

Geophysicist says Pawnee earthquake happened on newly discovered fault

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WICHITA, Kan. -- According to a geophysicist, Saturday's earthquake in Pawnee happened on a newly discovered fault zone.

Oklahoma researchers use a map of fault zones to predict where the next earthquake could happen, but Saturday's quake was on a fault researchers said they didn't know about.

"If they happen on a fault that we didn't previously know about, it's a bit of a surprise," said Dan McNamara, a geophysicist with the U.S. Geological Survey.

The Oklahoma Geological Survey created a map of fault zones.

"A lot of these faults are known from the oil industry," said McNamara. "They have very detailed maps of the subsurface because of oil and gas exploration."

He said it's not uncommon for earthquakes to happen on unknown faults.

"Many of the earthquakes that we are seeing are occurring on faults that we don't know about," said McNamara. "It's not so common in more active areas, like California and Alaska. Most of the faults come to the surface, for example, and they can be mapped out."

He said the faults in Oklahoma are much more difficult to find because they are very deep.

"They're several miles down, and the only way you'd know about them is through oil and gas exploration...physic type studies that they would do," said McNamara.

McNamara said it's possible Saturday's earthquake could be boosted to a 5.7 magnitude earthquake, which would be the strongest in state history.

"You may see something about that over the next few days by the USGS," said McNamara.

He said there will be aftershocks and more earthquakes in the future.

"If you live near an area that's had smaller earthquakes, you might be prepared for stronger shaking," said McNamara.

He said they are trying to get more precise earthquake locations, so researchers can map out the faults in better detail.