



Women in Mining Career Connections

A guide for students, teachers
and parents about opportunities
in the mining, minerals and
exploration industry.



Welcome to the Women in Mining Career Connections Guide – the first of its kind in Newfoundland and Labrador. This guide features profiles of some of our industry’s leading female workers – it shares their personal stories of where they began and how they came to realize a career in mining was their calling. These stories depict how fulfilling and meaningful a career in this industry can be and prove that our industry is rich not only in resources, but also in its people.

This Women in Mining Career Connections Guide commemorates the fifth year anniversary of the Women in Mining Forum, an annual Newfoundland and Labrador Mining Week event.

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Taking Action: A Guide for Teachers

Many career choices are confirmed during the first years of post-secondary education.

Here's what educators can do to help encourage women to consider the mineral resource industry.

1. Support women's education, at all levels, at all ages, and importantly – in all fields! Encourage young women to continue to participate and excel in the STEM studies.
2. Continue to educate and learn about unconscious biases. Work to stop the future looking like the past so under-represented minorities can contribute and improve our industries futures.
3. Encourage your female students to spread their wings and have the courage to participate and make difficult choices. The earlier we teach students to take chances and risks, the more likely they will keep an open mind to career options.

Is a Career in the Mineral Resource Industry right for me

*Questions to consider when
choosing a career in the
mineral resource industry:*



For more information about careers in the mineral resource industry, post-secondary programs of study and, academic requirements, take the time to talk with your guidance and/or career counsellor.

*Learn more about
the workplace skills
needed for the future at
www.skillscanada-nfld.com*

Exploring your career potential?

Choosing a career is a lot about exploring your own interests.

- What are your interests?
- Do you think your interests could relate to a career in the mineral resource industry?

Lifelong learning and you?

Formal and informal education and training are part of the lifelong learning process.

- What types of post-secondary education suit your interests?
- Do you want to complete a degree program, diploma or on-the-job training?

Mining your skills?

Digging deep and discovering your skill set can help determine your career direction. For example, are you good with people? Are you skilled with computers?

- What are your key skills?
- Do you think you have the skills required for a career in the mineral resource industry?

Considering your future?

Career-development requires thinking ahead.

- What type of work do you see yourself doing in 10 years?
- Do you know the steps to get there?

Newfoundland and Labrador's Mineral Resource Industry

Minerals and Metals Matter

Stop. Look around. Imagine for a moment what daily life would be like without rocks, metals and minerals. You may think "I live just fine without rocks, metals and minerals!" Let's go through your daily routine and see if that's true. You wake up, turn on your lights, take a shower, cook your meals, brush your teeth, listen to music, watch television, use a computer, drive to school and more... well, guess what? Minerals make these daily activities happen!

There are thousands of applications and highly desired products made from metals and minerals — products essential to meet our basic physical needs and enrich our way of life!

Newfoundland and Labrador is home to tremendous mineral wealth and the process of exploring, discovering and developing mineral resources requires qualified, skilled and experienced people. From A to Z, the minerals industry hires people from diverse professions like: accountants, chemists, draftspersons, diamond drillers, environmental engineers, electricians, geologists, GIS specialists, millwrights, mining engineers, nurses, truck drivers, and lots more.

Options and Opportunities?

Today's mineral resource industry offers:

- ✓ High paying jobs
- ✓ Equal employment opportunities
- ✓ Strong safety record
- ✓ Cutting edge research and development
- ✓ State of the art technology
- ✓ Innovative business practices
- ✓ Environmental protection
- ✓ Social responsibility

Outlook

The outlook for career opportunities remains high for the mineral resource industry. According to the Mining Industry Human Resources Council, www.mihhr.ca one out of two current industry workers will be replaced in the next decade. The mineral resource industry will offer tremendous opportunities for workers with the right skills and training.





1 Geoscience



5 Mine Closure

5

4



4 Mine Operation

From the Ground to the Everyday. | **A closer look at the mineral resource development cycle.**



Mineral Exploration

Mine Development

1

GEOSCIENCE

What is geoscience?

It's a field of science that addresses the study of the earth. Although it deals with all issues relating to the Earth and its systems, one of its major uses is the development of our natural resources. Natural resources include minerals, metals, oil, gas, aggregates, soil, and water resources.

Geoscience often includes other areas of science such as biology, chemistry, physics as well as mathematics and engineering. A geologist, geochemist, geophysicist, environmental geologist and paleontologist are examples of geoscience career paths.

WANTED

A curious problem-solver ready to discover and better understand the Earth and its resources.



Where can you find a geoscientist?

A geoscientist can be found in the field or in an office! They work in various levels of government departments and agencies, post-secondary institutions such as universities and colleges, industry consulting firms or are self-employed.



