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PUBLIC HEARING  
STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

Pecos Hall, 1st Floor, Wendell Chino Building  
1220 S. Saint Francis Drive  
Santa Fe, New Mexico

TRANSCRIPT OF PROCEEDINGS  
February 20, 2025

COMMISSION MEMBERS:

GERASIMOS ROZATOS, Chair  
GREG BLOOM, Member  
DR. WILLIAM AMPOMAH, Member

HEARD BEFORE:

HEARING OFFICER RIPLEY HARWOOD

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TRANSCRIPT OF PROCEEDINGS

CHAIR ROZATOS: Good morning to everyone. This is the official Oil Conservation Commission meeting that is slated for today. I am Gerasimos Rozatos. I am the acting director for the Oil Conservation Division. I go by Gerry; makes it easier for everybody.

And as I mentioned, this is our Oil Conservation Commission meeting that we have normally planned. Plus, we also have a hearing that we're going to be doing.

So before we start, though, I wanted to start with a roll call. As I said, I'm Gerasimos Rozatos. I am the acting chair for the commission.

And I'll move to the commissioner to my right.

COMMISSIONER BLOOM: Morning, everyone. I'm Greg Bloom, the assistant commissioner for Mineral Resources at the New Mexico State Land Office. I'm the designee of the land office.

And I will be stepping aside today for Case 24123. Unfortunately, my duties up at the legislature preclude me from being here most of this week and next. So Baylen Lamkin will be stepping in for just that case.

1 Baylen, you want to give us a wave so  
2 people can see you? He'll introduce himself later.  
3 He's a petroleum engineer at the land office.

4 COMMISSIONER AMPOMAH: I'm Dr. William  
5 Ampomah. I'm a professor at New Mexico Tech, a  
6 designee of the energy secretary. Thank you.

7 CHAIR ROZATOS: Excellent. So that is the  
8 commission. So before we start, we always want to do  
9 the approval of our past agendas or the current  
10 agenda.

11 So I'm asking for approval for the  
12 February 20 through 28, 2025, agenda.

13 COMMISSIONER BLOOM: I so move.

14 COMMISSIONER AMPOMAH: I second.

15 CHAIR ROZATOS: All in favor.

16 ALL MEMBERS: Aye.

17 CHAIR ROZATOS: Okay. So our agenda has  
18 been approved.

19 (Motion approved.)

20 CHAIR ROZATOS: We also need to approve the  
21 meeting minutes for the January 16th and 17th and the  
22 February 3rd, 2025, meetings. If we could get a  
23 motion for that.

24 COMMISSIONER BLOOM: I so move.

25 COMMISSIONER AMPOMAH: I second.

1 CHAIR ROZATOS: May I get a roll call. All  
2 in favor.

3 ALL MEMBERS: Aye.

4 CHAIR ROZATOS: Okay. So that has been  
5 approved.

6 (Motion approved.)

7 CHAIR ROZATOS: We're going to move now on  
8 to our pending cases. Our first case is Case Number  
9 23580, application of Wild Earth Guardians to amend  
10 the commission's rules to address PFAS amendments to  
11 19.15.2, 19.15.7, 19.15.4, 19.15.16, and 19.15.25 in  
12 the New Mexico Administrative Code.

13 This is a status conference to schedule  
14 the date for the commission's deliberations. Are all  
15 parties present for this? Yay? Nay? People?

16 MR. TREMAINE: Good morning, Mr. Chair.  
17 Jesse Tremaine for the Oil Conservation Division.

18 CHAIR ROZATOS: Excellent. Thank you.

19 MR. RANKIN: Good morning, Commissioner  
20 Rozatos. Adam Rankin, appearing on behalf of the  
21 New Mexico Oil and Gas Association.

22 CHAIR ROZATOS: Excellent. Thank you.

23 And anybody from Wild Earth Guardians?  
24 Maybe on the platform? No? Okay. Well, we can --  
25 go ahead.

1 MR. SAYER: Matthias Sayer on behalf of EOG.

2 CHAIR ROZATOS: Okay. Excellent. Thank  
3 you.

4 Well, we'll still proceed and we'll go  
5 from there. As I stated, we have a status conference  
6 that's scheduled for the commission's deliberations.  
7 We did come up with a date for the deliberations.

8 Sheila, is Ms. Orth on the platform?

9 MS. APODACA: I don't see her on the  
10 platform.

11 CHAIR ROZATOS: Okay. So the date that was  
12 submitted was either March the 11th or March the  
13 12th, correct, Sheila?

14 MS. APODACA: Yes. That's the date we were  
15 working with.

16 CHAIR ROZATOS: Okay. Does that work for  
17 everybody?

18 Mr. Rankin, we'll start with you.

19 MR. RANKIN: I believe so. I believe so.  
20 Let me just double check my calendar. Thank you very  
21 much. One moment. You said it was March 11th or  
22 March 12th?

23 CHAIR ROZATOS: Correct.

24 MR. RANKIN: That should work, Mr. Chair.  
25 Thank you.

1 CHAIR ROZATOS: Okay. Thank you.

2 Mr. Tremaine.

3 MR. TREMAINE: No conflicts. We are  
4 available.

5 CHAIR ROZATOS: Excellent. Thank you.

6 Mr. Sayer.

7 MR. SAYER: Thank you.

8 CHAIR ROZATOS: Okay. So no conflicts for  
9 Mr. Sayer.

10 And we don't know about Wild Earth  
11 Guardians, so we're going to set it for March the  
12 11th. If they have an issue, they can definitely let  
13 the commission know and we can tackle it at that  
14 time.

15 So March 11th is the date that we will  
16 set for that one, Sheila, if you could note that down  
17 for us, please.

18 I do know that those were dates that  
19 Ms. Orth -- that they did work with Ms. Orth, so she  
20 is good with that as well. So we'll be able to go  
21 that route.

22 Any other questions or comments on this  
23 particular case?

24 Excellent. We'll move on to our next  
25 case, Case Number 24683, application of Western

1 Environmental Law Center, Citizens Caring For the  
2 Future, Conservation Voters of New Mexico Education  
3 Fund, Dine' C.A.R.E., Earthworks, Naeva, New Mexico  
4 Interfaith Power and Light, San Juan Citizens  
5 Alliance, and Sierra Club to amend 19.15.2, 19.15.8,  
6 19.15.9 and 19.15.25 in the New Mexico Administrative  
7 Code.

8 This is set for a status conference.  
9 Are all parties present for that? We'll start with  
10 Western Environmental Law Center.

11 MR. TISDEL: Yeah. Kyle Tisdell for Western  
12 Environmental Law Center and other co-petitioners.

13 CHAIR ROZATOS: Excellent. Thank you.

14 MR. FELDEWERT: Good morning, Mr. Chair,  
15 Members of the Commission. Michael Feldewert of the  
16 Santa Fe office of Holland & Hart for Oxy USA.

17 CHAIR ROZATOS: Okay. Excellent.

18 MR. SUAZO: Good morning. Miguel Suazo,  
19 with Beatty & Wozniak, appearing on behalf of the  
20 New Mexico Oil and Gas Association.

21 CHAIR ROZATOS: Thank you, Mr. Suazo.

22 MR. TREMAINE: Jesse Tremaine on behalf of  
23 the Oil Conservation Division.

24 CHAIR ROZATOS: Excellent. Thank you  
25 Mr. Tremaine.

1 Anybody on the platform?

2 MS. TRIPP: Good morning, Commission. This  
3 is Ann Tripp, on behalf of Hinkle Shanor, appearing  
4 for interveners Independent Petroleum Association of  
5 New Mexico.

6 CHAIR ROZATOS: Excellent. And you said  
7 Tripp, correct, Ms. Tripp, T-R-I-P-P?

8 MS. TRIPP: T-R-I-P-P.

9 CHAIR ROZATOS: Okay. Excellent. Thank  
10 you.

11 Anybody else?

12 Okay we'll start with Western  
13 Environmental Law Center, or anybody who would like  
14 to make a comment.

15 MR. TISDEL: Yeah, thank you, Commission.

16 So our petition was filed in June 24th  
17 of 2024. The petition was granted by the commission  
18 on July 18th, and a hearing date was set for April.  
19 And that was done in September 23rd of 2024.

20 We had set up meetings in October with  
21 all of the parties to work through the petition as it  
22 had been filed. The Oil Conservation Division was  
23 also diligently working through their red-line  
24 version of the filed petition. We were anticipating  
25 that OCD's red-line would happen by the end of the



1 year. Due to, I think, workflow issues and a number  
2 of constraints on OCD's side, we did not get that  
3 red-line until February 12th.

4 Mr. Tremaine of OCD also did notify the  
5 commission on January 28th that we would need to  
6 continue and reschedule the hearing dates that were  
7 set in April. So we do have that red-line. I think  
8 all the parties at this point are working through  
9 that red-line.

10 There is a need, I think, for us to come  
11 back together and confer and see if we can come to  
12 some agreement on different dates for the hearing.

13 CHAIR ROZATOS: Okay. So we don't have any  
14 dates suggested as of now?

15 MR. TISDEL: Not of now.

16 CHAIR ROZATOS: Okay. Mr. Tremaine.

17 MR. TREMAINE: Mr. Chair, good morning.  
18 Thank you.

19 There have been a number of discussions  
20 between the parties in advance of our sharing of the  
21 revised red-line. However, it's going to take some  
22 time for everyone to figure out the different -- that  
23 conflicts, et cetera, and propose some dates to the  
24 commission.

25 I think that there are some elements to

1     OCD's red-line that will require a different  
2     examination of evidence at the hearing, and so we  
3     have moved the needle a little bit in terms of what  
4     witnesses and what experts might need to be available  
5     for all the parties, and absolutely respect that they  
6     will need some additional time.

7                 So with the eight days since we've  
8     circulated the petition, we haven't reached a  
9     particular proposed date. But what I would suggest  
10    to the commission is that we can communicate between  
11    the parties over the next week or two and submit a  
12    revised proposed scheduling order for the  
13    commission's review.

14                CHAIR ROZATOS: Okay. Mr. Suazo.

15                MR. SUAZO: Sure. Good morning, Mr. Chair  
16    and Commissioners.

17                I concur with the parties that, you  
18    know, we need to get together and really assess OCD's  
19    proposed changes. I think, you know, since the  
20    association is made up of members, we just got this  
21    last Wednesday, you know, we haven't even had the  
22    chance to confer as an industry about what these  
23    changes mean and what types of witnesses we're going  
24    to require, whether or not this warrants the  
25    association proposing their own red lines and so on

1 and so forth.

2 So I think that because the new changes  
3 by OCD were received so recently, we are going to  
4 need additional time. This is essentially a reset to  
5 a degree of the initial proceedings. And so we're  
6 not even scheduled to meet as an industry until next  
7 week. After that point, they would need to confirm  
8 amongst themselves, provide the attorney's feedback,  
9 probably have another follow-up meeting.

10 So I think realistically, we're not  
11 going to be in a position to, you know, look at  
12 dates, you know, that makes sense for us for, I would  
13 say, at least 30 to 60 days. Probably more, closer  
14 to 30.

15 CHAIR ROZATOS: Okay. Thank you.

16 Mr. Feldewert.

17 MR. FELDEWERT: I concur. I think we've  
18 kind of had a reset here, and it's going to take some  
19 time to get the parties together and then determine  
20 what evidence is going to be required with the  
21 changes have been proposed and what additional  
22 changes may be needed by my client or other clients.  
23 So I think, we're in a position where it's going to  
24 take a little time to get this set up again for a  
25 hearing.

1 CHAIR ROZATOS: Okay. Thank you.

2 Ms. Tripp, did you have anything you  
3 wanted to add?

4 MS. TRIPP: Commissioner, thank you. IPNM  
5 is in a very similar situation, in the sense that we  
6 are a member organization, over 350. And we've not  
7 yet set a time to meet to discuss the changes and  
8 whether a proposed red-line would be necessary.

9 So concurring with what everyone has  
10 said here today, that the parties need to get  
11 together and that the timeline for that is likely in  
12 the next 30 days or so.

13 CHAIR ROZATOS: Okay. Excellent.

14 So if we need probably another 30  
15 days -- Mr. Tremaine, go ahead.

16 MR. TREMAINE: Mr. Chair, hearing that the  
17 parties will require, I understand it, somewhat  
18 longer than I had anticipated, my suggestion would to  
19 set this for a status conference at the next meeting.

20 CHAIR ROZATOS: And that was what I was just  
21 going to say. You beat me to it.

22 MR. TREMAINE: I just wanted to be on the  
23 record as stating my position. Thank you.

24 CHAIR ROZATOS: Okay. Excellent.

25 So why don't we set this for a status

1 conference at the next OCC meeting, the March  
2 meeting.

3 Sheila, what date is the March meeting.

4 MS. APODACA: March 20th.

5 CHAIR ROZATOS: March 20th. So we'll set it  
6 as a status conference for March 20th. Hopefully,  
7 you all will have been able to get together and come  
8 to some consensus for days.

9 Go ahead, Commissioner Bloom.

10 COMMISSIONER BLOOM: Mr. Chair, I can't  
11 remember if this is something we set during your  
12 tenure, but we did set some tentative dates and held,  
13 based on our calendar, the weeks of the 14th through  
14 the 21st. I'm going to assume that those are freed  
15 up now and open up my schedule for other meetings.

16 CHAIR ROZATOS: I believe that that's the  
17 consensus, we are opening up the April. So April now  
18 is open. Those dates will be released. We will meet  
19 back again in March for this topic, as a conference,  
20 status conference. And as I've mentioned, hopefully,  
21 you all will have come to some conclusions and some  
22 decisions, and we can probably set a date March 20th.  
23 If you need more time, definitely we can discuss it  
24 at that point. But maybe we can set that.

25 Just remember everybody, we're going

1 into the summertime here, so schedules will get  
2 tighter with summertime. So please be cognizant of  
3 that as we're scheduling that out.

4 Excellent. Any other points or  
5 questions, comments for this particular case?

6 Great. We'll see you all on March the  
7 20th. Thank you.

8 We're going to be moving into our  
9 consolidated cases, but before we do that, let's take  
10 a few minutes so the parties can have time to change  
11 tables and everything. So let's take a 10-minute  
12 break.

13 (Off the record.)

14 CHAIR ROZATOS: Okay. Let's start up again.  
15 If I could get everybody's attention. We will start  
16 out with our next case.

17 Our next case is the consolidated cases  
18 by Goodnight Midstream and Empire New Mexico. The  
19 case numbers are, as I said, consolidated, so we have  
20 Case Numbers 24123, 23614 through 17, Case Number  
21 23775, and Case Numbers 24018 through 24020 and  
22 24025.

23 This is a matter to be heard by the  
24 commission. It's motions and opening statements  
25 today and tomorrow, and actual evidentiary

1 evidentiary hearing starting Monday, the 24th through  
2 the 28th.

3 Are all parties present? I'm going to  
4 start to my right and move across the room.

5 Mr. Rankin.

6 MR. RANKIN: Good morning, Mr. Chairman,  
7 Commissioners. May it please the commission. Adam  
8 Rankin with the Santa Fe office of Holland & Hart,  
9 appearing on behalf of Goodnight Midstream in these  
10 cases.

11 CHAIR ROZATOS: Excellent. Thank you.

12 MR. MOANDER: Chris Moander, counsel  
13 appearing on behalf of the Oil Conservation Division.

14 CHAIR ROZATOS: Excellent. Thank you.

15 MS. HARDY: Good morning, Commissioners.  
16 Dana Hardy appearing on behalf of Empire New Mexico,  
17 LLC.

18 CHAIR ROZATOS: Excellent. Thank you.

19 MS. SHAHEEN: Good morning. Sharon Shaheen,  
20 also appearing on behalf of Empire New Mexico.

21 CHAIR ROZATOS: Excellent. Thank you.

22 We'll move to the back table, right  
23 behind Ms. Shaheen.

24 MR. SUAZO: Good morning, Commissioners  
25 Miguel Suazo, with Beatty & Wozniak, appearing on

1       behalf of Pilot Water.

2               CHAIR ROZATOS:   Excellent.

3               MR. PADILLA:   Members of the Commission,  
4       Ernest L. Padilla for Empire New Mexico, LLC.

5               CHAIR ROZATOS:   Thank you, Mr. Padilla.

6               MR. BECK:   Matt Beck on behalf of  
7       interveners, Rice Operating Company and Permian Line  
8       Service, LLC.

9               CHAIR ROZATOS:   Thank you, Mr. Beck.

10              MR. RANKIN:   Mr. Chair, I neglected to  
11       introduce my colleague, Julia Broggi, also with  
12       Holland & Hart, who will be assisting me in these  
13       cases.

