

October 5, 2017

UNITED STATES OF AMERICA
ENVIRONMENT PROTECTION AGENCY

PUBLIC HEARING

PROPOSED ORDERS

SDWA 06-1017-1110
SDWA 06-1017-1111
SDWA 06-1017-1112

Tulsa County Courthouse
Room 119
500 South Denver Avenue
Tulsa, Oklahoma 74103-3844

Wednesday, October 11, 2017

The above-entitled matter came on for hearing at
9:14 a.m.

BEFORE:

TOM RUCKI, Hearing Officer, EPA

October 5, 2017

APPEARANCES:

ELLEN CHANG-VAUGHAN, Attorney
KRISTEN TALBOT, Attorney
U.S. EPA Region VI
Office of General Counsel
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202

FOR THE ENVIRONMENTAL PROTECTION AGENCY

ALSO PRESENT:

Robert Winter, Jireh Resources
David House, Jireh Resources
Lanny Woods, Jireh Resources

Steve McNamara, Warren American Oil Company
Doug Norton, Warren American Oil Company

John Tucker, Novy Oil & Gas

October 5, 2017

I N D E X

	PAGE
Presentation of Jireh Resources	
Robert Winter	6
David House	13
Lanny Woods	21
Presentation of Warren American Oil Company	
Steve McNamara	30
Doug Norton	34
Presentation of Novy Oil & Gas	
John Tucker	47
Comments by Hearing Officer Rucki	61
Court Reporter's Certificate	64

October 5, 2017

EXHIBITS

EPA DOCUMENTS

NUMBER	DESCRIPTION	PAGE
1	Hearing Schedule	--
2	Sign-in Sheets	--

WARREN AMERICAN

NUMBER	DESCRIPTION	PAGE
1	Opening Statement, Warren American	31
2	Reservoir Engineering Study, Mississippian Chat, Osage County	31
3	Affidavit of John D. Burroughs	31
4	Comments Submitted by Kerry Sublette	31

NOVY OIL & GAS

NUMBER	DESCRIPTION	PAGE
1	Map of Area	52
2	Photo of Vacuum Gauge	55
3	Water Sample Chart	58
4	Mesonet Rainfall Records	58

October 5, 2017

1 P R O C E E D I N G S

2 [9:14 a.m.]

3 HEARING OFFICER RUCKI: I'm going to
4 officially put us on the record here. It's 9:14.
5 I'm going to start a minute early.

6 We're here today -- my name is Tom
7 Rucki, the Regional Judicial Officer for Dallas EPA
8 Region 6.

9 But today I'm acting as just a Hearing
10 Officer. This is a public hearing. We won't be
11 conducting a trial. We won't be conducting cross-
12 examination.

13 This is regarding SDWA 06-2017-1110,
14 1111 and 1112. We're going to have Jireh -- and I
15 apologize if I'm saying that incorrectly. Jireh
16 Resources, Warren American Oil Company and Novy Oil
17 and Gas. And when those parties are finished,
18 we'll be having the public commenters.

19 It's my understanding that things may
20 not go as long as we expect them to go. As we
21 discussed earlier through emails, if things finish
22 early, the other parties are welcome to start as
23 soon as they're ready.

24 With that, Jireh, you can begin.

25 And I'm sorry, would you please spell

October 5, 2017

1 your name for the record, everyone, as you come up.

2 PRESENTATION OF JIREH RESOURCES

3 MR. WINTER: Yes, sir. My name is
4 Robert Winter, W-I-N-T-E-R.

5 Good morning, Hearing Officer Rucki.
6 As I say, my name is Robert Winter. I represent
7 Jireh, J-I-R-E-H, Resources, LLC, in the matter of
8 your Docket No. SDWA 06-2017-1110, which involves
9 Jireh well numbers 9, 4W and 18W in Osage County,
10 Oklahoma.

11 I'm here today with Dave House, who is
12 Jireh's president of operations, and Lanny Woods,
13 who is Jireh's vice president of operations.

14 Mr. House will address Jireh's general
15 corporate operations. Mr. Woods will address the
16 operations in the field specifically.

17 For my part, I just would like to
18 provide a few points of context for Jireh's
19 presentation today.

20 I don't know, first of all, Mr. Rucki,
21 whether you've been to this tributary on the North
22 Fork of Bird Creek.

23 HEARING OFFICER RUCKI: I have not.

24 MR. WINTER: It's a beautiful area.
25 It's marked by rolling hills. It's a wide prairie

October 5, 2017

1 landscape covered with native bluestem type grasses
2 common to Osage County.

3 The area provides sustenance and
4 forage for cattle, horse operations and ranching
5 operations in general, and it's been an active area
6 for oil and gas production for probably something
7 like nearly a hundred years. Jireh has been
8 operating in this rustic rural setting for probably
9 -- since the late 1980s.

10 The tributary at issue is probably
11 fairly described as an intermittent stream. In wet
12 weather it carries water.

13 In dry times, because of its shallow
14 nature, the water tends to pool at areas along the
15 creek. These individualized pools move along the
16 creek bed.

17 The actual impact site that we're
18 addressing today has been characterized as a 1- to
19 1.5-mile area along this tributary of the North
20 Fork of Bird Creek.

21 More recently, I've seen descriptions
22 of the actual impact area being described as two
23 pools, which are next to a culvert grid.

24 More generally speaking, the area is
25 15 miles upstream and northwest of Pawhuska, which

October 5, 2017

1 is the county seat of Osage County, home to about
2 3500 people.

3 From where we're sitting today,
4 Pawhuska is probably about an hour-and-10-minute
5 drive northwest of Tulsa.

6 Specific to Jireh, Jireh's oil and gas
7 works at issue involve producing fluids in the
8 formation known as the Mississippian Chat, which is
9 located at a subsurface depth of about 2800 feet.

10 Jireh's production from the
11 Mississippi Chat is saltwater and oil. Once the
12 fluid comes to the surface, the oil is removed.
13 The oil is processed. The oil is sent to market.

14 The saltwater that is brought to the
15 surface with the oil is returned to the
16 Mississippian Chat formation.

17 No other water, no outside water is
18 added to the separated saltwater that is returned
19 to the Mississippian Chat.

20 So in essence, once the water is
21 removed, the oil is extracted and the water is
22 returned, and that is their process.

23 In the time leading to the discovery
24 of chlorides in this tributary, there were no
25 visible surface indications of a spill event, much

October 5, 2017

1 less a connection specific to Jireh, whose
2 operations are three-quarters of a mile, almost a
3 mile away.

4 The tributary area at issue, the
5 impacted tributary, is not within the scope of
6 Jireh's oil and gas lease.

7 We understand that the spill was
8 discovered in early August of 2016. Jireh was
9 notified several weeks later in the closing days of
10 August of 2016.

11 Since that time, Jireh, Lanny and
12 David, have worked with the Environmental
13 Protection Agency, the EPA, to try to understand
14 the dynamics of the situation.

15 David and Lanny have gone to Dallas to
16 meet with EPA officials. They have met on the
17 site. They've walked the land with EPA officials.

18 They've gone to Pawhuska and met with
19 representatives of the Bureau of Indian Affairs and
20 the tribe to provide insight into the problem.

21 I think it was Lanny that delivered a
22 four-inch notebook of Jireh's operations and
23 production records to the EPA voluntarily.

24 We still at this point don't
25 understand all of the EPA's theories based on the

October 5, 2017

1 data, probably because we just received several
2 thousands of pages of documents last week, and we
3 anticipate, we understand that several thousand
4 more are coming.

5 So we are working with the information
6 we have based on their year-long investigation,
7 which we haven't had a chance to truly digest and
8 appreciate.

