## BEFORE THE STATE CORPORATION COMMISSION OF THE STATE OF KANSAS

In the matter of the failure of Oil Producers, ) Inc. of Kansas ("Operator") to comply with ) K.A.R. 82-3-407 at the Fitzgerald #3 in ) Kingman County, Kansas. )

Docket No: 20-CONS-3134-CPEN

CONSERVATION DIVISION

License No: 8061

### **PRE-FILED TESTIMONY**

#### OF

## **MELODY C. FLETCHER**

# ON BEHALF OF OIL PRODUCERS, INC. OF KANSAS

1	Q.	Please state your name and address, and tell us where you are employed.		
2	А.	Melody C. Fletcher. I am the Chief Operating Officer for Oil Producers, Inc. of		
3		Kansas located at 1710 Waterfront Pkwy. Wichita, Ks 67206.		
4	Q.	Would you describe your background and experience in the oil and gas industry?		
5	А.	My father was an independent oilman. I grew up learning all aspects of the oil and		
6		gas business, from leasing to operating. I assumed a pivotal role in his business, and		
7		worked with my father and brother for a number of years. When I served as a		
8		consultant in the oil and gas industry, Oil Producers, Inc. of Kansas was my client,		
9		and I came to known the company and its owners. In January 2013, I was offered		
10		the COO position, and I have held that position ever since then.		
11	Q.	Would you please identify and describe what is known as the Fitzgerald #3 well, the		
12		subject of this action before the KCC?		

1	А.	The Fitzgerald #3 was a disposal well located in Kingman County, Kansas. It was		
2		owned and operated by Oil Producers, Inc. of Kansas (which we refer to as OPIK).		
3		This disposal well was an important and integral part of OPIK's operations, and		
4		served a number of producing wells in the area. The Fitzgerald was constructed as		
5		a packer-less well, meaning it is an open hole with no packer in the wellbore.		
6	Q.	Please explain what occurred with the Fitzgerald disposal well in 2019.		
7	<b>A.</b>	In June 2019, OPIK personnel contacted Steve VanGieson of the KCC to witness a		
8		MIT test on the Fitzgerald SWD. On June 19, 2019, the KCC declared that the well		
9		failed the witnessed test, and the well was immediately shut-in. OPIK did not		
10		necessarily agree with the KCC's failure determination. Exhibit A attached hereto		
11		are copies of MIT recorded reports from the KCC, dating back to 1989. It includes		
12		the KCC's 2019 report. OPIK contends the report is inconclusive and incomplete		
13		(compare the field data recordings for the 2019 report to the prior reports). Jordan		
14		Diskin's testimony more fully explains OPIK's contentions regarding the test and		
15		KCC conclusions.		
16		As it turned out, the Fitzgerald disposal well was never again operated after the		
17		June failed MIT. Water which had been disposed of at this well were routed to the		
18		Lock SWD also located in Kingman County, Kansas.		
19	Q.	How are mechanical integrity tests handled at OPIK?		
20	А.	OPIK keeps a record of MIT due dates and notifies our Production Supervision		
21		when they are due. Dates are verified with Kolar. From this point, the Field		
22		Supervisors contact the District Office of the KCC to schedule the test and allow its		
23		witnessing.		

Q. In the instance of the Fitzgerald disposal well, the subject of this hearing, describe how
and when you learned about the mailed MIT, and what actions were taken following that
test by OPIK?

I was notified by Jordan Diskin, OPIK's Central Kansas Production Supervisor 4 A. shortly after the KCC determined that the well has been declared to have failed the 5 MIT. Jordan shared with me his observations and conclusions, as are set forth in 6 his Pre-Filed Testimony. OPIK was not certain that there was an actual leak in the 7 8 well, or that a failure should have been declared. A failed MIT does not always mean there is an actual leak. OPIK concluded at the time, and continues to believe 9 today that, at and following the June 2019 MIT on this well, the well did not pose a 10 11 threat to fresh or usable water resources or endanger correlative rights. Exhibit B is a copy of Injection Well Frequently Asked Questions. This can be found at 12 https://kcc.ks.gov/oil-gas/injection-wells-frequently-asked-questions#iwfaq12. On 13 page 2 the KCC explains the general construction standards for an injection well 14 such as the Fitzgerald disposal well. While it is a packerless well, this well is 15 constructed in a manner approved by the KCC. This well has three protective 16 layers: (a) surface casing; (b) production casing; and (c) tubing string. As the KCC 17 acknowledges on its website, "all three layers must fail at the same time to impact 18 groundwater." Based on the MIT test, as more fully explained by Mr. Diskin, it is 19 clear that there was not a failure of all three layers of protection on this well as 20 might impact groundwater. Therefore, OPIK challenges the KCC's conclusions 21 22 that this well was a "possible threat" to water after it was shut-in and taken out of operation. When OPIK was eventually able to get a rig to the site, it was 23

