



MINING INDUSTRY
HUMAN RESOURCES COUNCIL

Discover *your role* in Canada's Minerals and Metals Sector

A CAREER IN MINING IS
**MORE THAN
YOU THINK!**





MINING INDUSTRY
HUMAN RESOURCES COUNCIL
CONSEIL DES RESSOURCES HUMAINES
DE L'INDUSTRIE MINIERE

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CONTENTS

A Career in Mining is More Than You Think	1	Industry Trainer	26
Assayer.....	2	Survey Technician	27
Blaster	3	Maintenance Helper	28
Construction Miner.....	4	Maintenance Superintendent	29
Civil Engineering Technician / Technologist	5	Maintenance Supervisor	30
Civil Engineer.....	6	Mapping Technician / Technologist	31
Construction Helper.....	7	Mechanic	32
Construction Superintendent.....	8	Mechanical Engineer	33
Crane Operator	9	Mill Manager	34
Production Driller	10	Millwright	35
Haul Truck Driver	11	Mine Dispatcher.....	36
Electrical Engineer.....	12	Mine Manager	37
Electrician	13	Mine Operations Superintendent.....	38
Engineering Superintendent	14	Mineral Process Engineer	39
Environmental Biologist	15	Minerals Processing Operator.....	40
Environmental Technician / Technologist	16	Mining Engineer.....	41
Frontline Supervisor	17	Process Superintendent	42
General Labourer.....	18	Process Supervisor.....	43
Geological and Mineral Technician / Technologist	19	Project Manager	44
Geological Engineer.....	20	Mine Helper	45
Geologist	21	Surface Miner	46
Health and Safety Coordinator	22	Training Coordinator	47
Health and Safety Professional.....	23	Underground Miner	48
Heavy Equipment Operator	24	Welder	49
Hoist Operator	25		

A CAREER IN MINING IS MORE THAN YOU THINK

Discover **YOUR ROLE** in Canada's Minerals and Metals Sector

There are a million career choices out there. The trick is finding the one that's right for you. Some of us seek the thrill of discovery, while others prefer to stay grounded with more structure. Some like working in teams towards common goals, while others prefer to be alone.

So, what if there was an industry that offered all of these options? Welcome to Canada's mining industry, where people like you help provide the materials needed for virtually all the goods we use in our daily lives.

From computers and mobile phones, to buildings, bridges, hockey sticks and pucks. None of these things are possible without Canada's mines providing the raw resources, the energy, the inspiration to create them — and people like you to bring them together.

Take your first step to discovering all that the Canadian mining industry has to offer. Because a career in mining is more than you think!

DID YOU KNOW?

The Canadian mining industry employs 200,000+ people in over 120 different careers.

The Mining Industry Human Resources Council (MiHR) maintains the career profiles in this book to help you discover your role in Canada's minerals and metals sector and guide you on your journey to a career in mining.

MiHR is Canada's knowledge centre for mining labour market information. As an independent, non-profit organization, MiHR drives collaboration among mining and exploration companies, organized labour, contractors, educational institutions, industry associations, and Indigenous groups to identify opportunities and address labour market challenges within the Canadian minerals and metals sector. In addition to providing labour market information, MiHR also offers programs that focus on diversity, certification, standards, and training.

A sustainable mining industry requires a sustainable workforce. MiHR's vision is an inclusive, skilled and sustainable Canadian mining workforce that anticipates and adapts to volatility and innovation.

What's it Really Like to Work in Mining

Employment in mining falls within four main areas:

- 1 – Exploration
- 2 – Extraction and Milling
- 3 – Support Services
- 4 – Manufacturing and Fabrication

No matter the job, safety is the top priority in the mining industry. All mine employees observe strict health and safety rules.

DID YOU KNOW?

Canada is a global leader in mining, producing more than 60 unique minerals and metals.

Working hours vary considerably from mine to mine. Some have standard weekday hours or shift work that involves evening or weekend work. Overtime is generally not required, but employees may work longer hours for extra compensation. Some mines are located near communities, which allow employees to live at home and commute to work.

Many mines are located in remote areas and require employees to live in a mining camp, usually working on a "fly-in, fly-out" schedule. Living expenses are covered on-site, including meals. Camps vary in features, and can include gyms, recreation and other facilities. Some camps provide a variety of training including language courses and first aid. Fishing and hiking may or may not be permitted, depending on local regulations, licence requirements, and environmental considerations.

How to Build Your Mining Career

The mining workforce is becoming more educated, in part due to advances in technology and innovation. The number of workers with a high school diploma and with a university degree is increasing. The industry also draws many workers with an apprenticeship, trades certificate or diploma. Education requirements are listed within each of the career profiles in this book.

Many employers also want to help job seekers build a successful and fulfilling career. Here are some ways that the mining industry may support you:

- Offer job placements, training and mentoring
- Welcome applicants with experience in other industries and countries
- Have incentives to attract women and Indigenous people to mining education, training and employment
- Offer various incentives including flexible schedules, financial benefits and in-house training programs
- Provide professional development programs to support you and to develop career progression options

Where Do You Fit In?

