

Lister: Mount Taylor Mine bustling with activity during ‘standby’

By Kathy Helms May 18, 2018
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GRANTS — At the time Gulf Mineral Resources Co. was looking to open the Mount Taylor Mine, most geologists knew that the Westwater occurrence would be mineralized with uranium east of the San Rafael Fault, but deemed it too deep, too wet, too hot to produce. Yet they knew from drilling results that there were large resources there.

They acquired the land position, entered a joint venture agreement in the early 1970s with other companies – soon to be bought out by Gulf – and decided to go into commercial operation. They handed off the information about geologic resource estimates to engineers.

“The engineers took the information and started developing that technical program that was going to allow them to sink two shafts over 3,000 feet in probably the most hostile working conditions known in the western United States,” Joe Lister, manager of the mine, testified during a two-day hearing May 7 and 8 in Santa Fe before the New Mexico Mining Commission.



An overview of the Mount Taylor Mine surface facilities and 24-foot headframe above the mine shaft are visible in this 2015 photo.

Kathy Helms/Gallup Independent



Cleanup activities at the Mount Taylor Mine have begun. An excavator digs into a mound of benign cover material that was removed from the shaft during 1975-79.

Photo courtesy Mount Taylor Mine

At issue is whether the Mining and Minerals director erred when he signed off on a permit Dec. 29, allowing the mine to return to active status although it is projected to take nearly a decade to get to the point of mineral production. The director's decision is being challenged by the Multicultural Alliance for a Safe Environment and Amigos Bravos.

They contend that Rio Grande Resources, owner of the mine, has postponed cleanup by continuing to request standby permits, and with only one standby period remaining, now says it will begin producing uranium again. They also believe that "active" mines should be producing minerals and economic benefits to communities or be cleaned up.

Jim Kuipers, the groups' expert witness, testified: "When we allow a mine to flood, that's not a decision to keep it on standby. That's a decision to close the mine." Lister disagreed.

Steps taken

Rio Grande Resources started moving forward to reactivate the mine in 2012, Lister said, preparing the application as a first step toward acquiring a return-to-active permit. They developed a scope of work based on what they thought the permit would look like. After receiving the permit in December, the first week of January, they started looking at how they needed to tweak the scope of work to comply with the permit conditions.

“We went out to bid for the earthwork, the survey work, the radiation and safety work, electrical work and quality control work on all the work that we’re doing,” Lister said. “I’m here to tell you we had earth-moving equipment delivered to Mount Taylor last week, the survey work has been done, the radiation safety meeting for contractors was held yesterday. Today, we’re looking at building that work plan with all parties.” They also added to the payroll by hiring a graduate from the Colorado School of Mining.

Among the cleanup activities, a waste rock pile in the southwest corner of the site will be regraded to a 5:1 slope, said Alan Kuhn, Ph.D., a geologist who began working with company in 2012. The slope is currently steeper than they would want for final reclamation.

Gulf years

Gulf had a two-year production period, 1980-82, then with markets going south, the company placed the mine in dry standby.

“That decision did not come lightly,” Lister said. Gulf had already invested nearly \$500 million in 1970. The question was: How could they preserve their half-billion-dollar investment, a resource that stretches 6 miles, and geological resources that exceed over 200 million pounds during standby?

“Gulf thought at that time that perhaps it would be down for five to 10 years,” Lister said. “So they did the economics internally, they did the engineering internally, and went out to Dames and Moore, a still very respected engineering group.” Gulf asked whether they were correct in assuming that they could flood the mine, if need be, and still be able to get back in it. A study was done.

Lister, who has an extensive mining history, working for United Nuclear, Homestake, Gulf, Chevron and others, said the 1983 Dames and Moore report was the first time he ever heard the term “wet standby.”

“I was a little perplexed by that, as others were, thinking a standby is standby. But no. The difference in wet standby versus a dry standby is about \$8 million bucks,” he said.

“So they sat there during this whole process, looking at what do we do with Mount Taylor. It was decided, ‘Let’s install a concrete bulkhead. Let’s store the water and let’s put it in standby for the interim, for a short time, until we make a final decision. That was accomplished in the spring of 1983,” Lister said. “They allowed the mine to flood behind the bulkheads to the height of about 10 feet or so.”

‘Wet standby’

While Gulf was still debating whether to maintain that position or place the mine in wet standby, the decision was circumvented by the Gulf-Chevron merger in late 1984-early 1985, Lister said. By December 1985, Chevron was producing ore.

“From January ‘86 through December 1989, Chevron produced 650,000 tons of ore grade material exceeding nearly 7 million pounds,” Lister said. “In early 1989, it was apparent that we were running out of contracts.” The decision to deactivate the mine now fell to Chevron.

“The decision to put Mount Taylor on wet standby was made by Chevron,” Lister said. “That’s not an easy decision when you’re in a captive environment over 3,000 feet deep. You’ve got water coming at you at 5,000 gallons a minute and you’re going to remove 10,000-12,000 horsepower pumps. You’re going to remove one fan that the motor weighs 10 tons. You’re going to remove transformers, pump switch gears, everything. I’m going to remove the rail, I’m going to take the pipe out, and I’m going to remove most of the electrical cable. I’m not going to leave anything underground.”

Using the Dames and Moore report and prior experience, they regraded the bulkheads and successfully removed all equipment on the 3,300, 3,200 and 3,100 level in 24 hours and hoisted it to the surface, then went up to the upper levels to start on those.

“The Dames and Moore study said it would be a good idea to support some of the key intersections,” Lister said, for when they decided to reopen the mine. “That’s what we did, because they’d already planned to re-enter Mount Taylor.” Over the next several months, beginning June 15, 1990, all the equipment underground was removed.

“Mount Taylor was finally sold after a series of suitors that all implied they would not want it in a dry standby. They wanted a wet standby. The sale happened in August 1991,” Lister said, when he became an employee of Rio Grande Resources and mine manager.



Water is sprayed on the roadway to eliminate fugitive dust while work is conducted at the Mount Taylor Mine.

Photo courtesy/Mount Taylor Mine

Rio Grande Resources has a technical group that generally looks at water treatment worldwide in terms of uranium contamination, Lister said. With their assistance, while on standby, the company has been researching how it can treat Mount Taylor water to current drinking water standards, and how it can produce Mount Taylor ore more efficiently. It also added 1,500 acres with a resource estimate that could exceed 30 million pounds and initiated design work on surface facilities, among other activities.

“You don’t see this when you go to the mine site,” Lister said. The thinking that’s going on, the engineering are not visible. “You don’t see this work that’s being done overseas and other places in the United States because we’re not a publicly-held company.”

Those who go up to the gate of the uranium mine might think the company is not doing anything, Lister said. “It’s not true.”