

APPENDIX 3-E
CAREERS IN MINING INFOSHEETS (2011-2012)

KSM PROJECT SEABRIDGE GOLD

EDUCATION

- Grade 12 completion may be required.

TRAINING

If you are interested in completing Grade 12 or upgrading your skills, you have a number of options. Check out adult basic education programs at:

- The College of New Caledonia (CNC). CNC also offers a Mining Industry Certificate.
- Northwest Community College (NWCC).

If you have completed Grade 12 and are interested in exploring your career options in exploration and mining, contact:

- General educational advisors or First Nations Access coordinators at NWCC.
- School of Exploration & Mining advisors at NWCC.
- Academic advisors at the CNC.

CAREER ADVANCEMENT POTENTIAL

Some labourers in minerals and metal processing progress into jobs as machine and process operators when they have some experience.

To learn more about a career as a labourer in Mineral and Metal Processing (including information about work duties and working conditions, salaries and employment prospects), you can access information in the National Occupation Classification (NOC) System at BC Work Futures (www.workfuturesbc.ca). The NOC code for this occupation is 9611.

MINERALS & METAL PROCESSING LABOURERS

People who work in this occupation perform many different activities and have the skills to work in many places. You can find minerals and metal processing labourers working in mineral ore and metal mines and processing plants, including copper, lead and zinc refineries; in steel mills and aluminum plants; where precious metals are refined; and in cement, clay, glass and stone processing plants and foundries.



image source: MiHR Council and iStock

JOB DESCRIPTION

Depending on the type of mine or plant they work in, people employed as minerals and metal processing labourers perform some or all of the following duties:

- Transport raw materials, finished products, scrap and recyclable materials throughout plants manually or using forklifts.
- Feed conveyors, crushers and other equipment; open valves and start pumps; sort, stack, bundle and stamp materials; and perform other activities to assist process and machine operators in mineral ore and metal processing.
- Clean work areas and equipment, and may assist with minor repairs and maintenance.

Seabridge Gold developed its job fact sheets using information from Human Resources and Skills Development Canada's 2006 National Occupational Classification, BC Work Futures (www.workfuturesbc.ca) and the Mining Industry Human Resource Council's 'Explore for More' program (www.acareerinmining.ca). To learn more about Seabridge Gold and its projects, visit www.seabridgegold.net.

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EDUCATION & EXPERIENCE

- Grade 12 completion is usually required.
- Some experience as a heavy equipment operator may be required for drillers.
- Experience as a blaster helper in surface mining and quarrying or construction may be required for blasters.
- A provincial blasting licence is usually required for blasters.

TRAINING

On-the-job training is often provided.

If you are interested in completing Grade 12 or upgrading your skills, you have a number of options. Check out adult basic education programs at:

- The College of New Caledonia (CNC). CNC also offers a Mining Industry Certificate.
- Northwest Community College (NWCC).

If you have completed Grade 12 and are interested in exploring your career options in exploration and mining, contact:

- General educational advisors or First Nations Access coordinators at NWCC.
- School of Exploration & Mining advisors at NWCC.
- Academic advisors at the CNC.

CAREER ADVANCEMENT POTENTIAL

- Some drillers and blasters move into supervisory roles with experience.

To learn more about a career as a driller or blaster (including information about work duties and working conditions, salaries and employment prospects), you can access information in the National Occupation Classification (NOC) System at BC Work Futures (www.workfuturesbc.ca). The NOC code for this occupation is 7372.

DRILLERS & BLASTERS

Drillers operate machines to make blast holes in open-pit mines and quarries, and for building foundations at construction sites. Blasters fill these holes with explosives and detonate them to dislodge coal, ore and rock, or to demolish structures. People who work as drillers and blasters are usually employed by mining, quarrying and construction companies, and by drilling and blasting contractors.



image source: MiHR Council

JOB DESCRIPTION

Drillers and blasters often perform both drilling and blasting activities but we've separated the activities by role so you can see some or all of the different duties these individuals perform:

Drillers

- Drive and operate drilling machines that bore large blast holes in open-pit mines, quarries and on construction sites, and drill holes for building foundations and pilings.
- May measure location and stake out a pattern of holes to be drilled, load blast holes with explosives and detonate explosives to dislodge coal, ore or rock.

Blasters

- Read instructions or diagrams, lay out drill pattern; determine depth and diameter of blast holes and conduct field tests to determine type and quantity of explosives required.
- Assemble charges; load explosives; connect wires, detonating cords and fuses to blasting machines; and detonate charges.
- Handle, store and transport explosives and accessories in accordance with regulations and ensure that safety procedures are observed.

Seabridge Gold developed its job fact sheets using information from Human Resources and Skills Development Canada's 2006 National Occupational Classification, BC Work Futures (www.workfuturesbc.ca) and the Mining Industry Human Resource Council's 'Explore for More' program (www.acareerinmining.ca). To learn more about Seabridge Gold and its projects, visit www.seabridgegold.net.

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EDUCATION & EXPERIENCE

- Completion of Grade 12 is usually required.
- Completion of a four- to five-year apprenticeship program; or
- A combination of more than five years of work experience in the trade and some high school, college or industry courses in being an industrial electrician is usually required to be eligible for trade certification.
- Trade certification for industrial electricians is compulsory in British Columbia.

TRAINING

The Industry Training Authority (www.itabc.ca) is the best place to find information about becoming an industrial electrician and training for careers in the Trades. Both the College of New Caledonia and Northwest Community College offer different levels of courses for people interested in becoming electricians.

If you are interested in completing Grade 12 or upgrading your skills, you have a number of options. Check out adult basic education programs at:

- The College of New Caledonia (CNC). CNC also offers a Mining Industry Certificate.
- Northwest Community College (NWCC).

If you have completed Grade 12 and are interested in exploring your career options in exploration and mining, contact:

- General educational advisors or First Nations Access coordinators at NWCC.
- School of Exploration & Mining advisors at NWCC.
- Academic advisors at the CNC.

CAREER ADVANCEMENT POTENTIAL

- Progression to supervisory positions is possible with experience.
- Red Seal trade certification allows for interprovincial mobility.

To learn more about a career as an industrial electrician (including information about work duties and working conditions, salaries and employment prospects), you can access information in the National Occupation Classification (NOC) System at BC Work Futures (www.workfuturesbc.ca). The NOC code for this occupation is 7242.

INDUSTRIAL ELECTRICIANS

Industrial electricians install, maintain, test, troubleshoot and repair industrial electrical equipment and associated electrical and electronic controls. They are employed by electrical contractors and maintenance departments of factories, plants, mines, shipyards and other industrial establishments.