With so many occupations available, there's a place for everyone in mining. Additional information about careers and MiHR's diversity, certification, standards, and training programs, can be found at www.MiHR.ca.

ASSAYER

Assayers provide information that is critical for mine performance by inspecting, grading, sampling, testing or refining raw and processed materials. They set their own priorities and activities, have an eye for detail and work best when following established procedures and routines.

Job Description

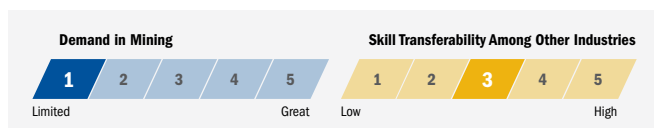
- Inspect, grade, sample, test or refine raw and processed materials, analyzing for substances such as metals, non-metallic materials, concentrates and waste
- Use spectrographic analysis, chemical solutions and specialized equipment
- Adjust methods of analysis and maintain analysis equipment
- Advise 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

Compensation



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

Job Prospects



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.

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

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

BLASTER

Blasters load and detonate explosives while following strict health, safety and security regulations. They have good planning skills and pay very close 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

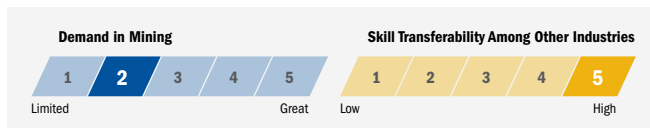
Compensation

\$31.47/hour

\$48.24/hour

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

Job Prospects



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.

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

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

CONSTRUCTION MINER

Construction Miners put practical skills to use and construct, install, maintain and repair structures and fixtures within a mining environment.

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 subflooring 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

Compensation

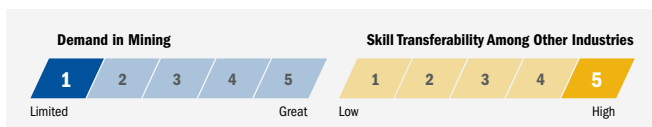
\$28.84/hour

\$41.86/hour

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

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

Job Prospects



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.

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

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

CIVIL ENGINEERING TECHNICIAN / TECHNOLOGIST

Civil Engineering Technicians are vital members of a mine's engineering department. They work with the team that designs and builds new infrastructure for the mine and keeps the mine operating safely and efficiently.

Job Description

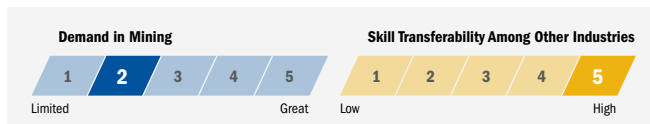
- Perform scheduled mine-wide surveys (e.g. face advance and drilling surveys, ventilation) and collection of data
- Conduct surveys and mapping of planned new excavations in an operating mine
- Inspect concrete, shotcrete, steel and timber to ensure surface and new areas undergoing underground construction 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

Compensation



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

Job Prospects



Why are People Attracted to this Career?

Civil Engineering Technicians enjoy 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.

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 (two to three 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

- Willingness to relocate
- Other languages

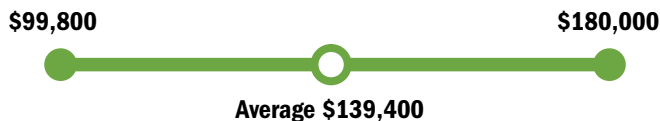
CIVIL ENGINEER

Civil Engineers are vital members of a mine's engineering department, helping to prepare budgets and monitor project progress. They help design and build new infrastructure and contribute to the efficient and profitable operation of a mine.

Job Description

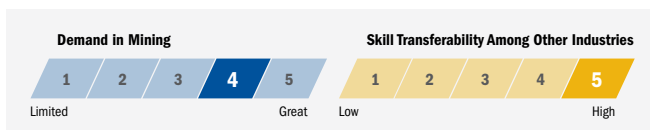
- Estimate detailed quantities of inputs and prices for new works, feasibility studies and formal tenders, and suggest innovative cost-effective construction solutions
- Analyze construction documents and drawings to prepare cost estimates, budgets and programs
- Assist with preparing tendering competitions, 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

Compensation



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

Job Prospects



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.

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

CONSTRUCTION HELPER

Construction Helpers provide valuable support in a team environment, gaining first-hand mining industry work experience that could open the door 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

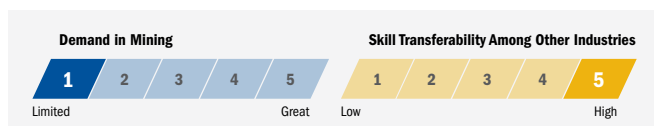
Compensation

\$31.74/hour

\$34.09/hour

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

Job Prospects



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).

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
- Undergo a criminal record check

Assets

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

CONSTRUCTION SUPERINTENDENT

Construction Superintendents lead the daily operation of mining construction projects, ensuring that they progress on time and on budget, and mentor teams.

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

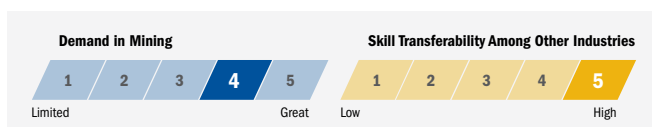
Compensation

\$112,000

\$163,627

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

Job Prospects



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.

