



EXPLORING CAREERS

in the Mining and Minerals Industry



THE MINERALS INDUSTRY SUPPORTS OUR LIVES DAILY

You may not know it, but minerals affect your life in almost every way. From the materials that pave roads and heat homes, to the medicine your doctor prescribes, minerals and rocks are essential to our way of life. **In fact, if it can't be grown, it must be mined, and everything that grows needs minerals to live.**

Number of Key Minerals Needed for Clean Technologies



19 minerals needed for EVs (frame, wiring/circuitry, batteries)



15 minerals needed for wind turbines (frame, wiring/circuitry, concrete)



17 minerals needed for solar panels (solar cells, semiconductor chips, steel frame, photovoltaic cells & batteries)

Sample of Essential Minerals for Clean Energy

3 Li Lithium	5 B Boron	6 C Carbon	13 Al Aluminum	23 V Vanadium
25 Mn Manganese	26 Fe Iron	27 Co Cobalt	28 Ni Nickel	29 Cu Copper
30 Zn Zinc	42 Mo Molybdenum	47 Ag Silver	51 Sb Antimony	57-71 La Lanthanides
78 Pt Platinum	79 Au Gold	82 Pb Lead		





It Starts Here

The mining and minerals industry supports our quality of life. The industry is the starting point for most of the world's supply chains and is the key to developing green technologies. Using advanced technology, this industry produces the raw materials for many of the items used each day, including:

- Cell phone components and batteries
- Solar panels
- EV batteries
- Toothpaste
- Cosmetics
- Fertilizer
- Building materials
- Aviation parts
- Medicine
- Glass
- Asphalt and concrete

The mining and minerals industry offers a wide range of exciting, high-tech and green careers that make a difference to society. Plus, they come with:

- Top salaries and benefits
- Variety
- Travel
- The chance to work with advanced technology
- Continuous career training
- Opportunities for advancement
- Responsibility
- Challenge
- Leadership



Explore | how you can make a difference through a career in the modern world of minerals and mining.



Discover | a variety of in-demand career opportunities.



Talk | with your school counselor to learn how your academic goals can lead you to this exciting industry.

For more information, visit

MineralsEducationCoalition.org/careers.



An Innovating Industry

The mining and minerals industry is one of the oldest in the world, but it's an industry embracing innovation. You'll find data science, AI, robotics and other cutting edge technology in all aspects of the industry. As the world moves to incorporate more green energy, new sources of the rocks and minerals must be found, permitted, processed, and produced worldwide. As a result, the career outlook for the industry not only remains strong, but is predicted to dramatically increase in the years to come.



EXPLORING OPPORTUNITIES: GEOLOGY AND GEOLOGICAL ENGINEERING

Geology is the scientific study of the nature, formation, origin and development of Earth, including its raw materials, natural processes and resulting products, and its history. This knowledge is used throughout the mining cycle to aid in the search for metals, minerals and fuels; to identify geological conditions, hazards and stability of mine sites; and to remediate and reclaim mine and mill sites.

Geological engineering combines the fields of geology and engineering.

What geological specialties are used by the mining industry?

- Mineralogy
- Petrology
- Paleontology
- Geophysics
- Geochemistry
- Hydrology
- Engineering geology
- Economic geology
- Environmental geology

What geological expertise is used in the minerals industry?

Expertise provided to the mining industry includes exploration for and development of mineral and energy resources and construction materials resources; site and geotechnical evaluations (slope stability, rock mechanics; previous site/land use impacts); land reclamation; and hydrogeology (ground water and surface water).

What are the jobs for geoscientists and geological engineers?

Geoscientists and geological engineers work for mining and exploration companies, consulting, and geotechnical firms that provide technical expertise to the mining industry, government agencies such as the United States Geological Survey (USGS), state geological surveys and universities. Companies that employ geosciences professionals range in size from Fortune 500 corporations that employ hundreds to small consulting firms that may employ only a few individuals. Geoscientists also create their own companies and rise to levels of management in government and large corporations.



FOCUS ON:

SPECIALISTS IN GEOLOGY AND GEOLOGICAL ENGINEERING

Geologist | Geologists study the materials and processes of the Earth to explain how, when and why events occurred in the formation of the Earth's rock record. Economic geologists apply geology to explore for and develop the metal, mineral, and fuel resources that are used as the foundation of our standard of living and modern society.

