreille Mine**

"Women should know that just because they haven't done something before, it doesn't mean they can't do it. When I was first introduced to the idea of working in mining, I took a leap of faith, and it turned out that I had skills that could be applied within this industry. I have also been supported and encouraged in my endeavors at Teck and thoughtfully mentored. Because I know I have support from my colleagues and supervisor, I have the confidence to explore projects outside of my regular skill set. I hope that stories like this can give others the confidence to take a step in a new direction they might not have imagined for themselves."

**N**ow, more than ever, there is a strong call to action to press forward and progress gender parity. This year's theme, #PressforProgress, encourages us all to motivate and unite friends, colleagues and communities to think, act and be gender inclusive.

To celebrate this year's International Women's Day, *Connect* spoke with a few of the more than 1,300 accomplished women across our company. Here, some of these exceptional women who have chosen a career at Teck across a wide range of occupations, share their thoughts on International Women's Day, the future for women in mining, and diversity and inclusion at Teck.



## Celebrating International Women's Day

International Women's Day provides us with an opportunity to reflect on the accomplishments of the women in our own lives, as well as those here at Teck and around the world. The day is also an important reminder that a diverse workforce brings together individuals with a range of backgrounds and perspectives, and that together, they can help build a stronger company.

Visit [teck.com/connect](https://teck.com/connect) or Teck's Facebook page for an inspiring video featuring these and other women of Teck, which you can share to help spread the message of progress and inclusivity.



**Angélica Gálvez**

**Mechanic, Plant Maintenance  
Carmen de Andacollo Operations**

"International Women's Day emphasizes the importance and significance of all the different roles women fulfill, both in the workforce and at home. It's a day that exists to celebrate all of our work. Press for progress for me is about continuing to work towards equality. The results of work performed by a woman or a man is the same and we have to recognize that."



**Victoria Sterritt**

**Lead, Technology and Innovation  
Vancouver office**

"Press for progress means speaking my truth in an open way that promotes dialogue, in order to enact the changes we need to see. Being a woman in this industry means being a minority, for better or for worse, but it also means the opportunity to be an agent for change. I am hopeful about the future of inclusion and diversity at Teck when I look around me and see the incredible women I work with—they are powerful, smart and fun. I'm also inspired by the men I work with who are open to having the difficult conversations that we need to have. We have a long way to go, but I'm really inspired by the progress that I've seen in the last few years and about the exponential movement that we'll see in the years to come."



**Elaina Ware**

**General Manager  
Greenhills Operations**

"When I think about International Women's Day, what comes to mind is making sure that all people have opportunities to do their best. It's important for us to make sure that women, and men, are given those chances. A lot has changed around inclusion of women in the mining industry since I began my career around 20 years ago. It wasn't unusual for me to be the only woman in the room; in fact, it was the norm when I started. There were times when I struggled to have a voice loud enough to be heard, and that's very different today. Now, it's really about making sure that everyone's voice is heard. At Teck, what gives me hope are the values we have, which naturally align with inclusion and diversity. When we talk about excellence and courage, these values fit right in. I think that we're going to unlock tremendous value because of the courageous work we're doing with inclusion." ■



**ADVANCING  
THE  
DIVERSITY  
DIALOGUE**

As part of our journey to increasing inclusion and diversity at Teck, we know that creating a safe space for dialogue and providing training about the value of diversity is critical.

In 2017, as part of advancing our Inclusion and Diversity Policy, we launched training with the Gender Intelligence Group across our operations. During half-day workshops, employees from the front line through to senior management learn to recognize and value the differences between women and men, and employ tactics to increase equality in the workplace.

## What Is Gender Intelligence?

Gender intelligence is a mindset founded on the neuroscience that underlies gender-specific behaviours. The Gender Intelligence Group advocates that women and men have unique behaviours and that equality comes from recognizing and valuing those differences.

The group has found that, based on their research, there are biological reasons behind the way women and men think and act; the differences between genders are complementary and can lead to more innovative thinking, greater productivity and better engagement.

