

GOCONTRACTOR

MINING SKILLS SHORTAGE CANADA

CONTENTS

3 Main Causes and Solutions to a Skills Shortage in the Canadian Mining Industry

4 Retirement of Skilled Workers

5 Lack of Popularity with Female, Immigrant, and Indigenous Workers

7 Work in a Temporary, Inaccessible Location

9 Rivalry with Other Industries

10 Conclusion

Main Causes and Solutions to a Skills Shortage in the Canadian Mining

Although mining is one of the most important industries in Canada, a skills shortage has been a longstanding problem that is likely to remain as the number of skilled workers entering the industry stays below the number of experienced workers who are reaching retirement.

Mining accounts for approximately one in every 45 jobs throughout the country

Work must be done to make the industry more attractive, especially in the northern territory where local infrastructure is often inadequate to set up a mining project and interest any skilled workers. This is one of the ways to encourage female and immigrant workers to enter the industry, as well as making mining more attractive for workers who are skilled to carry out their job in similar industries, such as construction. It's vital that new workers are skilled for the job and not chosen because a suitable applicant cannot be found.

Importance of Mining as an Industry in Canada

Over the next decade, $140 billion is estimated to be spent on new mining investment in the country. There are more than 400,000 people directly employed in the Canadian mining industry and over 190,000 working as contractors. This is one of the largest mining nations in the world and in 2016, mining accounted for 19% of Canadian goods exports through the production of over 60 different minerals and metals.



This makes it crucially important to deal with the current skills shortage in the industry. More workers are required to fill almost all the positions involved. Some of the skilled workers in greatest demand include geologists, mining engineers and heavy-duty equipment mechanics. A bachelor's degree, or even a few years of experience could be required before workers are skilled and suitable for the job.

SOME OF THE MAIN REASONS FOR THESE SKILLS SHORTAGES ARE:

- Retirement of skilled workers
- Unpopularity with female and immigrant workers
- Indigenous workers without the necessary skills
- Isolation of many sites, especially in northern Canada
- Poor infrastructure (e.g. travel and residence) in many remote mining locations
- Competition from other industries (for workers with the same skills)

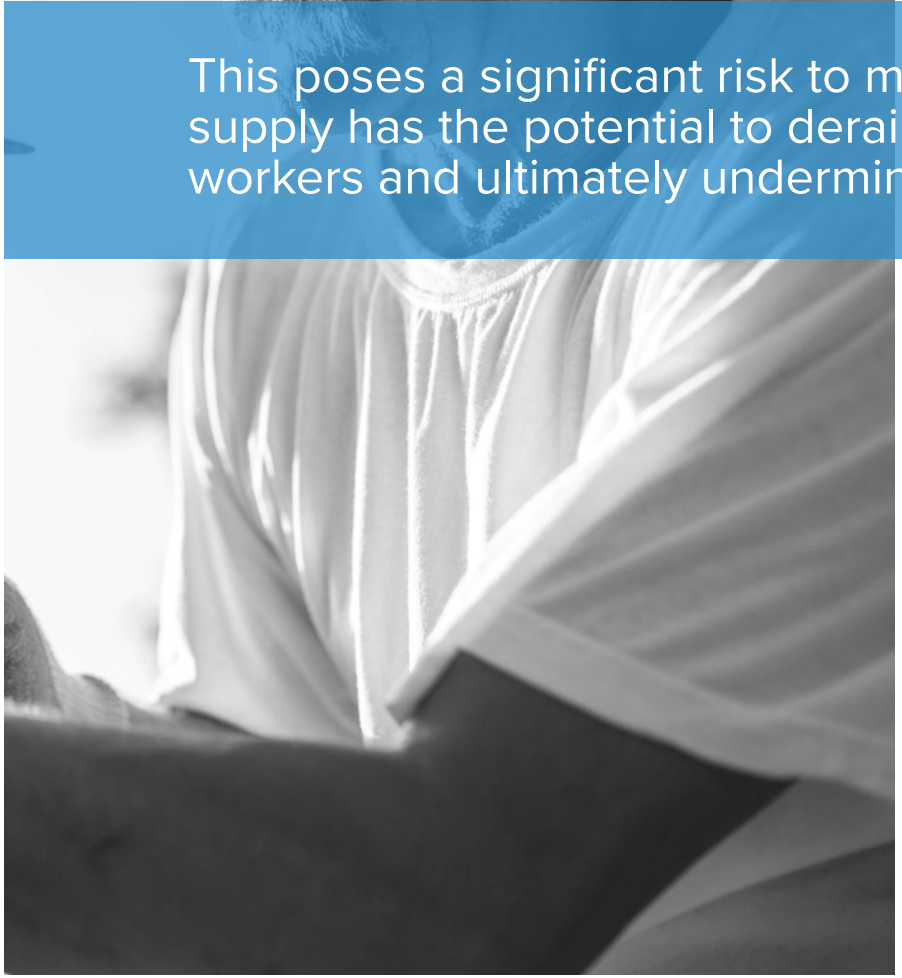
The large number of workers who are now entering retirement makes these other problems even more critical to resolve.