9 Based on what the EPA has provided us
10 though so far, we understand a few salient points.
11 Number one, the water quality testing for chlorides
12 near Pawhuska and the water wells located on the
13 ranch have all returned with negative results,
14 which is a good thing.

15 Further, the test results from the two
16 pools, as we understand it, the chlorides -- where
17 the chlorides were originally found, those chloride
18 numbers have been decreasing over time, which is
19 also a good thing.

20 There's simply no question this is an
21 unfortunate situation. It has been a challenge to
22 everyone involved, and Jireh certainly has no
23 animosity towards the EPA or anyone else who's been
24 harmed or impacted by this.

25 Based on the information that we have

October 5, 2017

1 and what we've seen so far, any notion that there
2 is a continuing or ongoing spill is simply not
3 supported by the facts.

4 Further, we don't see, based on the
5 facts that we've received from the EPA and the
6 information that we have in any way Jireh's
7 operations have caused the spill of the chlorides
8 into the tributary.

9 And finally, as far as Jireh's
10 processes, from the information we have, there's no
11 connection between Jireh taking water out of the
12 Mississippian Chat and returning water to the
13 Mississippian Chat, that the pressures and
14 processes involved in that have caused any
15 chlorides to seep into the tributary.

16 Now, later on today you're probably
17 going to hear from some other folks who may not be
18 so closely familiar with Jireh's operations, about
19 what they think that might have caused or may be
20 causing problems in that tributary.

21 It is understandably an incredibly
22 frustrating situation, frankly, and no doubt an
23 emotional matter too, because it involves the
24 environment that we all care about.

25 However, from what we have seen, the

October 5, 2017

1 allegations that have been made against Jireh
2 generally fall into a couple of categories.

3 Number one, the allegations generally
4 just aren't supported by the facts of the
5 operations, as we have indicated.

6 Number two, much of what is said
7 appears to be based on assumptions, which have been
8 layered on other assumptions, some of which just
9 aren't accurate.

10 And number three, there seems to be a
11 misunderstanding of information, whether it's
12 interpretation that's wrong is a fundamental
13 misunderstanding, which leads to, frankly,
14 inaccuracies.

15 We see a reasoned result that is based
16 on probabilities and not possibilities and that is
17 anchored in truth and not speculation, anchored in
18 logic and not speculation.

19 Ultimately, we hope that Jireh is not
20 judged prematurely, that we have adequate time to
21 look at the underlying information that EPA has
22 gathered during its year-long investigation.

23 We hope that we can receive a
24 reasonably fair hearing where we get to present our
25 side, the information that we've gathered and

October 5, 2017

1 evaluate what the EPA has said and not just have
2 this be a one-sided narrative.

3 And frankly, we have had and expect to
4 continue to have a pleasant, professional and
5 productive relationship with the EPA to get to the
6 bottom of all this.

7 Perhaps most of all, we look forward
8 to getting to the truth of the matter, which is
9 something that we don't think has yet been shown.

10 So in the meantime as we work to
11 better understand this information we've received,
12 to digest the information that we are getting,
13 that's still to come, please let the record reflect
14 that Jireh respectfully opposes and objects to the
15 proposed administrative order issued by the
16 Environmental Protection Agency in this matter
17 relative to Wells No. 9 and 4W and 18W.

18 I will now introduce to you David
19 House, who is Jireh's president. He will be
20 followed with short comments by Lanny Woods.

21 We appreciate your time and the
22 opportunity. Thank you.

23 HEARING OFFICER RUCKI: Thank you.

24 MR. HOUSE: Good morning.

25 HEARING OFFICER RUCKI: Good morning.

October 5, 2017

1 MR. HOUSE: My name is David House, H-
2 O-U-S-E. Thank you for the opportunity to visit
3 with you today regarding the proposed
4 administrative orders that are the subject of this
5 hearing.

6 I'd like to just begin by introducing
7 you to Jireh Resources. We're a very small oil
8 production company. We own 11 leases in total.
9 All of them are in Osage County.

10 My business partner, Lanny Woods, is a
11 geologist and we each have over 35 years experience
12 in the oil and gas production business.

13 About eight years ago we raised some
14 equity money from some local businessmen. We put
15 in the majority of our own personal net worth and
16 we bought these properties.

17 We bought these properties with the
18 intention of being long-time owners and we still
19 have that intention today.

20 The two leases that are the topic of
21 these proposed administrative orders represent 60
22 percent of the value of our company.

23 We have five employees and one
24 contract person on our payroll and we've called
25 Pawhuska the home of our company since the

October 5, 2017

1 beginning about eight years ago.

2 The purpose of this introduction is to
3 make it clear that this is a critical issue to us.
4 Everyone involved, our employees, our lenders, our
5 investors, our vendors, our customers, all have a
6 vested interest in discovering the true source of
7 this contamination through our combined
8 investigation with the Environmental Protection
9 Agency, the Bureau of Indian Affairs, the
10 landowners and our fellow producers in the area.

11 I'm deeply committed to solving this
12 mystery, because it's impacting the environment in
13 the vicinity of our operations.

14 Whether deserved or not, this casts a
15 shadow on the reputation of Jireh and, frankly,
16 threatens the future of our company. It can also
17 possibly result in the loss of valuable oil
18 reserves to the Osage Nation.

19 An important point is that the data we
20 have accumulated today tends to contradict the
21 theories that are being discussed by the EPA and
22 other parties and suggests a very different source
23 of contamination altogether.

24 From the very beginning of Jireh,
25 Lanny and I have dedicated ourselves and our

October 5, 2017

1 employees to operate Jireh in a manner that we
2 would want to be treated.

3 We have done our best to treat all
4 stakeholders, whether investors, regulators,
5 employees, vendors, we treat them the way we want
6 to be treated.

7 We do the same with surface owners
8 also. We treat them the way we want to be treated.

9 Frankly, the previous operator left
10 some of these leases in rather poor conditions and
11 we have spent a substantial amount of time and
12 money bringing this surface facility up to what we
13 would consider approved standards and in compliance
14 with all the applicable EPA, BIA and other
15 regulatory rules and regulations.

16 We're not perfect. We make mistakes.
17 But when we make one, we notify the applicable
18 regulatory agency, we notify the surface owner, and
19 we fix the problem.

20 When we have had a notice come from a
21 regulatory agency that we've had a problem, we
22 expeditiously and professionally repair whatever
23 that problem is. This is just the way we do
24 business.

25 Let me also say that we're outdoor

October 5, 2017

1 enthusiasts also and we're surface owners. We
2 fish, hunt, hike, camp, and we want to do this
3 activity in the cleanest and most pristine
4 environment the same as every other Oklahoman.

5 We strive on a daily basis to operate
6 our properties in a way that is conducive to these
7 activities and protective of the environment around
8 us.

9 Speaking to the specifics of this
10 particular matter, the intermittent stream that is
11 the subject of this hearing is not on our lease.

12 If it had been on our lease, we would
13 have taken care of this problem when it first
14 appeared a year ago.

15 The methodology to arrest saltwater
16 spills and correct problems is well established in
17 Osage County.

18 You go below the existing contaminated
19 area, build a temporary dam, bring in vac trucks
20 and literally vacuum the water out of the creek.

21 If necessary, you actually remove the
22 stream bed if it's been contaminated also, flush
23 the area with fresh water and then continue
24 monitoring it to be sure that no incremental
25 remediation is required.

October 5, 2017

1 If this had been done a year ago, over
2 a year ago now, we probably wouldn't be here today.
3 This would be an incident long forgotten.

4 We have actually discussed this
5 process with our joint operator, Warren American,
6 and with EPA.

7 Both are in favor of following this
8 action even still today. We hope to reach an
9 agreement still with the landowner that will allow
10 us to remove the remaining contaminated water.

