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We had a hazard that was both difficult to fix and expensive. Who would have believed such a simple device as the SafetySpear could have solved all that in one go?”

Lynne Bouchard
Project Engineer



How Fosterville Gold Mine
used the **SAFETYSPEAR**
to drive up safety and drill costs down



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- Fosterville Gold Mine was facing a challenge. They needed to stop heavy drill rods falling from overhead blast holes.



- This hazard was impacting miner safety, lowering productivity, and increasing costs.
- After trying the traditional methods of plating over or grouting the holes, as well as other solutions on the market, Fosterville Gold Mine adopted the use of the SafetySpear.
- With the SafetySpear, Fosterville Gold Mine has now solved this safety issue, increased productivity, and reduced costs.

A big problem for this heavy hitter

As Victoria's highest producing gold mine, and one of the richest in the world, Fosterville Gold Mine is owned and operated by Canadian-based Agnico Eagle.

The high yields of the Fosterville site are the backbone of the mine's success. But the company values of Trust, Respect, Equality, Family, and Responsibility are at its heart.

The difficult ground conditions at Fosterville were making the

hazard of stuck drill rods in overhead production blast holes a tough challenge to overcome. If these heavy steel rods came loose and fell onto miners or equipment, the results could be catastrophic.

Solving this problem was important for smooth and efficient operations. But it was also vital in honouring their values to keep their miners safe.

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The horrible realisation of what could happen if someone, or valuable equipment was underneath, really hit home.

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Darren Manley
Senior Long Hole Driller

So, Fosterville Gold Mine committed to finding a solution that was quick, easy, and didn't cost the earth. Most importantly, it had to fulfill the promise of protecting miners and valuable equipment from this potentially lethal hazard.



Traditional solutions weren't the answer

As with other mines trying to solve this problem, Fosterville had tried plating over or grouting the holes when a broken or stuck rod had to be abandoned.

But these methods were expensive, time-consuming, and known to frequently fail. The cascade effect of disrupting a Development Jumbo's drilling schedule to plate over a hole, meant headings weren't drilled, charged, fired or

bogged on time. Budgets and schedules were challenged, and team morale impacted. All for questionable results.

Even the simpler, wooden "Kelly" plugs weren't proven by solid testing and research, so couldn't be a trusted solution.

With a reputation for innovation and tenacity, Fosterville Gold Mine searched for other solutions on the market. They hit upon a steel

product that looked promising, but found its heavy weight to cause manual handling problems. It was also subject to rust, hard to install, and expensive.

In the end, their teams of miners didn't like it, so a better solution was needed.

Thinking outside the box

The leadership team went back to the drawing board. They had to find an answer suitable for the particular Fosterville conditions. They needed a product that wouldn't corrode, was easy to install, practical, and didn't increase risk to their teams. Ticking off all these criteria was going to be no mean feat.

But it was this exacting list of requirements that led them to the SafetySpear.

With the SafetySpear, Fosterville Gold Mine was able to answer each of the concerns from the drill operators, to the supervisors, to the executives.

- The SafetySpear's heavy-duty plastic construction made it lightweight, corrosion-proof, and easy to install.
- It had been thoroughly tested to many times more force than would ever happen in an underground environment.
- It was crusher and mill-friendly, and wouldn't harm Fosterville's sensitive Biox plant.
- It could be installed by the same drilling rig that had lost the drill rod, right then and there, instantly making that hole safe.
- It could withstand intense heat and cold, as well as varying bore sizes and blast conditions.
- It wasn't the cheapest solution by unit, but it was easily the most cost effective in saving time and lives.

“I've seen a lot of ideas in my long 25-year career, some have worked, others with questionable results. The SafetySpear is the first device that's simple and quick to install, it will work even in fractured ground. I have the confidence

