Impact Of Hydraulic Fracturing On Earthquakes

Is Hydraulic Fracturing Responsible for Earthquakes?

Introduction to the Controversy

Hydraulic Fracturing knew as ‘fracking’, is a process that is carried out by drilling horizontally down the earth using intense high-pressure to extract Earths resources. By injecting millions of gallons of water containing sand, salt and other toxic chemicals which is then placed into shale deposits with high pressure. This will result in fracturing the rock that will create fissures to extract the raw fuel that allows workers to extract these fossil fuels much easier. It is a common man-made controversial technique used among companies to recover these oils and natural gases for our everyday use. However, over the years fracking has shown to pose serious environmental concerns on the process of hydraulic fracturing. Causing controversy among researchers whom speculate if hydraulic fracturing is responsible for earthquakes or not.

Why Some Agree That Hydraulic Fracturing IS NOT causing earthquakes

Recent researchers have suggested other related procedures that have largely shown to be responsible for causing earthquakes rather than hydraulic fracturing. According to the article, ‘Are fracking and earthquakes really connected?’ says there’s two techniques being used that have resulted in the causing of earthquakes first is pumping waste liquids into the ground. The drillers re-inject the saltwater that appear in the oil deposits they have recovered from when drilling to receive the oil and natural gas. However, this must go somewhere so they build wastewater wells to dispose of the water, so it does not contaminate oil deposits, that is then injected deep into the earth. The only problem with that is when performing an injection, its not always common that they companies perform a geologic detail review of this method. Where there could potentially be unseen fault lines and because of the pressure of the injection it could burst. The other process is carbon capture and storage (CCS) what’s done is C02-rich gases is extracted from an existing well its then processed and compressed. Once is treated its transported to storage sites through pipelines which is generally the cheapest way of transport. Then injected into various geological storage sites to be monitored. Although according to the National Academy of Science says that CCS can, “induce seismic events than wastewater disposal because the volumes of injected fluids are theoretically larger, occurring over longer periods of time and under higher pressure” (Trilling, 2017). Meaning that together from both techniques of pumping even more liquid underground adding high pressures underground more than fracking resulting in earthquakes. In another article, ‘How oil and gas disposal wells can cause earthquakes’ says theirs about 50,000 disposal wells in Texas which makes sense since the state is known for its manufacturing of oil and natural gases. Yet it is also the cause of many earthquakes because of these waste wells, it would not make sense if the act alone of drilling and fracturing the shale would be responsible for these earthquakes.

Why Some Agree That Hydraulic Fracturing IS causing earthquakes

Discussion Board Forum Teamwork Reflection

For our team discussion board forum, we receive, ‘Hydraulic fracturing IS NOT responsible for causing earthquakes’. All the group members contributed in a synopsis based on the article they selected to explain why hydraulic fraction does not cause earthquakes and using evidence from the chosen article to backfire their claim. Everyone wrote comments to our piers synopsis from what their article was about which was interesting to see different responses even though it was the same topic. Practically all the comments from the team were positive feedback and were mostly agreeing with each other on their synopsis. On how they showed important evidence from the article, and a lot of us agreed that wastewater wells seem to be the causing of earthquakes than fracking based on the article available to us. Of course, some of my pears had questions for more information or whom opposed to our statement, however everyone responded respectfully and still applaud our effort to support the topic. Base on the deadlines we certainly worked together to keep up with the assignment as well as informing our group to respond to the discussion board to make sure no one missed the deadline. Personally, made sure my team and myself were on track with the discussion board including responding to my fellow classmates. There was no conflict among us it was quite encouraging and welcoming, by communicating with each other and working together. Our group exceled, I believed we followed the instructions and meeting the assigned deadlines, we did well as a team overall.

Summary

A few preconceived ideas I originally had about hydraulic fracturing was that wastewater wells were the causing of earthquakes. Based on the research of the article I choose for the discussion board synopsis was, ‘Are fracking and earthquakes really connected’ gave strong evidence that supported my argument and still does. However, after reading a few articles from the other group including the ones I chose from the, ‘hydraulic fracturing is the cause of earthquakes’ changed my perspective.

References

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