1		determined that OPIK was unable to set the packer at the bottom of well, due to	
2		saltwater corrosion at packer depth.	
3	Q.	What did OPIK do after the failed MIT on the Fitzgerald disposal well?	
4	А.	The well was reported to the OPIK office and placed on the workover list. Our	
5		Production Supervisor keeps in contact with the office on scheduling, including	
6		delays, weather, crops, etc.	
7	Q.	Did OPIK receive a June 24, 2019, letter from Steve Vangieson regarding the Fitzgerald	
8		disposal well?	
9	А.	Yes. He made reference to the June 19, 2019, reported failure of the MIT and the	
10		fact that under K.A.R. 82-3-407(c) we had 90 days to repair the well and pass an	
11		MIT, plug the well, or isolate all leaks and demonstrate the well does not pose a	
12		threat to fresh or usable water or endanger correlative rights. We had determined,	
13		and continue to believe, the well did not pose a risk to water or other rights, for the	
14		reasons stated above and as stated in Jordan Diskin's Pre-Filed Testimony.	
15		Nevertheless, we set about to free up our rig to work on the well. We kept the KCC	
<mark>16</mark>		advised of our efforts, and were working as quickly as we could to this well, which	
17		was very important to our production, back in service. However, we were not able	
18		to meet the timeline established by the KCC.	
19	Q.	When did you receive the penalty notice from the KCC?	
20	А.	I was out of the office and do not have the exact date. OPIK did receive a copy of	
21		the Penalty Order stating that we were being penalized \$1,000 for violating K.A.R.	
22		82-3-407, with no specific subsection reference to that regulation, "because a current	

23 and successful MIT has not been performed on the subject well." OPIK also

1		received a November 7, 2019, INVOICE from the KCC, and this part of the record
2		provided the following more detailed and specific identification and description of
3		the alleged violation: "K.A.R. 82-3-407(g) – Operating wells without current
4		mechanical integrity test." K.A.R. 82-3-407(g) is in fact the apparent source of the
5		authority for the \$1,000 penalty assessed against OPIK. It reads as follows: "No
6		injection well shall be operated before having passed a mechanical integrity test.
7		The operator's failure to test a well to show its mechanical integrity or to report the
8		oil-to-water or gas-to-water ratio as required under paragraph (b)(4)(B) above shall
9		be punishable by a \$1,000 penalty, and these wells shall be shut in until the required
10		test has been passed or the reports have been furnished." OPIK denies that it
11		"operated" the Fitzgerald disposal well in violation of subsection (g) of K.A.R. 82-3-
12		407.
13	Q.	Did you attempt to communicate with the KCC regarding the Penalty Notice and
14		Invoice?
15	A.	I called Michael Glamann on November 27, 2019. He was not in and I left a
16		message asking him to return my call. I had not heard from Mr. Glamann and
17		called again on December 3, 2019. We spoke and discussed the penalty and all the
18		steps of contact OPIK had made with the KCC. The reason for the penalty said
19		"OPIK continued to operate the well". We did not continue to operate the well as
20		witnessed during the MIT.
21	Q.	Why did OPIK request a hearing to challenge the \$1,000 penalty order?
22	А.	OPIK did not request this hearing because of the money. OPIK is spending far
23		more than \$1,000 to try to remove from the record and the history of our company a