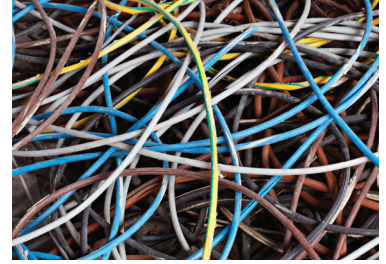


image source: MIHR Council and iStock

JOB DESCRIPTION

Industrial electricians perform some or all of the following duties:

- Read drawings and blueprints in order to determine the layout of industrial electrical equipment installations.
- Install, examine, repair and replace electrical wiring and other electrical components.
- Test electrical and electronic equipment and components for continuity, current, voltage and resistance.
- Maintain, repair, install and test:
 - switchgear, transformers, switchboard meters, regulators and reactors;
 - electrical motors, generators, alternators, industrial storage batteries and hydraulic and pneumatic electrical control systems; and
 - industrial, electrical and electronic control systems.
- Conduct preventive maintenance programs and keep maintenance records.

Seabridge Gold developed its job fact sheets using information from Human Resources and Skills Development Canada's 2006 National Occupational Classification, BC Work Futures (www.workfuturesbc.ca) and the Mining Industry Human Resource Council's 'Explore for More' program (www.acareerinmining.ca). To learn more about Seabridge Gold and its projects, visit www.seabridgegold.net.

KSM PROJECT SEABRIDGE GOLD

EDUCATION & EXPERIENCE

- Completion of Grade 12 is required.
- Completion of a four- to five-year apprenticeship program is required.
- Trade certification for construction electricians is compulsory in British Columbia.

TRAINING

The Industry Training Authority (www.itabc.ca) is the best place to find information about becoming a construction electrician and training for careers in the Trades. Both the College of New Caledonia and Northwest Community College offer different levels of courses if you're interested in becoming an electrician.

If you are interested in completing Grade 12 or upgrading your skills, you have a number of options. Check out adult basic education programs at:

- The College of New Caledonia (CNC). CNC also offers a Mining Industry Certificate.
- Northwest Community College (NWCC).

If you have completed Grade 12 and are interested in exploring your career options in exploration and mining, contact:

- General educational advisors or First Nations Access coordinators at NWCC.
- School of Exploration & Mining advisors at NWCC.
- Academic advisors at the CNC.

CAREER ADVANCEMENT POTENTIAL

- Progression to supervisory positions is possible with experience.
- Red Seal trade certification allows for interprovincial mobility.

To learn more about a career as a construction electrician (including information about work duties and working conditions, salaries and employment prospects), you can access information in the National Occupation Classification (NOC) System at BC Work Futures (www.workfuturesbc.ca). The NOC code for this occupation is 7241.

CONSTRUCTION ELECTRICIANS

Electricians lay out, assemble, install, test, troubleshoot and repair electrical wiring, fixtures, control devices and related equipment in buildings and other structures. They are employed by electrical contractors and maintenance departments of buildings and other establishments, or they may be self-employed.



image source: MiHR Council and iStock

JOB DESCRIPTION

If you're a construction electrician, you may be required to:

- Read and interpret drawings, circuit diagrams and electrical code specifications to determine wiring layouts for new or existing installations.
- Install, replace and repair lighting fixtures and electrical control and distribution equipment, such as switches, relays and circuit breaker panels.
- Splice, join and connect wire to fixtures and components to form circuits.
- Test continuity of circuits using test equipment to ensure compatibility and safety of system, following installation, replacement or repair.
- Connect electrical power to audio and visual communication equipment, signalling devices and heating and cooling systems.
- Conduct preventive maintenance programs and keep maintenance records.

Seabridge Gold developed its job fact sheets using information from Human Resources and Skills Development Canada's 2006 National Occupational Classification, BC Work Futures (www.workfuturesbc.ca) and the Mining Industry Human Resource Council's 'Explore for More' program (www.acareerinmining.ca). To learn more about Seabridge Gold and its projects, visit www.seabridgegold.net.

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EDUCATION & EXPERIENCE

- Completion of Grade 12 is required.
- Completion of a four- to five-year apprenticeship program; or
- A combination of more than five years of work experience in the trade and some high school, college or industry courses in plumbing is usually required to be eligible for trade certification.
- Trade certification is compulsory in British Columbia.

TRAINING

The Industry Training Authority (www.itabc.ca) is the best place to find lots of information about becoming a plumber and training for careers in the Trades. Both the College of New Caledonia and Northwest Community College offer different levels of courses if you're interested in becoming a plumber.

If you are interested in completing Grade 12 or upgrading your skills, you have a number of options. Check out adult basic education programs at:

- The College of New Caledonia (CNC). CNC also offers a Mining Industry Certificate.
- Northwest Community College (NWCC).

If you have completed Grade 12 and are interested in exploring your career options in exploration and mining, contact:

- General educational advisors or First Nations Access coordinators at NWCC.
- School of Exploration & Mining advisors at NWCC.
- Academic advisors at the CNC.

CAREER ADVANCEMENT POTENTIAL

- Progression to supervisory positions is possible with experience.
- Red Seal trade certification allows for interprovincial mobility.

To learn more about a career as a plumber (including information about work duties and working conditions, salaries and employment prospects), you can access information in the National Occupation Classification (NOC) System at BC Work Futures (www.workfuturesbc.ca). The NOC code for this occupation is 7251.

PLUMBERS

Plumbers install, repair and maintain pipes, fixtures and other plumbing equipment used for water distribution and waste water disposal in residential, commercial and industrial buildings. They are employed in maintenance departments of factories, plants and similar establishments, by plumbing contractors, or they may be self-employed.



image source: MIHR Council

JOB DESCRIPTION

Plumbers perform some or all of the following duties:

- Read blueprints and specifications to determine the layout of plumbing systems, water supply networks, and waste and drainage systems.
- Install, repair and maintain domestic, commercial or industrial plumbing fixtures and systems.
- Measure, cut, bend and thread pipes using hand and power tools or machines.
- Join pipes using couplings, clamps, screws, bolts, cement or soldering, brazing and welding equipment.
- Test pipes for leaks using air and water pressure gauges.

Seabridge Gold developed its job fact sheets using information from Human Resources and Skills Development Canada's 2006 National Occupational Classification, BC Work Futures (www.workfuturesbc.ca) and the Mining Industry Human Resource Council's 'Explore for More' program (www.acareerinmining.ca). To learn more about Seabridge Gold and its projects, visit www.seabridgegold.net.

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EDUCATION & EXPERIENCE

- Completion of Grade 12 is required.
- Completion of a four- to five-year apprenticeship program; or
- A combination of more than five years of work experience in the trade and some high school, college or industry courses in steamfitting or pipefitting is usually required to be eligible for trade certification.
- Steamfitter-pipefitter trade certification is compulsory in British Columbia.

TRAINING

The Industry Training Authority (www.itabc.ca) is the best place to find lots of information about becoming a steamfitter or pipefitter and training for careers in the Trades. British Columbia Institute of Technology (www.itabc.ca) offers specific ITA-approved training as well as Foundation courses for people interested in becoming steamfitters and pipefitters.

If you are interested in completing Grade 12 or upgrading your skills, you have a number of options. Check out adult basic education programs at:

- The College of New Caledonia (CNC). CNC also offers a Mining Industry Certificate.
- Northwest Community College (NWCC).