## What Are the Benefits of Diversity in the Workplace?

Studies have shown that more diversity at a company can lead to better financial performance, especially at the board and senior management level.<sup>1</sup> Recognizing the value in unique perspectives from both women and men has also been found to result in a higher retention of female employees and less discrimination company-wide.

## Studies have shown that more diversity at a company can lead to better financial performance.

The Gender Intelligence training also addressed one of Teck's core values: safety. According to a Stanford University research project in 2014, it was found that there was an 84% increase in safety with the presence of women in the oil sector.<sup>2</sup> These safety performance improvements were due to less risk-taking and improved decision-making. The presence of women also promoted a greater sense of shared fate and humanity.

## A More Diverse Future

Gender intelligence training will continue to be conducted throughout 2018, with the goal of continuing to increase diversity at Teck. Our focus will be on women and Indigenous Peoples and ensuring our workplaces are welcoming and inclusive for all. ■

<sup>1</sup>Shecter, Barbara, What's a woman on the board worth to stock investors? About 300 bps, according to CIBC study. *Financial Post*, 2017.

<sup>2</sup>Ely, Robin J. and Meyerson, Debra. Unmasking Manly Men: The Organizational Reconstruction of Men's Identity. *Stanford Business*, 2014.

# The Ripple Effect and Its Reach Across Our Lives

Central to Courageous Safety Leadership is the ripple effect: how an event or action can create ripples of consequences—far-reaching and sometimes multiplying—across our lives, the lives of our families and the lives of our co-workers.

In December 2016, a workplace incident at Trail Operations set in motion ripples across Ironworker Adam Nugent's life. ■

To hear Adam's story and how Teck has learned from it to create a safer workplace, visit [teck.com/connect](http://teck.com/connect)



None of the hazards came from the challenges of the work; they came from the challenges of becoming complacent.

*Adam Nugent, Ironworker  
Trail Operations*



# DIVERSIFYING TECK'S BUSINESS: **FIRST OIL** AT FORT HILLS



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The Fort Hills oil sands project in the Athabasca region of Alberta achieved an important milestone on January 27—first oil—and the project remains on track to reach 90% capacity by the end of 2018.

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This milestone means Teck has officially added a new pillar to our business—energy—one that is expected to operate through numerous price cycles over its 44-year mine life and is a natural fit with our core strengths in truck-and-shovel mining techniques used at our existing copper, zinc and steelmaking coal operations.

Fort Hills will produce a high-quality, lower-carbon-intensity product called ‘Fort Hills Reduced Carbon Dilbit Blend’. It will be among the lowest life cycle carbon intensity of any Canadian oil sands production, with a lower carbon intensity than about half of the oil currently refined in North America.

The project was delivered just four weeks after its projected target date, which, taken together with delays resulting from severe wildfires in Fort McMurray, is a remarkable accomplishment.

Fort Hills is a long-life asset that will generate significant value for Teck for years to come.

Above: Fort Hills primary extraction plant, where bitumen is combined with hot water to separate the oil from the sand.

**The production of first oil at Fort Hills is the culmination of the hard work of thousands of people since the project was sanctioned by the Fort Hills partners in 2013.**

*Don Lindsay  
President and CEO*

As at December 31, 2017, Teck held a 20.89% interest in the Fort Hills Energy Limited Partnership, which owns the Fort Hills oil sands project, with 26.05% held by Total E&P Canada Limited and the remaining 53.06% held by the project operator, Suncor Energy. Teck’s share of Fort Hills bitumen production is forecast to be approximately 38,000 barrels per day on an annualized basis.

To learn more about the role that Carlos Opazo, Director, Construction Management, had in helping develop and deliver on an execution plan to build the primary extraction plant at Fort Hills, see “Man with a Plan”.



Carlos's leadership, diligence and attention to detail were demonstrated in a construction plan that could be executed without significant changes, but also adapted as challenges arose. The plan's quality also attracted very competitive bids from experienced construction contractors, which benefited the project's bottom line.

# Man with a Plan

## Carlos Opazo

Director, Construction Management  
Calgary office\*

In 2013, Carlos Opazo was seconded as Construction Director to develop and deliver on an execution plan to build the primary extraction plant at the Fort Hills oil sands mining and processing operation—a project of massive proportions, even for the most seasoned of construction directors.

