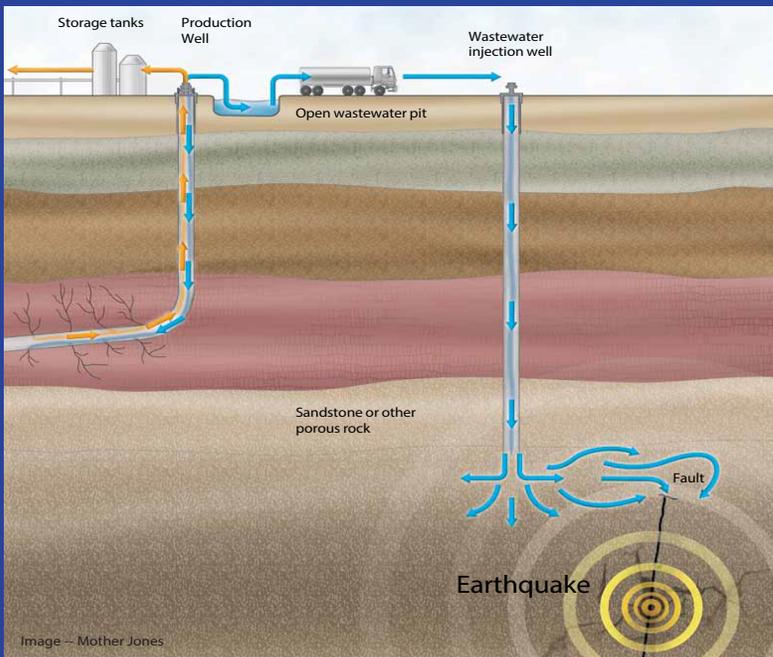


Yes, Humans Really Are Causing Earthquakes

by Justin Rubinstein, USGS Research Geophysicist



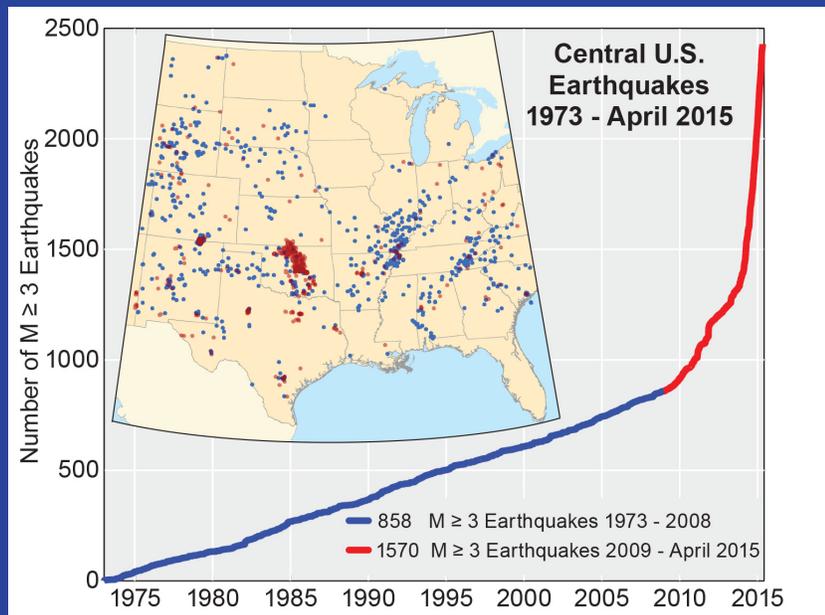
- The earthquake rate has dramatically increased in the central US in the last 6 years.
- Oklahoma had more $M \geq 3$ earthquakes in 2014 than California.
- This increase is due to earthquake activity induced by oil and gas operations.
- Most earthquakes are not caused by hydraulic fracturing.
- We may be able to control these earthquakes.



Well operator standing next to a wastewater injection well in Weld County, Colorado.



