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## U. geologist's claims of water raise doubts about tar sands mine expansion

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A Canadian energy company has won “tentative” state approval to expand a proposed tar sands mine on the southern rim of the Tavaputs Plateau.

But first, U.S. Oil Sands has to contend with Bill Johnson and his pesky data.

The University of Utah geology professor has spent the past two years studying the hydrology of PR Springs and is “100 percent” certain the ridge top where U.S. Oil Sands would dig is hydrologically tied to many of the perennial springs watering nearby canyons.

Johnson's research is crucial to the debate over the mine's permit because, for the past seven years, state regulators have claimed there is no groundwater present at the mine site, so the controversial project supposedly poses no threat to nearby springs.

“There is no doubt,” Johnson told Utah Division of Oil, Gas and Mining director John Baza on Tuesday. “If I put the results in front of 100 hydrologists, they would say there is a path [for water] from the ridge tops to the canyon bottoms.”



Al Hartmann | The Salt Lake Tribune  
A small group from Peaceful Uprising, Utah Tar Sands Resistance and concerned citizens read statements and performed a skit with children on the steps of the Utah Department of Natural Resources as a security guard records them before a crucial hearing Tuesday, June 30 at the Utah Division of Oil, Gas and Mining in Salt Lake City.

Baza convened a special hearing to hear Johnson, who spoke as an expert for the group Living Rivers, and residents and activists opposed to tar sands mining.

He also heard from U.S. Oil Sands executives.

The Calgary-based company would like to expand the test site from 64 acres to 316 acres, using a citrus-based solvent to separate out a viscous crude called bitumen.

“It is a much more logical mining plan,” operations chief Barclay Cuthbert said. “It’s an optimization by which we improve the method for extracting bitumen. We have shown we can extract the bitumen with a minimum impact to the environment and we will continue to do so.”

Baza will make a decision whether to allow the mine expansion within the next 10 days, but his findings will likely be appealed to the state Board of Oil, Gas and Mining.

Activists staged a rally on the steps of the building before the hearing, denouncing foreign companies’ plans to strip-mine tar sands and oil shale.

Utah holds some of North America’s largest deposits of the “unconventional” fossil hydrocarbons, but many people prefer them left in the ground because extracting and processing them requires lots of energy and rearranges the landscape.

“It is unconscionable for the state to allow operations at all,” said Kathy Albury of Peaceful Uprising. “They had a permit, but they got greedy and wanted more. They opened the can of worms. They came back for more. They should not get it.”

A private security guard shot video of the Peaceful Uprising and Utah Tar Sands Resistance speakers and asked press photographers for their identification.

The groups regularly conduct vigils and demonstrations at PR Springs on the line between Grand and Uintah counties, where 26 protesters were arrested last summer after some activists locked themselves to mine equipment and others obstructed vehicle traffic.

Authorities labeled the action a “riot” that shut down mine operations for the day.

Uintah County officials support the project because of its projected economic impact — expected to total \$1.2 billion.

Over 10 years, the project is estimated to generate \$160 million in royalties for the state’s school fund and provide 200 to 300 full-time, high-paying jobs, according to the County Commission’s letter asking Baza to expedite permitting.

“U.S. Oil Sands is a high-quality lessee. They have the economic strength to see this project through to its successful completion,” said Tom Faddis of the Utah School and

Institutional Trust Lands Administration. “SITLA traded into this land with the objective to acquire high-value mineral properties. It is our job to make money for beneficiaries — as crass as that sounds.”

Some Grand County officials have a much different view.

“Tar sands are the dirtiest oil on the planet with the greatest destruction,” said Tory Hill, a Castle Valley Town Council member who was speaking on behalf of herself and Grand County Council member Mary McGann.

“The ecosystem living on the Tavaputs has been called the Serengeti of the American West. Is this something good for our county, our state and our planet?”

Hill wondered why U.S. Oil Sands’ proprietary process, which uses a citrus-based solvent that is billed as ecologically benign, has yet to be used in Alberta, where tar-sands extraction has taken a steep environmental toll.

“They’ve ruined parts of Alberta, and now they want to destroy the Tavaputs,” Hill said. “Why are you so eager to use us as your test subject? They say they will reclaim the mine, but that’s an impossible promise.”

While speakers voiced a range of reasons to oppose the mine Tuesday, the lawyers in the room debated the existence of groundwater.

The question has dogged the PR Springs mine since it was first proposed in 2007 on state trust lands north of the Book Cliffs. At every regulatory step, the issue has been decided in U.S. Oil Sands’ favor. The company, however, has declined to determine exactly where the springs are recharged and to put in monitoring wells, calling such measures a waste of time.

“There will be no impact to groundwater because there is no groundwater present, and the ridge top mine is hydrologically disconnected from the springs,” said the company attorney John Davis. “There are surrounding ridges that would contribute to those springs, but they are not the ridges where the mine is located.”

As proof, Davis cited the 180 bore holes the company drilled in and around the mine area. Crews went 150 feet deep, twice the depth of the mine horizon, and found no evidence of water.

Last month, however, Johnson and his U. colleagues and students published findings in a peer-reviewed journal that flatly contradict the company’s claims.

He said the dry bore holes mean little since their purpose was to characterize the bitumen deposit, yet they are repeatedly cited as proof there is no groundwater.

“It’s the same as looking out today [with cloudless weather] and saying that it is impossible for water to come from the sky. That infuriates me as a scientist,” Johnson said. “Finagling over what side of the canyon the flow came from is a waste of time. You agree it is coming from ridge tops, but not from our ridge top, which is pretty magical.”

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