Retirement of Skilled Workers

During the 1980s and 1990s, low commodity prices caused many students who may have studied geology or engineering in mining to retrain, with many of them entering the finance or government sector. Some colleges and universities even cancelled all of their mining programs, leading to something that has been called a ‘lost generation of miners’. This can be seen in the growth of older workers reaching retirement in the industry between 2007 and 2016, from 11% to 16%. The number of young workers has also dropped from 13% to 5%.

This poses a significant risk to mining operations, given that a thin labor supply has the potential to derail projects, drive up the cost of finding workers and ultimately undermine an operation’s ability to run competitively.



A new report by the Canadian Mining Industry Human Resources Council (MiHR) has estimated that between 2017 and 2027, after the retirement of current workers, over 87,830 skilled workers will be needed to work in the mining industry. If the industry continues to expand however, the number of new workers required could climb to 130,410. This report also estimates that although 18,210 workers will be needed for the role of technical occupations, supervisors and foremen, skilled trades, and production workers, only 8,670 are likely to be available.

More work can be done to retain older workers, perhaps giving them the job of mentoring a young apprentice and letting them do some of the work they might now find too physically challenging. This will help young workers to gain experience in the industry and be ready to take on the role when their mentor retires.

This high retirement rate also indicates the importance of making the mining industry more appealing to female, immigrant, and indigenous workers.

Lack of Popularity with Female, Immigrant, and Indigenous Workers

Recently, the MiHR has undertaken a research program, determining how the mining industry can find the sufficient number of skilled workers needed for the variety of jobs involved. This focuses on making the industry more appealing to immigrants and women, as well as increasing the number of skilled indigenous workers, with whom the industry is already quite popular.

Encouraging Women to Enter the Industry

While women account for 47% of the Canadian workforce, only 17% of the current mining workforce are female. Some of these jobs could be almost identical to roles in another industry but are still less popular in mining. For example, women account for 19% of all professional and physical science occupations in Canada, but only 16% of these jobs in the mining industry (2016).

When the MiHR surveyed women to find out how they felt about mining, results showed that the industry was still seen by a lot of them as an “old boys’ club”. Many perceived an everyday work environment where women were singled out or overlooked, gradually pushing them to leave their job. Gender harassment and bullying are still recognized problems in the industry.

In 2015, Status of Women Canada stated that $495,000 was going to be used for the new project ‘Addressing Systemic Barriers for Gender Equity in Mining’. The aim of this project is to understand the main reasons why women are unlikely to enter the industry and work out what can be done to make it seem more appealing. It is the job of mining companies to provide a company culture that is totally inclusive of women.

Once a company has decided on a strategy to ensure their culture is gender inclusive, it will need to be supported, perhaps through workshops, training or solving problems that might not have been considered before. For example, changing ‘Men at Work’ signs to ‘Danger: People at Work’.

It is also important that this new strategy is ongoing, always explaining to new workers why it is critical to the company. Any projects that were seen to benefit from having male and female participants should be celebrated. Adjustments will probably need to be made along the way.