Mineralogist | Mineralogists study mineral formation, crystal structure, chemistry and properties to understand the origin of the mineral deposit, to develop process strategies for extracting the ore and separating out the valuable minerals, and to develop and modify mineral-based products for industrial and consumer use.

Geochemist | Geochemists use physical, organic and inorganic chemistry to investigate the type and distribution of major and trace elements and organic compounds in rocks, soils and waters.



PROFILE IN GEOLOGY AND GEOLOGICAL ENGINEERING



David Bieber

Education:

M.S. Geology, University of Colorado, Boulder

Position:

Manager of Geology/Survey at Martin Marietta Materials

Geophysicist | Geophysicists apply the principles of physics to studies of the Earth's interior and investigate Earth's magnetic, electrical and gravitational properties.

Geophysical Engineer | Geophysical engineers apply geophysical techniques to understand and plan for geologic conditions that affect mines.

Geological Engineer | Geological engineers are involved in:

Exploration—exploring and characterizing the mineral resource; site characterization—characterizing geologic conditions and hazards at the mine sites;

Hydrogeology—evaluating ground and surface water conditions and protecting or remediating of these resources;

Geotechnical—assessing the physical properties of soils and rocks for safe design of facilities;

Environmental studies—be part of a team to design and construct mine waste disposal and environmental protection facilities, and conduct reclamation plans at mine sites;

Management—after gaining experience in exploration, design, operation and leadership.

My main responsibilities are to adapt the mining plan for current operations to the reality of that operation, plan and direct reclamation for existing operations, and develop mining and reclamation plans for future mining. I also provide environmental and land use services for Martin Marietta operations.

The thing I like best about the industry is the people. The men and women who work in the mines and those who support them are some of the nicest, hardest working, and most generally good people I have had the pleasure of working with. What I find most challenging about my job is the diversity of issues that I get to deal with, which is also one of the most rewarding challenges.

Even though we come from a wide variety of backgrounds, cultures, etc., there is a common thread of civility and mutual respect that is refreshing in today's society.

EXPLORING OPPORTUNITIES: MINING ENGINEERING

"Mining is not everything but without mining everything is nothing."
– Max Planck

Mining is a broad term consisting of extracting the desired mineral resources that are found naturally deposited within the Earth. It requires an understanding of the market for mineral commodities, the economics associated with the actual capital and operating expenditures of the mining facility, and coordination with other mineral scientists to convert the mineral resource into a salable product.

Mining engineers implement sound engineering, good equipment operation, routine maintenance procedures, and compliance with safety and environmental regulations.

Why is mining engineering important to the minerals industry?

Mining is the first step in extracting a mineral resource. It's the initial selection process where the material that is desired is separated from the non-desired material. Engineering along with geology are required to identify the resource and to optimize the safe extraction of the mineral resource.

Where are the jobs for mining engineers?

Mining engineers work all over the world. They are located at corporate offices or consulting services offices that are typically located in major cities throughout the world. Mines may be near urban areas such as sand and gravel operations. Some mining engineers may be located near the mining operations or they may work remotely and travel to mine sites periodically.

FOCUS ON:

SPECIALISTS IN MINING ENGINEERING

Mine Valuation | Mine valuation is the process of determining the worth of a specific mineral deposit. This is necessary to determine the viability of extracting the mineral resource and making a return on the investment.

Mine Design | After a mineral resource is located, the method of mining the deposit must be decided, typically surface or underground mining. Method selection includes many factors specific to the site and location of the deposit. Then the schedule of extraction must be developed for the specific deposit.

Materials Handling | Mining is the process of selecting the resource material from other materials. Typically, the volume of the materials that must be handled is quite large, whether the resource itself, the surrounding materials or the combination of both. Handling of these materials must follow specific procedures depending on the type and volume of materials.



Rock Excavation | The most common method of extracting the resource rock is excavation. The method of excavating the rock varies depending on the physical properties of the rock. Rock excavation may be accomplished by simple scraping or gouging practices or intense drilling followed by loading explosives in the drill holes and blasting. Extraction may take place with automated machines controlled virtually.

Ventilation | In underground operations, special consideration is always given to the condition of the air. Emissions from underground equipment, combustion gases from blasting operations and moisture and heat from rock surfaces affect the quality of the air. Even if emissions are not a safety issue, in the case of certain mine locations, work productivity and the premature onset of fatigue can be an issue due to higher humidity and temperatures.

