

**THE STATE CORPORATION COMMISSION  
OF THE STATE OF KANSAS**

Before Commissioners: Pat Apple, Chairman  
Shari Feist Albrecht  
Jay Scott Emler

In the matter of the application of Quail Oil & Gas, LC to authorize injection of saltwater into the Arbuckle formation at the Sly 2-6 SWD well, located in the NE NE SE of Section 6, Township 17S, Range 6E in Morris County, Kansas. ) Docket No: 17-CONS-3484-CUIC  
) CONSERVATION DIVISION  
) License No. 33185

**PRE-FILED REBUTTAL TESTIMONY OF LEE B. SHOBE  
ON BEHALF OF QUAIL OIL & GAS, LC**

- 1 Q. Please state your name, position, employer and office address.
- 2 A. My name is Lee B. Shobe. I am an independent geologist. My address is 9232 W. Brandt  
3 Avenue, Littleton, Colorado 80123.
- 4 Q. Do you have any specific response to Dr. James Abers' pre-filed testimony?
- 5 A. Yes, while the US Geological Survey has concluded that wastewater disposal is a source of  
6 the recent increase in earthquakes in the central United States (USGS, *Induced Earthquakes*  
7 *Myths and Misconceptions*, 2017), the US Geological Survey in the same paper has also  
8 concluded that "[n]ot all wastewater injection wells induce earthquakes." In fact:
- 9 Most injection wells are not associated with felt earthquakes. A combination of  
10 many factors is necessary for injection to induce felt earthquakes. These include:  
11 the injection rate and total volume injected; the presence of faults that are large  
12 enough to produce felt earthquakes; stresses that are large enough to produce  
13 earthquakes; and the presence of pathways for the fluid pressure to travel from the  
14 injection point to faults.

1        See <https://earthquake.usgs.gov/research/induced/myths.php>. Dr. Abers has failed to show  
2        how the subject injection well would induce seismicity when there is no recent record of  
3        seismic activity in the area even though injection is occurring in such area.

4        Q. Have you reviewed publically available information on the United States' Geological  
5        Survey National Earthquake Information Center (NEIC) website?

6        A. Yes, I searched the NEIC website on April 13, 2017 and again on May 24, 2017.

7        Q. As of May 24, 2017, did such NEIC website show any earthquakes since 1950 with an  
8        epicenter in Morris County, Kansas?

9        A. No.

10       Q. Are you familiar with the history of injection wells in Morris County, Kansas?

11       A. Yes.

12       Q. To your knowledge, when were injection wells first used in Morris County, Kansas?

13       A. Injection wells have been used in such Area since the 1920's.

14       Q. Does this conclude your rebuttal testimony?

15       A. Yes.

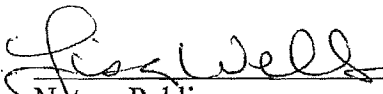
VERIFICATION

STATE OF Colorado )  
  ) ss:  
COUNTY OF Jefferson )

I, Lee B. Shobe, being duly sworn, upon my oath, state that I have read the foregoing Pre-Filed Rebuttal Testimony to which this verification is attached, that I am aware of its contents, and the statements are true and correct.

  
\_\_\_\_\_  
Lee B. Shobe

SUBSCRIBED AND SWORN to before me on this 6 day of June 2017.

  
\_\_\_\_\_  
Notary Public

My commission expires: 11-10-2019

LISA WELLS  
NOTARY PUBLIC  
STATE OF COLORADO  
NOTARY ID 20114072310  
MY COMMISSION EXPIRES Nov. 10, 2019