Encouraging More Indigenous Workers

Many mines and new mining projects are situated on traditional land where indigenous natives are still present. While the mining industry is the largest private sector employer of indigenous Canadians, one in four of working age are still unemployed. There is still strong potential for the mining industry to hire more but barriers include lack of sufficient training and lack of awareness of all the working opportunities that are available.

Mining' popularity with indigenous workers is one of the reasons why the Mining Association of Canada (MAC) supports 'Indspire', a national charity which invests in their education. This benefits individuals, their families and Canadian industries that are popular with indigenous workers. Priorities set for 2017-2022, include continuous research and changes in programs, making them more successful for these workers to have sufficient education and training for their chosen job.

Making Immigrants More Aware of the Industry

The proportion of immigrants working in the Canadian mining industry is 10% lower than the national average. More immigrants live in urban areas, while mineral extraction often takes place in remote locations.

Attracting immigrant workers is important to deal with the current skills gap. Although over 50% of those who are working in the Canadian mining industry are university graduates, a survey carried out by MiHR, discovered many graduates are not even aware of the available opportunities of working in the industry (2015). Although employers have mentioned language and communication as major barriers, immigrants who were surveyed did not see this as so important, with many coming from English-speaking countries.

University graduate networks and student career supports, such as job fairs and networking events can be helpful. These supports should be made more accessible to students hoping to enter the mining industry, perhaps featuring enrolment opportunities for additional training or membership into professional associations.

Agencies in urban areas have little contact with the mining industry, many under the assumption that immigrants won't be interested in moving to these remote regions. Assumptions have been made but little research has been done to find out why these jobs are so unpopular. Perhaps immigrants feel that it will be difficult to access suitable housing, or a better transport system needs to be in place to make it attractive. Maybe it's just something they've never been informed about, assuming there's no work available in such a remote location.

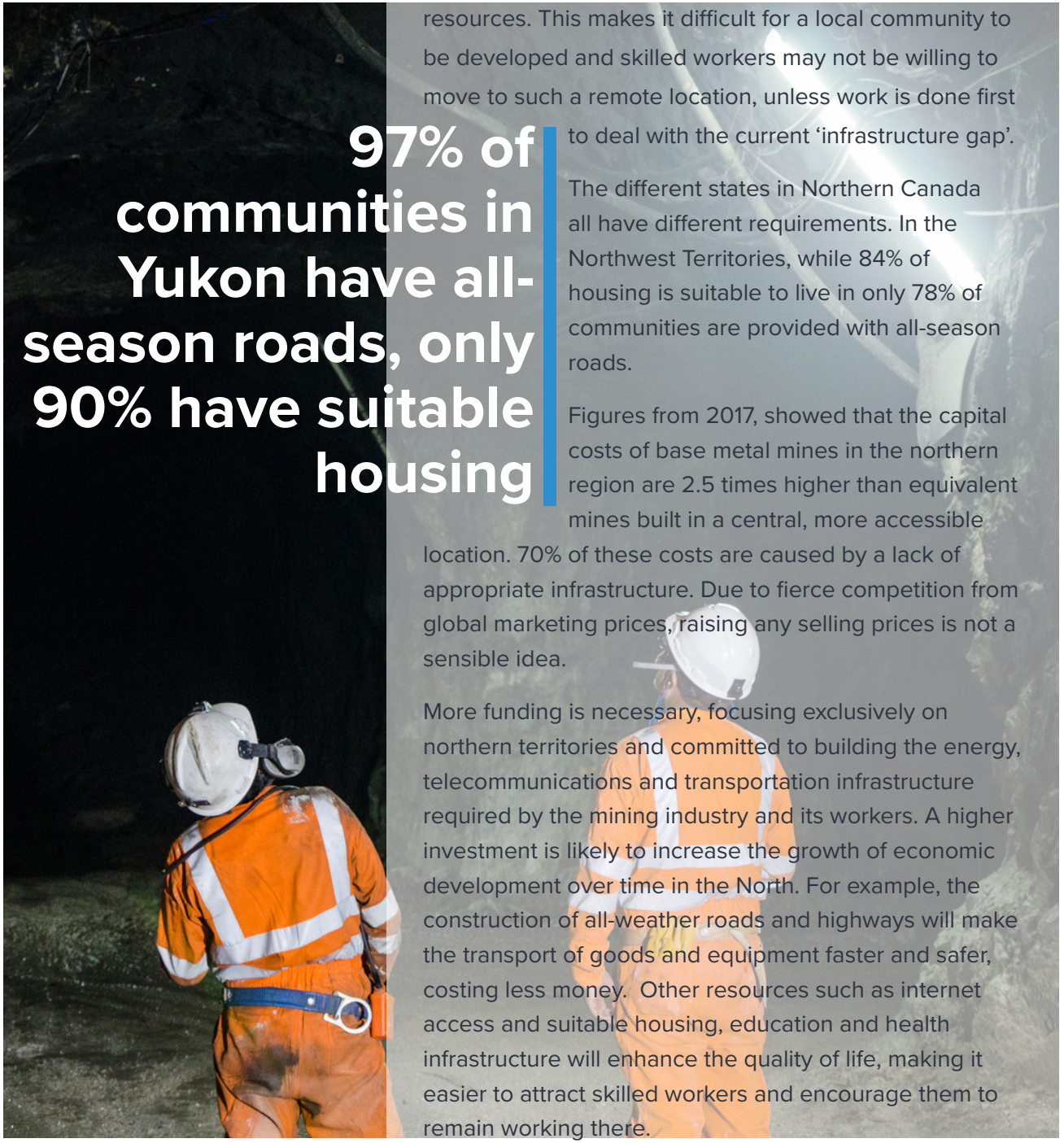
Work in a Temporary, Inaccessible Location