Rock Mechanics | The physical properties of resource and non-resource materials are key considerations when designing and operating a mine. How well the rock holds together, how it responds to different stresses, and how that response is affected by the moisture content of the material influences the overall mine design and the approach to mining.

PROFILE IN MINING ENGINEERING



Line-Audrey Nkule

Education:

B.S., Mining Engineering, Civil Engineering, Environmental Engineering, West Virginia University

Position:

Mining Engineer at Caterpillar

When I started my degree in mining, I never knew how rewarding this career could be and where it could take me.

The amount of exposure and knowledge in different aspects that I've had is crazy. It's insane the number of companies I interact with on a daily basis, the projects I work on - they're never the same. You have potential options for careers in the mining industry that you don't even need to be in a traditional mining way being on site.

Of course, technology is helping those options.

I was hired into this new job to be a mining autonomous specialist for one of our mine sites. Basically, the job entails in using some of the Caterpillar mine autonomous systems in order to run the autonomous fleets that we have on site.

I am working on everything from the project management to the implementation of that technology on sites. So, anything from risk assessment, to onsite change management, to making sure that people are aware of the new technology, the new practices and how it impacts all aspects of the mines, from the maintenance team down to the pit technicians.



EXPLORING OPPORTUNITIES: MINERAL PROCESSING AND EXTRACTIVE METALLURGY

Mineral processing involves the production of both metallic and nonmetallic industrial materials. Metallic products include copper, iron, zinc, gold, etc. Nonmetallic products include silica, kaolin, gypsum, aggregates, etc.

Mineral process engineers concentrate on separating the valuable mineral from the host rock through crushing, grinding, chemical and physical separation.

What is extractive metallurgy?

In extractive metallurgy, the processed ore materials are treated either in liquid solution or at high temperatures to produce metallic products. Extractive metallurgists understand the chemical reactions to make metals from the rocks and other mineral sources. For example, lithium is extracted from rocks with very low lithium content and enriched to make a product that can be used to produce lithium ion batteries with a series of steps based on the physical and chemical properties of the minerals.

Where are the jobs in mineral processing and extractive metallurgy?

Mineral processing and extractive metallurgy offer a diverse range of job opportunities around the world. These include positions from exploration and development to production. There are opportunities in engineering companies that provide technical solutions and services, in research and development to create new technologies, and in academia and government agencies in mineral processing.

What is the role of engineering in mineral processing?

Metallurgical engineers develop, or direct, the processing of ores to produce the raw materials used in a wide range of products. This includes the design of mines and utilities, equipment and equipment ergonomics, processing technologies, and minimizing environmental impacts.



FOCUS ON:

SPECIALISTS IN MINERAL PROCESSING AND EXTRACTIVE METALLURGY

Mineral Process Engineer | Mineral process engineers develop and direct the processes that separate minerals from undesired materials, including crushing, grinding, concentration and physical separation.

Process Engineer | Process engineers investigate or develop processes used in the production of metals or materials. Process engineers work with the process plants to reduce costs, increase production recovery, purify the metal or material, or develop new processes.



Metallurgical Engineer | Metallurgical engineers deal primarily with the separation of the metals or materials from the ore. They use simulation software that allows them to optimize processes leading to cleaner and greener metal extraction. This specialty includes:

- Research metallurgists evaluate existing or new processes or equipment through laboratory testing.
- Mineral processing plant metallurgists oversee the separation of the product from the ore.
- Pyrometallurgists employ high-temperature processes to produce metals and alloys.
- Hydrometallurgists use solvents and other solutions to extract valuable minerals. This may also include biology with microbes and electrolysis.

PROFILE IN MINERAL PROCESSING AND EXTRACTIVE METALLURGY



Fangyu Liu

Education:

B.S. Metallurgical Engineering, Central South University, China; M.S. Metallurgical Engineering, Central South University, China; PhD, Metallurgical and Materials Engineering, Colorado School of Mines

Position:

Process Metallurgist at Hatch, Ltd.

We cannot live without metals in our daily life. It is fascinating to lead a career to tell the stories behind it.