Carlos brought to his new role more than 30 years of experience in project execution and knew that the more detailed and realistic his execution plan, the more likely it was to come in on time and on budget.

The result: Carlos's plan met important milestones, and even with significant obstacles—such as the wildfires that evacuated Fort McMurray residents to the site's workforce camps for six weeks—construction crews were able to make up time to finish on his schedule.

And the primary extraction plant was not only completed on time, it was also delivered \$135 million under budget. ■

This profile on Carlos is excerpted from our *Recognizing Excellence* book, which recognizes Teck's 2017 Excellence Awards recipients.

Visit [teck.com/connect](http://teck.com/connect) to read more profiles from the book, which highlights the achievements of this year's recipients.

\*Carlos Opazo is now Area Manager, Concentrator, Quebrada Blanca Phase 2

# PEOPLE & PLACES



## Alannah Cervenko

**Lead, Strategic Partnerships,  
Community and Government Affairs  
Vancouver office**

### **When did you start at the company, and at which site/office?**

I started at Teck in 2012 in the Vancouver office.

### **Could you provide a brief description of what you do in your role?**

I build and manage strategic partnerships that help make the world a better place for people while also creating value for Teck. As part of this work, I oversee our Zinc & Health and Copper & Health programs.

### **What is your favourite part about your job?**

When people learn that Teck's products—zinc and copper—are game-changing solutions to some of the world's most pressing health challenges, it can really change their perspective. It gives us a new way to talk to young people about mining, and when they get excited, I get excited.

### **What is your most memorable moment working at Teck to date?**

I'll never forget the day we launched the 25th Team with UNICEF and the Government of Canada. This "Team" of Canadian women are helping improve the lives of millions of women and children around the world.

### **What is your favourite activity outside of work?**

When I'm not at work, I'm trying to keep up with my 15-month-old son, Austin. He prefers running to walking these days, so we spend a lot of time outside—rain or shine!

## Cindy Bohmer

**Plant Operator  
Elkview Operations**

### **When did you start at the company, and at which site/office?**

I started at Teck six and a half years ago at Elkview Operations.

### **Could you provide a brief description of what you do in your role?**

I work at the Elkview plant as a plant operator and spend the majority of my time loading our trains.

### **What is your favourite part about your job?**

The most rewarding part of my job is looking for ways to load trains more efficiently and trying to improve the functionality of our loadout program. I really like that I have the opportunity to bring forward new ideas to make that happen.

### **What is your most memorable moment working at Teck to date?**

I was humbled to find out I was the winner of an Excellence Award and excited to get to take part in the trip to Korea; however, I'm terrified to fly! I realize people fly every day, but I am always a bit anxious when it's my turn.

### **What is your favourite activity outside of work?**

I enjoy camping and fishing, but most of my winter days off are consumed with watching my two boys play hockey all over Alberta. I'm also a long-time member of the Canadian Kennel Club. I have been a member in good standing for 24 consecutive years, and, at present, my husband and I breed harlequin Great Danes.

Visit [teck.com/connect](https://teck.com/connect)  
to learn more about  
The 25th Team.







## Mullingar, County Westmeath, Ireland

**Raymond Maloney**

**Field Technician**

**Exploration, Europe**

### **What is the area's point of pride?**

Belvedere House Gardens is the biggest tourist attraction in the area and offers stunning views of Lough Ennell (Lake Ennell), forest walks and the 'Jealous Wall', which was a folly built during a love triangle feud to block out the sight of another estate in the area.

### **Is there anything the area is famous for?**

Westmeath is known as 'the Lake County', with several beautiful large lakes for fishing, swimming and other water sports, or to be admired for their beauty alone.

### **What is the area's best-kept secret?**

According to Teck employees here in Ireland, the area's best-kept secret is the burrito shop close to the Mullingar core shed!

### **What is your favourite restaurant in the community?**

As a local, I would recommend Tyrrellspass Castle Restaurant as the perfect example of Irish food in a beautiful setting.

