BEFORE THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS

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In the Matter of the Application of TDR Construction, Inc. to Authorize Injection of Saltwater into the Squirrel Formation at the Superior #I-1 Well, Located in Section 10, Township 16 South, Range 21 East, Franklin County, Kansas. Docket No.19-CONS-3168- CUIC

License No. 32218

Conservation Division

PRE-FILED DIRECT TESTIMONY OF LANCE TOWN

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- 2 Q. STATE YOUR NAME AND BUSINESS ADDRESS FOR THE RECORD.
- A. My name is Lance Town. My business address is TDR Construction, Inc., P.O. Box 339,
 Louisburg, Kansas 66053.

5 Q. WHAT IS YOUR OCCUPATION?

A. I am self employed as an owner and officer of TDR Construction, Inc., ("TDR") which owns
and operates oil and gas leases in eastern Kansas. I am also an owner and officer of Town
Oilfield Service, Inc. ("TOS"), which is an oil and gas service company, that provides drilling,
pulling, plugging and other related services to numerous oil and gas operators in eastern
Kansas. I am also an owner and officer of additional companies involved in oil and gas related
activities similar to those engaged in by TDR and TOS.

12 Q. WHAT WAS THE NATURE OF YOUR EMPLOYMENT PRIOR TO THAT TIME?

A. I am a third generation oil producer and have been around the oil business my whole life. I
 started working full time for Town Oil Company in 1991, and performed a number of duties
 while employed in that capacity including field maintenance, pumping, employee supervision,
 and regulatory compliance. I started my first oil and gas related company in 1996 and since

- that time I have been self employed as an oil producer and oil field service provider in eastern
 Kansas.
- Q. DOES TOS PROVIDE OILFIELD SERVICE WORK TO COMPANIES OTHER THAN
 THOSE WHICH YOU ARE AFFILIATED WITH?
- A. Absolutely. TOS owns two drilling rigs and is responsible for drilling approximately 250 to
 300 wells per year for many different operators on a contract basis. In addition, TOS provides
 various other oil field services upon numerous eastern Kansas oil and gas leases.
- 8 II. <u>PURPOSE OF THE SUBJECT APPLICATION</u>

9 Q. WHAT IS THE PURPOSE FOR FILING THE APPLICATION WHICH IS THE SUBJECT
10 OF THIS DOCKET?

A. To obtain design approval for an injection well on the Superior Lease located in the NE/4 of
 S10-T16-R21 in Franklin County, Kansas.

13 Q. PLEASE DESCRIBE THE PROJECT TDR IS CONDUCTING ON THE SUPERIOR LEASE
14 THAT HAS LED TO THE FILING OF THE SUBJECT APPLICATIONS.

- 15 A. TDR owns a small tract of real property upon which the subject well is proposed to be drilled. 16 This property is located in the midst of a previously developed oil field, however all wells 17 located thereon were plugged and abandoned in 2006 by the KCC fee plugging fund. In 2018 18 TDR drilled a production well upon this tract of real property to determine if commercial 19 quantities of oil existed beneath such property. The production well yielded satisfactory 20 results and TDR now seeks to drill the subject injection well to return produced water to the 21 producing reservoir. Additional development of this area may be pursued if data obtained 22 during the drilling of this well indicate that such development is warranted.
- 23 Q. AS PART OF THE APPLICATION PROCESS, TDR WAS REQUIRED TO PUBLISH

1	NOTICE AS WELL AS GIVE NOTICE BY MAIL TO ALL LANDOWNERS AND
2	LEASEHOLD INTEREST OWNERS WITHIN A HALF MILE OF THE SUPERIOR
3	LEASE. DID TDR COMPLY WITH THOSE NOTICE REQUIREMENTS?

- 4 A. Yes.
- Q. WILL THE INJECTION WELL WHICH IS THE SUBJECT OF THE PENDING
 APPLICATION COMPLY WITH ALL APPLICABLE RULES AND REGULATIONS
 PROMULGATED BY THE KANSAS CORPORATION COMMISSION?
- 8 A. Yes.
- 9 Q. IN YOUR OPINION WILL THE WELL CONSTRUCTION AND DESIGN PROPERLY
- 10 PROTECT THE FRESH AND USABLE WATER RESOURCES IN THE AREA?
- 11 A. Yes.
- 12 Q. IN YOUR OPINION WILL INJECTION INTO THE SQUIRREL FORMATION THROUGH
- 13 THE SUBJECT INJECTION WELL BE CONTAINED WITHIN THE SAID SQUIRREL14 FORMATION?
- 15 A. Yes.
- Q. IN YOUR OPINION WILL INJECTION AT THE PROPOSED RATES AND PRESSURES
 THROUGH THE SUBJECT INJECTION WELL INTO THE SQUIRREL FORMATION
 INITIATE FRACTURES THROUGH THE STRATA OVERLAYING THE SAID
 SQUIRREL FORMATION THAT COULD ENABLE THE FLUID OR FORMATION
 FLUID TO ENTER FRESH AND USABLE WATER STRATA?
- A. No. Injection at the rates and pressures proposed in the subject application are very common
 in this area for injection wells into the Squirrel formation. In addition, the subject wells are
 quite literally bordered by hundreds of production and injection wells being operated upon