Geoscience Profiles

Alana Hinchey



Position: Senior Geologist,
Regional Geology Section

Organization: Geological Survey of
Newfoundland and Labrador,
Department of Natural Resources,
St. John's, NL

Education: Ph.D. in Earth
Sciences, Carleton University;
M.Sc. in Earth Sciences, Memorial
University; B.Sc.H in Geology,
Queens University

Alana's Journey: Alana works for the Geological Survey, a division with the provincial government responsible for providing geological information for the Province. Geoscience data has many different uses, and, services the mineral resource industry, other government agencies, and the general public.

Alana's responsibilities include managing the regional mapping section, generating projects, scientific research, and ensuring staff have the tools to complete their projects. She shares, "I enjoy the flexibility that comes from being involved in a wide variety of projects." She especially enjoys field work and the opportunity to travel and discover underexplored regions. Her research projects have taken her to unique places throughout Canada, from the North coast of Labrador, to the Article circle of Nunavut, and the interior Mountains of British Columbia.

The use of technology is very important to Alana's work, including the use of handheld computers in collecting field data. "The miniaturization of computers has revolutionized the way we capture data. The use of specialized software such as Geographic Information Systems (GIS) is essential in creating digital maps and pinpointing exact positions."

Alana has always been involved with sports and volunteering and believes this gives one the ability to work in a team. "You don't always have to be the best player, but by trying and working hard, you can achieve great things. Volunteering gives you an appreciation for other people's needs. Having grown up in a rural, small town (Alana grew up Faro, Yukon) it opens your eyes to the world."



*The miniaturization
of computers
has revolutionized
the way we
capture data...*



Geoscience Profiles

Jennifer Organ



Position: Project Geologist,
Geochemistry Geophysics
and Terrain Sciences Section

Organization: Geological Survey
of Newfoundland and Labrador,
Department of Natural
Resources, St. John's, NL

Education: M.Sc. in Geography
and Joint B.Sc. H in Earth
Science and Geography,
Memorial University

Jennifer's Journey: Jennifer works for the provincial government with the Geological Survey, a government division of nearly 60 people. Her work is office based for most of the year, but she loves the field component. "The field work is what I love most about my work. Collecting data and mapping requires me to be in the field for the summer months. My job is fun, and it's challenging... and as a bonus I am able to work outdoors." A typical field season lasts 12 weeks and time is often broken up by weekends off.

Jennifer's research projects are specialized, and provide valuable information to help better understand why a landscape looks the way it does, and, to learn about its history. Her research has many applications, including exploring for minerals, land use planning and assessing geological hazards.

She enjoys exploring different locations throughout the province and often uses helicopters and boats to access remote field areas. Jennifer records all her field data digitally, and studies the data back at the office to produce geology maps and write reports. Jennifer especially enjoys mentoring summer field students. She would like students to realize the importance of strong communication skills. She admits she underestimated the importance of strong writing and editing skills in high school and now has a better appreciation for how important they are for her (or any) career. Jennifer is working towards strengthening her own technical writing skills.



***My job is fun, and
it's challenging...
and as a bonus
I am able to
work outdoors.***





The Mineral Resource Industry Presents a World of Opportunities!

Careers in the mineral resource industry offer many diverse and exciting career paths. From trades and technology, to highly specialized and professional positions, the industry has multiple positions and offers high paying salaries and benefits. Working in the mining industry can provide opportunities to work with innovative technology, to travel all over the world and to train and expand your skills. Curious and want to learn more about careers in mining? Visit www.acareerinmining.ca.

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MINERAL EXPLORATION

What is mineral exploration?

The first stage of the mineral resource development cycle is mineral exploration. Searching for ore bodies, or valuable minerals and metals that can be economically mined is the goal of exploration. The mineral exploration stage is a slow, yet very well planned stage. It is rare to find an orebody with a high enough concentration of minerals or metals to develop a mine, but it all begins with mineral exploration! Good geological maps and reports created in the geoscience

stage provide the road maps for explorationists. Mineral Exploration is carried out by geologists, prospectors, junior exploration companies and/or mining companies. A geologist, geophysicist and prospector are examples of mineral exploration careers.

WANTED

An explorer with a keen sense of adventure, on a mission to find the next big mineral deposit.

Where can you find a mineral explorationist?

Explorationist work is largely carried out in the great outdoors! Office time is shared studying aerial and satellite photographs, reviewing geological maps and reports and published work completed by government geological surveys, exploration or mining companies. They work for junior exploration companies, mining companies, consulting firms or are self-employed.



Mineral Exploration Profiles

Sherry Dunsworth



Position: Vice-President Exploration

Organization: Marathon Gold Corporation, Pasadena, NL

Education: M.Sc. in Earth Sciences, Memorial University; B.Sc. H in Geology, St. Mary's University

Sherry's Journey: Sherry is the Vice-President of Exploration and a registered professional geologist for a junior exploration company that employs six employees year-round and up to 25 employees during the summer exploration season. She has more than 30 years in the mineral resource industry and has traveled and worked extensively in many countries throughout the world.

Sherry's executive responsibilities are varied, but she loves the exciting nature of the exploration sector. Her roles include developing, implementing and monitoring exploration projects, controlling budgets, writing corporate documents and reports, giving presentations and hiring staff. She finds the various aspects of her career to be stimulating and rewarding.