1		finding that it operates wells without current MITs and conducts operations that
2		pose risks to water. During my December 3, 2019, conversation with Michael
3		Glamann, I informed him that we were on location of the Fitzgerald SWD and it
4		appeared the cost to repair will require contacting the working interest parties for
5		their election. The owners' response time would be 30 days. Michael informed me
6		that I should go ahead and file for a hearing because it would delay everything
7		giving OPIK the time needed. I heeded that advice and requested a hearing. OPIK
8		eventually determined that it was not economical to repair this disposal well, and
9		the Fitzgerald was plugged in December.
10	Q.	Is there anything you would like to add regarding this matter?
11	<b>A.</b>	OPIK has been operating in Kansas since the 1980's and is operated by second
12		generation owners, with the third generation involved. OPIK operates over 500
13		wells in Kansas, Oklahoma, and Texas. Since the beginning of my employment with
14		OPIK I have stressed the importance of working closely with the KCC, the roles of
15		which our company respects. We strive to keep in contact with the KCC before,
16		during and after all situations.
17		My concern is over the effect the Penalty Order and findings will have on our
18		operator's license. We are a great operator, we always operate above board, and I
19		felt that we were working with the KCC and vice versa. There were over 29 calls
20		and emails between the KCC and OPIK regarding various wells, including the
21		Fitzgerald disposal well, during this time, to keep the KCC informed and up to date.
22		It was never our intention to dodge the work or ignore what needed to be done. I
23	100 mg	think we showed that. In the period of time from June 2019 through January 3,
		6
2	1.12	

1	2020, there were 28 wells brought online, plugged, 10-year TA extensions done, or	
2	MITs in 8 Kansas counties. During the same time period, there were many factors	
3	concerning some of these wells that came into play with the KCC. Because I was	
4	already in contact with Michael Glamann when I spoke to Steve VanGieson, I	
5	informed Michael of the Fitzgerald SWD that may or may not come across his desk.	
6	He asked that I keep him informed. We had contacted another rig but they were	
7	also unavailable, playing catch up due to the weather (over 55 inches of rain, crops,	
8	etc.). Mr. VanGieson did provide additional time for OPIK to work on the	
9	Fitzgerald disposal well, which we appreciate. OPIK does not believe it violated	
10	KCC regulations, and respectfully requests that the Penalty Order be set aside.	

#### AFFIDAVIT

STATE OF ) ) ss: COUNTY OF )

I, Melody C. Fletcher, of lawful age, being first duly sworn upon my oath, state that:

I am the Chief Operating Officer for Oil Producers, Inc. of Kansas and I have read the above and foregoing Pre-Filed Testimony; and find that said answers are true and correct.

Oil Producers, Inc. of Kansas

Melody & Eletcher

day of



Notary Public

My Commission Expires: Sne 8, 2022

	TAMARA S. WEST
	NOTARY PUBLIC
and a state of the state	STATE OF KANSAS
-101111111111	My Appt. Exp. Q-8-22

#### **CERTIFICATE OF SERVICE**

I hereby certify that on this 3<sup>rd</sup> day of February, 2020, a true and correct copy of the above and foregoing was e-filed with the Kansas Corporation Commission's through the e-filing Express and copy was sent by email to:

Daniel Fox, Compliance Officer, KCC District 2 Kansas Corporation Commission District Office No. 2 3450 N. Rock Road, Bldg., 600 Ste. 601 Wichita, KS 67226 <u>d.fox@kcc.ks.gov</u>

Michael Glamann, Litigation Counsel Kansas Corporation Commission Central Office 266 N. Main Street., Ste. 220 Wichita, KS 67202-1513 <u>m.glamann@kcc.ks.gov</u>

Jonathan R. Myers, Assistant General Counsel Kansas Corporation Commission 266 N. Main Street., Ste. 220 Wichita, KS 67202-1513 j.myers@kcc.ks.gov

Rene Stucky Kansas Corporation Commission 266 N. Main Street., Ste. 220 Wichita, KS 67202-1513 <u>r.stucky@kcc.ks.gov</u>

Kelcey Marsh Litigation Counsel Conservation Division 266 N Main St., Ste 220 Wichita, KS 67202-1513 <u>k.marsh@kcc.ks.gov</u>