11 As to determining, trying to determine
12 the source of the spill, we have requested all the
13 related data that EPA has relied upon to make their
14 conclusions today.

15 As Robert said, we have received a
16 fair amount of data and we expect to receive
17 substantially more data from EPA, hopefully by the
18 end of the month. That's what they're telling us
19 now.

20 Based on an informal meeting with the
21 EPA, they seem to believe that an underground
22 saltwater plume from 2500-feet deep -- 2500 feet,
23 that's like a 250-story office building -- was
24 driven by some mysterious high pressure up out of
25 the reservoir 2500 feet over a big hill from our

October 5, 2017

1 lease, down a hill and popped out from the bottom
2 of an intermittent stream.

3 Understand, there was never any
4 evidence of any saltwater flowing from the surface.
5 This all supposedly happened underneath the ground.

6 We believe this conclusion is based on
7 assumptions that are not supported by actual data
8 or the law of physics.

9 We have seen no downhole pressure
10 readings reported by the EPA. We may get some in
11 the future. We don't know.

12 But downhole pressure is the key
13 element in understanding the theory. There has to
14 be enough downhole pressure to drive this plume of
15 saltwater up, over, around, back up.

16 As part of normal operations, we
17 routinely test bottom hole pressures. We have
18 never seen any bottom hole pressure that was
19 anywhere close to allowing this type of plume to
20 transfer to that 2500 feet of surface, three-
21 quarters mile away. We just haven't seen it.

22 Despite our data, we now face a
23 proposed administrative order that does not appear
24 to be supported by facts or science, but could
25 potentially financially ruin our company and eight

October 5, 2017

1 years of effort.

2 What we've elected to do is to the
3 very best of our ability cooperate with EPA and BIA
4 in this investigation.

5 We have gone out and retained Ph.D.,
6 petroleum reservoir engineers, who are looking at
7 our data, looking at EPA's data and will continue
8 to look at EPA's data.

9 We've hired Ph.D. hydrologists who are
10 doing the same thing. And yes, we even had to hire
11 some attorneys to help us in this.

12 But our goal is for EPA and the public
13 to understand that we're working toward a true
14 solution and we want to get to the bottom of this.

15 From here forward, we look forward to
16 receiving the incremental data from EPA, have our
17 consultants review it, and through further
18 discussions with EPA and the BIA if appropriate, we
19 will demonstrate with bottom hole pressure tests,
20 hydrology studies and expert testimony regarding
21 reservoir engineering, production records and
22 geologic data that it's physically impossible for
23 our wells to be the source or the cause of the
24 saltwater that was discovered a year ago.

25 Our goal today is simply to state for

October 5, 2017

1 the record we're confident that our company and its
2 wells had nothing to do with saltwater that was
3 found in the intermittent stream that's a tributary
4 to North Bird Creek.

5 Our preliminary data supports this
6 conclusion with scientific fact. We certainly have
7 not pumped or dumped water into this small stream.

8 We look forward to resolving this
9 issue in a manner that benefits all concerned. We
10 want to protect the beautiful environment of Osage
11 County. We love that area of the state and we are
12 going to get to the bottom of this.

13 Thank you very much for your time.

14 HEARING OFFICER RUCKI: Thank you.

15 MR. HOUSE: I'll turn it over to Mr.
16 Lanny Woods.

17 MR. WOODS: My name is Lanny Woods, L-
18 A-N-N-Y, W-O-O-D-S. Thank you for this opportunity
19 to discuss the situation at North Bird Creek and
20 what Jireh Resources believes may have happened to
21 cause the saltwater spill.

22 As my partner, David, alluded to, I am
23 a geologist and we are trained for situations such
24 as this.

25 We are trained to test, to analyze

October 5, 2017

1 circumstances, and to offer possible science-based
2 explanations for what's happened.

3 To give some brief background, Jireh
4 Resources was first contacted about this incident
5 two days prior to August 31st, 2016.

6 As has been previously mentioned, the
7 spill was not on our lease and it was more than a
8 mile from the closest well.

9 At this meeting, we met with other
10 operators in the general area to discuss the
11 apparent saltwater spill that had been discovered
12 in a small intermittent stream south of Jireh's
13 operations.

14 At this first meeting we discovered
15 that saltwater with chlorides of over 8,000 parts
16 per million were found in a pool on the downslope
17 side of an intermittent stream and directly
18 adjacent to a culvert bridge.

19 The water on the upslope side of the
20 bridge was fresh. So the only place the saltwater
21 was found in the creek was on the downslope side.

22 We were told that the Bureau of Indian
23 Affairs and EPA ran an extensive search in the
24 entire area looking for any indication as to where
25 saltwater may have come from.

October 5, 2017

1 Any saltwater spilled on the surface
2 would kill vegetation, making it easier to locate
3 any kind of spill site. We were told that no signs
4 of a surface spill were found.

5 So I believe the question that was and
6 is still in everyone's minds is where did the
7 saltwater come from to get into the creek, and in
8 particular the small pool just below the bridge.

9 Early on it was suggested that
10 saltwater may have been illegally dumped into the
11 creek on the downslope side of this culvert bridge
12 that spans the creek.

13 This would easily explain why
14 saltwater was not found anywhere else in the
15 immediate area and why it was only found on the
16 downslope side of the bridge.

17 The EPA's own internal report suggests
18 the same possible conclusion. Its August 16, 2016,
19 inspection report states, "Flow paths, seepage and
20 other potential surface indications were not
21 observed."

22 Later on it says, "Another possible
23 source of the wastewater could be a possible
24 dumping from a tank truck from the county road."

25 The current data that we have still

October 5, 2017

1 indicates that this is what likely caused the
2 original saltwater spill.

3 So what is the EPA's current theory as
4 to how the saltwater got into the creek? Based on
5 the data accumulated to date -- and understand that
6 data collection is still going on, EPA personnel
7 apparently believe that the injection wells used by
8 the area operators had supercharged or
9 overpressured the zone they recycle water into, the
10 Mississippi Chat Reservoir, and that this has
11 caused saltwater from the zone to travel some 2500
12 feet up through some unknown pathway or from an
13 improperly plugged well, and then directly into the
14 creek. The odds that this scenario caused the
15 spill are extremely low.

16 Let's talk about the pressure issue.
17 Recall the EPA's theory is based on the assumption
18 that we had overpressured the reservoir. The facts
19 do not support this theory.

20 The volume of oil that has been
21 produced from the reservoir underlying the lease
22 exceeds 4.8 million barrels of oil and represents
23 about 35 percent of the original oil in place.

24 Since 1988, over 1.1 million barrels
25 of oil, which is equivalent to 45 million gallons

October 5, 2017

1 of oil, have been taken out of the reservoir. This
2 has caused a huge reduction in the fluid volume and
3 pressure.

4 Since 1988 no makeup water has been
5 put into the reservoir, meaning no water other than
6 the water that has been produced from the reservoir
7 is being put back into the reservoir.

8 No additional water has been put into
9 the reservoir to make up for the oil that's been
10 produced and taken out.

11 This is basically a recycling
12 operation. For each barrel of oil and produced
13 water that comes out of the reservoir, the oil is
14 separated and the water is simply returned to the
15 reservoir from which it came.

16 So more fluid is being taken out than
17 what's being put back in. This condition cannot
18 cause a reservoir to become overpressured or
19 supercharged.

20 It can only reduce the volumes and the
21 pressures within the reservoir, and we have solid
22 data that support this fact.

23 Jireh Resources have spent the time
24 and money to properly test for actual bottom hole
25 pressures. These show to a degree of certainty

October 5, 2017

1 that the reservoir is depleted and not overly
2 pressurized.