"I pursued this career choice because I loved working outdoors in an exciting and challenging environment and I also wanted to travel. So, the idea that I could combine work and travel as well as being paid a good salary was a dream for me to pursue," shares Sherry. "Geology is a wonderful career if you are the type of person who likes solving puzzles (rocks are the puzzles), the outdoors, challenges of all sorts, are open to change, and can adapt to new places and people." Sherry adds that although the opportunity for travel is wonderful, it means you will most likely be away from home each night and may not be living in a city.

"If you want to succeed in a non-traditional role, make sure you work hard, know your job, give respect to others, be receptive to suggestions, ask for help but always be willing to work hard and be on time. These are the qualities that lead to success!"



Geology is a wonderful career if you are the type of person who likes solving puzzles (rocks are the puzzles)...



Mineral Exploration Profiles

Kaylen Janes



Position: Manager of Environmental Affairs and Community Relations

Organization: Altius Minerals Corporation, St. John's, NL

Education: Graduate Diploma in Integrated Coastal and Ocean Management, Marine Institute; B.Sc. in Biology, Memorial University

Kaylen's Journey: Kaylen is the Manager of Environmental Affairs and Community Relations for Altius Minerals Corporation, a company that conducts early-stage mineral exploration activities. The company explores for mineral deposits and matches the natural resource project with industry partners that can advance the project. Kaylen works with a dynamic team with professional backgrounds in geology, geotechnical training, accounting and administration.

Originally from Marystown, NL, Kaylen chose to work in the mineral exploration industry because of opportunities to travel within the province, especially Labrador. She is especially keen to gain on-the-ground experience while working with communities. "I most enjoy working directly with communities and aboriginal groups," Kaylen shares. "I consult with communities and aboriginal groups near the areas Altius is conducting activities, ensuring our mineral exploration programs are completed in an environmentally-friendly way."

Kaylen recommends her career path to those with an interest in travelling, environmental management, and communicating with a variety of different stakeholders. She encourages students to network as a means of securing their first job. "Students should take advantage of all networking opportunities presented to them while completing post-secondary studies and early in their careers." Kaylen has chosen to continue her education part-time while working; she is currently completing a Master of Environmental Science graduate program at Memorial University.



Students should take advantage of all networking opportunities presented to them while completing post-secondary studies and early in their careers.



3

MINE DEVELOPMENT

What is mine development?

The mine development stage only occurs if the mineral exploration stage is positive! There are three main goals during mine development:

- 1) Determine if the mineral deposit is worth mining (i.e. evaluate the mineral discovery)
- 2) Raise financing to develop the mine
- 3) Plan to design and build a mine

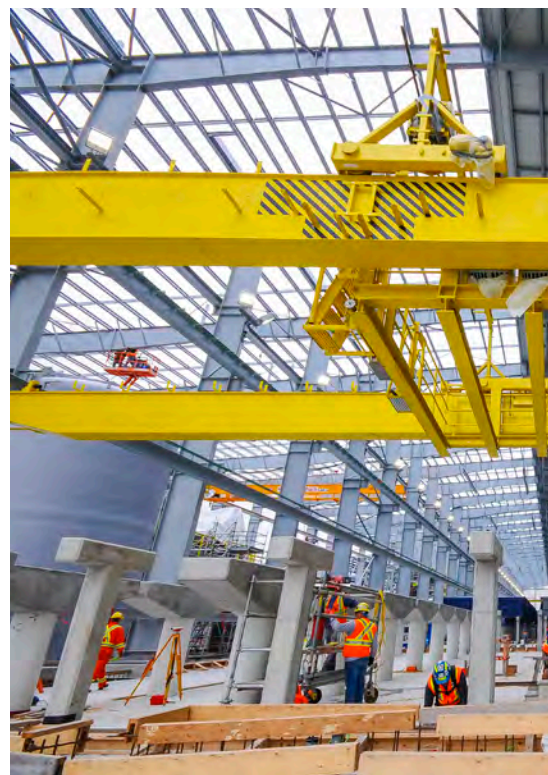
During the mine development stage, the company has to make many detailed plans and important decisions. It is a long, and intense, multi-phase process, sometimes taking up to 7 to 10 years to complete. Companies must follow a strict process as required by government laws. The project must be released from an environmental assessment (EA) before the company can receive the permits required to mine. These permits are called mining and surface leases. Companies must also have financial assurance to support mine closure. Various plans and reports are required, including for closure of the mine, geology and engineering studies, legal and financial work, and potential environmental and social impacts.

Where can you find people who work in the mine development stage?

Many different skills and training are required to work in this stage! Work can occur in the field and/or office. Accountants, construction workers, electricians, engineers, geologists, lawyers and workers specialized in various skilled trades are just a few of the types of careers needed.

WANTED

A team player ready to design and build the next great mining project.