Unlike the majority of other industries, the location of mining projects is determined by factors outside of a company's control, the result being that many Canadian sites can be found in remote, northern territories with mineral resources. Local infrastructure is often insufficient to meet the working and living conditions that are vital for mining to become a safe and productive industry. Even if local housing has been provided, work may only be available until the minerals being mined have all been extracted.

An 'Infrastructure Gap' in Northern Canada

After the Nanisivik mine was formed by the Mineral Resources International Limited (MRI) in 1972, the Strathcona Agreement was signed two years later with the federal government. This was the first mine to be built in the Arctic and the federal government invested $18.3m into town site development, a dock, and an airstrip, receiving an 18% stake in the company. For over 40 years, the government was not involved in the construction of any roads, railways, power, or shipping for any other northern Canadian mines.

Poor infrastructure is a problem in the northern region, often including the absence of reliable roads, housing, energy, telecommunications, and other necessary resources. This makes it difficult for a local community to be developed and skilled workers may not be willing to move to such a remote location, unless work is done first to deal with the current 'infrastructure gap'.



97% of communities in Yukon have all-season roads, only 90% have suitable housing

The different states in Northern Canada all have different requirements. In the Northwest Territories, while 84% of housing is suitable to live in only 78% of communities are provided with all-season roads.

Figures from 2017, showed that the capital costs of base metal mines in the northern region are 2.5 times higher than equivalent mines built in a central, more accessible location. 70% of these costs are caused by a lack of appropriate infrastructure. Due to fierce competition from global marketing prices, raising any selling prices is not a sensible idea.

More funding is necessary, focusing exclusively on northern territories and committed to building the energy, telecommunications and transportation infrastructure required by the mining industry and its workers. A higher investment is likely to increase the growth of economic development over time in the North. For example, the construction of all-weather roads and highways will make the transport of goods and equipment faster and safer, costing less money. Other resources such as internet access and suitable housing, education and health infrastructure will enhance the quality of life, making it easier to attract skilled workers and encourage them to remain working there.

Temporary Residence

With most established communities only lasting until the metals and minerals have all been extracted, there are now ‘ghost towns’ that have been left uninhabited after work has stopped. This could also be the case if the cost of a certain mineral or metal falls, making it too expensive to keep the site open.

For example, in 1979 the town of Kitsault was established in British Columbia for 1,200 new residents. This town acted as the home community for workers in the new molybdenum mine, run by the American mining company, Phelps Dodge. When the cost of molybdenum plummeted in 1982, the local residents were given until October 31st, 1983 to leave their company-owned homes. 90 abandoned homes and 200 apartments as well as a deserted shopping mall, restaurant, movie theater, sports center and bank can still be seen today.

