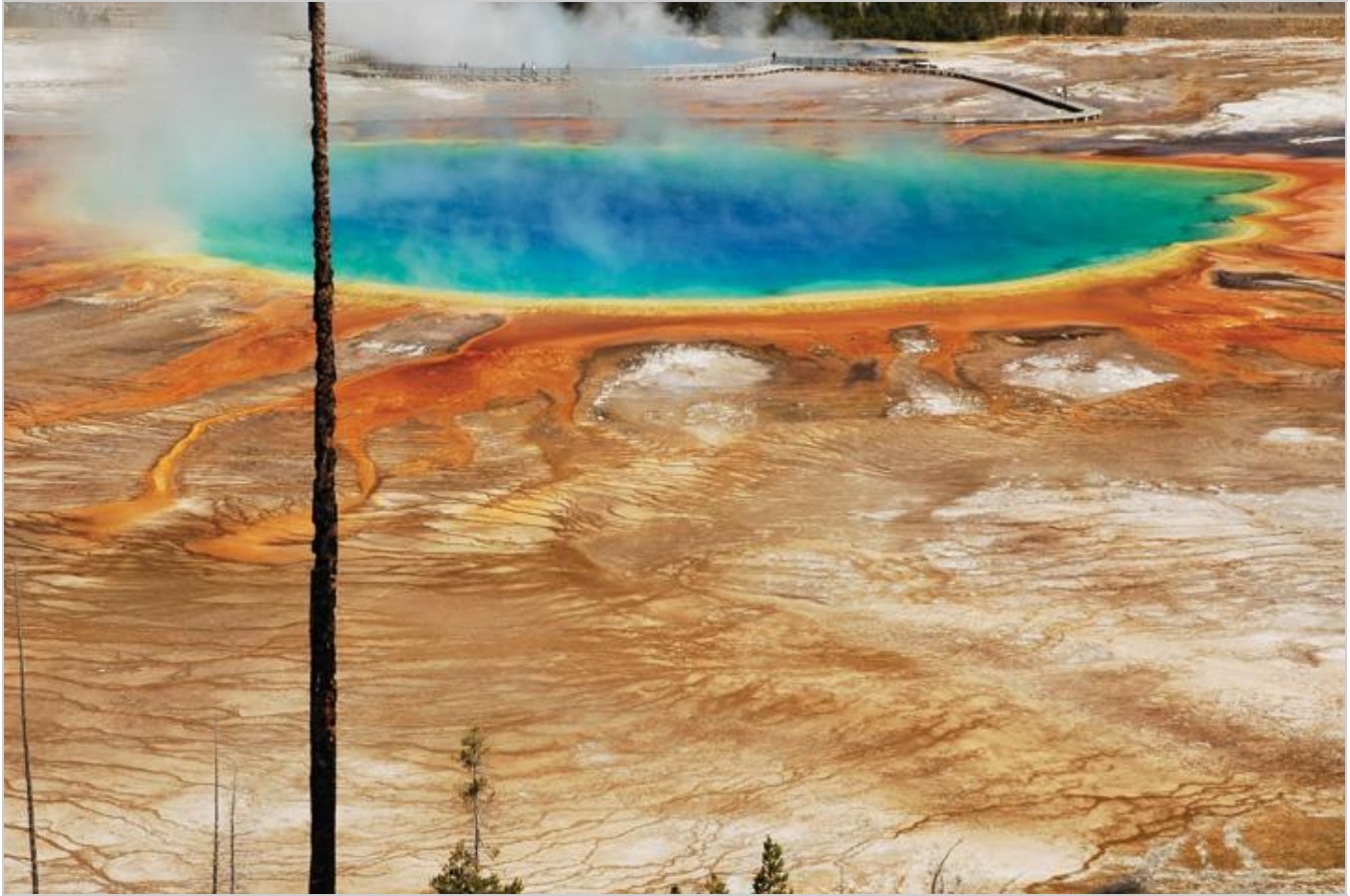


Quakes shake loose fears about Yellowstone volcano



Grand Prismatic Spring in the Midway Geyser Basin at Yellowstone National Park is shown in this 2005 file photo. A Yellowstone geologist says the likelihood of an eruption of the park's caldera is about the same as a large meteorite hitting the earth. (Paul Ng, Star-Tribune correspondent)

By MEAD GRUVER
Associated Press writer
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CHEYENNE -- Run for your lives ... Yellowstone's gonna explode!