My specialty is in mineral processing and extractive metallurgy. I have spent most of my career working in academic institutions. Academic positions are typically located in cities that have mines and mineral industries nearby. The nature of my work is highly dynamic, as it varies depending on the focus of my research, my teaching schedule, and the unique features of each project. On teaching days, I dedicate time to preparing engaging lectures and grading assignments, while non-teaching days are spent acquiring new knowledge and generating research ideas for publications. I really enjoy the nature of my work as it allows me to explore new avenues and be creative and innovative in my field.

The most rewarding aspects of my job are the pleasant experiences working with my colleagues and the constant drive to learn new knowledge and develop skills. I have not been in the workforce for very long, and I have received a lot of help and support from my colleagues and I have learned much from their experience on different projects. Like my professors always said, "Once you get to the professional job is when the real education begins." I feel fortunate to get trained on the job to learn more and to understand the industry better. This prepares me to take on more responsibilities on various projects.

EXPLORING OPPORTUNITIES: ENVIRONMENTAL SPECIALIST

Sustainability and responsible mining is at the forefront of modern mining. The mining industry today is responsible and dedicated to compliance with all local, state and federal regulations required by environmental law. Environmental engineers and specialists work with companies to ensure that a mine meets or exceeds the requirements of all environmental regulations, addresses stakeholder concerns, minimizes impacts to the environment, and develops and executes mining plans, as well as post mining reclamation plans in a responsible fashion.

The mining industry has progressed to acknowledge and proactively meet the concerns of a variety of external stakeholders, including the communities directly affected by mining operations, governmental agencies, environmental advocacy organizations, indigenous populations, and potential water resource users. Similarly, a careful approach must also be taken with the biological, ecological, and cultural resources.

FOCUS ON:

SPECIALISTS IN ENVIRONMENT

Hydrologist and Hydrogeologist | Hydrologists study the properties, distribution and effects of water in the atmosphere and on the Earth's surface, while hydrogeologists focus on water occurrence and movement in subsurface soil and rocks.

Biologist | Biologists study the science of living organisms and life processes, including the structure, functioning, growth, origin, evolution and distribution of living organisms.

Why is the mining industry important to the environment?

There is a focus on clean energy to replace fossil fuels to reduce emissions and move towards carbon free energy systems. Development of clean energy depends upon the availability and use of critical minerals including minerals such as copper, lithium, manganese, nickel, cobalt, and rare earth elements. Electrical vehicles need batteries to store electricity, and lithium, nickel, cobalt, manganese, and graphite are needed for the batteries. Wind turbines and electrical vehicle motors require rare earth elements as permanent magnets. The demand for these mineral resources is expected to grow tremendously. Mineral resource use in new power generation facilities has increased by 50% since 2010, replacing non-renewable energy sources.



Environmental Engineer | Environmental engineers are certified professionals who apply math, science and engineering principles to the design, construction and operation of economical and efficient structures, equipment and systems in the natural environment.

Wetland Scientist | Wetland scientists study ecological sustainability of flora and fauna in wetland areas, maintain adequacy and quality of water resources in the wetlands, minimize introduction of pollutants to the wetlands and implement impact mitigation and remediation projects.

What is the role of environmental specialists in the mining industry?

Environmental specialists make certain that mine management is aware of new laws and regulations affecting the mine operation. The mine management team includes environmental professionals from various specialty fields. They work closely together at all stages of mining to ensure the mine operates efficiently and without a mishap that could endanger the mine operations. Environmental specialists constantly monitor the air and groundwater at the mine to protect public and private lands surrounding the mine property. They work for government, non-profits and private companies and can be found working outdoors with special tools and instruments to take measurements, as well as indoors in labs analyzing data, designing, and planning environmental processes.

Where are the environmental jobs in the mining industry?

Environmental professionals are found in the mining industry at all levels of employment throughout the world. You might work in an office or at the corporate headquarters of a mining company. You could also find yourself working for an environmental consulting firm that provides specialized services to mining organizations, working in both the office and field. You could be outdoors supervising drilling operations and performing water resources and other environmental investigations, or indoors performing environmental analyses on data collected or performing complex models to forecast future projections of mine related environmental conditions.

PROFILE IN ENVIRONMENT



Julie Lucas

Education:

M.S., Water Resources Science, University of Minnesota Duluth; B.S., Biochemistry and Molecular Biology, University of Minnesota Duluth

Position:

MiningMinnesota Executive Director

As the Executive Director of MiningMinnesota, I advocate for responsible mining of the mineral resources that will “keep the lights on” as our nation transitions to a future powered in greater part by renewables. I lead MiningMinnesota with a passion for building a greener and more sustainable future for us all. I emphasize how Minnesota metals can be used in electric vehicles and renewable energy. My hope is to explain the environmental review and permitting process and the scrutiny that projects go through. It begins with responsible mineral sourcing.

