

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED
BY THE OIL CONSERVATION DIVISION FOR
THE PURPOSE OF CONSIDERING:

APPLICATION OF NGL WATER SOLUTIONS CASE NO. 16509
PERMIAN, LLC FOR APPROVAL OF A
SALTWATER DISPOSAL WELL IN LEA COUNTY,
NEW MEXICO.

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

May 16, 2019

Santa Fe, New Mexico

BEFORE: LEONARD LOWE, CHIEF EXAMINER
 MICHAEL McMILLAN, TECHNICAL EXAMINER
 DAVID K. BROOKS, LEGAL EXAMINER

This matter came on for hearing before the New Mexico Oil Conservation Division, Leonard Lowe, Chief Examiner; Michael McMillan, Technical Examiner; and David K. Brooks, Legal Examiner, on Thursday, May 16, 2019, at the New Mexico Energy, Minerals and Natural Resources Department, Wendell Chino Building, 1220 South St. Francis Drive, Porter Hall, Room 102, Santa Fe, New Mexico.

REPORTED BY: Mary C. Hankins, CCR, RPR
 New Mexico CCR #20
 Paul Baca Professional Court Reporters
 500 4th Street, Northwest, Suite 105
 Albuquerque, New Mexico 87102
 (505) 843-9241

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

APPEARANCES

FOR APPLICANT NGL WATER SOLUTIONS PERMIAN, LLC:

DEANA M. BENNETT, ESQ.
MODRALL, SPERLING, ROEHL, HARRIS & SISK, P.A.
500 4th Street, Northwest, Suite 1000
Albuquerque, New Mexico 87102
(505) 848-1800
deanab@modrall.com

FOR INTERESTED PARTY NEW MEXICO STATE LAND OFFICE:

ANDREA ANTILLON, ESQ.
NEW MEXICO STATE LAND OFFICE
OFFICE OF GENERAL COUNSEL
310 Old Santa Fe Trail
Santa Fe, New Mexico 87501
(505) 827-5702
aantillon@slo.state.nm.us

FOR INTERESTED PARTY SALT CREEK MIDSTREAM:

ADAM G. RANKIN, ESQ.
HOLLAND & HART, LLC
110 North Guadalupe, Suite 1
Santa Fe, New Mexico 87501
(505) 988-4421
agrarkin@hollandhart.com

1	INDEX	
2		PAGE
3	Case Number 16509 Called	4
4	NGL Water Solutions Permian, LLC's Case-in-Chief:	
5	Witnesses:	
6	Neel L. Duncan:	
7	Direct Examination by Ms. Bennett	4
	Cross-Examination by Examiner McMillan	14
8	Redirect Examination by Ms. Bennett	16
	Recross Examination by Examiner McMillan	17
9		
10	Statement by Ms. Antillon of the State Land Office	19
11	Proceedings Conclude	19
12	Certificate of Court Reporter	20
13		
14		
15	EXHIBITS OFFERED AND ADMITTED	
16	NGL Water Solutions Permian, LLC Exhibit	
	Numbers 1 through 5	14
17		
18		
19		
20		
21		
22		
23		
24		
25		

1 (8:44 a.m.)

2 EXAMINER LOWE: Call Case Number 16509.
3 It's NGL Water Solutions Permian, LLC to approve a
4 saltwater disposal well, Lea County, Raptor SWD No. 1.
5 Call For Appearances.

6 MS. BENNETT: Deana Bennett on behalf of
7 the Applicant, NGL Water Solutions Permian, LLC. And I
8 have one witness.

9 MS. ANTILLON: Andrea Antillon on behalf of
10 the State Land Office. I have a statement to make. I
11 do not have any witnesses.

12 MR. RANKIN: Adam Rankin on behalf of Salt
13 Creek Midstream. I have no witnesses.

14 MS. BENNETT: Good morning, again.

15 Again, my name is Deana Bennett on behalf
16 of the Applicant, NGL Water Solutions Permian, LLC, and
17 I have one witness, Mr. Neel Duncan.