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
- ✓ 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

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
- 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 New Brunswick)

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

CRANE OPERATOR

A Crane Operator is good with numbers, works while pursuing their qualifications and approach heavy equipment and machinery with confidence and respect.

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

Compensation

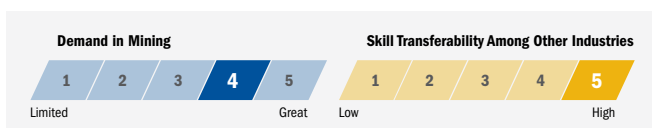
\$30.77/hour

\$49.74/hour



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

Job Prospects



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.

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

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

PRODUCTION DRILLER

Production Drillers are critical to mining production. They are mechanically inclined, follow protocol and procedure, and figure 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

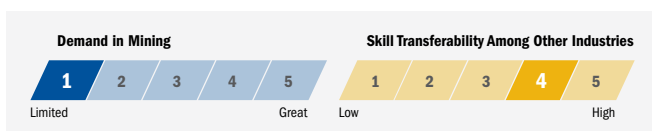
Compensation

\$30.53/hour

\$48.24/hour

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

Job Prospects



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.

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
- ☒ 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

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

- Willing to relocate
- Other languages

HAUL TRUCK DRIVER

Haul Truck Drivers make big contributions to mining or minerals processing by transporting raw materials in electric or diesel haul trucks.

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

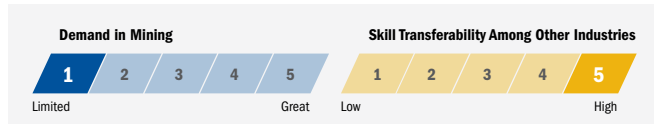
Compensation

\$29.00/hour

\$46.77/hour

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

Job Prospects



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: conditions 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.

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

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

ELECTRICAL ENGINEER

Electrical Engineers use science, technology and problem solving to design and support the construction and maintenance of a variety of products, services and information systems.

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

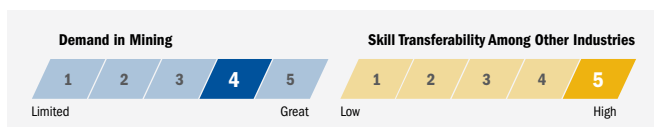
Compensation

\$79,500 **\$111,800**



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

Job Prospects



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.

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

May be Required

- Professional registration, PEng
- High power distribution training (or training on electronic computer control process)
- Three or more years of mining experience
- Experience using 3D drawing software

Assets

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

ELECTRICIAN

Electricians install, test, repair and maintain electrical systems and equipment. They excel at engaging in a variety of challenging tasks that require precision 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 and require additional expertise
- Attend to breakdowns and emergencies such as power outages, cable replacement, ventilation issues and power to emergency pumps
- Follow preventative maintenance programs, including routine equipment inspections
- Maintain maintenance records
- Lock out equipment that presents any type of hazard and meet with supervisor to review process to make it safe and operable
- 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 (electrically and electronically)
- Operate generator stations during power outages

Compensation

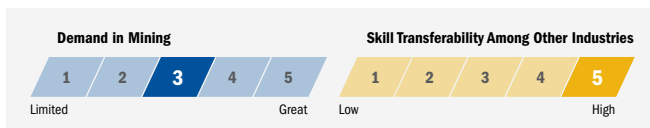
\$27.58/hour

\$51.20/hour

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

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

Job Prospects



Why are People Attracted to this Career?

Electricians enjoy exciting work where every day presents 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 much of their workday troubleshooting, and often have to work in small confined spaces or high up on ladders and platforms, including bucket trucks.

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
- Good eyesight and colour vision (required to identify colour-coded wires)
- 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
- Red Seal certificate in Electrical trade

May be Required

- High school diploma or equivalent

Assets

- Willingness to relocate
- Other languages

ENGINEERING SUPERINTENDENT

Engineering Superintendents are part of the mine management team. They manage teams of engineers, lead new developments and keep the mine and mill running smoothly and safely.

Job Description

- Work with senior managers, other superintendents, engineers, technologists and technicians to provide engineering services and support to mining and processing activities
- 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, both formal and informal
- Recruit, train and develop employees, with support from HR specialists
- Oversee the development of engineers, technologists and technicians, providing support, encouragement, advice and guidance

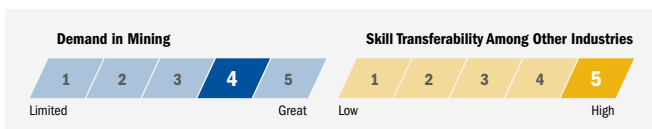
Compensation

\$134,725

\$166,944

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

Job Prospects



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 appreciate the opportunity to work with new technologies and new processes, and to manage and develop their people. They like working on projects and solving problems. They also like to work with other senior managers and the broader perspective on the industry that comes with that collaboration.

What is it Like to Work as an Engineering Superintendent in mining?

Note: conditions vary according to employer and region.