My greatest career satisfaction comes from teaching others. In my role, I am able to teach mining folks WHY we do what we do to protect the environment, and I am able to educate non-miners about the mining process and how miners play a critical role in environmentally-responsible steel production and the development of green technologies. I have been lucky to play an active role in the culture change within our industry over the past 15 years as we figure out how to make sustainable mining a reality.

EXPLORING OPPORTUNITIES: HEALTH & SAFETY

Today, mine safety and health is regarded as the top priority for the mining industry. Every mine has a staff of safety professionals whose exclusive duty is to ensure that the miners are knowledgeable about their equipment and working conditions at all times.

What is the role of health and safety specialists in the minerals industry?

Health and safety specialists keep mine management informed about all new and applicable safety laws and regulations for the safe operation of the mine. The safety department is an important part of the management team. Mines are very proud of safety records that result in no loss of time or injuries. Safety professionals monitor working conditions throughout the mine, mill, shops and laboratories to ensure that all employees use personal protective equipment and are proactive about health and safety in their respective work areas. They work indoors and outdoors with a wide variety of instruments and tools for taking measurements and analyzing data.

Where are the jobs for health and safety specialists?

Health and safety professionals work throughout the world and at all levels of employment based on their knowledge and experience. They can be found both on the mine site and in the corporate offices of a mining company.

FOCUS ON:

SPECIALISTS IN HEALTH & SAFETY

Industrial Hygienist | Industrial hygienists study the science of health, prevention of disease and illness, and the conditions and practices that promote or preserve health. Industrial hygienists help identify and prevent exposures that may cause injury or illness, often consulting the hierarchy of controls.

Occupational Safety and Health Specialist | Occupational safety and health specialists, through education and experience, demonstrate a thorough knowledge of safety principles, laws and regulations and apply them in the workplace.

Safety Engineer | Safety engineers are certified professionals who apply math, science and engineering principles to the design of systems with inherent safety and fail-safe features.



Industrial [Health] Engineer | Industrial engineers engage in planning, implementation, and coordination of health and safety programs using engineering technology and principles. They are responsible for preventing and correcting working conditions deemed unsafe.

Human Factors Professional | Human factors professionals are certified professionals who are concerned with the application of what we know about people, their abilities, characteristics, and limitations to the equipment they use, environments in which they function, and their jobs. These professionals ensure that the design and intersection of people, the job, and their environment doesn't introduce unintended workplace risks.

Behavioral Scientist | Behavioral scientists improve health and safety by conducting research, identifying barriers to protective behaviors, and developing pragmatic interventions and tools that encourage people to make proactive health and safety decisions.

Health and Safety Trainer | Training is an essential piece of education that can keep miners safe and healthy. Trainers or health educators develop high-quality, tested training to deliver on an annual or new task basis and have a mechanism to evaluate worker competencies.

PROFILES IN HEALTH & SAFETY



John Steven Metzger

Education:

M.A., Journalism, Ball State University;
B.S., Photography, Rochester Institute
of Technology

Position:

Earth Monitoring Manager and
Business Development Coordinator at
AssetAssurance Monitoring

The mining industry is now more aware of Safety and the intersection of Safety and Operational capacity and capabilities. When operations and engineering learned that "safety monitoring" was good for their metrics and the overall status of the mine, it instantly changed the onsite dynamic.

My working relationships with colleagues and professionals in a variety of fields and environments have been invaluable. Through life-long learning, personal development, and risk management processes I have contributed to a broad range of project and task deployments and instrument implementation projects.

Some of my favorite career highlights have been introducing and supporting ground-based radar monitoring at numerous mines across the U.S., Canada, and China and adapting new techniques to managing hardware in challenging mine environments. Highlights of my career also include working with staff on a mine site to assure safety, operations, and continuing production despite high wall failures, ice-falls, and slope instability.



Dr. Emily J. Haas

Education:

PhD in Health Communication,
Purdue University; B.A./M.A.
Communication, University of Dayton

Position:

Senior Research Behavioral Scientist,
Human Factors Branch, CDC/NIOSH,
Pittsburgh, PA

Health Communication is the use of different tools and theories to try to develop persuasive health messages to encourage individuals to participate in healthier or safer decision-making.

