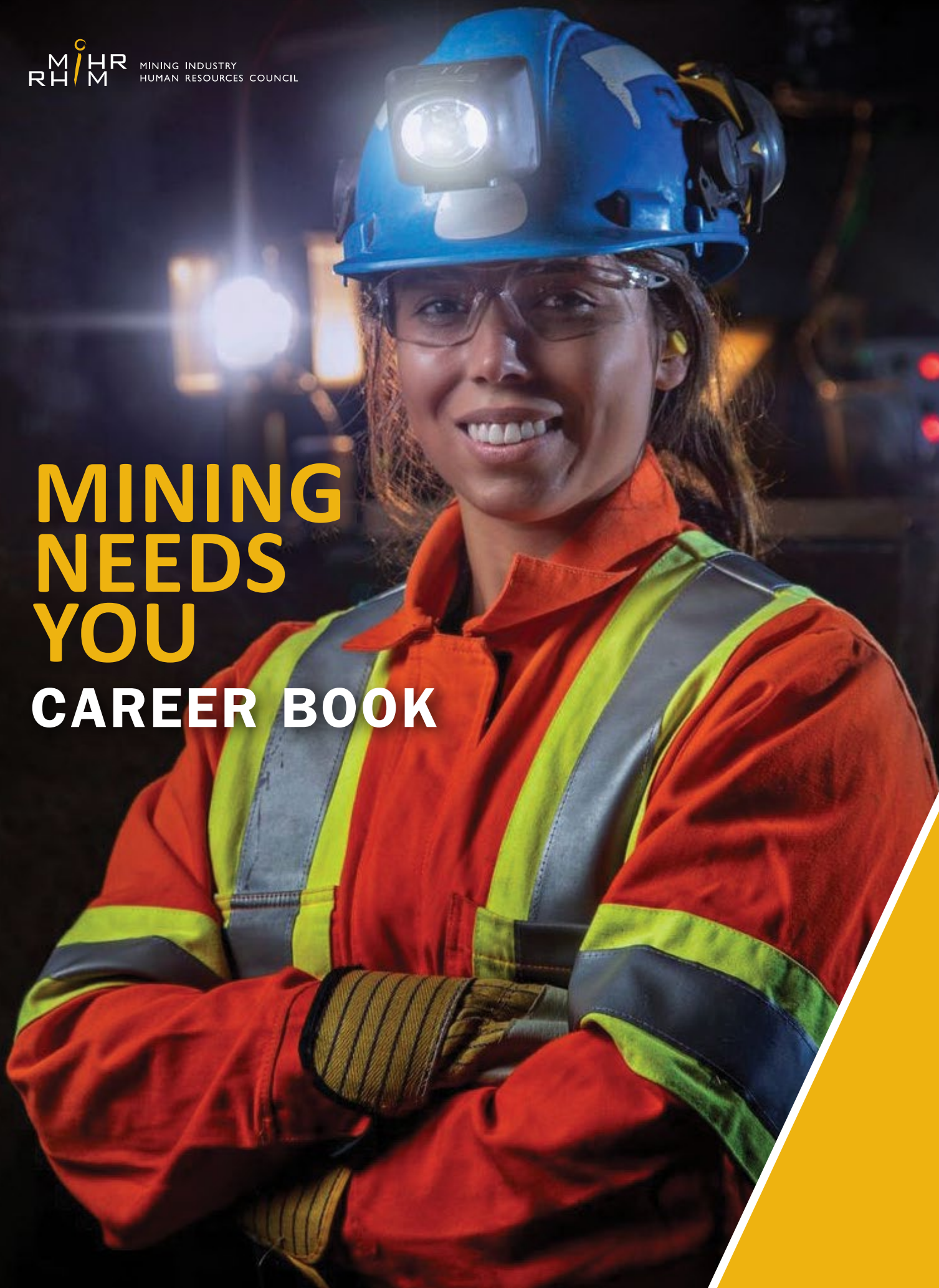
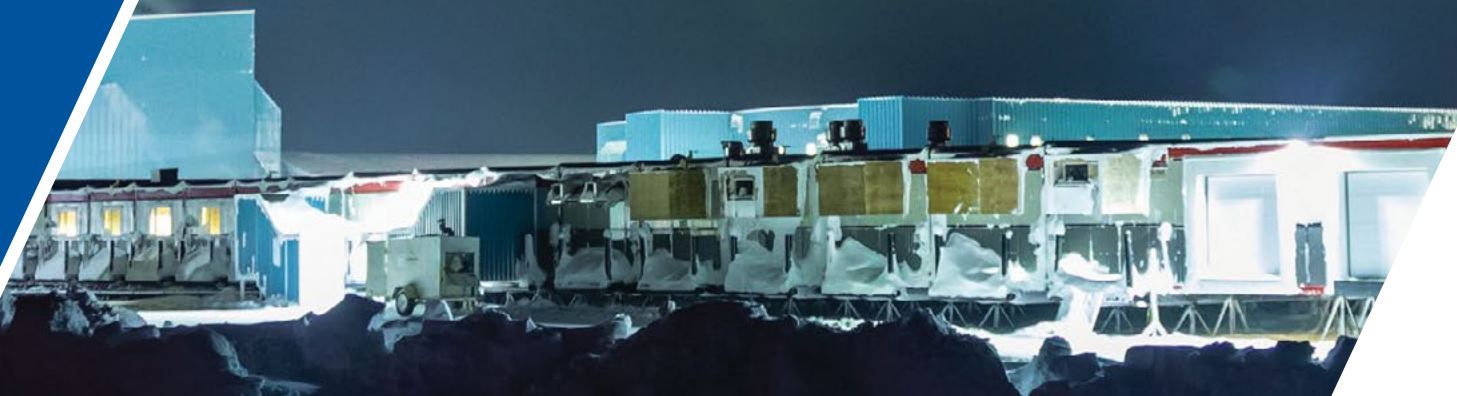


MINING NEEDS YOU

CAREER BOOK





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Canada 

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Is Mining For You?

Choosing a career is one of life's biggest decisions. Most of us want a rewarding career that we can be proud of. We want challenging work that offers opportunities for lifelong growth, pays well and provides financial security for ourselves and our families.

There are other things to consider as well. What do we value in a workplace and team? What kind of work-life balance are we looking for? What type of lifestyle do we want when work wraps up for the day?

This book introduces you to the types of careers you can find in mining. Did you know that Canada is one of the world's leading mining nations? With that responsibility in mind, our minerals and metals sector has a vision to be the global leader in worker safety, environmental sustainability and social responsibility within the next 10 years.

For Canada's mining industry to achieve this vision, it needs to attract people who are looking for an exciting, innovative career where they can make a difference. Mining needs you.

Ready to find out whether mining is for you?

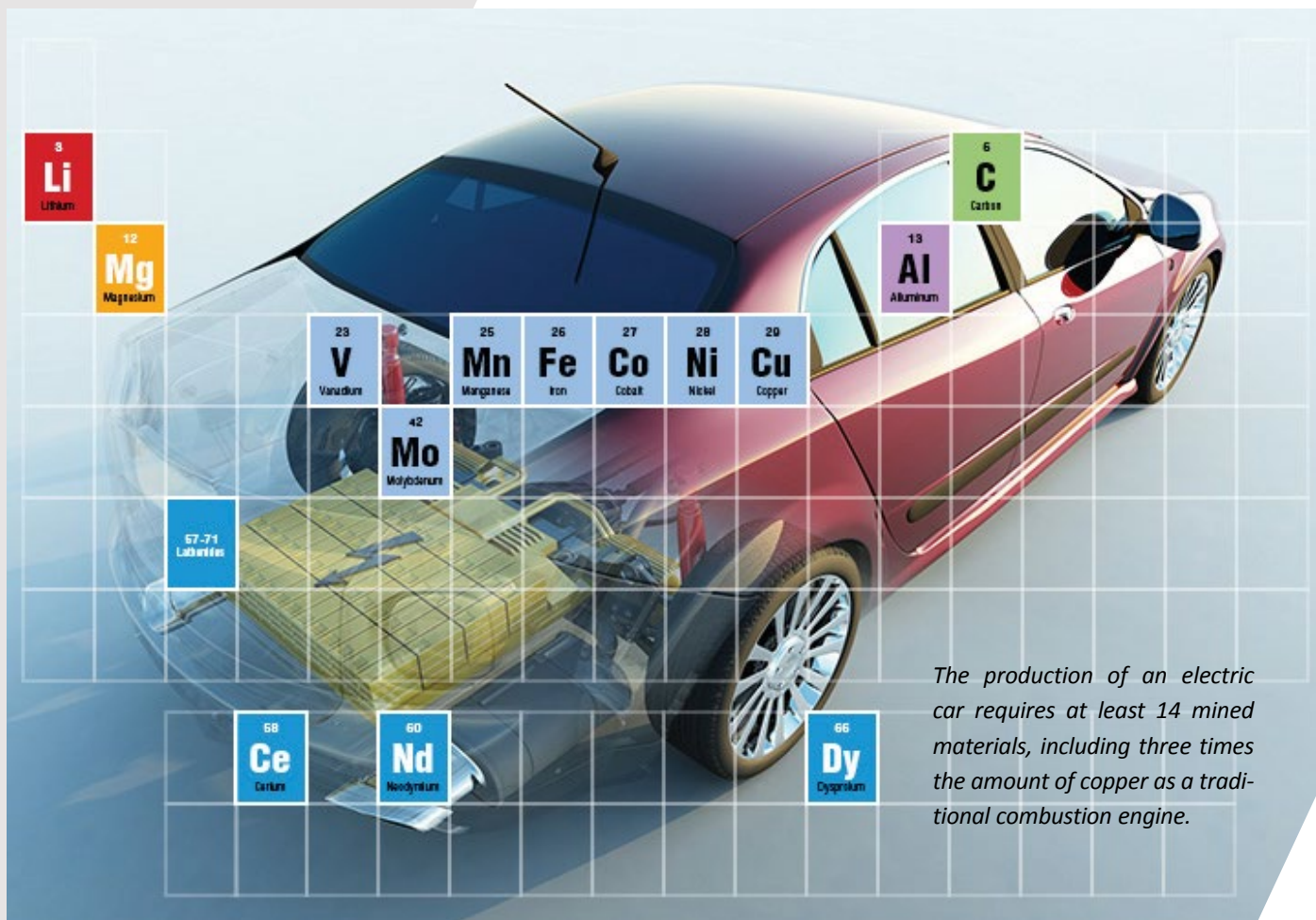
A photograph of several wind turbines in a field of tall, golden-brown grain. The sky is a vibrant orange and red, suggesting a sunset or sunrise. The turbines are silhouetted against the bright sky. One turbine is prominently in the foreground, while others are visible in the distance.

We Need Mining.

It's not news that mining is a major contributor to Canada's economy.

Canada's production of some 60 minerals and metals directly and indirectly contributed \$107 billion to Canada's total nominal GDP in 2020. We are the world's leading producer and exporter of potash: we fertilize the world's farms. Canada ranks third in the global production of aluminum, fourth in cobalt and fifth in nickel — important metals in the production of solar cells and high-density batteries.

Without Canada's mining, the world's shift to low-carbon wouldn't be possible.



The production of an electric car requires at least 14 mined materials, including three times the amount of copper as a traditional combustion engine.

Mining plays an important role in the average Canadian's everyday life.

We need copper to turn on our lights, to build our homes and to keep our hospitals free of infectious bacteria. Mined uranium is a must for smoke detectors and x-ray machines. Nickel is necessary for your guitar strings, electronics and kitchen sink.

In the transition to a low-carbon economy, mining has taken on the challenges of the 21st Century as demand for its output increases. The average electric car requires 80 kg of copper wiring — two to three times that of a regular vehicle.

Mining in Canada means responsible supply chains for metals and minerals, sustainably-sourced raw materials and high standards of environmental stewardship.

These principles are essential to the industry that puts cookware in our kitchens, smartphones in our pockets and surgical equipment in our hospitals. We can't do without mining, but we can always do mining better. That's why we need people who are looking for a career where they can make a difference.

A full-page background image of a mining worker in a hard hat and safety gear, using a tool that produces a large amount of bright orange sparks. The worker is standing in a dark, industrial setting with various pieces of machinery and structural elements visible in the background.

Mining Needs You.

Canada's mining industry is committed to leading the way on the environment, developing and maintaining strong partnerships with Indigenous communities and continuously improving worker safety. As well as being an efficient and technologically-advanced industry, Canada aims to be a global leader in mining with a clear and predictable regulatory environment, innovative clean technology solutions and best management practices.

But to achieve that vision, we need people who are ready for an exciting and rewarding career adventure. People interested in the cutting edge of technology, in leading the fight against climate change and in helping Canada lead on the global stage. People who care about their communities and neighbours, and who want their careers to make a difference.

If Canada is to become the global leader in responsible, safe and sustainable mining, it will need to attract the best and brightest in a wide range of fields, from robotics to engineering to environmental science to heavy machinery.

Mining needs you.

A woman with dark hair is smiling and looking towards the camera. She is in a control room, with a large screen behind her showing a mining operation. The screen displays a yellow excavator working in a rocky, underground environment. The control room has a dark interior with some equipment visible.

What Does Modern Mining Look Like?

Not only is mining one of the oldest industries in the world it was also integral to the early development of Canada as a nation.

The 19th Century prospecting that found iron in Quebec and Ontario, and gold in B.C. and the Yukon, laid the foundational tracks for the national railway system to spread north and west across the land.

That might be why the thought of mining brings to mind black-and-white pictures of men covered in coal dust emerging from underground.

Mining has come a long way since then.



Where exploration to find minerals and metals once involved only a hammer and claim stakes, now geologists and surveyors include Light Detection and Ranging (LiDAR) and portable spectrometers in their toolbox. Before a shovel even touches the ground, there are environmental assessments, feasibility studies and geological, geochemical and geophysical analyses.

Modern extraction is almost completely mechanized, where machinists, engineers and skilled workers manage and operate specialized machinery to handle raw materials. Sophisticated techniques are in place to deal with proper ventilation, lighting and ground-water removal.

AT THE CUTTING EDGE OF TECHNOLOGY

Mining has always depended on innovative problem-solving. Today, the industry is meeting the light-speed transformation of high technology in every aspect of its operations. From data analytics and advanced robotics, to virtual reality and artificial intelligence, mining needs state-of-the-art technology to run its modern operations.

If you're interested in cutting-edge technology like predictive maps, underground communications and remote-controlled vehicles, mining is an amazing field in which to work.

SAFE AND GETTING SAFER

Whether you work underground or above ground, in the field or in the lab, modern-day mining in Canada is safe. Today, underground mining jobs in Canada are as safe as a construction job. In fact, as one of the safest mining jurisdictions in the world, other mining countries regularly look to Canada to adopt its safety processes and practices.



As an industry, Canada's mining companies are committed to the highest health and safety standards possible and always aim for a zero-incident work environment.

COMMITTED TO ENVIRONMENTAL SUSTAINABILITY

Canadians expect that exploration, mining, processing and related activities include measures to avoid, minimize and mitigate environmental impacts. That's why mining is dedicated to climate change adaptation that includes plans to maintain air and soil quality, to protect wildlife and habitat health, and to reduce greenhouse gas emissions while adopting alternate and renewable energy sources.

Across the industry, there are efforts to lower the environmental footprint of mines and to create circular economies within mine extraction and operation that turn waste or by-products into useful inputs. Today's industry is working with scientists, experts and its workforce to create a sustainable industry for now and the future.



PARTNERED WITH INDIGENOUS COMMUNITIES

Canadian mining companies are committed to working with Indigenous peoples whose communities are often located near mining operations. By building respectful, long-term relationships with these local communities, mines develop resource-extraction strategies and mine closure and reclamation efforts. Through Impact and Benefit Agreements (IBAs), industry and Indigenous peoples clearly define the relationship and the project to ensure employment, economic, financial, environmental, social and cultural needs of the community are met.

Indeed, the success of a mining project often depends on the community's level of interest and participation in the mine's labour force. That's why Indigenous peoples comprise 7% of the mining sector – making mining the largest private sector employer of Indigenous peoples in Canada. This is expected to increase as more Indigenous communities become partners in resource development projects.

GROWING IN DIVERSITY

Our industry can't thrive without the efforts and perspectives of women, New Canadians, Indigenous peoples and other marginalized groups that have historically been underrepresented in mining. Mining is serious about increasing equal representation and diversity, and the industry regularly develops initiatives to increase participation from these groups. The Mining Association of Canada (MAC) and its members, which include 45 of Canada's leading mining companies, released a formal statement in 2020



denouncing all forms of discrimination, racism and sexism, and committed to actions to eliminate them in the Canadian mining industry.

Some programs are breaking down barriers and improving hiring practices, like the Gender Equity in Mining Works (GEM Works) program, or building bridges between immigrant-serving organizations, women's and diversity organizations and mining companies, with MiHR's ENSEMBLE: The Mining Diversity Network.

The future of mining depends on a diverse workforce with people from all marginalized groups across the country occupying key positions throughout the industry.



What Types of Jobs Are Available in Mining?

Today's mining industry is a complex and technologically advanced sector that involves over 120 different positions, from science and engineering to skilled trades to finance and professional services.

So, how does mining work and where would you fit in?



Every mining project involves some fundamental steps: exploring land to discover deposits, building the facilities to safely and cleanly extract them, the actual mining, and then milling or refining the deposits into usable products. Every step depends on the skills of labourers and operators, tradespeople and engineers, scientists, managers and support staff to keep mines in safe and responsible operation. Let's take a look at each of these in more detail.

EXPLORATION

The essence of mining is the discovery of a mineral deposit. Sometimes you're on the ground, taking soil, water and vegetation samples in an undeveloped piece of land. Sometimes you're conducting aerial photography, mapping out the geological area with cutting-edge sensors and recording devices, or using powerful satellite imagery and computer modelling to assess the possible location for a mine.

Geologists, Environmental Biologists, Mapping Technologists and **Survey Technicians** all play a role in gathering preliminary research and data. Through their assessments, surveys, drilling and sampling, they help a mining company come to one conclusion: do we dig here?

If all goes according to plan and the environmental studies and economic assessments are approved, **Construction Managers, Mineral Process** and **Mining Engineers** and **Superintendents** turn plans into actions.



EXTRACTION AND MILLING

Once a deposit is found and deemed ready for extraction, how do we get those precious minerals out of the ground? This is the key step of extraction.

Some mines are on the surface, some are underground — it depends on safety, technological and environmental circumstances. That's why complex problem-solving is so critical to being a **Mining Process Engineer**. With the help of **Blasters, Drillers, Labourers** and various **Helpers**, they use sophisticated equipment and machinery to drill, blast and move rock containing minerals. Other **Miners, Supervisors** and **Engineers** then help move the raw ore to the processing parts of the mine to get to the metals and minerals, which is the process of milling.



MANUFACTURING AND FABRICATION

Some mines go one step further with a manufacturing or fabrication plant. For example, once potassium salts are refined from ore, some mines turn the mineral into phosphate and potash products to ship directly to the consumer. With the right facilities, a mine's half-finished bar or plate of metal can transform into tin cans for food preservation or electronic elements of a smartphone.

SUPPORT SERVICES

Along with all the mining-specific careers, there are career opportunities essential to all industries: human resources, marketing, finance, accounting, legal advice — mining is worth taking a look if you are skilled in ways that don't immediately scream, "mineral deposit!"

What's most important among these service providers are skills such as active learning, complex problem-solving, troubleshooting and, most importantly, critical thinking. To keep the repair shops and labs running, every mine needs **Industry Trainers**, **Mill Managers** and **Project Managers**. The warehouses and offices need to be kept in order, where management and supervisors keep their workers housed, fed and safe.

IN THE NEXT SECTION, we look at individual careers in more detail. Whether you're curious about working as a Blaster or a Mining Process Engineer, an Assayer or a Heavy Equipment Operator, you'll find the information you need to understand more about the job, its education or training requirements and salary range.



Career Profiles

On the following pages you'll find profiles of 54 common jobs found in the mining industry. With more than 120 occupations within Canada's mining sector, mining needs you.