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

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
- ☒ 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

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 (e.g. oil and gas, petro-chemicals, steel, electricity generation)
- Knowledge of the mining industry
- Proficiency with word processing, spreadsheet and presentation software
- Proficiency with AutoCAD
- 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 New Brunswick)

Assets

- 10–12 years of relevant experience
- Specialist mine planning and scheduling software, including 3D and visualization
- Willingness to relocate
- Other languages

ENVIRONMENTAL BIOLOGIST

Environmental Biologists are passionate about science and the environment, help reduce any negative environmental impact of mining and find balance between a mining operation and the surrounding ecosystem.

Job Description

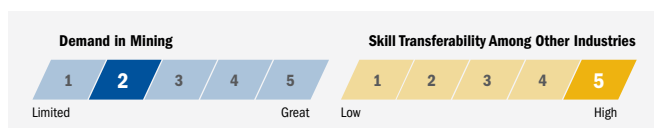
- Plan, conduct, and monitor environmental projects to ensure the mine operates in compliance with federal and provincial regulatory requirements and environmental protection acts and guidelines
- Develop new technologies, processes and procedures to ensure that mining is conducted in a sustainable and 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

Compensation



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

Job Prospects



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.

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

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 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
- Proficiency in language of operation

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
- Willing to relocate
- Other languages

ENVIRONMENTAL TECHNICIAN / TECHNOLOGIST

Environmental Technicians / Technologists work with environmental engineers and scientists to identify, evaluate, prevent and control environmental contamination.

Job Description

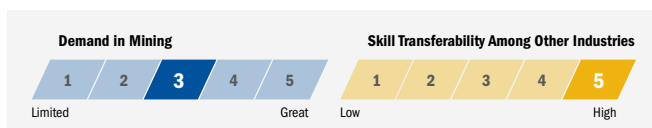
- Enter and analyze data, write reports and help ensure compliance with environmental regulations and legislation
- Participate in multi-disciplinary projects, including hazardous materials survey, abatement and remediation activities, air monitoring, flora and fauna protection, waste audits, and environmental 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 material
- May conduct information or training sessions on environmental issues within the community or the mine

Compensation



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

Job Prospects



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.

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

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) 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

FRONTLINE SUPERVISOR

Frontline Supervisors like solving problems and meeting targets, communicate and work well with others and take responsibility for the safety of an entire team.

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

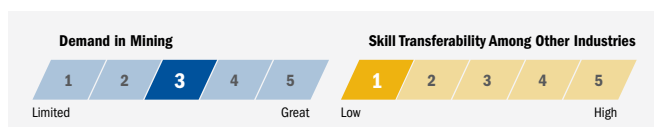
Compensation

\$85,000

\$112,000

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

Job Prospects



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.

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 New Brunswick)

May be Required

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

Assets

- A journeyperson trade certificate, post-secondary technical diploma, or Engineering degree
- Willingness to relocate
- Other languages

GENERAL LABOURER

General Labourers provide valuable assistance and support in a team of Minerals Processing Operators and other mill employees. They are fit, capable, a team player and can work 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

Compensation

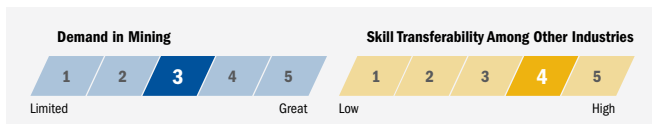
\$19.55/hour

\$40.07/hour



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

Job Prospects



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).

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

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

GEOLOGICAL AND MINERAL TECHNICIAN / TECHNOLOGIST

Geological and Mineral Technologists have good physical endurance, enjoy working outdoors, are adaptable, detail-oriented 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

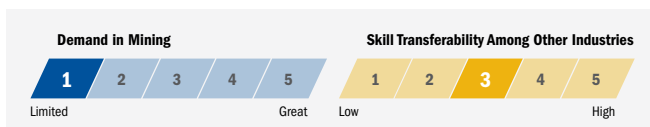
Compensation



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

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

Job Prospects



Why are People Attracted to this Career?

Geological and Mineral Technologists 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 Technologist in Mining?

Note: conditions vary according to employer and region.

Geological and Mineral Technologists 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.

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-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

GEOLOGICAL ENGINEER

Technical and scientific analysis on rock, soil, and groundwater, solve engineering problems and designs solutions that ensure safe and economical.

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, and radar images
- Design and recommend solutions to protect the environment from mining operations such as strategies for proper waste disposal, 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 with Mining Engineers, Project Managers and inter-disciplinary teams

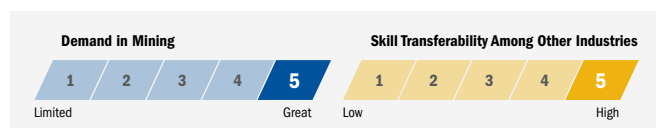
Compensation

\$87,590

\$141,696

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

Job Prospects



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 and toxic or dangerous substances and/or organisms may be present. Geological Engineers test samples for content and composition and then develop reports and recommendations.