### **What is a typical weekend like there?**

There are several pubs and restaurants to go to at night, with most pubs offering live music, including traditional Irish music. Mullingar is also on the Greenway, which is a walking and cycling route that passes from Dublin all the way to the Atlantic Ocean on the west side of the country. You could also take in Gaelic football or hurling in Cusack Park.



## Fernie, B.C.

**Jeff Williams**

**Environmental Performance Lead**

**Sparwood office**

### **What is your community's point of pride?**

The endless, well-maintained trails. Whether it is trail maintenance or grooming the Nordic, snow bike and multi-use trails, hundreds of volunteer hours are put into our trail system.

### **What is the area's best-kept secret?**

Fernie is well known for endless powder in winter, but summers here are hard to beat. Trail running, mountain biking, fishing, golfing, hiking, camping and going to the lakes—almost too many activities to choose from.

### **What's a typical weekend like there?**

For me, it involves lots of morning coffee, coaching the youth cross-country race team, hanging out in the Elk Valley Nordic Centre warming hut, dinner at one of the great restaurants in Fernie, sleep and then repeat on Sunday.

### **What's your favourite restaurant in the community?**

If I am feeling social, Yamagoya for sushi, but if I want to stay inside by the warm fire, it would be takeout from Himalayan Spice Bistro.

### **Is there anything else you'd like other Teck employees to know about the area?**

There are many great smaller communities within Fernie sustained by active members and volunteers who are passionate about outdoor activities. The Fernie Mountain Bike Club, the Fernie Nordic Society and the Stag Leap Running Co. are a few of the amazing communities you can be a part of whether you live here or are visiting.

# A PICTURE IS WORTH 1,000 WORDS

**1.** Ann Nyambura Kamande receives her Community Health Worker certificate from President and CEO Don Lindsay in Kenya in 2014. Today, Ann is one of more than 60,000 women in Kenya, Burkina Faso, Ethiopia and Senegal who are providing health care to children and families in rural communities. Ann and others have been empowered through education and support by our Zinc Alliance for Child Health partnership with the Government of Canada and Nutrition International.



**2.** On February 5, Teck employees and their families were able to enjoy the snowy trails, as well as receive free lessons at the Teck Inspiring Wellness and Learning Family Ski Day at the Blackjack cross-country trails near Trail Operations. Pictured here: Jennifer McLean, Senior Maintenance Engineer (r), with her father, Barry McLean (l) and her son Jamie Olson.



**3.** Renowned pin collector Al Falcao shared the spirit of excellence by providing each of the players on his grandson's hockey team with Teck's Olympic pin. "Every one of these kids on the ice has dreams of being an Olympian someday, and hopefully these pins can help inspire them."

**4.** More than 1,000 community residents and employees attended the first annual Teck Mining Technology Fair, hosted by Carmen de Andacollo Operations. The event featured demonstrations, simulators and information booths on innovations in mining processes, especially around environmental management.



# A Lifetime Together in Mining and Marriage

Much has changed in the mining industry over the past 30 years, but for two Teck employees in the Elk Valley, B.C., the one constant has been each other.

On February 21, 2018, Dean and Glenda Hewitt officially retired, saying goodbye to their careers and hello to the next phase of their lives, after a combined 68 years in mining.

“We came in the door together, and we’re walking out the door together,” says Dean, formerly Superintendent, Materials Operations at Elkview and Line Creek Operations. The couple has been together for 36 years, married for 32, and they have two beautiful daughters and three grandchildren.

“Now we’re going to do what we want when we want—that’s my retirement motto,” adds Glenda, whose final role was Finance Administrative Assistant at the Mountain View office.

The two first came across the country to B.C. from Eastern Canada in the early 1980s, looking for work in mining. It was a natural choice for the two 20-somethings, both of whom had parents working in the industry.

“Before that, though, the longest job I held was for 15 months, and now I’ve been with this company for 34 years; it’s all I really know,” says Dean.

Over the years, Dean has worked at all of Teck’s steelmaking coal operations in Tumbler Ridge, Hinton and the Elk Valley in a variety of positions, starting as a warehouse worker before moving into a buyer role, and eventually into his last position with the company. Glenda also began in the warehouse, moving to an Executive Assistant role and eventually to her final role in Sparwood.