LABOUR & OPERATOR

- Robotic Welder Operator
- Assayer
- General Labourer
- Haul Truck Driver
- Heavy Equipment Operator
- Hoist Operator
- Mine Helper
- Maintenance Helper
- Mineral Processing Operator
- Surface Miner
- Underground Miner

SKILLED TRADES

- Instrumentation Technician
- Blaster
- Construction Helper
- Construction Miner
- Crane Operator
- Electrician
- Mechanic
- Millwright
- Production Driller
- Welder

TECHNICIAN

- IoT Technology Specialist
- Civil Engineering Technician
- Environmental Technician
- Geological and Mineral Technician
- Mapping Technician
- Survey Technician
- Civil Engineer

SCIENCE & ENGINEERING

- Environmental Consultant
- Electrical Engineer
- Environmental Biologist
- Geological Engineer
- Geologist
- Mechanical Engineer
- Mineral Process Engineer
- Mining Engineer

MANAGEMENT

- Indigenous Relations
- Superintendent
- Construction Superintendent
- Engineering Superintendent
- Frontline Supervisor
- Maintenance Superintendent
- Maintenance Supervisor
- Mill Manager
- Mine Dispatcher
- Mine Manager
- Mine Operations Superintendent
- Process Superintendent
- Process Supervisor
- Project Manager

SUPPORT

- Equity, Diversity & Inclusion Specialist
- Health and Safety Coordinator
- Health and Safety Professional
- Industry Trainer
- Training Coordinator

Career Spotlight

Robotic Welder Operator

Page 17

Labour & Operator

Instrumentation Technician

Page 29

Skilled Trades

IoT Technology Specialist

Page 40

Technician

Environmental Consultant

Page 47

Science & Engineering

Indigenous Relations Superintendent

Page 57

Management

Equity, Diversity & Inclusion Specialist

Page 71

Support



Labour & Operator

Robotic Welder Operator
Assayer
General Labourer
Haul Truck Driver
Heavy Equipment Operator
Hoist Operator
Mine Helper
Maintenance Helper
Mineral Processing Operator
Surface Miner
Underground Miner

ROBOTIC WELDER OPERATOR

We need Robotic Welder Operators to set up and operate the highly technical, computer-controlled machines that help a mine run. Robotic welders are integral machines in a mine and their operators use them to complete complicated machine functions on a variety of steel products. Robotic Welder Operators maintain, operate and fix these machines as needed and created welded steel parts to precise specifications.

JOB DESCRIPTION

- Set up and operate robotic welding equipment to achieve desired results
- Program robotic welders and developing parameters and schedules for production
- Interpret machine program specifications or blueprints
- Use hand tools and precision measuring instruments to mount, install, align and secure attachments and fixtures on assigned machines
- Load and unload machine parts manually or with hoists, depending on weight and size
- Follow technical diagram instructions while welding
- Perform inspection checks of all welds to ensure quality assurance
- Modify cutting parameters and schedules as needed to avoid or resolve issues
- Monitor machine operation and diagnosing problems that require fixing or troubleshooting
- Improve existing robotics and other machinery
- Maintain a working relationship with suppliers to source replacement parts and new equipment as needed
- Ensure work completed complies with the appropriate and applicable standards
- Follow safety policies, procedures and instructions as outlined by the employer's and regulatory bodies' safety guidelines and procedures and wear personal protective equipment (PPE) while keeping a safe work area

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- High school diploma or equivalent
- Trade course or other formal training in welding
- Experience in robot programming software
- Knowledge of occupational health and safety standards
- Knowledge in use measuring tools (e.g., tape measure, dial caliper)
- Knowledge of basic machining and fabrication
- Able to read manufacturing prints and shop drawings
- Physically fit and mobile
- Willingness to work in a diverse environment
- Must be able to pass a medical test
- Must be able to pass a drug test
- Proficiency in language of operation

Regional Requirement

- Assayer Certification

May be Required

- Able to lift heavy items (20 lbs or more)
- Able to perform repetitive tasks while standing

Regional Requirement

- Two years of experience in mining operation

Assets

- Trade course or other formal training in welding
- College or certification in a related field
- Experience in a mine's day-to-day operations and procedures
- Experience in maintaining robotic weld cells
- Willingness to relocate
- Other languages

SUCCESS PROFILE

- Identifies issues and priorities, and solves problems with a positive attitude
- Strong communication and interpersonal skills
- Pays attention to details
- Strong time management and prioritizing skills
- Works well under pressure and with others
- Performs work with a high level of accuracy

- Strong mathematical and mechanical aptitude
- Understands and respects safety procedures, regulations and legislation
- Understands complex instructions and schematics

COMPENSATION

\$47,000

\$110,598

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining

1	2	3	4	5
LIMITED				GREAT

Skill Transferability Among Other Industries

1	2	3	4	5
LOW				HIGH

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Robotic Welder Operators are passionate about the intricacies of automation and are fulfilled by detail-oriented tasks. They are problem solvers who feel inspired by the day-to-day challenges faced by the engineering and maintenance sectors of a mine. They are attracted by the responsibility of supporting automated welding systems used to meet production requirements.

WHAT IS IT LIKE TO WORK AS A ROBOTIC WELDER IN MINING?

Note: conditions vary according to employer and region.

Robotic Welder Operators are responsible for supporting automated welding systems used to meet production requirements of a mine's day-to-day operation. They already have working experience in robot programming software, basic machining and fabrication and the daily scheduling involved in specific welding work. They are physically fit, analytical thinkers and mechanically inclined problem solvers.

ASSAYER

We need Assayers because they provide key information that is critical for mine performance. Assayers are responsible for inspecting, grading, sampling and testing of raw and processed materials. They set their own priorities and activities and must have an eye for detail.

JOB DESCRIPTION

- Inspect, grade, sample, test or refine raw and processed materials, analyzing for substances such as metals, non-metallic materials, concentrates and waste
- Use spectrographic analysis, chemical solutions and specialized equipment
- Adjust methods of analysis and maintain analysis equipment
- Advise supervisor or colleagues of issues and communicate with engineers, metallurgists, hydrologists, skilled tradespeople and mill management
- Complete inspection and test reports
- May assist in environmental audits and the development of environmental protection procedures

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- High school diploma or equivalent
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse environment
- Proficiency in language of operation

Regional Requirement

- Assayer Certification

May be Required

- Demonstrated prior proficiency in a scientific discipline
- Formal qualification or training in a scientific subject such as chemistry, geology, assaying

Assets

- Work experience in a laboratory environment or in minerals processing
- Willingness to relocate
- Other languages

SUCCESS PROFILE

- Works well with others, shares opinions and findings even when they are unfavourable
- Is analytical, stays focused, is patient, precise and accurate
- Accountable for decisions and actions
- Proficient in science
- Embraces new technology
- Fine motor skills
- Willing to engage in continuous learning and skills development

COMPENSATION

\$54,000 \$85,600 \$103,000

AVERAGE

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Assayers make meaningful contributions to mine performance and are well compensated for their efforts. Working in a laboratory, an Assayer enjoys a clean and predictable environment with many opportunities to collaborate and interact with a variety of professionals.

WHAT IS IT LIKE TO WORK AS AN ASSAYER IN MINING?

Note: conditions vary according to employer and region.

Assayers work in a laboratory near a mine or mill, spending the majority of their time standing while analyzing samples. They follow strict safety regulations due to the use of hazardous materials and may have to work under pressure to produce fast results in support of mine crews to maximize output. Handling supplies and substances involves light duty lifting.

GENERAL LABOURER

We need General Labourers to provide valuable assistance and support to Minerals Processing Operators and other mill employees. A great way to gain experience in the mining industry, General Labourers must be fit, collaborative and enjoy working with their hands.

JOB DESCRIPTION

- Assist Process and Machine Operators in mineral ore and metal processing
- Help Mineral Processing Operators and other mill workers to move ore and metal by using bins, conveyors, chutes, weigh scales, railcar movers and front-end loaders
- Assist Mineral Processing Operators in processing ore and metal by monitoring, operating or maintaining pumps, valves, crushers, flotation cells, cyclones, thickeners and screens
- Clean work areas and equipment
- Transport scrap materials through the plant
- Follow checklists and complete log books
- Report any hazards or safety concerns to a Frontline Supervisor

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Physically fit and mobile
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse workplace
- Proficiency in language of operation

May be Required

- High school diploma or equivalent
- Provide own safety equipment (e.g. approved steel-toed boots)
- Demonstrated ability to work under minimal supervision
- Undergo a criminal record check
- Valid driver's licence (or eligible for a driver's licence) with few or no current infractions

Assets

- Knowledge of safe operation of hand tools
- Experience operating light or heavy duty equipment
- Experience cleaning complex mechanical equipment
- Basic understanding of how machines work
- Willingness to relocate
- Other languages

SUCCESS PROFILE

- Follows clear policies and processes
- Comfortable working at heights
- Committed to safe work habits
- Enjoys hands-on work and mechanically inclined
- Good listening and problem solving skills
- Positive attitude and works well with others
- Willing to learn and perform repetitive tasks

COMPENSATION

\$19.55/hr

\$40.07/hr

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

General Labourers gain practical experience while earning a competitive wage. This entry-level position gives candidates the chance to prove that they are capable, while also providing opportunities to train for jobs that require more experience or specific skills.

WHAT IS IT LIKE TO WORK AS A GENERAL LABOURER IN MINING?

Note: conditions vary according to employer and region.

General Labourers help with a variety of tasks, which provides valuable experience and the opportunity to learn many new skills. Hands-on tasks can be repetitive and many may be physically demanding with prolonged periods of walking, standing, bending, crouching or kneeling, with heavy lifting of up to 23 kg (50 lbs) (based on job research, 2014).

HAUL TRUCK DRIVER

We need Haul Truck Drivers to transport the raw materials from mining or minerals processing in large electric or diesel haul trucks. They need to enjoy operating large equipment, be committed to safe work habits and have great spatial awareness.

JOB DESCRIPTION

- Operate and drive heavy haul trucks to transport tons of materials over short distances either in a surface environment or underground
- Perform inspections of vehicle systems, equipment and accessories such as tires, lights, turn signals and brakes
- Ensure cargo is properly loaded according to safety requirements
- Follow all safety policies, procedures and legislation
- Maintain paper or electronic log book
- Communicate with Dispatcher and other Haul Truck Drivers using communication devices such as a two-ways radio or on-board computers
- May drive special purpose vehicles, including: end dump trucks, centre dump truck units, shuttle cars, remix trucks and water trucks

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Appropriate Class or driver's permit, if required to drive outside of the mine site
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse environment
- Proficiency in language of operation

May be Required

- High school diploma or equivalent
- Completion of accredited driver's training course through a vocational school or community college
- Certification for transporting dangerous goods

Assets

- Willingness to relocate
- Other languages

SUCCESS PROFILE

- Follows procedures, verbal directions and hand signals
- Commits to safe work habits
- Enjoys operating large equipment
- Good vision and depth perception, with excellent spatial orientation and sense of space/direction/elevation

COMPENSATION

\$29.00/hr

\$46.77/hr

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Haul Truck Drivers tend to be seeking challenging entry-level work in the mining industry. With a positive attitude, the right qualities and willingness to learn, candidates have the opportunity to be considered without needing industry experience or formal qualifications.

WHAT IS IT LIKE TO WORK AS A HAUL TRUCK DRIVER IN MINING?

Note: these vary according to employer and region.

Haul Truck Drivers work inside a temperature-controlled cab in hot and cold environments, communicating with colleagues mostly over two-way radios or by using hand and/or other signals. They must be able to concentrate and stay alert while performing repeated tasks in a dynamic environment and sometimes in severe environmental conditions.

HEAVY EQUIPMENT OPERATOR

We need Heavy Equipment Operators to work confidently with all kinds of complex machinery, outdoors or underground. They are responsible and safety-conscious members of the team who may operate anything from a backhoe to a remote-controlled device.

JOB DESCRIPTION

- Use one or more types of heavy equipment:
 - Equipment used in open pit mines includes: graders, scrapers, track and wheel dozers and loaders, excavators, draglines, backhoes and shovels.
 - Equipment used in underground mines includes: locomotives, scoop trams, water trucks and remote-controlled equipment
- Use heavy equipment according to operating practices to excavate and move minerals and metals, earth, sand, gravel, rock, muck, coal and snow
- Safely drive and maneuver heavy equipment around the mine
- May select, fit and remove attachments
- Safely operate the controls of heavy
- Monitor gauges, dials and other indicators to make sure the heavy equipment is working properly; report discrepancies to dispatch
- Adjust controls to regulate pressure, control speed and flow of operation
- Perform a walk-around inspection before, during, and after every shift
- May clean, maintain and secure equipment
- Troubleshoot in accordance with regulations and approved procedures; may perform minor repairs as required or report issues to dispatch
- Complete log books and daily reports on delays, production and safety issues
- Use two-way radio, visual, audio and light signals to communicate with other operators and ensure safety

SUCCESS PROFILE

- Follows verbal directions and hand signals
- Ability to stay focused
- Fast reflexes and good hand-eye and eye-foot coordination
- Good interpersonal skills and works well with others

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Physically fit and mobile
- Must pass a medical and drug test
- Willing to work in a diverse environment
- Proficiency in language of operation

Regional Requirement

- Technical training and a valid certificate for specific equipment (in some cases apprenticeship training)

May be Required

- Technical training and a valid certificate for specific equipment
- High school diploma or equivalent
- Valid driver's licence and good driving record

Assets

- Previous experience operating heavy equipment (i.e.: in trucking, logging or construction) (operator training may be offered by employer with no prior experience required)
- Willingness to relocate
- Other languages

- Good troubleshooting skills
- Good vision and depth perception
- Respect and understanding of safety procedures and regulations
- Independent, organized and alert

COMPENSATION

\$26.45/hr

\$48.24/hr

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining

1	2	3	4	5
LIMITED				GREAT

Skill Transferability Among Other Industries

1	2	3	4	5
LOW				HIGH

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Heavy Equipment Operators often specialize in more than one type of equipment. Many take advantage of opportunities to train on different types of heavy equipment or use their experience to train others.

WHAT IS IT LIKE TO WORK AS A HEAVY EQUIPMENT OPERATOR IN MINING?

Note: these vary according to employer and region.

Heavy Equipment Operators work inside temperature-controlled equipment cabs. They work in their own in a cab for the majority of their shift and communicate with colleagues mostly over two-way radios or by using signals. New operators are likely trained by employers and begin by operating a blade machine, such as a grader, dozer or wheeled excavator. They are also required to lift heavy objects up to 23 kg (50 lbs) (based on 2014 job research).

HOIST OPERATOR

We need Hoist Operators to transport people, equipment and materials safely up and down mine shafts. They are practical and steady operators who must be adaptable, quick-thinking and always on top of the latest regulations and procedures.

JOB DESCRIPTION

- Transport people, equipment and materials up and down mine shafts
- Safety is the top priority. Hoist operators inspect equipment to ensure safe operation
- Troubleshoot in accordance with regulations and approved procedures
- May train new Hoist Operators
- May support the installation of new hoists in the mine
- Monitor hoist activity and conditions from a control room

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- High school diploma or equivalent
- Knowledge of occupational health and safety rules, and provincial hoisting regulations
- Medical certificate attesting to the ability to operate the hoist (renewed annually)
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse environment
- Emergency preparedness training
- Proficiency in language of operation

Regional Requirement

- Valid provincial hoisting certification
- 10 or more years of experience working in or around mining shafts, including shaft inspections, cage tending, skip tending, chairing, sling and maintenance

May be Required

- Successful completion of a mine-specific Hoist Operator exam
- Two years of experience working underground

Assets

- Experience in other areas of the mine (e.g. blasting or drilling)
- Willingness to relocate
- Other languages

COMPENSATION

\$34.09/hr

\$48.47/hr

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Hoist Operators work independently and take initiative within a structured environment. They also train and mentor new Hoist Operators.

WHAT IS IT LIKE TO WORK AS A HOIST OPERATOR IN MINING?

Note: conditions vary according to employer and region.

Hoist Operators spend the majority of their shift working in a control room on the mine site.

SUCCESS PROFILE

- Communicates with people at all levels
- Visualizes hoist movements
- Adaptable, organized, alert and focused
- Detail-oriented
- Enjoys coaching and mentoring others
- Respect and understanding of safety procedures, regulations and legislation
- Mechanically-inclined
- Responsible and productive
- Strong communication, math computer and trouble-shooting skills
- Values safety, health and a positive working environment
- Willing to engage in continuous learning and skills development
- Works well with others

MINE HELPER

We need Mine Helpers because they provide valuable assistance and support to various departments at a mine site. By assisting Miners and other operators, they gain first-hand mining industry work experience that can open doors to a long and satisfying career.

JOB DESCRIPTION

- Assist mine production crews with various tasks
- Move tools, equipment and materials to and from work areas
- Assist miners with set up and operation of drills and other machinery
- Assist heavy equipment operators to secure special attachments to equipment
- Signal various operators to guide them in moving equipment
- Support blast crew by delivering supplies and carrying out delegated tasks
- Assist in basic maintenance tasks, such as refueling, lubricating and washing equipment and machinery
- Clean rooms, roadways, working areas, mine equipment and machinery, conveyances and clear blockages and spills
- Complete equipment inspection checks
- Write basic progress reports

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Physically fit and mobile
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse workplace
- Proficiency in language of operation

May be Required

- Provide own safety equipment (e.g. approved steel-toed boots)
- High school diploma or equivalent
- Demonstrated ability to work under minimal supervision
- Valid driver's licence (or eligible for a driver's licence) with few or no current infractions
- Undergo a criminal record check

Assets

- Knowledge of safe operation of hand tools
- Some apprenticeship training or other experience
- Experience in operation of light or heavy duty equipment
- Experience cleaning complex mechanical equipment
- Willingness to relocate
- Other languages

SUCCESS PROFILE

- Follows policies and processes
- Committed to safe work habits
- Enjoys hands-on work
- Mechanically inclined
- Positive attitude
- Willing to learn
- Willing to perform repetitive or routine tasks
- Works well with others

COMPENSATION

\$19.55/hr

\$40.76

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining

1	2	3	4	5
LIMITED				GREAT

Skill Transferability Among Other Industries

1	2	3	4	5
LOW				HIGH

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Mine Helpers want to gain practical experience while earning a competitive wage. This position gives candidates the chance to prove they are capable and committed, while also providing opportunities to train for jobs that require more experience or specific skills.

WHAT IS IT LIKE TO WORK AS A MINE HELPER IN MINING?

Note: conditions vary according to employer and region.

Mine Helpers assist with a variety of tasks, which provides valuable experience and the opportunity to learn many new skills. They perform many tasks repeatedly, but are well compensated for their efforts. Many of their tasks are physically demanding with prolonged periods of standing, bending, crouching or kneeling, and they are required to lift up to 23 kg (50 lbs).

MAINTENANCE HELPER

We need Maintenance Helpers because they offer valuable assistance and support to the tradespeople who work in a mine. Maintenance Helpers are team players and physically fit, acquiring industry experience by working closely with Mechanics, Electricians and other trades.

JOB DESCRIPTION

- Assist Mechanics, Electricians, Welders, Millwrights and other tradespeople with a variety of tasks
- Provide tradespeople with tools and parts they need for their work
- Help to keep equipment clean
- Keep the shop clean, including garbage disposal and wash bays
- General routine maintenance, including sweeping floors, emptying garbage bins and cleaning spills
- Wash equipment
- Move tools and materials to and from work areas
- Track cleaning supply levels and provide list to Supervisor

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Physically fit and mobile
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse environment
- Proficiency in language of operation

May be Required

- High school diploma or equivalent
- Undergo a criminal record check
- Valid driver's licence (or eligible for a driver's licence) with few or no current infractions

Assets

- Willingness to relocate
- Other languages

SUCCESS PROFILE

- Committed to safe work habits
- Hands-on work
- Mechanically inclined
- Multi-tasking skills
- Positive attitude
- Willing to learn
- Willing to perform repetitive or routine tasks
- Minimal supervision required
- Works well with others

COMPENSATION

\$26.45/hr

\$33.60/hr

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Maintenance Helpers gain practical experience and exposure to the trades while earning a competitive wage. This entry-level position gives candidates the chance to prove that they are capable, while also providing opportunities to train for jobs that require more experience or specific skills.

WHAT IS IT LIKE TO WORK AS A MAINTENANCE HELPER IN MINING?

Note: conditions vary according to employer and region.

Maintenance Helpers do a variety of tasks that provide valuable experience and the opportunity to learn many new skills. As with any hands-on learning activity, the work involves performing the same tasks repeatedly. Many tasks are physically demanding with prolonged periods of standing, bending, crouching or kneeling, and workers must be able to handle heavy loads.

MINERAL PROCESSING OPERATOR

We need Mineral Processing Operators because they perform essential work in mining operations. Working in teams, it is their responsibility to understand and control the processing of minerals and metals.