14              CHAIR ROZATOS:   Excellent.   Thank you,  
15       Ms. Broggi.

16                       As we stated, that this is going to be  
17       motions and opening statements today.   It is a matter  
18       to be heard in front of the commission.   We do have a  
19       hearing officer with us, Mr. Rip Harwood.   So I will  
20       transfer it over to Mr. Harwood to begin the  
21       proceedings.

22                       Mr. Harwood.   Mr. Harwood, if you can  
23       click on your microphone, the right button.   There  
24       you go.

25              HEARING OFFICER HARWOOD:   Just going to ask



1     what illuminates the green light.   Okay, good.

2                     Good morning, everybody.   I have a list  
3     of things here I want to go through, but first of  
4     all, I have a sheet here of motions that were filed.  
5     And I believe that all the prehearing motions have  
6     been resolved, but I'd like to hear from the parties  
7     if there's any disagreement.

8                     And I guess I'll start with you,  
9     Mr. Rankin.

10                    MR. RANKIN:   Good morning, Mr. Harwood.   My  
11     understanding at this time is that all the  
12     preliminary motions that have been filed in advance  
13     of the hearing, have been addressed and disposed of.  
14     So there is nothing pending at this time, is my  
15     understanding.

16                    HEARING OFFICER HARWOOD:   Yes sir.

17                    MR. MOANDER:   Mr. Hearing Officer, Chris  
18     Moander, OCD.   My understanding is, all the  
19     prehearing motions that had been filed that were  
20     pending, have been resolved.

21                    However, OCD will likely be submitting a  
22     motion for reconsideration on an order that was  
23     entered yesterday.   And I anticipate we'll be filing  
24     that by the close of business today.   So that will be  
25     outstanding, I won't speak for the other parties, but

1 I'm not anticipating that there will be any party  
2 response to that because it's very specific to a  
3 particular order. So that will be forthcoming.

4 I'm not clear who will be addressing  
5 that, but I'll ensure that that's filed today.

6 HEARING OFFICER HARWOOD: Mr. Moander, I  
7 look forward to your outstanding motion. Thank you.

8 Ms. Hardy.

9 MS. HARDY: Good morning, Hearing Examiner.  
10 From Empire's perspective, all of the outstanding  
11 motions have been resolved.

12 HEARING OFFICER HARWOOD: All right. And  
13 let's see, Ms. Shaheen.

14 MS. SHAHEEN: Ms. Hardy is speaking for  
15 Empire today.

16 HEARING OFFICER HARWOOD: I'm sure by the  
17 end of next week, I'll know everybody's name.

18 I know you, Mr. Beck. Go ahead.

19 MR. BECK: Yeah, same for Rice and Permian.  
20 We understand all the motions are decided.

21 HEARING OFFICER HARWOOD: Okay. And for  
22 Empire. Oh, I'm sorry, you already spoke for Empire.  
23 Let's see. Okay. So there are three of you for  
24 Empire. All right. Fair enough.

25 CHAIR ROZATOS: All right. So, Mr. Hearing

1 Examiner, did you ask for Pilot, Mr. Suazo with  
2 Pilot.

3 HEARING OFFICER HARWOOD: Oh, I'm sorry,  
4 Mr. Suazo. Didn't mean to overlook you.

5 MR. SUAZO: No, no problem. Pilot considers  
6 the outstanding motion resolved, as well.

7 HEARING OFFICER HARWOOD: All right. Thank  
8 you very much.

9 Okay. So while we were on the break, I  
10 spoke informally with Mr. Rankin because my  
11 understanding is that we have five days for this  
12 hearing, and in speaking with him, my further  
13 understanding is that we have approximately 22  
14 witnesses to get through.

15 So I don't know if the rest of you share  
16 Mr. Rankin's pessimism, but he's thinking that five  
17 days is probably not going to be enough for this  
18 hearing, which was news to me. It may not be news to  
19 the commission.

20 But the reason I raise it is because one  
21 of the first things I like to go through is the order  
22 of presentations and time allotments. My  
23 understanding, again, from a sidebar conversation  
24 with Mr. Rankin, is that you all have agreed on the  
25 order of presentations. Empire could go first,

1 Goodnight to go second. And then OCD to go third.  
2 Is that correct?

3 MR. RANKIN: I believe so, Mr. Hearing  
4 Officer.

5 CHAIR ROZATOS: Mr. Hearing Officer, was an  
6 order, that last paragraph there, that was dated,  
7 states the order that we had decided for the actual  
8 case. I forget the date of the order.

9 HEARING OFFICER HARWOOD: Okay. I'm not  
10 sure when this was dated, but I guess I should have  
11 read it more carefully. So that solves that issue.  
12 So that's the order of presentations.

13 Let me hear from you, Empire, Ms. Hardy  
14 or Ms. -- I'm sorry, I want to get the pronunciation  
15 correct -- Shaheen?

16 MS. SHAHEEN: That's correct.

17 HEARING OFFICER HARWOOD: Let me hear from  
18 Empire. How long do you think that you will need to  
19 present your case and your witnesses.

20 MS. HARDY: I think that, of course, it  
21 depends on the amount of cross-examination time and  
22 questions from the commission. But based on the  
23 number of witnesses, it seems that it would likely  
24 take several days, possibly the first week. But it  
25 depends on the time of cross, of course.

1           HEARING OFFICER HARWOOD: You know, I used  
2 to do a lot of jury trial work and I had judges tell  
3 me, "Okay. We have a week for trial. You've got  
4 till Wednesday at noon, and then you turn it over to  
5 the other side."

6           So I'm assuming that that's not going to  
7 be the protocol here and that the five days can  
8 stretch into 10 days, 12 days, whatever it takes. I  
9 guess the concern there, given the number of people  
10 involved, including, you know, the time constraints  
11 of all the parties and all the commission members, is  
12 that if we go more than five days, there may be some  
13 break between the first part of this, quote, unquote,  
14 trial and the rest of the proceeding.

15           It's very unlikely, I suspect, and the  
16 commission can tell me if I'm wrong, that we'll be  
17 able to reconvene the week following next week to  
18 continue this hearing immediately.

19           CHAIR ROZATOS: I think you're correct,  
20 Mr. Hearing Officer. I think that we're all going  
21 into this knowing that we're dedicating the five days  
22 next week, and then as of Friday of next week, we'll  
23 see where we're at. And then we're going to have to  
24 look at schedules.

25           HEARING OFFICER HARWOOD: Okay.

1 CHAIR ROZATOS: So I think the goal is to  
2 try to get it as soon as we possibly can, to  
3 reconvene. But, again, there's a large number of  
4 people that are involved, so schedules will  
5 definitely be of the utmost concern by next Friday.

6 HEARING OFFICER HARWOOD: Okay. So the  
7 downside of going beyond five days, obviously, is  
8 that there's going to be -- this proceeding is going  
9 to end up being an extended hearing over a period of  
10 probably a month or more, would be my guess.

11 Okay. So I don't think it makes any  
12 sense at this point, then, to even talk about time  
13 allotments. We will assume that on Monday, Empire  
14 will start with its first witnesses. We're going to  
15 have opening statements today from everyone, correct?  
16 So at least we'll get that out of the way.

17 MR. MOANDER: I believe that's correct  
18 Mr. Hearing Officer.

19 HEARING OFFICER HARWOOD: Any estimate on  
20 the length of time you all need for opening  
21 statements? Is this the last item on the agenda,  
22 Mr. Rozatos.

23 CHAIR ROZATOS: This is the last item on the  
24 agenda, and we are slated to potentially go into  
25 tomorrow, if need be, for opening statements. This

1 is a very lengthy calendar. So today and tomorrow  
2 are slated for opening statements. Evidentiary  
3 hearing starts on Monday. So however long it takes  
4 once we start.

5 HEARING OFFICER HARWOOD: Well, I almost  
6 hate to hear that because it encourages people to go  
7 on and on. I'll just remind everybody that, you  
8 know, opening statements are just to give everybody  
9 an overview of what they expect their witnesses to  
10 say and what they expect to prove.

11 We don't need to hear the whole case  
12 since we're going to hear the whole case from the  
13 witnesses. So just bear that in mind. It would be  
14 nice if we don't have to go into tomorrow.

15 In fact, if we have tomorrow, and I'm  
16 just floating this idea for everybody, since we only  
17 have five days for trial, is there any chance if we  
18 get through openings today, that we can start the  
19 hearing on the merits with witnesses tomorrow?

20 CHAIR ROZATOS: Mr. Hearing Officer, I  
21 think -- and I apologize, these were all issues we  
22 did kind of tackle. The witnesses are only going to  
23 be set starting Monday. Schedules for the witnesses  
24 were also kind of set with that. So we are kind of  
25 on a time crunch.

1 I think all the parties, and correct me  
2 if I'm wrong, parties, everybody agreed, especially  
3 at the last meeting that we had, that we were going  
4 to be as expeditious as we possibly could be.

5 On this particular case, I think  
6 everybody was aware that this was going to take more  
7 than the five days. And I will actually -- I  
8 apologize for taking this from you, Mr. Hearing  
9 Officer, but I'll just start from one side of the  
10 room and move my way across.

11 Is that how you understood it,  
12 Mr. Rankin.

13 MR. RANKIN: Yes, Mr. Chair. And I think  
14 part of the problem with starting on Friday, as we  
15 just discussed, is that lots of people are traveling  
16 from lots of different places and having to go back  
17 on the weekend just didn't make sense. So we just  
18 decided to start on Monday.

19 CHAIR ROZATOS: Excellent.

20 Mr. Moander.

21 MR. MOANDER: Mr. Chair, that is OCD's  
22 understanding. And we have prepared under that  
23 understanding.

24 CHAIR ROZATOS: Okay. Ms. Hardy or  
25 Ms. Shaheen.



1 MS. HARDY: Yes, same for Empire.

2 CHAIR ROZATOS: Okay. Mr. Suazo.

3 MR. SUAZO: Same for Pilot.

4 CHAIR ROZATOS: Okay. Mr. Beck?

5 MR. BECK: Yes.

6 CHAIR ROZATOS: Okay. So we all have gone  
7 into this knowing that starting Monday, witnesses,  
8 and then however long it takes.

9 HEARING OFFICER HARWOOD: All right. Well,  
10 I didn't mean to open a can of worms, but, you know,  
11 time is of the essence in these things.

12 All right. So the next thing on my list  
13 here, Goodnight had mentioned that it's expert, Larry  
14 Lake, has limited availability at the end of the  
15 week. Given the fact that Empire is going to take  
16 most of the week, is that even still an issue?

17 MR. RANKIN: Mr. Examiner, I think if  
18 Mr. Lake -- if we're not able to get to our case by  
19 the end of the week, then he would just have to  
20 appear remotely. I think that will probably be the  
21 situation for him.

22 HEARING OFFICER HARWOOD: So you'll be able  
23 to work around it.

24 MR. RANKIN: I believe so.

25 HEARING OFFICER HARWOOD: Okay. Fair

1 enough.

2 I don't know if this is something that  
3 happens here or not, or whether it even applies in  
4 these cases. It's on my list. You know, in all the  
5 Civil trials I did, I routinely excluded non-expert  
6 witnesses from being present to overhear the  
7 testimony of other witnesses.

8 I don't know if in these cases there are  
9 any witnesses other than experts. I'd like to hear  
10 from the parties if the rule of exclusion is even an  
11 issue here. Mr. Rankin.

12 MR. RANKIN: Mr. Hearing Officer, I don't  
13 believe so. I appreciate you raising the question,  
14 but I believe in every instance all the experts --  
15 all the witnesses in these consolidated cases are all  
16 experts across various different overlapping fields.

17 HEARING OFFICER HARWOOD: Can you speak up a  
18 little?

19 MR. RANKIN: Sure. No. I believe that the  
20 rule of exclusion wouldn't apply here. In every  
21 case, all the witnesses who be testifying are experts  
22 in various overlapping fields.

23 HEARING OFFICER HARWOOD: Okay.

24 MR. MOANDER: Mr. Hearing Officer, OCD would  
25 agree. I don't think I've seen a witness in this

1 case that would be considered a lay witness under the  
2 rules of evidence, so I don't think the exclusionary  
3 rule matters at this point.

4 HEARING OFFICER HARWOOD: Okay. I thought  
5 maybe there were principals for Empire or Goodnight  
6 that might be testifying, but no.

7 Ms. Hardy.

8 MS. HARDY: Mr. Examiner, thank you. I  
9 agree that the witnesses are experts and the  
10 exclusionary rule wouldn't apply.

11 And with respect to the presentation, I  
12 just wanted to go back for a minute and mention that  
13 the parties have agreed to spend approximately 15  
14 minutes with each expert on direct because they have  
15 filed direct and rebuttal testimony in writing, so we  
16 are working to expedite the hearing in that regard.

17 So I think the amount of time that each  
18 witness will take will depend really on  
19 cross-examination and questions from the commission.  
20 So it's possible we could get through Empire's  
21 witnesses more quickly, just depending on how that  
22 goes.

23 HEARING OFFICER HARWOOD: Well, I appreciate  
24 that. If that weren't the case, we'd be looking at a  
25 month-long trial, right?

1 MS. HARDY: Yes. I agree.

2 HEARING OFFICER HARWOOD: Anyone else on  
3 this rule of exclusion issue? If I hear nothing,  
4 then I'll assume everybody's in agreement.

5 And of course it doesn't apply to expert  
6 witnesses, you all understand that, because experts  
7 can change their opinions all the way through trial  
8 based on what they hear. So they're welcome to sit  
9 in and listen if the parties want to pay for that.

10 Okay. So the other thing is, I'm  
11 assuming that this hearing will go from 9:00 to 5:00  
12 every day next week, or does the commission break  
13 earlier?

14 CHAIR ROZATOS: I think we were slated for  
15 9:00 to 5:00.

16 HEARING OFFICER HARWOOD: 9:00 to 5:00, and  
17 then we'll have a lunch break.

18 CHAIR ROZATOS: Correct.

19 HEARING OFFICER HARWOOD: And I'm assuming  
20 we'll have a mid-morning and mid-afternoon break.

21 CHAIR ROZATOS: Correct.

22 HEARING OFFICER HARWOOD: Okay. Fair  
23 enough.

24 Let's see. So this is just for  
25 everybody's -- this is mainly for my benefit, I

1     should say. And I'm sure, you know, the commission  
2     members are more familiar than I am, but with  
3     abbreviations and acronyms, when you guys present  
4     your cases, if you could do your best to at least  
5     explain that stuff the first time it comes up so  
6     that, you know, technical ignoramuses, like myself,  
7     can start picking up the jargon. Okay?

8             It's prevalent in government work in  
9     general. And there's a whole set of acronyms that  
10    apply in the oil and gas field. So these guys may  
11    know it, but it would help me if you guys can try and  
12    remember that.

13            Okay. The last thing, I just want to  
14    make it clear, you know, based on the research that's  
15    been done, your substantive presentations in this  
16    case are to the commission. They're not to me.

17            Given Mr. Rankin's comprehensive  
18    research results, my only role here basically is to  
19    resolve procedural issues and, you know, to at least  
20    make provisional rulings on evidentiary issues,  
21    subject to, you know, the commission's review and  
22    possible overruling of my views on the subject.

23            As a hearing officer for other state  
24    agencies and most of the hearings for the City of  
25    Albuquerque, I'm used to being the complete decision

1 maker. So my role here is a bit of an oddity for me.  
2 I feel like I'm half master of ceremonies and half  
3 law clerk. So it doesn't really matter to me in this  
4 day and age of my semi-retirement. I basically work  
5 for boat parts. I spend half the year in Maine and  
6 my boat is a typical jealous mistress. It doesn't  
7 care what I do so long as I keep feeding it.

8                   Anyway, so that's what I will be doing.  
9 I will not be making any substantive recommendations  
10 to the commission. And at the end of this, whenever  
11 that may be, it's a quorum of the commission that  
12 will decide all substantive issues raised at this  
13 hearing. All right.

14                   Okay. Anything further from the  
15 commission?

16                   Mr. Rubin, anything you'd like to add.

17                   MR. RUBIN: Just that everyone else should  
18 silence their cell phones.

19                   CHAIR ROZATOS: Okay. Excuse me. By the  
20 way, I caught a cold coming back from Miami last  
21 week, but I want you to know, Doctor, that I don't  
22 think it -- I know it's not COVID, and I don't think  
23 it's still contagious. But I apologize for that.

24                   So, does anybody need a quick break  
25 before we go right into openings? Are you all

1 prepared at this point to begin with your opening  
2 statements? All right. Then let's hear from whoever  
3 for Empire will be making their opening remarks.

4 MS. HARDY: Thank you, Mr. Examiner,  
5 Commissioners. Dana Hardy on behalf of Empire. And  
6 I am going to try to share my screen here and  
7 hopefully this will work.