/s/ Charles E. Millsap

	DOCKET# DJ.3787.7
CASING MECHANICAL INTEGRITY TEST	
Disposal Well Enhanced Recovery: Repressuring	NWSESW, Seo 17, T 29 S,R LO END
Flood	3630 Feet from South Section Line
Date injection started	Lease FIEGerald Well # 3
API #15- 095-21454-00-00	County Kingman
Operator: OPIOK	Operator License# 8061
Name &	and the second
Address 1710 Waterfront PKW	Contact Person
Wichita, Ks 1072010	Phone
Max. Auth. Injection Press Psi; Max Inj.	
If Dual Completion – Injection above production Conductor Surface	Injection below production Production Liner Tubing
Size \$7/8	<u>51/1</u> Size 278
Set'at 22.5	<u>4683</u> <u>3933</u> Set at <u>4690</u> Type Du0(ne
" Böttom 125	4683
	D (and plug back) ft, depth ze 51/1 Set at
Zone of injection ft. to ft.	Perf. or open hole
Type MIT: Pressure: Radioactive	e Tracer Survey: Temperature Survey:
F Time: Start Min Min	Min
I E Pressures:	Set up 1 System Pres. during test
1 1 1	2 <sup>(1)</sup>
A C D O O	Set up 2 Annular Pres. during test
Dout the 0 0	Set up 3 Fluid loss during test bbls.
T Tested: Casing or Casing - Tubing	Annulus
A The bottom of the tested zone in shut in with	
Test Date 6-17-1 Using	Co Lools Company's Equipment
The operator hereby certifies that the zone between	
was the zone tested	
Signature	Title
The results were Satisfactory / Marginal	
State Agent:	Title: Witness: YES NO
REMARKS:	
	DHE/T: Dist, Office
Computer Update Is there Chemical Seala	nt or a Mechanical Casing patch in the annular space? (Y/N) (If YES please describe in REMARKS)
GPS Lat GPS Los	nġ KCC Form U-7
EXHIBIT	OF 9-17-19 Attachment R7
A popies	Page 12 of 37
<sup>3</sup> <u>//</u>	

CASING MECHANICAL IMEGRITY TEST	DOCKET + J-23787
Disposal Enhanced Recovery:	11 W SE SW, Sec 17, T 29, S, R 6 EM
Repressuring	998 Feet from South Section Line
Floci	3630 Feet from East Section Line
Date injection started	Leese Fitzgerald Weil # 3
API #15 -095 -21454-00-00	COUNTY Kingman
Operator: Bobert F Campbell Nation	Operator License = 5348 KCC WICHITA
Address 260N Kock RD	Contect Ferson Robert Campbell JUN 27-2014
Wichda, Ks. 67206	Phone 316-695-6001 RECEIVED
Max. Auth. Injection Press. psi If Dual Completion - Injection above	i; Max. Inj. Rate bol/d; production Injection below production
Conductor Surjage	Production Liner Tubing
Set at 225 Cement Top 0	4683 Set at 4680 3933 Type Paoline
" Bottom 225	TD (and plug back) ft. depth
Facker type Paller 1855 20ne of injection 4683 ft. to	Size Set at
	ive Tracer Survey Temperature Survey
F Jire: Start 10 Min. 20 Min.	30 Mir.
E Pressures: 80 80	80 Set up 1 System Pres. during test
D In Use 250 250	250 Set up 2 Annular Pres. during test
D	Set up 3 Fluid loss during test this.
162023, 00000	- Tubing Annulus
The bottom of the tested zone is shi	ut in with Paleerless
Test Date 6-19-14 Using	Company's Bouigment
	the zone between $4600$ feet and $0$ feet
was the zone tested 1 Non	Thimesol 1
	Title
The results were Serisfactory	, Marginal , Not Satisfactory
State Agent	Title TIK Witness: Yes No
REMARKS: <u>54r.</u>	
Orgin. Conservation Div.;	KERE/T; Dist. Office;
Computer Update	RCC FORTH U-7 6/8
	Attachment R7 Page 13 of 37

37,52024-98,00309
CASING MECHANICAL INTEGRITY TEST DOCKET $\frac{1}{23787}$ Disposal T Enhanced Recovery: NW SE SW, Sec 17, T29 S, R 6 EW
$\begin{array}{c c} \hline & & & & \\ \hline \\ \hline$
API #15 -095 -21454-00-00 County <u>King MAN</u> Operator: <u>Asburt &amp; Campbell</u> Operator License # 5348 KANSAS CORPORATION COMMISSION
Address 260 N. Rock RD Contact Person Robert CAmpbell JUL 17 2009 Wichita Ks 67206 Phone 316-685-6001 RECEIVED
Max. Auth. Injection Press.   psi; Max. Inj. Rate   bbl/d;     If Dual Completion - Injection above production   Injection below production     Conductor   Surface   Production   Liner   Tubing     Size
Type Mit: Pressure Radioactive Tracer Survey Temperature Survey
$ \begin{array}{c} I \\ E \\ \hline \\ D \\ \hline \\ D \\ \hline \\ \\ D \\ \hline \\ \\ \\ \\ \\$
The bottom of the tested zone is shut in with <u>PAKer less</u> Test Date <u>7-8-09</u> Using <u>Company's Equipment</u>
The operator hereby certifies that the zone between <u>4679</u> feet and <u>O</u> feet was the zone tested <u>Those Starn</u> <u>AFE Forman</u> Signature <u>Title</u>
The results were Satisfactory X , Marginal , Not Satisfactory
Orgin. Conservation Div.; KIRE Dist. Office; Attachment R7 JAM Computer Update KCC Form U-7 6/8:

M

37.52050 N 098.00342 W

CASING MECHANICAL INTEGRITY TEST	<u>787 62-0</u> # TEXDOD
Disposal C Enhanced Recovery:	NW 55 5W, Sec 17, T 295, R 6 ER
Repressuring Flood Tertiary	990Feet from South Section Line3630Feet from East Section Line
Date injection started	Lease Fitzgerald Well # 3
Operator: RE Campbell	Operator License # 5348
Name & Address 260 N. Rock RD.	Contact Person Robert Campbelaceived
Wichta Ks. 67206	Phone Tile- 1085- 4 001
Max. Auth. Injection Press. G per If Dual Completion - Injection above Conductor Surface Size 225 Set at 225 Cement Top 0 " Bottom 225 DV/Perf. Packer type Pake-less Zone of injection 4683 ft. to Type Mit: Pressure X Radioact F Time: Start 10 Min. 20 Mir	JUNUT 2004     si; Max. Inj. Rate   1000 bbl/d;     a production   Injection below predeservation Division     Production   Liner     Size   J/8     4/683   Set at 4679     TD (and plug back)   ft. depth     Size   Set at     oft.   4/884     Perf. or open hole   A/6     tive Tracer Survey   Temperature Survey
I NOTINUSE 80 80 L Pressures: 80 80	80 Set up 1 System Pres. during test
D IN USE 360 360	360 Set up 2 Annular Pres. during test 80
D	Set up 3 Fluid loss during testbbls.
T Tested: Casing or. Casing	- Tubing Annulus X
The bottom of the tested zone is s	hut in with Pakerless
Test Date 5-25-04 Using	Company's Equipment
The operator hereby certifies that	the zone between <u>41679</u> feet and <u>O</u> feet
was the zone tested Don Thin	nesch
Sig	gnature Title
The results were gatrisfactory X	, Marginal, Not Satisfactory
State Agent	Title PIOT Witness: Yes X NO
REMARKS: Backside logded	with Hydrocarbon
Orgin. Conservation Div.;	KDHE/T; Dist. Office; Attachment R7 SAMTO MV RCC Form U-7 6/8:

CASING MECHANICAL INTEGRITY TEST	DOCKET # D-23,787	
Disposal 📿 Enhanced Recovery:	New SE Sw, sec 17, T29 S, R 6 EM	
Repressuring Flood Tertiary	$\frac{996}{563}$ Feet from South Section Line Feet from East Section Line	
Date injection started	Lease F, +2 900 A/6 Well # Specific France KANSAS CORPORATION COMMISS	
Operator: Robert Campbell Name & Address 260 N Rock, Road	Operator License # <u>3348</u> Contact Person Robert O'Ampbril	
Walt KS 67306	Phone 316-685-6001 CONSERVATION DIVISION WICHITA, KS	
Type Mit: Pressure X Radioa F Time: Start <u>o</u> Min. <u>15</u> M E Pressures: <u>130</u> <u>(30</u> L D A T Tested: Casing or Casin	e production Injection below production e Production Liner Tubing Size 276 Size 276 Set at 4679 Type Dus-Ince TO (and plug back) ft. depth Size Set at to ft. <u>4683-4884</u> Perf. or open hole <u>S</u> A	
A The bottom of the tested zone is	shut in with Puckeebss	
Test Date <u>225-99</u> Using	PACTALOSS Masi Tor Company's Equipment	
The operator hereby certifies the	PPO	
was the zone tested lance	Rgm T Signature Title	
The results were Satisfactory X, Marginal , Not Satisfactory		
Orgin. Conservation Div.;	KDHE/T; Dist. Office; Attachment R7 SAMI Prase 160257370-7 6/8	