JOB DESCRIPTION

- Work in a team to process extracted ore and load finished products into railcars to ship to customers
- Monitor processes and equipment that upgrade ore to produce a marketable product
- Operate heavy equipment (e.g. bins, conveyors, chutes, pumps, valves, crushers, flotation cells, cyclones, thickeners, screeners, weigh scales, railcar movers and front-end loaders)

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- High school diploma or equivalent
- Previous experience in a mill environment
- Physically fit and mobile
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse environment
- Proficiency in language of operation

May be Required

- High school diploma or equivalent
- Demonstrated ability to work under minimal supervision
- Undergo a criminal record check
- Valid driver's licence (or eligible for a driver's licence) with few or no current infractions

Assets

- Willingness to relocate
- Other languages

SUCCESS PROFILE

- Takes extra care in following procedures around potentially hazardous materials, equipment and machinery
- Adaptable
- Embraces new techniques and technologies
- Enjoys hands-on work
- Enjoys working with math, science, computers and machinery
- Understands and respects safety procedures, regulations and legislation
- Patient and flexible
- Strong communication and problem-solving skills
- Strong risk management and time management skills
- Team player
- Willing to perform repetitive or routine tasks

COMPENSATION

\$37.18/hr

\$48.47/hr

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Minerals Processing Operators enjoy working in a team and playing a key part in the production process. They work with different kinds of equipment and with cutting-edge technologies, and are well compensated for their efforts.

WHAT IS IT LIKE TO WORK AS A MINERAL PROCESSING OPERATOR IN MINING?

Note: conditions vary according to employer and region.

Minerals Processing Operators are exposed to challenging working conditions such as confined spaces, at heights and near open holes. They must be willing and able to climb ladders and steel ramps.

SURFACE MINER

We need Surface Miners because it is their responsibility to extract ore and minerals from the ground. Problem solving, enjoyment of hands-on work, and comfort with heavy machinery are all important for success in this challenging career at the front line of a mine site.

JOB DESCRIPTION

- Extract rocks, ore and minerals from the ground and use heavy equipment and machinery to blast and move rock containing minerals and metals

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Physically fit and mobile
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse environment
- Proficiency in language of operation

Regional Requirement

- Apprenticeship training up to two years may be required as determined by the province/territory of employment

May be Required

- High school diploma or equivalent

Assets

- Willingness to relocate
- Other languages

SUCCESS PROFILE

- Takes care in following procedures, especially with hazardous materials, equipment and machinery
- Visualizes three-dimensional layouts
- Embraces new techniques and technologies
- Enjoys operating heavy equipment and machinery
- Understands and respects established safety procedures, legislation and regulations
- Enjoys hands-on work
- Patient, flexible and adaptable
- Resourceful and independent
- Strong problem solving skills
- Strong risk management skills
- Works well with others

COMPENSATION

\$28.00/hr

\$48.24/hr

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Surface Miners like working both independently and within a team. They work with sophisticated equipment and machinery, and with new technologies, and are well compensated for their efforts.

WHAT IS IT LIKE TO WORK AS A SURFACE MINER IN MINING?

Note: conditions vary according to employer and region.

Surface Miners spend most of their time at the mine. They are exposed to challenging working conditions, such as in confined spaces, at heights and near open holes. They must be willing and able to climb ladders and steel ramps on the surface.

UNDERGROUND MINER

We need Underground Miners because they perform a variety of critical extraction tasks at the front line of a mining site. They must work well in close-knit teams, be physically fit, and enjoy working with their hands.

JOB DESCRIPTION

- Work in a team to extract rocks, ore and minerals from the ground
- Use sophisticated equipment and machinery to drill, blast and move rock containing minerals and metals
- Work closely with other miners, supervisors, mine captains, mine superintendents, geologists and mining engineers to safely and efficiently move material from the mine to the mineral processing plant

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Physically fit and mobile
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse environment
- Proficiency in language of operation

Regional Requirement

- Apprenticeship training up to two years may be required as determined by the province/territory of employment

May be Required

- High school diploma or equivalent

Assets

- Willingness to relocate
- Other languages

SUCCESS PROFILE

- Takes care in following procedures, especially with hazardous materials, equipment and machinery
- Operates large equipment and machinery
- Visualizes three-dimensional layouts
- Works in dark, enclosed spaces for long periods
- Embraces new techniques and technologies
- Enjoys hands-on work
- Has a deep level of understanding and respect for established safety procedures, regulations and procedures
- Patient, flexible, adaptable and
- Strong risk management skills
- Works well with others

COMPENSATION

\$28.00/hr

\$48.24/hr

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining

1	2	3	4	5
LIMITED				GREAT

Skill Transferability Among Other Industries

1	2	3	4	5
LOW				HIGH

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Underground Miners like working both independently and within a team, using sophisticated equipment and machinery, as well as new technologies. They are also well compensated for their efforts.

WHAT IS IT LIKE TO WORK AS AN UNDERGROUND MINER?

Note: conditions vary according to employer and region.

Underground Miners spend most of their time at the mine site. They work in challenging conditions such as in confined spaces, at heights and near open holes. They must be willing and able to climb ladders and steel ramps on the surface and underground.



Skilled Trades

Instrumentation Technician
Blaster
Construction Helper
Construction Miner
Crane Operator
Electrician
Mechanic
Millwright
Production Driller
Welder

INSTRUMENTATION TECHNICIAN

We need Instrumentation Technicians to keep a mine's most sensitive equipment in fine working order. They need to monitor, diagnose and correct systems and instruments—as well as install and test new versions—that are integral to the smooth operation of a mine.

JOB DESCRIPTION

- Use wiring diagrams and layouts to assemble and install electronic and pneumatic equipment
- Test and program computer control systems
- Analyze electronic control field instruments to diagnose faults
- Calibrate and fix electrical circuits, communication networks and control field equipment
- Report and record accurate observations, results and data from on-site evaluations
- Perform preventative maintenance, repairing and adjusting of systems components
- Identify and provide direction for improvement of operator workstations

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- High school diploma or equivalent
- Knowledge of electrical safety code, process control and measurement
- Skilled Trade Certificate as Industrial Mechanic/Millwright
- Physically fit and mobile
- Willingness to work in a diverse environment
- Must be able to pass a medical test
- Must be able to pass a drug test
- Proficiency in language of operation

May be Required

- Available to be on-call 24 hours per day
- Valid driver's licence

Assets

- Instrumentation certificate
- Industrial equipment repair experience
- Experience with control systems, including distributed control systems (DCSs) and programmable logic controllers (PLCs)
- Knowledge of hydraulics and electronics
- Previous mining experience
- Red Seal certification as Industrial Mechanic/Millwright
- Willingness to relocate
- Other languages

COMPENSATION

\$44,000

\$97,500

(Source: online job ads in Canada, 2021).

JOB PROSPECTS

Demand in Mining

1	2	3	4	5
LIMITED				GREAT

Skill Transferability Among Other Industries

1	2	3	4	5
LOW				HIGH

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Instrumentation Technicians are responsible for supporting automated systems used to meet production requirements of a mine's day-to-day operation. Those attracted to this career are good with their hands, passionate about tools and excited by taking complex machinery apart to put it back together again. They are driven by the opportunity to update and improve instrumentation control, communication and computer systems in important ways.

WHAT IS IT LIKE TO WORK AS AN INSTRUMENTATION TECHNICIAN IN MINING?

Note: conditions vary according to employer and region.

Instrumentation Technicians are critical to mining operations because they install, modify and repair machinery and equipment at all stages of production. They already have working experience in machine testing, calibrating and installation, as well as mini-computer systems, interfaces and displays, including programming languages and analytical measurements.

SUCCESS PROFILE

- Identifies issues and priorities, and solves problems with a positive attitude
- Strong communication and interpersonal skills
- Builds trust and maintains positive relationships with a wide variety of personnel and community members
- Works well under pressure
- Mechanically inclined
- Willing to learn
- Willing to perform repetitive or routine tasks
- Minimal supervision required
- Embraces new techniques and technologies
- Enjoys working with math, science, computers and machinery
- Understands and respects safety procedures, regulations and legislation

BLASTER

We need Blasters because they are responsible for loading and detonating the explosives needed in mining while following strict health, safety and security regulations. Blasters must have good planning skills and great attention to detail.

JOB DESCRIPTION

- Lay out drill patterns, determine depth and diameter of blast holes
- Conduct field tests to determine type and quantity of explosives required
- Design the blast timings
- Assemble primer charges using selected detonators, fuses, detonating cords and other materials
- Manually load explosives in blast holes or direct bulk explosives trucks to load holes
- Connect electrical wires, detonating cords or fuses into series and connect series to blasting machines; detonate charges
- Manage, store and transport explosives and accessories according to regulations and ensure that safety procedures are observed at all times
- Report on and maintain accurate inventory of explosives
- May operate air-track, rotary, in-the-hole or other drilling machines to drill blast holes

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Up to one year of experience as a Blaster's Helper or Shooter's Helper
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse environment
- Proficiency in the language of operation

Regional Requirement

- Valid Blaster certificate

May be Required

- Undergo a criminal record check
- High school diploma or equivalent
- Blaster or Driller vocational certificate

Assets

- Willingness to relocate
- Other languages

SUCCESS PROFILE

- Follows procedures (especially around hazardous material, equipment and machinery)
- Follows verbal directions and hand signals
- Works well under pressure and stays focused and calm
- Is organized, precise and accurate
- Has strong risk management skills
- Values safety, health and a positive working environment

COMPENSATION

\$31.47/hr

\$48.24/hr

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Blasters are in excellent physical condition, work well under pressure, and enjoy teamwork and working outdoors. Every day is different and there is always a lot of action on the job.

WHAT IS IT LIKE TO WORK AS A BLASTER IN MINING?

Note: conditions vary according to employer and region.

Blasters have the opportunity to work at both underground and surface mine sites. Potentially exposed to severe environmental conditions, they must be able to transport loads of explosives, follow strict procedures around potentially hazardous materials, and thoroughly interpret federal and provincial regulations.

Blasters are team players, working with production drillers and other operation and production crews to ensure safety and minimize risks.

CONSTRUCTION HELPER

We need Construction Helpers because of the invaluable support they provide in a team environment. By assisting Construction Miners and other skilled trades, they gain first-hand mining industry work experience that can open doors to a long and satisfying career.

JOB DESCRIPTION

- Assist construction miners and other skilled tradespeople with a variety of tasks
- Select tools, equipment, or materials from storage, then load, transport and unload at job site
- Clean work areas, machines, or equipment, to maintain a tidy and safe job site
- Work with timber; for example, cut, glue, clamp, screw, drill, position or hold; erect scaffolding, shoring, or braces
- Mix, pour and spread materials such as concrete and asphalt
- Use hand and pneumatic tools, prying bars, rakes, shovels, wheelbarrows and other equipment
- Cut and install insulation and floor materials
- Oil and grease hoists and similar equipment
- Maintain, repair and paint as needed
- Carry out other duties as needed; for example, direct traffic at or near construction sites

SUCCESS PROFILE

- Follows clear policies and processes
- Comfortable working at heights
- Committed to safe work habits
- Enjoys hands-on work
- Good listening skills
- Mechanically inclined
- Positive attitude with a willingness to learn
- Willing to perform repetitive or routine tasks
- Works well with others

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Physically fit and mobile
- Willingness to work in a diverse workplace
- Must be able to pass a medical test
- Must be able to pass a drug test
- Proficiency in language of operation

Regional Requirement

- Valid Construction Safety Training Systems (CSTS) certification

May be Required

- Provide own safety equipment (e.g. approved steel-toed boots, hard hat)
- High school diploma or equivalent
- Demonstrated ability to work under minimal supervision
- Valid driver's licence (or eligible for a driver's licence) with few or no current infractions

Assets

- Undergo a criminal record check
- Some apprenticeship training or other experience
- Knowledge of safe operation of hand tools
- Red Seal certification
- Willingness to relocate
- Other languages

COMPENSATION

\$31.47/hr

\$48.24/hr

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining

1	2	3	4	5
LIMITED				GREAT

Skill Transferability Among Other Industries

1	2	3	4	5
LOW				HIGH

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Construction Helpers want to gain practical experience while earning a competitive wage. This entry level position gives candidates the chance to prove that they are capable, while providing opportunities to train for jobs that require more experience or specific skills.

WHAT IS IT LIKE TO WORK AS A CONSTRUCTION HELPER IN MINING?

Note: conditions vary according to employer and region.

Construction Helpers are asked to help with a variety of tasks, which provides valuable experience and the opportunity to learn many new skills. Many tasks are physically demanding with prolonged periods of standing, bending, crouching or kneeling, and the need to lift up to 23 kg (50 lbs) (based on job research, 2014).

CONSTRUCTION MINER

We need Construction Miners to build, install, maintain and repair the structures and fixtures that are critical for the operation of mines. Construction Miners require great building, planning and problem solving skills.

JOB DESCRIPTION

- Construct, erect, install, maintain and repair structures and fixtures made of wood, wood substitutes, lightweight steels and other materials such as plastic, fiberglass and drywall; may build tunnel bracing, brattices and underground passageways
- Read and interpret blueprints, drawings and sketches to determine specifications and calculate requirements
- Prepare layouts that comply with building codes
- Measure, cut, shape, assemble and join various materials
- Build foundations, install floor beams, lay sub-flooring and erect walls and roof systems
- Fit and install trims
- Supervise apprentices and other construction workers
- Work in compliance with federal and provincial building codes, as well as related regulatory and safety requirements and legislation
- Prepare cost estimates; prepare and maintain records for construction materials, complete work orders
- Care for and maintain equipment

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- High school diploma or equivalent
- Completion of a three-to-four year apprenticeship program, or equivalent work experience
- Three to five years of experience as a Construction Miner, with experience in new construction, renovation and other areas
- Good eyesight; sharp vision and the ability to see details
- Ability to use computer-assisted design programs
- Valid driver's licence (or eligible for a driver's licence) with few or no current infractions
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse environment
- Proficiency in language of operation

Regional Requirement

- Trade certification is mandatory in Quebec; it's considered an asset in other provinces and territories

Assets

- Red Seal certification
- Additional qualifications, such as Confined Space Certificate, Forklift Certification, Working at Heights training
- Willingness to relocate
- Other languages

SUCCESS PROFILE

- Builds and maintains a positive relationship with supervisors
- Visualizes how things work, go together and come apart
- Works within budget and time constraints
- Is committed to safe work habits
- Is dependable, detail-oriented and able to follow technical drawings and plans
- Embraces new technology

- Has excellent manual dexterity, hand-eye coordination and sense of balance
- Is organized, a proficient multi-tasker with strong verbal and listening skills
- Has strong math, computer, problem-solving and decision-making skills
- Takes initiative and works well in a team and independently

COMPENSATION

\$28.84/hr

\$41.86/hr

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Carpentry is a skilled trade that requires attention to detail, accuracy and continual learning. Construction Miners take pride in their work and enjoy working with their hands to create useful structures. No two projects are ever the same, but for a Construction Miner, it is always rewarding to see the finished product.

WHAT IS IT LIKE TO WORK AS A CONSTRUCTION MINER IN MINING?

Note: conditions vary according to employer and region.

Construction Miners have the potential to work inside, underground and outside in all seasons and environmental conditions. The work requires a keen mathematical mind, good hand-eye coordination and manual dexterity. Construction Miners spend most of the day lifting heavy tools and materials, are required to lift up to 18 kg (40 lbs) (based on 2014 job research), and are expected to work in cramped spaces as well as having to climb and work from ladders – and spend prolonged periods standing or kneeling.

CRANE OPERATOR

We need Crane Operators to move materials and machinery into the precise locations needed for mining operations. Crane Operators need to be good with numbers, possess focus, coordination and confidence, and have respect for heavy equipment and machinery.

JOB DESCRIPTION

- Use cranes to lift, move, position or place equipment, machinery, materials and other large objects
- Transport, set up and take down crane
- Communicate with assigned crews to determine the best placement of the mobile crane for planned lifts
- Operate the pedals and levers of cranes to rotate the crane, raise and lower its boom and one or more load lines in a safe and efficient manner to minimize risk of injury or damage
- Apply and verify rigging, stay alert to identify and correct rigging hazards, lower loads to adjust rigging
- Perform a walk-around inspection before, during, and after every shift, record results in log book and report issues to supervisor
- Conduct test lifts, read, interpret and calculate crane capacities and weight (by reading load charts and load sensors) to prepare for rigging and hoisting

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Completion of a three to four year apprenticeship program or relevant work experience
- One to three years of experience working under minimal supervision
- Willingness to work in a diverse workplace
- Must be able to pass a medical test
- Must be able to pass a drug test
- Proficiency in language of operation

Regional Requirement

- Journey person Trade Certificate as Mobile Crane Operator (check the requirements for your province or territory)

Assets

- Red Seal certification as Mobile Crane Operator
- Willingness to relocate
- Other languages

SUCCESS PROFILE

- Follows verbal directions and hand signals
- Stays focused
- Is comfortable working at heights and has good vision, depth perception, hand-eye and eye-foot coordination
- Has a deep level of respect for, and understanding of, safety procedures and regulations

- Organized, alert and works well with minimal supervision and with others
- Some understanding of mechanical systems

COMPENSATION

\$30.77/hr

\$49.74/hr

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Crane Operators take pride in using their skills and training to provide a challenging and important service. They like to work on their own and also work well within a team to achieve common goals.

WHAT IS IT LIKE TO WORK AS A CRANE OPERATOR IN MINING?

Note: conditions vary according to employer and region.

Crane Operators work inside a temperature-controlled equipment cab in hot and cold environments. Working alone in a cab for the majority of a shift, they communicate with colleagues mostly over two-way radios or by using hand signals. They may occasionally be required to lift up to 23 kg (50 lbs) (based on 2014 job research). For safety reasons, most crane work is done during daylight hours.

ELECTRICIAN

We need Electricians to install, test, repair and maintain electrical systems and equipment that are integral to the mine's operation. They excel at tackling challenging tasks that require deep knowledge of electrical systems, attention to detail and safe work practices.

JOB DESCRIPTION

- Maintain and upgrade existing electrical systems as well as new installations, including (but not limited to) control equipment, motors, pumps, and more
- Interpret drawings, blueprints, schematics and electrical code specifications
- Install and maintain automated systems
- Consult with other specialists when working with complex electronic devices and systems
- Attend to power outages, cable replacement, ventilation issues and power to emergency pumps
- Follow preventative maintenance programs, including routine equipment inspections
- Maintain maintenance records
- Lock out hazardous equipment and meet with supervisor to review safety process
- Replace items such as circuit breakers, fuses, switches, electrical and electronic components
- Change fuses and insulators on main power lines, and repair and/or replace lighting
- Reroute power (ground switching) as required to complete work safely
- Provide electrical service for underground mining equipment and surface operating equipment
- In underground mines, install power sleds, maintain hoists
- Operate generator stations during power outages

SUCCESS PROFILE

- Reads and interprets technical drawings
- Committed to safe work habits
- Detail-oriented and precise
- Embraces new technology
- Excellent manual dexterity
- Flexible, versatile and patient
- Has strong communication skills
- Works well in a team and independently
- Works well under pressure

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Completion of a four-year apprenticeship program that combines classroom instruction with on-the-job training
- Journeyman Trade Certificate in Electrical trade
- Good eyesight and colour vision (required to identify colour-coded wires)
- Ability to conduct complex tests
- Must pass a medical and drug test
- Willing to work in a diverse environment
- Proficiency in language of operation
- Red Seal certificate in Electrical trade

May be Required

- High school diploma or equivalent

Assets

- Willingness to relocate
- Other languages

COMPENSATION

\$27.58/hr

\$51.20/hr

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Electricians enjoy a variety of challenges. Electricians are well respected within the mining industry because it takes expert knowledge and skill to harness the power of electricity in a safe and responsible manner.

WHAT IS IT LIKE TO WORK AS AN ELECTRICIAN IN MINING?

Note: conditions vary according to employer and region.

Electricians interpret electrical drawings to determine wiring layouts that will work best in new installations. Working with a variety of hand tools and meters, they spend their workday troubleshooting, and often work in small confined spaces or high up on ladders and platforms, including bucket trucks.

MECHANIC

We need Mechanics because they inspect, repair and maintain the light vehicles, trucks and mine support equipment — from shotcrete sprayers to forklifts — that are integral to a mine's operation.

JOB DESCRIPTION

- Proactive about workplace safety and follows all rules and legislation for using equipment and tools
- Conduct preventive maintenance through scheduled inspections, servicing, adjustments, troubleshooting and repair of light vehicles and mine support equipment
- Perform ad hoc repair tasks, as required
- Fix mechanical and electrical problems quickly and effectively so vehicles are available as much as possible
- Maintain equipment according to manufacturer specifications
- Keep work station tidy in the maintenance shop and wherever maintenance work is carried out
- Contribute to worksite improvements in safety, productivity and cost effectiveness

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Completion of a three or four-year apprenticeship program that combines classroom instruction with on-the-job training
- Journey person Trade Certificate as Mechanic (check the requirements for your province or territory)
- Must be able to read and understand manuals and written instructions in language of operation
- Valid driver's licence (or eligible for a driver's licence) with few or no current infractions
- High school diploma or equivalent
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse environment
- Proficiency in language of operation

May be Required

- Red Seal certification in a related trade

Assets

- Willingness to relocate
- Other languages

SUCCESS PROFILE

- Computer diagnostic and testing equipment proficiency
- Dependable and patient
- Embraces new technology
- Excellent manual dexterity
- Rational and analytical
- Strong communication and listening skills
- Strong math, diagnostic and computer skills
- Works well in a team and independently
- Works well under pressure

COMPENSATION

\$27.00/hr

\$51.20/hr

Apprentices are typically paid a percentage of the full wage beginning at 75% and increasing with experience.