Most popular in Canada and Australia, Fly-in Fly-out is a method of employment that can take place in remote locations that workers may not want to reside in full-time. Paying for flights and temporary on-site housing actually costs less than building houses and facilities for a new community of workers. They could work on-site for two weeks and then live back at home for the second two. This may still be unpopular with workers who may choose a similar job in another industry without the same problems of location and travel.

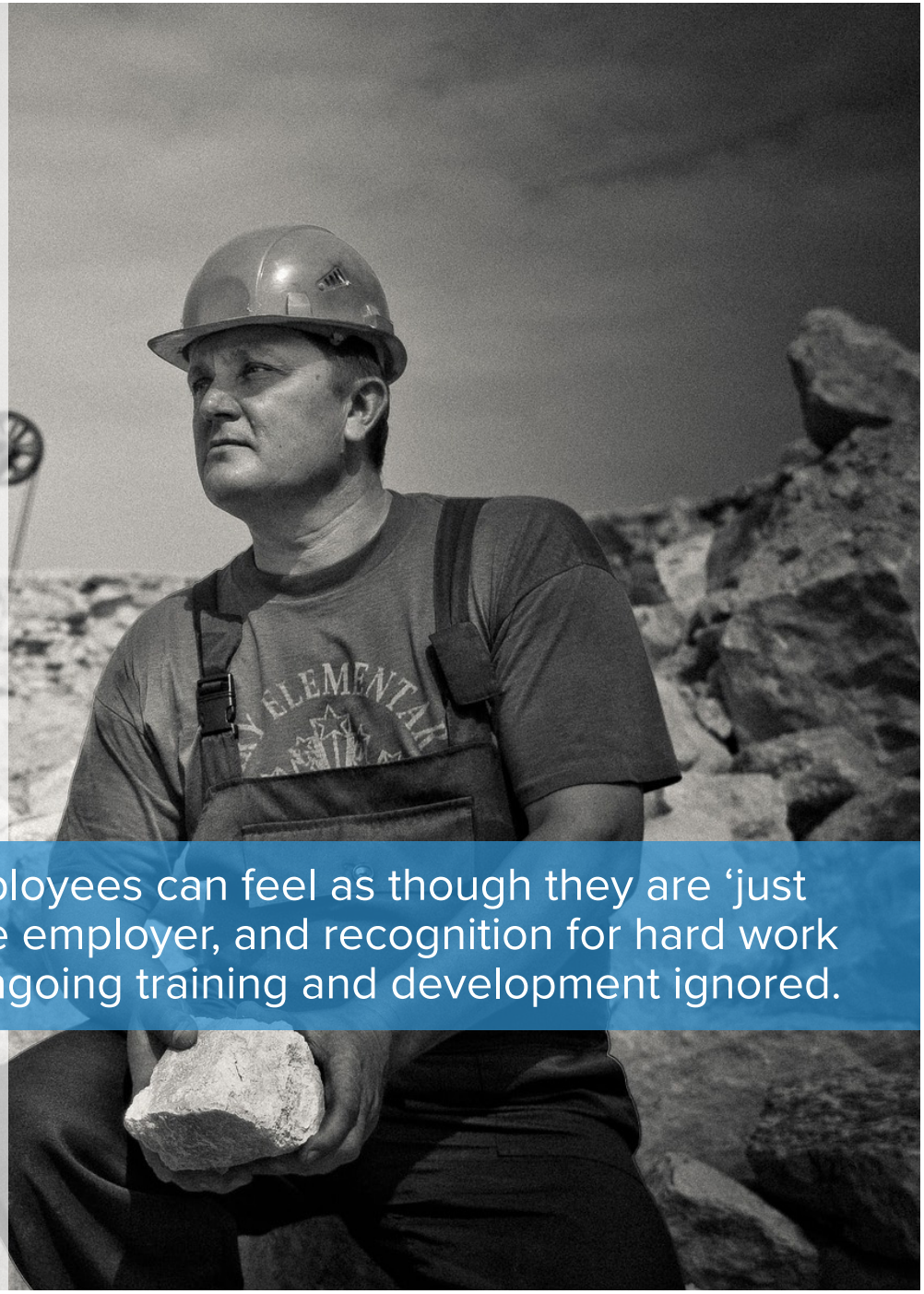


Rivalry with Other Industries

In 2015 the Canadian economy finally started to rapidly grow. Becoming even stronger throughout 2017, it is expected to keep growing over the coming years. During the first four months of 2017, mining was the leading cause of economic expansion in the country. Although, the mining sector is growing at a fast rate, the construction industry is also booming. While skilled workers are required to work in the construction industry, experienced construction workers are also necessary to work on mining sites. This has led to a greater demand for skilled workers and fierce competition between both industries to attract them.

For example, Saskatchewan is the leader in residential construction in the whole of Canada. This makes it more likely that suitable work in a well-paid job will remain consistent for construction workers. After Finland, Saskatchewan is the second most attractive mining investment destination in the world (2018) and construction workers are also required for this industry.