3 A respected petroleum engineer, who is
4 a professor at the University of Tulsa, has
5 reviewed the available data and made the conclusion
6 the Mississippi Chat Reservoir in the Jireh release
7 area cannot support overpressurization.

8 There is no unusual synergies between
9 wells that would support supercharging of the
10 reservoir.

11 Just as an example, Jireh's 18W well,
12 we recycle about 2800 barrels of water per day with
13 a surface pressure of less than 200 psi. PSI is
14 pounds per square inch.

15 When the pump that recycles the water
16 into the well shuts off, the pressure at the well
17 goes to zero psi instantaneously. Zero psi means
18 there is no pressure.

19 The EPA has indicated it believes the
20 saltwater is still entering the creek, and we do
21 not believe this.

22 The first report of the incident at
23 the creek indicated that saltwater content in the
24 first creek pool below the bridge was 80,000 parts
25 per million.

October 5, 2017

1 Since that original reading, the parts
2 per million has generally proceeded to go down
3 every month, and there has been no recording near
4 the original 80,000 parts per million.

5 In late May 2017 the EPA installed ten
6 monitoring stations in various parts of the creek.
7 Since May 28, 2017, the station near the original
8 spill site, the one in the upper pool, measured 500
9 parts per million, which is basically fresh water.
10 The pool remains clean today.

11 Sometime after the first reported
12 spill site was identified, a second pool was found
13 about a half mile south and downstream.

14 This spot had a reported saltwater
15 content around 45,000 parts per million. It, too,
16 has slowly started to clean up.

17 This data supports one of EPA's
18 initial potential causes, that saltwater was
19 illegally dumped into this stream and over time the
20 saltwater in these pools have slowly been diluted
21 and reduced as rainwater washes through the small
22 portion of the stream.

23 Other than for a brief shut-in for
24 testing, Jireh has not shut down its operations and
25 has continued to produce oil and recycle produced

October 5, 2017

1 water back into the reservoir just as it did before
2 the spill.

3 No increase in saltwater has been
4 reported at the original pool. As a result and
5 contrary to what EPA has indicated, we do not see
6 any correlation between our recycling operations
7 and in-steam water quality. We continue to operate
8 and the stream is getting cleaner.

9 So based on this data, whatever
10 happened in the fall of last year is no longer
11 happening.

12 In conclusion, we at Jireh Resources
13 have been and will continue to be committed to
14 doing our very best in keeping our leases and
15 surface areas free of environmental problems.

16 We have worked with EPA, giving them
17 any and all they have requested in a timely manner
18 and we'll continue to do so.

19 The incident which contaminated a
20 small portion of North Bird Creek Tributary is
21 certainly an unfortunate situation, but the data
22 being generated from the site indicated that
23 Jireh's operations are not to blame for this
24 problem.

25 Nevertheless, as a concerned citizen

October 5, 2017

1 of Osage County, we want to be committed and try to
2 find good results to this problem.

3 We have additional data analysis
4 by our consultants that we're going to share with
5 EPA, which we believe is going to support our
6 position.

7 We look forward to the satisfactory
8 resolution to this incident and appreciate EPA's
9 willingness to work with us in this mutual effort.

10 Thank you.

11 HEARING OFFICER RUCKI: Thank you.

12 MR. WINTER: Officer Rucki, there's no
13 more commentator with presentation on behalf of
14 Jireh.

15 HEARING OFFICER RUCKI: Great, thank
16 you. Thank you both also.

17 Warren American, if you'd like a few
18 minutes, you can have those, or we could just go
19 right into your presentation. It's up to you.

20 MR. McNAMARA: Your Honor, Steve
21 McNamara for Warran American. If we could possibly
22 have ten minutes?

23 HEARING OFFICER RUCKI: Sure, that's
24 great. We'll start again at 9:56.

25 [Recess.]

October 5, 2017

1 PRESENTATION OF WARREN AMERICAN OIL COMPANY

2 MR. McNAMARA: Mr. Rucki, my name is
3 Steve McNamara. I'm an attorney here today on
4 behalf of Warren American Oil Company. My name is
5 spelled M-c-N-A-M-A-R-A.

6 And I'm not going to make any
7 substantive comments other than we had prepared
8 written reports that we would like to be included
9 in the record. These would include the opening
10 statement of Mr. Doug Norton, who I'll introduce in
11 a moment.

12 We have a reservoir engineering study
13 that's been prepared by William M. Cobb &
14 Associates out of Texas, one of the recognized
15 petroleum engineering firms.

16 We also have the affidavit of Mr. John
17 Burroughs, who's the Vice President of Operations
18 for Warren American, and he's here today.

19 And we have a report by Dr. Kerry
20 Sublette, who is the Sarkeys professor of
21 environmental engineering at the University of
22 Tulsa and is well respected.

23 And I've marked these as Warren
24 American Exhibits 1, 2, 3 and 4, and so that the
25 record is complete, that we have -- we make sure

October 5, 2017

1 that these engineering and scientific studies and
2 the data and conclusions that they come to are
3 properly before the Environmental Protection Agency
4 when it makes its decision to change these proposed
5 orders into final orders, that they have this in
6 the record.

7 HEARING OFFICER RUCKI: Great. Thank
8 you.

9 [Warren American Exhibit Nos. 1 - 4
10 were received.]

11 MR. McNAMARA: So if I may approach?

12 HEARING OFFICER RUCKI: Yeah, please.

13 MR. McNAMARA: In keeping with the
14 spirit of this hearing as open to the public, we've
15 decided that lawyers -- lawyers making arguments is
16 not conducive to the free flow of information. And
17 so I wanted to introduce my clients.

18 Mr. Doug Norton is the Chief Operating
19 Officer. Mr. John Burroughs is the Vice President
20 of Operations. We also have Mr. Tom Turmelle,
21 who's the Vice President of Geology for Warren
22 American.

23 It is a small company, and what we are
24 talking about today is probably seventy percent of
25 the management skill of the company that's here

October 5, 2017

1 today.

2 And I want to state for the record
3 that since first being notified of this problem,
4 Warren American and these three individuals have
5 devoted hundreds of man hours of their time to try
6 to determine what is the cause of this incident and
7 how -- how Warren American's operation could have
8 been involved in this.

9 They firmly believe -- and I believe
10 the facts and evidence will show -- that it is not
11 Warren American's operations in any way, shape or
12 form that contributed or caused this spill.

13 So we have, for the record, complied
14 with every request -- not order, every request --
15 that the Environmental Protection Agency has made
16 of Warren American.

17 It has voluntarily complied with -- it
18 has shut down its production of -- and so the
19 record is clear, when one shuts in their disposal
20 wells, we cannot produce oil, because, as the other
21 speakers have said, in a recycling operation, if
22 you keep producing fluid and you don't have a place
23 to put the water, then it doesn't work. So you
24 have to shut-in the producing wells in order to
25 shut-in the disposal wells.

October 5, 2017

1 And we've shut-in the disposal wells
2 and therefore shut-in our entire operation on this
3 lease for a short period of time at the request of
4 the EPA when they requested all operators to shut-
5 in.

6 And then subsequently we shut-in ours
7 for an extended period of time, approximately 30
8 days, and then recently we've reactivated our
9 lease, in part, because we have an obligation under
10 the law to the Environmental -- to the Bureau of
11 Indian Affairs and the Osage Nation to produce the
12 lease. And we reactivated them to save the lease,
13 but we also reactivated them because our experts
14 felt that we needed more data and more information.

15 I would like to concur that the
16 overarching question here is whether this is a
17 recurring event, and Warren American very much
18 wants permission to vacuum the polluted water out
19 of the creek and return it as close as possible to
20 a pristine condition, and then to continue to
21 observe if additional saltwater comes back into the
22 creek and, if so, from where.