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Mechanics perform a lot of hands-on work using a variety of tools. It is a perfect fit for people who are passionate about engines, carburetors and transmissions, and who have several years of experience working with cars and trucks. Mechanics do what they love and gain a deeper knowledge of how mechanical, electrical and computer systems work.

WHAT IS IT LIKE TO WORK AS A MECHANIC IN MINING?

Note: conditions vary according to employer and region.

Mechanics in the mining sector use computerized diagnostic equipment to test, adjust and repair key vehicle components such as engines, steering systems, braking systems, drive trains, vehicle suspensions and electrical systems. They also reassemble and test repaired items against manufacturer standards, as well as perform preventative maintenance such as wheel alignments, oil changes and tune-ups. They have the opportunity to work with a wide variety of equipment and machinery, which can be challenging and rewarding. This career can be demanding as Mechanics are often on their feet or bent over in uncomfortable positions most of the day. In some cases, they may have to lift up to 23 kg (50 lbs) (based on job research, 2014) and occasionally use cranes and hoists for lifting.

MILLWRIGHT

We need Millwrights to install, modify and repair machinery and equipment at all stages of production. Critical to mining operations, Millwrights are good with tools, enjoy taking machines apart and work well both independently or as part of a team.

JOB DESCRIPTION

- Install, maintain, modify and repair machinery and stationary equipment (e.g. conveyors, hydraulic systems, pneumatic devices, pumps, engines, motors, production machines, etc.)
- Troubleshoot production problems and take preventive or corrective action as required
- Perform operational equipment checks
- Read blueprints, manuals and process specifications to visualize layouts and guide work
- Collect, analyze, and summarize information and trends to prepare mechanical maintenance reports
- Operate heavy-lifting equipment
- Maintain a clean, orderly and safe work environment
- Follow health and safety policies to ensure safety and environmental protection
- Collaborate with planning departments and shop personnel to ensure maintenance requirements are met
- Document and communicate actions, irregularities and ongoing maintenance requirements (e.g. routine oil change)

SUCCESS PROFILE

- Committed to safe work habits
- Excellent manual dexterity
- Respect and understand safety procedures, regulations and legislation
- Independent
- Results-oriented
- Strong communication, interpersonal and troubleshooting skills
- Team player
- Values safety, health and a positive working environment
- Willing to perform repetitive or routine tasks

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Journeyperson Trade Certificate as Industrial Mechanic/ Millwright (check the requirements for your province or territory)
- Physically fit and mobile
- Knowledge of mining operations and mining equipment
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse environment
- Proficiency in language of operation

May be Required

- Red Seal certification as Industrial Mechanic/ Millwright
- High school diploma or equivalent

Assets

- Willingness to relocate
- Other languages

COMPENSATION

\$29.00/hr

\$49.75/hr

Commission work pays between \$70 and \$100 per hour. Apprentices are paid a percentage of the full wage beginning at 75% and increasing with experience.

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Millwrights enjoy the hands-on challenge of performing precision work and keeping production systems in good conditions. They solve a range of technical problems in diverse mining environments, and are well compensated for their efforts.

WHAT IS IT LIKE TO WORK AS A MILLWRIGHT IN MINING?

Note: conditions vary according to employer and region.

Millwrights work in confined spaces, at heights and near open holes. They work with a variety of tools and large equipment to perform precise alignments as well as regular machinery maintenance.

PRODUCTION DRILLER

We need Production Drillers to move, set up and operate the drilling rigs that are critical to mining production. Production Drillers must be mechanically inclined, committed to following all protocols and procedures, and enjoy figuring out the best way to complete a drill pattern.

JOB DESCRIPTION

- Move, set up and operate drilling rigs and related equipment above or underground to drill holes for blasting and mineral excavation
- Use a variety of drills and hammers including hydraulic drills, rotary, in-the-hole, and top hammer, diamond drills and other drilling machines
- Prepare the drill site, move and set up drill following site plans and layouts, position drills and set angles and depths
- Start and stop drills, and coordinate with other workers on the site
- Conduct pre-operational checks and monitor conditions by checking water flow, components, fluid levels, fittings, safety equipment, as well as depths and alignments of boring positions
- Regulate air pressure, rotary speed, and downward pressure, according to the type of rock being drilled
- Operate secondary equipment, such as pumps and equipment used to prevent and correct problems or make minor repairs and refuel, inspect, lubricate and replace components to maintain drill
- Meet all drill production targets without damaging the drill
- Read and maintain daily drill report and drilling logbook and report issues to Supervisor
- Collaborate closely with mechanics, the production team and supervise Driller Helpers and Mine Helpers

SUCCESS PROFILE

- Communicates using signals
- Follows and implements procedures and safety policies in daily work
- Stays focused, dependable, reliable, responsible and adaptable
- Visualizes three-dimensional layouts
- Embraces new techniques and technologies

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Must be able to read and understand manuals and written instructions in language of operation
- Two to five years of experience in production mining such as Driller Helper, Heavy Equipment Operator or Underground Miner
- Physically fit and mobile
- Willing to work in a diverse workplace
- Must pass a medical and drug test
- Proficiency in language of operation

May be Required

- High school diploma or equivalent
- Training and certification in mining production modules
- Drill specific training (often on-the-job)
- Undergo a criminal record check

Assets

- Willingness to relocate
- Other languages

- Good vision and manual dexterity
- Strong risk management and trouble-shooting skills
- Strong understanding of mechanical systems
- Works well with minimal supervision as well as with others

COMPENSATION

\$30.53/hr

\$48.24/hr

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Production Drillers have physical stamina and like to work outside. They work well under pressure with minimal supervision, and enjoy challenging work that requires them to plan their actions carefully.

WHAT IS IT LIKE TO WORK AS A PRODUCTION DRILLER IN MINING?

Note: conditions vary according to employer and region.

Production Drillers work alone for hours at a time, and team up with blasters and other operation and production crews in order to meet production targets and ensure safety. They look after valuable drill equipment, work underground or outside – sometimes in severe environmental conditions – and are required to lift up to 25 kg (55 lbs) (based on job research, 2014). In mines with a short production phase, they may work for contractors and may travel to work at different mining locations.

WELDER

We need Welders because they construct and repair metal products that are essential to a mine. Welders must be patient workers who excel at carefully joining parts using heat and pressure with a variety of heavy equipment.

JOB DESCRIPTION

- Read drawings and blueprints for direction on projects
- Clean and prepare metal surfaces for welding, cutting, gouging, beveling, grinding or filing
- Shape and bend piping and metal sections by using hand tools, machines or by heating and hammering
- Measure and align parts for joining
- Join metal sections using various welding and bolting techniques
- Examine welds for bead width, appearance and penetration
- Smooth welds by grinding, chiseling and filing
- Acid bathe and polish finished products
- Fit attachments, connect hoses to gas tanks and other components
- Repair worn parts of metal products

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Completion of a three to four-year apprenticeship program or relevant work experience
- Journeyman Trade Certificate as Welder (check the requirements for your province or territory)
- Good eyesight; contact lenses should not be worn
- Knowledge of Metallurgy
- Physically fit and mobile
- Ability to conduct complex tests
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse environment
- Proficiency in language of operation

May be Required

- Red Seal certification as Welder

Assets

- Willingness to relocate
- Other languages

SUCCESS PROFILE

- Builds and maintains a positive relationship with supervisors
- Reads blueprints, graphs, charts and plans
- Stays focused
- Committed to safe work habits
- Dependable
- Detail-oriented
- Embraces new technology
- Excellent manual dexterity
- Patient
- Strong communication and listening skills
- Strong concentration skills
- Strong decision-making skills
- Strong math skills
- Takes initiative
- Works well in a team and independently
- Works well under pressure

COMPENSATION

\$28.00/hr

\$45.99/hr

Apprentices are typically paid a percentage of the full wage beginning at 75% and increasing with experience.

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Welders seek a hands-on occupation that offers challenge and opportunity. They tackle projects that require different problem-solving skills, and are well compensated for their efforts. Some are drawn to the artistic side of welding and enjoy fine-tuning their technique with every project they take on.

WHAT IS IT LIKE TO WORK AS A WELDER IN MINING?

Note: conditions vary according to employer and region.

Welders work on equipment ranging from light service vehicles to large crushers, working as a part of the mine's maintenance department. Some of their work is performed in the maintenance shop, and some is done at the work site. Their work includes the construction of new structures and repairs or modifications to existing ones as well as equipment and machinery. Welders are often required to work in confined spaces, lift heavy pieces of metal, and endure long periods of standing, squatting and kneeling, while performing repetitive activities.



Technician

Internet of Things Technology Specialist
Civil Engineering Technician
Environmental Technician
Geological and Mineral Technician
Mapping Technician
Survey Technician
Civil Engineer

INTERNET OF THINGS TECHNOLOGY SPECIALIST

We need Internet of Things (IoT) Technology Specialists to help transition mining into the connected age of the IoT. The implementation of IoT and AI technologies will be game-changing in the data accumulation and monitoring of all aspects of mining operations, leading to a range of benefits including safety improvements, reduced environmental impacts and increased profitability.

JOB DESCRIPTION

- Coordinate and support the deployment of IoT application solutions
- Perform hardware installation and system configuration
- Troubleshoot technical issues with IoT specific application integration and system configuration
- Provide ongoing technical services onsite or using remote tools
- Analyze business needs and develop technical requirements
- Produce workflow charts and system architecture diagrams
- Work alongside management and various departments to determine requirements for integrations
- Provide solutions to issues related to the connection of networks and platforms
- Project management that includes long- and short-term goals and initiatives
- Maintain up to date knowledge of IoT, cloud infrastructures and supporting technologies
- Create, analyze and validate detailed functional and non-functional requirements
- Design and review test cases and code reviews as needed

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- College diploma or bachelor's degree in electrical, electromechanical, automation engineering technology, computer science or related technical area
- 3+ years of relevant experience working in IoT integration and data engineering
- Knowledge of wireless technologies (Wi-Fi, LTE, UHF, VHF, BLE, RFID)
- Knowledge of IoT sensors, protocols and test tools
- Knowledge of mining operations and mining equipment
- Willingness to work in a diverse environment
- Must be able to pass a medical test
- Must be able to pass a drug test
- Proficiency in language of operation

May Be Required

- Valid driver's license
- Willingness to relocate

Assets

- Experience in IoT integration
- Experience with cloud infrastructures
- Other languages

COMPENSATION

\$33,000

\$71,000

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining

1	2	3	4	5
LIMITED				GREAT

Skill Transferability Among Other Industries

1	2	3	4	5
LOW				HIGH

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

IoT Technology Specialists are efficiency-oriented individuals who are both excited by and informed about the future of production, monitoring and performance of mines. They are attracted to this career for its opportunities to be at the cutting edge of the next generation of cloud computing and AI-led industry initiatives. These high-tech passions will allow the IoT Technology Specialist to launch their employer into a new era of data-driven workflow, production, maintenance and management.

WHAT IS IT LIKE TO WORK AS AN IOT TECHNOLOGY SPECIALIST IN MINING?

Note: conditions vary according to employer and region.

IoT Technology Specialists are responsible for a mine's implementation, maintenance and testing of IoT systems and sensors. They develop innovative services that help users receive, control and manage information. They are knowledgeable but also constantly learning about IoT protocols, software and devices, and they regularly monitor and analyze a huge amount of data.

SUCCESS PROFILE

- Interested in learning new technologies
- Organized analytical thinker with attention to detail
- Strong communication and interpersonal skills
- Strong problem-solving skills, able to troubleshoot complex problems
- Committed to safe work habits
- Minimal supervision required
- Adaptable
- Enjoys hands-on work
- Enjoys working with math, science, computers and machinery
- Understands and respects safety procedures, regulations and legislation
- Willing to perform repetitive or routine tasks

CIVIL ENGINEERING TECHNICIAN

We need Civil Engineering Technicians to keep mines operating safely and efficiently. They are vital members of the mine's engineering department and the specialized team that designs and builds new mine infrastructure and maintains existing infrastructure.

JOB DESCRIPTION

- Perform scheduled mine-wide surveys (e.g. face advance and drilling surveys, ventilation) and collection of data
- Conduct surveys and mapping of planned new excavations in an operating mine
- Inspect concrete, shotcrete, steel and timber to ensure surface and new areas undergoing underground construction is completed as per specifications
- Collect samples and carry out tests on materials samples
- Write regular reports, diagnose issues, develop and communicate corrective actions
- Assist with preparation, review and updating of civil and mechanical construction drawings using AutoCAD or other software
- Work with the mine planning and projects teams
- File and maintain engineering drawings and documents
- Install ground control instrumentation and read electronic instrumentation
- Make arrangements with mine operations personnel for equipment requirements, and physical installation of the instrumentation station
- Maintain and repair instrumentation stations

SUCCESS PROFILE

- Good at math, with interest in technology, information technology and science
- Identifies issues and solves problems with a positive attitude
- Committed to precise and accurate data collection
- Has respect for and understanding of safety procedures, regulations and legislation
- Learns quickly, especially detailed legislative, technical and production information
- An organized critical thinker with strong communication, computer, interpersonal and troubleshooting skills

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Post-secondary diploma or degree (2 – 3 years) in a relevant engineering subject, or a suitable combination of education with experience in quality assurance / control for field and laboratory testing
- Proficiency with word processing, spreadsheet and email software
- Computer-based drafting and design experience in AutoCAD or mining specific software
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse environment
- Proficiency in language of operation

Assets

- Red Seal certification
- Work experience as a foreman
- Training in business administration and leadership
- Post-secondary degree in Construction Science or Construction Management
- Willingness to relocate
- Other languages

COMPENSATION

\$74,700 \$80,600 \$93,400

AVERAGE

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining

1 2 3 4 5

LIMITED

GREAT

Skill Transferability Among Other Industries

1 2 3 4 5

LOW

HIGH

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Civil Engineering Technicians enjoys a challenging variety of projects and appreciate the chance to work with new technologies.

WHAT IS IT LIKE TO WORK AS A CIVIL ENGINEERING TECHNICIAN IN MINING?

Note: conditions vary according to employer and region.

Civil Engineering Technicians are likely based in an office or laboratory on (or near) the mine site, but spend most of their time in the mine. They are often required to work safely in confined spaces, at heights and near open holes, and must be willing and able to climb ladders and steel ramps on the surface and underground.

ENVIRONMENTAL TECHNICIAN

We need Environmental Technicians to prevent and control environmental contamination. Working with teams of engineers and scientists, they continuously measure a mine's water, soil and air to ensure compliance with regulations and legislation.

JOB DESCRIPTION

- Enter and analyze data, write reports and help ensure compliance with environmental regulations and legislation
- Participate in multi-disciplinary projects, including hazardous materials survey, abatement and remediation activities, air monitoring, flora and fauna protection, waste audits, and environmental compliance audits
- Measure resources, including water, soil and air to monitor pollution levels
- Collect and analyze samples from the environment by conducting physical and chemical tests
- Control and manage hazardous materials and ensure the proper cleanup of polluted sites
- Support implementation of resource deposits and planning of new infrastructure and construction
- Manage laboratory equipment and materiel
- May conduct information or training sessions on environmental issues within the community or the mine

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Post-secondary diploma (2 – 3 years) related to the environment (e.g. natural resources sciences, wastewater treatment, pollution control, hydrology, ecology, toxicology, mineralogy, geology, land scape management and civil engineering)
- Proficiency with word processing, spreadsheet and email software
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse environment
- Proficiency in language of operation

Regional Requirement

- Membership in the regulatory body to use the title "Professional Technologist"

May be Required

- International Organization for Standardization (ISO) ISO-14000 Environmental Standards certification
- Computer-based drafting and design experience in AutoCAD or mining specific software
- Workplace Hazardous Materials Information System (WHMIS) certification

Assets

- Willingness to relocate
- Other languages

SUCCESS PROFILE

- Identifies issues and solve problems
- Visualizes completed projects
- Enjoys hands-on work
- Understands and respects safety procedures, regulations and legislation

- Has strong computer, risk management, communication and interpersonal skills
- Has a strong interest in natural sciences
- Works well in a team

COMPENSATION

\$50,000 \$74,500 \$98,600

AVERAGE

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining

1 2 3 4 5

LIMITED

GREAT

Skill Transferability Among Other Industries

1 2 3 4 5

LOW

HIGH

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Environmental Technicians / Technologists tend to be responsible people who enjoy working with a challenging variety of routine and new tasks. Strongly committed to environmental protection, they like the outdoors and appreciate the opportunity to learn and work with new technologies.

WHAT IS IT LIKE TO WORK AS AN ENVIRONMENTAL TECHNICIAN IN MINING?

Note: conditions vary according to employer and region.

Environmental Technicians / Technologists inspect, maintain, control and manage hazardous waste and waste operations, collect samples, and assist with regulatory compliance and other duties. They perform laboratory and field tests in order to monitor the environment and investigate any sources of pollution, and the work involves travelling between multiple sites and the potential of having to investigate a chemical spill or perform water analysis in lakes or rivers. They also prepare information sessions and help to deliver training on environmental issues.

GEOLOGICAL AND MINERAL TECHNICIAN

We need Geological and Mineral Technicians to conduct surveys and analyze geophysical data. They must be detail-oriented, adaptable, and enjoy working outdoors to direct survey programs and provide technical services related to production.

JOB DESCRIPTION

- Conduct or direct geological, geophysical, geochemical, hydrographic or oceanographic surveys, drilling, well logging or underground mine survey programs
- Configure, operate and maintain survey instruments and equipment
- Prepare notes, sketches, geological maps and cross-sections
- Prepare, transcribe or analyze seismic, gravimetric, well log or other geophysical and survey data
- Assist Engineers and Geologists in the evaluation and analysis of petroleum and mineral reservoirs
- Prepare or supervise the preparation of rock, mineral or metal samples and may perform physical and chemical laboratory tests
- Conduct environmental audits
- Carry out various other technical functions in support of geology, geophysics and petroleum and mining engineering
- Support modeling of resource deposits and planning of new infrastructure and construction

SUCCESS PROFILE

- Identify issues and solve problems with a positive attitude
- Precise and accurate data collection
- Critical thinker
- Respect and understanding of safety procedures, regulations and legislation
- Learns quickly
- Organized
- Strong communication, computer, interpersonal and troubleshooting skills
- Strong interest in math, technology, Information Technology and science

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Post-secondary diploma (two to three years) in mineralogy, geology or a related program
- Proficiency with word processing, spreadsheet, and email software
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse environment
- Proficiency in language of operation

Regional Requirement

- Membership in the regulatory body to use the title "Professional Technologist"

May be Required

- Certification in geological and mineral technology or in a related field (available through provincial associations of engineering/applied science technologists and technicians)
- Computer-based drafting and design experience in AutoCAD or mining specific software
- Wilderness Survival Training

Assets

- Willingness to relocate
- Other languages

COMPENSATION

\$112,000

\$163,627

Short-term employment contracts are common. In those cases, Geological and Mineral Technicians are paid for days worked at a rate of approximately \$200 - \$260 per diem.

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining

1	2	3	4	5
LIMITED				GREAT

Skill Transferability Among Other Industries

1	2	3	4	5
LOW				HIGH

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Geological and Mineral Technicians enjoy a challenging variety of routine and new tasks, the outdoors, and appreciate the opportunity to learn and work with new technology.

WHAT IS IT LIKE TO WORK AS A GEOLOGICAL AND MINERAL TECHNICIANS IN MINING?

Note: conditions vary according to employer and region.

Geological and Mineral Technicians work at the mine site with engineers and geologists or in a laboratory. In the mine, they prepare equipment, take samples, support mapping and drilling, enter data and package samples. With experience, they spend more time coordinating and compiling reports in an office.

MAPPING TECHNICIAN

We need Mapping Technicians because they bring together information in exciting ways, creating and using GIS databases and computer programs to replace paper maps and drawings. They must be good with numbers, programming and visualizing data.