If you have completed Grade 12 and are interested in exploring your career options in exploration and mining, contact:

- General educational advisors or First Nations Access coordinators at NWCC.
- School of Exploration & Mining advisors at NWCC.
- Academic advisors at the CNC.

CAREER ADVANCEMENT POTENTIAL

- Progression to supervisory positions is possible with experience.
- Red Seal trade certification allows for interprovincial mobility.

To learn more about a career as a steamfitter or pipefitter (including information about work duties and working conditions, salaries and employment prospects), you can access information in the National Occupation Classification (NOC) System at BC Work Futures (www.workfuturesbc.ca). The NOC code for this occupation is 7252.

STEAMFITTERS & PIPEFITTERS

Steamfitters and pipefitters lay out, assemble, fabricate, maintain, troubleshoot and repair piping systems carrying water, steam, chemicals and fuel in heating, cooling, lubricating and other process piping systems. Steamfitters and pipefitters are employed in maintenance departments of factories, plants and similar establishments, and by pipefitting contractors, or they may be self-employed.



image source: MiHR Council

JOB DESCRIPTION

If you're a steamfitter or pipefitter, you may be required to:

- Read and interpret blueprints and specifications to determine layout requirements.
- Cut openings for pipe in walls, floors and ceilings using hand or power tools or machines, and select the type and size of pipe required.
- Measure, cut, thread and bend pipe to required shape using hand and power tools.
- Weld, braze, cement, solder and thread joints to join pipes and fabricate sections of piping system.
- Install supports, valves, piping and control systems.
- Test system for leaks using testing equipment.
- Clean and maintain pipe units and fittings and flush system.
- Remove and replace worn components and reactivate system.

Seabridge Gold developed its job fact sheets using information from Human Resources and Skills Development Canada's 2006 National Occupational Classification, BC Work Futures (www.workfuturesbc.ca) and the Mining Industry Human Resource Council's 'Explore for More' program (www.acareerinmining.ca). To learn more about Seabridge Gold and its projects, visit www.seabridgegold.net.

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EDUCATION & EXPERIENCE

- Completion of Grade 12 is required.
- Completion of a four-year apprenticeship program (or a combination of several years of work experience in the trade and some high school, college or industry courses) is required to be eligible for trade certification; however, certification is not required to work as a construction millwright or industrial mechanic in BC. While certification is not mandatory, it will likely increase employment opportunities.

TRAINING

The Industry Training Authority (www.itabc.ca) is the best place to find lots of information about becoming a millwright or industrial mechanic and training for careers in the Trades. You can register at a number of different schools for foundation courses and apprenticeship training to become a millwright or industrial mechanic, including at the British Columbia Institute of Technology, Northwest Community College, and the College of New Caledonia. A complete list of ITA-approved institutions is on the ITA website.

If you are interested in completing Grade 12 or upgrading your skills, you have a number of options. Check out adult basic education programs at:

- The College of New Caledonia (CNC). CNC also offers a Mining Industry Certificate.
- Northwest Community College (NWCC).

If you have completed Grade 12 and are interested in exploring your career options in exploration and mining, contact:

- General educational advisors or First Nations Access coordinators at NWCC.
- School of Exploration & Mining advisors at NWCC.
- Academic advisors at the CNC.

CAREER ADVANCEMENT POTENTIAL

- Progression to supervisory positions is possible with experience.
- Red Seal trade certification allows for interprovincial mobility.

To learn more about a career as a millwright or industrial mechanic (including information about work duties and working conditions, salaries and employment prospects), you can access information in the National Occupational Classification (NOC) System at BC Work Futures (www.workfuturesbc.ca). The NOC code for this occupation is 7311.

CONSTRUCTION MILLWRIGHTS & INDUSTRIAL MECHANICS

Construction millwrights and industrial mechanics install, maintain, troubleshoot and repair stationary industrial machinery and mechanical equipment. Construction millwrights are employed by millwrighting contractors and industrial mechanics are usually employed in manufacturing plants, utilities and other industrial establishments.



image source: MIHR Council and iStock

JOB DESCRIPTION

If you're a construction millwright or an industrial mechanic, you may be required to:

- Read blueprints, diagrams and schematic drawings to determine work procedures.
- Install, align, dismantle and move stationary industrial machinery and mechanical equipment, such as pumps, fans, tanks, conveyors, furnaces and generators according to layout plans using hand and power tools.
- Operate hoisting and lifting devices such as cranes, jacks and tractors to position machinery and parts during the installation, set-up and repair of machinery.
- Inspect and examine machinery and equipment to detect and investigate irregularities and malfunctions, as well as adjust machinery and repair or replace defective parts.
- Operate machine tools such as lathes and grinders to fabricate parts required during overhaul, maintenance or set-up of machinery.
- Clean, lubricate and perform other routine maintenance work on machinery.

Seabridge Gold developed its job fact sheets using information from Human Resources and Skills Development Canada's 2006 National Occupational Classification, BC Work Futures (www.workfuturesbc.ca) and the Mining Industry Human Resource Council's 'Explore for More' program (www.acareerinmining.ca). To learn more about Seabridge Gold and its projects, visit www.seabridgegold.net.

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EDUCATION & EXPERIENCE

- Some companies require completion of Grade 12; some do not.
- Completion of a one- to two-year apprenticeship program; or
- Some high school, college or industry courses in heavy equipment operating combined with on-the-job training.

TRAINING

The Industry Training Authority (www.itabc.ca) has some good information about becoming a Heavy Equipment Operator. A number of public and private institutions offer heavy equipment operator courses, including Northwest Community College.

If you are interested in completing Grade 12 or upgrading your skills, you have a number of options. Check out adult basic education programs at:

- The College of New Caledonia (CNC). CNC also offers a Mining Industry Certificate.
- Northwest Community College (NWCC).

If you have completed Grade 12 and are interested in exploring your career options in exploration and mining, contact:

- General educational advisors or First Nations Access coordinators at NWCC.
- School of Exploration & Mining advisors at NWCC.
- Academic advisors at the CNC.

CAREER ADVANCEMENT POTENTIAL

Progression to supervisory positions is possible with experience.

To learn more about a career as a heavy equipment operator (including information about work duties and working conditions, salaries and employment prospects), you can access information in the National Occupation Classification (NOC) System at BC Work Futures (www.workfuturesbc.ca). The NOC code for this occupation is 7421.