Mine Development Profiles

Amy Copeland



Position: Manager of Permitting and Environmental Compliance

Organization: Alderon Iron Ore Corporation, St. John's, NL

Education: B.Sc. in Geological Engineering, University of New Brunswick

Amy's Journey: Amy works for Alderon Iron Ore Corporation. Alderon is a development company with an iron ore project located next to mining towns Wabush and Labrador City in Western Labrador, Canada. Alderon employs about 40 people and recruits and hires for a multitude of roles including engineers, environmental scientists, aboriginal relations and more. Amy's first position in the mining industry was in Alberta in the oil patch. "I was fresh out of school and Schlumberger hired new graduates frequently as they are typically energetic and eager to learn. I was recruited to my current position by my former manager who had moved on to the same company."

As the Manager of Permitting and Environmental Compliance, Amy works with others to generate lists of regulatory requirements for the evolving project as they relate to permitting, planning and environmental compliance. She loves the fast-paced nature of her work and often travels to Québec and Labrador.

To obtain a position of Amy's level, one would have to acquire a Bachelor's degree in science or engineering and complete at least eight to ten years' work experience. "The mining industry provides great opportunities to work with a variety of people and see different sides of development and exploration projects. I always had an interest in geology and engineering so the decision to work in the mining industry was a natural one."



I always had an interest in geology and engineering so the decision to work in the mining industry was a natural one.



Mine Development Profiles

Fay Pittman



Position: General Manager,
Projects

Organization: Alderon Iron Ore
Corporation., Montreal, QC

Education: B.Eng. (Civil),
Memorial University

Fay's Journey: Fay Pittman is the General Manager (GM) of Projects at Alderon, an iron ore development company located in the Labrador West region, currently developing a mine that will produce iron ore concentrate.

Fay chose engineering based on her academic strengths in math and science. "Math is a basic requirement for engineering and my GM role involves managing a budget so math is important in that respect as well." Though English was not a favorite subject for Fay, she feels strong written and oral communication skills are critical. Fay believes participation in sports and volunteering is valuable as it helps to build teamwork skills."

Fay obtained her first job with Schlumberger in the oil industry and then moved to work with Canadian Pacific Railway where she held a variety of roles in operations and engineering. Having spent 10 years in the rail industry prior to entering the mining industry, Fay was eager for a change. "When I first entered the mining industry, I was actually surprised at the number of females that were working in this field. I had worked with only a handful of females in the rail industry and it was a pleasant surprise to encounter greater diversity in mining."

Fay says that Alderon is supportive of work-life balance. "There is a lot of give and take in my organization. As long as my manager is confident in my ability to do my work, he provides me with the flexibility to manage my time as required."



Math is a basic requirement for engineering and my GM role involves managing a budget so math is important in that respect as well.



4

MINE OPERATION

What is mine operation?

The mine operation stage involves removing and processing mineral resources from the earth to make them useable. The mining method depends on many factors, including the size, shape and location of the valuable minerals. This concentration of valuable minerals is called an orebody. Mining methods include:

- 1) Open-pit mining
- 2) Underground mining

Open-pit mining is used for mineral deposits that are near the earth's surface, while underground mining is used to extract ore that is buried deep! Once the ore has been removed or extracted, it is moved to a processing plant to separate the valuable minerals from the raw rock. The ore is sold and the leftover waste rock is safely stored.

Where can you find people who work in the mine operation stage?

The mining operation stage provides opportunities to travel and work anywhere in the world! Embracing new technologies and working with specialized workers from different cultures are some of the benefits. Field and office work can occur near urban areas, but typically work occurs in remote areas. Corporate offices, consulting service offices and mine sites are some of the places you will find specialists working in this stage. A driller, electrician, environmental technologist, haulage truck driver, mine engineer, pipefitter, and warehouse worker are examples of careers in the mining stage.

WANTED

A dynamic person with a passion for hands-on work, operating high tech equipment to produce valuable minerals that maintain our quality of life.



Mine Operation Profiles

Nicole Slade



Position: Manager of Pellet Plant and Product Handling

Organization: Rio Tinto, Iron Ore Company of Canada, Labrador City, NL

Education: B.Eng. (Mechanical), Memorial University; Master's Certificate in Project Management, York University

Nicole's Journey: Nicole is the Pellet Plant and Product Handling Manager with the Iron Ore Company of Canada (IOC), operated by leading global mining group Rio Tinto. IOC is the largest manufacturer of iron pellets in Canada and operates a mine, concentrator, and pelletizing plant in Labrador City, employing approximately 2000 people. Nicole has nearly 20 years in the industry. She began her career as an engineering work term student, gradually working her way up to various leadership roles from design engineer, plant engineer, project manager, senior and principal advisor, superintendent and her current role as plant manager!

Nicole credits her career path to what she refers to as "diversifying" her resume. "I seized every opportunity for challenging assignments. I worked in unfamiliar places and took assignments that were outside my comfort zone." Nicole's work has taken her around the world to South Africa, Western Australia for seven years, and eventually back home to Labrador City. She credits her current senior management role to the network she developed while working in Australia. Nicole is not finished advancing her career yet, however, and declares "The sky is the limit – you just have to step up. There is still so much to learn and do."