JOB DESCRIPTION

- Procure and install GIS software for the mine data collection, as well as the equipment that interfaces with Satellite Positional Systems (SPS)
- Build, design output reports, operate and maintain the GIS and spatial databases and systems for the mine
- Analyze and edit spatial data to verify its integrity and accuracy
- Work closely with Surveyors and Engineers to ensure data is accurately collected, presented and interpreted
- Integrate data from various sources to generate digital graphics and maps
- Prepare topographic maps, aerial photo mosaics, and other custom mapping products
- Help to ensure safety, improve operational efficiency and quality control, control costs and solve problems
- Contribute to reports and instruction manuals, attend meetings, record and store information
- Coach and assist Surveyors, Engineers and Operators use of GIS databases

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Post-secondary degree or diploma in a relevant subject (i.e. geography, geology, surveying, etc.), or a combination of education with experience as a Database Technician

- Proficiency with surveying terminology and the use of survey tools and field equipment
- Proficiency with AutoCAD, digital mapping, spatial database software, graphic workstations, colour plotters, digitizers and related equipment
- Able to prepare and execute less complex tools such as scripts, menus and routines related to the work performed
- Knowledge of GIS software
- Proficiency with word processing, spreadsheet, email software and language of operation
- Knowledge of advanced geographic information concepts, systems and applications, legal land surveying, coordinate geometry, survey calculations and topographical mapping
- Must be able to pass a medical and drug test
- Willingness to work in a diverse environment

Regional Requirement

- Certification through provincial associations of applied science technologists and technicians
- Two years of supervised work experience

May be Required

- Valid driver's licence (or eligible for a driver's licence) with few or no current infractions

Assets

- Willingness to relocate
- Other languages

SUCCESS PROFILE

- Interested in problem solving, Information Technology, instrumentation and new techniques and applications
- Interested in visual presentation, aesthetics, colour schemes
- Can work in a fast-paced, changing environment, in a team and independently
- Committed to accuracy, data integrity, improved production and reduced costs
- Interested in quality assurance, safety and environmental protection, procedures, legislation and regulations

- Learns quickly, especially detailed functional, legal/privacy and technical information
- Strong organizational, analytical, computer and programming skills, communication, listening and multi-tasking skills
- Takes initiative and achieves new insights into the data
- Works well with the continuing changes of pragmatic iterative processes

COMPENSATION

\$112,000

\$163,627

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining

1	2	3	4	5
LIMITED				GREAT

Skill Transferability Among Other Industries

1	2	3	4	5
LOW				HIGH

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Mapping Technicians enjoy problem solving, information technology and the presentation of data. They enjoy working in multidisciplinary teams, using the latest technologies and equipment.

WHAT IS IT LIKE TO WORK AS A MAPPING TECHNICIAN IN MINING?

Note: conditions vary according to employer and region.

Mapping Technicians are based in an office far from the mine site, but may spend time at the production and exploration sites. Standard week-day working hours with only occasional overtime, evening and/or weekend work are the norm.

SURVEY TECHNICIAN

We need Survey Technicians because they conduct or participate in field surveys to determine the exact location and relative position of rivers, ridges and other natural features and structures on the earth's surface, underground and underwater.

JOB DESCRIPTION

- Mark the location of new works, and set up reference points as benchmarks
- Plot survey results, prepare detailed drawings, charts, plans, and write survey notes and reports
- Analyze and edit spatial data to verify the accuracy of data for quality assurance
- Inspect, adjust, test and monitor the performance of the survey equipment, Satellite Positional Systems (SPS) and other systems
- Plan SPS routine maintenance, ensuring they are productive, efficient and safe
- Coordinate, direct, mentor and train more junior field and office staff
- Work closely with Surveyors, Geologists and Mining Engineers to ensure that data is accurately collected, presented and used
- Plan and conduct field work to assist with other company programs
- Compile data from various sources to generate maps
- Prepare topographic maps, aerial photo mosaics, and other custom land survey products
- Analyze and conduct quality assurance on surveys
- Help to ensure safety, protect the environment, improve operational efficiency and quality control, regulate production costs and solve problems

JOB ENTRY REQUIREMENTS

Note: The requirements listed illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

SUCCESS PROFILE

- A strong interest in Information Technology and instrumentation
- Trustworthy and maintains positive relationships with a wide variety of personnel
- Identifies issues, solve problems and takes initiative
- Can work in a fast-paced, dynamic environment
- Calm, positive, organized, careful and flexible
- Committed to precise and accurate measurement and safety and environmental protection
- Embraces new techniques and technology
- Learns detailed function and technical information quickly
- Strong communication, computer and drafting skills
- Understanding legislation and regulations concerning safety, employment and environmental protection
- Works well in a team and independently, and under pressure

Fixed Requirements

- Post-secondary diploma (2 – 3 years) in geomatics or land survey technology, or a combination of high school education with experience as a member of a survey party
- Proficiency with AutoCAD and other digital Land Survey, graphic workstations, colour plotters, digitizers and related equipment
- Maintain technical competence in related software platforms and field technologies and use them efficiently
- Proficiency in survey calculations, relevant engineering and drafting practices, uploading/downloading survey data, using related software platforms and language of operation
- Excellent understanding of the coordination between field survey, office computations and drafting
- Must pass a medical and drug test
- Willing to work in a diverse environment

Regional Requirement

- Certification through provincial associations of applied science technologists and technicians

May be Required

- Two years of supervised work experience
- Valid driver's licence with few or no current infractions

Assets

- Willingness to relocate
- Other languages

COMPENSATION

\$54,000

\$75,000

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Survey Technicians excel at mathematics and conduct precision work. They enjoy working outdoors, experiencing remote parts of the country and using the latest technology and equipment.

WHAT IS IT LIKE TO WORK AS A SURVEY TECHNICIAN IN MINING?

Note: conditions vary according to employer and region.

Survey Technicians are based in an office at the mine site, but spend most of their time at the production and exploration sites, often in uncomfortable conditions including confined spaces, at heights and near open holes.



Science & Engineering

Environmental Consultant
Electrical Engineer
Environmental Biologist
Geological Engineer
Geologist
Mechanical Engineer
Mineral Process Engineer
Mining Engineer

ENVIRONMENTAL CONSULTANT

We need Environmental Consultants to lead the development and implementation of a mine's environmental planning and management practices. The mining industry recognizes the need to reduce its environmental impact, including mitigating against climate change. Environmental Consultants help mines comply with regulations and take a leadership role in preserving the earth, water and air for future generations.

JOB DESCRIPTION

- Manage environmental management plans which satisfy provincial and federal government regulatory requirements
- Obtain environmental approvals, permits and licences
- Implement procedures, policies and proactive measures to prevent permit violations and promote project development
- Prepare environmental data collection and data management to organize submissions of environmental applications, records, reports and notifications
- Perform site inspection, air monitoring services and visual inspections for the removal of hazardous materials
- Design and interpret internal audits to ensure technicians, site personnel and contractors are following environmental regulatory and internal requirements
- Maintain strong working relationships with mine site employees including area managers and project engineers
- Create and organize project reports of site inspections and assessments
- Prepare research papers, educational texts, or articles and present at conferences, workshops and symposia

SUCCESS PROFILE

- Strong knowledge of environmental acts and regulations
- Good understanding of the environmental impact of mining processes
- Strong oral and written communication skills
- Strong organizational skills
- Detail-oriented
- Strong technical writing skills
- Analytical and strategic thinker
- Strong problem-solving skills
- Ability to prepare accurate technical records and reports
- Ability to work with all levels of the organization

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Post-secondary degree in Environmental Science or diploma in Environmental Technology or Biological Sciences Technology
- Knowledge and experience with environmental management systems
- Knowledge of applicable environmental legislations and guidelines
- Proficient in office and data management software

May be Required

- Willing to work on a shift work or fly-in-fly-out (FIFO) schedule

Assets

- Experience at a mining or industrial setting
- Willingness to relocate
- Other languages

COMPENSATION

\$36,000

\$92,000

(Source: Source: online job ads in Canada, 2021).

JOB PROSPECTS

Demand in Mining

1	2	3	4	5
LIMITED				GREAT

Skill Transferability Among Other Industries

1	2	3	4	5
LOW				HIGH

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Environmental Consultants are tasked with providing timely and helpful technical advice when it comes to environmental regulations, monitoring and performance. They are an integral part of a mine's day-to-day operation as well as its long-term planning because of their ability to translate environmental regulations into practical policies and effective action. People are attracted to this career because they wish to lead the industry toward positive changes, ethical stewardship and environmental responsibility.

WHAT IS IT LIKE TO WORK AS AN ENVIRONMENTAL CONSULTANT IN MINING?

Note: conditions vary according to employer and region.

Environmental Consultants must be highly organized and motivated to identify, assess and manage the environmental effects of a mine's operation on neighbouring lands and waters. They are constantly keeping up to date with regulatory protocols and requirements from provincial, federal and international governing bodies so their employer remains in safe, legal and compliant operation.

CIVIL ENGINEER

We need Civil Engineers to ensure the efficient and profitable operation of mines. They are vital members of a mine's engineering department, fulfilling a wide range of tasks from helping to prepare budgets and monitoring project progress to designing and building new infrastructure.

JOB DESCRIPTION

- Estimate detailed quantities of inputs and prices for new works, feasibility studies and formal tenders, and suggest innovative cost-effective construction solutions
- Analyze construction documents and drawings to prepare cost estimates, budgets and programs
- Assist with preparing tendering competitions, evaluating bids, negotiating variations and remedial works
- Prepare construction progress schedules, budgets and cash-flow forecasts
- Write brief reports, attend meetings, exchange information with other professionals, record and store information
- Facilitate the handover of information to the operations team and set up appropriate cost codes and data collection for controlling budgets
- Analyze records of past construction work, the materials and equipment used and the outcomes produced and store in a database for future reference
- Develop a personal network of practitioners who can provide advice when required
- Play a leading role in controlling future construction costs at all stages of the mine life cycle
- May negotiate with contractors, subcontractors and suppliers to reduce costs, improve quality and finalize contracts

SUCCESS PROFILE

- Develops innovative solutions in a high pressure, fast-paced, changing environment
- Identifies issues and priorities, and solves problems with a positive attitude
- Visualizes, quantifies and plans a wide variety of construction projects
- Builds trust and maintains positive relationships with a wide variety of personnel
- Committed to accuracy, improved production, reduced costs, safety and environmental protection
- Learns quickly, especially detailed legal, technical and production information.
- Organized with good time management and communications skills
- Strongly interested in technology, information technology and data
- Strong numerical, math, computer and planning skills
- Thorough understanding of, and compliance with, legislation and regulations concerning safety, employment and environmental protection

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- High school diploma or equivalent
- Post-secondary diploma in civil or construction engineering technology (or mechanical or electrical engineering, or architectural technology) or experience as a qualified tradesperson in a construction trade (e.g. plumbing, carpentry, electrical)
- Proficiency with word processing, spreadsheet, email and presentation software
- Proficiency with scheduling software
- Use of computer-based databases and estimation programs using engineering, construction and mining software
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse environment
- Proficiency in language of operation

Regional Requirement

- Five to ten years of experience in construction

May be Required

- Professional Certification as a technician, technologist or engineer

Assets

- Willingness to relocate
- Other languages

COMPENSATION

\$99,800 \$139,400 \$180,000

AVERAGE

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining

1	2	3	4	5
LIMITED			GREAT	

Skill Transferability Among Other Industries

1	2	3	4	5
LOW			HIGH	

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Civil Engineers are motivated to advance their careers in construction. They enjoy developing innovative solutions with careful calculation and estimation, and appreciate the opportunity to work as a member of a multidisciplinary team and to use the latest techniques and technology.

WHAT IS IT LIKE TO WORK AS A CIVIL ENGINEER IN MINING?

Note: conditions vary according to employer and region.

Civil Engineers are likely employed by a construction company serving the mining industry, based in an office and do not spend much time at construction sites. They use significant experience in construction or base estimates on analysis of past projects to plan and price new works.

ELECTRICAL ENGINEER

We need Electrical Engineers to design and support the construction and maintenance of a mine's electrical and information systems. They use science, technology and critical thinking to troubleshoot and solve problems.

JOB DESCRIPTION

- Conceive and plan the electrical equipment and systems to operate in demanding conditions at the mine site
- Research, specify, recommend, install and commission the electrical equipment and systems
- Provide trouble-shooting support to improve operational efficiencies
- Provide technical leadership for maintenance departments through the use of computerized planning, modeling and predictive maintenance systems
- Lead the implementation of cutting-edge processes and safety practices
- Prepare tendering competitions, evaluate technical aspects of bids, supervise contractors, negotiate variations and remedial works, assure quality, measure work done, approve and accept works
- Lead or work on a team to ensure projects are completed on time and budget, and to high quality standards
- Write reports, attend meetings, exchange information with other professionals, record and store information in compliance with legislation, regulations and company policies
- Ensure safety, improve operational efficiency and quality, control production costs and protection of the environment at all stages of a mine life cycle
- Work cooperatively with other departments, project managers, supply chain and mine management to optimize production, reduce costs, solve problems and meet deadlines
- Supervise Junior Engineers and Technicians and assist Supervisors in building an efficient work force
- Only licensed engineers review and certify that electrical work has been built following established standards and regulations

SUCCESS PROFILE

- Builds trust and maintains positive relationships with a wide variety of personnel
- Works under pressure in a fast-paced, dynamic environment
- Embraces new techniques and technologies
- Enjoys working with math, science, computers and all things electrical
- Understands and respects established safety procedures, legislation and regulations
- Intelligent, creative and goal-oriented
- Patient, flexible, adaptable and resilient, with strong communication and time management skills

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Bachelor's degree in Electrical Engineering
- Eligible for Registration as Engineer in Training
- Proficiency with word processing, spreadsheet, email software and language of operation
- Specialized software skills
- Willing to work in a diverse workplace
- Must pass a medical and drug test

Regional Requirement

- Three or more years of mining experience

May be Required

- Professional registration P.Eng
- High power distribution training (or training on electronic computer control process)

Assets

- Master's degree in Electrical Engineering, or related field
- Willingness to relocate
- Other languages

COMPENSATION

\$79,500

\$111,800

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Electrical Engineers seek challenging and rewarding technical work. They like to work independently and with a team, and with new technologies.

WHAT IS IT LIKE TO WORK AS AN ELECTRICAL ENGINEER IN MINING?

Note: conditions vary according to employer and region.

Electrical Engineers are usually based in an office in the engineering department on the mine site. They may be exposed to challenging working conditions, be required to work in confined spaces, at heights and near open holes, and are willing and able to climb ladders and steel ramps on the surface or underground. Experienced Electrical Engineers spend less time in the field and more in an office environment.

ENVIRONMENTAL BIOLOGIST

We need Environmental Biologists to help reduce the impacts of mining operations on the surrounding ecosystem. Passionate about science and the environment, they develop new technologies and procedures to ensure that mining is conducted in a sustainable way.

JOB DESCRIPTION

- Plan, conduct, and monitor environmental projects to ensure the mine operates in compliance with federal and provincial regulatory requirements and environmental protection acts and guidelines
- Develop new technologies, processes and procedures to ensure that mining is conducted in a sustainable and environmentally-friendly manner
- Lead and manage environmental assessments to protect groundwater, fisheries, wildlife, and other natural resources
- Conduct investigations, field studies and environmental monitoring of mining operations on water, plant and animal life
- Plan, organize and conduct field surveys including wetland delineation, habitat assessment, native plants, and other ecological studies
- Collect, prepare and analyze samples of water, soil, and plant and animal population
- Apply scientific tools, statistical techniques and computer technologies to collect, analyze and research data
- Prepare environmental and compliance assessment reports and technical correspondence for internal stakeholders and regulatory authorities
- Supervise technicians, field crews and other biologists; work with inter-disciplinary teams
- Provide technical support to Project Managers for the Contaminated Site Management practice on natural resources damages, ecological and human health risk assessment tasks

JOB ENTRY REQUIREMENTS

Note: The requirements listed illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Bachelor's degree in Environmental Science
- Six to eight years of experience in environmental assessment projects and consulting experience in mining or in similar industries and small/large hydroelectric projects
- Hands-on experience with environmental assessment, impact surveys, field studies of endangered species and/or wetland delineation projects
- Knowledge of industry-specific statistical and analytical computer software
- Knowledge and experience with federal, provincial and local workplace health and safety and environmental legislations, rules, regulations and reporting processes and procedures
- Valid Class 5 driver's licence
- Ability and willing to conduct fieldwork in all types of environmental conditions and harsh terrain as well as periodic overnight travel
- Physical stamina for fieldwork
- Must pass a medical and drug test

Regional Requirement

- Eligible for registration as Biologist in Training
- Professional Registration

May be Required

- Master's degree in environmental science, preferably biological sciences or related field such as environmental science, natural science, hydrology, ecology or botany

Assets

- Specific experience with environmental assessment
- Willingness to relocate
- Other languages

SUCCESS PROFILE

- Conducts statistical analysis
- Works independently and as part of a multi-disciplinary team
- Adaptable, analytical, professional, conscientious, detail-oriented and organized
- Understands and respects safety procedures, environmental legislation and regulations

- Has strong communication, writing, computer and critical thinking skills
- Values safety, health and a positive working environment

COMPENSATION

\$60,000 \$91,400 \$124,000

AVERAGE

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Environmental Biologists have a deep concern for environmental sustainability. They like scientific investigation and are interested in field assignments and being outdoors. They enjoy conducting research, analyzing data and creating technical reports. They like to support mining companies in environmental stewardship.

WHAT IS IT LIKE TO WORK AS AN ENVIRONMENTAL BIOLOGIST IN MINING?

Note: conditions vary according to employer and region.

Environmental Biologists are based in an office or laboratory on or near the mine site. They spend a lot of time conducting surveys and fieldwork and may conduct on-site assessments and travel long distances to collect samples. Fieldwork is conducted in all types of environmental conditions, within bodies of water and may require the handling of toxic or dangerous substances and/or organisms.

GEOLOGICAL ENGINEER

We need Geological Engineers to provide technical and scientific analyses on rock, soil and ground-water, and to solve engineering problems with safe and economical solutions. With critical thinking and environmental knowledge, they design solutions to protect the environment from mining operations.

JOB DESCRIPTION

- Plan and coordinate geotechnical, geological, geophysical or geohydrological data acquisition, analysis and mapping
- Design and conduct feasibility studies in mining exploration, operation and evaluation
- Analyze and interpret geological and geophysical information from various sources including geological maps, survey data, well logs, bore holes, aerial photos and radar images
- Design and recommend solutions to protect the environment from mining operations such as strategies for proper subsurface waste disposal, protection of groundwater resources, erosion control, and restoration of polluted sites
- Plan, organize and conduct field surveys and site investigations including analysis of rock, bedrock and near-surface deposits, environmental hazards, safety risk assessments and quality assurance of mining projects
- Conduct studies of groundwater flow and contamination and develop recommendations for site selection, treatment and construction
- Design open pit walls, mine waste dumps and earth-fill fluid-retaining dam structures and conduct detailed technical analyses on these designs including slope stability, seepage and hydraulic separation
- Apply scientific tools, computer technologies and instrumentation related to geology and engineering to collect, analyze and research data
- Prepare assessment reports, feasibility studies, recommendation reports and technical correspondence for internal stakeholders and regulatory authorities
- Work closely with Mining Engineers and Project Managers and other inter-disciplinary project teams including Technicians, Technologists and Scientists
- Only licensed engineers authorize designs, calculations and drawings and are accountable on behalf of their employers

SUCCESS PROFILE

- Acts with authority and make independent decisions
- Sees projects through
- Work with and/or manage a multi-disciplinary team
- Critical thinker
- Respect and understanding of safety procedures, environmental legislation and regulations

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Bachelor's degree in geological or environmental engineering or in an associated technical field such as mining engineering or civil engineering
- Eligible for Registration as Engineer in Training
- Up to 10 years of work experience in geology, mining engineering or operations experience with specific experience in environmental assessment projects in mining or similar industries such as oil and gas (pipeline and transmission lines) and power/utility sector and small/large hydroelectric projects
- Ability to plan and execute field programs with knowledge of proper sampling techniques
- Working knowledge of industry-specific statistical and analytical computer software
- Valid Class 5 driver's licence
- Ability and willingness to conduct fieldwork in all types of environmental conditions and harsh terrain as well as periodic overnight travel
- Physical stamina for fieldwork
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse environment
- Proficiency in language of operation

May be Required

- Master's degree in geological or environmental engineering or related field
- Professional Registration, P.Eng.

Assets

- Hands-on experience with geological assessment, feasibility surveys, subsurface investigation, contaminated site investigation and remediation
- Specific experience with geological assessment in Canada
- Willingness to relocate • Other languages

- Strong communication, computer (scientific software databases, mapping and queries), organizational and analytical skills
- Strong interest in math, technology, Information Technology and science
- Values safety, health and positive working environment

COMPENSATION

\$87,590

\$141,696

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining

1	2	3	4	5
LIMITED				GREAT

Skill Transferability Among Other Industries

1	2	3	4	5
LOW				HIGH

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Geological Engineers are interested in earth sciences and natural formations, applied mathematics and the basic laws of physics and chemistry. They are good with numbers, enjoy engineering challenges and traveling to various locations. Geological Engineers work with other Technologists, Scientists, and Engineers both in a lab and outdoor environment. They apply their knowledge of geology and engineering to build or improve designs that help mines operate in a safe and efficient manner while taking into consideration the laws and regulations on environmental sustainability and responsibility. They also research, analyzing data and creating technical reports.