CASING MECHANICAL INTEGRITY TEST	er # <u>D·2378</u> 7	
Disposal X Enhanced Recovery: Diw SE Sw, Sec 17, T 29	S, R 6 E(W	
Repressuring 990 Feet from South Sec Flood 3630 Feet from East Sec		
Tertiary Iease Fitzgerald Well   Date injection started Icase Fitzgerald Well   API #15  County Km	#	
Operator: Rabeet E. CAmpbell Operator License # 5348		
Name & Address 260 N Rock. Rd. Contact Person R.b. Crampbe	[[	
CIDICALTA KS 167.206 Phone 316-685-6001		
Max. Auth. Injection Press.   Q. psi; Max. Inj. Rate / 000 bbl/d;     If Dual Completion - Injection above production   Injection below production     Conductor   Surface   Production   Liner     Size	Tubing	
" Bottom <u>225</u> <u>4683</u> DV/Perf. TD (and plug back)	ft. depth	
Packer type <u>Packer less</u> Size Set at Zone of injection <u>Acb.</u> ft. to ft. <u>4683-4864</u> Perf. or open hol		
Type Mit: Pressure Radioactive Tracer Survey Temperature	Survey	
F Time: Start <u>O</u> Min. <u>15</u> Min. <u>Se</u> Min.		
E Pressures: <u>CC 60 60</u> Set up 1 System Pres. duri D Set up 2 Annular Pres. duri D Set up 3 Fluid loss during A	ng te <mark>st <u>28</u> a/WA</mark> a	
D Set up 3 Fluid loss during	test <u>COMmbbl</u> s.	
A T Tested: Casing _ or Casing - Tubing Annulus	0 8 1994	
T Tested: Casing or Casing - Tubing Annulus OUUSERVA A The bottom of the tested zone is shut in with (CR	TION DRA	
1	pany's Equipment	
The operator hereby certifies that the zone between $\frac{7679}{1679}$ feet and	feet	
was the zone tested //au E. Culant Agast	·	
Signature Ti	tle	
The results were Satisfactory, Marginal, Not Satisfac	tory	
State Agent Ack Lhother Title Scet II Witness:	Yes 🗶 No	
REMARKS: Manitoring - BACK Sints LOANEd ZS'BK of CRode.		
Orgin. Conservation Div.; KDHE/T; Dist. Office;		
A	CC Form U-7 6/84 ttachment R7 Page 17 of 37	

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CASING MECHANICAL INTEGRITY TEST	DOCKET # D-23 78 7	
Disposal X Enhanced Recovery:	NW 58 5W, Sec 17, T 295, R 6 E/0	
Repressuring Flood Tertiary Date injection started	<u>190</u> <u>3630</u> Lease Fitzgerald Well # 3	
API #15	County Kingman	
Operator: Robert E Campbell Name & Address 260 N. Rock RD.	Operator License # <u>5348</u> Contact Person <u>RE</u> <u>Campbell</u>	
WichHa Ks.	Phone 316, 685-6001	
Wickthan KsPhone316.685-6001Max. Auth. Injection Press.Gpsi; Max. Inj. Rate/000bbl/d;If Dual Completion - Injection above productionInjection below productionSizeSurfaceProductionLinerSize $2/8$ Set at $225$ $46.83$ Set at $225$ $46.83$ Set at $225$ $46.83$ Set at $46.79$ Cement TopTypeBottomTD (and plug back)ft. depthPacker typeNoncZone of injection $A16.93$ ft. to ft. $418.84$ Perf.or open hole $041$ Type Mit:Pressure XRadioactive Tracer SurveyTemperature SurveyFTime: Start 10Min. $30$ Min. $30$ Min.IPressures: $95^{-4}$ $95^{-4}$ $95^{-4}$ Set up 2Annular Press. during test $95^{-4}$ DSet up 3Fluid loss during test $95^{-4}$ AThe bottom of the tested zone is shut in with $Miltia. ManualMittia. ManualMiltia. Manual$		
Test Date <u>9-3-89</u> Using <u>Nicholas Woster Service</u> Company's Equipment		
The operator hereby certifies that the zone between $4600$ feet and $0$ feet was the zone tested $\pm 0$ on Thimesch		
	Signature Title	
The results were Satisfactory, Marginal, Not Satisfactory State Agent <u>ftw. U. Suew</u> Title <u>PIRT</u> Witness: Yes y No		
REMARKS: Monitoring - Backside loaded the 75 bbls of Crude Oil		
Orgin. Conservation Div.;	KDHE/T; Dist. Office; Attachment R7 KC@agerne & 37 6/84	