8 Okay. So to give you a brief factual  
9 background on these matters, these cases involve  
10 Goodnight's continuing and proposed additional  
11 injection of foreign and incompatible produced  
12 saltwater into the San Andres Formation underlying  
13 the Eunice Monument South Unit, which we will refer  
14 to as the EMSU.

15 The commission's orders approving the  
16 unit, that were issued approximately 40 years ago,  
17 included the San Andres Formation within the unitized  
18 interval. Goodnight's injection causes waste and  
19 impairs the correlative rights of each mineral  
20 interest owner in the unit, including the majority  
21 owners of the minerals, the State of New Mexico,  
22 which owns over 58 percent, and the United States  
23 which owns over 19 percent, thereby interfering with  
24 Empire's operations of the unit.

25 In addition to the continuing injection

1 that is ongoing, Goodnight proposes additional wells  
2 and to increase the injection rate into one well,  
3 which will only exacerbate the problem.

4 Here you'll see a map of the EMSU  
5 boundary. Empire also operates the EMSU-B to the  
6 northwest and the AGU unit to the southeast. And as  
7 we know, in these cases we are looking at the EMSU  
8 specifically.

9 For some background on the unit, the  
10 subject field was discovered in 1929. In 1984, the  
11 commission approved the unitization of the EMSU and  
12 included both the San Andres and Grayburg formations  
13 in the unitized interval. At that time, it was  
14 estimated that an additional 64.2 million barrels of  
15 oil could be recovered by water flooding the  
16 reservoir. Since that time, the EMSU has produced  
17 approximately 25 million barrels of oil.

18 The unit was first operated by Gulf Oil  
19 Corporation, which was subsequently rebranded as  
20 Chevron. In 2004, XTO acquired Chevron's interest,  
21 and XTO operated the unit from 2004 to 2021.

22 Empire acquired XTO's interest and  
23 became the successor operator in March of 2021.  
24 Empire acquired the EMSU from XTO because of the  
25 significant potential for enhanced oil recovery in



1 the San Andres ROZ, which is the residual oil zone,  
2 and the Grayburg. XTO's literature on the unit  
3 valued the ROZ at approximately \$100 million.

4 With respect to Goodnight's injection,  
5 Goodnight first began injecting water into the  
6 San Andres unitized interval of the EMSU in July of  
7 2020, and as of January 1st, 2025, has injected  
8 approximately 63 million barrels of water.  
9 Goodnight's injection far exceeds any other injection  
10 of produced water into the unitized interval of the  
11 EMSU.

12 Here you will see a map of Goodnight's  
13 proposed SWDs within the EMSU. They are shown in the  
14 red stars and there are four of them here. And you  
15 can see the injection rates and pressures listed  
16 there, and the rates are significant that are  
17 proposed.

18 And as you can also see, these wells are  
19 included within sort of a -- it's a concentrated  
20 small area. And these are only the five proposed  
21 wells that are at issue here.

22 If you look at this map you can see all  
23 of the existing wells as well as the proposed wells  
24 within the EMSU there are nine of them, and we've  
25 also listed the injection rates there, and they are

1 significant. And, again, as you can see, this is a  
2 large amount of injection going into this area of the  
3 EMSU and into the unitized interval.

4 Goodnight also operates an additional  
5 five SWD wells within approximately one mile of the  
6 EMSU, and another SWD well in the San Andres within  
7 two and a half miles of the EMSU.

8 Goodnight has permitted an additional  
9 two wells, with an approximately 1.25 miles of the  
10 unit, which have not yet been drilled. And those are  
11 the Rocket and Verlander SWDs.

12 As of January 2025, the total amount of  
13 incompatible saltwater injected by Goodnight within  
14 or near Empire's operations is at least 126 million  
15 barrels of water.

16 Empire's evidence demonstrates that  
17 Goodnight's injection to date and proposed injection  
18 into the future adversely impacts Empire's ability to  
19 recover hydrocarbons in the unitized interval,  
20 including both the Grayburg and the San Andres, by,  
21 among other things, pressuring up the San Andres  
22 Reservoir to levels above the original pressure,  
23 requiring Empire to operate its CO2 tertiary recovery  
24 project at a higher pressure than necessary, and  
25 requiring Empire to inject the produced water into

1 another zone to make room for the CO2 to avoid  
2 fracturing the formation.

3 Further re-pressurization of the  
4 San Andres increases water influx into the Grayburg  
5 Formation through natural fractures, and that is  
6 prematurely watering out Empire's Grayburg producers.

7 Let's talk for a minute about the  
8 applicable law and the burden of proof, as well as  
9 the issues to be decided. And I think all of my  
10 slides are important. This might be the most  
11 important slide, from my perspective.

12 The New Mexico oil and Gas Act requires  
13 the commission to prevent waste of hydrocarbons and  
14 protect correlative rights. Under the act, the  
15 commission is charged with issuing orders, and this  
16 is a quote, "...to prevent the drowning by water of  
17 any stratum or part thereof capable of producing oil  
18 or gas or both oil and gas in paying quantities and  
19 to prevent the premature and irregular encroachment  
20 of water or any other kind of water encroachment that  
21 reduces or tends to reduce the total ultimate  
22 recovery of crude oil petroleum or gas or both oil  
23 and gas from any pool."

24 Goodnight has incorrectly focused on the  
25 first phrase of this statute, which refers to paying

1 quantities, and ignores the rest. This argument  
2 violates New Mexico's rules of statutory  
3 construction, which require that statutes be  
4 construed in their entirety. In addition, the  
5 provision is included in the commission's enumeration  
6 of powers and must be read broadly.

7 Goodnight also misconstrues the term  
8 "production in paying quantities." Under New Mexico  
9 law, that term means only that income generated from  
10 oil and gas production exceeds operating costs. This  
11 analysis does not include capital cost or investment.

12 To the extent that Goodnight's witnesses  
13 focus on the economic aspects of a proposed tertiary  
14 recovery project, that focus is failing to comply  
15 with the statute and ignores the actual definition  
16 under New Mexico law of production in paying  
17 quantities.

18 With respect to the burden of proof, I  
19 think we should all agree that administrative  
20 proceedings are subject to the common law rule that  
21 the moving party bears the burden of proof. The  
22 party bringing the application before the commission  
23 therefore bears the burden of proving by a  
24 preponderance of the evidence that it is entitled to  
25 the relief requested in the application.

1           Here, Goodnight bears the burden of  
2     proving by a preponderance of the evidence that its  
3     proposed injection will not result in waste or impair  
4     correlative rights. And Empire bears the burden of  
5     proving on its applications to revoke Goodnight's  
6     permits that the injection is resulting in waste or  
7     impairing correlative rights.

8           And I'm raising that issue here because  
9     Goodnight has argued in various motions that Empire  
10    bears the burden of proof somehow on all of the  
11    applications, and that's not correct. It's not a  
12    correct statement of the law.

13           With respect to the issues to be decided  
14    here, those have been addressed already by the  
15    commission in its joint order on the scope of the  
16    hearing. And that order states: At said hearing,  
17    the parties shall submit all evidence, testimony and  
18    legal argument on the issue of the existence, extent  
19    of and possible interference with a residual oil zone  
20    underlying the Eunice Monument South Unit, the EMSU,  
21    by produced water injection activities undertaken by  
22    Goodnight.

23           So that is what we are all here to  
24    address and that the commission will decide.

25           Empire's witness testimony will

1 demonstrate that a ROZ underlines the EMSU and that  
2 Goodnight's injection is interfering with it. Empire  
3 relies on voluminous geological and engineering data  
4 that supports its position, while Goodnight  
5 disregards fundamental geology.

6 Goodnight's spends the majority of its  
7 time trying to explain away evidence rather than  
8 supporting its case with affirmative evidence.  
9 Likely because Goodnight's evidence is weak and  
10 flawed, as Empire's witnesses will explain.

11 And to introduce those witnesses, these  
12 are the folks you'll be hearing from during the  
13 hearing.

14 You'll hear from Jack Wheeler. He is  
15 the Empire senior vice president of Land and Legal.  
16 He will testify regarding the creation and history of  
17 the EMSU, Empire's acquisition of the EMSU and its  
18 operations, Division and commission orders relating  
19 to the unit, and the location of Goodnight's proposed  
20 and currently active or permitted SWDs within the  
21 EMSU.

22 Dr. Robert Lindsay is a consulting  
23 geologist. Dr. Lindsay wrote his PhD dissertation on  
24 the EMSU, and he is the foremost authority on it. He  
25 will testify to his characterization of the geology

1 of the San Andres and Grayburg Reservoir, including  
2 selection of the top of the San Andres, the presence  
3 of a residual oil zone within the San Andres,  
4 identifiable vertical fractures within the San Andres  
5 and Grayburg that allow for vertical migration of  
6 injected saltwater from the San Andres into the  
7 Grayburg, and the lack of an effective geologic seal  
8 between the Grayburg and San Andres.

9           You'll hear from Galen Dillewyn, a  
10 consulting log analyst with NuTech. He will testify  
11 on the procedures that NuTech used to determine oil  
12 saturations of the Grayburg waterflooded interval in  
13 the San Andres ROZ in seven key wells at the EMSU.  
14 He will address the NULOOK process for determining  
15 rock properties and oil saturation and carbonate  
16 reservoirs sensitivities run on the model, and  
17 determination that a ROZ interval exists at the EMSU.

18           Joseph McShane is a geologist, petroleum  
19 geologist with Empire. He will testify regarding his  
20 experience reviewing and studying the unitized  
21 Grayburg and San Andres interval in the EMSU,  
22 including a geologic overview, cross-sections  
23 proposed and active Goodnight wells injecting into  
24 the interval, subsea structure maps of the Grayburg  
25 in San Andres, NuTech's log analysis of oil-in-place,

1 proof of the ROZ in the San Andres, and the lack of a  
2 geologic barrier between the Grayburg and San Andres.

3 Ryan Bailey, a consulting geologist with  
4 Ops Geologic will testify in rebuttal to Mr. Preston  
5 McGuire that Goodnight's selection of a deeper top  
6 for the San Andres reduces Goodnight's estimate of  
7 the oil-in-place for the San Andres ROZ. Goodnight  
8 does not recognize the Lovington Sand as a marker  
9 within the Upper San Andres, and many of their picks  
10 for top of San Andres are at this sand. And there is  
11 considerable oil-in-place in both the Upper and Lower  
12 San Andres based on Ops' log interpretation and  
13 mapping.

14 Stanley Birkhead is a consulting  
15 geologist with Ops Geologic as well. He will testify  
16 that Goodnight's estimate of oil saturation is  
17 pessimistic due to the log parameters and rock facies  
18 utilized in the interpretation, Goodnight's  
19 oil-in-place estimate is low due to the use of a  
20 San Andres structure top provided to expert witness  
21 Davidson by Goodnight, and that there are high oil  
22 saturation intervals in both the Upper and Lower  
23 San Andres, which Goodnight failed to identify due to  
24 its interpretation techniques.

25 Dr. Bob Trentham is a geologist as well.



1 He will testify about the ROZ fairways that developed  
2 in New Mexico and Texas, leaving large volumes of  
3 residual oil beneath main pay zones, those are  
4 brownfields, and isolated with no main pay, which are  
5 greenfields. He will talk about CO2 and enhanced oil  
6 recovery success at the Seminole ROZ interval, which  
7 is a brownfield and has produced 20,000 barrels of  
8 oil per day for over 10 years. He will talk about  
9 similarities and the success of the CO2 enhanced oil  
10 recovery project at Tall Cotton, which is a  
11 greenfield, where no commercial oil production had  
12 been established prior to CO2 injection. And he will  
13 address core and log information and state that that  
14 confirms the presence of a ROZ at the EMSU, the  
15 EMSU-B and the AGU.

16 Laurence Melzer is a geological  
17 engineer. He will testify about the use of enhanced  
18 oil recovery techniques, including CO2, to recover  
19 previously unproduced residual oil zones around the  
20 world, including in the Permian Basin. He will  
21 provide estimates of the recoverable ROZ resources at  
22 the EMSU, explain how SWD injection into those  
23 reservoirs will severely impair the ROZ for both oil  
24 exploration and CO2 storage, thereby creating waste.

25 Frank Marek is a consulting engineer.

1 He will testify to his evaluation of the impact of  
2 existing SWD operations on waterflood projects in the  
3 EMSU, including his analysis of cross-sections across  
4 the unit that show oil saturations, the ways in which  
5 injection and further injection of produced water  
6 into the unitized interval detrimentally impacts  
7 Empire's ability to recover hydrocarbons from the ROZ  
8 and, therefore, results in waste.

9 Dr. James Buchwalter is a consulting  
10 reservoir engineer. He will testify regarding his  
11 reservoir model that he constructed for the EMSU,  
12 EMSU-B and AGU waterflood units in the San Andres ROZ  
13 interval, to obtain pressure in production history  
14 match required the water influx from the San Andres  
15 occur with the start of production in the 1930s, and  
16 he will explain that Goodnight is pressuring up the  
17 San Andres at a rate of at least 4 psi's for every  
18 million barrels of water injected, and that this  
19 would result in 50,000 barrels of water per day  
20 entering the Grayburg producing interval within the  
21 next two years due to higher San Andres pressure.

22 And last, but not least, Mr. William  
23 West is Empire's senior vice president of operations.  
24 He will testify about the volumes of Goodnight's SWD  
25 injections to date, their quantifiable impacts on the

1 EMSU secondary recovery operations. He will explain  
2 that there's evidence of communication between the  
3 San Andres and Grayburg formations. He will provide  
4 evidence that there was a ROZ in the San Andres,  
5 discuss the estimated area of SWD exposure due to the  
6 saltwater within the EMSU, describe SWD impacts on  
7 secondary and tertiary recovery projects going  
8 forward, and explain how Goodnight's downdip disposal  
9 will impact the updip portions of the San Andres and  
10 ultimately enter the Grayburg.

11 I am going to attempt some technical  
12 wizardry here and show you a simulation that is  
13 pretty short. It's about two minutes. The Eunice  
14 Monument South Unit is composed of stacked sequences  
15 of carbonate material that have been naturally  
16 fractured during structure uplift of the San Andres  
17 and Grayburg formations.

18 Goodnight's SWDs are impacting the  
19 residual oil zone within the San Andres and water is  
20 moving through those natural fractures to the  
21 Grayburg. So the simulation will give you an idea of  
22 the fluid movement in the reservoir.

23 So this is showing you the map, the line  
24 of cross-section. And this is a cross-section  
25 through the reservoir, showing the San Andres is

1 structurally high to Goodnight's Ryno SWD as we move  
2 to the northeast. And it was during this uplift of  
3 the structure that natural fractures formed in the  
4 Grayburg and San Andres.

5           You can see here that Goodnight  
6 saltwater injection is moving updip to Empire's water  
7 supply wells and through natural fractures into the  
8 Grayburg. And here we see a geologic slice of the  
9 reservoir showing the Grayburg and a major portion of  
10 the San Andres filled with oil.

11           The Grayburg and San Andres intervals  
12 were concentrated with oil until tectonic forces  
13 millions of years ago caused the oil from the  
14 San Andres to be displaced with water, leaving a  
15 residual oil zone.

16           Production began in the Grayburg  
17 interval in the 1930s, and in 1986, a waterflood was  
18 implemented in the Grayburg. The waterflood in the  
19 Grayburg displaces the oil and leaves a residual oil  
20 saturation in the Grayburg. Here we see the  
21 pressures in the San Andres and Grayburg with  
22 pressure in the San Andres currently being higher, as  
23 Goodnight continues to inject saltwater the pressure  
24 and the San Andres increases and builds up. And as  
25 the pressure builds up the water moves through the

1 natural fractures into the Grayburg.

2 The CO2 flood begins to recover oil from  
3 the residual oil zone in the San Andres while  
4 continuing to waterflood the Grayburg. And since  
5 it's likely that CO2 will move through the natural  
6 fractures into the Grayburg, the Grayburg area above  
7 the CO2 flood will also be prepared for CO2  
8 breakthrough.

9 Empire's evidence proves that a ROZ  
10 exists within the San Andres Formation in the EMSU.  
11 The selection of the tops of the San Andres Formation  
12 here is key. Goodnight concedes there is a ROZ, but  
13 claims it is in the Grayburg, based on its flawed  
14 selection of the top of the San Andres.

15 This is a high level summary of Empire's  
16 evidence that will be addressed by our witnesses the  
17 existence. The existence of ROZ within San Andres  
18 underlying the EMSU and the surrounding area is  
19 confirmed by core on the EMSU 679 and RR Bell  
20 Number 4 wells within the unit and the north Monument  
21 Grayburg/San Andres Unit 522 well, previously  
22 operated by Amerada Hiss, which is located near the  
23 EMSU-B.

