

September 5, 2019

Mr. Rene Stucky
Kansas Corporation Commission
266 N. Main Street, Suite 220
Wichita, Kansas 67202-1513

Dear Mr. Stucky:

We wish to register our opposition to the issuance of a permit to TDR Construction, Inc. for the purpose of “enhanced recovery of saltwater into the Moldenhauer Lease,” well numbers 30 and 45, located in Franklin county, Kansas. This lease is located in the southwest $\frac{1}{4}$ of section 29, twp. 15S, range 21 east.

The basis of our opposition is framed by the following considerations:

1. We are in possession of a circa 1920s oil and gas wells map which indicates an abandoned well in proximity of that lease and we have no assurance that that well has been plugged and if so, properly plugged.

2. We have in our possession testimony by a petroleum engineer, Dwayne McCune, Cedar Technical Services, Baldwin City, Kansas that normal spacing for waterflood operations in eastern Kansas have, historically, been “very close.” Mr. McCune states that in 1942, on average, one oil well was located, in a lease, per 2.06 acres. We believe this data suggests the number of abandoned wells in the oil-producing areas of eastern Franklin county is likely very high and that the probability of locating such wells is remote. Paragraph #1 above and this paragraph, #2, relate to our protest by virtue of abandoned wells presenting threats to our health, property, income, and friends.

3. The legal notice published in the Ottawa Herald on August 8, 2019 states that TDR Construction, Inc. has filed an application “for a permit to authorize the enhanced recovery of saltwater into the Moldenhauer Lease....” We do not understand the language of the legal notice and we do not believe the state corporation commission in this state is legally authorized to permit enhanced recovery of saltwater operations. Hence, we are confused by the language of the

notice which language is grammatically correct, but not defined in commission regulations, or is incorrect and thus defective. In either case the notice does not serve its purported purpose of reasonably informing us, the public, of an activity which may put us at risk.

4. In the January 14, 2019 the corporation commission's Abandoned Oil and Gas Exploration and Production Wells report to the legislature the commission states that in its district #3, the district in which we live, there are 5,099 abandoned wells which require action. The same report issued in January, 2018 listed 5,101 wells which required action. This constitutes a net reduction of 2 wells. Most of those wells are Level B and C wells. At the current rate at which such wells are being plugged, a net of 2 wells a year, these, these 5,099 wells will be plugged in 2,549.5 years. This is unacceptable to us because of the threat these wells pose to us.

5. We live in the Marais des Cygnes watershed, own a farm here, float the Marais des Cygnes river in our canoes, and our float in October of this year will be between Ottawa, Kansas and Rantoul, Kansas which float will take us right past the place where the tributary which drains the Moldenhauer lease meets the Marais des Cygnes. That place is just above Peoria, Kansas.

6. We have an investment property on our farm; this property leases, currently for \$1,495/month. Past tenants at this property have often sent their school-age children to Central Heights public school, USD 288, which school has as its water source Franklin County rural water #6. This water district gets its water from an intake pipe in the Marais des Cygnes river which is not far (I can quantify this) downstream from where the watershed for the Moldenhauer lease drains into the river. Here is the connection: the concentrated saline solutions injected under high pressure into the Moldenhauer lease put the streamlets near this lease at risk, thus the Marais des Cygnes river at risk, thus the public water supply, Franklin County Rural Water #6 at risk, thus the public water at Central Heights school at risk, thus the value of our real property at risk.

7. Our friends drink rural water #6 water. Our water, at our farm is not rural water #6. We drink Franklin county rural water #2 water. We live close to the boundary between these two water districts.

8. It is known in petroleum engineering that there exists a critical input pressure and pressure exceeding this pressure in a formation can result in a rupture of the formation, in direct passage of the input water to nearby producing wells, extension of old shot cracks, or to abandoned wells. Unless we are informed of the critical input pressure of the formation into which wells 30 and 45 will be injecting, we will assume that we are at risk by issuance of this permit.

9. The state's Abandoned Well Plugging and Site Remediation Fund is funded by the state through June, 2020. We have little assurance that the legislature will enact legislation to fund plugging and remediation past this date. The 5,099 wells in our district which require action hence may exist in perpetuity. Thus the issuance of further permits in the context of this funding uncertainty appears to be folly to us, not merely because of the risk to our health, property, income, and friends.