The sky is the limit – you just have to step up.



Mine Operation Profiles

Angelique Saunders



Position: Millwright (Apprentice)

Organization: Rio Tinto, Iron Ore Company of Canada, Labrador City, NL

Education: Diploma, Millwright Program, College of the North Atlantic

Angelique's Journey: Angelique is part of the Iron Ore Company of Canada's (IOC) field maintenance team. Millwrights are industrial mechanics and Angelique is responsible for maintaining and fixing mining equipment such as drills and shovels. Her time is shared between working outdoors in the open pit and working on the equipment in the component shop. Angelique enjoys her work as a Millwright and credits her colleagues for helping her grow in her role. "I feel lucky to have a great group of men and women that I work with on a daily basis to help enhance my skills as I make my way toward becoming a Journeyperson."

Originally from Labrador West, Angelique left home in 1997 to travel and work overseas. She spent over six years teaching English in South Korea before living in Australia and Alberta. In the fall of 2011, Angelique returned home and enrolled in the Millwright program at the College of the North Atlantic. During the nine month program, she was awarded several scholarships which provided her with needed financial assistance. Upon graduation, she received a position with IOC.

Angelique plans to continue her apprenticeship program and qualify as a Millwright Journeyperson in Newfoundland and Labrador. Once she qualifies for the Red Seal Certification, her skills become transferable and she will then be able to practice her trade across the country.



I feel lucky to have a great group of men and women that I work with on a daily basis to help enhance my skills.



Mine Operation Profiles

Dawn Hamilton



Position: Health, Safety and Environment (HSE) Advisor—Engineering Projects

Organization: Rio Tinto, Iron Ore Company of Canada, Labrador City, NL

Education: Diploma, Mining and Mineral Processing, College of the North Atlantic; Certificate in Health, Safety and Environmental Process, University of New Brunswick

Dawn's Journey: Dawn is a member of the Health, Safety and Environment (HSE) team, a team which provides coaching and support on the application of HSE policies and procedures to the leaders and employees in the IOC Labrador City operations. Dawn helps the teams to fully embed the HSE standards as IOC moves to zero harm.

Born and raised in a mining town, Dawn grew up watching her grandfather and father work at IOC and felt a pull toward the industry.

In the beginning of her career, Dawn worried that she would not be taken seriously as a woman in this traditionally male dominated industry. However, Dawn quickly learned that encouragement and support from co-workers came from both her female and male counterparts. Dawn is now a third generation employee at IOC.

Upon graduation from College of the North Atlantic, Dawn accepted a six month contract as a process technician and has since been with the company for over 14 years. Dawn may have begun in a temporary staff role, but she was soon driving a 300 tonne truck bringing ore to the loading pockets. In time, this led to analyzing samples in the chemical laboratory, which eventually led to her current role in HSE. Dawn says people and technology are integral parts of the job and her willingness to be a team player has paid off in her career. Dawn also says opportunities are vast for those willing to put in the effort and dedication. "The opportunities are endless in the industry! I have worked in five positions already in my career and know the opportunities are there for unlimited growth."



The opportunities are endless! I have worked in five positions already in my career and know the opportunities are there for unlimited growth.



Mine Operation Profiles

Maureen Bresil



Position: Hydrometallurgist

Organization: Vale NL,
St. John's, NL

Education: M.Sc. in Mathematical
Engineering, The Pierre—and—
Marie—Curie University
(University of Paris)

Maureen's Journey: Maureen began her career as a Hydrometallurgist at Vale working in New Caledonia, an island in the southwest Pacific Ocean. Vale is involved with base metal production (nickel, copper, and cobalt). Their main product, nickel, serves both the stainless steel and plating markets. There are many roles at Vale including process operators, engineers, environmental technologists, geologists, metallurgists, and more. Maureen's position involves engineering calculations, processing procedures, personnel training and coaching, developing processes, risk identification, and mitigation.

Maureen appreciates the value of being part of a team commissioning the start-up of an innovative process technology. "My home island of New Caledonia holds one of the world's most impressive nickel reserves. It was a joy and an honor to be part of the team developing its natural resources."

Maureen says she entered the mining industry feeling she would have to work twice as hard as her male counterparts. She was relieved to discover the opposite. "I found my male colleagues appreciated my enthusiasm and knowledge and approached me as a resource in the solving of process issues."

Maureen feels her company is supportive of its employees. As an employee, she benefits from reimbursement of tuition and course fees, extensive in-house training programs, and opportunities to travel to mining conferences throughout the world.



I found my male colleagues appreciated my enthusiasm and knowledge and approached me as a resource in the solving of process issues.