# Injection Wells Frequently Asked Questions (FAQ)

Updated: 10/11/13

- What is an injection well?
- How many Class II injection wells are there?
- What types of Class II injection wells are there?
- What types of fluid are injected into Class II wells?
- What else might be in saltwater?
- Aside from water, what else might be in hydraulic fracturing fluid?
- Why is hydraulic fracturing fluid injected instead of recycled?
- Does hydraulic fracturing use a lot of water?
- What about truck traffic and road damage from injection activities?
- Where are the Commission's regulations for Class II injection wells?
- How does the Commission regulate Class II injection wells?
- What are the construction standards for an injection well?
- What is involved in the permitting process for injection wells?
- How does the Commission monitor injection wells?
- Is it possible to look up injection wells on the Commission's website?

#### What is an injection well?

Injection wells allow for the placement of fluids into the ground. The United States Environmental Protection Agency (EPA) has created six "classes" of injection wells. In Kansas, Class I, III, IV, V, and VI injection wells are regulated by either the Kansas Department of Health and Environment (KDHE) or the EPA.

The Kansas Corporation Commission (Commission) regulates Class II injection wells. Class II injection wells are used to inject fluids associated with oil and gas production into the ground. Class II injection wells are the type of wells addressed in this FAQ document.

# How many Class II injection wells are there?

In Kansas, there are approximately 16,600 permitted injection wells.

#### What types of Class II injection wells are there?

Class II injection wells come in two varieties: disposal wells and secondary/enhanced oil recovery wells.

Disposal wells are used to inject fluids into rock formations that do not produce oil or gas. The formations are isolated from usable quality groundwater and are sealed above and below by unbroken and impermeable rock formations. There are about 5,000 disposal wells in Kansas.

Secondary/enhanced oil recovery wells are used to inject fluids into formations/reservoirs that produce oil or gas. The formations are also isolated. Injection of fluid into these formations often allows for increased recovery of oil or gas reserves. There are about 11,600 secondary/enhanced oil recovery wells in Kansas.

# What types of fluid are injected into Class II wells?

Two types of fluid are typically injected into Class II wells.

The first fluid is saltwater. Saltwater is sometimes referred to as brine water, or produced water. Oil and gas reservoirs often contain significant amounts of saltwater. When oil and gas are produced, saltwater is also produced. Operators must dispose of the saltwater in a manner that will not pollute surface or subsurface waters. Often, the most effective and economical way to do that is to inject the saltwater back into the rock formation.

The second fluid is hydraulic fracturing fluid. Fracking fluid is primarily water, but may also include sand and various additives. Used hydraulic fracturing fluid must be disposed of in a manner that will not pollute surface or subsurface waters, and operators often dispose of the fluids down disposal wells.

Saltwater represents the overwhelming majority of the fluid injected into Class II wells.

What else might be in saltwater?



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It is possible that small quantities of drilling mud, well treatment fluids, or residual hydrocarbons will be in the produced saltwater. These are generally found in no more than trace quantities. Fluids must be injected into formations that are isolated from usable quality groundwater, sealed above and below by unbroken, impermeable rock formations.

# Aside from water, what else might be in hydraulic fracturing fluid?

In small quantities, sand and various additives may be found in hydraulic fracturing fluid. Within the next few months, Commission Staff anticipate that interested citizens will be able to view more data on these additives at <u>http://www.fracfocus.org</u>. These fluids must also be injected into formations that are isolated from usable quality groundwater, sealed above and below by unbroken, impermeable rock formations.

# Why is hydraulic fracturing fluid injected instead of recycled?

Some hydraulic fracturing fluid is recycled, although a majority is disposed of by injection. The primary reason cited by operators for injecting the fluid is that it is significantly less expensive than recycling.

# Does hydraulic fracturing use a lot of water?

Yes and no. Although a hydraulic fracturing treatment may use hundreds of thousands of gallons of water, hydraulic fracturing accounts for much less than 1 percent of statewide water use.

Operators must have proper authority to use water in hydraulic fracturing, and industry continues to look for technological advances to reduce fresh water use. The Commission recognizes the value of fresh, usable water to the citizens of Kansas.

# What about truck traffic and road damage from injection activities?

The Commission does not have authority to regulate truck traffic or road damage. Concerned citizens should contact relevant county or municipal governments, or the Kansas Department of Transportation, which may be able to address these issues.