Success Profile

- ☒ Acts with authority and makes independent decisions
- ☒ Critical thinker who sees projects through
- ☒ Work with and/or manage a multi-disciplinary team
- ☒ Respect and understanding of safety procedures, environmental legislation and regulations
- ☒ Strong communication, computer (scientific software databases, mapping and queries), organizational and analytical skills
- ☒ Strong interest in math, technology, and science
- ☒ Values safety, health and positive working environment

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 medical and drug tests
- 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, PEng.

Assets

- Experience with geological assessment, feasibility surveys, subsurface investigation, contaminated site investigation and remediation
- Willingness to relocate
- Other languages

GEOLOGIST

Geologists play a pivotal role in daily mining output, support infrastructure planning and ensure that existing resources are developed in a sustainable manner. They are fascinated by rocks, rock formations, mountain building, plate tectonics, faults and earthquakes and have good physical endurance.

Job Description

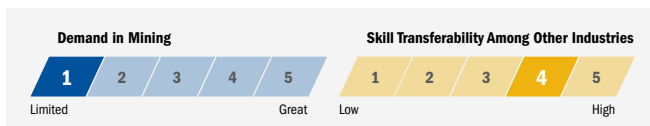
- Assist the in-pit/underground ore production, stockpiling and ore reporting
- Plan the grade control drilling program
- Accurate sampling of various drills
- Evaluate assay data quality
- Update grade control database, block model and design of the ore blocks
- Interact closely with mill operations, 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

Compensation



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

Job Prospects



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.

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

HEALTH AND SAFETY COORDINATOR

Health and Safety Coordinators build, implement, and oversee health and safety programs. Safety is their top priority; they communicate well with others and excel at managing conflict.

Job Description

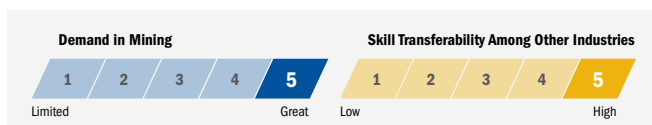
- Develop and review health and safety rules, policies and procedures in accordance with site, company and government regulations and legislation
- Conduct inspections to ensure that health and safety requirements and governmental legislation is being followed at all times
- Ensure that workers are up-to-date 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
- 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

Compensation



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

Job Prospects



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: these 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.

Success Profile

Common traits that successful Health and Safety Coordinators share are:

- ✓ 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
- ✓ 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

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

HEALTH AND SAFETY PROFESSIONAL

Health and Safety Professionals translate complex regulations into practical actions and behaviours. They are proactive leaders who 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

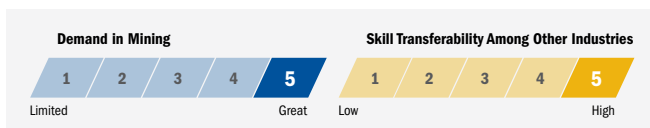
Compensation

\$77,738

\$192,886

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

Job Prospects



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.

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

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

HEAVY EQUIPMENT OPERATOR

(**Note:** The scope of this profile does not include Haul Truck Driver, Driller, Crane and Hoisting Equipment Operator)
Heavy Equipment Operators work with machinery outdoors or underground, and are responsible and safety conscious.

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

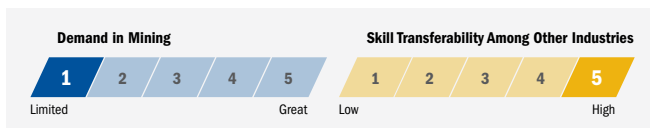
Compensation

\$26.45/hour

\$48.24/hour

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

Job Prospects



Why are People Attracted to this Career?

Heavy Equipment Operators often specialize in more than one type of equipment. Many are trained 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: conditions 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).

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

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

- High school diploma or equivalent
- Valid driver's licence and good driving record

Assets

- Previous experience operating heavy equipment
- Willingness to relocate
- Other languages

HOIST OPERATOR

Hoist Operators transport people, equipment and materials up and down mine shafts. They are practical and steady, engage in continuous learning and can adapt and think on their feet.

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

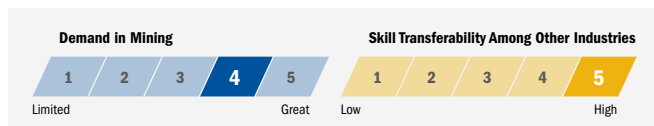
Compensation

\$34.09/hour

\$48.47/hour

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

Job Prospects



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

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

INDUSTRY TRAINER

Industry Trainers help new and existing employees develop their mining skills and knowledge by teaching, coaching, and mentoring and helping them reach their potential.

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

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

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 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

SURVEY TECHNICIAN

Survey Technicians are careful, precise and good with numbers. 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

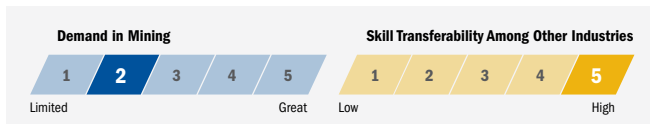
Compensation

\$54,000

\$75,000

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

Job Prospects



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.

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

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 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

MAINTENANCE HELPER

Maintenance Helpers provide valuable assistance and support to the tradespeople who work in a mine. They are team players, physically fit and enjoy hands-on work.

