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Neighbors worried about quakes in back yard

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Folks in Anderson Springs, a tiny community near The Geysers, have been living for years with small earthquakes triggered by geothermal energy production.

"We're rocking and rolling most of the time," said Meriel Medrano, a 38-year resident of the Lake County village.

Now they're worried about an experimental deep-drilling project that would tap a new heat source more than two miles below the surface.

"We don't know what's going to happen," she said. "This is right behind my house."

Their fears are heightened because a similar project triggered a serious earthquake in Switzerland in 2006.

"It's arrogance to think you can control this stuff," said Jeff Gospe, who owns a weekend home in Anderson Springs. "You're dealing with Mother Nature and things you don't fully understand."

But a scientist with the U.S. Geological Survey said the project is unlikely to set off larger quakes.

"For a large earthquake to occur, you need a large fault," said David Oppenheimer, a seismologist who has been monitoring The Geysers for years. "Those geologic conditions don't exist at The Geysers from what we know."

AltaRock Energy, the Sausalito-based startup that is drilling the new well, said last week there's nothing to worry about.



SCOTT MANCHESTER / For The Press Democrat

Bob Marelli of Anderson Springs looks at heavy supports that had to be put under one of his homes that he rents out to repair a sinking section of floor caused by earthquakes.

"We anticipate no net increase in seismic activity," said Jim Turner, AltaRock's vice president of operations. The Lake County drilling site can't be compared to the Swiss location because it's geologically different, he said.

A geothermal developer drilled into an earthquake fault deep below Basel, Switzerland, triggering a temblor on Dec. 8, 2006 that damaged buildings and led officials to shut down the project.

But the Lake County site isn't near any major earthquake faults, Turner said. "The area where we'll be drilling is made up of tiny fractures," he said. "Any seismicity produced will be significantly less in size."

AltaRock has received preliminary approval and started the first phase of drilling last week but will need additional permits to finish the project. AltaRock is closely monitoring seismic activity during the drilling and can stop if there is any danger, the company said.

The Geysers in Lake and Sonoma counties is the world's largest geothermal production area, with nearly two dozen power plants and hundreds of steam wells.

AltaRock plans to sell steam to the Northern California Power Agency, a group of city utilities including Ukiah and Healdsburg. The well is on land owned by the federal Bureau of Land Management.

"It's hard for us believe everything's going to be fine," said Joan Clay, another Anderson Springs resident. NCPA recently paid \$16,000 to repair her son's damaged cottage on Anderson Creek, she said.

It may already be too late to prevent the impacts, Clay said. "Once they start, how are they going to turn it off?" she asked.

But Bob Marelli, a retired shoe repairman from San Rafael who moved with his wife to live full time in the small community in 1996, said he's "kind of middle of the road" on the issue.

"If I had my druthers, I wish they weren't doing it," he said of the new drilling project. "But we need to have energy, so that to make progress, I guess we'll have to do it."

AltaRock's project needs more scientific study, said Gospe, who heads the Anderson Springs Community Alliance, a community group organized around the earthquake issue.

"This project caught us by surprise," he said. "It's being slipped through without much environmental review." The group isn't against geothermal development, but feels it should be properly managed, Gospe said.

Anderson Springs feels earthquakes at least once a week, Medrano said. Although no one has been hurt, residents report broken windows, cracked walls, jammed doors, loose tiles and damaged chimneys.

Geothermal producers pay thousands of dollars a year to compensate residents for damage. Most of the quakes are between magnitudes 1.0 and 4.0, but even small quakes can cause damage, Gospe said.

"It depends on how close you are," he said. "These aren't normal earthquakes, because they're man-made."

Small quakes have increased since geothermal operators began injecting Santa Rosa wastewater into the steamfields six years ago.

The largest earthquake recorded at The Geysers was a 4.5, and scientists don't expect anything stronger with AltaRock's project, Oppenheimer said. "A 4.5 seems to be the upper limit," he said. "You could go higher, but you'd be speculating."

Anderson Springs hasn't received much help because it's far from urban centers, Gospe said. "If this were happening in Rincon Valley or downtown Santa Rosa," he said, "drilling wouldn't be allowed."

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