24 So Empire's witnesses and the analysis  
25 in this case is based on the actual core from those

1 wells.

2 The self-affirmed statements of engineer  
3 Laurence Melzer, which is our Exhibit C, states, "The  
4 evidence from the cores taken at depth in the  
5 San Andres clearly demonstrates residual oil zone of  
6 at least 250 feet beneath the two units."

7 Oil saturations obtained in the EMSU 679  
8 conventional core and shown in Preston McGuire's  
9 B-32, show oil saturations greater than 20 percent in  
10 the San Andres down to 4,252 measured depth, or minus  
11 652 feet subsea.

12 Goodnight uses an incorrect San Andres  
13 top of minus 672 subsea, whereas Empire's corrected  
14 top of the San Andres is minus 548 subsea. This  
15 demonstrates the problem with Goodnight picking the  
16 top of the San Andres deep to avoid saltwater  
17 disposal into the Grayburg interval. By selecting a  
18 proper San Andres depth for this downdip well, a 104  
19 ROZ column exists.

20 And you can see that on this exhibit.  
21 This is one of Goodnight's exhibits. It's Preston  
22 McGuire's B-32. Goodnight Empire's notes are shown  
23 in yellow, as it's also one of our rebuttal exhibits  
24 to Mr. William West's testimony. And it shows that  
25 Goodnight uses a San Andres top of minus 672, but the

1 actual core showed a higher top of minus 548. So  
2 that's 124 feet higher than Goodnight's pick. And if  
3 we use Goodnight's estimate of where the oil  
4 saturation is greater than 20 percent, this shows  
5 there is 104 feet of ROZ, which Goodnight has  
6 excluded from its estimates of oil-in-place. So this  
7 really shows the fundamental problem with their  
8 analysis.

9 Goodnight indicated during the Piazza  
10 hearing on that well, in its Exhibit C-18, which is  
11 our Rebuttal Exhibit N-2, which I'm going to show  
12 you, the wall selecting the top of the San Andres for  
13 water disposal, Goodnight was asked by OCD to use the  
14 deeper pick because it would give greater offset to  
15 the Grayburg production.

16 So this is that exhibit from the Piazza  
17 hearing and it's exhibit N-2 to our rebuttal. In the  
18 yellow notes, our, Empire's, and it states that  
19 Goodnight confirmed in their SWD application on  
20 Piazza, they had selected a deeper pick than what  
21 could have been normal to provide greater offset to  
22 the Grayburg production. And they indicate that they  
23 continue to use these deeper picks. So that shows  
24 the reason for their picks rather than the actual  
25 geology.

1 XTO confirmed that both the San Andres  
2 and Grayburg have ROZ intervals when it owned the  
3 unit. This is one of our exhibits that shows the  
4 information that XTO had provided in a cross-section  
5 regarding the wells, and it demonstrates the  
6 existence of the ROZ. We have colored it in our  
7 notes. Empire's notes are in yellow. Those are  
8 Mr. West's notes. And it shows the Grayburg and  
9 San Andres ROZ intervals. The coloration shows the  
10 Grayburg transition zone, an area where San Andres  
11 has moved hydrocarb. Removable hydrocarbons are also  
12 shown.

13 And Goodnight's witness, Mr. William  
14 Knights, confirmed that both the EMSU-658 and 660  
15 wells both tested oil in this updip portion of the  
16 San Andres. The existence of a ROZ in the San Andres  
17 is further confirmed by openhole logs and mudlogs,  
18 which will be discussed by Empire's witnesses. I've  
19 provided citations for some of those exhibits here.  
20 We will show them during the hearing.

21 For example, the EMSU-660 drilling mud  
22 log shows good to yellow fluorescence with regions of  
23 good cut and strong gas shows across 150 feet of the  
24 San Andres. These other wells also that I've  
25 identified here show the existence of a ROZ in the



1 San Andres.

2 Now, for a summary of Goodnight's  
3 evidence, Preston McGuire is the only Goodnight  
4 witness who picked formation tops. All of the other  
5 Goodnight witnesses relied on his picks and did not  
6 do any independent evaluation Mr. McGuire is a  
7 geologist, but his formation top picks rely entirely  
8 on reservoir engineering principles, including  
9 pressure data. He ignores voluminous geological  
10 data.

11 As Dr. Lindsay states in his rebuttal,  
12 you should never, ever pick formation tops using  
13 engineering data, especially when geological data is  
14 available. And this area is very well studied  
15 geologically. Dr. Lindsay discusses that extensively  
16 in his testimony. Mr. McGuire's rebuttal does not  
17 address Empire's evidence on the this issue. He  
18 instead focuses on other matters.

19 With respect to the oil saturations in  
20 the San Andres, Empire witness, Dr. Lindsay, explains  
21 the core analysis from the Empire-679 well and the RR  
22 Bell Number 4 show sufficient oil saturations to  
23 reach a conclusion that the San Andres has a ROZ,  
24 irrespective of whether it was termed as  
25 nonproductive in 1984.

1                   Similarly, Empire's witness from NuTech,  
2     Galen Dillewyn, opines. Based on wireline logs for  
3     ten wells, there is oil saturation in the San Andres.  
4     And I provided a quote from his testimony there. He  
5     states the San Andres and Grayburg are primarily a  
6     dolomitic rock, with some dispersed limestones, and  
7     that both formations show evidence of hydrocarbon  
8     saturation.

9                   With respect to Goodnight's evidence on  
10    oil saturation, they rely primarily on the lack of  
11    oil produced by water supply wells within the EMSU.  
12    But as Empire's witnesses extensively explain, a  
13    residual oil zone can only be produced with CO2  
14    tertiary recovery. So the lack of production of oil  
15    through water supply wells is irrelevant,  
16    essentially.

17                  Goodnight concedes that two wells have  
18    tested oil in the San Andres, the EMSU-658 and the  
19    EMSU-660. This demonstrates the existence of movable  
20    oil, which Goodnight saltwater disposal operations  
21    are pushing off the lease and outside of the unit.

22                  Goodnight's contention that the ROZ  
23    exists only in the Grayburg rests on the  
24    misidentification of the top of the San Andres  
25    Formation. And as I mentioned earlier and showed you

1 the slide, Goodnight admits that it picked the top  
2 lower at the Oil Conservation Division's  
3 recommendation to increase separation for purposes of  
4 water disposal.

5 Empire will present extensive evidence  
6 that Goodnight's existing and proposed injection  
7 within the EMSU is damaging the ROZ and impairing  
8 correlative rights. There is no impermeable barrier  
9 between the Grayburg, the San Andres ROZ and  
10 Goodnight's injection.

11 With respect to Empire's evidence, as  
12 explained by Dr. Lindsay in his direct and rebuttal,  
13 natural fractures exist in both the Grayburg and  
14 San Andres formations and promote communication  
15 between the two intervals. And Dr. Lindsay has  
16 provided the actual fracture studies that confirm  
17 this conclusion.

18 The San Andres Reservoir pressure  
19 dropped from 1747 psi's at minus 430 feet subsea to  
20 1245 psi's, which is over a 28 percent depletion by  
21 April 1986, with limited production from the  
22 San Andres. And this was measured in the EMSU-211  
23 well. And this is important because it shows prior  
24 to waterflooding, that production from the Grayburg  
25 caused a pressure drop in the San Andres. So that

1 confirms that there was not an impermeable barrier  
2 between the two intervals.

3 Empire has also provided water chemistry  
4 results that confirm there is no impermeable barrier  
5 between the injection interval and the San Andres and  
6 the Grayburg.

7 Dr. Lindsay discusses those studies. He  
8 explains that plumes of water came from the  
9 San Andres which contains low salinity water that is  
10 sulfate rich. The presence of San Andres sulfate  
11 water mixing with the Grayburg barium ions and  
12 forming barium sulfate scale prior to the waterflood  
13 shows that San Andres water entered the Grayburg  
14 prior to the waterflood and, therefore, there's no  
15 impermeable barrier and there is communication  
16 between the zones. This interference is also shown  
17 by Dr. Buchwalter's model.

18 Dr. Trentham, another of Empire's  
19 experts, similarly concludes that core and log  
20 information confirms the presence of ROZ and that  
21 Goodnight's continued injection of off lease water  
22 will greatly diminish or destroy Empire's ability to  
23 use tertiary recovery in the unit.

24 Empire has seen an increase chlorides in  
25 four wells near the Goodnight SWD wells, which also

1 indicates that San Andres water is entering the  
2 Grayburg Formation.

3 With respect to Goodnight's evidence,  
4 Goodnight contends that a 200-foot barrier exists  
5 across the EMSU, separating The zone in which  
6 Goodnight injects incompatible water from the ROZ  
7 that exists in the Grayburg in San Andres.  
8 Goodnight's witness, Mr. McGuire, states that  
9 additional engineering evidence addressed in their a  
10 testimony confirms his assessment.

11 The problem with this representation is  
12 that the cross-sections provided by Mr. McGuire do  
13 not show a continuous 200-foot barrier. And each of  
14 Goodnight's witnesses relied on Mr. McGuire's  
15 representations that a 200-foot barrier divides  
16 Goodnight's disposal zone from the existing residual  
17 oil zones.

18 And I'm going to show you here. I need  
19 to, I think, escape from this for one moment. I'm  
20 going to show you Mr. McGuire's cross-section that he  
21 relies on and that all of Goodnight's witnesses rely  
22 on. And they claim that and -- I know this is small,  
23 so it's a little bit difficult to read. But the main  
24 point here, for my purpose right now, is that they  
25 claim the solid colored zones constitute impermeable

1 barriers between the injection zones.

2 But as you can see -- unfortunately, I  
3 just lost it. There it is -- they are not  
4 impermeable barriers. You can see a lot of white  
5 space there. The white space would allow for flow.

6 So I'm sure Goodnight's witnesses, they  
7 rely on that and it's not a correct assessment.

8 Back to my slide.

9 Goodnight's injection is also damaging  
10 the ROZ and impairing correlative rights because it  
11 is increasing formation pressure the injection causes  
12 overpressured formations this. Overpressurization  
13 exacerbates existing and causes additional fractures  
14 and collapse breccia. Injection of foreign water is  
15 also damaging Empire's producing wells.

16 Goodnight is pressuring up the  
17 San Andres at a rate of 4 to 7 psi's per 1 million  
18 barrels of water injected. By its disposal of over  
19 200,000 barrels of water per day, Goodnight will  
20 pressure up the San Andres by 292 to 511 psi's in one  
21 year's time. This will require that Empire use more  
22 CO2 for the San Andres CO2 flood than if the CO2  
23 flood is operating at a lower pressure.

24 The disposed water is also known to  
25 cause scaling and corrosion, as evidenced by a

1 workover on Goodnight' Ryno SWD well in October of  
2 2024. The disposal water causes scaling downhole due  
3 to high levels of sodium and calcium in the disposal  
4 water mixing with sulfates in the San Andres water.  
5 So that's another problem that this injection is  
6 causing.

7                   Due to the San Andres pressure increase,  
8 water influx into the Grayburg through natural  
9 fractures will increase and impact Empire's Grayburg  
10 waterflood. The areas where water entered from the  
11 San Andres into the Grayburg was mapped at the AGU.  
12 It can be estimated at the EMSU by the high water  
13 production volumes seen in the crustal areas at the  
14 EMSU prior to the waterflood. There was an edge  
15 water drive from the Goat Seep Aquifer/Grayburg prior  
16 to the waterflood, but it was insufficient to cause  
17 these high water volumes.

18                   The petroleum geology using the correct  
19 San Andres structure top geochemistry, which includes  
20 the San Andres sulfate water appearing in the  
21 Grayburg, and petrophysics, which includes the core  
22 and log analysis showing oil in the San Andres, all  
23 show that there is a ROZ in the San Andres and that  
24 there is communication between the San Andres and the  
25 Grayburg.

1 Physics tells us that pressure increases  
2 in the San Andres, and as that occurs, the water  
3 influx will increase and this problem will worsen.

4 To address OCD's concern about the  
5 migration of injected water to the Capitan Reef, the  
6 first point is that this issue is outside the scope  
7 of the hearing because the commission must first  
8 determine if there is a ROZ within the San Andres and  
9 if Goodnight's injection is interfering with  
10 correlative right.

11 Dr. Lindsay's direct testimony also  
12 addresses OCD's concern. He states there is not a  
13 migration pathway between the unitized interval in  
14 the Capitan Reef. Empire's injection, including for  
15 a CO2 project, is vastly different from Goodnight's  
16 injection.

17 Goodnight's injection involves high  
18 volumes of water from other formations and areas into  
19 the San Andres; whereas, Empire is only injecting  
20 water that was produced by the San Andres and  
21 Grayburg within the EMSU back into the same  
22 formations. Goodnight's injection is causing  
23 formation damage, while Empire's is not.

24 OCD does not present any evidence that  
25 migration or contamination of the Capitan Reef is



1 actually occurring. And at this time, the commission  
2 should not require Empire to implement a monitoring  
3 project. The request is unnecessary because OCD does  
4 not provide any evidence of a migration pathway, and  
5 voluminous geological evidence shows there is no such  
6 pathway.

7 In conclusion, Empire's evidence  
8 resoundingly demonstrates that there is a ROZ within  
9 the San Andres underlying the EMSU, and that  
10 Goodnight's injection is interfering with Empire's  
11 unitized interval and violating correlative rights.

12 Empire's applications to revoke  
13 Goodnight's permits should be granted and Goodnight's  
14 applications for approval of additional wells and to  
15 increase its injection rate should be denied.

16 Thank you very much.

17 HEARING OFFICER HARWOOD: Thank you very  
18 much, Ms. Hardy. Thank you, Ms. Hardy.

19 Let's see, I see it's 10:22. Why don't  
20 we take a ten-minute break. How about we come back  
21 at 10:35, give everybody a little bit of a break.

22 And you can collect your thoughts,  
23 Mr. Rankin.

24 (Off the record.)

25 HEARING OFFICER HARWOOD: Okay. All right,

1 folks. Let's get on with it. You've had an extra  
2 four minutes, so just for the record.

3 All right. I take it, then, that  
4 Goodnight will make their opening statement at this  
5 point, and I suspect we'll hear something a little  
6 bit different.

7 MR. RANKIN: Thank you, Mr. Hearing Officer.  
8 May I please the Commission, Chairman Rozatos,  
9 Commissioner Bloom, who's an absentia, Commissioner  
10 Ampomah.

11 In these consolidated cases, Goodnight  
12 seeks approval for five new produced water disposal  
13 wells, an authorization to increase the injection  
14 rate in one existing well. All these wells target a  
15 disposal zone in the San Andres Formation, and all  
16 are within the exterior boundaries of the Eunice  
17 Monument South Unit, or the EMSU, that is operated by  
18 Empire.

19 For the existing well, which is called  
20 the Andre Dawson in Case Number 23775, Goodnight  
21 requests an increase in the injection rate from  
22 25,000 barrels per day up to a maximum of 40,000  
23 barrels per day.

24 As explained in the testimony, this  
25 increase in the maximum rate is just to accommodate

1 long term peak loads. Goodnight has no intention of  
2 running its wells or any of its wells at that maximum  
3 rate for prolonged periods. Goodnight's approach is  
4 to distribute its load over multiple wells and over a  
5 large area.

6 Now, the testimony will show that  
7 Goodnight has operated its wells in the EMSU at an  
8 average injection rate of less than 15,000 barrels of  
9 water per day, and that is the rate they expect to  
10 maintain in all of its wells.

11 Four of Goodnight's cases request  
12 approval for new wells to dispose into the  
13 San Andres. Those are under Case Numbers 23614  
14 through 23617. Now, all the details on those wells  
15 and the requests, the technical issues are in the  
16 testimony.

17 The fifth proposed new well is under  
18 Case Number 24123. Now, that's the de novo case in  
19 which the Division denied Goodnight its permit  
20 previously, back in November of '23. We believe the  
21 division's order was erroneous.

22 The evidentiary record simply does not  
23 support the order. There was no evidence that the  
24 proposed injection would interfere with EMSU  
25 operations, cause waste or impair correlative rights.

1 There just was no evidence then and there's still no  
2 evidence today.

3 Now, as the testimony will show, all  
4 five of Goodnight's proposed new wells and the Andre  
5 Dawson rate increase should be improved in addition  
6 to Goodnight's six cases, we also have Empire's four  
7 applications to revoke Goodnight's injection  
8 authority and its four existing SWDs in the unit.

9 What the commission must decide. Okay.  
10 At issue, and what the commission ultimately needs to  
11 decide, is whether Goodnight's existing and proposed  
12 injection will cause waste or impair correlative  
13 rights in the EMSU. It's that simple.