They were always fulfilled by their work, which has helped them achieve their ultimate goal of retiring at 55.

As for the coming years, the Hewitts already have big travel plans in the works—including a trip to Mexico, with much more expected to follow in the future as they set their sights on Australia, Alaska and the many regions of Canada they have yet to visit.

“We came in the door together, and we’re walking out the door together.”

“People say it takes about a year to settle into retirement; our next couple of years are pretty busy. Keep in mind that we have three grandchildren,” says Dean.

As for what they would say to current or prospective employees about their time with the company, Glenda has this message: “We’re grateful for all our years at Teck, which afforded us a quality lifestyle that we were able to balance with our family life. The company has been nothing short of awesome to us.” ■

Opposite: Dean and Glenda Hewitt at their home in Coleman, Alberta





# Recognizing Excellence

On February 21, our 2017 Excellence Awards winners and guests arrived safely in Seoul, South Korea, to participate in a weeklong trip to the XXIII PyeongChang Olympic Winter Games.

To read more about the outstanding contributions of these 30 Excellence Awards recipients, visit [teck.com/connect](http://teck.com/connect) to read “Recognizing Excellence”, or look for the insert in your print edition of *Connect*. ■

Above: The group travelled to Gangneung Olympic Park to watch the women’s gold medal hockey game.

Opposite, above left: Excellence Award Winner Cristian Soto Araneda, Head of Occupational Health, Quebrada Blanca Operations and spouse Paola Inzunza Contreras at Canada Olympic House.

Opposite, above right: Willie Desjardins, Men’s Hockey Head Coach for Team Canada (far right), was a surprise guest speaker during the group’s visit to Canada Olympic House.

Opposite, below: The group watched Canada win gold and silver in Women’s Ski Cross.

Right: Winners meet with Karina LeBlanc, Teck ambassador and former goalkeeper for the Olympic bronze medal-winning Canadian Women’s Soccer team.





# Redefining Teck's By-Products

Trail Operations partners with MIDAS to explore new ways to create value from slag.

**M**etallurgical slags, by-products of Teck's lead-zinc smelting and refining complex in Trail, B.C., are at the centre of a three-year research project led by the University of British Columbia Okanagan. Graduate students are looking at ways to extract and refine valuable rare elements from the slag, which can be used commercially in semiconductors and other electronic applications.

Much of this is unfolding at MIDAS (Metallurgical Industrial Development Acceleration and Studies), a fabrication lab located in Trail, where this project is able to flourish, along with other technical opportunities heating up in the region.

## A Centre for Regional Innovation

From the outside, MIDAS could be another retail shop in a strip of small businesses, but inside, technology and innovation are at the forefront. The applied research, commercialization and digital fabrication training facility services the metallurgical sector that clusters around Teck's Trail Operations. MIDAS makes advanced manufacturing technology—including 3D printing—accessible to many in West Kootenay, B.C.

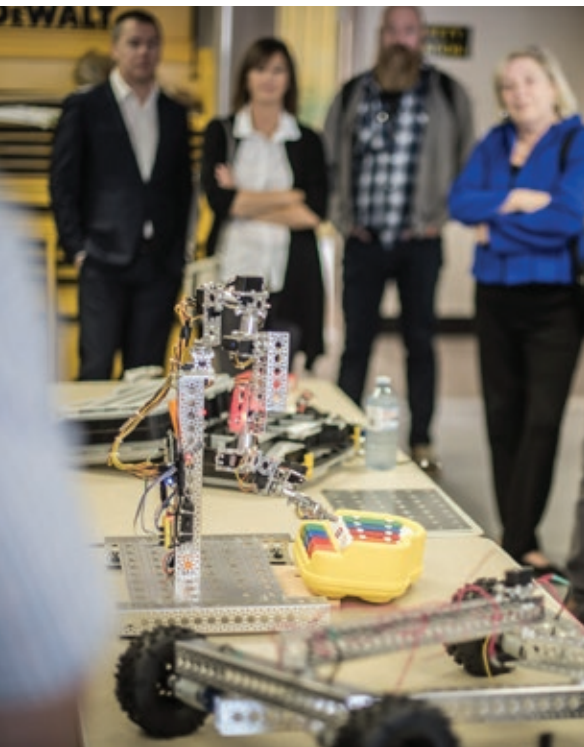
MIDAS, a public-private enterprise initiated by the Kootenay Association of Science & Technology (KAST) and Fenix Advanced Materials, opened in 2016 to leverage the region's technical talent, commercialize new products and technologies, and diversify the local economy.

