

The Salt Lake Tribune

Kennecott seeks to extend life of Utah mine

By Steven Oberbeck and Mike Gorrell

August 16, 2010 06:37AM

Kennecott Utah Copper is laying plans for a major expansion of its Bingham Canyon mine, a project that if launched promises to solidify its centurylong status as one of the state's main economic engines.

If the plan clears regulatory hurdles, it will extend the mine's life to 2034 and secure more than 2,000 jobs, while avoiding a scenario in which Kennecott would wind down operations starting in 2016 and gradually lay off workers as the end of copper production approaches in 2021, said CEO Kelly Sanders.

"Kennecott has a great history in Utah, and this mine expansion offers an opportunity for us to continue producing about a quarter of the country's copper for years to come," Sanders said.

Kennecott's work force in Utah might even expand as the company ramps up its fleet of ore-hauling trucks and adds an in-pit crusher and supporting equipment at its huge concentrator, which separates the copper and other valuable minerals from rock.

The endeavor will be expensive and time-consuming, though, requiring Kennecott to "push back" the south wall of its mine by about 1,000 feet so miners can deepen the massive pit by another 300 feet and reach an additional 700 million tons of copper ore.

Just getting rid of the overburden, or waste rock, covering that ore will take seven years. But before that, it could take two years to evaluate the project and get approval from the board of directors of Kennecott's parent company, Rio Tinto, before the work of moving millions of tons of rock off the south wall can begin.

Standing on the north wall high above the bottom of the pit last week, with massive ore trucks below looking like little more than toys, Sanders said that with the expansion known as the Cornerstone Project, "we're at a pivotal point in planning the future of our operations."

Kennecott's economic footprint in the Salt Lake Valley extends well beyond the mine's boundaries. The company spends \$900 million dollars a year on employee salaries and benefits, taxes and fees, as well as purchases from about 1,000 Utah vendors, according to the University of Utah's Bureau of Economic and Business Research.

The company's importance to the state's economy once led late Utah economist Thayne Robson to remark that Kennecott helped buy more Utah homes and put more food on more Utah tables than any single company in history.

Sanders wants to preserve Kennecott's key role. He emphasized the U. study also estimated that extending the mine's life would pump an annual average of \$1 billion into the Utah economy through the mid-2030s.

Throughout its rich history, the mine has had to overcome skeptics. As its future unfolds, things will be no different.

More than 30 million years ago, hot magma from deep within the Earth's crust welled up beneath the Quirrh Mountains and deposited copper ore in the shape of a huge tooth. In 1903, when Utah Copper Co. founder Daniel C. Jackling dreamed of using mass-production techniques to exploit the low-grade copper deposit under his feet, mining leaders of the day scoffed at the notion.

As it turned out, Jackling's dream was no fancy.

In the century since production began in 1906, miners working under several owners slowly chipped away at the crown of the molar-shaped deposit. To date, the mine has produced 18.7 million tons of copper, more than any other in the world.

Yet over the decades, as the miners delved ever deeper, the higher-value ore slowly dwindled. With its new plan, Kennecott hopes to get at reserves that contain up to 20 percent less copper than in years past.

"What that means is that we are going to have to become more efficient," Sanders said, acknowledging there will be increased environmental impacts as well.

To keep its smelter running at full capacity and churning out 300,000 to 340,000 tons of refined copper a year, Kennecott will have to mine more of the lower-grade ore. And that means the company eventually will have to get more and bigger hauling trucks, add a new crusher to pulverize the additional ore and upgrade its concentrator.

"We're going to have to move more ore and crush more ore, which means that we will need more power — up to another 100 megawatts," Sanders said. "We are studying now how to best get the power, whether we want to produce it ourselves or get it from the grid."

Moving more rock, however, also means there will be more trucks emitting more pollution. And deepening the mine means those trucks will be hauling rock over longer distances, which will contribute to the additional dust produced by the crusher and the longer conveyor belts that will be needed to move the pulverized rock to the concentrator.

As part of its Cornerstone Project, Kennecott will need to update about 25 of its 70 primary environmental permits. The company will be filing for the first of those this week, Sanders said.

Kennecott officials already have briefed the state Department of Environmental Quality about their intentions. Each permit adjustment will require public hearings, said Doug Bacon, a project manager in the department's Division of Environmental Response and Remediation.

"Based on my discussions with them, they're planning to actively engage the public outside of the standard permitting process," Bacon said. "They plan to go out and talk to communities, the neighborhoods and pull together stakeholder interest groups."

Kennecott also has permits with the Utah Division of Oil, Gas and Mining, the state agency that oversees reclamation of mining properties. One permit covers the Bingham Canyon mine, while others include its Copperton concentrator and tailings impoundment north of Magna.

"Anything that impacts any of those permits will require upgrades to those permits," said Leslie Heppler, an engineer in the division's minerals reclamation program.

Sanders said Kennecott's plan is to keep the economic engine going. "To do so will require an investment on our part, government approval and public support."

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Proposal The big dig

Kennecott would "push back" the south wall of its mine by about 1,000 feet and deepen the massive pit by another 300 feet to reach an additional 700 million tons of copper ore.

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Numbers Economics

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