

Swiss geologist stands trial for earthquake damages caused by experimental geothermal project

Schlomoh Gysin, Associated Press, 12-16-09

BASEL, SWITZERLAND — A geologist on trial for causing earthquakes while drilling for hot rocks to produce clean energy said Tuesday he was surprised by the strength of the most powerful tremor.

Markus Haering, who designed the geothermal project, rejected allegations that he deliberately damaged properties and said local people knew the risks.

The deep drilling underground caused a series of earthquakes in 2006, including one of 3.4 magnitude, rattling residents of the northwest city of Basel. Project leader Geopower Basel has already paid around 9 million Swiss francs (\$9 million) in compensation for cracked walls and other damage on properties near the experiment.

The project was suspended at the time and shut down last week after a risk analysis concluded that more quakes could follow if the drilling continued.

The experiment aimed to be the world's first to generate power commercially by boiling water on naturally occurring rocks 3 miles (5 kilometers) underground.

The Swiss efforts are being closely watched in the United States, where the Energy Department is sponsoring more than 120 geothermal energy projects in several states. A leading U.S. company, AltaRock Energy, in September stopped drilling at one key development site north of San Francisco citing drilling difficulties.

AltaRock's Chief Executive Don O'Shei said Tuesday the company is not abandoning the experiment.

"We suspended the drilling project in September, and are still waiting for the final review of seismicity from the Department of Energy," O'Shei told The Associated Press.

The project was criticized by neighbors, who feared it would spur earthquakes. Geologists said the drilling would create minor quakes too light to feel.

O'Shei said if the Energy Department's seismic review comes back as expected, AltaRock will begin drilling in a new site at the Geysers. But, he said there was no timetable for when that might happen.

Haering said, at the Swiss site, "we had very little knowledge of seismicity" before starting to drill. He called the resultant quakes "a learning process for everyone involved."

But project leaders had drawn up an emergency plan, Haering told the court.

"Every minute, we knew what was going on and were able to act instantly," he said.

The pressurized water being sent down the shaft was immediately stopped after the 3.4 magnitude quake, he said.

On paper, the Basel project looked fairly straightforward: Drill down, shoot cold water into the shaft and bring it up again. The superheated water would be capable of generating enough power through a steam turbine to meet the electricity needs of 10,000 households and heat 2,700 homes.

But located on top of a fault line and in the middle of a city, it proved too dangerous to continue, Basel's environmental and economic department said last week.

Haering could face up to five years in prison if a judge rules that he intentionally damaged Basel properties. A verdict is expected next week.

Other attempts in Switzerland to tap the heat of the Earth's bedrock are continuing in zones that are less earthquake-prone. Engineers in Zurich started preliminary drilling last month to see if the area there was suitable.

St. Gallen in eastern Switzerland plans to start drilling on its own geothermal project next year.