18 THE WITNESS: I'm still under oath.

19 NEEL L. DUNCAN,
20 after having been previously sworn under oath, was
21 questioned and testified as follows:

22 DIRECT EXAMINATION

23 BY MS. BENNETT:

24 Q. With that, I would like to ask Mr. Duncan to
25 introduce himself for this case on the record.

1 A. Yes. Neel Lawrence Duncan.

2 **Q. AND for whom do you work?**

3 A. Integrated Petroleum Technologies. I sometimes
4 forget.

5 **Q. And have you been retained by NGL Water**
6 **Solutions Permian?**

7 A. Yes, I have.

8 **Q. And what are your responsibilities for NGL?**

9 A. Drilling and development of saltwater disposal
10 wells in southeast New Mexico, particularly in Eddy
11 County.

12 **Q. Eddy and Lea Counties?**

13 A. Yes.

14 **Q. So your area of expertise -- or your area of**
15 **responsibility for NGL as a consultant covers the area**
16 **that is subject to this application?**

17 A. Yes.

18 **Q. And have you previously testified before the**
19 **Division?**

20 A. I have, and my qualifications were accepted.

21 MS. BENNETT: At this time I'd like to
22 tender Mr. Duncan as an expert in saltwater disposal
23 matters.

24 MS. ANTILLON: No objection.

25 MR. RANKIN: No objections.

1 EXAMINER LOWE: Michael?

2 EXAMINER McMILLAN: Proceed.

3 MS. BENNETT: Thank you.

4 Q. (BY MS. BENNETT) Let's turn to Tab 1, please.

5 And, Mr. Duncan, if you could explain to the examiners
6 what's behind Tab 1, I'd appreciate it.

7 A. This is the application of NGL Water Solutions
8 for the Raptor SWD. We're seeking a saltwater disposal
9 well to the Devonian. It's also, we believe, in the
10 Capitan Reef area, so there is a casing-design change to
11 accommodate that and make sure we protect fresh water.
12 And we're asking for a well with, again, a
13 7-inch-by-5-1/2-inch tapered tubing string with the
14 smallest casing to be 7-5/8, 39 pound so that we can
15 fish the 5-1/2 if needed.

16 Q. And when you -- you mentioned the Capitan Reef
17 a moment ago. Has NGL had prior conversations with OCD
18 about changing the casing design to protect the Capitan
19 Reef?

20 A. Yes, we have.

21 Q. And have those casing designs been accepted by
22 the OCD?

23 A. Actually, I haven't seen any orders drafted on
24 any of these applications, but yes, in general and in
25 discussions, it's an acceptable method for protecting

1 the Capitan.

2 Q. Yeah. And that's a good distinction. These
3 haven't been approved, but you have coordinated with
4 OCD, and OCD has been generally receptive?

5 A. Generally receptive to our plan.

6 Q. So if you look behind Tab 1A, is this a revised
7 wellbore design to show the changes that NGL propose to
8 protect the Capitan Reef?

9 A. Yes, it is.

10 Q. And, again, this is similar to or identical to
11 other wellbore designs that NGL has submitted when the
12 well is in or near the Capitan Reef?

13 A. Yes, it is. And the principle here was to case
14 off the salt before we enter any of the Capitan
15 formations.

16 Q. And so this wellbore design, which is a new
17 wellbore design because of the Capitan Reef, has more
18 protection near the surface and, to the Capitan Reef,
19 more cement casing; is that right?

20 A. Yes.

21 Q. To be more protective?

22 A. Yes.

23 Q. Okay. Let's turn to Tab 1B then. Tab 1B is a
24 C-102 for this proposed well; is that right?

25 A. Yes, it is.

1 Q. And do you know why I've included the C-102 in
2 this exhibit packet?

3 A. There was a pooling number change or
4 difference.

5 Q. So this is the correct pool code on this C-102;
6 is that right?

7 A. Yes.

8 Q. Okay. Thanks.

9 Let's turn to Tab 3 -- I'm sorry -- Tab 2
10 then. And has NGL retained a petroleum engineer or
11 reservoir engineer to conduct studies of the proposed
12 well?

13 A. Yes, Scott Wilson of Ryder Scott, and he's a
14 reservoir engineer who has testified before the
15 Division -- or the Commission, and the his
16 qualifications have been accepted.

17 Q. And he's actually testified before the Division
18 for NGL, right?

19 A. Yes.

20 Q. And he's submitted similar studies on behalf of
21 NGL?

22 A. Yes.

23 Q. And in his -- his study is attached as Exhibit
24 A to his affidavit; is that right?

25 A. That's correct.

1 Q. And in his studies, does he model just the
2 proposed well or all wells in the area?

3 A. He models all wells in the area, including the
4 proposed wells.

5 Q. So he, for lack of a better word, turns on all
6 wells that he knows of or that are proposed or in
7 existence and models at that rate?