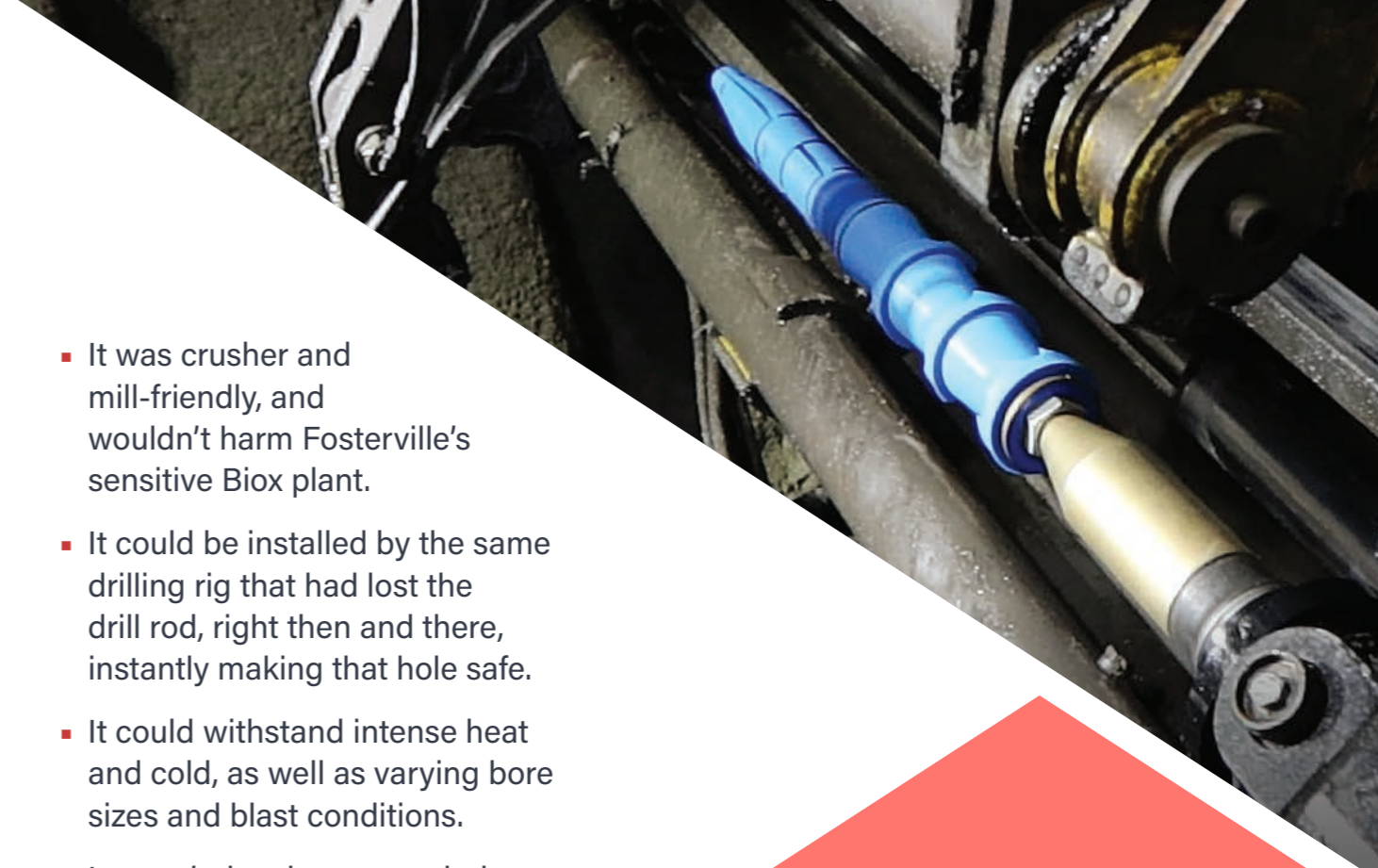
that we can work underneath a hole that has been made safe with the SafetySpear. This is the device we have been looking for. It's tough, reliable and easy to use.”

Darren Manley
Senior Long Hole Driller

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It's a no brainer. Why would you use anything else but the SafetySpear?”

Nick Sinclair
Senior Long Hole Driller



Fast implementation and even faster results

As the mine's leadership team knew the SafetySpear had been designed, developed and extensively tested by an experienced Long Hole Driller, they were confident it was right for the task.

Created by RattleJack Mining Innovations, the SafetySpear was repeatedly demonstrated to the crews, under punishing conditions. The SafetySpear consistently showed its value in design, ease of install and reliability, earning the hard-won respect of all who saw it in action.

Fosterville Gold Mine quickly implemented the SafetySpear into its daily operations and immediately reaped the rewards of their forward-thinking approach.

The mine enjoyed instant benefits in labour and material costs, and the crews loved it.

The SafetySpear had delivered on its promises of fast and easy installation, lightweight handling, adaptability to conditions, and no interruptions to scheduling.

The most important benefit however, was the risk of falling drill rods had been eliminated.

The crews were confident to work under holes made safe by the SafetySpear, and the supervisors were at ease knowing their crews were protected.



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We're always looking at technologies for reducing risk within our mining operation. The introduction of the SafetySpear achieved this, delivering a safer work environment for all of us.

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*Darren Watkins
Mining Manager*



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At Fosterville, we need to have technologies that do the job quickly, efficiently and without fuss. The SafetySpear is light, fast and easy to install in our corrosive

areas. This allows our scheduling and budgets to remain on track and we do it safely.

”

*David Rose
Senior Production Engineer*



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The SafetySpear will set a new benchmark in up-hole drilling risk management in our industry. ”

Ion Hann
Vice President
Agnico Eagle
Fosterville Gold Mine Australia



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I've worked in both Australian and Canadian underground mines, but at Fosterville we have some very challenging ground conditions that need unique technologies to navigate around.

We brought the SafetySpear in because we wanted a no-nonsense solution, with the flexibility to put up with our ground conditions.

The SafetySpear was easy to implement into the system and offered all the best qualities because it was designed by a long hole operator who understood the problems firsthand. ”

Lynne Bouchard
Project Engineer

What's next for Fosterville Gold Mine and RattleJack?

Since solving this crucial problem, Fosterville Gold Mine has saved hundreds of thousands of dollars each year, improved safety standards, and decreased workload. Their yields are high, production smooth, and they've had zero instances of falling drill rods where the SafetySpear has been used.

Today, they're still applying their innovative and industry-leading mindset, working to identify common problems, and finding new solutions.

Fosterville Gold Mine's relationship with RattleJack Mining Innovations remains strong, and they're supporting the new ideas RattleJack is bringing to the table.

If you'd like to see how the SafetySpear can solve the hazard of falling drill rods for your operation, visit www.rattlejack.com.au to arrange a demonstration.



www.rattlejack.com.au