14 But there are threshold issues that  
15 underlie those ultimate decisions that the commission  
16 must evaluate and decide first, including whether  
17 Goodnight's San Andres disposal zone in the EMSU  
18 contains economic accumulations of oil that are  
19 commercially recoverable through a CO2 flood; whether  
20 any stratum within the EMSU that is capable of  
21 producing oil in paying quantities is being drowned  
22 out by water from Goodnight's disposal; and whether  
23 there's a competent geologic seal or barrier that  
24 effectively isolates Goodnight's disposal within the  
25 San Andres.

1                   Separately, the commission also must  
2       decide whether the San Andres is geologically or  
3       hydrologically connected to the Capitan Reef or to  
4       any other underground source of drinking water.

5                   The testimony that you're going to be  
6       reviewing or you have already started reviewing,  
7       hopefully, and that you're going to hear next week  
8       will establish that the San Andres and the EMSU is an  
9       aquifer, not a hydrocarbon reservoir. And I'm  
10      talking specifically about Goodnight's disposal zone.  
11      Okay?

12                  Because it is an aquifer, there are no  
13      commercial accumulations of oil in that zone. That  
14      means, disposal of produced water can't be causing  
15      waste or impairing correlative rights. Nor is it  
16      watering on any zone capable of producing oil or gas  
17      in paying quantities.

18                  And because there is a competent and  
19      effective seal that isolates the disposal zone from  
20      the EMSU operations above, there's no impairment to  
21      correlative rights or to the production in the EMSU,  
22      and, therefore, no waste.

23                  Much of the evidence supporting these  
24      determinations is highly technical and complex, much  
25      like the carbonate shelf system that makes up the

1 EMSU itself. But while the subject matter and  
2 evidence at the core of this dispute are technical,  
3 with a heavy focus on petrophysics, petroleum  
4 geology, geochemistry and geology, fundamental tenets  
5 of logic and reason ultimately carry the day. Okay?

6 So don't get too concerned or swept up  
7 in all the technical issues here. Because,  
8 ultimately, logic and reason carry the day.

9 Even without an advanced degree in  
10 petroleum engineering and petrophysics, the weight  
11 and force of the evidence is clear and supports  
12 granting Goodnight's applications and denying  
13 Empire's effort to revoke them.

14 Let me give you a little bit of  
15 background and context on what we're talking about  
16 here. Before I get into the details, I want to go  
17 into this history in the background of the San Andres  
18 in this area. And I'm going to start sharing my  
19 screen and I'm going to show you on the screen here  
20 actually something that Empire didn't show you in its  
21 opening.

22 I want to point out first, before I get  
23 into the details of this map, that in 1965, the  
24 New Mexico State Engineer declared the San Andres in  
25 this area to be an aquifer subject to permitting

1 requirements for beneficial use. The EMSU's operator  
2 at the time, when it was first approved back in the  
3 1980s, went to the state engineer and permitted six  
4 water supply wells in the San Andres through the  
5 state engineer back in the 1980s as a source for  
6 waterflood operations. In fact, the whole reason the  
7 San Andres was included in the EMSU was because it  
8 was the only source of water capable of supplying the  
9 volumes needed for the waterflood in the EMSU.

10 Even though the San Andres had no  
11 history of primary production, was known to be  
12 nonproductive, it was included erroneously as part of  
13 the unitized interval. It should never have been  
14 included. The commission has no authority to unitize  
15 formations that are aquifers.

16 And the evidence presented to the  
17 commission was that the San Andres would be used as a  
18 water supply and that waterflood injection would be  
19 limited to the oil column in the Grayburg and the  
20 Lower Penrose above the San Andres.

21 But well before it was declared an  
22 underground water basin, the San Andres was, for  
23 years, a formation targeted for produced water  
24 disposal since at least the 1950s, more than three  
25 decades before the unit was created in 1984.

1           On this map all the wells that have been  
2 approved and actively injecting into the San Andres  
3 in and around the three units that Empire operates.

4           The first San Andres disposal well in  
5 the area that would become the EMSU started injecting  
6 produced water in 1960. And that's this well up  
7 here. It's a little yellow triangle here. And  
8 you'll see on each of these wells is a date of first  
9 injection and the cumulative volumes as of today.  
10 Okay? For some of the wells, we don't have complete  
11 records because they were injecting before the  
12 Division started requiring reporting of all the  
13 injectant volumes. Okay?

14           So the first well there is the EME  
15 Number 33-M. It's less than 200 feet from the  
16 boundary of the unit. And is operated now by Rice  
17 Operating Company, one of the interveners in this  
18 case, and it has injected more than 60 million  
19 barrels of produced water to date.

20           Then, nearest to the unit boundaries  
21 today, in 1966 a saltwater disposal well was approved  
22 and started injecting in what is now the EMSU. It's  
23 actually within the boundaries, and that's this well  
24 here in the southwest corner. It's the EME SWD  
25 Number 21. And it's operated by Permian Line



1 Service, who also is an intervenor in this case and  
2 it has injected more than 43 million barrels of water  
3 to date.

4 As you can see, there are dozens of  
5 additional SWDs that have been approved in and around  
6 the EMSU and Empire's two other units going back to  
7 1952. Most of them are still active. Since the '50s  
8 and every decade, numerous additional SWDs started  
9 disposal operations within this five-mile area,  
10 within the five-mile area surrounding Empire's three  
11 units.

12 In 1987 Gulf Oil, itself, who was the  
13 operator of the EMSU, converted one of its wells,  
14 that actually was the unit log well, to an active  
15 disposal well in the San Andres. And that well has  
16 continued to be operated by Empire as recently as  
17 late in 2024.

18 I'm showing this map because Empire's  
19 experts, including their reservoir modeler, says that  
20 all SWDs should be shut in and banned within a  
21 five-mile radius around Empire's three units.

22 In Empire's testimony, Mr. William West  
23 says all SWDs within two miles should be shut in and  
24 banned, and no SWDs should be allowed within a  
25 five-mile radius unless all the working interest

1 owners in these three units approve.

2 More than 60 SWDs are within that  
3 five-mile radius. That's a lot of SWDs. More than  
4 90 have been approved for disposal in the San Andres  
5 in the area. In fact, in the early '90s, the  
6 Division even established a special pool code for  
7 San Andres disposal wells that it continues to use  
8 today.

9 The history and context is important to  
10 understand here because Empire and the EMSU before it  
11 came to existing disposal in the San Andres within  
12 the EMSU; that disposal was pre-existing. Empire  
13 knew or should have known about the San Andres  
14 disposal when it bought the properties from XTO, but  
15 remarkably, they somehow only discovered it  
16 afterwards.

17 Based on the fact that the disposal in  
18 the San Andres existed before the EMSU was created  
19 and continued to be approved, even after the EMSU was  
20 formed, Goodnight Midstream acted in reliance on  
21 decades of authorized approvals for SWDs and filed  
22 applications for its own disposal wells, but only  
23 after the following.

24 First, Goodnight met with XTO, who was  
25 then the operator of the EMSU, to discuss potential

1 locations for their own SWDs in the unit. Second,  
2 Rice Operating filed for, and the OCD approved, two  
3 additional SWDs in the EMSU in 2018. And that's over  
4 here, this little pink well which has a date of first  
5 injection of 11/20. This is the P-15 well and it's  
6 now owned and operated by Pilot, one of the  
7 interveners in this case. And the other well is down  
8 here in the maroon color, the darker maroon color.  
9 That's the N-11. That is owned and operated now by  
10 Permian Line Service.

11 After Rice received its permits in 2018,  
12 Goodnight proceeded to file applications for four of  
13 its own SWDs in the unit between 2019 and 2020. The  
14 first was the Sosa SWD, which was filed in 2019.  
15 It's one of these four wells down here in that little  
16 grouping. It was approved by the OCD in March of  
17 2020. XTO did not object.

18 Next was the Ryno SWD; again, one of  
19 these four in this little grouping. It was converted  
20 from a Devonian injection well into a San Andres.  
21 That application was filed in 2019 and approved by  
22 the Division in 2020. No objection from XTO.

23 Next, Goodnight filed two applications  
24 for the Dawson and Banks wells. Those were filed in  
25 2020 and approved by OCD in February of 2022. Again,

1 no objection from XTO.

2 The evidence will show that Goodnight's  
3 existing SWDs and its pending applications in the  
4 unit were filed in sequence and in reliance on the  
5 division's long history of approving SWDs in the  
6 San Andres, including within the EMSU, and in  
7 reliance on the long history that the San Andres was  
8 an aquifer and a water management source.

9 Now, what does that reliance look like?  
10 It looks like this: Hundred million pipeline that  
11 Goodnight built moving produced water from areas of  
12 high intensity Delaware Basin development, near where  
13 the OCD has set up seismic response areas, to  
14 Goodnight's saltwater disposal field around the EMSU.  
15 This is what's at stake in today's hearing.

16 Now, Empire's claims, given the history  
17 of the San Andres is, you know -- given the history  
18 here, what's the problem? Okay? What's the problem  
19 with Goodnight's operations.

20 Well, Empire is suddenly saying that  
21 there's overlooked oil in the San Andres, and they  
22 have a plan to produce it. They say that there's 900  
23 million barrels of oil across their three units.  
24 It's a remarkable claim, given that they bought the  
25 three units from XTO for a final adjusted price of

1 just about \$16 million. The purchase price was \$17  
2 million. After all adjustments were made, it was \$16  
3 million.

4 According to Empire, injection of  
5 produced water into the San Andres is going to make  
6 it costlier for them to produce CO2 from their ROZ  
7 zone, and it's impacting their waterflood operations,  
8 and that the injection from Goodnight is causing  
9 water to migrate into the Grayburg, causing corrosion  
10 scale and encroaching on their waterflood operations.

11 Now, as the applicant is seeking to  
12 revoke Goodnight's injection authority and to  
13 overturn decades of long-established regulatory  
14 precedent, by converting the San Andres from a water  
15 management zone for produced water disposal and water  
16 production into an oil reservoir, it's Empire's  
17 burden to bring forward sufficient facts to prove  
18 those claims under their applications. There's no  
19 dispute about that.

20 The problem is, they keep changing their  
21 story. They keep shifting their position, they keep  
22 revising their analysis and their models every time  
23 Goodnight's points out a fundamental flaw in their  
24 approach. And they keep trying to litigate their  
25 claims by ambush, starting with the very first

1 contest between these parties in 2022.

2 Back then, in the Piazza case, Goodnight  
3 made a very simple discovery request: Provide all  
4 the documents that reflect the presence or absence of  
5 oil in the San Andres within the EMSU. One request,  
6 just give us what you got.

7 Empire put up a big fight and resisted.  
8 The Division agreed with us and issued an order  
9 compelling the discovery. Empire gave us seven  
10 documents. Four documents were general papers and  
11 presentations on ROZ and the public announcement of  
12 Empire's purchase. The others were marginally  
13 responsive to the discovery request, some details on  
14 some of their wells. Nothing about an ROZ in the  
15 San Andres.

16 We show up to hearing and Empire  
17 presents as part of their evidence and testimony  
18 brochures from XTO that they withheld from discovery  
19 in an effort to ambush us at the hearing. The  
20 hearing officer admitted the exhibits over  
21 Goodnight's objections. The same thing happened at  
22 the outset of these cases, these very cases before  
23 the Division one year later in 2023, only on a much  
24 bigger scale.

25 Just days before the hearing, Goodnight

1 was forced to compel production and continue that  
2 hearing from the day it was set when it became  
3 apparent that Empire failed to comply with its  
4 discovery obligations, and the cases were eventually  
5 referred to the commission.

6 Now at the commission, Empire is playing  
7 the same game and still no consequences. After the  
8 parties filed direct testimony and exhibits in August  
9 2024, Empire saw Goodnight's petrophysics and  
10 oil-in-place analyses from its experts at Netherland,  
11 Sewell and acted quickly to prepare a revised  
12 petrophysics analysis, directing their witness,  
13 Mr. Galen Dillewyn, with NuTech, to undertake a  
14 different analysis using different inputs and  
15 different parameters based on measured water  
16 saturation in his core logs, information that Empire  
17 had all along from the beginning.

18 Now, based on that new analysis, Empire  
19 submitted revised petrophysics testimony and revised  
20 geology testimony, with a new oil-in-place analysis,  
21 in December, more than three months after the  
22 deadline to submit direct testimony, without seeking  
23 leave from the commission to do so and without  
24 conferring with counsel from the other parties  
25 beforehand.

1           Now, we reached an agreement to file the  
2       revised testimony and to file a notice, okay,  
3       explaining what was changed, why it was changed and  
4       the justification for the timing. So that is all  
5       part of the record.

6           Now that revision in December required  
7       Goodnight's experts and counsel to throw away all the  
8       work they had been doing the three months prior on  
9       the original analysis that they had done and start  
10      over on a new one in December. Remarkably, when  
11      asked which version of his testimony he stood behind,  
12      Mr. Dillewyn testified in his deposition that he  
13      stood behind his original analysis and testimony, not  
14      the revised one that Empire had instructed him to  
15      prepare.

16           Then, a month after filing the revised  
17      petrophysics and oil-in-place testimonies, Empire  
18      disclosed in early January that they were going to  
19      present two new witnesses, providing a different  
20      petrophysical analysis with different assumptions and  
21      different inputs, resulting in a different  
22      oil-in-place estimate, based on a new stratigraph  
23      analysis, with new tops, for which Empire's new  
24      experts think that the -- where the San Andres is  
25      actually located.



1                   Now, we've had the underlying  
2     petrophysical logs and digits for less than a week  
3     at this point, so we have not had time to fully  
4     evaluate them. But it's apparent that what they're  
5     doing is that they're calibrating their new log  
6     interpretations to a different core log not in the  
7     EMSU, and many of their San Andres top picks are  
8     different. We evaluated the top picks that they'd  
9     given us in discovery and that were used for their  
10    structure maps initially, and approximately half of  
11    the tops in their cross-sections and their rebuttal  
12    testimony are different than what we had initially.

13                  So the fact that Empire has to keep  
14    changing their story, while Goodnight's analysis has  
15    remained consistent and unwavering, says just about  
16    all you need to know.

17                  But what is Empire's story and how does  
18    all this technical stuff fit into it? What it  
19    appears is that Empire's goal here is to confuse and  
20    obfuscate. Okay? That is most apparent in their  
21    testimony around what is or is not the San Andres.

22                  For example, all of Empire's evidence on  
23    the alleged migration of produced water is limited to  
24    what Empire calls the Upper San Andres. The zone  
25    that Goodnight refers to as the Grayburg, not

1 Goodnight's disposal zone. That interval, which is  
2 highlighted here in yellow, okay, whatever you want  
3 to call it, the Upper San Andres or Lower Grayburg,  
4 is not in disputes in these cases, because it is  
5 above Goodnight's disposal zone and the perm barrier  
6 that we've identified.

7 The only dispute is what to call it.  
8 But, you know, even that makes no difference. It's  
9 just semantics. Okay? It has no bearing on the  
10 analysis of the technical issues in these cases  
11 whether there's oil in Goodnight's disposal zone.

12 And the evidence that Empire does  
13 present on this purported communication of the  
14 San Andres is purely conjectural. For example,  
15 Empire insists that the high sulfate San Andres water  
16 that was migrating into the Grayburg before the EMSU  
17 waterflood even started in 1986, thereby establishing  
18 a history of communication between the zones, okay,  
19 but they have not presented any evidence of high  
20 sulfate San Andres water being produced from the  
21 Grayburg Formation before waterflood operations  
22 started. So there's no evidence that that's actually  
23 the case.

24 And the evidence they do rely on to  
25 contend there is communication today, such as the

1 geochemistry data that they rely on heavily, it's not  
2 diagnostic. It just doesn't provide the fingerprint  
3 that Empire claims.

4 Looking for a San Andres fingerprint  
5 makes no sense, considering that approximately 350  
6 million barrels or more of San Andres water has been  
7 injected into the Grayburg for more than 40 years,  
8 completely mixing the chemistry. But setting aside  
9 these evidentiary problems and the supposition that  
10 Empire makes and the conclusion Empire attempts to  
11 draw, are all it related entirely to what is  
12 essentially this Upper San Andres zone, not  
13 Goodnight's disposal zone.