HEAVY EQUIPMENT OPERATORS

Heavy equipment operators work with machinery such as heavy articulating rock trucks, loaders, excavators, backhoes, bulldozers and graders. They work on the construction and maintenance of roads, bridges, airports, gas and oil pipelines, tunnels, buildings and other structures; in surface mining and quarrying activities; and in material handling. They are employed by construction companies, heavy equipment contractors, public works departments and pipeline, logging, cargo-handling and other companies.



image source: MiHR Council

JOB DESCRIPTION

If you are a heavy equipment operator, you'll perform some or all of the following duties:

- Operate heavy equipment such as backhoes, bulldozers, loaders and graders to excavate, move, load and grade earth, rock, gravel or other materials during construction and related activities.
- Operate bulldozers or other heavy equipment to clear brush and stumps prior to logging activities and to build roads at logging and surface mining sites.
- Operate heavy equipment with pile driver head to drive piling into earth to provide support for buildings, bridges or other structures.
- Operate heavy dredging equipment to deepen waterways or reclaim earth fill.
- Operate power shovels to excavate rock, ore or other materials from open-pit mines, strip mines, quarries or construction pits.
- Operate heavy equipment to move, load and unload cargo.
- Conduct pre-operational checks on equipment and clean, lubricate and refill equipment.

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EDUCATION & EXPERIENCE

- Some experience as a general construction labourer may be required for construction trade helpers.
- Flagmen/women may require a traffic control certificate.

TRAINING

If you are interested in completing Grade 12 or upgrading your skills, you have a number of options. Check out adult basic education programs at:

- The College of New Caledonia (CNC). CNC also offers a Mining Industry Certificate.

- Northwest Community College (NWCC).

If you have completed Grade 12 and are interested in exploring your career options in exploration and mining, contact:

- General educational advisors or First Nations Access coordinators at NWCC.
- School of Exploration & Mining advisors at NWCC.
- Academic advisors at the CNC.

CAREER ADVANCEMENT POTENTIAL

You have the opportunity to work in many different locations and job sites as a construction labourer.

To learn more about a career as a construction labourer (including information about work duties and working conditions, salaries and employment prospects), you can access information in the National Occupation Classification (NOC) System at BC Work Futures (www.workfuturesbc.ca). The NOC code for this occupation is 7611.

CONSTRUCTION LABOURERS

Construction trades helpers and labourers assist skilled tradespersons and perform labouring activities at construction sites, in quarries and in surface mines. These workers are employed by construction companies, trade and labour contractors, and surface mine and quarry operators.



image source: MiHR Council

JOB DESCRIPTION

Construction trades helpers and labourers perform many different activities, including some or all of the following:

- Load and unload construction materials, and move materials to work areas.
- Erect and dismantle scaffolding, ramps, and barricades required at construction sites.
- Mix, pour and spread materials such as concrete and asphalt.
- Assist tradespersons such as carpenters, bricklayers, cement finishers, roofers and glaziers in construction activities.
- Assist heavy equipment operators to secure special attachments to equipment, signal operators to guide them in moving equipment and provide assistance in other activities.
- Assist in drilling and blasting rock at construction sites.
- Assist miners in excavating and in setting up and operating various drills and other surface mining machinery.
- Remove rubble and other debris at construction sites using rakes, shovels, wheelbarrows and other equipment.
- Tend or feed machines or equipment used in construction such as mixers, compressors and pumps.
- Clean up chemical spills and other contaminants, and remove hazardous materials.
- Oil and grease hoists and similar equipment.
- Direct traffic at or near construction sites.

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KSM PROJECT SEABRIDGE GOLD

EDUCATION & EXPERIENCE

- Completion of Grade 12 is required.
- A bachelor's degree in geological engineering or in a related discipline is required. Some employers may require a master's degree or doctorate in a related engineering discipline.
- Licensing by a provincial or territorial association of professional engineers is required to approve engineering drawings and reports and to practise as a Professional Engineer (P.Eng.).
- Supervisory and senior positions in this unit group require experience.

TRAINING

Universities across Canada offer many different engineering programs. If you are interested in a career in mining, talk to a university program advisor about the best course for you to take. The University of British Columbia (www.ubc.ca) offers an undergraduate degree program in geological engineering.

CAREER ADVANCEMENT POTENTIAL

- There is considerable mobility between engineering specializations at less senior levels.
- Engineers often work in a multidisciplinary environment and acquire knowledge and skills through work experience that may allow them to practise in associated areas of science, engineering, sales, marketing or management.
- Geological engineers work closely with geologists and other scientists and engineers, and mobility is possible between some fields of specialization.

To learn more about a career as a geological engineer (including information about work duties and working conditions, salaries and employment prospects), you can access information in the National Occupation Classification (NOC) System at BC Work Futures (www.workfuturesbc.ca). The NOC code for this occupation is 2144.

GEOLOGICAL ENGINEERS

Geological engineers conduct geological and geotechnical studies to assess suitability of locations for civil engineering, mining and oil and gas projects. They also plan, design, develop and supervise programs of geological data acquisition and analysis and prepare geological engineering reports and recommendations. Geological engineers are employed in consulting engineering companies, electrical utilities, mining and petroleum companies and in government and research and educational institutions.



image source: MiHR Council

JOB DESCRIPTION

If you are a geological engineer, you perform some or all of the following duties:

- Plan, develop and co-ordinate programs of geotechnical, geological, geophysical or geohydrological data acquisition, analysis and mapping to assist in the development of civil engineering, mining, petroleum and waste management projects or for regional development.
- Analyze and prepare recommendations and reports on settlement of buildings, stability of slopes and fills, and probable effects of landslides and earthquakes to support construction and civil engineering projects.
- Conduct theoretical and applied study of groundwater flow and contamination and develop prescriptions for site selection, treatment and construction.
- Plan, develop, co-ordinate and conduct theoretical and experimental studies in mining exploration, mine evaluation and feasibility relative to the mining industry.
- Conduct surveys and studies of ore deposits, ore reserve calculations and mine design.
- Design, develop and implement computer applications for geophysics, geochemistry, geology, mapping and related fields.
- Supervise technologists, technicians and other engineers and scientists.

Seabridge Gold developed its job fact sheets using information from Human Resources and Skills Development Canada's 2006 National Occupational Classification, BC Work Futures (www.workfuturesbc.ca) and the Mining Industry Human Resource Council's 'Explore for More' program (www.acareerinmining.ca). To learn more about Seabridge Gold and its projects, visit www.seabridgegold.net.

KSM PROJECT SEABRIDGE GOLD

EDUCATION & EXPERIENCE

- A bachelor's degree in metallurgical, materials, ceramic or chemical engineering or in a related engineering discipline is required. Some companies may require a master's degree or doctorate in a related engineering discipline.
- Licensing by a provincial or territorial association of professional engineers is required to approve engineering drawings and reports and to practise as a Professional Engineer (P.Eng.).
- Supervisory and senior positions in this unit group require experience.

TRAINING

Universities across Canada offer many different engineering programs. If you are interested in a career in mining, talk to a university program advisor about the best course for you to take.

CAREER ADVANCEMENT POTENTIAL

- There is considerable mobility between engineering specializations at the less senior levels.
- Engineers often work in a multidisciplinary environment and acquire knowledge and skills through work experience that may allow them to practise in associated areas of science, engineering, sales, marketing or management.
- Metallurgical and materials engineers work closely with other scientists and engineers, and mobility is possible between some fields of specialization.