23 So with that, I'd like to introduce
24 Mr. Doug Norton. He's going to be reading his
25 prepared statement, which is Exhibit 1.

October 5, 2017

1 HEARING OFFICER RUCKI: Okay. Thank
2 you.

3 OPENING STATEMENT OF WARREN AMERICAN OIL COMPANY

4 MR. NORTON: Officer Rucki, my name is
5 Doug Norton.

6 HEARING OFFICER RUCKI: Good morning.

7 MR. NORTON: I'm speaking today on
8 behalf of Warren American Oil Company concerning
9 the Bird Creek salinity issues being investigated
10 by the EPA.

11 Warren American is grateful to the EPA
12 for the opportunity to place into the record
13 written expert reports and evidence which we
14 believe conclusively exonerates Warren American
15 from the allegations that it has failed to confine
16 injected fluids to the authorized injection zone,
17 resulting in a contamination of Bird Creek.

18 Warren American has been in business
19 for over 75 years, and enjoys an excellent
20 reputation, both inside and outside the oil and gas
21 community.

22 This is the first time in Warren
23 American's history where it has been involved in an
24 EPA hearing. Warren American is deeply committed
25 to protecting the environment of the Osage County

October 5, 2017

1 while producing oil and gas for our own benefit and
2 for the benefit of the Osage Nation.

3 Warren American has owned the Chapman
4 lease since December 13, 2013, when it was acquired
5 from Link Oil Company.

6 Warren American has fully cooperated
7 with the EPA in every aspect of this investigation
8 since August 2016 until the present date. We have
9 turned over to the EPA all of our files and records
10 pertaining to our injection wells and our
11 production wells.

12 We have devoted hundreds of man hours
13 internally investigating our own operations in an
14 attempt to arrive at an answer to this dilemma.

15 We have periodically shut down our
16 operations, conducted numerous diagnostic tests on
17 injection wells and producers, and monitored
18 salinity and temperatures at various spots along
19 Bird Creek over time.

20 We have spent numerous hours
21 discussing both facts and theories with the
22 representatives of the EPA and representatives of
23 the surface owners.

24 We deeply value the input and efforts
25 of the general public and the EPA that have been

October 5, 2017

1 made with respect to this problem, and pledge to
2 continue to work with the Agency and surface owners
3 in the future.

4 Now, with respect to the proposed
5 order that was sent to Warren American by the EPA
6 on July 29, 2017, it is Warren American's opinion
7 that the conclusions reached in the proposed order
8 as to Warren American's operations are factually
9 and scientifically incorrect, and the data does not
10 support the EPA's theory that the Mississippi Chat
11 formation is over-pressured.

12 Warren American's opinion is based on
13 the following observations:

14 1. The Mississippi Chat formation is
15 not over-pressured. As a preliminary matter, we
16 would note that, of the three injection wells
17 operated on the Warren American -- on the Chapman
18 lease, two of the wells, the B8 and B9, are taking
19 water from a vacuum, and the third is operating at
20 a very low injection pressure.

21 It is difficult to understand how the
22 EPA could arrive at the conclusion that the
23 injection wells that take water on a vacuum could
24 leak to or contribute to the over-pressuring at the
25 Mississippi Chat formation.

October 5, 2017

1 In the aggregate, Warren American's
2 producing operations bring both water and oil to
3 the surface, separates the oil from the water, and
4 then reinjects the water into the same producing
5 formation without adding any makeup water to
6 replace the oil volumes produced.

7 This concept, or recycling operation,
8 has been going with respect to the Mississippi Chat
9 Reservoir at this location for more than 50 years.
10 The result is that the reservoir pressure in this
11 Mississippi Chat formation is now less than the
12 bottom hole pressure was 50 years ago.

13 Since the pressure within the
14 Mississippi Chat has continuously declined over
15 time, there is no scientific or factual basis for
16 the conclusion that the Mississippi Chat has been
17 or is over-pressured.

18 As a professional registered petroleum
19 engineer with 40 years of experience, I can attest
20 that it would be classified as a normally pressured
21 reservoir.

22 To study this finding of the EPA,
23 Warren American has engaged the services of Cobb &
24 Associates, petroleum engineers. Under Cobb's
25 guidance, Warren American recently obtained

October 5, 2017

1 measured bottom hole injection pressures for all
2 its injectors on the Chapman lease.

3 A copy of the Cobb & Associates report
4 is submitted along with this statement, which
5 concludes (a) the Mississippi Chat is not over-
6 pressured; (b) that the Warren American injection
7 wells are not injecting water in volumes or
8 pressures anywhere close to the fractured gradient
9 for the Mississippi Chat formation; and (c) that
10 there is approximately 2,400 feet of vertical
11 elevation between the top of the Mississippi Chat
12 formation and the bottom of the Bird Creek at
13 Monitoring Station No. 6; and finally (d) that 90
14 percent of the pressure drop from the injection
15 wells to the producers occurs within 10 feet of the
16 injectors, and therefore there is insufficient
17 reservoir pressure, even while water injection is
18 occurring, to lift a column of fluid from the
19 Mississippi Chat into the bottom of Bird Creek. As
20 long as the water is entering our injection wells
21 at the surface and actually enters the Mississippi
22 Chat formation, it does not channel up the back
23 side of the casing.

24 Conclusion No. 2. Warren American's
25 injection water is confined solely to the

October 5, 2017

1 Mississippi Chat formation.

2 Also submitted along with this
3 statement is the affidavit from our Vice President
4 of Operations, Mr. John Burroughs.

5 As Mr. Burroughs' affidavit describes,
6 Warren American has taken additional steps to
7 conclusively prove that the water it is injecting
8 into the injection wells is not escaping somewhere
9 between the surface and the Mississippi Chat
10 formation.

11 This is evidenced primarily by three
12 radioactive injection profile tests which Warren
13 American recently caused to be run by Associated
14 Wire Line Service of Healdton, Oklahoma.

15 These tests, the results of which are
16 attached to Mr. Burroughs' affidavit, conclusively
17 show that all water injected into the Warren
18 American wells enters the Mississippi Chat
19 formation, and does not escape between the surface
20 and the Mississippi Chat or channel up the outside
21 of the wellbores.

22 The Cobb report, referenced
23 previously, also concludes, based on these
24 injection profiles, that the injection water is
25 confined solely to the Mississippi Chat formation.

October 5, 2017

1 3. Warren American injection wells
2 have not recently failed MIT tests. There has been
3 an insinuation that Warren American's injection
4 wells have recently failed MIT tests. This was
5 alluded to in the public comments.

6 Mr. Burroughs' affidavit corrects the
7 record with respect to the facts. A summary of Mr.
8 Burroughs' affidavit regarding these issues is as
9 follows:

10 (a) Warren American's CW4 Well,
11 sometimes referred as the "C1 Well," did fail an
12 MIT test on November 18, 2014, at which time all
13 injection of fluids was discontinued. The well was
14 subsequently plugged in 2016, as witnessed by the
15 EPA; and

16 (b) Warren American B9 Well failed an
17 MIT on August 11, 2015. All injection was
18 discontinued at that time.

19 As Mr. Burroughs' affidavit shows,
20 efforts were made to repair the B9 Well, which were
21 ultimately successful. Injection was recommenced
22 after the well successfully passed an MIT test on
23 December 30, 2016. The B9 Well is currently taking
24 water on a vacuum and injecting approximately 900
25 barrels of water a day.