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

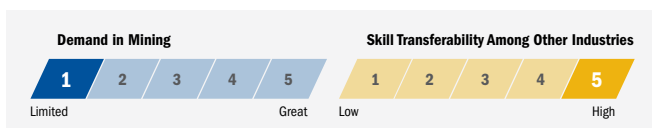
Compensation

\$26.45/hour

\$33.60/hour

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

Job Prospects



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.

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

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

MAINTENANCE SUPERINTENDENT

Maintenance Superintendents are part of the mine management team that keeps the mine and mill running smoothly and safely. They manage several teams of people, and are responsible for safety, equipment reliability and control maintenance costs.

Job Description

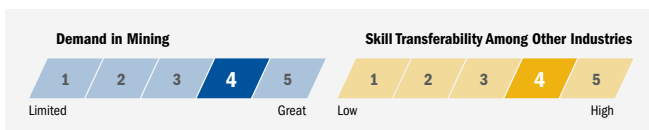
- Oversee all aspects of site maintenance, possibly with specialist teams (mechanical, electrical/electronic, hydraulic, etc.), covering the mine itself, the associated processing mill, and related conveyor systems
- Work with Senior Managers, other Superintendents and their Maintenance Supervisors to 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

Compensation

\$117,500  \$210,000

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

Job Prospects



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.

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
- ☒ Organized and a critical thinker
- ☒ Responsible and accountable
- ☒ Strong communication, computer, interpersonal, problem-solving and troubleshooting 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 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 New Brunswick)

Assets

- Master's degree in engineering, mining or other relevant degrees
- Willingness to relocate
- Other languages

MAINTENANCE SUPERVISOR

As the maintenance team lead, Maintenance Supervisors are problem solvers, safety-conscious, decision-makers, and responsible for large and small, fixed and mobile 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

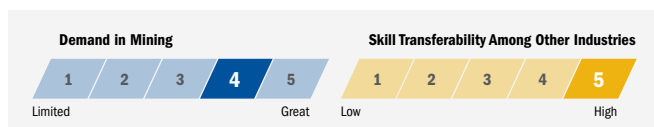
Compensation

\$100,000

\$115,225

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

Job Prospects



Why are People Attracted to this Career?

A Maintenance Supervisor's 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.

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
- ☑ 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

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 New Brunswick)

May be Required

- Red Seal certification in a related trade

Assets

- Proficiency with AutoCAD or similar software, and computer diagnostic tools
- Post-secondary degree in engineering or mining
- Willingness to relocate
- Other languages

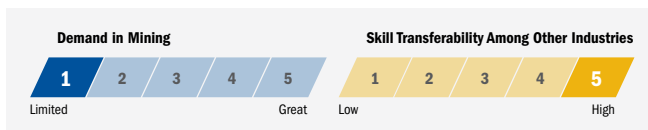
MAPPING TECHNICIAN / TECHNOLOGIST

Mapping Technicians bring together information in exciting ways, creating and using GIS databases and computer programs to replace paper maps and drawings. They are 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 Prospects



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 weekday working hours with only occasional overtime, evening and/or weekend work are the norm.

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

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 with few or no current infractions

Assets

- Willingness to relocate
- Other languages

MECHANIC

Mechanics in the mining industry inspect, repair and maintain light vehicles, trucks and mine support equipment such as shotcrete sprayers, scissor lifts, boom trucks and forklifts.

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

Compensation

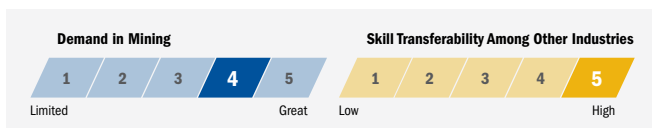
\$27.00/hour

\$51.20/hour

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

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

Job Prospects



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.

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

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
- Journeyperson 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

MECHANICAL ENGINEER

Mechanical Engineers are leading members of a mine's engineering department. They support production and minerals processing operations by working in a team that specifies, purchases, and installs specialized mechanical equipment and maintains it efficiently and safely.

Job Description

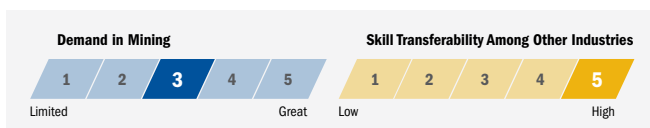
- Organize, install and operate the mechanical equipment and systems at the mine site
- Oversee the maintenance, repair and support of mechanical equipment and systems by operators and mechanics
- Prepare, check and approve calculations, documents, drawings, cost estimates and tests in compliance with 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

Compensation



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

Job Prospects



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.

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

May be Required

- Specialized software skills
- Use of computer-based design and drafting using mechanical engineering and mining software
- Professional Registration, P. Eng.

Assets

- Master's degree in Mechanical Engineering or related subject
- Willingness to relocate
- Other languages

MILL MANAGER

Mill Managers are accountable for the success of processing operations and for ensuring safety, quality, cost-effectiveness, and meeting targets. They hold a high level of responsibility, motivating their teams and collaborating with other area managers to achieve results.

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

Compensation



(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.