8 A. Yes.

9 Q. And what are his conclusions with respect to
10 increasing the tubing size and how that might impact
11 fractures in the formation?

12 A. In principle, no effect, no increased risk --
13 risk of fracturing.

14 Q. And what are his conclusions about reservoir
15 pressures and the distance that fluids will travel?

16 A. The fluid migration will generally stay within
17 one mile of the proposed well.

18 Q. And is it his conclusion that additional
19 injection wells will not create any materially adverse
20 pressures in the formation?

21 A. That's correct.

22 Q. Something we didn't talk about earlier is why
23 NGL is seeking to have this larger tubing size, the
24 7-by-5-1/2-inch. What are the benefits of that?

25 A. It certainly reduces horsepower and reduces

1 the -- it increases the amount of water you can put in a
2 single well, reducing the number of wells in New Mexico.
3 Surface impacts are reduced and that sort of thing.

4 Q. Okay. Thank you.

5 Let's turn now to Tab 3, please. Is Tab 3
6 the affidavit of Dr. Kate Zeigler?

7 A. Yes, it is.

8 Q. And who is Dr. Zeigler?

9 A. Dr. Zeigler is a geologist retained by NGL to
10 look mostly at confinement and any faults in the area
11 and any potential risk to confinement.

12 Q. And she's previously testified before the
13 Division; is that right?

14 A. She has.

15 Q. And her credentials were accepted?

16 A. Yes.

17 Q. And she's testified on behalf of NGL?

18 A. Yes.

19 Q. And presented similar studies to the Division?

20 A. Yes, she has.

21 Q. Is her study attached to her affidavit as
22 Exhibit A?

23 A. Yes, it is.

24 Q. And based on her study, does she look at
25 permeability barriers above and below the target

1 **injection zone?**

2 A. Yes, she does. And she shows that those
3 permeability barriers are there, and the injection
4 fluids will be confined to the injection zone.

5 **Q. And does she testify about her opinion with**
6 **respect to any impact on hydrocarbons in the area?**

7 A. Yes. And because of the upper permeability
8 barrier, there will be no effect on -- no impact on
9 hydrocarbons in the area.

10 **Q. And does she testify about impacts on**
11 **freshwater resources?**

12 A. Yes. And the well design and the injection
13 will prevent any contamination of freshwater resources
14 in the area.

15 **Q. Thank you.**

16 **Let's turn now to Tab 4, please. Is Tab 4**
17 **the affidavit of Dr. Steven Taylor?**

18 A. Yes, it is.

19 **Q. Who is Dr. Taylor?**

20 A. He's a Los Alamos geophysicist retained by NGL,
21 and he operates NGL's seismic networks and is quite an
22 expert in geophysics.

23 **Q. And when you say he operates NGL's seismic**
24 **monitoring, he actually has installed monitors by**
25 **certain of NGL's wells in New Mexico, right?**

1 A. Yes, he has. He's put up a network, and as we
2 develop, we expand that network to make sure all NGL's
3 wells are covered by the network.

4 **Q. And in his study, he has exhibits showing where**
5 **the -- where his seismic monitors are located?**

6 A. Yes. Those are in his study.

7 **Q. And he also has reviewed the study of Todd**
8 **Reynolds of FTI Platt Sparks; is that right?**

9 A. Yes. He's reviewed the fault slip analysis
10 prepared by FTI Platt Sparks and agrees with the
11 findings.

12 **Q. And could you briefly summarize what**
13 **Dr. Taylor's findings are with respect to this proposed**
14 **well?**

15 A. The findings are that we have minimum risk of
16 induced seismicity mostly because of the fault
17 directions and the way the fluids travel.

18 **Q. And does Dr. Taylor also conclude that there is**
19 **very little seismic activity in the area where the well**
20 **is proposed to be located?**

21 A. Yes.

22 **Q. Let's turn now to Tab 5. Is the exhibit behind**
23 **Tab 5 an affidavit prepared by me on behalf of NGL**
24 **showing the parties to whom notice was given; the second**
25 **page is an Affidavit of Notice showing that notice was**

1 given on October 19th, 2018, published in the "Hobbs
2 News-Sun," and then the final pages show the status of
3 mailings?