Mine Operation Profiles

Stephanie Baggs



Position: Mine Geologist,
Voisey's Bay Mine Site

Organization: Vale NL,
St. John's, NL

Education: B.Sc.H in
Earth Sciences,
Memorial University

Stephanie's Journey: Stephanie works for a global mining company which operates the Voisey's Bay Mine Site, which employs up to 300 people. The mine provides nickel, copper and cobalt concentrates to smelt, refine and sell in the world market.

Stephanie's early introduction with the minerals industry started during her undergraduate studies while attending university. As a student, she was encouraged to participate in events such as the Prospectors and Developers Association of Canada (PDAC) Convention. This world renowned convention attracts industry professionals annually from over 100 countries. During her time at PDAC, Stephanie had the opportunity to network with mining company representatives and attend presentations, short courses, workshops and luncheons. This unique networking opportunity reinforced the importance of strong communication skills – both oral and written – early in her career.

Stephanie says that as a Professional Geologist, "Strong written communication skills are important as there are quite a number of reports to be written on a monthly and yearly basis. It's always important to properly communicate your ideas and perspectives. In fact, to secure your first job you will need good written and spoken English for your resume and interviews."

In her current role, Stephanie completes a wide range of tasks both in the field and in the office, everything from sample collection to report writing. She says the industry is full of rewards for young people. "The industry is challenging and dynamic. It never gets boring! Plus, you can earn a great living!"



*It's always
important to properly
communicate your
ideas and perspectives...*



Mine Operation Profiles

Jill Kelly



Position: Health, Safety and Environment Superintendent

Organization: Teck Resources Limited, Duck Pond Operations, Millertown, NL

Education: B.Sc. in Biology, Dalhousie University; B.Eng. in Biological, Dalhousie University; M.A.Sc. in Environmental Engineering, Memorial University; Certificate in Occupational Health and Safety, University of New Brunswick

Jill's Journey: Jill is Health, Safety and Environment Superintendent with Duck Pond Operations, an underground copper-zinc mine owned and operated by Teck Resources Limited. Teck started producing copper and zinc there in 2007. Jill's background in science and environmental engineering led her to a career in the mining industry. In Health, Safety and Environment (HSE), Jill performs work in environmental management, technical reporting, and data collection. As part of her day-to-day job, she manages budgets and regularly interacts with regulators and corporate personnel.

Jill credits her volunteer experience with Girl Guides of Canada for instilling a strong work ethic and helping her build self-confidence. "I have had to have a lot of self-confidence as I am often speaking in front of large groups. Confidence and persistence is needed to excel at work."

Changing industries throughout her career has led to different challenges for Jill, like balancing work with family commitments. A recent challenge for Jill has involved balancing work with family commitments. "I have learned to become more balanced and to change pace when needed. Thankfully, I have a flexible work schedule."

Jill says that career advancement can be obtained if one has the drive and determination needed to excel. "The industry is very accepting of women and the jobs are challenging and rewarding. I would recommend it to anyone."



The industry is very accepting of women and the jobs are challenging and rewarding. I would recommend it to anyone.



Mine Operation Profiles

Melanie Bugden



Position: Junior Mine Geologist

Organization: Teck Resources Limited, Duck Pond Operations, Millertown, NL

Education: B.Sc. in Geology, Acadia University

Melanie's Journey: Melanie is a Junior Mine Geologist with Teck Resources Limited. In her department at Teck, there are several roles including geologists, engineers and surveyors. Melanie takes "hands-on work" to a new level — she spends the majority of her work week underground searching and surveying rocks to determine if they are ore or just waste rock. It makes for an interesting work week. "There are no two days the same — there is always something new to learn or do," enthuses Melanie.

Melanie's love of mining began early — from her first summer job as a student at Duck Pond, she knew mining was the industry for her. "I loved it! I didn't explore any other industry after that." Melanie says common stereotypes about women not belonging in industry are slowly disappearing. "I am a female working in this industry. I work with men on a daily basis and they respect me as they would any other geologist in the field."

Melanie has a flexible work schedule, working seven days on and seven days off. She says the job opportunities within Teck are endless. Employees can move from junior geology positions, to senior positions, and even to senior management positions, including technical services superintendent or mine manager.

Eventually, Melanie would like to advance to a management role. Throughout her career, her mentors have encouraged her to pursue as much training as possible and to work hard. "I've always been pushed to work hard and my love of the job has also been a huge motivator for me to succeed."



There are no two days the same — there is always something new to learn or do!



Mine Operation Profiles

Roberta Hicks

Position: Miner – Haulage Truck Driver

Organization: Teck Resources Limited, Duck Pond Operations, Millertown, NL

Education: Diploma, Hard Rock Miner Program, Corona College

Roberta's Journey: Roberta is a haulage truck driver, a position she has held for over five years. Roberta is responsible for using a variety of underground equipment such as driving a 45 tonne haulage truck and operating the load, haul, and dump (LCD) scoop. Roberta was late in life finding her current career and credits her friends for their positive support and for influencing her to pursue work in the mining industry."