14 Empire has presented no direct evidence  
15 showing communication between the disposal zone here  
16 in blue and the Grayburg or even between the disposal  
17 zone in the Upper San Andres. It's really important  
18 to understand this and to be clear about what depths  
19 Empire or its witnesses are referring to when they  
20 discuss the San Andres. By constantly referring to  
21 the interval above Goodnight's disposal zone as the  
22 San Andres, without specifying depths, Empire's zone  
23 confusion about the two main issues in these cases,  
24 whether there's communication between the disposal  
25 zone and the producing interval, whether there is an

1 economic ROZ in Goodnight's disposal zone, those are  
2 the two main issues, and it's important to understand  
3 what depths we're talking about, this confusion shows  
4 up across every main category of evidence that Empire  
5 puts forward.

6 First in the alleged fractures between  
7 the San Andres and Grayburg. Those are all premised  
8 on Dr. Lindsay's fracture analysis and his testimony,  
9 where Dr. Lindsay provides specific depths for his  
10 fracture study of a single oriented core, the 679  
11 well. The fracture study does not even go to the  
12 bottom of the Grayburg in his own analysis. It stops  
13 well short of what Empire itself calls the base of  
14 the Grayburg.

15 Now, in his rebuttal testimony,  
16 Dr. Lindsay supplies additional testimony on two new  
17 fracture studies in the EMSU to the northwest and the  
18 AGU to the southeast, miles away, but nothing new on  
19 the EMSU. But even then, he does not provide any  
20 depths for reference in either of his rebuttal  
21 testimony or in his backup documentation that he  
22 provided to us.

23 If you read it carefully, you'll see he  
24 does not specify where he says the fractures are,  
25 what zones. Now, these additional fracture studies

1 actually documented fractures going into the  
2 stratigraphic equivalent of what is Goodnight's perm  
3 barrier. You would expect to have seen that in his  
4 testimony, what specific depths is he talking about.  
5 But he doesn't include it.

6 The second category of data where we see  
7 this confusion is in the reservoir pressure  
8 measurements from Mr. William West. He makes  
9 assumptions about what the pressures are at certain  
10 depths to show a purported pressure drawdown in the  
11 San Andres as a result of primary production in the  
12 Grayburg. He tries to show that there's  
13 communication between the formations. But the depths  
14 that he uses are well above the top of the barrier  
15 isolating Goodnight's disposal zone.

16 So even if his pressure assumptions and  
17 calculations are correct, there's significant  
18 problems with those. The depths he says -- in fact,  
19 you'll see in the testimony in our rebuttal that says  
20 it doesn't actually establish communication, it does  
21 the opposite. It shows that the Grayburg is highly  
22 compartmentalized and there's not even communication  
23 within the vertical layers of the Grayburg, itself.

24 But even if his calculations and  
25 assumptions are right, the depths he says are in the

1 San Andres are not in Goodnight's disposal zone. So  
2 his erroneous assumptions here on the pressures  
3 infects not just his testimony but it infects and  
4 invalidates Empire's reservoir simulation that they  
5 put forward, which requires having an accurate  
6 starting reservoir pressure for Goodnight's disposal  
7 zone. He's far above it and it's not an accurate  
8 representation of actually what's happening in the  
9 disposal zone.

10 Third, we see this confusion continue  
11 with Empire's ROZ petrophysics and oil-in-place  
12 calculations across the EMSU. And you heard it in  
13 the opening, Empire complains that Goodnight has  
14 excluded roughly 200 vertical feet of the San Andres  
15 from its ROZ calculations, resulting in a lower  
16 oil-in-place calculation for the San Andres. But  
17 that claim is just plain false. Goodnight did not do  
18 its petrophysics or its oil-in-place analysis based  
19 on formations. And contrary to Empire's claims,  
20 Goodnight does not exclude the ROZ from its  
21 calculations, not at all.

22 In fact, Goodnight's petrophysics and  
23 oil-in-place analysis are entirely agnostic with  
24 respect to what interval they're in, whether it's  
25 Grayburg or San Andres. Goodnight's petrophysics is

1 based on facies changes and the oil-in-place analysis  
2 is simply divided into tiers based on depth and  
3 reservoir quality, without regard to whether a  
4 certain interval is called the Grayburg or  
5 San Andres.

6 Under this approach, and this was at the  
7 at the discretion of our experts, who said, "Look  
8 there's a dispute over the tops, so we're not going  
9 to get into the tops. We just want to know where the  
10 oil is. What does the rock say?"

11 Under this approach the San Andres top  
12 does not matter. What matters is whether there is  
13 any potential for economic oil and at what depths.  
14 Now, according to this analysis that Netherland,  
15 Sewell conducted nothing below minus 500 feet, at a  
16 maximum, subsea, warrants economic evaluation. It  
17 doesn't matter to them. It doesn't matter to the  
18 analysis whether that's the Grayburg or San Andres.  
19 It's all about depth.

20 In contrast, Empire overinflates its oil  
21 saturations, calculating mobile oil where well tests  
22 produced 100 percent water, and calculating high oil  
23 saturations where there's no oil standing in the  
24 core. Empire also includes additional vertical  
25 intervals in its ROZ, calculations that are above

1 Empire's disposal zone and not part of the dispute in  
2 this case, because they're outside of the disposal  
3 zone. This interval should not be calculated as if  
4 it is in the disposal zone.

5 The bottom line, whatever you hear in  
6 the testimony about the San Andres without specifying  
7 depth, be aware whether the testimony relates to  
8 Goodnight's disposal zone or shallower intervals,  
9 because that's critical.

10 Now, I want to get into the two main  
11 areas of dispute, okay, whether there's communication  
12 and fractures, and whether there's oil in the ROZ.

13 On the issue of communication between  
14 the San Andres and the Grayburg, Empire has produced  
15 no data to support their claim that massive volumes  
16 of San Andres water are pluming into the Grayburg.  
17 If they did, they would be able to show it in  
18 field-wide production, or at least in offsetting  
19 wells through well production data. But they haven't  
20 and they can't.

21 Empire has no production data to support  
22 this claim, so they went out and they got a reservoir  
23 modeler to create a simulation that provided them the  
24 answer that they want. The problem is that  
25 Goodnight's disposal volumes are just not showing up



1 in the Grayburg, as Empire claims.

2 Empire's witness, Dr. Buchwalter,  
3 testified in his deposition that the EMSU was one of  
4 the hardest reservoirs that he has ever attempted to  
5 model. It took him more than 500 model runs to get  
6 what he called a field-wide match. Well, in his  
7 deposition he explained his approach was simply trial  
8 and error. He started with a reservoir pressure and  
9 he started with the initial production volumes and he  
10 tried to do a match, and it took him 500 model runs,  
11 several months to do so. He said getting that match  
12 was like hitting the lottery.

13 On the assumption that his field-wide  
14 match means that his model accurately reflects  
15 reality, his written testimony states that the  
16 San Andres must be currently contributing about  
17 24,000 barrels of water per day from the San Andres  
18 into the Grayburg through fractures across the EMSU.  
19 That's 720,000 barrels a month to account for the  
20 water production in the EMSU.

21 Now over a nine-month period, that would  
22 be almost six and a half million barrels of water  
23 that he says is allegedly pluming up from the  
24 San Andres into the Grayburg. If his model were  
25 accurate, those volumes would be showing up in the

1 Grayburg in Empire field-wide production data. But  
2 we're just not seeing those volumes anywhere in  
3 production. In fact, Empire's actual field data  
4 shows something very different.

5 Here I'm showing you a slide from  
6 Mr. West's direct testimony, and I've highlighted  
7 some language. Empire's VP of operations, Mr. West,  
8 testified that Empire is injecting 70,000 barrels of  
9 water per day as part of its waterflood and producing  
10 about 70,000 barrels per day as part of the  
11 production from the Grayburg.

12 In other words, Empire is producing  
13 about the same amount of water that they inject every  
14 day. That's current. Just looking at these numbers,  
15 Dr. Buchwalter is saying that nearly one-third of  
16 the volumes that Empire is injecting into the  
17 Grayburg every day is pluming up in -- I'm sorry.  
18 Let me rephrase that.

19 Just looking at these numbers,  
20 Dr. Buchwalter says that nearly one-third of the  
21 volumes that Empire is injecting into the Grayburg  
22 every day is pluming up from the San Andres every day  
23 as well, 24,000 barrels a day. That means about  
24 100,000 barrels of water actually is going into the  
25 Grayburg every day, 70,000 from Empire's waterflood

1 injection and 24,000 pluming up from the San Andres.  
2 But we're just not seeing those numbers. Okay?

3 Let's look at some of the actual recent  
4 numbers that Mr. West himself put in his testimony.  
5 These are production figures for a nine-month period,  
6 from November '23 to July '24. These are daily  
7 average numbers. That means we have -- if you were  
8 to, you know, calculate this out over that period of  
9 nine months, there's about 19 million barrels of  
10 water that Empire is injecting and producing over  
11 that time. It's roughly the same in as going out.

12 But according to Dr. Buchwalter, there  
13 should be more than six million barrels difference  
14 over these nine months. There's not even a  
15 200,000-barrel difference. Okay?

16 Now, is the injection somehow affecting  
17 oil production? You know, that's their claim. But  
18 here's a slide showing, from Empire's own data,  
19 field-wide production data going back to 1970.  
20 There's no impact. In fact, the most recent month  
21 shows that it's the slowest or lowest decline over  
22 the entire period, going back to 1970.

23 Zooming in on this period from March of  
24 2021, when Empire acquired and started operating the  
25 unit, we see that in interval that Mr. West

1 identifies in his testimony, in Exhibit I-18, where  
2 he purports that there's an unreasonable decline in  
3 oil between November 2023 and July '24, all he did  
4 was he subtracted July '24 from November '23 and he  
5 sees a big drop. But he's not telling you that the  
6 months after, it rebounded.

7 He's also not telling you that during  
8 that same period there was a -- if you look at the  
9 well count in the field, the well count has been  
10 going down over time, but production's been holding  
11 pretty constant. So we're not seeing an impact in  
12 produced water and we're not seeing an impact in oil  
13 production or decline.

14 There's just no abnormal decline and no  
15 impact. The water's just not showing up and there's  
16 nothing indicating any problems with the EMSU  
17 operations. Empire's claim and its reliance on  
18 modeling and simulation that's not reflected in  
19 actual field data is just smoke and mirrors and does  
20 not match reality.

21 Now, rather than plumes of San Andres  
22 water coming up into the Grayburg, what's actually  
23 happening is that there's edge water encroachment  
24 from the Grayburg and the Goat Seep. That's the  
25 answer to the water mystery in the EMSU. Only it's

1 not a mystery. The encroachment from the Goat Seep  
2 and edge water moving into the Grayburg has been  
3 known about and written about since the 1930s, almost  
4 as long as the field has been producing. Throughout  
5 its long history, there's never been any discussion  
6 in the literature on the EMSU or EMSU well files of  
7 the Division or Division case files that there is  
8 San Andres water pluming up into the Grayburg through  
9 extensive natural fracturing, as Empire describes.

10 Empire is trying to rewrite history here  
11 and reframe the facts to suit their story. In  
12 support, Empire points to a single 1996 Chevron paper  
13 that addresses corrosion and scale problems that were  
14 encountered during the waterflood due to the known  
15 incompatibility of the San Andres water and the  
16 Grayburg. The authors speculate that apparently  
17 San Andres water was finding its way into some EMSU  
18 Grayburg producers in the wells, and postulate that  
19 water may have entered the well more directly, not  
20 that the water was going into the Grayburg Formation  
21 through fractures.

22 The supposed bottom water also would not  
23 be water in communication with Grayburg's disposal  
24 zone. This, again, is that disputed area, the  
25 disputed interval that we say is above our

1 permeability. It is above our permeability barrier,  
2 which is isolated from Goodnight's disposal.

3 In short, there's no statement in this  
4 paper that the San Andres is pluming into the  
5 Grayburg nor is there any data or documentation  
6 attached or referenced to establish that.

7 Two years later, in 1998, another  
8 Chevron team published a paper, an SPE paper, Society  
9 of Professional Engineers, on a different topic  
10 involving the EMSU: It's terrible waterflood  
11 conformance issues.

12 Now, this paper's lead author was  
13 Chevron's Tracy Love. Chevron was the operator at  
14 the time. He was a petroleum engineer who was in  
15 charge of the waterflood and production issues in the  
16 unit.

17 The purpose of the paper was to diagnose  
18 waterflood problems, design treatments, implement  
19 process improvements. He explained that there was  
20 poor waterflood conformance and it caused Chevron to  
21 do a substantial project, starting in 1996, to  
22 characterize the unit and to evaluate how they can  
23 improve the waterflood.

24 Reservoir character characterization, he  
25 said, included mapping high perm streaks, doing

1 material balance, tracking what goes in and what  
2 comes out, and other engineering calculations, like  
3 zonal processing. In that paper, he identifies that  
4 the San Andres has a source of water encroachment  
5 into the Grayburg. He states that there are plumes  
6 of unaccounted -- he does not state that there are  
7 plumes of unaccounted-for water coming into the  
8 Grayburg from the San Andres.

9 He instead found all kinds of other  
10 problems, including rapid breakthrough, high perm  
11 streaks, injection into the gas cap and other issues.  
12 But he didn't find any unaccounted-for water from the  
13 San Andres.

14 Two years later, Mr. Love testified at  
15 the Division, in 2000, over requested increases to  
16 surface injection pressures within the waterflood.  
17 In that case, there was a dispute about the EMSU  
18 water escaping from the waterflood into the Penrose  
19 and Queen formations, impacting shallower formations.  
20 He was asked directly if Chevron had identified any  
21 unaccounted-for water in the EMSU, and he testified  
22 that Chevron had conducted and completed a full field  
23 reservoir simulation for the EMSU and that the only  
24 unaccounted-for water was downdip edge water coming  
25 in from the from the Grayburg.

1 Four years after Chevron's corrosion  
2 paper in 1996 speculated about potential San Andres  
3 water in the EMSU well waters, there was no further  
4 discussion about San Andres water migrating into the  
5 Grayburg, no discussions of fractures and no data or  
6 documentation showing that the San Andres water ever  
7 plumed up into the Grayburg before the waterflood or  
8 after.

9 Finally, the definitive, tangible  
10 evidence that there is an area of extensive competent  
11 seal isolating its disposal zone is the pressure  
12 difference between the disposal zone and the  
13 formations above.

14 When drilling each of its wells,  
15 Goodnight has passed through a normally pressured  
16 zone in the Grayburg into a substantially  
17 under-pressured interval in the disposal zone, where  
18 Goodnight has lost circulation and returns. They had  
19 the same experience at the same stratigraphic interval  
20 when they drilled each of their wells.

21 The testimony and exhibits will show  
22 that there's just no data or documentation supporting  
23 the claim that the San Andres water is migrating into  
24 the Grayburg, as Empire contends.

25 Now on to the ROZ claims. This is the



1 last main issue before the Division, whether there's  
2 an ROZ in the EMSU. That's true that Goodnight's  
3 experts have identified a potential ROZ in the EMSU  
4 between approximately minus 350 feet subsea and a  
5 maximum of minus 500 feet subsea. That's about 200  
6 feet above Goodnight's current injection disposal  
7 interval, depending on where you are in the  
8 structure.

9 But according to Netherland, Sewell,  
10 nothing below that depth warrants further economic  
11 evaluation. According to them, there is ample data  
12 to make that assessment now. There's no need to do a  
13 pilot CO2 at that depth to confirm what we already  
14 know, especially not within the disposal zone.

15 And they say even the potential ROZ  
16 identified in the main producing interval, the zone  
17 above minus 350, is going to require significant  
18 additional evaluation to determine if a CO2 project  
19 could even be economically viable in that zone. Why?  
20 Why is the success of even the shallower zones so  
21 uncertain? Because the EMSU is effectively a failed  
22 waterflood, and the same reasons the waterflood  
23 failed are likely going to cause a CO2 flood to fail  
24 as well, especially a CO2 that's a water alternating  
25 gas flood.

1 Empire notes at the time the EMSU  
2 waterflood was approved, it was projected to produce  
3 64.2 million barrels through waterflood operations.  
4 And Empire goes on to say that it has produced  
5 approximately 25 million barrels of oil since 1984.  
6 But that 25 million barrels of oil includes 14  
7 million barrels of primary production. So between  
8 1984 and when the waterflood commenced, there was an  
9 additional 14 million barrels of primary production.  
10 That means the EMSU has produced only about 11  
11 million barrels under the waterflood.

12 In the 1983 technical committee report,  
13 which is in evidence in this case, they projected  
14 that the optimum recovery case would produce 63.2  
15 million barrels of oil over a 30-year flood life,  
16 while the minimum recovery case would yield 23.7  
17 million barrels, over the same period. Having  
18 produced only 11 million barrels after nearly 40  
19 years of waterflood is a colossal failure; that is  
20 less than half of what the minimum recovery case was  
21 projected to be back in 1983.