To learn more about a career as a metallurgical and materials engineer (including information about work duties and working conditions, salaries and employment prospects), you can access information in the National Occupation Classification (NOC) System at BC Work Futures (www.workfuturesbc.ca). The NOC code for this occupation is 2142

METALLURGICAL & MATERIALS ENGINEERS

Metallurgical and materials engineers conduct studies of the properties and characteristics of metals and other non-metallic materials. They also plan, design and develop machinery and processes to concentrate, extract, refine and process metals, alloys and other materials such as ceramics, semiconductors and composite materials. Metallurgical and materials engineers are employed in consulting engineering firms, mining, metal processing and manufacturing companies, and in government, research and educational institutions.



image source: MiHR Council

JOB DESCRIPTION

If you're a metallurgical or materials engineer, you perform some or all of the following duties:

- Conduct studies and design, develop and specify the processes and machinery to concentrate, extract, refine and process metals from ores.
- Conduct studies on the properties and characteristics of materials and design, develop and specify processes for moulding, shaping, forming and thermal treatment of metals, alloys and metallic systems, ceramics, semiconducting and other materials.
- Conduct chemical and physical analytical studies, failure analyses and other studies and recommend material selection, design of materials, corrosion control measures, operational testing and other procedures.
- Co-ordinate production testing and control of metal refining, smelting or foundry operations or non-metallic materials production operations.
- Supervise technologists, technicians and other engineers and scientists.

Seabridge Gold developed its job fact sheets using information from Human Resources and Skills Development Canada's 2006 National Occupational Classification, BC Work Futures (www.workfuturesbc.ca) and the Mining Industry Human Resource Council's 'Explore for More' program (www.acareerinmining.ca). To learn more about Seabridge Gold and its projects, visit www.seabridgegold.net.

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EDUCATION & EXPERIENCE

- Completion of Grade 12 is required.
- Geological and mineral technologists usually require completion of a two- to three-year college program in geological technology, petroleum technology, petroleum engineering technology, hydrogeology or groundwater technology, mining technology, mining engineering technology, mineralogy, metallurgical technology, or welding technology.
- Geological and mineral technicians usually require completion of a one- to two-year college program in a related field.

TRAINING

- Certification in geological and mineral technology or in a related field is available through provincial associations of engineering/applied science technologists and technicians and may be required by employers.
- A period of supervised work experience, usually two years, is required before certification.

CAREER ADVANCEMENT POTENTIAL

- There is limited mobility between occupations in this group.
- Mobility may be possible between some occupations in this group and related fields of civil engineering technology.

To learn more about careers as geological and mineral technologists and technicians (including information about work duties and working conditions, salaries and employment prospects), you can access information in the National Occupation Classification (NOC) System at BC Work Futures (www.workfuturesbc.ca). The NOC code for this occupation is 2212.

GEOLOGICAL & MINERAL TECHNOLOGISTS & TECHNICIANS

Geological and mineral technologists and technicians provide technical support and services or may work independently in the fields of oil and gas exploration and production, geophysics, petroleum engineering, geology, mining and mining engineering, mineralogy, extractive and physical metallurgy, metallurgical engineering and environmental protection. They are employed by petroleum and mining companies, consulting geology and engineering firms, and by governments and educational institutions as well as by a variety of manufacturing, construction and utilities companies.



image source: MIHR Council and iStock

JOB DESCRIPTION

If you're a geological or mineral technologist or technician, you perform some or all of the following duties:

- Conduct, direct or participate in geological, geophysical, geochemical, or hydrographic surveys, prospecting field trips, exploratory drilling, well logging or underground mine survey programs and in environmental audits and related environmental protection activities.
- Operate and maintain geophysical survey and well logging instruments and equipment.
- Prepare notes, sketches, geological maps and cross sections; and prepare, transcribe or analyze seismic, gravimetric, well log or other geophysical and survey data.
- Prepare, supervise or assist in the preparation of rock, mineral or metal samples and perform physical and chemical laboratory tests.
- May conduct, supervise or assist on studies and programs related to mine development, mining methods, mine ventilation, lighting, drainage and ground control.
- May assist hydrogeologists in evaluating groundwater and well circulation.
- Carry out a limited range of other technical functions in support of geology, geophysics and petroleum and mining engineering.

Seabridge Gold developed its job fact sheets using information from Human Resources and Skills Development Canada's 2006 National Occupational Classification, BC Work Futures (www.workfuturesbc.ca) and the Mining Industry Human Resource Council's 'Explore for More' program (www.acareerinmining.ca). To learn more about Seabridge Gold and its projects, visit www.seabridgegold.net.

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EDUCATION & EXPERIENCE

- Grade 12 completion is required.
- Working towards certification, or already certified, under the Occupational Health & Safety Act/Regulations is preferred by most employers.
- In some companies, several years of related work experience and the completion of in-house training courses may substitute for formal education.

TRAINING

The British Columbia Institute of Technology (www.bcit.ca) offers a diploma program in Occupational Health & Safety.

If you are interested in completing Grade 12 or upgrading your skills, you have a number of options. Check out adult basic education programs at:

- The College of New Caledonia (CNC). CNC also offers a Mining Industry Certificate.
- Northwest Community College (NWCC).

If you have completed Grade 12 and are interested in exploring your career options in exploration and mining, contact:

- General educational advisors or First Nations Access coordinators at NWCC.
- School of Exploration & Mining advisors at NWCC.
- Academic advisors at the CNC.

CAREER ADVANCEMENT POTENTIAL

- Some health and safety coordinators move into supervisory roles with experience.

To learn more about a career as a health and safety coordinator (including information about work duties and working conditions, salaries and employment prospects), you can access information in the National Occupation Classification (NOC) System at BC Work Futures (www.workfuturesbc.ca). The NOC code for this occupation is 2263.

HEALTH & SAFETY COORDINATORS

Health and safety coordinators evaluate and monitor health and safety hazards and develop strategies to control risks in the workplace. They inspect restaurants, public facilities, industrial establishments, municipal water systems and other workplaces to ensure compliance with government regulations regarding sanitation, pollution control, the handling and storage of hazardous substances and workplace safety. They are employed throughout the private and public sectors.



image source: MiHR Council

JOB DESCRIPTION

Depending on the type of mine or plant they work in, people employed as Health & Safety Coordinators perform some or all of the following duties:

- Conduct safety orientation, safety training, job site inspections and reporting.
- Maintain awareness of amendments to the Occupational Health & Safety Act and Regulations, and make recommendations for their implementation.
- Perform job site safety compliance inspections including hazard analysis, safe work procedures, written reports and recommendations.
- Monitor adherence to company safety programs by all company employees and subcontractors.
- Ensure timely completion of accident/injury reporting to corporate offices.

Seabridge Gold developed its job fact sheets using information from Human Resources and Skills Development Canada's 2006 National Occupational Classification, BC Work Futures (www.workfuturesbc.ca) and the Mining Industry Human Resource Council's 'Explore for More' program (www.acareerinmining.ca). To learn more about Seabridge Gold and its projects, visit www.seabridgegold.net.

