# Scientific Writing Abstract: Submitted by Cyril Naves

# Analysis of the effects of fracking on seismic activities leading to potential earthquakes

Fracking is the process of injecting a high-pressure fluid underground to crack open the rocks and exploit the natural gas trapped deep inside the ground. Fracking has become more common in the US and Canada to compete against the rising oil costs fixed by the countries which belong to the Organization of the Petroleum Exporting Countries. This study on fracking conducted by geo scientists at the University of Stanford, aims to bring out a better view on the ill effects of fracking, in particularly the potential to create earthquakes.

The methodology involved by the geo-scientists at the university was a data collection activity of the seismic parameters in the fracking site and using a data-mining algorithm to detect earthquake-pattern recognition in the analysis. When this data analysis was performed on close to fifty-three fracking production wells in the state of Arkansas in US, the team of geo-scientists were able to identify that, in about seventeen of them earthquakes were recorded but of a smaller magnitude.

This study further reveals that, in the near future these smaller recorded magnitude of earthquakes can cause bigger life threatening natural disaster which might be a full-scale earthquake. By this analysis of the fracking site by the geo-scientists, it has paved the way for the people to understand the ill-effects of fracking and to minimize their gas exploration through fracking activity immediately, avoiding a major impending danger to the earth.

**Reference:** Clara E. Yoon et al. Seismicity During the Initial Stages of the Guy-Greenbrier, Arkansas, Earthquake Sequence, *Journal of Geophysical Research: Solid Earth* (2017)