

Managing costs

An examination by Boart Longyear of the role exploration core drilling consumables play in increasing productivity on the jobsite

Sometimes the smallest products can make the biggest impact. While they don't carry \$1 million price tags like some of the high-technology capital equipment available on the market, coring consumables represent incremental cost over the life of a project that can save or lose a drilling contractor hundreds of thousands of dollars in product cost and downtime, not to mention ramifications to brand and business. And, in today's environment, productivity on the jobsite is more critical than ever.

Today, drilling contractors must contend with the cumulative effect of reduced demand for raw materials on a global scale. Volatile commodities pricing, reduced investment for juniors as well as mine closures and suspensions have created a drilling climate with fewer available contracts, and in many cases, significantly decreased profit on business that is awarded. Drilling contractors are scrutinising each project to uncover cost efficiencies and eliminate downtime caused by a variety of factors. With razor-thin margins, consumables can play a significant role in maximising time spent in the hole and managing cost over the life of a project.

Even in boom times, excessive rod trips and product failures in the hole could reduce or erase profit margins and even put the contract in jeopardy. Today, as drillers compete for contracts, manufacturers face increased customer pressure to continue to develop products that increase time spent actively drilling in the hole. With a decrease in near-surface orebodies and a shift toward deeper hole projects, this trend will only increase, even when the global economy rebounds.

While much of the focus so far has been devoted to reducing inventory to better match demand, contractors must keep a healthy amount of bits and other consumables in stock to continue work on projects they do land. Even if buying lower quantities, many contractors looking for an edge in productivity are opting for consumables that will save time and money in the long run, exhibiting less price sensitivity upfront.

However, cost management continues to be an issue industry-wide. And with relatively few barriers to entry, non-genuine designs and consumable parts present a growing problem in many regions. These parts are typically the result of 'reverse engineering' genuine parts, using inferior materials of construction and manufacturing processes. Often, the non-genuine part is copied based on a visual inspection only, with virtually no knowledge of manufacturing processes used or its assembly. While cheaper upfront, these parts create significant liability after purchase, which results in productivity losses from component failure, rig damage and safety hazards. Beyond momentary loss of productivity, contractors employing non-genuine parts may lose the contract, and damage their ability to win business in the future.

In the end, contractors that stock consumables that travel faster, require fewer rod trips and last longer in the hole will be more productive, more profitable and better positioned to weather the current economic storm.

At a nickel mine in Manitoba, Canada, Boart Longyear Drilling Services field tested the new

Stage3™ diamond coring bit in a multi-site deployment. The drill teams averaged bit-life gains of up to 200% over their previous standard, the Boart Longyear Extended Crown. This underground drilling project used Boart Longyear LM™ drills for BQ size holes with a BQ 08 ABR Stage3 bit.

Boart Longyear Drilling Services had employed the Boart Longyear Extended Crown for more than three years at the mine. The ground conditions are demanding due to the variability in the formations, not only from one part of the mine to another, but even within a single hole. The formations are typically hard abrasive quartz mixed with medium hard and coarse ground. Until recently, a 08 ABR configuration of the Extended Crown had proven to be the best bit in use at the mine with an average bit life of 37.5 m.

With the proven performance of the Extended Crown, the drilling teams were unsure about trying the new Stage3 bit at first. Boart Longyear field engineers knew that upgrading to the Stage3 would provide a significant performance increase, and worked with the drill teams to determine the correct configuration, delivering the bits to the drill teams in a 08 ABR configuration.

After putting four bits to the test, the drill teams were stunned by the Stage3 results. The average bit life of the Stage3 was 120 m — more than three times the life of the Extended Crown. As more Stage3 bits are deployed in the field, a look at the matrix-to-matrix comparison continues to prove the success of this bit. **IM**