22 Now, the EMSU is a complex carbonate  
23 shelf system. It has dozens of sea level changes,  
24 has been sub aerially exposed, resulting in  
25 substantial compartmentalization and severe

1 conformance issues that have plagued the water  
2 flood's performance and effectiveness from the start,  
3 and it would plague a potential CO2 flood for exactly  
4 the same reasons. This complex carbonate system is a  
5 problem for CO2 flood in intervals, even with the  
6 highest oil concentrations far above Goodnight's  
7 disposal zone. But for Goodnight's disposal zone,  
8 where the uppermost 400 feet of aquifer contains an  
9 average oil saturation of less than 11 percent,  
10 according to the petrophysical analysis that we've  
11 done, which is far below the threshold oil  
12 concentrations of any known pilot CO2 or commercial  
13 CO2 project, there's no chance for economic ROZ.

14               How can I say that with such confidence.  
15 Well, let's look at what we know about ROZs. The  
16 definition of an ROZ comes from Goodnight's own  
17 experts. They've got two ROZ experts, Dr. Trentham  
18 and Mr. Steve Melzer. This is from one of their  
19 papers and actually from their testimony in this  
20 case.

21               It shows that the highest oil  
22 concentrations and saturations in the ROZ are the  
23 shallowest, and that oil saturations drop with depth.  
24 They also tell us that commercial oil saturations or  
25 rather commercial ROZs have oil saturations between

1 about 20 and 40 percent. That's directly from  
2 numerous papers and presentations on record from  
3 Mr. Melzer and Dr. Trentham. And it's in the direct  
4 testimony. And it's restated and adopted by Empire  
5 in its previous statement, as well.

6 This next slide here is from Goodnight's  
7 witness Preston McGuire. It reflects Mr. Melzer and  
8 Dr. Trentham's work on the Goldsmith-Landreth  
9 San Andres Unit, which they refer to. And it shows  
10 the recorded oil saturations in that core and where  
11 they place the base of the ROZ in that field right at  
12 20 percent, where the oil saturations drop off.

13 I'm going to note here, okay, that they  
14 call the 20 percent oil saturation point the limit of  
15 a commercial CO2 flood interval, because below that,  
16 saturations drop off below economic levels.

17 Now, where you see that telltale drop  
18 off in the oil saturations at about 20 percent, that  
19 generally represents what they call the  
20 "paleo-oil-water contact," according to them. The  
21 paleo-oil-water contact is the deepest point in the  
22 formation that was, at some point in the  
23 paleogeologic time, previously saturated with oil  
24 until Mother Nature's waterflood.

25 Mother Nature's waterflood is when the

1 Permian Basin tilted, allowing massive volumes of  
2 meteoric water to flush through the Grayburg and  
3 San Andres, acting like a manmade waterflood,  
4 sweeping oil out of formations to the south and  
5 southeast, and updip, under substantial hydraulic  
6 pressure.

7 This next slide here shows the general  
8 path from, Empire's testimony. Multiple volumes  
9 swept through the Grayburg and San Andres over  
10 millions of years, until there was a shift in the  
11 Grand Rift, cutting that hydraulic head off and  
12 essentially turning off Mother Nature's waterflood.

13 Note that the EMSU is right in the  
14 middle of the path of this Mother Nature's  
15 waterflood. And Dr. Trentham measured the  
16 permeability in the San Andres here as high as 100  
17 millidarcy. It's also worth noting that they also  
18 identified a geologic seal in the San Andres at the  
19 top.

20 Now, before Mother Nature's waterflood  
21 was turned off, so much water came through, just like  
22 a manmade waterflood, that essentially all the mobile  
23 oil was swept out. All that was left behind in terms  
24 of oil was bound to the rocks and the pores and was  
25 essentially immobile at static and in situ reservoir

1 conditions.

2 Now, after that, according to Empire's  
3 expert, Dr. Lindsay, some of the oil that had been  
4 swept migrated back into the EMSU after that  
5 hydraulic head was turned off, partially  
6 re-saturating the Grayburg, but not the San Andres.  
7 He testified in his deposition that the San Andres  
8 never re-saturated. The only oil left in the  
9 San Andres was immobile oil that had been swept and  
10 at very low concentration saturations. That is what  
11 residual oil is, oil that was left behind in the  
12 residual oil zone.

13 Now, according to Empire's experts, what  
14 you see after the Mother Nature's waterflood are oil  
15 saturations that are very similar to what you see  
16 after a manmade waterflood.

17 Now, Goodnight's experts mostly agree  
18 with this story, except for one big thing. They  
19 don't think that the evidence supports the conclusion  
20 that the San Andres was ever saturated with oil.  
21 They think the evidence instead supports concluding  
22 that the San Andres was more likely a migratory  
23 pathway for oil, moving through the San Andres updip  
24 from source rock in the Delaware Basin.

25 And why do they think that? Because the

1 residual oil saturations are too low in the  
2 San Andres to have been saturated with oil. And the  
3 sparse, intermittent oil accumulations that they see  
4 in their wrong interpretations are not mappable  
5 across the area.

6 That means that the San Andres at the  
7 EMSU does not match the definition of an ROZ in the  
8 literature or in practice. It doesn't have the oil  
9 saturations necessary for a commercial development  
10 because it was never saturated. It was only ever a  
11 migratory pathway and it was never re-saturated at  
12 the end of Mother Nature's waterflood, unlike the  
13 overlying Grayburg.

14 What does that mean for the EMSU? It  
15 means that we would expect to see good residual oil  
16 saturations at or above 20 percent down to the base  
17 of the Grayburg, because the Grayburg was at one time  
18 saturated before Mother Nature's waterflood, and it  
19 re-saturated.

20 But before the Grayburg -- but below the  
21 Grayburg into the San Andres, we would expect to see  
22 oil saturations below 20 percent, because it was  
23 never saturated. It was only ever a migratory  
24 pathway for oil and was never re-saturated after  
25 Mother Nature's waterflood. And that's just what we

1 see. Okay?

2 This is a slide again from Goodnight's  
3 exhibits that shows all the core data that we have  
4 for the EMSU. And, again, it shows that Goodnight  
5 has picked minus 652 subsea as the last point where  
6 there are consecutive core oil saturations above 20  
7 percent. Below that, oil saturations drop off. That  
8 makes the base of the Grayburg ROZ at about minus 652  
9 subsea, above where Goodnight's disposal zone starts  
10 here, at about minus 700 feet subsea, where the core  
11 oil saturations are all below 7 percent.

12 Empire's expert, Dr. Trentham, testified  
13 in his deposition that he could not disagree with  
14 that depth as the base of the ROZ, but he might put  
15 it a few feet deeper. That would make the ROZ in the  
16 EMSU a little more than 300 feet thick.

17 Based on what we know about the ROZ oil  
18 saturations decreasing with depth, there's no basis  
19 to believe that there will be any higher oil  
20 saturations deeper in the San Andres than what has  
21 already been revealed in more shallow zones,  
22 especially not below what is depicted here to be the  
23 paleo-oil-water contact.

24 How does his testimony support all this?  
25 This is a table from Dr. Trentham's testimony.



1 Dr. Trentham says that the EMSU, in his estimation,  
2 based on what he understands from Dr. Lindsay, has  
3 a -- it all depends on where you put the oil-water  
4 contact or the producing oil-water contact. Trentham  
5 says that the EMSU has a 370-foot thick ROZ. That's  
6 almost already thicker than any ROZ interval that has  
7 been developed. Okay? You can see them all here.

8 XTO, in its brochures, in an effort to  
9 sell the property, told Empire in its documents that  
10 they think there's a potential for a 300-foot thick  
11 ROZ down to as deep as minus 700. In contrast,  
12 Empire in his petrophysic analysis is essentially  
13 saying that there's a commercial ROZ in the Grayburg  
14 and the San Andres that is at least 1200 feet thick  
15 or more, with substantial oil saturations all the way  
16 to the base of the San Andres.

17 That would be at least three times  
18 thicker than any known commercial or pilot ROZ  
19 anywhere in the Permian Basin. That's extremely  
20 unlikely. Not only is it unlikely that the core oil  
21 saturations, that average 7 percent at that depth,  
22 for 100 feet, are suddenly going to increase over 20  
23 percent, based on what we know about ROZs. But it's  
24 also unlikely for at least the following reasons,  
25 just based on Empire's own experts.

1 Dr. Lindsay testified in his deposition  
2 that the only confirmed ROZ that he knew of in the  
3 EMSU is limited to the Grayburg, and it follows the  
4 base of the Grayburg structure because there's a  
5 composite sequence boundary that he says serves as a  
6 barrier to flow. Here's a slide from Dr. Lindsay's  
7 testimony and he's identifying right here the ROZ  
8 terminates at this base of the Grayburg because of  
9 this composite sequence boundary. And he says it's  
10 mostly on the western half of the EMSU.

11 Asked whether he was aware of any ROZ  
12 that spans a composite sequence boundary like the one  
13 between the San Andres and the Grayburg, he testified  
14 no, it would be unique.

15 He also testified in his deposition that  
16 there was only a potential ROZ in the Upper  
17 San Andres, and that it is speculation that there's  
18 an ROZ in the Lower San Andres.

19 What if we step back and look at this  
20 from a wider angle. Does the broader production  
21 history align with this interpretation that I'm  
22 proposing to you, that the San Andres in and around  
23 the EMSU was never a saturated oil reservoir and  
24 therefore would not be a potential ROZ? Yes.

25 Our expert, Mr. Bill Knights, reviewed

1 the production history in and around the margin of  
2 the central basin platform, where the EMSU is  
3 located. Unlike the fields around it, more than  
4 seven miles away, the EMSU does not have a productive  
5 San Andres interval. To the South and to the north,  
6 there are fields with production in both the Grayburg  
7 and San Andres. Okay? When I look east, across the  
8 top of the central basin platform and the northern  
9 shelf, there are fields that also produce from deeper  
10 zones down into the San Andres.

11 This all has to do with the fact that  
12 each of these productive San Andres fields have  
13 unique characteristics for production that don't  
14 apply to the EMSU, and it all has to do with oil  
15 migratory pathways.

16 Does the same pattern show up in ROZ  
17 place? In fact, there are no ROZs on the west side  
18 of the central basin platform and south of the  
19 San Simon Channel, let alone any that target the  
20 San Andres.

21 Why is that? Well, there's a reason for  
22 it. And it's not because the San Andres or ROZ have  
23 been overlooked at the EMSU. It's because it does  
24 not have the oil saturations necessary.

25 At the beginning of this opening, I

1 promised that despite all the technical testimony and  
2 all the technical issues, that logic and reason would  
3 ultimately carry the day. I'll leave you with three  
4 simple things to keep in mind as you review the  
5 exhibits and listen to the testimony.

6 First, remember to ask yourself is the  
7 testimony that you're reviewing and you're hearing on  
8 the San Andres specific to Goodnight's disposal zone,  
9 or is it something shallower?

10 Second, Goodnight has encountered a very  
11 real and substantial pressure differential below its  
12 perm barrier, at the same stratigraph level across  
13 all of its wells inside and outside the unit. That  
14 is a very real, tangible demonstration that there is  
15 an extensive and effective perm barrier between the  
16 disposal zone and everything above.

17 Third, there's no need to conduct any  
18 more tests, collect any more data or conduct any  
19 pilot projects on the disposal zone. It has been  
20 subjected to a definitive ROZ test through a massive  
21 depressurization over more than three decades. 380  
22 million barrels of water has been withdrawn from that  
23 same zone, and not a single barrel of oil or skim oil  
24 has been produced or reported. If there was a  
25 residual oil zone down there at the saturations that

1 Empire's experts are claiming, some of that oil would  
2 have been mobilized and produced. It's not the case.

3 The testimony will show that Goodnight  
4 has painstakingly evaluated the San Andres in this  
5 area. It's an ideal location for produced water  
6 disposal. It's expansive and it's got lots of  
7 capacity, making it a critical resource for managing  
8 disposed produced water from horizontal well  
9 development in the Delaware Basin. It's  
10 under-pressured and has significant capacity because  
11 it has been depleted after decades of massive water  
12 withdrawals from across the area, not just in the  
13 EMSU.

14 There are 16, 17, 18 additional water  
15 supply wells that have withdrawn massive barrels out  
16 of the EMSU. Goodnight has calculated anywhere  
17 between 850 million to 1 billion barrels of water  
18 have been withdrawn out of the San Andres in this  
19 area.

20 It has substantial and effective  
21 geological seals which prevent communication between  
22 the injection zone and the overlying production  
23 formation as well.

24 In short, the overwhelming -- not in  
25 short anymore -- weight of the evidence will show

1     that the proposed injection will not interfere and  
2     has not interfered with unit operations, will not  
3     cause waste and will be protective of correlative  
4     rights and otherwise comply with the Oil and Gas Act.

5             Now, I want to make one additional  
6     statement. Each of Goodnight's experts have  
7     conducted an independent analysis. They've been  
8     unbounded by my direction or Goodnight's direction.  
9     We did not direct them to an answer. Their direction  
10    from me and Goodnight was, "What is the answer here?  
11    Is there an ROZ? Can it be recovered? Is it  
12    economic? Is the disposal water communicating with  
13    any of the formations above? The EMSU waterflood  
14    operations, are they being impacted? Is there any  
15    evidence of a geochemical fingerprint reflecting  
16    Goodnight's disposal in EMSU operations?"

17            We told them what we think, but we  
18    wanted them to test our analysis. We asked them,  
19    "Tell us. Are we wrong? Why are we wrong? Or tell  
20    us we're right."

21            I cannot wait to get them in this room.  
22    Okay? I cannot wait to get them in this room and I  
23    want you to ask them all your questions. Okay?

24            With that, Mr. Chair and Commissioners,  
25    after you hear all the evidence, we ask that you

1 approve Goodnight's applications and that you deny  
2 Empire's efforts to revoke their existing saltwater  
3 disposal wells. Thank you.

4 HEARING OFFICER HARWOOD: Okay. Thank you,  
5 Mr. Rankin.

6 Mr. Moander, you have any idea how long  
7 your opening will be?

8 MR. MOANDER: I'm anticipating 15 minutes  
9 probably, at the maximum. It will be abbreviated  
10 relative to other openings today.

11 HEARING OFFICER HARWOOD: Well, if it's that  
12 short, I guess my suggestion is that we simply  
13 proceed and that'll bring this conveniently to the  
14 lunch hour. If it's longer than that, then we may  
15 cut you off and bring you back.

16 MR. MOANDER: I will happily accept a break,  
17 if that's required. But I'm pretty confident I can  
18 get through what I need to.

19 HEARING OFFICER HARWOOD: Is that okay with  
20 everybody, then, that we just proceed? All right.

21 CHAIR ROZATOS: Yeah, I think it's good.

22 HEARING OFFICER HARWOOD: All right. OCD,  
23 Mr. Moander, you're on.

24 MR. MOANDER: Thank you, Mr. Hearing  
25 Officer, Commissioners, Mr. Chair.

1                   Now for something completely different  
2     than what you've heard this morning.   OCD comes  
3     before the commission with an information problem.  
4     Some of the commissioners may be familiar with this;  
5     it comes from economics.   It's the idea that when  
6     information is imbalanced in a dynamic, usually more  
7     than two parties, that somebody in that dynamic is  
8     probably going to lose unfairly or will be shortened.

9                   OCD looks at this issue as essentially  
10    the problem is as follows:   OCD doesn't know what it  
11    doesn't know about potential impacts from San Andres  
12    injection in the EMSU to the Capitan Reef via what we  
13    suspect is the Hobbs Channel.   So OCD actually agrees  
14    with Empire that we don't have evidence proving  
15    something one way or the other, that's why we're here  
16    because we want to find out.

17                  OCD's hypothesis is simply that it  
18    suspects there's an underground hydrogeologic event  
19    occurring that ties together the EMSU to the Hobbs  
20    Channel and the Capitan Reef.   OCD does not know what  
21    that event is, but it fears that injection of  
22    produced water from oil and gas operations is a  
23    contributing factor to the increased water volume in  
24    the Capitan Reef, potentially leading to Reef  
25    contamination, violation of the Safe Drinking Water



1 Act, and ultimately a possible exemption of the  
2 Capitan Reef Aquifer.

3 OCD's proposed solution to resolve both  
4 the problem in its hypothesis is to obtain OCC  
5 authorization and implement an investigation and  
6 monitoring program to assess and characterize the  
7 relationship between the San Andres Formation in the  
8 EMSU and the Capitan Reef.

9 Probably not surprising, OCD lacks the  
10 resources and labor pool to effectively conduct this  
11 project on its own. This is a heady task before the  
12 OCD and it's going to require assistance of Industry  
13 to accomplish this.