Hundreds of small earthquakes at Yellowstone National Park in recent weeks have been an unsettling reminder for some people that underneath the park's famous geysers and majestic scenery lurks one of the world's biggest volcanoes.

In the ancient past, the volcano has erupted 1,000 times more powerfully than the 1980 blast at Mount St. Helens, hurling ash as far away as Louisiana. No eruption that big has happened while humans have walked the earth, however, and geologists say even a minor lava flow is extremely unlikely any time soon.

Some observers are nonetheless warning of imminent catastrophe.

"To those of us who have been following these events, we know that something is brewing, especially considering that Yellowstone is over 40,000 years overdue for a major eruption," warned a posting on the online disaster forum Armageddononline.org.

Another vocal observer, Tom Lakosh, of Anchorage, Alaska, has been urging the Yellowstone Volcano Observatory to deploy more equipment to see if the quakes are happening up and down a vent left over from one of the volcano's cataclysmic eruptions.

"They're lollygagging around here, you know, fiddling, when we could all be buried in ash," Lakosh said.

Earthquakes are hardly unusual in Yellowstone. Hundreds occur in the park every year. Earthquake "swarms" like the recent activity also aren't uncommon, although the swarm appears to have been the most energetic in more than 20 years.

The 900 or so quakes began Dec. 26 and significantly tapered off about a week later. The most powerful quake, on Dec. 28, measured magnitude 3.9, on the cusp of being able to cause minor damage. The vast majority of quakes were too weak to be felt by anyone.

A similar swarm near West Yellowstone, Mont., in 1985 produced more than 3,000 quakes over a three-month period. The largest of those quakes was magnitude 4.9.

Scientists knowledgeable about Yellowstone's geology aren't publicly speculating much about what caused the latest quakes before they can analyze the data. That process will take months.

"It's great that people have opinions, that they're excited," park geologist Hank Heasler said. "However, the good source for information on this are scientists who are aware of what's going on."

Yellowstone spokesman Al Nash, for one, hadn't fled from his desk Thursday at Mammoth Hot Springs.

"The concept of the volcano has an attraction, so I understand why we get some attention," he said. "But I live here. I'm not worried. I'm not packing up my bags."

Nash was a little riled, though, by a Web page entitled "Yellowstone Warning." The page warned "everyone to leave Yellowstone National Park for 100 miles around the volcano caldera because of the danger in poisonous gasses that can escape from the hundreds of recent earthquakes," and carried the U.S. Geological Survey logo.

"A casual observer would be led to believe that was an official source," Nash said, pointing out that the Yellowstone Volcano Observatory hasn't changed the volcano's alert level from "normal."

Working with the Geological Survey, Nash issued a press release saying no evacuation had been ordered.

Geological Survey spokeswoman Jessica Robertson in Reston, Va., said the Web page violated the USGS trademark and the agency's attorneys were investigating whether a federal offense was committed.

Phone and e-mail messages left with contact information on the Web site weren't returned Thursday.

Jake Lowenstern, the Menlo Park, Calif.-based scientist in charge of the Yellowstone Volcano Observatory, said theories about the quakes -- such as Lakosh's idea that they're centered on a vent -- aren't impossible, but the evidence is lacking.

"I could come up with 100 different theories without any evidence for them and they would all be equally likely," Lowenstern said. "Unless you have some reason to say that's what's going on, then you're not going to get a whole lot of people convinced by your speculation."

Heasler, the Yellowstone geologist, said the odds of a cataclysmic eruption at Yellowstone any time soon are astonishingly remote -- about the same as a large meteorite hitting the earth. The last such eruption happened 640,000 years ago. The last eruption of any kind at Yellowstone was a much smaller lava flow about 70,000 years ago.

"Statistically, it would be surprising to see an eruption the next hundred years," Lowenstern said.

Much more likely, he said, would be a hydrothermal explosion in which underground water encounters a hot spot and explodes through the surface. Small hydrothermal explosions producing craters a few feet across happen in Yellowstone perhaps once or twice a year. Large hydrothermal explosions leaving craters about the size of a football field happen every 200 years or so, according to a 2007 paper co-authored by Heasler, Lowenstern and others.

Lowenstern said a variety of new equipment installed deep within bore holes in the park over the past two summers eventually will provide a clear picture of what's been happening with the earthquake swarm. The data could help scientists make better predictions about Yellowstone's geology.