neighboring leases. All of these wells are operating very similarly if not identically to how the
 well which is the subject of this Docket will be operated, and no ill effects have been
 attributed to any of these wells since they have been placed into operation.

Q. THE SUBJECT APPLICATIONS REQUEST A MAXIMUM INJECTION RATE OF 500 BBLS/DAY AND A MAXIMUM INJECTION PRESSURE OF 650 PSIG, PLEASE EXPLAIN WHY THESE RATES AND PRESSURES ARE NEEDED?

7 A. The Squirrel formation is a very tight formation and higher pressures are required in order to 8 get this reservoir to accept water in a manner that is conducive to an effective waterflood and injection in general in reasonable volumes. In addition, because the Superior Lease is located 9 10 in the midst of a previously developed oil field that was subjected to a water flood, the 11 production well drilled in 2018 produces a substantial amount of water and a higher injection 12 rate is needed in order to deal with high amount of water produced from this lease and to 13 maintain reservoir pressure. If the subject authority is obtained we will begin injection at the 14 maximum 650 psig requested in the application. In my opinion we would not be able to 15 effectively operate the Superior Lease using injection pressures less than 650 psig or an 16 injection rate of less than 500 bbls per day and a portion of the recoverable oil would be left 17 unrecovered and waste will occur. Therefore, the request for 500 bbls/day is based upon the 18 needs of Superior Lease in order to operate it efficiently and without waste. In addition, both 19 the injection rate and volume are consistent with other operations in the area and also with the 20 rates and pressures approved by the Commission on other injection wells in the area.

Q. ARE ALL OF THE WELLS WITHIN A QUARTER MILE RADIUS OF THESE INJECTION WELLS COMPLETED IN A MANNER TO PROTECT FRESH AND USABLE WATER RESOURCES?

A. I believe they are. It is my understanding that KCC fee funds were used to plug all of the
 unplugged wells in this field.

Q. THE PROTESTANTS HAVE EXPRESSED A CONCERN ABOUT CONTAMINATION OF THE MARAIS DES CYGNES RIVER CAN YOU PLEASE SPEAK TO THOSE CONCERNS?

6 A. Attached hereto as Exhibit 'LT-1' is a map which highlights in blue the rough path of Hickory Creek from the vicinity of the subject lease to its confluence with the Marais des Cygnes 7 8 River. Even if some water injected into the well which is the subject of this Docket were 9 released through some unforseen event, such water would have to travel more than a mile over 10 land (and more than half of such distance would be UP HILL) to reach Hickory Creek. From 11 there it would have to follow the meandering path of Hickory Creek for more than nine miles 12 before it could have any possibility of reaching the Marais des Cygnes River. The likelihood 13 of any water which is injected into the well which is the subject of this Docket having any real 14 possibility of reaching the Marais des Cygnes River is extremely remote and maybe even 15 impossible. Moreover, even if some trace of the water which is injected into the well which 16 is the subject of this Docket were to reach the Marais des Cygnes River such water would be 17 diluted by its long journey down Hickory Creek and then down the Marais des Cygnes River 18 to such a degree that it would be all but impossible to for the subject wells to impair RWD 6's 19 ability to source its water from the Marais des Cygnes River. Moreover, there are quite 20 literally hundreds of existing injection and production wells located between the well which 21 is the subject of this Application and the Marais des Cygnes River. The removal and 22 reinjection of fluid through these existing wells would preclude any possibility that water 23 injected into the subject well could reach the Marais des Cygnes River in concentrations that 1

would impair RWD 6's ability to source its water from such river.