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EDUCATION & EXPERIENCE

- Grade 12 completion may be required.
- Some employers require completion of a cooking, culinary arts or related program; often, on-the-job training may also be provided.
- Trade certification for cooks is available but is not mandatory for employment. Apprenticeship programs may be started in secondary school, through entry-level training courses, or through direct entry to the workplace.

TRAINING

The Industry Training Authority (www.ita.ca) is a good place to find information about becoming a professional cook and training for careers in the Trades. You can register at a number of different schools for foundation courses and apprenticeship training to become a cook.

If you are interested in completing Grade 12 or upgrading your skills, you have a number of options. Check out adult basic education programs at:

- The College of New Caledonia (CNC). CNC also offers a Mining Industry Certificate.
- Northwest Community College (NWCC).

If you have completed Grade 12 and are interested in exploring your career options in exploration and mining, contact:

- General educational advisors or First Nations Access coordinators at NWCC.
- School of Exploration & Mining advisors at NWCC.
- Academic advisors at the CNC.

CAREER ADVANCEMENT POTENTIAL

- There is mobility among the various types of cooks in this group.
- Progression to supervisory or more senior positions, such as chef, is possible with experience and training.
- Red Seal trade certification allows for interprovincial mobility.

To learn more about a career as a cook (including information about work duties and working conditions, salaries and employment prospects), you can access information in the National Occupation Classification (NOC) System at BC Work Futures (www.workfuturesbc.ca). The NOC code for this occupation is 6242. The NOC code for kitchen helpers is 6641.

COOKS & KITCHEN HELPERS

Cooks prepare and cook a wide variety of foods. They may be responsible for overseeing staff, planning menus or managing kitchen activity. Kitchen helpers perform a number of different activities to assist workers who prepare or serve food and beverages. Cooks and kitchen helpers are employed in many different places, including restaurants, hotels, hospitals, educational institutions, on ships, and at construction, logging and mining camps.



image source: MiHR Council and iStock

JOB DESCRIPTION

If you're employed as a cook, you perform some or all of the following duties:

- Prepare and cook complete meals or individual dishes and foods.
- Prepare and cook special meals for patients as instructed by a dietician or chef.
- Schedule and supervise kitchen helpers.
- Oversee kitchen operations.
- Maintain inventory and records of food, supplies and equipment.
- May plan menus, determine size of food portions, estimate food requirements and costs, and monitor and order supplies.
- May hire and train kitchen staff.

Kitchen helpers perform some or all of the following duties:

- Wash and peel vegetables and fruit.
- Wash work tables, cupboards and appliances.
- Remove trash and clear kitchen garbage containers.
- Sweep and mop floors, and perform other duties to assist cook and kitchen staff.

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EDUCATION & EXPERIENCE

- Security guards are not required to have completed secondary school; however, completion of Grade 12 is preferred by employers.
- All security companies and their employees must be licensed prior to taking part in security duties. Licensing requires the completion of the Basic Security Training (BST) course.
- Training requirements beyond BST vary depending on where security guards work and who they work for. Individual security companies often provide additional in-house training.
- Many security companies require criminal background checks.
- Many companies require level one industry first aid training.

TRAINING

The Justice Institute of British Columbia is (www.jibc.ca) the best place to find information about Basic Security Training courses. The website lists a number of approved schools where people can take this training around the province, including in Northern BC.

If you are interested in completing Grade 12 or upgrading your skills, you have a number of options. Check out adult basic education programs at:

- The College of New Caledonia (CNC). CNC also offers a Mining Industry Certificate.
- Northwest Community College (NWCC).

If you have completed Grade 12 and are interested in exploring your career options in exploration and mining, contact:

- General educational advisors or First Nations Access coordinators at NWCC.
- School of Exploration & Mining advisors at NWCC.
- Academic advisors at the CNC.

CAREER ADVANCEMENT POTENTIAL

- Security guards with considerable experience may move into supervisory positions in the field or office or into corporate security management.
- With additional training and education, some security guards may move into law enforcement occupations (i.e. as police officers, corrections officers or sheriffs).

To learn more about a career as a security guard (including information about work duties and working conditions, salaries and employment prospects), you can access information in the National Occupation Classification (NOC) System at BC Work Futures (www.workfuturesbc.ca). The NOC code for this occupation is 6651.

SECURITY GUARDS

Security guards and other related workers guard property against theft and vandalism, control access to establishments, maintain order and enforce regulations at public events and within establishments. They are employed by many different industries and types of business, including private security agencies, retail stores, transportation facilities, educational, financial and health institutions, and industrial establishments, including mines.



image source: MiHR Council and iStock

JOB DESCRIPTION

If you are a security guard, you may perform some or all of the following duties:

- Control access to establishments, issue passes and direct visitors to appropriate areas.
- Attend to persons with special needs.
- Patrol assigned areas, on foot or in vehicles, to guard against theft, vandalism and fire.
- Enforce regulations of an establishment to maintain order and resolve conflicts.
- Operate security control-room equipment to monitor establishment activities.
- Ensure that establishment safety and emergency procedures are followed, and respond to fire alarms, bomb threats and other emergencies.
- Follow radio and emergency telephone procedures.

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EDUCATION & EXPERIENCE

- Grade 12 completion is not necessary but may be required by some employers.
- Some employers require a criminal record check.

TRAINING

If you are interested in completing Grade 12 or upgrading your skills, you have a number of options. Check out adult basic education programs at:

- The College of New Caledonia (CNC). CNC also offers a Mining Industry Certificate.
- Northwest Community College (NWCC).

If you have completed Grade 12 and are interested in exploring your career options in exploration and mining, contact:

- General educational advisors or First Nations Access coordinators at NWCC.
- School of Exploration & Mining advisors at NWCC.
- Academic advisors at the CNC.

CAREER ADVANCEMENT POTENTIAL

- Progression to supervisory positions is possible with additional training or experience.

To learn more about a career as a Janitor or Caretaker (including information about work duties and working conditions, salaries and employment prospects), you can access information in the National Occupation Classification (NOC) System at BC Work Futures (www.workfuturesbc.ca). The NOC code for this occupation is 6663.

JANITORS & CARETAKERS

Janitors and caretakers clean and maintain the interior and exterior of commercial, institutional and residential buildings and their surrounding grounds. They are employed by office and apartment building management companies, condominium corporations, educational institutions, health care facilities, recreational and shopping facilities, religious establishments, and industrial and other establishments, including mines.



image source: MIHR Council and iStock

JOB DESCRIPTION

Janitors and caretakers perform some or all of the following duties:

- Operate industrial vacuum cleaners to remove scraps, dirt, heavy debris and other refuse.
- Wash windows, interior walls and ceilings.
- Empty trash cans and other waste containers.
- Sweep, mop, scrub and wax hallways, floors and stairs.
- Clean snow and ice from walkways and parking areas.
- Cut grass and tend grounds.
- Clean and disinfect washrooms and fixtures.
- Make adjustments and minor repairs to heating, cooling, ventilating, plumbing and electrical systems, and contact tradespersons for major repairs.
- Perform other routine maintenance jobs such as painting and drywall repair.

