

18 October 2017

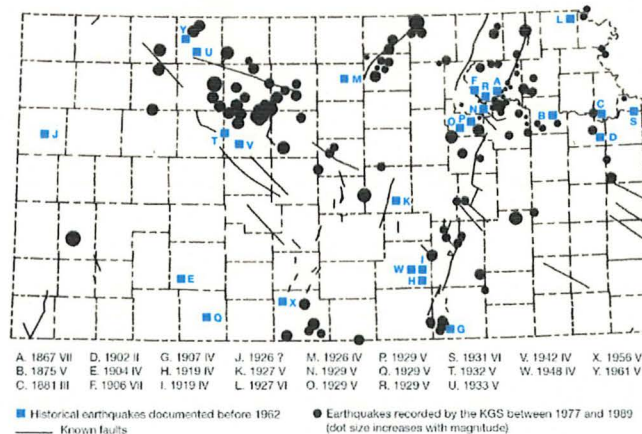
Kansas Corporation Commission (KCC)  
Attn: Rene Stuckey  
Conservation Division (Oil and Gas)  
266 N. Main Street, Ste., 220  
Wichita, KS 67202-1513

- Re: 1. Application to Amend Injection Permit  
(Add 1 Well for Enhanced Recovery:  
Thrasher #10)  
E-31, 965.  
Thrasher 1-5  
Sec. 25-13S-20E  
Douglas County.
2. Application(s) for Injection Well(s)  
E-32, 566  
Hadl-1 &2  
Sec. 36-13S-20E  
Douglas County

Dear Commission Members:

The Water Advisory Team (WAT-Lawrence, KS), a research and advocacy group for water issues in northeastern Kansas, urges you to reject the above applications for installing and operating salt water injection wells on the Hadl and Thrasher leases in Douglas County. At the present time, there is too little information available to ensure that the potential adverse effects of allowing the installation and operation of the proposed injection wells can be accomplished in a safe and environmentally compatible manner.

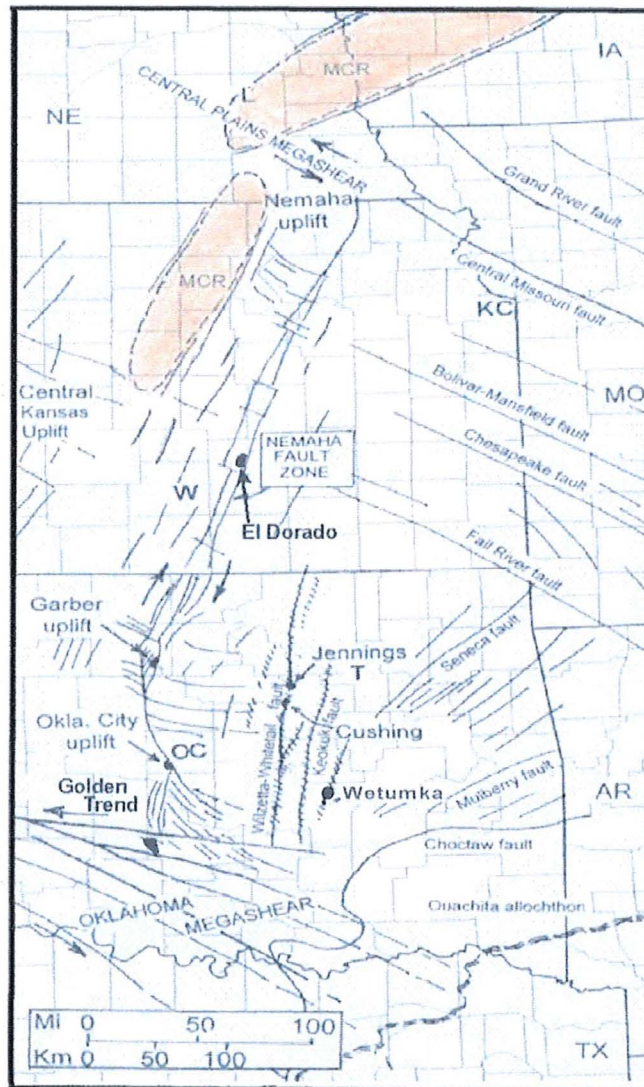
Although northeast Kansas has not had major seismic activity recently, the record indicates that this area has historically been seismically active (i.e., within the last 150 years) (DuBlois and Wilson, 1978). Major earthquakes occurred in northeast Kansas impacting Kansas City, Olathe, Lawrence, Topeka, Wamego, and other communities in the area in 1867, 1875, 1881, 1906, and 1931 with magnitudes as high as 7 on the MMI scale. Some, but not all, of these are indicated on the following figure from Buchanan, et al. (2014):