Damage to St. Gregory's University in Shawnee, Oklahoma



USGS Menlo Park Campus • Free Public Lecture • August 27, 2015 at 7PM

USGS Evening Public Lecture Series: online.wr.usgs.gov/calendar

Map for lecture site on reverse

Directions to U.S. Geological Survey

The USGS Menlo Park Campus is located at 345 Middlefield Road in Menlo Park

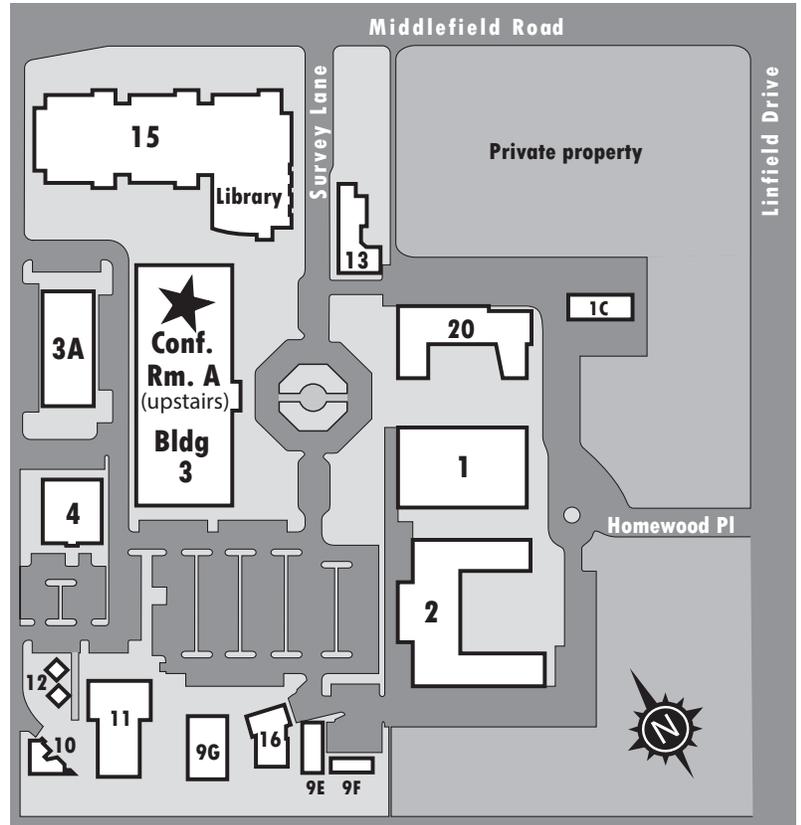
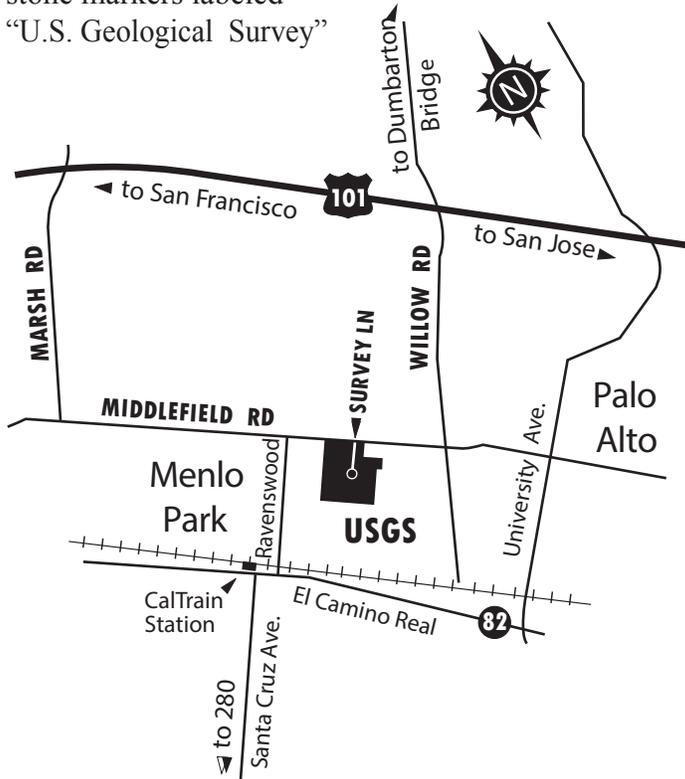
From San Francisco

- Exit highway 101 at Marsh Road, Atherton
- Go west to the T-junction with Middlefield Rd.
- Turn left (south)

From San Jose

- Exit highway 101 at Willow Road, Menlo Park
- Go west to Middlefield Rd.
- Turn right (north)

Enter the USGS campus at Survey Lane with large stone markers labeled “U.S. Geological Survey”



 For special needs accommodation please e-mail wmcesic@usgs.gov, two weeks prior to an upcoming event.

Free USGS Public Lecture

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