October 5, 2017

1 In summary, neither of these wells
2 could have contributed to the pollution of Bird
3 Creek, which occurred in August 2016, as neither
4 had been in operation for a full year prior to the
5 discovery at Monitoring Station No. 2. Also,
6 neither had the type of failure that would permit
7 injection into a shallow horizon.

8 Now, concurrent with our conclusion
9 that Warren American is not responsible for the
10 Bird Creek contamination, a separate likelihood has
11 been determined: that the contamination was a one-
12 time event and there is no ongoing pollution into
13 the creek.

14 This topic is addressed in a second
15 report offered by Dr. Kerry Sublette, distinguished
16 professor of environmental engineering at the
17 University of Tulsa. And in addition to studying
18 the data provided by the EPA, Dr. Sublette walked
19 the creek, and supervised the measuring of the
20 salinity and temperature in several spots beyond
21 the EPA signs over time.

22 Dr. Sublette's report is also being
23 offered into the record today to support Warren
24 American's observation that the salinity levels
25 present in Bird Creek have declined over time and

October 5, 2017

1 are continuing to decline.

2 In particular, the salinity levels at
3 Monitoring Station No. 2 where initial reports
4 found 80,000 ppm of chlorides have now fallen to
5 below 1,000 ppm and continue to decline.

6 Salinity also continues to fall at
7 Monitoring Station No. 6, although the salinity
8 measurements remain high in the deepest part of the
9 pool there. However, the salinity reading is six
10 inches from the surface at Station No. 6, but it
11 increased rapidly to the 1,500 ppm range.

12 Dr. Sublette concludes that all
13 observations of increased salinity can be explained
14 by stratified flow and pool-to-pool transport of
15 salts.

16 Another significant finding by
17 Dr. Sublette is that the temperature anomalies
18 observed at various depths of Bird Creek could
19 readily be explained by solar heating of the dense
20 saline layers. Therefore, communication with the
21 creek and a deeper strata would not be necessary to
22 explain elevated temperatures at deeper, high-
23 salinity locations.

24 So that the record is clear, Warren
25 American was requested to voluntarily shut-in all

October 5, 2017

1 three of its injection wells on at least two
2 occasions.

3 The first time was from June 9 to
4 June 16 in conjunction with the shut-in of all
5 three of the operator's wells at the EPA's request.

6 The second shut-in began on August 9
7 to cooperate with EPA's proposed administrative
8 order. From that date for approximately 30 days,
9 Warren American's production facilities were
10 completely shut down.

11 It should be noted for the record,
12 Warren American has no alternative source to take
13 produced water off of the Chapman lease. Also,
14 Warren American has been told by EPA personnel that
15 no new permits to drill a disposal well further to
16 the north or to dispose of our produced water into
17 different formations will be approved. Without
18 disposal wells, Warren American cannot produce the
19 Chapman lease.

20 As a consequence of the foregoing and
21 in an effort to continue to gather scientific data,
22 Warren American decided to reactivate its
23 operations following the 30-day shut-in. The
24 reactivation occurred on September 8, 2017.

25 From that date, Warren American has

October 5, 2017

1 obtained readings from both Monitoring Station No.
2 2 and Monitoring Station No. 6, with the consent of
3 the surface owner and the knowledge of the EPA.
4 Dr. Sublette addresses those readings in his
5 report.

6 The bottom line is that the salinity
7 levels continue to decline and remain steady, even
8 after Warren American's wells had been reactivated.
9 This certainly suggests that Warren American wells
10 have not, and do not, contribute to the saltwater
11 that entered Bird Creek in August 2016, nor does it
12 appear that there is any current inflow of
13 saltwater from any source.

14 In conclusion, it is Warren American's
15 position that, at all times, we operated wells in
16 compliance within terms of our underlying permits.
17 We believe that the initial photographic evidence
18 of oil and oil sheens in the creek in August 2016
19 and the absence of any reported oil sheens
20 subsequent to August 2016 strongly substantiate
21 that this was a one-time event. The gradual
22 decline of the salinity of the water remaining in
23 the creek also supports our conclusion that the
24 pollution is not currently recurring.

25 This is particularly true with respect

October 5, 2017

1 to Warren American's wells which were voluntarily
2 shut-in for an extended period of time. The
3 evidence shows that prior to the Warren American
4 shut-in, during the shut-in, and after the
5 injection activities were resumed, salinities
6 within Bird Creek all continue a gradual, steady
7 decline.

8 Warren American concurs with the
9 recommendation in Dr. Sublette's report that the
10 high-salinity water in Monitoring Station No. 6 be
11 drained two or three times, if necessary. The
12 salinity at that station should continue to be
13 monitored during this process.

14 Further, Warren American believes that
15 the EPA's proposed order to permanently discontinue
16 disposing of produced water into the Mississippi
17 Chat is arbitrary and capricious and is not
18 supported by the data. As noted above, such an
19 order would likely lead to the inability to produce
20 the Chapman lease.

21 Other alternatives are available, at
22 least on an interim basis, to monitor the
23 situation. These would include (1) lowering the
24 allowed maximum injection pressure on the Warren
25 American injection wells; (2) requiring an annual

October 5, 2017

1 or biannual MIT test on the Warren American
2 injection wells; (3) conducting weekly monitoring
3 and reporting of casing pressure in addition to the
4 current tubing pressure; and (4) requiring weekly
5 monitoring of the salinity levels within Bird Creek
6 for an extended period of time.

7 Warren American has not yet received
8 all of the documents that it has requested from the
9 EPA through various Freedom of Information Act
10 requests. We respectfully request that we be
11 provided adequate time to review and respond to
12 this information once it is received.

13 Warren American is of the firm belief
14 that its activities were not the cause of the
15 observed pollution. Our expert reports show that
16 the proposed order, as directed to Warren American,
17 is not supported by scientific evidence, and
18 represents a finding of guilt-by-association that
19 is not warranted.

20 We honor our reputation for honesty
21 and integrity in all matters pertaining to our
22 operations, and the proposed order deprives us of
23 the ability to prove our innocence.

24 We strongly urge the EPA not to go
25 forward with the proposed administrative order

ANN THORNTON BERRY, CSR
1-877-517-9367

October 5, 2017

1 while data is indicating that no further
2 contamination is occurring.

3 Thank you.

4 MR. McNAMARA: I believe that
5 concludes the comments for Warren American. So we
6 don't have any further testimony or evidence at
7 this time.

8 HEARING OFFICER RUCKI: Great. Thank
9 you. If Novy Oil is ready, we can continue. We're
10 well ahead of schedule.

11 MR. TUCKER: Can we have just a couple
12 of minutes?

13 HEARING OFFICER RUCKI: Sure, of
14 course. Yeah, we can take another 10 minutes, if
15 you like, and reconvene around 10:30.

16 MR. TUCKER: Sure.

17 HEARING OFFICER RUCKI: Thank you.

18 [Recess.]

19 PRESENTATION OF NOVY OIL AND GAS, INC.

20 MR. TUCKER: Good morning, sir.

21 HEARING OFFICER RUCKI: Good morning.

22 MR. TUCKER: You and I met before
23 this --

24 HEARING OFFICER RUCKI: Yes.

25 MR. TUCKER: -- started here.

October 5, 2017

1 My name is John Tucker, T-U-C-K-E-R.
2 And I told you that I'm probably the only person
3 who showed up in a bow tie, and I guess that proved
4 true.

5 I'm here on behalf of Novy, and
6 present with me are Mr. Novy, which is logical
7 because that's the name of the company, Mr. Johnson
8 and Mr. Ellis, who are here representing the
9 operator, which is Gray Horse Operating, and we do
10 appreciate the opportunity to be heard and
11 appreciate the courtesy shown to us by the folks at
12 the EPA when our folks went to Dallas to visit with
13 them. If asked they would tell you that our folks
14 just went down and visited with them. We didn't
15 present this as any kind of legal matter. I wasn't
16 there.