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 New Brunswick)

Assets

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

MILLWRIGHT

Millwrights are critical to mining operations at all stages of production. They are good with tools, enjoy taking machines apart and rebuilding them, and work well both in a team and independently.

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)

Compensation

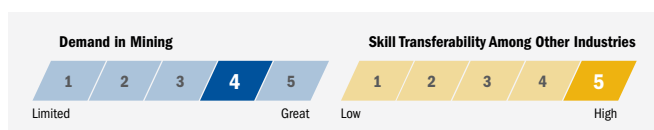
\$29.00/hour

\$49.74/hour

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

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.

Job Prospects



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.

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

- Journeyman 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

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

Assets

- Willingness to relocate
- Other languages

MINE DISPATCHER

Mine Dispatchers have existing processing and production experience in the mining industry. They have exceptional communication skills and work with a variety of computer software and various types of office equipment.

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

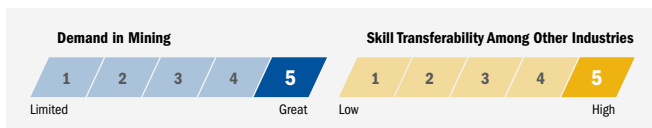
Compensation

\$32.00/hour

\$39.05/hour

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

Job Prospects



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.

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

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

MINE MANAGER

Mine Managers manage various teams running mining operations, and have a high level of responsibility to ensure safety, quality, cost-effectiveness and reaching targets.

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, (ex. 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

Compensation



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

Why are People Attracted to this Career?

Mine Managers 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.

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
- ☒ Maintains positive working relations with trade unions
- ☒ Operational leadership experience
- ☒ Organized and a critical thinker
- ☒ Strong communication and interpersonal skills
- ☒ Strong computer and risk management 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

- 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 New Brunswick)

Assets

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

MINE OPERATIONS SUPERINTENDENT

Mine Operations Superintendents are leaders, managing several mine management teams and are responsible for safety, production volumes, quality and budgeting.

Job Description

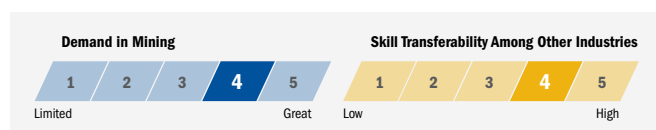
- Responsible for safety, production, quality and budgets for their area of mine operations
- Work with senior managers, other Superintendents and their frontline supervisors to control mine operations
- Responsible for the workers, equipment, tools and materials in mine operations
- Prepare and approve 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

Compensation



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

Job Prospects



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.

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
- ☒ Organized and a critical thinker
- ☒ Responsible and accountable
- ☒ Strong communication and interpersonal skills
- ☒ Strong 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 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 New Brunswick)

Assets

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

MINERAL PROCESS ENGINEER

Mineral Process Engineers use sophisticated processes and new technologies to extract and refine valuable minerals from raw ore. They also create new products from waste materials, clean up the work environment and promote economic growth.

Job Description

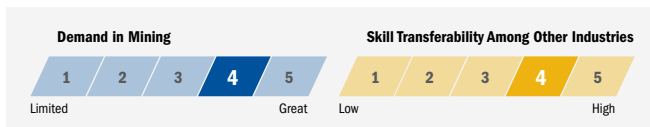
- Organize and supervise the extraction of metals and minerals from ore at underground or surface mines
- Monitor the conditions of the various processes and the flow of material through the mill
- Monitor and control the mine feed, operating parameters and the addition of chemical substances to ensure 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

Compensation



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

Job Prospects



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.

Success Profile

- ☒ Creative
- ☒ Embraces new techniques and technologies
- ☒ Enjoys working with math, science, computers and machinery
- ☒ Goal-oriented
- ☒ Understands and respects safety procedures, legislation and regulations
- ☒ Patient, flexible, adaptable and resilient
- ☒ Strong communication and time management skills
- ☒ Team player

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

MINERALS PROCESSING OPERATOR

Minerals Processing Operators work in teams to perform essential work in mining operations, understanding and controlling 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 (ex. bins, conveyors, chutes, pumps, valves, crushers, flotation cells, cyclones, thickeners, screeners, weigh scales, railcar movers and front-end loaders)

Compensation

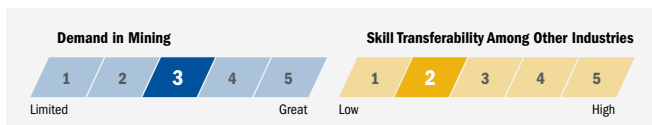
\$37.18/hour

\$48.47/hour



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

Job Prospects



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 Minerals 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.

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

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

Assets

- Depending on the type of mining, a bachelor's degree in metallurgical/chemical/mechanical engineering
- Willingness to relocate
- Other languages

MINING ENGINEER

Mining Engineers work in teams with other engineers and technologists to develop and construct new mines and manage existing mines.

