

Mine Tailings Reveal Rich Past

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In an era defined by a vast array of disposable goods, it may seem surprising that anyone would want to excavate old mine tailing waste sites.

Long considered an eyesore and an environmental problem, mine tailings – the waste rock produced in the mining process – may actually be a valuable commodity, after all.

With the price of metals soaring, small amounts of leftover gold, silver and copper, buried in heaps of mine tailings, could be profitable if an accurate assessment of the tailings were possible.

Unfortunately, with most tailing piles composed of fine, sandy, mixed materials, getting an accurate core sample can be difficult. And, without a number of revealing core samples, it would be nearly impossible to determine the amount of leftover metal.

Recently, however, a sonic drill rig was used to extract a large number of undisturbed, continuous samples from a mine tailing heap in the Princeton, British Columbia area of Canada.

The sonic drill rig was hired to provide core samples accurate enough to allow geologists and engineers to decide if there was enough precious metal left in the Princeton tailings to make mining them a viable project.

In less than three days, one sonic rig drilled and cored 11 holes, each to a depth of 100 ft. for a total of 1100 ft. of continuous core samples – a drilling result that delighted the client, considering that the contract had asked for only three holes to be drilled.

“We just kept drilling for the time period we were hired for and that gave the client nine more holes than they required,” says Bill Fitzgerald, general manager for Sonic Drilling Ltd., a contracting company operating a number of sonic rigs supplied by the Sonic Drill Corporation.

“Obviously, the speed at which a sonic drill rig can core through difficult material gave it a huge advantage,” he says.

The Princeton tailings are a reminder of the rich history in British Columbia where mining was a driving force of economic development that helped to open up the interior of the province. The tailings are also a reminder of another era – one that was powered by sweat and steam.

From the underground workings of Princeton’s Copper Mountain, ore was hauled by steam locomotive to the concentrator mill located at the once-thriving Allenby town site. Tailings from the Allenby mill were then conveyed more than three miles down a wooden flume to the tailings site.

The Copper Mountain deposits were first staked in 1892, although the first commercial production wasn’t achieved until 1927. The property, covering an area of 29 square miles, produced a total of 1.74 billion pounds of copper, 9.1 million ounces of silver and nearly one million ounces of gold before being closed in 1996.

The mining area contained five different open pit mining areas, ten different waste rock stockpiles, containing 212 million tonnes of rock, and one tailings area containing 152 million tonnes of mine tailings.