Roberta has taken advantage of opportunities for career promotions and advancement at her workplace. She is grateful for "the opportunity

Kim Rowsell

Position: Underground Miner – Bolter Operator

Organization: Teck Resources Limited, Duck Pond Operations, Millertown, NL

Education: Diploma, Hard Rock Miner Program, Corona College

Kim's Journey: Miners are a group of operators that perform specialized mining functions, using sophisticated machines and equipment. As a bolter operator, Kim is responsible for supporting the underground mine's rock walls and ceiling with a screen and inserting rock bolts. Safety is a top priority, and Kim's role ensures her co-workers can continue their individual functions. Other mining roles include: drillers, muckers (operate mucking machines), blasters (use explosives to break the rocks), pipefitters (prepare the pipes that supply compressed air and water to the drills), and electricians.

"I have worked hard from the first day of hire and because of this I have had the opportunity to advance quickly," Kim shares. "Once you are viewed

Maxine Vautier

Position: Miner – Haulage Truck Driver / Scoop Operator

Organization: Teck Resources Limited, Duck Pond Operations, Millertown, NL

Education: Diploma, Hard Rock Miner Program, Corona College

Maxine's Journey: Maxine is an underground truck driver and scoop operator (both manual and remote). Maxine is responsible for driving a 45 tonne haulage truck, loading it underground with copper and zinc ore, and moving or hauling the ore to the surface.

Maxine received a scholarship to attend college to complete her diploma program. Her program focused on "core training" around central mining themes, including health and safety, the mining process, and fundamental hard rock training. Maxine successfully secured a full time position before completing her mining program. Since graduation

Mine Operation Profiles

to move up the ladder and train on different machinery, as well as take part in Mine Rescue Training and competitions." Roberta's commitment to safety has been recognized by her company and profiled in Teck's 2011 annual report, "When you make safety a core value, you think about it first in all of your actions and you share this leadership with your family and friends."



When you make safety a core value, you think about it first in all of your actions and you share this leadership with your family and friends.



by others as being competent and dependable, advancement is sure to happen. This increases your responsibilities, but also increases your wages!" Kim has been fortunate for the opportunity to travel while increasing her professional development from training courses, conferences, and field trips. Kim also received the "a trip of a lifetime" for participating in a Teck safety video – an all-expense trip for two to the 2012 Summer Olympic Games in London, England!



Once you are viewed by others as being competent and dependable, advancement is sure to happen...



and entering the workforce, she has had many opportunities to advance her career. "I have been in four different positions in the past six years, and, with experience come opportunities... as you gain experience, you qualify for advancement."

Maxine would "absolutely" recommend her career path to others. She shares, "I love working with others, and being able to work at your own pace, unsupervised, in a variety of jobs."



...and with experience come opportunities... as you gain experience, you qualify for advancement.



5

MINE CLOSURE

What is mine closure?

Mine closure is the last stage in the mineral development cycle! Mining is a temporary use of the land and all mines eventually close. Once mining is complete and the mine closes, the land must be left in a safe state that blends with the surrounding environment. This is called reclamation. Today's mining processes ensure that safe and sound environmental management occurs at every stage of the mining cycle, and in particular, before mining begins!

Where can you find people who work in the mine closure stage?

Duties generally involve time shared doing field work, laboratory analysis and office work. Environmental technicians, environmental engineers, and specialists who study the soil, water, wildlife and vegetation are examples of career opportunities in the mine closure stage.

WANTED

*A savvy environmentalist
with a passion for restoring
the land to its natural
state, making it safe to be
enjoyed for future use.*



Mine Closure Profile

Abigail Steel



Position: Environmental Engineer,
Mineral Development Division

Organization: Newfoundland and
Labrador Department of Natural
Resources, St. John's, NL

Education: Ph.D. in Civil
Engineering, Memorial University;
B.Eng. in Civil Engineering,
Queen's University

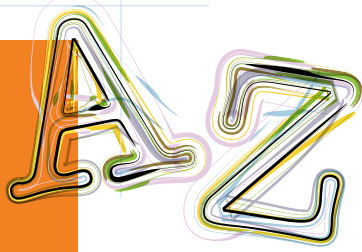
Abigail's Journey: Abigail works with the Mineral Development Division, Newfoundland and Labrador Department of Natural Resources, a provincial government office regulating the mining industry. Abigail studied civil engineering in university and, initially worked in the field of geotechnical engineering. Training and work experience provided the opportunity for Abigail to enhance her skills and to now work as an environmental specialist.

Abigail reviews technical reports from mine operators, studies consultant proposals, and assesses designs related to operating mines and orphaned and abandoned mines. She makes recommendations concerning mine plans and how abandoned and orphaned mines will be restored. She also spends time in the field conducting mine site inspections. Technology enables Abigail to analyze and work with large amounts of data. She shares, "I enjoy the technical challenges faced in the mining industry and the variety of people that I work with."



I enjoy the technical challenges faced in the mining industry and the variety of people that I work with.





The Mining Industry Human Resources Council lists more than 120 different careers essential to the mineral resource development industry. Here are just a few of the career classifications...