WHAT IS IT LIKE TO WORK AS A GEOLOGICAL ENGINEER IN MINING?

Geological Engineers work in an office, but are also required to visit sites for temporary or long stays. Working hours may be irregular when conducting fieldwork and driving may be required on radio-controlled resource roads. Fieldwork can consist of travelling long distances to collect samples and conduct on-site assessments. Fieldwork is conducted in all types of environmental conditions, within bodies of water (including rivers and streams) and toxic or dangerous substances and/or organisms may be present. When the fieldwork is complete, Geological Engineers return to the lab and test samples for content and composition and then develop reports and recommendations.

GEOLOGIST

We need Geologists to support infrastructure planning and ensure that resources are developed in a sustainable manner. Geologists apply their fascination with earth sciences to a wide range of work that is pivotal to mine performance.

JOB DESCRIPTION

- Assist the in-pit/underground ore production, stockpiling and ore reporting
- Plan the grade control drilling program
- Accurate sampling of various drills
- Evaluate assay data quality
- Update grade control database, block model and design of the ore blocks
- Interact closely with mill operations, mine planning and mine operations
- Ensure all mine geology department activities are in compliance with health and safety policies and laws
- Supervise and develop Graduate Geologists and Mineral and Geological Technicians
- Conduct in-pit/underground geological mapping and data analysis for grade control modeling, acid rock drainage and geotechnical evaluation
- Participate with end of month grades and tonnes reconciliation
- Participate in daily safety meetings

SUCCESS PROFILE

- Shares knowledge with colleagues
- Visualizes three-dimensional layouts
- Analytical
- Curious
- Embraces new techniques and technologies
- Understanding and respect for established safety procedures, regulations and legislation
- Patient, positive, flexible, adaptable and resilient
- Respectful, open-minded and works well in a team
- Strong communication, computer and problem-solving skills
- Strong interest in earth sciences and math
- Willing to learn

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Bachelor's degree in geology or earth sciences
- Eligible for registration as Geoscientist in Training
- Must be willing to pass a medical test
- Must be willing to pass a drug test
- Willingness to work in a diverse workplace
- Physically fit and mobile
- Proficiency in language of operation

May be Required

- Professional Registration, P. Geo.
- Wilderness survival training

Assets

- Master's degree in geology or earth sciences
- Willingness to relocate
- Other languages

COMPENSATION

\$70,100 \$91,300 \$159,400

AVERAGE

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining

1 2 3 4 5
LIMITED GREAT

Skill Transferability Among Other Industries

1 2 3 4 5
LOW HIGH

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Geologists like the range of working environments, including fieldwork, office work and/or lab work. There are opportunities to learn and apply new techniques and technologies. Geologists are attracted by earth science, traveling, adventure and outdoor activities that keep them physically fit.

WHAT IS IT LIKE TO WORK AS A GEOLOGIST IN MINING?

Note: conditions vary according to employer and region.

Geologists are based in an office, laboratory or a core-shack on (or near) the mine site, but will often be required to work and travel in remote locations. At times, they are required to work in challenging physical environments and seasonal environmental conditions. They are occasionally on-call and available to respond to a call on short notice. This career is centred around communication and teamwork. The work is fast-paced with daily opportunities to make decisions and to learn.

MECHANICAL ENGINEER

We need Mechanical Engineers because they support production and minerals processing operations through the purchase, installation and maintenance of specialized mechanical equipment. Mechanical Engineers are leading members of a mine's engineering team.

JOB DESCRIPTION

- Organize, install and operate the mechanical equipment and systems at the mine site
- Oversee the maintenance, repair and support of mechanical equipment and systems by operators and mechanics
- Prepare, check and approve calculations, documents, drawings, cost estimates and tests in compliance with quality assurance policies
- Find the causes of vibration, mechanical failures and maintenance problems
- Supervise contractors, negotiate changes, control quality, measure work done, approve and accept works
- Lead or work on a team to ensure projects are completed on time and budget
- Write reports, attend meetings, exchange information with other professionals, record and store information in compliance with legislation, regulations and company policies
- Play a leading role in ensuring safety, improving operational efficiency and quality, controlling production costs and minimizing effects on the environment
- Work cooperatively with other departments, engineering disciplines, project managers, supply chain and management to optimize production, reduce costs, solve problems and meet deadlines
- Supervise junior engineers and technicians and assist supervisors in building an efficient work force

SUCCESS PROFILE

- Builds trust and maintains positive relationships with a wide variety of personnel
- Identifies issues and priorities, and solves problems with a positive attitude
- Plans and works in a fast-paced, dynamic environment
- Ensures quality, innovative design, improved production and reduced costs
- Committed to safety and environmental protection
- Understands the mine's long term goals and assists in determining the best method to reach them
- Organized and a critical thinker
- Interested in machines, the production process, technology and Information Technology
- Strong active listening skills
- Strong communication, analytical, computer and planning skills
- Works well under pressure

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- A Bachelor's degree in Mechanical Engineering or related subject
- Eligible for registration as Engineer in Training
- Proficiency with word processing, spreadsheet and email software
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse environment
- Proficiency in language of operation
- Specialized software skills
- Use of computer-based design and drafting using mechanical engineering and mining software

May be Required

- Professional Registration, P. Eng.
- Master's degree in Mechanical Engineering or related subject

Assets

- Willingness to relocate
- Other languages

COMPENSATION

\$59,918

\$180,000

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining

1	2	3	4	5
LIMITED				GREAT

Skill Transferability Among Other Industries

1	2	3	4	5
LOW				HIGH

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Mechanical Engineers enjoy tackling a challenging variety of duties including design, analysis, problem-solving and creating systems. They appreciate the opportunity to lead a multidisciplinary team and use the latest technologies and equipment in their work, and are well compensated for their efforts.

WHAT IS IT LIKE TO WORK AS A MECHANICAL ENGINEER IN MINING?

Note: conditions vary according to employer and region.

Mechanical Engineers are likely based in an office on (or near) the mine site, but spend much of their time at the mine. They may be exposed to challenging working conditions and may be required to work safely in confined spaces, at heights and near open holes. They must be willing and able to climb ladders and steel ramps on the surface and underground.

MINERAL PROCESS ENGINEER

We need Mineral Process Engineers to use new technologies and sophisticated processes to extract and refine valuable minerals from raw ore. Creative problem solvers, Mineral Process Engineers look to optimize systems, including developing new products from waste materials.

JOB DESCRIPTION

- Organize and supervise the extraction of metals and minerals from ore at underground or surface mines
- Monitor the conditions of the various processes and the flow of material through the mill
- Monitor and control the mine feed, operating parameters and the addition of chemical substances to ensure maximum mineral extraction, to create stable, high-quality concentrates
- Conduct on-site testing and research to identify ways to improve systems
- Troubleshoot operational inefficiencies
- Implement cutting-edge processes and safety practices
- Write reports, attend meetings and exchange, record and store information in compliance with legislation, regulations and company policies
- Work cooperatively with other departments to optimize production, reduce costs, solve problems and meet deadlines
- Supervise junior engineers and technicians and assist supervisors in building an efficient work force
- Plan for equipment wear and create proactive maintenance procedures

SUCCESS PROFILE

- Creative
- Embraces new techniques and technologies
- Enjoys working with math, science, computers and machinery
- Goal-oriented

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Bachelor's degree in engineering (e.g. metallurgical, chemical, mechanical or mining)
- Eligible for Registration as Engineer in Training
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse environment
- Proficiency in language of operation

May be Required

- Professional Registration, P.Eng.
- Specialized software skills

Assets

- Master's degree
- Proficiency with word processing, spreadsheet and email software
- Willingness to relocate
- Other languages

- Understands and respects safety procedures, legislation and regulations
- Patient, flexible, adaptable and resilient
- Strong communication and time management skills
- Team player

COMPENSATION

\$70,000 \$93,300 \$147,000

AVERAGE

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining

1 2 3 4 5

LIMITED

GREAT

Skill Transferability Among Other Industries

1 2 3 4 5

LOW

HIGH

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Mineral Process Engineers seek challenging and rewarding technical work. Possessing strong analytical skills, they enjoy finding creative solutions to problems, and are well compensated for their efforts. They utilize new technologies, working both independently and with a team.

WHAT IS IT LIKE TO WORK AS A MINERAL PROCESS ENGINEER IN MINING?

Note: conditions vary according to employer and region.

Mineral Process Engineers work in an office in a mill or in a research lab. They are exposed to challenging working conditions, including confined spaces, at heights and near open holes. They must be willing and able to climb ladders and steel ramps.

MINING ENGINEER

We need Mining Engineers because they provide specific knowledge and leadership that is critical for developing and constructing new mines, and for managing existing mines. Mining Engineers work closely on teams with other engineers and technologists.

JOB DESCRIPTION

- Investigate and evaluate mineral deposits in collaboration with geologists, earth scientists and economists to determine their profitability
- Plan mine navigation systems, including tunnels and shafts for underground operations and pits and haulage roads for open-cut operations, using computer-aided design
- Consult with Geologists and other engineers about the design, selection and provision of specialty machines, facilities and systems for mining and infrastructure such as access roads, water and power supplies
- Oversee the construction of the mine and the installation of plant and equipment
- Troubleshoot to improve operational efficiencies
- Implement cutting edge processes and safety practices
- Supervise contractors, negotiate variations and remedial works, assure and control quality and measure work done.
- Lead or work on a team to ensure projects are completed to time, budget and high quality standards
- Write reports, attend meetings, and exchange, record and store information in compliance with legislation, regulations and company policies
- Ensure safety, improve operational efficiency and quality, control production costs and environmental protection
- Work cooperatively with other departments to optimize production, reduce costs, solve problems and meet deadlines
- Supervise junior engineers and technicians and assist supervisors in building an efficient work force

SUCCESS PROFILE

- Builds trust and maintains positive relationships with a wide variety of personnel
- Plans and works effectively in a fast-paced, dynamic environment
- Visualizes three-dimensional layouts
- Embraces new techniques and technologies
- Understands and respects safety procedures, regulations and legislation
- Intelligent, creative and goal-oriented
- Organized and a critical thinker
- Patient, flexible, adaptable and resilient
- Strong active listening and communications skills
- Strong analytical, computer skills
- Strong time management and planning skills
- Takes initiative
- Team player
- Works well under pressure

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Bachelor's degree in mining engineering
- Eligible for Registration as Engineer in Training
- Proficiency with word processing, spreadsheet and email software
- Specialized software skills
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse environment
- Proficiency in language of operation

May be Required

- Professional Registration, P.Eng

Assets

- Master's degree in mining engineering or related field
- Willingness to relocate
- Other languages

COMPENSATION

\$59,900

\$180,000

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining

1	2	3	4	5
LIMITED				GREAT

Skill Transferability Among Other Industries

1	2	3	4	5
LOW				HIGH

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Mining Engineers seek challenging and rewarding technical work. With their strong analytical skills, they enjoy forming creative solutions to problems, and are well compensated for their efforts. They utilize new technologies effectively both independently and with a team.

WHAT IS IT LIKE TO WORK AS A MINING ENGINEER IN MINING?

Note: conditions vary according to employer and region.

Mining Engineers use their knowledge and skills to design systems and operations to extract minerals and metals to meet growing resource demands. They minimize the associated physical, environmental and social footprints associated with the extraction and processing of mineral resources and managing the waste materials produced – requiring knowledge of topics in every science and engineering discipline.

A photograph of two miners in a quarry. The miner on the left is wearing a yellow hard hat, safety glasses, and a high-visibility orange and yellow vest over a black jacket. He is pointing his right arm towards the background. The miner on the right is also wearing a yellow hard hat and a similar high-visibility vest. In the background, there is a large yellow excavator on the left and a deep, rocky quarry pit extending into the distance under a clear sky.

Management

Indigenous Relations Superintendent
Construction Superintendent
Engineering Superintendent
Frontline Supervisor
Maintenance Superintendent
Maintenance Supervisor
Mill Manager
Mine Dispatcher
Mine Manager
Mine Operations Superintendent
Process Superintendent
Process Supervisor
Project Manager

INDIGENOUS RELATIONS SUPERINTENDENT

We need Indigenous Relations Superintendents to build great relationships with Indigenous communities to effect positive change within mining operations. They establish and maintain positive and respectful relationships with Indigenous communities, their elected officials and their governing bodies. This work directly improves the development and execution of Indigenous Relations strategies in support of enterprise objectives.

JOB DESCRIPTION

- Develop and implement community relations strategies and initiatives to interact with various Indigenous communities, groups and individuals with respect to cultural sensitivities
- Remain up to date with trends and developments of Indigenous peoples engagement by developing an understanding of their needs and priorities
- Develop strategies and successfully implement policies and programs that support Indigenous peoples as neighbours, community members, employees and stakeholders
- Travel to Indigenous communities to establish, build and maintain relationships with Indigenous community leadership and to share information with community members
- Work closely with various mine departments, so managers and employees understand and implement policies that are relevant to Indigenous peoples and communities
- Develop strong relationships with Indigenous communities and key non-Indigenous stakeholders
- Communicate project updates and offer information in various community and stakeholder forums
- Promote a cooperative working relationship between employer and Indigenous communities
- Provide proactive solutions to human resource teams to support acquiring and retaining talent
- Identify, track and monitor issues, concerns and interests that have been identified by Indigenous communities
- Implement and track commitments and agreements with Indigenous communities and organizations
- Provide support during the negotiation and implementation of all aspects of current or upcoming Impact Benefits Agreements (IBAs)
- Support negotiation, lead implementation and track the commitments of IBAs with Indigenous communities

SUCCESS PROFILE

- Superior communication skills with the ability to listen and communicate with care and discretion
- Ability to build trust and foster relationships with various stakeholder groups
- Highly skilled in conflict resolution
- Develops innovative solutions in a high-pressure, fast-paced, changing environment
- Makes difficult choices and effectively communicates their results
- Identifies issues and priorities, and solves complex, multifaceted problems with a positive attitude
- Demonstrate a high level of professionalism with sensitive and confidential issues
- Comfortable writing and speaking for a public audience
- Organized and a critical thinker
- Strong computer and risk management skills
- Works well under pressure
- Understands and respects legislation, regulations and procedures concerning, safety, employment and environmental protection
- Thoughtful and cooperative team player
- Maintains positive working relations with trade unions and Indigenous communities

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Post-secondary diploma in Indigenous studies or degree in arts in community development, humanities or a related field
- Knowledge of Indigenous history and culture, protocols and governance
- Post-secondary diploma or degree within a relevant area of study
- Proficiency with word processing, spreadsheet, email, scheduling and presentation software
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse environment
- Proficiency in language of operation

Regional Requirement

- Five to 10 years of experience in Indigenous and/or community relations

May be Required

- Willingness to relocate
- Valid driver's licence
- Travel to remote locations
- Other languages

Assets

- Lived experience as an Indigenous person
- Ability to speak an Indigenous language
- Knowledge of Indigenous community relations policies, procedures and initiatives
- Knowledge of climate and legal issues affecting Indigenous peoples and communities

COMPENSATION

\$49,000

\$120,000

(Source: online job ads in Canada, 2021).

JOB PROSPECTS

Demand in Mining

1	2	3	4	5
LIMITED				GREAT

Skill Transferability Among Other Industries

1	2	3	4	5
LOW				HIGH

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Indigenous Relations Superintendents are at the heart of the industry-wide effort to develop and maintain strong relationships between the sector and the Indigenous communities and peoples on whose traditional lands they operate. They are responsible for implementing engagement, training, employment and social investment processes. They are attracted by the desire to drive mutual benefits for Indigenous communities and mines.

WHAT IS IT LIKE TO WORK AS AN INDIGENOUS RELATIONS SUPERINTENDENT IN MINING?

Note: conditions vary according to employer and region.

Indigenous Relations Superintendents travel to First Nations, Inuit or Métis communities that will feel the impacts of mining operations. They use a high level of integrity and a large set of communication skills to collaborate and partner with these local Indigenous communities, as well as liaise with their leadership team on the issues, priorities and contexts of local Indigenous peoples.

CONSTRUCTION SUPERINTENDENT

We need Construction Superintendents to lead the safe and efficient daily operation of mining construction projects. They have a key leadership role in mentoring teams and ensuring that construction projects progress on time and on budget.

JOB DESCRIPTION

- Plan, organize and control the daily operations of mining construction projects to make sure they are completed safely, on time, and within budget
- Read and interpret blueprints, drawings and sketches to determine specifications and calculate requirements
- Hire employees and ensure that new and current employees have all training required
- Ensure adequate resources and equipment are available
- Maintain quality control
- Coordinate and work with subcontractors, Construction Supervisors and specialist engineers
- Conduct safety audits, risk assessments and housekeeping inspections to ensure regulatory, corporate, site and environmental standards are being followed
- Maintain detailed progress reports of construction activities and report project performance to mine management and stakeholders
- May inspect work performed by employees, contractors and sub-contractors
- Participate in project meetings to monitor and support project progress
- Work with trade union(s), supervisors and HR department to avoid and resolve personnel issues and grievances

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Post-secondary diploma or degree
- Five to 15 years of related experience

SUCCESS PROFILE

- Builds a culture of cooperation and collaboration while motivating teams
- Demonstrates credibility and integrity
- Identifies issues and solve problems
- Understands blueprints, technical drawings and plans
- Works within budget and time constraints

- Good understanding of blueprint reading
- Experience and knowledge of construction planning, productivity analysis, Quality Assurance (QA) processes and Health, Safety and Environment procedures and regulations
- Proficiency with word processing, spreadsheet, email, AutoCAD and presentation software
- In-depth knowledge of construction methods, project management scheduling and cost control
- Valid driver's licence with few infractions
- Experience coordinating work efforts of different groups: direct and indirect construction contractors and internal groups like field engineers, safety and quality professionals
- Must be able to pass a medical and drug test
- Willingness to lead in a diverse environment
- Proficiency in language of operation

Regional Requirement

- Bilingual French and English (Quebec and NB)

May be Required

- Undergo a criminal record check
- Work experience in a construction trade

Assets

- Red Seal certification
- Work experience as a foreman
- Training in business administration and leadership
- Post-secondary degree in Construction Science or Construction Management
- Willingness to relocate
- Other languages

- Embraces new technology
- Highly self-motivated with strong leadership, mentoring, analytical, organizational and communications skills
- Values safety, health, and stays up to date with processes and regulations
- Works well under pressure

COMPENSATION

\$112,000

\$163,627

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Construction Superintendents are drawn to the challenge of leading the construction and implementation of new mine projects. They want to make sure that projects progress on time and on budget.

WHAT IS IT LIKE TO WORK AS A CONSTRUCTION SUPERINTENDENT IN MINING?

Note: conditions vary according to employer and region.

Construction Superintendents work out of a field office at the construction site in all seasons and in a variety of environmental conditions. They monitor a project and make daily decisions about construction activities, report to the Site Project Manager, and conduct team building and conflict resolution activities.

ENGINEERING SUPERINTENDENT

We need Engineering Superintendents because their oversight is critical to the safe and smooth operation of mines and mills. They lead teams of engineers and technicians to plan, run and maintain developments at all stages of the mining process.

JOB DESCRIPTION

- Work with senior managers, other superintendents, engineers, technologists and technicians to provide engineering services and support
- Oversee many aspects of mine engineering, with specialist teams of engineers, technologists and technicians in mining, civil, mechanical, electrical, environmental, chemical or biological engineering
- Select and install new facilities or equipment, and design new processes
- Work on projects such as the development of new shafts, tunnels or mining areas, closing old areas, and site restoration
- Prepare and approve designs, specifications and plans
- Assign work to teams, oversee progress, solve problems, and take corrective action when required
- Prepare and negotiate budgets and monitor spending
- Prepare technical reports and briefs on equipment, safety, project progress and other matters
- Lead and participate in meetings and briefings
- Recruit, train and develop employees, with support from HR specialists
- Oversee the development of engineers, technologists and technicians, providing support, encouragement, advice and guidance

SUCCESS PROFILE

- Delegates work to achieve results
- Earns and maintains respect by demonstrating credibility and integrity
- Influences people at all levels
- Makes and implements difficult decisions, and communicates the reasons for them
- Overcomes difficulties and solves problems with a positive attitude
- Is accountable for decisions and actions

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Post-secondary degree in mining or engineering
- Minimum of eight years of relevant experience including several years as an Engineer in mining or in heavy industry
- Knowledge of the mining industry
- Proficiency with word processing, spreadsheet, presentation software, AutoCAD, and language of operation
- Must be able to pass a medical and drug test
- Willing to lead in a diverse environment

Regional Requirement

- Bilingual French and English (Quebec and NB)

May be Required

- 10 – 12 years of relevant experience
- Mine planning specialist and scheduling software, including 3D and visualization

Assets

- Willing to relocate
- Other languages

- Understands and respects legislation, regulations and procedures concerning safety, employment and environmental protection
- Enjoys working on new projects and under pressure
- Strong organizational, critical thinking, communications, computer, troubleshooting, problem solving and interpersonal skills

COMPENSATION

\$134,725

\$166,944

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Engineering Superintendents are highly motivated to take on a senior position with increased responsibilities and challenging work. They are ambitious and enjoy working with new technologies and processes, and to manage and develop their staff. They like working on projects and solving problems. They also like to work with other senior managers and to collaborate.