Seabridge Gold developed its job fact sheets using information from Human Resources and Skills Development Canada's 2006 National Occupational Classification, BC Work Futures (www.workfuturesbc.ca) and the Mining Industry Human Resource Council's 'Explore for More' program (www.acareerinmining.ca). To learn more about Seabridge Gold and its projects, visit www.seabridgegold.net.

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EDUCATION & EXPERIENCE

- Grade 12 completion is required, along with extensive on-the-job experience. Some employers prefer a university degree, a diploma of business, or a certificate from a related field of study.
- Experience working in accounts payable, receivable and data entry may be necessary.
- Computer skills, including a working knowledge of MS Word, Excel and accounting software, are an asset.

TRAINING

There are many different training programs for people interested in careers in accounting. You can search www.educationplanner.ca for a complete list of different programs offered across the province.

If you are interested in completing Grade 12 or upgrading your skills, you have a number of options. Check out adult basic education programs at:

- The College of New Caledonia (CNC). CNC also offers a Mining Industry Certificate.
- Northwest Community College (NWCC).

If you have completed Grade 12 and are interested in exploring your career options in exploration and mining, contact:

- General educational advisors or First Nations Access coordinators at NWCC.
- School of Exploration & Mining advisors at NWCC.
- Academic advisors at the CNC.

CAREER ADVANCEMENT POTENTIAL

- Progression to supervisory or skilled financial occupations, such as accounts payable supervisor, bookkeeper or office manager is possible with additional training and experience.

To learn more about a career as an Accounting Clerk (including information about work duties and working conditions, salaries and employment prospects), you can access information in the National Occupation Classification (NOC) System at BC Work Futures (www.workfuturesbc.ca). The NOC code for this occupation is 1431.

ACCOUNTING CLERKS

Accounting and related clerks calculate, prepare and process bills, invoices, accounts payable and receivable, budgets and other financial records according to established procedures. They are employed throughout the private and public sectors.



image source: MIHR Council

JOB DESCRIPTION

Accounting and related clerks perform some or all of the following duties:

- Calculate, prepare and issue documents related to accounts such as bills, invoices, inventory reports, account statements and other financial statements using computerized and manual systems.
- Code, total, batch, enter, verify and reconcile transactions such as accounts payable and receivable, payroll, purchase orders, cheques, invoices, cheque requisitions and bank statements in a ledger or computer system.
- Compile budget data and documents based on estimated revenues and expenses and previous budgets.
- Prepare period or cost statements or reports.
- Calculate costs of materials, overhead and other expenses based on estimates, quotations and price lists.
- Respond to customer inquiries, maintain good customer relations and solve problems.
- Perform related clerical duties, such as word processing, maintaining filing and record systems, faxing and photocopying.

Seabridge Gold developed its job fact sheets using information from Human Resources and Skills Development Canada's 2006 National Occupational Classification, BC Work Futures (www.workfuturesbc.ca) and the Mining Industry Human Resource Council's 'Explore for More' program (www.acareerinmining.ca). To learn more about Seabridge Gold and its projects, visit www.seabridgegold.net.

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EDUCATION & EXPERIENCE

- Grade 12 completion is required. Some employers prefer a university degree, a diploma of business, or a certificate from a related field of study.
- Experience working in human resources departments may be necessary.
- Computer skills, including a working knowledge of MS Office programs are an asset.

TRAINING

There are a number of different HR courses and business administration programs available to people interested in careers in HR. You can search www.educationplanner.ca for a complete list of different options offered across the province.

If you are interested in completing Grade 12 or upgrading your skills, you have a number of options. Check out adult basic education programs at:

- The College of New Caledonia (CNC). CNC also offers a Mining Industry Certificate.
- Northwest Community College (NWCC).

If you have completed Grade 12 and are interested in exploring your career options in exploration and mining, contact:

- General educational advisors or First Nations Access coordinators at NWCC.
- School of Exploration & Mining advisors at NWCC.
- Academic advisors at the CNC.

CAREER ADVANCEMENT POTENTIAL

- Progression to supervisory positions is possible with experience. Progression to HR Management level positions is possible with additional training and experience.

To learn more about a career as an HR Assistant (including information about work duties and working conditions, salaries and employment prospects), you can access information in the National Occupation Classification (NOC) System at BC Work Futures (www.workfuturesbc.ca). The NOC code for this occupation is 1442.

HR ASSISTANTS

Human Resource (HR) Assistants (or Personnel Clerks) assist personnel officers and human resources specialists and compile, maintain and process information relating to staffing, recruitment, training, labour relations, performance evaluations and classifications. HR Assistants are employed in personnel departments throughout the private and public sectors.



image source: MIHR Council and iStock

JOB DESCRIPTION

HR Assistants perform some or all of the following duties:

- Process, verify and register documentation relating to personnel activities such as staffing, recruitment, training, grievances, performance evaluations and classifications.
- Maintain and update manual and computerized filing and registration systems, and compile and prepare reports and documents relating to personnel activities.
- Respond to telephone and written enquiries from staff and the general public regarding personnel matters.
- Arrange for advertising or posting of job vacancies, assist in screening and rating of job applicants, and conduct reference checks.
- Arrange for in-house and external training activities.

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EDUCATION & EXPERIENCE

- First aid attendants working in industrial or other settings must hold a valid certificate of Occupational First Aid (Level 1, 2 or 3) issued by WorkSafeBC or the equivalent.
- Occupational First Aid (OFA) Level 3-certified First Aid Attendants can work on any provincial workplace as a designated attendant. An attendant possessing a Level 2 certificate is limited to working within 20 minutes (driving time) to a hospital. A Level 1 attendant is limited to workplaces with small numbers of workers.

TRAINING

All three levels of first aid certification are offered by First Aid Training Agencies. The agencies are responsible for training, examinations and certification. An up-to-date list of all first aid training agencies is available on the WorkSafeBC website (www.worksafebc.com).

If you are interested in completing Grade 12 or upgrading your skills, you have a number of options. Check out adult basic education programs at:

- The College of New Caledonia (CNC). CNC also offers a Mining Industry Certificate.
- Northwest Community College (NWCC).

If you have completed Grade 12 and are interested in exploring your career options in exploration and mining, contact:

- General educational advisors or First Nations Access coordinators at NWCC.
- School of Exploration & Mining advisors at NWCC.
- Academic advisors at the CNC.

CAREER ADVANCEMENT POTENTIAL

- First aid attendants with Occupational First Aid Level 3 qualification may take a bridging course to qualify for Emergency Medical Responder licensing in BC. First aid attendants may also pursue careers in Occupational Health and Safety.