# Where are the Commission's regulations for Class II injection wells?

The Commission has three statutory duties: to protect correlative rights, to prevent waste, and to protect fresh and usable water. With injection wells, the primary concern is to protect fresh and usable water.

The Commission's regulations for injection wells are found in <u>K.A.R.</u> 82-3-400 through K.A.R. 82-3-412. The regulations are specifically tailored to protect underground sources of drinking water from harm from improper injection. The regulations follow national guidelines under the federal Safe Drinking Water Act regarding surface and groundwater protection.

# How does the Commission regulate Class II injection wells?

Within the Commission, the Underground Injection Control (ULC) department has primary responsibility for Class II injection wells.

There are three main aspects to the regulatory process. First, an injection well must be properly constructed. Second, an injection well must be properly permitted. Third, the Commission monitors all injection operations.

# What are the construction standards for an injection well?

Commission rules for the construction of all oil and gas wells, and also injection wells, are found in K.A.R. 82-3-106. The rules require multiple layers of cement and steel casing to ensure that usable groundwater is not impacted by injection operations.

Specifically, an injection well's construction standards require three layers of casing.

The first protective layer is surface casing. Surface casing consists of a steel pipe, partially or totally encased in cement, reaching from the surface to below the deepest usable groundwater level. Surface casing acts as a protective sleeve through which deeper drilling occurs.

The second protective layer is the production casing. Production casing is steel pipe, encased in cement, reaching from the surface to the well's total depth. Production casing goes inside the surface casing.

The third protective layer, used by most injection wells, is the tubing string and packer. The tubing string and packer conduct fluids down through the production casing to the bottom of the well, where the fluids are injected.

Thus, all three protection layers must fail at the same time to impact groundwater.

# What is involved in the permitting process for injection wells?

There are four steps to the permitting process.

First, the operator must file an application. When filing the application, the operator must notify the landowner, as well as all owners of unleased acreage and all oil and gas well operators within a ½ mile radius of the project boundary. The operator must also publish notice in the official county newspaper.

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Second, Commission Staff determines whether the operator is in good standing with the Commission.

Third, Commission Staff checks whether the well is properly completed to protect groundwater.

Fourth, Commission Staff conducts an "area of review" study, to confirm that there are no improperly completed, improperly plugged, or abandoned wells within ¼ mile of the proposed injection well. This helps ensure that there is no pathway of migration from the injection zone to usable water.

If Commission Staff identifies an issue, it must be resolved. After Commission Staff determines that the well complies with all rules ensuring protection of fresh and usable water, the Commission will administratively approve the application.

However, if an interested party protests the application, stating reasons why the proposed plan may cause damage to oil, gas, or water resources, then a hearing may be held. Based on the evidence presented, the Commission will either approve or deny the application.

### How does the Commission monitor injection wells?

There are three major ways in which the Commission monitors injection wells.

First, operators must report average injection pressures and monthly injection volumes to the Commission. This assures that the well is operating within the authority of the permit.

Second, injection wells are periodically inspected based on several factors, including the operator's compliance record and the injection well's vicinity to sensitive environmental groundwater and public areas. If an inspection indicates a problem, the well must be shut in until the issue is resolved.

Third, each injection well must be tested for mechanical integrity. An initial test, before the well is permitted, must demonstrate that there are no leaks. Afterwards, wells must pass a mechanical integrity test (MIT) at least once every 5 years. Commission Staff sometimes direct operators to conduct MIT's more frequently when troubleshooting potential problems.

Any well that fails an MIT must be immediately shut-in. The operator is then given 90 days to repair the well or to plug it. The Commission's standard MIT is designed to identify small leaks or a loss of well integrity before it becomes a larger problem.

Operators are required to notify the Commission before conducting an MIT. Federal guidelines only require the Commission to witness 25% of MIT's, but Commission inspectors witness over 85% of these tests, as the Commission wishes to ensure protection of fresh water supplies.

#### Is it possible to look up injection wells on the Commission's website?

Not at this time. You can, however, view maps that include injection wells on the Kansas Geological Survey (KGS) website, at <u>http://maps.kgs.ku.edu/oilgas/index.cfm</u>.

The KGS website provides many details about oil and gas wells in Kansas. If you cannot find what you are looking for, call the Commission at 316-337-6200. We may be able to assist you.

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