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

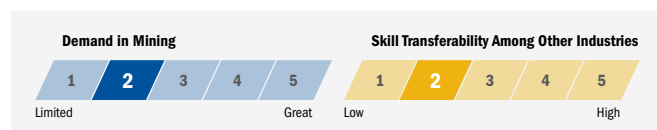
Compensation

\$59,900

\$180,000

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

Job Prospects



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 work in an office on the mine site, but also spend a lot of time at the mine site. They experience 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 on the surface and underground.

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

PROCESS SUPERINTENDENT

Process Superintendents work with mine management teams to run mill operations and process mined materials. They manage several teams of people and are responsible for safety, environment, production volumes, quality and budgeting.

Job Description

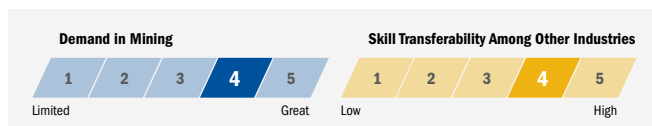
- Responsible for the safety, production, quality and budgets for their processing operations
- Work with senior managers, other superintendents and their process supervisors to control processing machinery to convert mined materials into products
- Processing activities vary with the mineral being mined, 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

Compensation

\$167,935 **\$200,000**

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

Job Prospects



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.

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 New Brunswick)

Assets

- Willingness to relocate
- Other languages

PROCESS SUPERVISOR

Process Supervisors are decisive, working well under pressure in a position of high responsibility. They embrace change and are strong leaders to ensure their mine site runs efficiently.

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

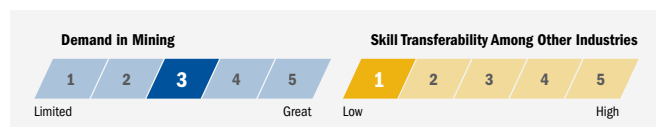
Compensation

\$102,432

\$116,046

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

Job Prospects



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.

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
- ☒ Reliable and responsible
- ☒ Intermediate proficiency with chemistry
- ☒ Strong communication skills (verbal and written)
- ☒ Strong computer skills
- ☒ Well-organized and a critical thinker
- ☒ Works well under pressure
- ☒ 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

- 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
- 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 New Brunswick)

Assets

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

PROJECT MANAGER

Project Managers are organized multi-taskers who take on comprehensive projects that go beyond day-to-day mining operations.

Job Description

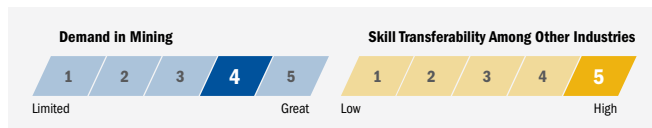
- Manage projects to modify or add facilities and infrastructure (ex. upgrading an air strip, building new accommodation, constructing a road, building new structures for the mill, opening up new sections of the mine, etc.)
- Plan projects (ex. develop full scale project work plans and proper documentation 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

Compensation



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

Job Prospects



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.

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

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
- 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 Registration, PEng.
- 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

MINE HELPER

Mine Helpers provide valuable assistance and support to various departments in a mine site. A valuable occupation, it can open doors to many other jobs in the mining industry.

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

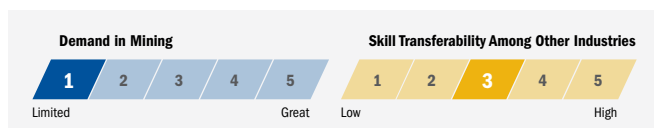
Compensation

\$19.55/hour

\$40.76/hour

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

Job Prospects



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).

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

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

SURFACE MINER

Surface Miners extract ore and minerals from the ground. It is a 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.

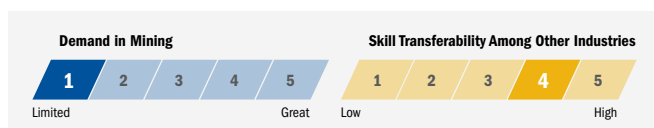
Compensation

\$28.00/hour

\$48.24/hour

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

Job Prospects



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.

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

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

TRAINING COORDINATOR

Training coordinators develop and conduct training for various kinds of workers in a mine site.

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

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.

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

- 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

May be Required

- Work experience in the mining sector

Assets

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

UNDERGROUND MINER

Underground Miners work in close-knit teams to perform a variety of critical extraction tasks at the front line of a mining site.

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

Compensation

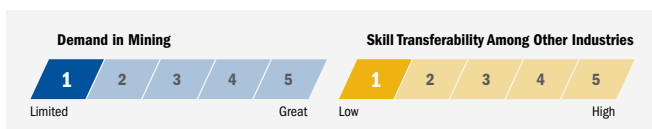
\$28.00/hour

\$48.24/hour



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

Job Prospects



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 a Underground Miner in Mining?

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.

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

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

WELDER

Welders are patient workers who construct or repair metal products by carefully joining parts using heat and pressure and 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

Compensation

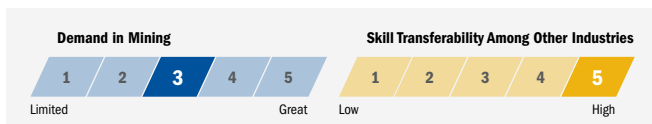
\$28.00/hour

\$45.99/hour

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

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

Job Prospects



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.

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

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

NOTES



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