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More recently smaller magnitude earthquakes (in the 1.5 to 3 magnitude) have been recorded in the 1980-2014 time frame (KGS, 2017).

The unevenness of how faults are mapped by geologists in Kansas is evident by the fact that the Worden Fault is not shown on the above figure from Buchanan et al. (2014), but several other faults near the central eastern border of the state are. These don't appear to be fully consistent with faults extending into eastern Kansas from Missouri shown on the figure below from Johnson (2008), which does not show the Worden Fault either. However, the Worden Fault is shown on the geologic map of Douglas County (Ross, et al., 1992):



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Note that the unnamed fault shown in the above figure between the Bolivar-Mansfield Fault and the Central Missouri Fault extends into Douglas County to the area around Eudora and Lawrence near where the applicant in the matter at hand wants to install and operate injection wells.

At present, only one fault has been identified within Douglas County. That is the Worden Fault which extends approximately 6 km to the west of Baldwin City. However, this appears to be due more to lack of information than lack of faults. It is virtually certain that more faults exist within Douglas County, Kansas and the surrounding area. Otherwise the area could not have been as seismically active as it was over the last 150 years. The Worden Fault has been described as a “northeast-trending fault located in southwestern Douglas County, Kansas... with a displacement of about 6 m with the downthrow side to the northwest” and is thought to “probably (be)... the surface reflection of adjustments of Precambrian basement fault rocks” (Merriam, 2009). It is not unusual that we would not know about faults that are actually present until they self-identify by becoming active. That is what happened in the Christchurch, New Zealand area in 2010 when a major earthquake struck an area not previously known to have any active faults. This is also what appears to have been the case closer to Kansas in Pawnee, Oklahoma in 2016. In an interview after that earthquake last year, a U.S. Geological Survey (USGS) geophysicist was quoted in an interview stating the general principle that “it’s not uncommon for earthquakes to happen on unknown faults. Many of the earthquakes that we are seeing are occurring on faults that we don’t know about” (KWCH, 2016).

The proposed injection wells are for relatively small injection rates (i.e., on the order of 100s of barrels/day) and to relatively shallow depths. Presumably Midstates Energy knows the depth it intends to inject at, if it has not already drilled injection wells at these locations, but this was not stated in the public notice. General geologic information indicates the Squirrel formation in that part of Douglas County may be at depths on the order of 700 feet (O’Connor, 1960). Despite the shallow depth and small injection rates, the potential impact in such cases can be substantial. According to the USGS, “induced seismicity can occur at significant distances from injection wells and at different depths. Seismicity can be induced at distances of 10 miles or more away from the injection point and at significantly greater depths than the injection point” (USGS, 2017).

The impact of drilling and injection programs may also be adverse and substantial on residents of or close to the areas involved and can disrupt water resources such as drinking water wells. Although the general area along Route 458 is served by a rural water district, there may be residences that have their own water supply wells and chose not to hook up to rural water. Has the applicant or the KCC notified local residents to inform them of these applications and solicit their input? Unfortunately, there is a history of local residents in Douglas County being poorly served by the KCC when applications are sought for these types of petroleum hydrocarbon developments. What happened near Baldwin City in the 2013-2014 time frame is a case in point. For example, news coverage indicates that a service man and his wife had purchased a 10 acre plot of land to build a home on before leaving for overseas duty. However, on returning in 2014 he found that the KCC had allowed a company to come in and place four new oil wells and an injection well on his property that effectively precluded his ability to utilize the land. Despite KCC regulations, he had not been notified of what was happening on his property while he was deployed and serving his country (Hancock, 2014 and Hawley, 2014). Complaints about this situation reached the legislature in 2014, but the legislature has not yet seen fit to take action. At the time, Senator Holland was quoted in the news as saying that “he has heard numerous complaints about new drilling operations.” He further stated that “there are drillers who have no intention at all to work with landowners... they’re not playing nicely in the sandbox” (Hancock, 2014).