WHAT IS IT LIKE TO WORK AS AN ENGINEERING SUPERINTENDENT IN MINING?

Note: conditions vary according to employer and region.

Engineering Superintendents are based in an office in (or near) the mine site. They spend some time in the mine and the processing mill, and also attend and sometimes chair mine management meetings.

FRONTLINE SUPERVISOR

We need Frontline Supervisors to oversee the work environment and take responsibility for the safety of their team. Frontline Supervisors solve problems and meet targets, they communicate and work well with others, and they lead by example to promote a culture of safety.

JOB DESCRIPTION

- Take responsibility for the safety of their team by close observation of the work environment and taking action when needed to prevent incidents
- Lead by example, and promote a culture of safety and environmental protection in the workplace
- Work in mine operational areas, supervising the extraction of minerals from underground or surface mines
- Plan and organize work, distribute tasks to their team, oversee work progress and achieve production targets
- Build teams, motivate individuals and solve problems to achieve results
- Work with senior managers and other supervisors to promote and achieve overall mine objectives
- Play a crucial role in keeping the lines of communication open between mine management and the team
- Develop their employees by providing advice, encouragement and coaching
- Ensure that both new and experienced workers are well-trained and have the skills and knowledge they need to do their jobs safely and effectively
- Comply with legislation and regulations concerning safety, employment and protection of the environment
- Work with trade unions, if the mine is unionized

SUCCESS PROFILE

- Earns and maintains respect by demonstrating credibility and integrity
- Leads and influence people at all levels
- Makes difficult decisions, and communicates the reasons for them
- Understands and respects legislation, regulations and procedures concerning safety and environmental protection
- Reliable, responsible and works well under pressure
- Strong communication, writing, computer and critical thinking skills

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- High school diploma or equivalent
- At least two years relevant operations experience in a mining environment
- Proficiency with word processing, spreadsheet and email software
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to lead in a diverse environment
- Proficiency in language of operation

Regional Requirement

- Bilingual French and English (Quebec and NB)

May be Required

- Valid driver's licence (or eligible for a driver's licence) with few or no current infractions
- A journeyperson trade certificate, post-secondary technical diploma, or Engineering degree

Assets

- Willingness to relocate
- Other languages

COMPENSATION

\$85,000

\$112,000

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Frontline Supervisors enjoy challenging and responsible work that involves large mining equipment and machinery and offers the opportunity to learn and work with new technologies. They enjoy contributing to the development of others as well as prospects for their own professional development and career advancement.

WHAT IS IT LIKE TO WORK AS A FRONTLINE SUPERVISOR IN MINING?

Note: conditions vary according to employer and region.

Frontline Supervisors are based in an office in the mine and spend time overseeing activities on-site. They work in confined spaces, at heights, or in difficult environments, and participate in meetings with mine management and other stakeholders.

MAINTENANCE SUPERINTENDENT

We need Maintenance Superintendents because they oversee overall site maintenance to keep the mine running smoothly and safely. They manage several teams of people, and are responsible for safety, equipment reliability and controlling maintenance costs.

JOB DESCRIPTION

- Oversee all aspects of site maintenance, possibly with specialist teams (mechanical, electrical/electronic, hydraulic, etc.), covering the mine itself, the associated processing mill, and related conveyor systems
- Work with Senior Managers, other Superintendents and their Maintenance Supervisors to ensure safe equipment operations and maximize reliability and minimize costs
- Responsible for all the people (including contractors), equipment, tools, spare parts and materials in area of responsibility
- Prepare and approve preventative maintenance and other plans, allocate work to their teams, oversee progress, solve problems and take corrective action when required
- Prepare and negotiate large budgets, and monitor spending
- Prepare reports and briefs on equipment, safety, progress on projects and other matters
- Lead and participate in meetings and briefings, both formal and informal
- Work with the Engineering department on equipment performance and operations
- Recruit, train and develop employees, with support from Maintenance Supervisors and Human Resource (HR) specialists
- Oversee the development of Maintenance Supervisors, providing support, encouragement, advice and guidance
- Work with trade union(s), supervisors and HR departments to avoid and resolve personnel issues and grievances
- Liaise with suppliers and consultants

SUCCESS PROFILE

- Delegates work to achieve results
- Maintains respect by demonstrating credibility and integrity
- Influences people at all levels
- Makes difficult decisions, solves problems, and communicate the reasons for them
- Cooperative and positive
- Enjoys working with large equipment and machinery
- Understanding and respect for legislation, regulations and procedures concerning safety, employment and environmental protection

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Post-secondary degree or diploma in engineering or mining
- Knowledge of the mining industry
- Minimum of five years of relevant experience including several years as a Maintenance Supervisor in mining or in heavy industry (e.g. oil and gas, petro-chemicals, steel, electricity generation)
- Proficiency with word processing, spreadsheet, email and presentation software
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to lead in a diverse environment
- Proficiency in language of operation

Regional Requirement

- Bilingual French and English (Quebec and NB)

May be Required

- Master's degree in engineering, mining or other relevant degrees

Assets

- Willingness to relocate
- Other languages

- Organized and a critical thinker
- Responsible and accountable
- Strong communication, computer, interpersonal, problem-solving and troubleshooting skills
- Team player
- Works well under pressure

COMPENSATION

\$117,500

\$210,000

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Maintenance Superintendents are highly motivated to take on a senior position with increased responsibilities and challenging work. They are ambitious and appreciate the opportunity to work with new technologies, new processes and challenges. They like working with people, and to develop their teams. They also like working with other Senior Managers and the broader perspective on the industry that comes with that collaboration.

WHAT IS IT LIKE TO WORK AS A MAINTENANCE SUPERINTENDENT IN MINING?

Note: conditions vary according to employer and region.

Maintenance Superintendents are usually based in an office in (or near) the mine site and spend some of their time in the mine and the processing mill. They also attend and chair mine or mill management meetings.

MAINTENANCE SUPERVISOR

We need Maintenance Supervisors to provide safety conscious leadership to their maintenance teams. Problem solvers and decision makers, they are responsible for ensuring the maintenance of a wide range of equipment and machinery.

JOB DESCRIPTION

- Lead by example, and promote a culture of safety and environmental protection
- May lead a mixed trades or specialist team
- Work with range of equipment, vehicles or conveyor systems in a mine, or a plant or mill
- Manage preventative maintenance schedules and planned shutdowns, as per vendor specifications
- Ensure planned and ad hoc repairs are executed to keep all equipment running smoothly and safely
- Responsible for distributing tasks to the team, overseeing work progress and performance
- Advise mining and processing teams about correct operation of equipment
- Work with senior managers and other supervisors to achieve the mine's overall objectives
- Communicate well with senior management, other supervisors, and the team
- Develop employees by providing advice, training, and coaching
- Comply with legislation and regulations concerning safety, employment and protection of the environment
- Work with trade unions, if the mine is unionized

SUCCESS PROFILE

- Maintains respect by demonstrating credibility and integrity
- Identifies issues and solve problems with a positive attitude
- Leads and influences people with different personalities
- Makes difficult decisions, and communicate the reasons for them
- An understanding that plant operating time is critical to the company success
- Enjoys working with and fixing a wide variety of large and small machinery

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- High school diploma or equivalent
- A Journeyperson Trade Certificate in a related trade or technical diploma
- Two years relevant experience in a mining environment or in heavy industry
- Knowledge of the mining industry
- Proficiency with word processing, spreadsheet, email software and language of operation
- Valid driver's licence with few or no current infractions
- Must be able to pass a medical and drug test
- Willingness to lead in a diverse environment

Regional Requirement

- Bilingual French and English (Quebec and NB)

Assets

- Red Seal certification in a related trade
- Proficiency with AutoCAD or similar software, and computer diagnostic tools
- Post-secondary degree in engineering or mining
- Willingness to relocate
- Other languages

- Understands and respects legislation, regulations and procedures concerning safety and environmental protection
- Mechanically inclined and strong communication and computer skills
- Reliable and responsible, well-organized and a critical thinker
- Willingness to learn and keep up with new technology and maintenance techniques
- Works well under pressure and with others

COMPENSATION

\$100,000

\$115,225

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

A Maintenance Supervisor is responsible for major equipment and machinery. There are many opportunities to work with new technologies. They get great satisfaction from seeing the results of their efforts in a project and enjoy developing others.

WHAT IS IT LIKE TO WORK AS A MAINTENANCE SUPERVISOR IN MINING?

Note: conditions vary according to employer and region.

Maintenance Supervisors are based in an office or maintenance shop in the mine or adjacent mill, but spend most of their time overseeing activities on-site. They may have to work in confined spaces, at heights, or in difficult environments and environmental conditions. They wear protective clothing and equipment most of the time.

MILL MANAGER

We need Mill Managers to lead the mill processing team and ensure the success of processing operations. They hold a high level of responsibility, motivating their teams and collaborating with other area managers to prepare and implement operational plans for the mill.

JOB DESCRIPTION

- Maintain and encourage a safe working environment at all times
- Lead the mill processing plant team, managing all processing personnel and resources
- Prepare and implement operational plans for the mill, and monitor and report progress
- Propose capital expenditure projects for process improvements or capacity expansion
- Prepare production and operating budgets, and monitor and report performance and costs
- Recognize and anticipate operational, technical and safety challenges, taking action to prevent or overcome them, and seeking continuous improvement
- Contribute to business planning and company strategy to improve competitiveness, profitability and growth
- Engage with local communities and regulatory authorities to ensure company policies are met
- Work closely with the maintenance department to ensure continuously safe, and efficient operations
- Collaborate with management and corporate executives to achieve overall business objectives
- Oversee new projects to increase capacity or replace old equipment
- Oversee the recruitment and development of superintendents, supervisors and operators, providing support, encouragement, advice and guidance to build an effective workforce
- Manage relations with trade unions

SUCCESS PROFILE

- Delegates work to achieve results efficiently
- Influences workers at all levels
- Makes difficult choices, and effectively communicates their results
- Overcomes difficulties and solve problems with a positive attitude
- Ambitious
- Cooperative
- Interested in the wider business aspects of the industry
- Understands and respects legislation, regulations and procedures concerning safety, employment and environmental protection
- Maintains positive working relations with trade unions
- Operational leadership experience
- Organized and a critical thinker
- Strong communication, interpersonal, risk management and computer skills
- Team player
- Works well under pressure

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Degree in chemical engineering, metallurgy or mining
- Knowledge and experience in the mining industry
- Minimum of five years of experience in a leadership position, including in the processing activities
- Proficiency with word processing, spreadsheet, email and presentation software
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to lead in a diverse environment
- Proficiency in language of operation

Regional Requirement

- Bilingual French and English (Quebec and NB)

Assets

- A degree in business or management, or a relevant Master's degree
- Willingness to relocate
- Other languages

COMPENSATION

\$124,000 \$152,800 \$167,500

AVERAGE

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Mill Managers are motivated to take on a senior position with a high level of challenging work, covering several aspects of management. They like to use modern tools to solve processing problems, and are well compensated for their efforts.

WHAT IS IT LIKE TO WORK AS A MILL MANAGER IN MINING?

Note: conditions vary according to employer and region.

Mill Managers work in an office in a mill or at a mine site. They lead large teams of people, contribute to business management and act as an ambassador for the industry, working with other executives and the community alike.

MINE DISPATCHER

We need Mine Dispatchers because they act as the central communication contact for mine production. Organized, with exceptional communication skills, Mine Dispatchers work with a variety of computer software to schedule and dispatch workers and crews.

JOB DESCRIPTION

- Organize schedule and dispatch workers and work crews, as well as equipment and service vehicles according to requests, specifications or needs
- Serve as the central communication contact for mine production and safety
- Capture, validate and record mine site data, shift and production reports
- Monitor traffic and heavy equipment through video cameras to ensure efficient use
- Receive, prepare and relay work orders, messages and information to and from work crews, supervisors and field inspectors
- Facilitate decision-making for mine management and engineering crew
- Provide accurate information to ensure informed production decisions

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- High school diploma or equivalent
- Minimum of five years of experience working in a mine environment, including heavy equipment operations and different types of mobile equipment
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse environment
- Proficiency in language of operation

May be Required

- Experience operating computer-assisted communications and dispatching equipment
- Knowledge of standard operating procedures in mining

Assets

- Understanding of mine dispatch systems and operating software applications systems
- Willingness to relocate
- Other languages

SUCCESS PROFILE

- Stays focused
- Computer, problem solving and risk management skills
- Detail-oriented
- Strong communication and interpersonal skills
- Strong multi-tasking and time management skills
- Values safety, health and positive working environment
- Works well under pressure

COMPENSATION

\$32.00/hr

\$39.05/hr

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Mine Dispatchers enjoy using computers and other tools to communicate information effectively. They solve problems using new technology and procedures to achieve mine site goals, and are well compensated for their efforts.

WHAT IS IT LIKE TO WORK AS A MINE DISPATCHER IN MINING?

Note: conditions vary according to employer and region.

Mine Dispatchers work in a control-room to communicate orders to various mining teams to ensure the successful operation of a mine site.

MINE MANAGER

We need Mine Managers because they provide leadership to ensure the safety, quality, cost-effectiveness and overall success of a mine. They manage the various teams running mining operations and are responsible for preparing operational plans and budgets, among many other projects.

JOB DESCRIPTION

- Maintain and encourage a safe work environment at all times
- Lead the mine operations management team and manage all mining personnel and resources
- Prepare operational plans for the mine, and monitor and report progress
- Propose capital expenditure projects to expand capacity or improve operations
- Prepare production and operating budgets, and report performance and costs
- Recognize operational, technical and safety challenges, take action to prevent or overcome them, and continuously seek improvement
- Contribute to business strategy to improve company's competitiveness, profitability and growth
- Engage with local communities and regulatory authorities to ensure company policies are met
- Oversee new projects, (e.g. installing new mining equipment or opening a new shaft)
- Oversee the recruitment and development of superintendents, supervisors, and operators, providing support and guidance to build an effective workforce
- Manage relations with trade unions

SUCCESS PROFILE

- Delegates work to achieve results
- Influences people at all levels
- Makes difficult choices, and effectively communicates their results
- Overcomes challenges and solves problems with a positive attitude
- Accountable for decisions and actions
- Ambitious, cooperative team player
- Has a deep interest in the wider business aspects of the industry
- Understands and respects legislation, regulations and procedures concerning, safety, employment and environmental protection

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Post-secondary degree in mining or engineering
- Knowledge and experience in the mining industry
- Minimum of five years of experience in a leadership position, including in operations activities
- Proficiency with word processing, spreadsheet, email and presentation software
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to lead in a diverse environment
- Proficiency in language of operation

Regional Requirement

- Bilingual French and English (Quebec and NB)

Assets

- Post-secondary degree in business or management, or a relevant Master's degree
- Willingness to relocate
- Other languages

COMPENSATION

\$60,000 \$165,500 \$217,200

AVERAGE

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Mine Manager are highly motivated to take on a senior position with challenging work, covering many different aspects of management. They take on tasks of high responsibility, and are well compensated for their efforts.

WHAT IS IT LIKE TO WORK AS A MINE MANAGER IN MINING?

Note: conditions vary according to employer and region.

Mine Managers work in an office in the mine site, and spend some time in the mine. They chair internal meetings and participate in other management meetings, lead large teams of people, contribute to the business management and act as an ambassador for the industry by working with other executives and the community.

MINE OPERATIONS SUPERINTENDENT

We need Mine Operations Superintendents to ensure the safety, production volumes, quality and budgeting within mine operations. They are leaders, managing several mine management teams.

JOB DESCRIPTION

- Responsible for safety, production, quality and budgets for their area of mine operations
- Work with senior managers, other Superintendents and their frontline supervisors to control mine operations
- Responsible for the workers, equipment, tools and materials in mine operations
- Prepare and approve plans, delegate work to their teams, oversee progress, solve problems, and take corrective action when required
- Organize budgets and monitor spending
- Prepare reports and briefs on production, safety, progress on projects and more
- Lead and participate in meetings and briefings
- Recruit, train and develop employees, with support from frontline supervisors and human resources (HR) specialists
- Oversee the development of supervisors, providing support and guidance
- Work with trade union(s), supervisors and HR department to avoid and resolve personnel issues and grievances

SUCCESS PROFILE

- Delegate work to achieve results
- Influence people at all levels
- Make difficult choices, and effectively communicate their results
- Overcome challenges and solve problems with a positive attitude
- Cooperative
- Understand and respect legislation, regulations and procedures concerning safety, employment and environmental protection

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Post-secondary degree in mining or engineering
- Minimum of five years of relevant operations experience in mining, including several years as a Frontline Supervisor
- Proficiency with word processing, spreadsheet, email and presentation software
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to lead in a diverse environment
- Proficiency in language of operation

Regional Requirement

- Bilingual French and English (Quebec and NB)

Assets

- Proficiency with AutoCAD
- Post-secondary degree in business or management
- Willingness to relocate
- Other languages

- Organized and a critical thinker
- Responsible and accountable
- Strong communication and interpersonal skills
- Strong computer skills
- Team player
- Works well under pressure

COMPENSATION

\$131,000 \$156,000 \$176,100

AVERAGE

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining

1 2 3 4 5

LIMITED

GREAT

Skill Transferability Among Other Industries

1 2 3 4 5

LOW

HIGH

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Mine Operations Superintendents are highly motivated to take on a senior position with challenging work, involving a mix of office and mine work. They are ambitious, working with new technologies and developing their teams. They excel at collaborating with management, and are well compensated for their efforts.

WHAT IS IT LIKE TO WORK AS A MINE OPERATIONS SUPERINTENDENT IN MINING?

Note: conditions vary according to employer and region.

Mine Operations Superintendents divide their time between office work and directly supervising workers at the mine site. They also attend and chair mine management meetings.

PROCESS SUPERINTENDENT

We need Process Superintendents because they help run mill operations and process mined materials. Process Superintendents manage several teams of people and are responsible for production volumes, quality and budgeting, as well as the safety of the work environment.

JOB DESCRIPTION

- Responsible for the safety, production, quality and budgets for their processing operations
- Work with senior managers, other superintendents and their process supervisors to control processing machinery to convert mined materials into products
- Processing activities vary with the mineral being mined, but can include the separation of waste, washing, crushing, grinding, leaching, electrical, chemical or metal processing and packaging
- Responsible for people, equipment, tools and materials in their operations
- Prepare production plans, delegate work to their teams, oversee progress, solve problems, and take corrective action when required
- Prepare budgets and monitor spending
- Prepare reports and briefs on production, safety, environment, project progress, and more
- Lead and participate in meetings and briefings
- Recruit, train and develop employees, with support from process supervisors and human resources (HR) specialists
- Oversee the development of supervisors, providing support and guidance
- Work with the maintenance team to ensure optimum asset utilization
- Work with trade union(s), supervisors and HR department to avoid and resolve personnel issues and grievances
- Liaise with suppliers and consultants

SUCCESS PROFILE

- Delegates work to achieve results
- Identifies challenges and solves problems with a positive attitude
- Influences people at all levels
- Makes difficult choices, and effectively communicates their results
- Cooperative
- Understands and respects legislation, regulations and procedures concerning safety, employment and environmental protection
- Organized and a critical thinker
- Responsible and accountable
- Strong communication, interpersonal and computer skills
- Team player
- Works well under pressure

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Post-secondary degree in engineering, mining or metallurgy
- Minimum of five years of relevant process experience, including several years as a Process Supervisor in mining
- Proficiency with word processing, spreadsheet and email software
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to lead in a diverse environment
- Proficiency in language of operation

Regional Requirement

- Bilingual French and English (Quebec and NB)

Assets

- Willingness to relocate
- Other languages

COMPENSATION

\$167,935

\$200,000

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Process Superintendents are highly motivated to take on a senior position with challenging work, involving a mix of office and operational work. They are ambitious and work with new technologies and processes to develop their teams. They collaborate with other senior managers to ensure optimum mine performance, and are well compensated for their efforts.

WHAT IS IT LIKE TO WORK AS A PROCESS SUPERINTENDENT IN MINING?

Note: conditions vary according to employer and region.

Process Superintendents work in an office and spend a lot of time in the mill. They attend and chair mill or mine management meetings.

PROCESS SUPERVISOR

We need Process Supervisors because they lead a team of process operators and other personnel to safely and efficiently operate processing activities. Process Supervisors are strong leaders who are decisive and work well under pressure.