"Part of the rationale for building MIDAS here in Trail is the proximity to Teck's Trail Operations," explains Amber Hayes, project director for MIDAS. "Academics are just astounded by the value of Trail Operations' by-products they're able to work with; they have so many different elements, and they're an amazing resource."

**Academics are just astounded by the value of Trail Operations' by-products they're able to work with; they have so many different elements, and they're an amazing resource.**

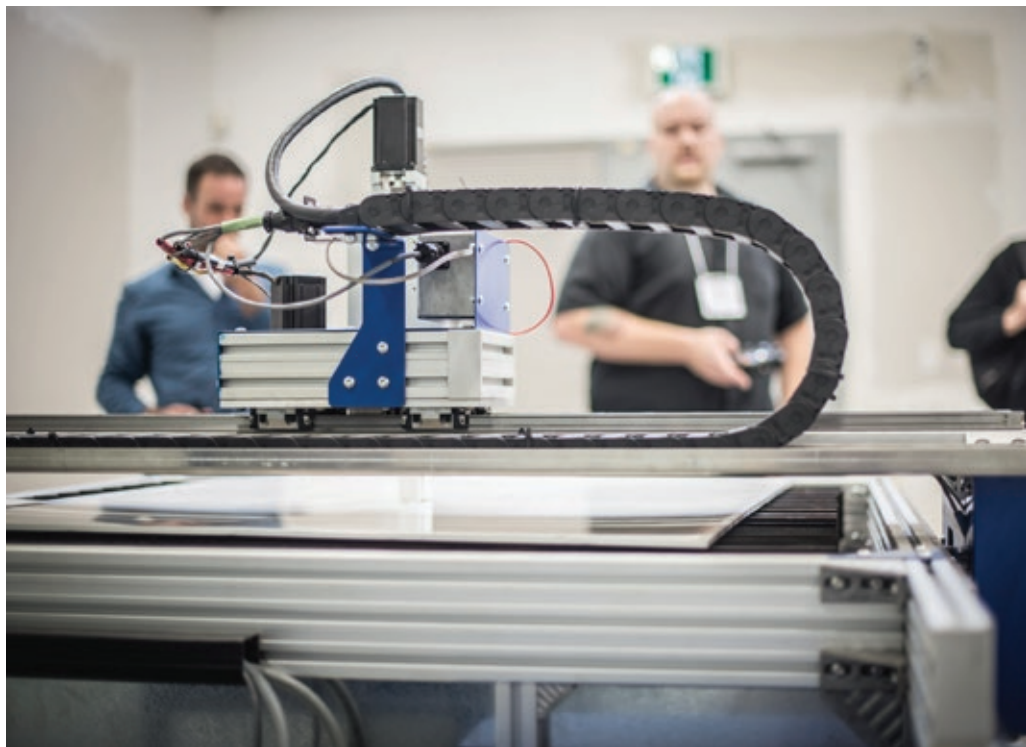






Regional companies use the facility and its equipment to supplement their business. For example, manufacturers can digitally print test prototypes in plastic before creating their products in wood or metal, training programs can be downloaded and accessed virtually, and aging equipment can be reverse-engineered. These disruptive technologies are not only being accessed by engineers, but also by resident artists, students and entrepreneurs.

“There is also a strong material stewardship opportunity with MIDAS for Trail Operations,” says Greg Richards, Superintendent, Knowledge Management, Trail Operations. Greg is also a metallurgical engineer and serves as Chair of the Lower Columbia Community Development Team Society’s Metallurgical Committee, which works to advance business development and economic strength in Trail and surrounding areas.



