NAME Structural Geology Homework

**due Monday, April 30**

**Silent Earthquakes**

Read the following wonderful article (it's posted on Blackboard as a pdf file):

Cervelli, Peter, 2004, The threat of silent earthquakes: Scientific American, v. 290, no. 3, p. 86-91.

What is a “silent earthquake”, and why is it silent?

Describe what happened during the silent earthquake in early November on the Big Island of Hawaii (not why it happened, just what).

If the south flank of the Big Island were to fail catastrophically, what would be the result? What evidence is there that this has happened in the past in the Hawaiian Islands?

Where else do silent earthquakes occur besides on the flanks of volcanic islands, and why is detection of silent earthquakes important in our overall assessment of seismic risk in an area?

What role might pore fluid pressure in triggering slip along the faults that bound the south flank of the Big Island?