17 We think probably it's because -- and
18 this is what I want to try to explain today -- we
19 really kind of don't belong in this situation for a
20 couple of reasons.

21 One, which I'll demonstrate in a
22 little bit is that it's pretty much scientifically
23 impossible for the Novy B15 well to be a
24 contributing cause to the surface water
25 contamination discovered at what's been identified

October 5, 2017

1 as Station No. 2.

2 And the other reason is as a matter of
3 public notice and as a matter of information which
4 was communicated to the EPA earlier today, the
5 relief that's sought by the EPA here, some action
6 with regard to the continuing operations of the
7 wells for the Respondents that are identified and
8 have spoken here today.

9 We have received approval from the BIA
10 to plug and abandon the well, which is the subject
11 of this proceeding. We have an alternative means
12 for our disposal, so our operation will not be
13 affected by plugging and abandoning that well.

14 It's a luxury to have an extra
15 disposal well, but wells are expensive to maintain.
16 And since it's not something that's required for
17 us, rather than be any kind of an issue, we're just
18 wanting to plug and abandon. We're in the 30-day
19 comment period now that follows the issue of the
20 permit to plug and abandon.

21 But we want to present our position
22 today as to why we cannot be a part of this. It's
23 actually because, as of now, we're still a part of
24 the EPA's contention that we are a participating or
25 contributing factor.

October 5, 2017

1 As others have said, we, too, have
2 submitted a FOIA request to the EPA and received a
3 lot of data. We also received a letter from the
4 EPA saying that it would require -- that the EPA
5 would require an extended periods of time in order
6 to comply with our brief request. And no exact
7 date was given for the completion of the
8 production.

9 We're not presenting expert testimony
10 or reports today because, again, we want to see
11 what the final product is of the Freedom of
12 Information Act that would include all the things
13 that were done by the Environmental Protection
14 Agency.

15 So we do reserve the right, as we
16 discussed prior to this hearing in correspondence,
17 to submit further information, data, and opinions
18 following receipt of the FOIA information.

19 And I think we're saying today is that
20 the only reason that the Novy B-15 well is really
21 here is because we're one of wells that was close
22 to where the action was. That's what put us on the
23 list. That's what aspect has to be evaluated.

24 The report of the EPA indicated that
25 the testing that began in October 2016 and

October 5, 2017

1 continued periodically into 2017, elevated TES
2 levels were reported, what's been described as the
3 pool, as the pool by the culvert at Station 2.

4 Other wells were also -- or, other
5 locations were also tested, but that's kind of the
6 location that they key on.

7 And I would like to note, just for the
8 record, one factual error in the interim final Bird
9 Creek investigation and injection well response
10 plan. I mention this and I think it's important
11 because in the presentation of Jireh mention was
12 made of access to the country road and that it was
13 posited by -- posited by the EPA and also by Jireh
14 that an outside person had actually dumped salt
15 water at this location because the fresh water
16 above the culvert and above the road and salt water
17 in the pool which is Station 2.

18 And while the EPA did consider that to
19 be in their final report, as I read it, in the
20 section on page 5 that says "relevant efforts to
21 date have determined", it notes that the site is
22 remote with limited to access through locked gates
23 and there have been no reported observance of
24 illegal dumping there -- or, disposal activities.
25 They conclude that this eliminates a service source

October 5, 2017

1 due to recent dumping.

2 It's important for the record to note
3 that the locked gate, which is described by the EPA
4 that prevented access was not installed until after
5 the testing was complete in this project. That is
6 to say that the landowners at that location
7 determined that too many people were using their
8 road and installed a gate and put locks on it. But
9 that was after the event was discovered. It was
10 not at a time prior to that.

11 So as far as opportunity is concerned,
12 opportunity should be restored to the mix because
13 there was certainly access.

14 There are few reasons that we know
15 that it's impossible for the Novy well to have
16 contributed to cause these high samples. The first
17 thing that I'd like to offer, Exhibit No. 1, if I
18 may for the record.

19 Do I hand this to you, Madam Reporter?

20 THE REPORTER: Yes.

21 [Novy Oil and Gas Exhibit No. 1 was
22 offered into the record.]

23 MR. TUCKER: In Exhibit No. 1, and of
24 course since this is a public hearing, I brought --
25 probably not big enough to see, but maybe it will

October 5, 2017

1 work. I brought a copy to hold up while I talk so
2 the folks can see what we have here.

3 As you can note from looking at the
4 exhibit, and I didn't put a little orange flag on
5 yours, but you can see this location. This is the
6 area in question. This is the Jireh well. Down
7 here marked is the Novy well. This is Station 2
8 [indicating] where the pool is located. This is
9 Station 6, although it's not really involved in our
10 discussion.

11 And the thing that I'd like you to
12 note out of this is a couple of things. This is
13 topographic map. You know, topographic maps
14 basically show elevations. This shows the
15 elevation here [indicating], which is between the
16 Novy well and Station 2, as being 1100 feet.

17 It shows it's still 1050 feet here
18 [indicating]. It is 1100 feet here. The Novy well
19 is a downslope of the 1100 feet. It is all
20 downsloped into the nearest water stream, stream
21 source, which is identified in the highlighted blue
22 lines. This is an exhibit that was from the EPA's
23 documents that we received in the FOIA request,
24 which we have highlighted for clarity to show the
25 surface flow of the streambeds and where they go.

October 5, 2017

1 A combination of the elevation and the
2 location of the interdicting stream pretty well
3 makes clear that it would be darn near impossible
4 for anything from the Novy well to go upslope.

5 Also, it should be noted that is not
6 noted in the reports, but in this general area,
7 there are two water wells for domestic consumption
8 that have been tested. The test results from those
9 wells were not included in the matters in the FOIA
10 production, but since they were tested that they'll
11 be included in the matters yet to be produced.

12 Since those have been used
13 continuously for household drinking water purposes
14 without incident, we expect that the test reports
15 will indicate that there's no particular salinity
16 at that location.

17 Number two, these wells are all
18 identified as injection wells, but technically
19 that's not really correct. The Warren American
20 well and the Jireh well used pressure pumps to
21 inject the water that they're returning to the
22 Mississippian formation. We're rewetting the
23 aquifers as it's sometimes described.

24 That's not true of the Novy well. The
25 Novy well does not even have, and has never had, a

October 5, 2017

1 pressure pump on premises. And yet, it's a very
2 successful disposal well, which is what it is.
3 It's not an injection well, but a water disposal
4 well.

5 The reason that there is not a
6 pressure pump on premises is the Novy well has
7 always and consistently maintained a constant
8 vacuum, a constant vacuum because this is a fluid-
9 seeking formation. Now, our well goes to the
10 Arbuckle and the Mississippian, but both, in a
11 sense, are clearly fluid-seeking formations because
12 no pressure is required to return water in
13 formations from the Novy well.

14 And just -- not that this is any kind
15 of a complicated issue to understand. Let me offer
16 Exhibit 2 to my report.

17 [Novy Oil and Gas Exhibit No. 2 was
18 offered into the record.]

19 MR. TUCKER: But by way of
20 illustration, instead of a pressure gauge on the
21 Novy well, there is a vacuum gauge to tell you how
22 much vacuum is currently on the well.

23 Now, put that in scientific terms --
24 and I'm a lawyer, not a scientist -- but if you'll
25 look at the reading on this gauge, which is -- oh,

October 5, 2017

1 I suppose this is 22, 24, 26, 28, it's about 29.
2 That's 29 -- let me get this right. I want to say
3 this right. This is a mercury gauge value of about
4 29.