The mining industry found me when I was presenting applied research at a communication conference. I started to read about mining projects going on at the time and I got excited about how I could apply my work in graduate school to influence health and safety among mine workers.

Any student can have a career in the mining industry. Mining is a career for all disciplines. Anyone with any background, i.e. Engineering, Industrial Health, Safety Science, or even Behavioral and Social Science. Students should not limit themselves!

Now is the most exciting time to become involved in the mining industry. Mine operations are at the forefront and are leading the integration of new technologies and automation, so students can be on the cusp of piloting these new technologies.

EXPLORING OPPORTUNITIES: TECHNICAL AND TRADE CAREERS

Not all careers in mining require a college diploma. Many careers require a high school diploma or GED, or may require technical training and sometimes a certification that may include a 2-year degree. Some mines provide on-the-job training and all mines provide safety training and certification.

Why are tradespeople important to the mining industry? Mine sites, mills, autonomous mining operations, and mine reclamation efforts all require skilled tradespeople with diverse expertise. These operations cannot run without these skilled workers.

What tradespeople are in demand in the mining industry?

- Heavy equipment operators (sometimes very huge and very heavy!)
- Electricians
- Welders
- Surveyors
- Machinists
- Blast hole drillers
- Shot firers (blasters)
- Salespeople
- Tradespeople
- Trades assistants

What are the jobs for tradespeople?

Tradespeople work on mine sites, above or below ground, on drilling sites, in mills and crushing operations, or even in distant sites from which mining equipment is operated virtually at a distance.

FOCUS ON:

SPECIALISTS IN TRADE

Boilermaker | Boilermakers mark off, cut, shape, assemble, and fix metal to produce or repair storage tanks and other high pressure storage vessels used in mining and mineral processing.

Electrician/Electrical Fitter | Electrical fitters are mainly engaged in making, fitting or repairing electrical machines and instruments.

Heavy Equipment Operator | These include haul truck drivers, diamond drill operators, powder truck drivers, jumbo truck drivers, integrated tool carrier drivers, etc.





Mechanic | Mechanics assemble, install, adjust, maintain and repair mechanical equipment. Specialties include lift mechanic, diesel mechanic, shovel mechanic, or truck mechanic.

Metal Machinist | Metal machinists set up and operate tools to cut, shape and form metal stock and castings to exact size, using detailed drawings and specifications.

Metal Trades Assistant | Trades assistants may position and hold metal stock or products to enable work to be carried out; perform assembly and dismantling operations; solder or spot-weld components; operate power hammers, presses or other cutting and shaping tools and machines; and clean and prepare working surfaces and much more.



PROFILE IN TECHINICAL/ TRADE CAREERS



Christina Carling

Education:
Working on Bachelor's in Business Management/Human Resource Management

Position:
Senior Supervisor Technical Training – Morenci, AZ at Freeport-McMoRan

My career path with Freeport-McMoRan started in 2005 when I worked as a Laborer and Mill Operations Technician. In that position I learned skid loader, crusher and conveyer operations while gaining insight into various mill operations.

Two years later I learned heavy equipment/conveyer operations and maintenance along with mechanical skills when I took the position of Crusher Operator Trainee and Crusher II.

In 2009 I moved into a supervisory position as an In-Pit Crusher Operations Supervisor in which I was collaborating with various mine site/crusher operations. In this position I learned about other mine ops areas. I also received leadership training and I supervised a 10-person crew.

I continued my leadership path for the next nine years as I moved into the position of Technical Instructor and Facilitator in 2011. In this role I maintained reporting sheet and created crush/convey training materials and I continued leadership training on customer service and interpersonal skills.

In 2020 I took the position of Senior Technical Instructor and Facilitator. In this role I became training coordinator and maintained and documented training certifications and compliance. One year later, in 2021, I took my current position as Senior Supervisor of Maintenance Technical Training. In this role I supervised maintenance/apprenticeship and welding instructors. I also provided coaching and development. At this point in my career, I pursued an HR/Business degree through the company tuition reimbursement program.

Don't look at mining as a male-dominated industry. Mining offers so many different career choices. Don't judge as an outsider. Take the time to see what mining has to offer for you and your family.



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