“Being able to provide our by-products to MIDAS improves our ability to maximize the value of our materials across their life cycle while providing economic development opportunities for other companies and our region,” adds Greg.

When the facility was being commissioned, MIDAS also took the opportunity to gain critical safety expertise from Trail Operations.

Dallas Cain, Trail Operations’ Superintendent of Health and Safety, together with Chris D’Odorico, Manager of Health and Safety, supported MIDAS in developing the safety program for the site, which includes equipment operator training, lock-out procedures and facility safety management.

“MIDAS provided a real locus for the ideas that had been generated around regional metallurgical technology and innovation,” says Greg, recalling the number of discussions and attempts at something like MIDAS over the years. “I believe that MIDAS was the missing piece that we needed to help advance opportunities in our area.” ■

Opposite: Greg Richards, Superintendent, Knowledge Management, Trail Operations, and Chair of the Lower Columbia Community Development Team Society’s Metallurgical Committee.

Above: Community members tour MIDAS at its opening in 2016.



# Mining New Ideas at the Uearthed Hackathon

Hackathons have long been used in the software industry to bring together innovators and create new products in a short amount of time. More recently, the hackathon method has gained traction in the mining industry as a way to gather technical experts and tackle challenges in an era of big data.

In October 2017, students, programmers and mining experts came together in Vancouver, B.C., for 48 hours to create solutions to challenges facing miners like Teck at the Uearthed Hackathon. A team of Teck employees from across our operations, including Allyson Stoll, a Metallurgist from Red Dog Operations and Dave Harrington, a Senior Technical Analyst, Line Creek Operations, provided expert mining industry guidance for participants.

“There is a whole world of data analysis that opened up to me as an engineer, thanks to the Hackathon,” says Allyson. “I’m in the process of learning to code so I can help implement these types of changes at site.”

Dave supported a challenge at the event that focused on optimizing the haul cycle of each truck. Thanks to dozens

of sensors on haul trucks, Dave and his team are able to create a model to determine the best route and speed for each driver. However, the problem was how to display the data to drivers in real time in a safe and understandable way.

“Haul trucks carry up to 400 tonnes of material per cycle, so getting performance right can have big benefits for efficiency and cost reduction,” says Dave. “We have the data, but it was through the Hackathon that we began to unlock its potential.”

Teck’s participation in the Hackathon is one of the many ways we are focused on building a culture of innovation and technology across our sites. Moving forward, Teck is evaluating the winning project ideas and looking for opportunities to implement these innovations. ■



Visit [teck.com/connect](https://teck.com/connect) for a video with highlights from the Uearthed Hackathon.

Above left: Dean Mackie, Director, Enterprise Applications, Teck Digital Systems (far left) sets the stage for Uearthed Hackathon participants, organizers, and judges, including Shehzad Bharmal, Vice President, North American Operations, Base Metals (far right).

Above right: Uearthed Hackathon participants tackle a challenge.



# SDG Spotlight:

## Goal 5

Through our activities and initiatives, Teck is helping achieve progress on the United Nations Sustainable Development Goals (SDGs). In the spirit of International Women's Day celebrated throughout the month of March, we're spotlighting SDG Goal 5: Achieve gender equality and empower all women and girls.

Launched in September 2015, the SDGs consist of 17 ambitious goals that aim to tackle the world's most pressing challenges and shift the world onto a sustainable path. Meeting the SDGs by 2030 will require cooperation and collaboration among governments, NGOs, development partners, communities and the private sector.