JOB DESCRIPTION

- Promote a culture of safety and environmental protection in the workplace
- Lead a team of process operators and other personnel controlling various processing machines and conveyor systems, in a mill attached to a mine
- Processing activities include the separation of waste, washing, crushing, grading, chemical or metal processing, and packaging
- Plan and organize work, delegate tasks to the team, oversee progress and monitor results
- Build teams, motivate individuals and solve problems to achieve results
- Communicate well with senior managers, other supervisors and their team to promote and achieve mine objectives
- Develop employees by providing advice and guidance
- Ensure that new workers are well-trained and have the skills and knowledge they need to do their jobs safely and effectively
- Complete shift production reports
- Liaise with maintenance, engineering and other departments
- Comply with legislation and regulations concerning safety, employment and protection of the environment
- Work with trade unions, if the mine is unionized

SUCCESS PROFILE

- Leads and influences workers at all levels
- Makes difficult choices, and effectively communicate their results
- Overcomes challenges and solves problems with a positive attitude
- Cooperative
- Keeps equipment and machinery moving smoothly and safely
- Enjoys working with large equipment and machinery
- Understands and respects legislation, regulations and procedures concerning safety and environmental protection

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- High school diploma or equivalent
- Minimum of two years of relevant experience in a mining environment or in a heavy process industry (e.g. oil and gas, petro-chemicals, steel, electricity generation)
- Knowledge of the mining or mineral processing industries
- Proficiency with word processing, spreadsheet and email software
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to lead in a diverse environment
- Proficiency in language of operation

Regional Requirement

- Bilingual French and English (Quebec and NB)

Assets

- A Journeyperson Trade Certificate, Red Seal certification, post-secondary technical diploma, or Engineering degree
- Willingness to relocate

COMPENSATION

\$102,432

\$116,046

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Process Supervisors seek challenging work involving major processing equipment. They appreciate the opportunity to work with new technology and to contribute to the development of others.

WHAT IS IT LIKE TO WORK AS A PROCESS SUPERVISOR IN MINING?

Note: conditions vary according to employer and region.

Process Supervisors work in an office in the mill and spend a lot of time overseeing processing activities. They wear personal protective equipment most of the time, but will also be expected to participate in meetings with mine management and other stakeholders.

PROJECT MANAGER

We need Project Managers to take on large, comprehensive projects that go beyond day-to-day mining operations. Whether managing a new build or upgrading key infrastructure, Project Managers require exceptional organization and leadership skills to get the job done.

JOB DESCRIPTION

- Manage projects to modify or add facilities and infrastructure (e.g. upgrading an air strip, building new accommodation, constructing a road, building new structures for the mill, opening up new sections of the mine, etc.)
- Plan projects (e.g. develop full scale project work plans and proper documentation and records including scope of work, schedule, budgetary requirements, etc.)
- Select or source personnel to achieve project outcomes
- Track and control projects to deliver them within their approved scope, quality, budget, and schedule
- Coordinate between maintenance, engineering, operations and external contractors
- Develop and implement policies, standards and procedures as needed
- Manage physical construction
- Liaise with department manager to gain approvals and manage risk
- Evaluate project outcomes as established during the planning phase

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Fixed Requirements
- A Bachelor's degree in Engineering (e.g. civil, mechanical, electrical, mine) or a related technical field, or equivalent experience
- A minimum of 10 years of experience in an engineering discipline, including supervisory experience
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse environment
- Proficiency in language of operation

May be Required

- Professional Designation
- Four to six years of experience in the mining sector
- Project Management Professional (PMP) training or certification
- Knowledge of construction regulations, standards and protocols

Assets

- Project management experience that includes contracts and administration, procurement, materials control and project accounting
- Experience in estimating and cost control
- Willingness to relocate
- Other languages

SUCCESS PROFILE

- Delegates work to achieve results
- Identifies challenges and solves problems
- Influences workers at all levels
- Analytical
- Detail-oriented
- Goal-oriented
- Knowledge of mining operations and mining equipment
- Strong communication skills (verbal and written)
- Strong management skills
- Strong multi-tasking and time management skills

COMPENSATION

\$120,000

\$180,000

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Project Managers enjoy the challenge of balancing engineering abilities with managerial skills. This role is also an excellent introduction to the mining industry for experienced candidates with an engineering background.

WHAT IS IT LIKE TO WORK AS A PROJECT MANAGER IN MINING?

Note: conditions vary according to employer and region.

Project Managers work in an office at the mine site, also performing site visits to a variety of areas in the mine or mill, including surface and underground locations.



Support

Equity, Diversity & Inclusion Specialist
Health and Safety Coordinator
Health and Safety Professional
Industry Trainer
Training Coordinator

EQUITY, DIVERSITY & INCLUSION SPECIALIST

We need Equity, Diversity & Inclusion Specialists to enable sector stakeholders, including individuals, groups and companies, to understand, identify, and confront conscious and unconscious bias, as well as individual and systemic racism, sexism, ableism and discrimination in the mining workplace. These specialists help to ensure that policies, management processes, staff development, the work environment and related evaluative metrics support an inclusive and equitable organizational culture.

JOB DESCRIPTION

- Plan and implement equity, diversity and inclusion policies, programs and procedures to address systemic barriers and build awareness and knowledge around equity, diversity and inclusion in the workplace
- Develop strategic plans to proactively identify, analyse, address and evaluate effectiveness of systems, policies, procedures, training and programs aimed at advancing equity, diversity and inclusion in the workplace
- Support the identification and eradication of barriers to full participation in the workplace
- Serve as a subject matter expert on diversity and inclusion issues, providing advice and training to senior leaders, managers and employees
- Ensure diverse perspectives and voices are engaged in planning and developing policies
- Maintain and continue to develop knowledge of diversity and inclusion by researching effective practices, monitoring industry developments and evaluating emerging trends
- Work closely across teams and function areas to integrate and implement equity, diversity and inclusion policies and practices across all aspects of the organization
- Provide proactive solutions to human resource teams to support acquiring and retaining talent
- Develop and lead accessibility and equity training programs
- Manage advisory and consultation processes for leadership, boards and stakeholders
- Provide leadership, expertise and education in support of building an inclusive and welcoming work culture
- Create communication materials (videos and other digital content) on diversity and inclusion issues and topics
- Track and analyze diversity and inclusion metrics
- Collect data and create reports on the effectiveness of the diversity and inclusion initiatives

SUCCESS PROFILE

- Strong communication and interpersonal skills
- Strong project management skills
- Strong leadership and accountability
- Pays great attention to detail
- Strong problem-solving and analytical skills
- Strong presentation and facilitation skills
- Maintains respect by demonstrating credibility and integrity
- Builds trust and maintains positive relationships with a wide variety of personnel and community members
- Maintains positive working relations with trade unions

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career, do not take into account on-the-job training given to new employees and may vary according to employer and region

Fixed Requirements

- High school diploma or equivalent
- Post-secondary degree or diploma in a related field (i.e., Human Resources, Sociology, Communications, Education, Business Administration, Law, etc.)
- Knowledge and experience with diversity, equity and inclusion programs
- Proficiency with word processing, spreadsheet, email, scheduling and presentation software
- Proficiency in language of operation

Regional Requirement

- Five to 10 years of experience in personnel management, social services or human resources

Assets

- Formal training or certificate in EDI (Equity, Diversity, Inclusion)
- Experience in policy review and design, program or staff development, change management
- Willingness to relocate
- Other languages

COMPENSATION

\$47,000

\$110,598

(Source: online job ads in Canada, 2021).

JOB PROSPECTS

Demand in Mining

1	2	3	4	5
LIMITED				GREAT

Skill Transferability Among Other Industries

1	2	3	4	5
LOW				HIGH

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Equity, Diversity & Inclusion Specialists are motivated to make a difference in the mining industry. They feel drawn to collaborate with all functional areas and workplace stakeholders to develop, recommend and implement equitable and respectful systems, policies and programs to ensure a diverse and inclusive mining workforce that enables effective problem-solving, creativity, innovation and the industry's long-term success. They are change managers, passionate about strengthening equity, diversity and inclusion in all aspects of workplace culture, policies, procedures and practices.

WHAT IS IT LIKE TO WORK AS AN EQUITY, DIVERSITY & INCLUSION SPECIALIST IN MINING?

Note: conditions vary according to employer and region.

Equity, Diversity & Inclusion Specialists have significant experience in adult education, negotiation and interpersonal/intercultural communications. They are change agents committed to principles like human rights, reconciliation, inclusion, justness, accessibility and fairness. They are part of the cutting edge in hiring, training and operational practices across all industries to prevent barriers and improve the equitable attraction, recruitment, engagement and retention of a diverse workforce.

HEALTH AND SAFETY COORDINATOR

We need Health and Safety Coordinators because safety is their top priority. They build, implement and oversee health and safety programs, and they must excel at communication and managing conflict.

JOB DESCRIPTION

- Develop and review health and safety rules, policies and procedures in accordance with site, company and government regulations and legislation
- Conduct inspections to ensure that health and safety requirements and governmental legislation is being followed at all times
- Ensure that workers are up-to-date in training
- Research, plan, organize and conduct training programs
- Maintain, and report on, safety and health records and statistics
- Monitor machine or equipment changes
- Identify potentially hazardous situations and correct them
- Work with management to design strategies that protect employees from workplace hazards
- Integrate health and safety activities into production efforts
- Develop and promote the adoption of new safety training programs and practices
- Periodically act as a team leader for task forces and teams
- Review internal and external health and safety reports to determine areas that need improvement
- Direct rescue and firefighting operations during emergency
- Conduct investigations, including complaints, serious harm incidents and accidents
- Manage non-compliance violations
- Sample air for dust levels and determine the composition of the dust
- Conduct ergonomics assessments in offices and in the field
- Partner with mine managers, workers, health and safety committee members, union representatives and government inspectors to optimize the safety systems in the mine

SUCCESS PROFILE

- Develops and follows clear policies and processes
- Manages conflicting priorities and deadlines
- Assertive, confident and willing to act as an advocate for workers
- Calm, resilient, adaptable and embraces challenges

- Ensure all employees are adequately trained to perform their roles
- Assist mine management in responding to inquiries from customers, regulatory agencies and the public regarding health and safety issues

JOB ENTRY REQUIREMENTS

Note 1: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Note 2: Many employers encourage or require Health and Safety Coordinator certification even though there is no legislation in place to regulate this occupation. Voluntary certification typically requires completion of an educational program and/or a specified amount of work experience, combined with the successful completion of an exam.

Fixed Requirements

- High school diploma or equivalent and a degree or equivalent work experience in health and safety (often a minimum of three to four years of recent related safety experience in the mining industry)
- Working knowledge and experience with health & safety legislation, rules, regulations and reporting processes and procedures
- Valid driver's licence with few or no current infractions and first aid attendant certificate
- Proficiency with word processing, spreadsheet, email software and language of operation
- Ability to work with complex testing equipment
- Must pass a medical and drug test
- Willing to work in a diverse environment

Assets

- Professional designation
- Willing to relocate
- Other languages

- Learns quickly, especially detailed legislative, technical and production information
- Strong communication, conflict management, supervisory skills
- Thorough knowledge and understanding of workers' compensation legislation and government regulations

COMPENSATION

\$57,500 \$88,000 \$122,000

AVERAGE

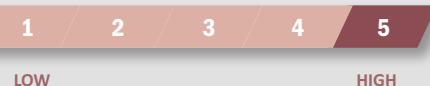
(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining



Skill Transferability Among Other Industries



WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Health and Safety Coordinators are assertive and self-confident, and thrive in a dynamic working environment. They are natural problem solvers and efficiently manage health and safety violations.. They identify potentially dangerous situations and take decisive action to prevent them.

WHAT IS IT LIKE TO WORK AS A HEALTH AND SAFETY COORDINATOR IN MINING?

Note: conditions vary according to employer and region.

Health and Safety Coordinators usually have an office on the mine site but spend most of their time in the mine and/or mill, indoors and outdoors. They climb ladders and steep ramps on the surface and underground. They are often required to enter areas with physical hazards, such as noise, dust, heat and cold.

HEALTH AND SAFETY PROFESSIONAL

We need Health and Safety Professionals to translate complex regulations into practical actions and behaviours. They promote and improve occupational health and safety by inspecting, investigating and ensuring compliance with regulatory requirements.

JOB DESCRIPTION

- Explain and apply the Occupational Health and Safety Act, its regulations and other federal and provincial legislation
- Conduct risk and exposure assessment and recommend controls to eliminate or mitigate health and safety hazards
- Assess workplaces to ensure equipment, materials and production processes do not present safety or health hazards
- Conduct hazard analysis, advise management of non-compliance and make recommendations for corrections
- Investigate health and safety related complaints, hazardous chemical spills, harmful exposures and occupational disease and workplace accidents
- Develop and maintain occupational health and safety strategies, audit management systems and policies, procedures and manuals
- Coordinate emergency response procedures, mine rescues, firefighting and first aid crews
- Write incident reports, notices of violations and complete compliance and conformance checklist
- Work with health and safety committees, workers, unions, mine management, government representatives and the public to promote safe work practices through the Internal Responsibility System
- Select, calibrate and use technical equipment, instruments and computer applications to test work environment and retrieve information

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Certificate in Occupational Health and Safety with eight-10 years of industry experience in health and safety, preferably in a mining or related environment
- Knowledge and experience with mining equipment and operations
- Knowledge and experience with federal, provincial and local mining workplace health & safety and environmental legislations, acts, rules, regulations and reporting processes and procedures
- Valid Class 5 driver's license
- Proficiency with word processing, spreadsheet, email, presentation, database software and language of operation
- Must pass a medical and drug test
- Willing to work in a diverse environment

May be required

- Certification with the Association for Canadian Registered Safety Professionals and Diploma in the Occupational Health and Safety or relevant work experience and in-house training
- General or enhanced screening check, including a criminal record check and, if applicable, fingerprint verification

Assets

- Canadian Registered Safety Professional Designation
- Willingness to relocate
- Other languages

SUCCESS PROFILE

- Interprets federal and provincial regulations
- Implements difficult decisions, and communicate the reasons for them
- Analytical, assertive, confident and advocate for a safe workplace
- Respects and understands safety and environmental procedures, regulations and legislation
- Organized, precise and accurate
- Strong communication skills (verbal and written)
- Values safety, health and a positive working environment
- Willing to engage in continuous learning and skills development

COMPENSATION

\$77,738

\$192,886

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

JOB PROSPECTS

Demand in Mining

1	2	3	4	5
LIMITED				GREAT

Skill Transferability Among Other Industries

1	2	3	4	5
LOW				HIGH

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Health and Safety Professionals are committed to protecting mine workers and the public. They work in a variety of environments and inspect different operations and processes. They share their expertise with employees in all areas of a mine, including operators and senior management. They compile information and communicate findings and recommendations.

WHAT IS IT LIKE TO WORK AS A HEALTH AND SAFETY PROFESSIONAL IN MINING

Note: conditions vary according to employer and region.

Health and Safety Professionals visit a variety of underground and open-pit sites. They are often required to work in rough terrain, as well as obstructed or confined spaces. They climb ladders and work at heights. While on-site, exposure to extreme heat and dust, smells, noise and mechanical vibrations is possible.



INDUSTRY TRAINER

We need Industry Trainers to help new and existing employees develop their mining skills and knowledge. They prepare and deliver teaching materials, and excel at coaching and mentoring others to help them reach their potential in the industry.

JOB DESCRIPTION

- Prepare teaching materials and job aids, and deliver training
- Help colleagues perform their jobs safely and effectively by sharing information, skills and knowledge
- Design and develop training programs in area of expertise that comply with national and provincial regulations
- Evaluate training materials after delivery and revise or update materials as required
- Collaborate with team leaders, superintendents and mine or mill managers to identify and prioritize training needs
- Collaborate with technical personnel to observe and analyze jobs, and validate operating procedures and processes to be used for training
- Deliver training to individuals and groups on work sites, in equipment cabs, using simulators, or in a classroom
- May develop and deliver computer-based training
- Plan and optimize training schedules within operational deadlines and track and document employee progress
- Support strategic planning, budgeting and scheduling
- Support operational goals by modeling corporate values and best practices to colleagues

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- High school diploma or equivalent
- Five to seven years of relevant operations experience in a mining environment or earth sciences operation
- Training or experience in one or more fields or processes related to mining or mineral processing
- Knowledge of relevant occupational health and safety rules and regulations as well as legislative training requirements
- Proficiency with word processing, spreadsheet, email, presentation and database software
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse environment
- Proficiency in language of operation

Assets

- Post-secondary training certificate or diploma in Adult Education, Vocational Education, or Instructional Design
- Training and/or certification in WHMIS 2015, Health and Safety, Equipment Operation (Tickets) and 'Train the Trainer'
- Mine Rescue certification
- Willingness to relocate
- Other languages

COMPENSATION

\$88,000

\$115,000

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Industry Trainers like the balance of teamwork and individual work. They are attracted to the challenge, opportunities to work with new technology and the application of existing skills from other sectors (e.g. sectors that use similar equipment as the mining sector). This career offers extensive interaction with a broad range of people and has frequent opportunities to network with internal and external stakeholders.

WHAT IS IT LIKE TO WORK AS AN INDUSTRY TRAINER IN MINING?

Note: conditions vary according to employer and region.

Industry Trainers spend some time working in an office on (or near) the mine site. They also conduct training sessions in the classroom and at various areas in the worksite, on the surface, underground, or both.

SUCCESS PROFILE

- Communicate with people at all levels
- Provide feedback effectively
- Excellent focus
- Embraces new techniques and technologies
- Enjoys coaching and mentoring others
- Respect and understanding of safety procedures, regulations and legislation
- Responsible, organized and alert
- Strong communication and research skills
- Engages in continuous learning and skills development



TRAINING COORDINATOR

We need Training coordinators to develop and conduct a wide range of training for various kinds of workers in a mine site. They combine extensive knowledge of mining operations with enjoyment of mentoring and coaching others.

JOB DESCRIPTION

- Supervise and support trainers and liaise with subject matter experts to ensure quality delivery and outcomes
- Conduct needs assessments for the organization, and identify skills and knowledge gaps
- Organize training delivery and manage training equipment
- Manage costs, training records, evaluation, reporting and follow-up
- Analyze existing training plans
- Provide feedback to participants and mine management
- Procure training programs from outside providers
- Manage and organize apprenticeship programs
- Design and develop new training programs
- Conduct ongoing training, assessment and certification of equipment, operation, and maintenance

SUCCESS PROFILE

- Develops knowledge, skills and abilities in others
- Identifies training requirements and needs
- Influences workers at all levels
- Enjoys coaching and mentoring others
- Knowledge of mine operations and mining equipment

JOB ENTRY REQUIREMENTS

Note: The requirements listed below illustrate what it takes to start the career and do not take into account on-the-job training given to new employees.

Fixed Requirements

- Five to eight years of experience developing and delivering instruction or training programs
- Must be able to pass a medical test
- Must be able to pass a drug test
- Willingness to work in a diverse environment
- Proficiency in language of operation
- Work experience in the mining sector

May be Required

- Post-secondary diploma or degree in a related field (e.g. training, adult education, instructional design and development, human resources management or communication)

Assets

- Willingness to relocate
- Other languages

- Resourceful
- Strong communication and interpersonal skills (verbal and written)
- Strong management skills
- Strong multi-tasking and time management skills

COMPENSATION

\$65,596

\$81,981

(Source: Canadian Mine Salaries, Wages & Benefits: 2018 Survey Results, InfoMine USA, 2018).

WHY ARE PEOPLE ATTRACTED TO THIS CAREER?

Training Coordinators love creative opportunities to learn and coach others. With a large workforce to train in a vast array of roles, every day is full of rewarding work, and they are well compensated for their efforts.

WHAT IS IT LIKE TO WORK AS A TRAINING COORDINATOR IN MINING?

Note: conditions vary according to employer and region.

Training Coordinators work closely with mine management to ensure training programs align with the needs of the organization and comply with legal requirements. When developing training programs, they collaborate with subject matter experts in all areas of mine operations. They mostly work in an office but also spend some time on-site.

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Civil Engineering Technician	41
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Craneoperator	33
Electrical Engineer	49
Electrician	34
Engineering Superintendent	59
Environmental Biologist	50
Environmental Consultant	47
Environmental Technician	42
Equity, Diversity & Inclusion Specialist	71
Front Line Supervisor	60
General Labourer	19
Geological and Mineral Technician	43
Geological Engineer	51
Geologist	52
Haul Truck Driver	20
Health and Safety Coordinator	72
Health and Safety Professional	73
Heavy Equipment Operator	21
Hoist Operator	22
Indigenous Relations Superintendent	57
Industry Trainer	74
Instrumentation Technician	29
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Maintenance Helper	24
Maintenance Superintendent	61
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