2 In addition, it should be noted that underground injection of waste water and other substances originally began as an environmental measure to prevent the pollution of surface 3 4 and ground waters. The subject well will help to reduce any risk of pollution to surface and 5 ground waters, by immediately returning produced water to the formation from which it was 6 removed, it will not increase these risks. When water is inevitably produced as part of oil 7 production there are really two options to deal with such water, i.e. store the water above 8 ground and transport it off site to another disposal well/surface pond, or immediately re-inject the water through on onsite injection wells. Storing the produced water on site and transporting 9 10 it poses a greater risk to surface waters such as the Marais des Cygnes River for instance than 11 re-injecting it through the subject injection well. I believe there is a far greater risk that 12 produced water would be spilled while it is being stored on the surface, being pumped into a 13 truck and then subsequently transported to and disposed of into another well than if it were 14 simply re-injected onsite through the proposed closed injection system.

Q. PLEASE DESCRIBE THE PROPOSED WELL COMPLETION AND DESIGN FOR THE SUBJECT WELL?

A. In drilling the subject injection well we will drill down approximately 21 feet, and set that length of 8 5/8 inch surface casing, and pump cement up the backside of that pipe for its entire length. Then we will drill down to the total depth of approximately 860 feet, and complete the well using 4.5" casing and pump cement up the back side of that casing for its entire length. After the well is completed Mechanical Integrity Tests ("MIT") will be performed upon the well to ensure the integrity of the well construction. Even though the subject application request a maximum injection rate of 650 psig, we typically pressure each of the subject wells up to 1,000 psig during the MIT's as an additional precaution to ensure the integrity of well
construction. The subject well must pass the MIT tests with no issues, and will be tested every
five years thereafter as required by KCC regulations. Additionally, the Superior Lease is
inspected every day by a company employee who is knowledgeable enough to detect any
issues that could arise, such as leaks, excessive pressures, etc. We believe that with the well
construction techniques utilized, the MIT testing, and the daily monitoring by our employees
the subject well sufficiently protects all fresh and usable water wells, aquifers and ponds.

8 Q. ARE THERE ANY OTHER FACTS WHICH YOU BELIEVE ARE IMPORTANT TO 9 PRESENT TO THE COMMISSION?

10 Yes. As further evidence of my confidence in the opinion expressed herein I would like the A. 11 Commission to know that the subject well is located upon real property that is owned in fee 12 by TDR. Therefore TDR would never do anything upon such property that would impair the value of such property or create a real risk of pollution thereon. Moreover, my family and I 13 14 live just over a mile from the proposed well and I have wells which are similar to the well 15 being requested herein located in the yard around my home. These facts provide further 16 evidence and assurance to the Commission that I see no real risk associated with the proposed 17 well or injection wells operated in the same manner as the subject well.

18 Q. IN YOUR OPINION DOES THE SUBJECT INJECTION WELL POSE A SIGNIFICANT

19 RISK TO FRESH AND USABLE GROUND WATER FORMATIONS IN THE AREA?

20 A. No.

Q. DO YOU BELIEVE THAT THE GRANTING OF THIS APPLICATION WILL ALLOW INCREASED PRODUCTION ON THE SUPERIOR LEASE WITHOUT CAUSING ANY HARM TO FRESH AND USABLE WATER IN THE AREA?

- 1 A. Yes.
- 2 Q. DOES THIS COMPLETE YOUR TESTIMONY TO THE COMMISSION?
- 3 A. Yes.

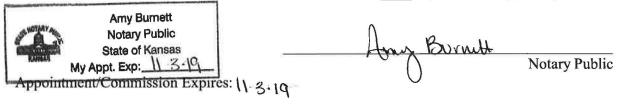
VERIFICATION OF LANCE TOWN

STATE OF KANSAS)) ss: COUNTY OF <u>Miani</u>)

Lance Town, being duly sworn, upon his oath states that he has read the document title "Pre-filed Testimony of Lance Town" to which this Verification is attached, that he is aware of its contents, and declares that the statements contained in said document are true and correct to the best of his information, knowledge and belief.

Lance Town

SUBSCRIBED AND SWORN to before me on this 18th day of February, 2019.



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S10-T165-R20E	S11-T16S-R20E	S12-T105-R20E	\$7-T165-R21E	S8-T16S-R21E	- S9-T165-R21E	S100#h257821E	s11-T1
S154308-R20E	50 S14-T16S-R20E	8 S13-T16S-R20E	S18-T16S-R21E	517-T165-R21E	\$16-T16S-R21E	\$15-T16S-R21E	s14.T1
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EXHIBIT LT-1

CERTIFICATE OF SERVICE

I hereby certify that a copy of the above and foregoing was sent via electronic mail, this 25th day of February, 2019, addressed to:

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