Decent wages are one of the most important factors to encourage jobseekers and skilled workers to remain, but:



> Quite often when working in the mines, employees can feel as though they are ‘just another number’ that is part of a larger scale employer, and recognition for hard work may often go unnoticed and the need for ongoing training and development ignored.

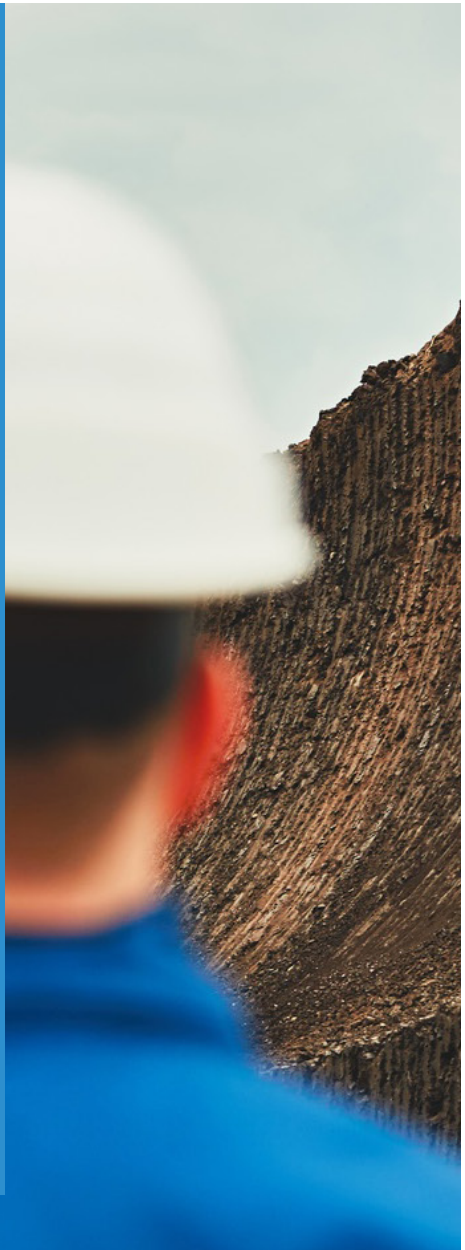
To present mining as an industry that is worthwhile to remain in, it is important that companies emphasize any future opportunities for workers. Perhaps making it clear that if they get enough training and experience, promotion is an achievable path if they remain in the industry.



Conclusion

As the number of workers now reaching retirement continues to increase, locating skilled workers in the mining industry to take their place is becoming a more important requirement. Female and immigrant workers should be encouraged to enter the industry, as well as dealing with the current ‘infrastructure gap’ to make the work more attractive and easier to reach if the site is based in a more remote location.

As the industry continues to grow and more workers are required, rivalry with other industries is also likely to increase. This is another reason the location of more remote mining sites should be made more easily accessible and more appealing for workers who might also have the choice of a job in a local construction site. Future opportunities should be presented from the beginning, making mining seem a worthwhile industry to enter and remain in, with new workers being aware of the skills and experience needed to make this possible.




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