4 A. Yes.

5 Q. One of the -- well, Mr. Rankin is here on
6 behalf of Salt Creek. And NGL has continued this case a
7 number of times; is that right?

8 A. Yes. We were -- because acid-gas injection
9 takes priority in this state, we were awaiting the
10 findings of Salt Creek as to whether or not they were
11 going to put an acid-gas injector in this area before we
12 came forward with this case.

13 Q. And is it your understanding that Salt Creek
14 has dismissed its application for the Leavenworth
15 acid-gas injection?

16 A. Yeah. We understand they have withdrawn it.

17 Q. And that's why at this time NGL has decided to
18 go forward with this case?

19 A. That's correct.

20 Q. And apart from that, though, and apart from the
21 State Land Office, there are no other objections to this
22 case?

23 A. Not to my knowledge.

24 Q. Great.

25 MS. BENNETT: With that, I have no more

1 questions for Mr. Duncan, and I would ask that Exhibits
2 1 through 5 be admitted into the record.

3 MS. ANTILLON: No objection.

4 MR. RANKIN: No objections.

5 EXAMINER McMILLAN: Exhibits 1 through 5
6 may now be accepted as part of the record.

7 (NGL Water Solutions Permian, LLC Exhibit
8 Numbers 1 through 5 are offered and
9 admitted into evidence.)

10 MR. McMILLAN: Cross?

11 MR. RANKIN: No questions.

12 MS. ANTILLON: No questions.

13 CROSS-EXAMINATION

14 BY EXAMINER McMILLAN:

15 A. Okay. The first question I've got is how close
16 are you to the Galaxy SWD No. 1?

17 THE WITNESS: Do you have that?

18 MS. BENNETT: That is on Mr. Reynolds's
19 exhibit, and if it's not, we can find out for you. But
20 it's -- it looks like it's a full section away from the
21 Galaxy. And I'm looking at Mr. Reynold's fault slip
22 probability analysis, which is right here.

23 THE WITNESS: Yeah. I'm looking for the
24 one that has -- I think those are mile-and-a-half.

25 MS. BENNETT: The Galaxy is right here

1 (indicating).

2 THE WITNESS: Yeah. So it's -- it looks
3 like it's about a mile.

4 MS. BENNETT: We can supplement the record
5 with that information.

6 EXAMINER McMILLAN: That would be good.

7 Q. (BY EXAMINER McMILLAN) The petroleum engineer
8 looked at all wells, right?

9 A. Yes.

10 Q. Did he take any special look at the Galaxy and
11 Raptor due to proximity?

12 A. The work of Ryder Scott has showed that -- it
13 pretty consistently has shown that the one mile is good.
14 I know the Division is thinking 1.5. And, again, I'll
15 state on the record, as I have in previous hearing, that
16 we'll always work with the Commission on injection rates
17 to make sure that we always, you know, listen -- we're
18 listening to your concerns. But our data has shown that
19 we are in good shape in terms of induced seismicity at
20 the one mile.

21 Q. You don't think there will be any constructive
22 interference with the Galaxy?

23 A. I don't believe so. His testimony -- his --
24 his testimony shows that it's not the case.

25 EXAMINER McMILLAN: Go ahead, Leonard.

1 EXAMINER LOWE: No questions.

2 EXAMINER McMILLAN: David?

3 EXAMINER BROOKS: No questions.

4 MS. BENNETT: May I ask a follow-up
5 question?

6 EXAMINER McMILLAN: Certainly.

7 REDIRECT EXAMINATION

8 BY MS. BENNETT:

9 Q. In terms of interference between the Galaxy and
10 the Raptor, what would that interference look like in,
11 say, in 20 years? Would it be a pressure increase that
12 would require the wells to -- or that would mean that
13 NGL could inject fewer fluids into the wells?

14 A. Yeah. Well, here's -- here's what happens. As
15 we inject, pressures do go up, but as a result, the
16 rates go down. So there's -- it's somewhat
17 self-controlling. We will be regulated to an injection
18 rate that somewhat solves the problem.

19 Q. And that's what Mr. Wilson models in his study,
20 right? He takes into consideration all of the wells and
21 the amount that they'll be injecting, including wells
22 that are close together like Raptor and Galaxy?