Learn more about
finding your right career
path at www.acareerinmining.ca

Mining Careers From A to Z

Administrative clerks **BIOLOGIST AND RELATED SCIENTISTS** Biological technologists and technicians **C**arpenters **CENTRAL CONTROL AND PROCESS OPERATORS IN MINERAL AND METALS PROCESSING** **Chemical technologists and technicians** **CHEMISTS** Chemical Engineers **Civil Engineering Technologists and Technicians** **CONSTRUCTION ESTIMATORS** **Construction Managers** **CONSTRUCTION MILLWRIGHTS AND INDUSTRIAL MECHANICS** **Drafting Technologists and Technicians** **DRILLERS AND BLASTERS – SURFACE MINING, QUARRYING AND CONSTRUCTION** **E**lectrical and Electronics Engineers **ELECTRICAL AND ELECTRONICS ENGINEERING TECHNOLOGISTS AND TECHNICIANS** **Engineering Managers** **FINANCIAL AND INVESTMENT ANALYSTS** **Financial Managers** **Financial auditors and accountants** **G**eochemist **GEOLOGIST Geophysicist** **GEOLOGICAL ENGINEERS** Geological and mineral technologists and technicians **H**heavy-duty Equipment **Mechanics** **HEAVY EQUIPMENT OPERATORS** **Human Resource Managers** **Human resource specialists** **INDUSTRIAL ENGINEERING AND MANUFACTURING TECHNOLOGISTS AND TECHNICIANS** **Industrial Electricians** **Industrial and manufacturing engineers** **INSPECTORS IN PUBLIC AND ENVIRONMENTAL HEALTH AND OCCUPATIONAL HEALTH AND SAFETY** **Inspectors and testers in mineral and metal processing** **LAND SURVEYORS** **Land Survey Technologists and Technicians** **M**achine Operators and Workers in Minerals and Metal Processing **MAPPING AND RELATED TECHNOLOGISTS AND TECHNICIANS** **Material Handlers** **Mechanic trades contractors and services** **Mechanical Engineers** **MECHANICAL ENGINEERING TECHNOLOGISTS AND TECHNICIANS** **Mining Engineers** **P**hysical Sciences **Professional Occupations** **PLUMBERS** **Primary Production Managers** **PROFESSIONAL ENGINEERS** **Production Clerks** **PIPEFITTERS AND SPRINKLER SYSTEM INSTALLERS** **S**ECRETARIES **Steamfitters** **SUPERVISORS IN MINERAL AND METAL PROCESSING** **Supervisors in mining and quarrying** **T**rades helpers and workers **TRUCK DRIVERS** **Transportation Route and Crew Schedules** **UNDERGROUND MINE SERVICE AND SUPPORT WORKERS** **Underground production and development miners** **WELDERS AND RELATED MACHINE OPERATORS...**



Selecting the Right School

What to Consider

- Type of school
- Type of academic program
- Cost and financial student aid

Post-Secondary Education

The **Labour Market and Career Information Hotline** provides tools and resources to support your career and employment goals. Call this toll-free hotline to learn more about career planning and services, training and education, programs, institutions, and more.

Toll-free: 1-800-563-6600 | Hearing Impaired-TTY: 1-866-729-4685

Email: LMCiHotline@gov.nl.ca

Compensation and Benefits

Environmental Engineer

\$50,000 to \$110,000

General Manager (Mine Development Project)

\$100,000 to \$200,000+

Health, Safety and Environment (HSE) Advisor

\$65,000 to \$105,000

Health, Safety and Environment (HSE) Superintendent

\$90,000 to \$150,000

Hydrometallurgist

\$75,000 to \$110,000

Junior Mine Geologist

\$60,000 to \$100,000

Manager – Environmental Affairs and Community Relations

\$85,000 to \$105,000

Manager – Pellet Plant and Product Handling (Mine Operations)

\$100,000 to \$200,000

Manager of Permitting and Environmental Compliance

\$85,000 to \$115,000

Millwright (Apprentice)

\$80,000 to \$90,000

Mine Geologist

\$60,000 to \$85,000

Project Geologist

\$50,000 to \$80,000

Senior Geologist

\$73,000 to \$95,000

Underground Miners (Truck Driver/Scoop Operator)

\$80,000 to \$90,000


Underground Miner (Bolter Operator)

\$80,000 to \$100,000

Vice-President Exploration (Junior Exploration Company)

\$140,000 to \$200,000+





Notes



MINING INDUSTRY NL



RioTinto

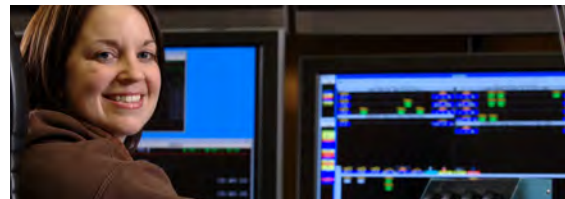


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