The system is broken when government agencies constituted to serve the public allow these kinds of things to happen. The KCC should not issue permits for saltwater injection until the necessary research has been done to develop conclusive information that the citizens and environment of Kansas will be protected. In this case, at the least, that means that: (1) more research is necessary to properly identify geologic faults in the area of concern; (2) a proper program to consider the cumulative effect of the drilling of production and injection wells is needed; and (3) measures are necessary to protect the citizens, their property, and their environment in cases such as these with the burden of proof that such protection will be provided is placed on the profit-making petroleum industry instead of the citizens. The 15-day comment period given in this particular case is way too short for citizens to have to respond to and is another example of the burden being placed improperly.

To date, we are unaware of any oil or gas company in Kansas being held accountable for causing earthquakes or ignoring the rights of Kansas landowners and residents when they want to utilize other people's property. Florida-based Midstates Energy has given no assurances that it will do anything more than operate to maximize their short-term profit by exploiting others from a distance.

We urge you to reject these applications for permits in order to ensure the safety and well-being of Kansas and Kansans.

Sincerely yours,

Gil Zemansky, Ph.D., P.G., P.HGW, CGWP  
(for WAT-Lawrence, KS)

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Pat Apple, Chairman  
Shari Feist Albrecht, Commissioner  
Jay Scott Emler, Commissioner

Sam Brownback, Governor

November 15, 2017

THAD HOLCOMBE  
1817 LEARNARD AVENUE  
LAWRENCE KS 66044

**RE:** Application's for Injection Authority  
Docket No. E-32,566  
MidStates Energy Operating LLC  
Hadl I-1 & I-2  
Sec. 36-13S-20E  
Douglas County, Kansas

Docket No. E-31,965  
MidStates Energy Operating LLC  
Thrasher #10  
Sec. 25-13S-20E  
Douglas County, Kansas

Dear Mr. Holcombe:

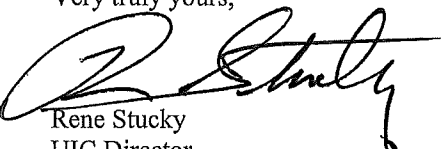
These letter(s) acknowledges receipt of your protest/objection to the above-referenced applications.

Please advise me within ten (10) days of receiving this letter if you feel a hearing should be scheduled in these matters. If a hearing is scheduled, you will be expected to participate in the hearing either in person or through legal counsel. Should you decide that you will not participate in a hearing, none will be scheduled and the application will be handled administratively and your protest will be noted. The U.S. Environmental Protection Agency (EPA) requires a hearing be held where significant interest is demonstrated. Failure to participate in the hearing process after filing a protest or objection indicates a lack of significant interest and no useful purpose would be served by holding a hearing if you, as opposing party, are not there to present testimony or cross-examine applicant's witnesses. If you are going to appear, you will receive a Notice of Hearing and should carefully comply with that Notice, including the requirement of pre-filed testimony. Any person requiring special accommodations under The Americans With Disabilities Act needs to give notice to the Commission at least ten (10) days prior to the scheduled hearing date. If you have questions regarding the hearing process, please contact Jon Meyers (316-337-6200) of our legal staff.

Commission staff has the duty to represent the public in general in recommending approval or denial of applications for injection or disposal well authority. One of the Commission's primary concerns is the protection of our groundwater and environment. If no hearing is held on these applications, your objection will be taken into consideration by our staff in making a recommendation on these applications. All of our staff geologists and technicians have qualified as expert witnesses and are sensitive to the concerns expressed by you and the citizens of our State.

Enclosed is a copy of the Conservation Division regulations regarding applications, hearings, and protestants. If you have any other questions, please do not hesitate to contact me.

Very truly yours,

  
Rene Stucky  
UIC Director

cc: MidStates Energy Operating LLC  
District Office # 3  
Jerry Knobel  
Legal ✓  
File

Enclosure