To learn more about a career as a First Aid Attendant (including information about work duties and working conditions, salaries and employment prospects), you can access information in the National Occupation Classification (NOC) System at BC Work Futures (www.workfuturesbc.ca). The NOC code for this occupation is 3234.

FIRST AID ATTENDANTS

First aid attendants care for those who are injured or who become ill at the workplace. They assess the seriousness of the situation and determine if and what treatment is needed. In cases which require medical care, the first aid attendant will provide treatment to maintain the patient and minimize the consequences of the injury until medical treatment is delivered. First aid attendants also treat minor injuries that would otherwise not receive, or that do not require, medical treatment.



image source: MiHR Council

JOB DESCRIPTION

First Aid Attendants typically perform some or all of the following duties:

- Assess extent of injuries or medical illnesses of ill or injured individuals to determine emergency medical treatment.
- May clean and bandage wounds, give oxygen and keep air passages clear in cases of choking. They also make sure the patient does not move in cases of spine or head injuries and they keep the patient warm and comfortable.
- Transport patients by air, land or water to hospital or other medical facility for further medical care.
- Document and record nature of injuries and illnesses and treatment provided.
- May train and supervise other workers in this unit group.
- May assist with triage of emergency patients.

Seabridge Gold developed its job fact sheets using information from Human Resources and Skills Development Canada's 2006 National Occupational Classification, BC Work Futures (www.workfuturesbc.ca) and the Mining Industry Human Resource Council's 'Explore for More' program (www.acareerinmining.ca). To learn more about Seabridge Gold and its projects, visit www.seabridgegold.net.

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EDUCATION & EXPERIENCE

- May require Grade 12 completion, some previous experience, or completion of driver training.
- Truck drivers in BC require a Class 3 commercial license to operate vehicles with more than two axles. For trucks with semi-trailers, drivers require a Class 1 driver's license. An air brake endorsement is necessary in order to operate a truck with air brakes.
- Many employers prefer to hire drivers with a good driving record and no criminal history.
- Transportation of Dangerous Goods certification is required for drivers who transport hazardous products or dangerous goods.

TRAINING

Many British Columbia colleges and private institutions offer truck driver training programs. For more information about the Canadian trucking industry and accreditation, please visit the Canadian Trucking Human Resources Council website (www.cthrc.com).

If you are interested in completing Grade 12 or upgrading your skills, you have a number of options. Check out adult basic education programs at:

- The College of New Caledonia (CNC). CNC also offers a Mining Industry Certificate.
- Northwest Community College (NWCC).

If you have completed Grade 12 and are interested in exploring your career options in exploration and mining, contact:

- General educational advisors or First Nations Access coordinators at NWCC.
- School of Exploration & Mining advisors at NWCC.
- Academic advisors at the CNC.

CAREER ADVANCEMENT POTENTIAL

- Truck drivers can progress to the control of heavier equipment by upgrading their licenses.
- Advancement into supervisory or management positions, or into non-driving occupations such as dispatcher, safety officer or driving trainer, is possible with additional training or experience.

To learn more about a career as a Truck Driver (including information about work duties and working conditions, salaries and employment prospects), you can access information in the National Occupation Classification (NOC) System at BC Work Futures (www.workfuturesbc.ca). The NOC code for this occupation is 7411.

TRUCK DRIVERS

Truck drivers operate light and heavy trucks, including multi-trailer combinations, to transport goods and materials over urban, interurban, provincial and international routes. They are employed by trucking, transportation and manufacturing companies, or they may be self-employed. Truck drivers must have excellent driving skills, good judgement, and an ability to remain focused for extended periods of time and to react quickly in emergency situations.



image source: MiHR Council and iStock

JOB DESCRIPTION

Truck drivers perform some or all of the following duties:

- Operate and drive trucks or trucks with trailers to transport goods and materials to specified destinations.
- Load, secure and unload trailers and ensure safety and security of cargo.
- Perform pre-trip inspections of vehicle systems and equipment such as tires, lights and brakes.
- Perform emergency roadside repairs.
- Obtain special permits and other documents required to transport cargo on international routes.
- Record cargo information, distance travelled, fuel consumption and other information in log books or in on-board computers.
- Communicate with dispatchers and other drivers using two-way radios, cellular telephones and on-board computers or in-person at customers' sites and border crossings.
- Stop at weigh scales when required based on vehicle and load size.

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EDUCATION & EXPERIENCE

- Completion of Grade 12 is required.
- Trade certification is not required to work as a welder in BC. However, there are three levels of welder certification: Levels C, B and A, available in BC. Level C certification is a prerequisite for Level B certification, which is a prerequisite for Level A certification.

TRAINING

The Industry Training Authority (www.ita.ca) is a good place to find information about becoming a welder (Level C, B and A) and training for careers in the Trades. You can register at a number of different schools to become a welder, including the College of New Caledonia, Northwest Community College and Northern Lights College.

If you are interested in completing Grade 12 or upgrading your skills, you have a number of options. Check out adult basic education programs at:

- The College of New Caledonia (CNC). CNC also offers a Mining Industry Certificate.
- Northwest Community College (NWCC).

If you have completed Grade 12 and are interested in exploring your career options in exploration and mining, contact:

- General educational advisors or First Nations Access coordinators at NWCC.
- School of Exploration & Mining advisors at NWCC.
- Academic advisors at the CNC.

CAREER ADVANCEMENT POTENTIAL

- With experience and additional training, welders can move into more senior positions. These include supervisory roles such as welding inspector, foreman or supervisor. They may also transfer their skills to related trades like boilermaking.
- Interprovincial Red Seal Certification is available for Welder Levels B and A.

To learn more about a career as a welder (including information about work duties and working conditions, salaries and employment prospects), you can access information in the National Occupation Classification (NOC) System at BC Work Futures (www.workfuturesbc.ca). The NOC code for this occupation is 7265.

WELDERS

Welders operate equipment to weld metals. A welder can be either an artisan or a precision production worker. This group also includes machine operators who operate previously set up production welding, brazing and soldering equipment. The great variety of work, techniques and work settings offered by this occupation is a very appealing aspect of this work. Welders are employed by companies that manufacture structural steel and platework, boilers, heavy machinery, aircraft, ships and other metal products, by welding contractors and welding shops or are self-employed.



image source: MIHR Council and iStock

JOB DESCRIPTION

Welders can specialize in particular types of welding, such as custom fabrication, ship building and repair, aerospace precision welding, pressure vessel welding, pipeline construction welding, structural construction welding, or machinery and equipment repair welding. There are different levels of welders, depending on the amount of education and work experience. However, welders typically perform some or all of the following duties:

- Read and interpret blueprints or welding process specifications.
- Operate manual or semi-automatic welding equipment to fuse metal segments using many different welding processes.
- Operate manual or semi-automatic flame-cutting equipment as well as brazing and soldering equipment.
- Operate metal shaping machines such as brakes, shears and other metal straightening and bending machines.
- Repair worn parts of metal products by welding on extra layers.

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