

Mining Industry Faces Potential Geologist Shortage

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TORONTO (Kitco News) -The mining industry is starting to face a dearth of skilled geologists as many veterans are close to retiring and there are not enough students and mid-career scientists to replace them.

This could have major ramifications for an industry which is experiencing a boom not seen since the 1970s and early 1980s.

Demand for mined products is skyrocketing as countries like China, India and other emerging markets see their economies grow, but the numbers of geologists who can find mineral deposits are starting to shrink. Several geologists who attended last week's Prospectors & Developers Association of Canada's conference in Toronto said this graying of the industry is going to be a significant challenge to overcome in the next few years.

Many of the experienced geologists are in their 50s. While there are new students that are coming into the ranks, the industry is missing many mid-career geologists would be in their 40s right now if they were still in the sector, said M. Stephen Enders, president, Society of Economic Geologists. "It's a lost generation," he said.

When the mining industry went through its bust in the 1990s, layoffs rippled across the sector, so many geologists took to other fields and never came back. Now with mining profitable again, it's missing a core constituency of would-be mid-career scientists. That can spell trouble in a few years, Enders said.

"I don't have specific figures, but a significant number of professionals will be eligible for retirement in 5-10 years. It's not just in the professional part of the industry, it also includes faculty that teach economic geology and science," he said.

Brent Cook, editor and geologist of Exploration Insights, lamented the aging of the industry. Cook has been involved in property economics and geology evaluations for over 25 years and he sees the danger of too few geologists. He said consulting firms that do feasibility studies are overworked. "The result is that there's a lot of sloppy work around," he said.

Several geologists said as the industry starts to dig for the harder-to-reach deposits, being able to rely on the talents of experienced scientists can make or break a company and the lack of a brain trust could hurt the industry as a whole.

Cook suggested that geology and mining as a profession doesn't have the

cache in the eyes of students from Western countries. Enders added that while some students are coming from outside the traditional countries of Canada, the U.S. and Australia, those who studied in non-Western universities do not always have the same rigorous education.

Nicole Tardif, geosciences technologist and earth science promoter at Laurentian University's Department of Earth Sciences, said geology and earth science are not as high of a focus as they should be when students are looking at scientific undergraduate studies. Part of that is just a lack of knowledge that geology exists as a career path for students at the high school or equivalent level.

"It's a real challenge," she said, especially as some high schools don't include earth science as part of their curriculum. Those that do might only focus on biology, she added.

Enders said within earth science curriculum, there are a lot of fields that are drawing students' interest, such as climate change or earth hazards, like studying earthquakes.

Further, parents can be no help. "Geologists sometimes get a bad rap. Parents ask 'you don't want to work in a mine, do you?' Parents sometimes have no idea of the opportunities out there," Tardif said.

She added that if the parents do know something about mining, sometimes their view of geologists is of "the guy who was harassing me in the mine."

Enders said that image problem is something mining has faced for more than 500 years. He cited "De Re Metallica," a book about mining in Germany published in 1556 which talked about the social and environmental matters at the time.

Cook and Tardif both said in an age where computer programming is a big draw for students, the idea of a scientist working outside of an office doesn't always appeal. But, Tardif said, if a student likes to travel or enjoys the outside, they can be a good candidate for a geology program. "It does take the right person," she said.

At PDAC, there were several booths where mining firms were actively recruiting geologists. Tardif said she had 60 undergraduate students looking for summer jobs in the field at the conference and within the first day or so, half already had secured employment.

Cook said mining companies may need to start sourcing geologists from the countries where they are operating to continue to ensure employment.

While Canada is still one of the top areas for mining activity, regions like Latin America have seen great growth in mining. However, Tardif pointed out, at least on the undergraduate level, unless there are universities in those countries where students can attend classes, attending an international school is usually only an option for wealthier students. She said at Laurentian University, nearly all undergraduate students are

Canadian. The graduate courses attract international students, she added.

Tardif said she goes to high schools to talk about geology and she's tried elementary schools, too. While younger students think rocks and minerals "are cool," it's hard to justify spending time with students at that age since it will be several years before they attend college.

In addition to talking to students at universities, the Society for Economic Geologists is in the exploratory stage of creating a curriculum with universities and companies to give more training for students and talented professionals to help them advance their knowledge of the field.

If the trend of fewer educated geologists continues, the worst-case scenario could be that there are fewer discoveries and less efficiency in mining, but Enders doesn't believe that. "I'm a free-markets guy, so I believe the market will take care of it," he said.

Current events are starting make more students interested in geology, Enders said. The row China and Japan had earlier over rare earth metals and the perceived dominance China has over these resources have piqued students' interest. "People realize we need resources," he said.

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