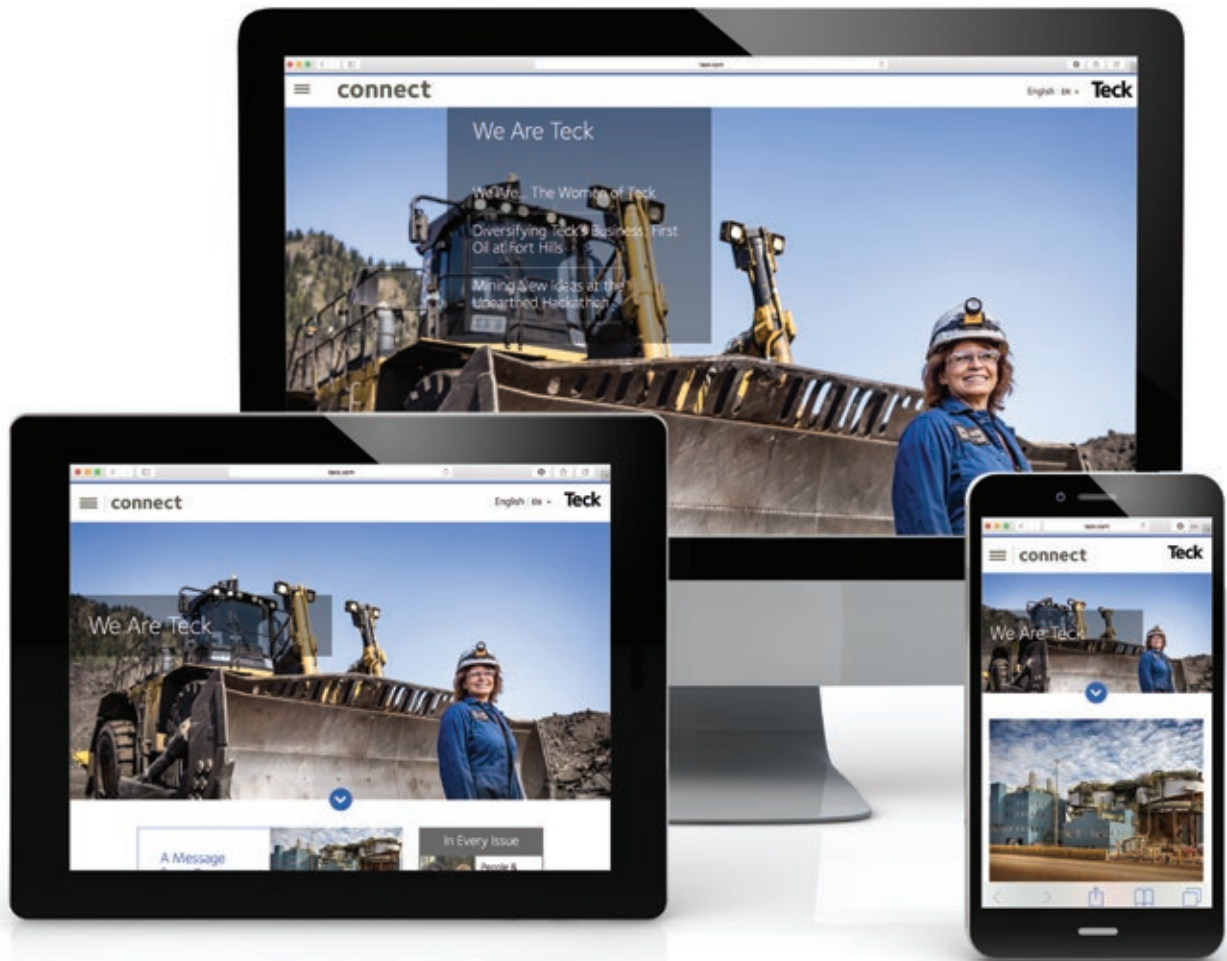
### Our Approach

We believe that diversity makes us a stronger company. We have implemented programs to increase diversity within Teck, and we support training and education opportunities focused on women in the areas where we operate. We know that a broad range of backgrounds and perspectives builds stronger, more resilient companies. Since 2010, the number of women in technical or operational roles at Teck has increased by 57%. ■

### Examples of Our Work

In 2016, we developed and released an Inclusion and Diversity Policy, endorsed by our Board of Directors and senior management team, which aligned with our values and existing corporate charters and policies.

For more examples of the ways we are committed to removing barriers and fostering the recruitment, retention and promotion of women at Teck, visit [teck.com/responsibility](http://teck.com/responsibility).



# Connect is now available at [www.teck.com/connect](http://www.teck.com/connect)

*Connect*, Teck's employee magazine, is now available online from anywhere. To access stories, photos and videos about our people, our business and the communities in which we operate, visit us online at [www.teck.com/connect](http://www.teck.com/connect)