23 A. That's correct.

24 Q. And then he models them out into the future to
25 determine when they will reach that plateau?

1 A. Right. Right.

2 **Q. And NGL is aware of the fact that there could**
3 **be pressure increases or pressure influences that would**
4 **mean that one well would have to inject less than**
5 **another well?**

6 A. That's correct.

7 **Q. And NGL is willing to take that business risk?**

8 A. NGL is willing to take that risk.

9 And, again, we're always willing to work
10 with the Commission to make sure that -- we don't stay
11 in business very long if we start causing earthquakes.
12 Ask the people in Oklahoma.

13 EXAMINER McMILLAN: That's our number one
14 avoidance.

15 THE WITNESS: Exactly.

16 MS. BENNETT: That's all I had in terms of
17 follow-up questions then.

18 RE CROSS EXAMINATION

19 BY EXAMINER McMILLAN:

20 **Q. Just to ensure, if we ask you to run some**
21 **additional logs, would you be willing, within reason, to**
22 **run them?**

23 A. What kind of logs?

24 **Q. Like a temperature survey, something of that**
25 **nature.**

1 A. Well, we as part of the -- you know, after
2 you've injected for two years, the -- the orders usually
3 require some sort of tracer, temperature survey to
4 monitor where injection fluids are going. But --

5 **Q. Okay. That's fine.**

6 **Would you be willing to come back -- if**
7 **we -- if we put that as part of the order, to come back**
8 **to a hearing and go over the information?**

9 A. In a hearing, I don't know. I certainly will
10 share it with you. I don't know -- I'm not going to
11 commit to a hearing right now unless -- you know, we can
12 talk about that. I don't think I want to go on the
13 record saying we'll come back to a hearing.

14 EXAMINER BROOKS: Well, that might be --

15 THE WITNESS: We're happy to work with you.

16 EXAMINER BROOKS: That might be put in the
17 order.

18 THE WITNESS: If it's put in the order, I
19 guess I've got to live with it.

20 MS. BENNETT: I think overall, though, what
21 Mr. Duncan is saying is that NGL is willing to, has been
22 and will continue to work with the Division. And so if
23 it's the Division's pleasure that we come back to a
24 hearing, we certainly would. But I also think that a
25 lot of this will be natural -- naturally occurring

1 because of the order and also just because of the
2 collaboration. But we're happy to do what the
3 Division's preference is.

4 EXAMINER McMILLAN: Any closing statements?

5 MS. ANTILLON: Oh, I have one.

6 Mr. Examiner, I just want to state again
7 that the State Land Office is reviewing this
8 application, as well as also has concerns with the
9 saltwater disposal due to its proximity to the State
10 Trust Land.

11 Thank you.

12 MS. BENNETT: Thank you.

13 With that, I would like to ask that Case
14 Number 16509 be taken under advisement.

15 EXAMINER McMILLAN: Any objection?

16 MS. ANTILLON: No objection.

17 EXAMINER McMILLAN: With that, Case Number
18 16509 shall be taken under advisement.

19 Thank you.

20 MS. BENNETT: Thank you.

21 (Case Number 16509 concludes, 9:05 a.m.)

22

23

24

25

1 STATE OF NEW MEXICO
2 COUNTY OF BERNALILLO

3

4 CERTIFICATE OF COURT REPORTER

5 I, MARY C. HANKINS, Certified Court
6 Reporter, New Mexico Certified Court Reporter No. 20,
7 and Registered Professional Reporter, do hereby certify
8 that I reported the foregoing proceedings in
9 stenographic shorthand and that the foregoing pages are
10 a true and correct transcript of those proceedings that
11 were reduced to printed form by me to the best of my
12 ability.

13 I FURTHER CERTIFY that the Reporter's
14 Record of the proceedings truly and accurately reflects
15 the exhibits, if any, offered by the respective parties.

16 I FURTHER CERTIFY that I am neither
17 employed by nor related to any of the parties or
18 attorneys in this case and that I have no interest in
19 the final disposition of this case.

20 DATED THIS 30th day of May 2019.

21

22

23 MARY C. HANKINS, CCR, RPR
24 Certified Court Reporter
New Mexico CCR No. 20
Date of CCR Expiration: 12/31/2019
Paul Baca Professional Court Reporters

25