5 So I used a standard conversion chart
6 courtesy of Mr. Google, and in the standard
7 conversion chart, that means that a mercury gauge
8 value of 29.4 inches means that the psia, which is
9 the pressure per square inch atmosphere is point --
10 is 0.39.

11 Now, we all learned in grade school or
12 junior high that the atmospheric pressure where
13 we're sitting right now is close enough to sea
14 level to be about the same as absolute -- absolute
15 pressure, which is 14.7 pounds per square inch.

16 Disposal water into this well is at a
17 pressure that is a minus pounds per square inch
18 relative to atmosphere. And in fact, if you take
19 the absolute vacuum, .039 psia, that means that the
20 equivalent in psia is minus 14.31 pounds per square
21 inch.

22 Now, the interim report indicates, and
23 I discussed the fact, that the EPA posits that
24 disposal wells over pressured the Mississippian
25 formation, thus forcing water out through spring

October 5, 2017

1 seeps or some other route, which apparently popped
2 in the bottom of this pond number two under that
3 theory. Which, in itself, is kind of a unique
4 coincidence as it popped up no place else.

5 But the Novy well goes into a fluid-
6 seeking formation.

7 The third point I'd like to make is
8 that the EPA began sampling in 2016 and continued
9 through 2017. The interim report notes that there
10 was a mechanical integrity problem that was
11 repaired during the study period for one of the
12 other wells. And the EPA reports that after that
13 well was repaired, surface water solids in Station
14 2 declined.

15 On May 9th of 2017 the Novy B15 well
16 was shut in for operational reasons. Prior to that
17 time, it was receiving water on a daily basis in
18 normal operations throughout the sampling period,
19 all the way up to May 9th of 2017.

20 Now, the EPA tests that continued
21 after that date showed that surface levels of TPS
22 at Station 2 continued to decline after the Novy
23 well was shut in. EPA concluded that -- and the
24 reason the EPA concluded that Novy should be here,
25 and the only reason EPA concluded according to

October 5, 2017

1 their report that Novy should be here, is that TPS
2 test results for Station 2 declined after the B15
3 was shut in. So by golly, it must have been a
4 contributing cause. Novy was closed; levels
5 continued to decline.

6 What the EPA did not consider,
7 although they discussed rainfall, they did not
8 consider the correlation of rainfall amounts to the
9 decline of TPS -- of the TPS level reports.

10 Let me offer Exhibit 4 of the report,
11 which are the Mesonet rainfall records.

12 [Novy Oil and Gas Exhibit No. 4 was
13 offered into the record.]

14 MR. TUCKER: We know Mesonet is the
15 official government recording group. Mesonet
16 rainfall records for Foraker, Oklahoma, which is
17 the closest recording station, and it's pretty
18 close, from March 23rd, 2017, to August 1, 2017.

19 Then I want to offer Exhibit 3.

20 [Novy Oil and Gas Exhibit No. 3 was
21 offered into the record.]

22 MR. TUCKER: Exhibit 3 is a chart that
23 shows two things. I'm sure that nobody can see it
24 past the first row. And I'm not even sure you can
25 see it on the first row. But you can at least see

October 5, 2017

1 the two colors that we want to correlate here. The
2 name of this is "Water Samples from Monitoring
3 Station No. 2". This is from the EPA reporting
4 documents. This is the date of the well repair.
5 These orange lines are the -- are the reports of
6 TPS for Station No. 2 for June of 2017.

7 You will note that from apparently --
8 approximately September of 2016 down to March of
9 2017, there is a rapid decline, and a significant
10 decline depicted of the test results from No. 2.
11 And it is significant to note that throughout this
12 entire period of time that these levels are
13 declining so rapidly, the Novy B15 well was
14 operating at full speed.

15 It is difficult to say that the Novy
16 B15 is contributing because this problem was a
17 problem going away rapidly when Novy B15 continues
18 to operate as usual.

19 Now, you'll recall, looking at this
20 diagram again [indicating], you'll recall the EPA
21 position is that Novy should be here because these
22 numbers continue to decline.

23 And just for illustration, this is
24 [indicating] approximately March of 2017. This is
25 [indicating] April of 2017.

October 5, 2017

1 If you'll notice, the slope is
2 exactly like that. If you'll notice the first
3 three readings -- or, actually four readings that
4 indicate a decline precede the date that the Novy
5 well was shut in. And yes, readings did continue
6 to decline.

7 But conversely, let's correlate this
8 initial decline that began right here [indicating]
9 in late March/early April with the continuing
10 decline.

11 The blue line, which went this way
12 [indicating], is the cumulative rainfall occurring
13 during that period of time. And if you will note,
14 there was a significant rainfall period there that
15 occurred. And as we all know, rainfall flushes out
16 the stream. It flushes out a pool particularly for
17 an intermittent stream.

18 When you add in the fact that there is
19 no scientific basis for a vacuum disposal well to
20 be able to overpressure a formation, there's
21 certainly no evidence as I can see -- or, as we can
22 see, that the Novy B15 well could have contributed
23 anything.

24 And it was noted, the latest samplings
25 of the Station 2 indicate that the water is

October 5, 2017

1 suitable for consumption by livestock.

2 Having said all that and having
3 explained why it is that we shouldn't be here in
4 the first place, which I think we're here because
5 of a misunderstanding of some of the physical
6 facts.

7 Bottom line is, is this proceeding is,
8 to us, should be considered moot because, at the
9 end of our 30-day comment period, absent some
10 change of view by the Bureau of Indian Affairs,
11 this well will be permanently -- will be plugged
12 and permanently abandoned.

13 Thank you, sir.

14 HEARING OFFICER RUCKI: Thank you.

15 Are there any of the public commenters
16 here by chance?

17 Bill Biel or R.D. Farr, Ron Reed,
18 Andrea Gleba, Joe Robert Serber, or someone from
19 the Nature Conservancy, could be Michael Buor?

20 [No audible response.]

21 HEARING OFFICER RUCKI: No?

22 Well, I guess then at this point,
23 we'll take a recess. And everybody who has said
24 their information is certainly welcome to leave
25 or stay. We're going to try to contact these

October 5, 2017

1 public commenters and see if they are coming to the
2 actual hearing to give information or their
3 comments.

4 So for now, we'll go off the record.

5 [Period off the record.]

6 HEARING OFFICER RUCKI: Good

7 afternoon, everyone.

8 I'm going to go back on the record.

9 It's now twelve o'clock.

10 Are there any public commenters here
11 to offer any evidence or information or speak?

12 [No audible response.]

13 HEARING OFFICER RUCKI: No? All
14 right. Well, we have -- we're going to give it
15 till about one o'clock and if no one shows up
16 between now and then to speak, we'll adjourn this
17 hearing for the day and close the comments.

18 So until then, I guess we can go off
19 record.

20 [Brief period off the record.]

21 HEARING OFFICER RUCKI: It's one
22 o'clock. We're going to quickly go back on record
23 here. It's my understanding that no one else is
24 coming, or no one that we can reach is answering in
25 the affirmative.

October 5, 2017

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

So, for the record, thank you.
[Whereupon, the hearing in the
heretofore entitled matter was
concluded.]

- - -

October 5, 2017

C E R T I F I C A T E

I, Ann Thornton Berry, hereby certify that this is the transcript of the proceedings before the Environmental Protection Agency on October 11, 2017, in the Hearing on Proposed Orders SDWA 06-2017-1110, SDWA 06-2017-1111 and SDWA 06-2017-1112, and that this is a full and correct transcript of the proceedings.

/s/ Ann Thornton Berry

ANN THORNTON BERRY, CSR #5767

1533 VC County Road 4810

Chandler, Texas 75758

903-852-2232