10. In his prefiled testimony in docket 14-CONS-455-CUIC James E. Melland, PE, PG, stated on page 4 stated that the well which was the subject of that docket, well #2 in the Krehbiel C lease, should be renamed an "Enhanced Recovery" well from "Disposal" well because the top of the injection zone "is not conclusively 50' below the Mississippian oil-water contact." This suggested toponymical rebooting is what we believe is occurring in many leases near us in eastern Franklin county. Namely, enhanced recovery wells are masking actual disposal activities. Mr. Melland's testimony is some evidence that masking is occurring because he's suggesting the verbal charade. This is a form of masking risk, subterfuge.

11. The state rendition form for the North Moldenhauer for the year 2019 indicate a 50% penalty for "failure to file." This penalty indicates a lack of stewardship to the state of Kansas and to its citizens. At some point, we infer, the oil assessment rendition form was finally filed. This form indicates 31 producing wells and 19 injection wells. The entire lease produced 945 bbls in 2018, 932 bbls in 2017, 1,942 bbls in 2016, 2,556 bbls. in 2015, and 2,317 bbls. in 2014. The Kansas Geological Survey's New Chart System predicts an annual oil production decline in this lease of 25.69%. Between 2014 and 2018 production declined 1,372 bbls, which constitutes an average decline over those 5 years of $1372/2317=11.8\%$. The total production decline over those same years is 59.2%.

The estimated gross reserve value of the oil pool in this lease is \$107,313. If we assume that the average cost of plugging a well in the Kansas Corporation Commission's Conservation District #3, the district in which the Moldenhauer lease is located, is \$4,500, then the 31 producing wells and the 19 injection wells in this lease represent a plugging liability of \$225,000. One can see that the predicted gross reserve value of the pool does not cover the plugging liability in this lease. Further, if the operator could net 25% of gross, which we doubt possible, the operator would net \$8,916 in 2018. At \$8,916 the operator could pay the \$225,000 plugging liability in 25.23 years. 25.23 years does not express, however, the forecast decline in productivity. We believe this lease cannot cover its liabilities and its continued operation puts Kansas taxpayers at risk if one were to think of the reserve pool as a bond to taxpayers because the operator and royalty owners are chewing through the bond.

12. On the southeast 40 acres of the southwest $\frac{1}{4}$ of section 29, the section in which this lease is located, and the 40 acres in which wells 30 and 45 are located, there are 7 injection wells, three for which permit is sought and 4 which are permitted. If permit is granted to wells 30, 45, and W-42 (the latter is under a protest) then the total permitted injection volume on this 40 acres is 280 bbls of saline solution a day. If one assumes an oil barrel to constitute 42 liquid gallons, then we have 11,760 gallons of permitted saline solution injected into 40 acres. This saline solution, if permits are granted, will be injected at a pressure of 650 psig. Two points here: these permits are granted in perpetuity and we have made note of declining production in this lease. The KCC has not promulgated a metric which would be useful to balance risk of injection with productive life of an oil play. Without such a metric we choose the side of caution and advise against permitting under these circumstances. The second point: the target zone for the two subject wells was shot twice per foot. These are relatively shallow zones and in such zones relevant literature suggests a verticality in the fracturing which sometimes results. Since some of the headwaters of the Marais des Cygnes river are in the streamlets which drain this lease, we express our thinking that you need take caution is issuing the sought permits.

13. One well in this lease, W-42, a well for which a public notice was published in the Ottawa Herald on July 6, 2019 had a temporary abandonment permit which expired on January 31, 2019. The referenced public notice

pertained to an application for an injection permit of 40 bbls./day at 650 psig. Our thinking is that seeking such permit is a strategy for avoiding the \$100 annual fee for the temporary abandonment or avoiding the \$4,500 cost of pugging the well. Our math indicates that this is a played-out lease and as a consequence the operator promulgates EOR applications which mask a cost-avoidance strategy.

Mr. Stucky, with these points we register our protest.

We request a favor: please mail the application for this permit or send us notice of how we might access the application. Thank you.

Cordially,

Scott Yeargain
Polly Shteamer
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Ottawa, Kansas 66067
785-418-7615

Cc: TDR Construction, Inc.
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