14 OCD's evidence is laid out in four or  
15 five different groupings. OCD will start with what  
16 we're calling the lay of the land. We're going to  
17 provide -- and you'll notice I'm not putting up all  
18 these maps, because you've seen plenty of that today,  
19 so this is going -- you will see these. I believe  
20 you've already got them.

21 A current overview of all wells and all  
22 the UIC Class II permitted wells in the EMSU. Also,  
23 we'll narrow down a bit further to both Goodnight and  
24 Empire wells that are currently in this waterflood.

25 OCD is also going to provide Department

1 of Interior New Mexico Tech reports on disposal  
2 operations in the Permian. As both parties have  
3 provided today, the barrels -- and just as a  
4 reminder, these are 42-gallon barrels -- the volume  
5 of barrels injected in the EMSU is a lot. It is a  
6 humongous number. I would say when we you start  
7 doing the math on 42 times any given number of  
8 proposed assessments of water injected, it starts to  
9 get astronomical in size.

10 Also, this particular document between  
11 Department of Interior and Tech, also confirms that  
12 the San Andres has largely been deemed a preferable  
13 location for produced water disposal.

14 The second category of evidence that  
15 will be presented to the OCC involves section  
16 70-2-12.B of the New Mexico Statutes, which outlines  
17 OCD powers, authority and so on. We'll walk through  
18 those and show the various sections, which have been  
19 argued at some length in the motions already, that  
20 OCD has authority to pursue this investigation and  
21 monitoring project.

22 This will also include a brief  
23 discussion about the Unitization Act. Now why that's  
24 important is because the Unitization Act has as part  
25 of its foundation, or at least a contributing factor,

1 what's called the UIC program. It's the underground  
2 injection control. This program has its roots in EPA  
3 regulations tied to the Safe Drinking Water Act.

4 The hallmark exhibit of the law here  
5 that governs what OCD is attempting to accomplish, is  
6 what's called the Appendix 2. And what that document  
7 does is it grants OCD primacy status to enforce the  
8 Safe Drinking Water Act in New Mexico. But it also  
9 obligated -- you should look at that as an  
10 obligation. That's a requirement.

11 Specifically relevant to the aquifer  
12 evaluation program, that falls underneath both the  
13 UIC program at the state level and the Safe Drinking  
14 Water Act at the federal, OCD is tasked was studying,  
15 classifying, delineating and then protecting  
16 potential potable water sources. This particular  
17 program, as well as the EPA regulations, are  
18 applicable to the San Andres Formation and the EMSU.

19 Turning to the expertise documents,  
20 you're going to hear almost all of this testimony  
21 from OCD witness Philip Goetze, who is the UIC  
22 program manager, and has extensive experience in not  
23 only managing the program, but produced water issues  
24 generally when it comes to injection.

25 First you'll see a series of these

1 expert papers. Several of them are written by the  
2 same author, and there's a theme running here. The  
3 first article that we'll have a talk about will be  
4 one written by a fellow named Hiss. He has mapped  
5 out a good -- the most of this work was done in the  
6 '70s. We acknowledge openly and without question,  
7 this is aged data. Unfortunately, OCD believes it's  
8 the best data available in terms of a summary or  
9 collection that one could look at to get a sense of  
10 what's gone on with underground injection down in the  
11 EMSU.

12           The first Hiss article has maps on it  
13 that are going to show where Hiss suspects, based on  
14 his chloride ion testing, there is a Hobbs Channel,  
15 or a form of an underground water pathway, that flows  
16 near or around the EMSU. And it generally shows the  
17 relationship between the Hobbs Channel and the  
18 Capitan Reef.

19           The next Hiss article that OCD will walk  
20 you through is what I have labeled the "notorious  
21 Hiss paper from 1975." It has caused quite a bit of  
22 an uproar. It's, at this point, arguably  
23 controversial. But it's the keystone document upon  
24 which OCD built its current UIC program. It was also  
25 influential in the Appendix 2 that granted from the

1 EPA to New Mexico the primacy to regulate underground  
2 injection and protect water, potable water.

3 This article also sets OCD standards for  
4 addressing disposal, as well as its views on the  
5 existence of the Hobbs Channel. Through all of the  
6 presentation of this paper, there's going to be  
7 multiple maps. They're going to be demonstrating  
8 where this flow goes, and that's in relation not just  
9 about the Hops Channel or the Capitan Reef, it's also  
10 going to address where some of these wells at issue  
11 in this case are located.

12 The next article is the Rassenfoss  
13 article, which came out of an industry journal. It  
14 states that water production in the New Mexico  
15 portion of the Permian Basin is increasing during oil  
16 recovery processes. For example, the Delaware Basin  
17 experienced water cuts of 80 to 90 percent during  
18 production operations.

19 Next we'll shift to articles by  
20 Mr. Lewis Land, who, interestingly, posits that the  
21 reef is already too brackish for human consumption.

22 There's also an additional article to  
23 that from 1984, the proposes the reef, because of  
24 brackish, should be an exempt aquifer, based on the  
25 Hiss documents.

1                   Now, I'm going to point out something  
2     here. One of the things that you will witness and  
3     that OCD will present is there is a significant  
4     amount of conflicting authority at this point. And I  
5     use authority from a legal sense. But I'll say more  
6     in a scientific sense, it's influential or  
7     informative.

8                   There's also another article by Land  
9     that maintains the reef is isolated from the Hobbs  
10    Channel, but also notes again that there are rising  
11    water levels being shown out of production.

12                  The last, and I'll call them expert  
13    articles, is from the Texas Water Development Board.  
14    I believe the commission is likely aware that Texas  
15    has a very different view on how it regulates oil and  
16    gas production, so, again, we're going to have a  
17    contrasting, differing, distinct view.

18                  This document shows that the rising  
19    water level issue in the Permian Basin does exist,  
20    but acknowledges there may be a hydraulic connection  
21    between the reef and the San Andres. Once we've gone  
22    through all this and Mr. Goetze has provided his  
23    input on it, which is, it appears like there's  
24    something going on, but we don't really know what it  
25    is, and the solution, again, to that is to get an

1 investigation and monitoring program into place, OCD  
2 will walk you through OCD's analysis of the matter  
3 through the lens of some of the cases that now form  
4 the main case before you.

5 Some of these will involve documents  
6 going back to 1954 reports that were submitted to OCD  
7 per regulations and requirements, and will extend all  
8 the way through 2022.

9 As noted, these are early filings, at a  
10 time when, well, the unit didn't exist, but there had  
11 been some pooling that had gone on, but, again, it'll  
12 work up all the way past the unitization up to  
13 effectively today.

14 OCD is also going to provide a selection  
15 of its communications with various state and federal  
16 regulations concerning protection from the Capitan  
17 Reef. These documents address historical water level  
18 changes in the reef. It also reflects OCD's  
19 investments in injection impact on the reef, which  
20 has, in OCD's view, largely validated OCD's concerns  
21 as they've arisen through this case.

22 Talking about what will happen with a  
23 program, OCD can't speculate, won't speculate as to  
24 what it's going to learn. That's the whole purpose  
25 of having the program implemented. But what OCD can

1 speak to is going to be the consequences,  
2 potentially, of a lack of a program.

3           OCD will present a chronology of what  
4 happens to a state, in this case, the State of  
5 California, that fails to protect drinking water by  
6 allowing oil and gas operators to tap into a  
7 protected aquifer, in violation of the Safe Drinking  
8 Water Act. Spoiler alert, it goes very badly for  
9 California.

10           Further consequences, though, more  
11 specific to New Mexico if OCD does not obtain  
12 direction and implement its program. And, again,  
13 you'll hear this from Mr. Goetze. First will be  
14 exemption of the Capitan Reef Aquifer. Now, that has  
15 a special meaning under the Safe Drinking Water Act,  
16 which we'll walk you through that. That means that  
17 the aquifer may be used for oil and gas operations,  
18 which is not currently the case. The other corollary  
19 of that is there's a loss of potentially potable  
20 drinking water source in southeast New Mexico.

21           On top of all that, violations of the  
22 Safe Drinking Water Act include a whole panoply of  
23 potential consequences, but a primary concern to OCD  
24 is it would result in the OCD underground injection  
25 control group being directly supervised by the EPA



1 out of Washington, DC. OCD would lose all local  
2 control of the program. This also would come along  
3 with increased and onerous reporting requirements  
4 that would already delay OCD action and paperwork.

5 And then, finally, the reputational  
6 black eye for New Mexico that New Mexico managed to  
7 end up with an exempted aquifer that, theoretically,  
8 at this point, could have been drinking water in a  
9 rather arid and water devoid location in the state.

10 Turning to the opposing evidence, the  
11 opinions from the -- from Empire and Goodnight at  
12 this point are just another opinion on top of another  
13 opinion on top of another opinion on top of another  
14 opinion.

15 The solution to that is to resolve all  
16 doubt and to allow OCD to pursue its investigation  
17 and monitoring program. Just through the documents  
18 I've walked through today, there is no consensus or  
19 generally accepted understanding of the overall  
20 situation involving the Capitan Reef in relation to  
21 the Hobbs Channel, the San Andres and the Permian  
22 Basin.

23 OCD's proposed project should provide  
24 insight and clarification on that and, hopefully,  
25 drive towards a generally accepted understanding.

1     OCD is well positioned to take up the responsibility  
2     of working towards that consensus or generally  
3     accepted understanding through its proposed plan.

4             So what is the proposed plan? On a  
5     surface level, OCD wants to institute this program to  
6     determine the hydrologic relationship between the  
7     Capitan Reef and the Hobbs Channel, determine any  
8     impacts to water quality if commingling does exist  
9     between disposal fluids injected in the San Andres  
10    and the Capitan Reef, and then, finally, characterize  
11    the Capitan Reef in this area to determine the  
12    current status as protectable, with the intent of  
13    either establishing a monitoring plan for continued  
14    management, which would be continued protection, or  
15    as an underground source of drinking water, or  
16    considering the possibility for aquifer exemption for  
17    the portion of the Capitan Reef from the Hobbs  
18    Channel to the New Mexico state line.

19            During the hearing, Mr. Goetze will go  
20    into the minutia and the detail on this plan, just  
21    exactly what OCD seeks to require of operators. OCD  
22    is aware that these sorts of plans are certainly not  
23    popular, but in this instance, the loss of UIC  
24    privacy would probably border on the catastrophic and  
25    it would reduce OCD's ability to continue protecting

1 underground sources of drinking water locally.

2 OCD looks forward to seeing everybody  
3 next week and is eager to put Mr. Goetze on the stand  
4 to help provide more support for OCD's proposed  
5 investigation and monitoring plan.

6 Thank you for your time today,  
7 Commissioners and Hearing Officer.

8 HEARING OFFICER HARWOOD: Thank you,  
9 Mr. Moander. I assume that you have Empire's  
10 agreement to your proposed monitoring program and  
11 they agree to split the cost of it?

12 MR. MOANDER: No, Mr. Hearing Officer.  
13 Unfortunately, that is not in the cards in this case.  
14 But I appreciate your optimism that settlement  
15 negotiation is ever ripe and evergreen.

16 HEARING OFFICER HARWOOD: All right. Well,  
17 hope does spring eternal, even in these proceedings.

18 All right. I'm thinking we don't need  
19 this afternoon then. And is there is there other  
20 item of business or anything else.

21 CHAIR ROZATOS: I think Mr. Rankin --

22 MR. BECK: I think that we and Pilot have  
23 brief opening statements.

24 HEARING OFFICER HARWOOD: Okay. So what's  
25 the commission's preference? Would you like to hear

1 those now or adjourn and come back after lunch? We  
2 have the luxury of the entire afternoon if we want  
3 it.

4 CHAIR ROZATOS: Mr. Beck and Mr. Suazo, how  
5 long do you think yours are going to take?

6 MR. SUAZO: Mine will take five to ten  
7 minutes, at most.

8 CHAIR ROZATOS: Okay. Mr. Beck.

9 MR. BECK: Same.

10 CHAIR ROZATOS: I say we kind of plow  
11 through this and we then are done. Does that sound  
12 okay with the commissioners?

13 Mr. Hearing Officer, is that okay with  
14 you.

15 HEARING OFFICER HARWOOD: I defer to the  
16 commission on all matters of any importance  
17 whatsoever. So you guys want to flip a coin, or you  
18 know who's going first.

19 MR. BECK: I defer to my friend, Mr. Suazo.

20 MR. SUAZO: I'm glad to start.

21 All right. Good morning, Commissioners,  
22 Mr. Chair, Mr. Hearing Examiner, Miguel Suazo on  
23 behalf of Pilot Water Solutions, with the law firm  
24 Beatty & Wozniak.

25 Pilot appreciates the opportunity to be

1 in part of this case on behalf of Pilot, and largely  
2 Pilot's in support of Goodnight's position. Pilot  
3 feels that this case presents a fundamental issue of  
4 regulatory integrity, geologic reality and the fair  
5 administration of longstanding orders governing the  
6 Eunice Monument South, EMSU.

7 Now, Pilot has a small interest in the  
8 EMSU and operates only a small, marginal well, as  
9 Mr. Rankin mentioned, the P-15. But Pilot has  
10 significant operations in the surrounding area that  
11 would be impacted by a decision in favor of Empire in  
12 this case.

13 Now Pilot's team has reviewed the  
14 evidence in this case and adamantly opposes the  
15 claims that injection into the San Andres migrates to  
16 the Hobbs Channel and then migrates to the Capitan  
17 Reef.

18 Pilot believes that the facts and  
19 science are clear and that there's a lot of  
20 fundamental flaws in Empire's analysis and that the  
21 San Andres Formation should be moved from that scope.

22 The San Andres is not and has never been  
23 a commercially viable hydrocarbon reservoir within  
24 the EMSU. For more than 60 years, it has been  
25 designated by OCD as a water management zone, a

1 formation for produced water disposal and reliable  
2 water supply for secondary recovery operations. The  
3 inclusion of the San Andres and the EMSU unitized  
4 interval was, we believe, and agree with Goodnight, a  
5 historical error, and one that must be corrected to  
6 reflect the true geologic and regulatory framework.

7 Now, there are lots of implications for  
8 a decision in favor of Empire in this case. As  
9 Mr. Rankin mentioned there's over 60 SWDs just in the  
10 vicinity, and there are a lot of operators that would  
11 be affected, as with the entire oil and gas industry.

12 Pilot believes that the San Andres is  
13 geologically distinct from the Capitan Reef complex.  
14 And Goodnight's stratigraphic analysis confirms that  
15 the San Andres Formation is not stratigraphically or  
16 temporally equivalent to the Capitan Reef. The  
17 Capitan Reef is laterally separated from the  
18 San Andres by more than two miles, eliminating any  
19 possibility of contamination. And OCD has repeatedly  
20 approved Goodnight's disposal wells in the San Andres  
21 under this understanding, most recently in March of  
22 2023.

23 Again, Pilot takes a position that this  
24 is not an oil-bearing reservoir in this region, so  
25 Empire's claims of waste and correlative rights

1 violations are essentially baseless. The Capitan  
2 Reef does not play a significant role in domestic  
3 water supplies in Lea County, as the primary  
4 municipal water source is the Ogallala Aquifer.

5 The Capitan Reef is highly saline, with  
6 a total TDS of over 10,000 milligrams per liter.

7 Pilot believes that Empire's claims are  
8 based on misinterpretation and speculation. They  
9 claim that the San Andres contains a residual oil  
10 zone of commercially recoverable hydrocarbons. Pilot  
11 does not believe that's the case.

12 They also claim that Goodnight's  
13 injection wells are watering out the Grayburg  
14 production and impairing secondary recovery.  
15 Empire's ROZ argument is unsupported by the reliable  
16 data and contradicts historical production records,  
17 Mr. Rankin mentioned in his opening and as his  
18 evidence will show in this case.

19 Now, it's important that operators in  
20 this area have regulatory stability, and that's where  
21 the role of the commission comes in. Beyond the  
22 geological and technical facts, this case carries  
23 significant regulatory implications. And OCD is  
24 rightly concerned that amending decades' old orders  
25 could destabilize established regulatory frameworks.

1 And Pilot is sensitive to OCD's assertion about the  
2 UIC program, however, we think that the facts and  
3 evidence in this case, you know, does not warrant  
4 those concerns.

5 So in conclusion, the evidence  
6 overwhelmingly we believe supports Goodnight's  
7 position and we respectfully request that the  
8 commission recognize the fundamental flaws in  
9 Empire's claims and reject its efforts to rewrite the  
10 history of this area and grant the release on  
11 Goodnight. Thank you.

12 HEARING OFFICER HARWOOD: Thank you,  
13 Mr. Suazo. I didn't mean to overlook you or Rice  
14 Operating, so appreciate that.

15 MR. SUAZO: No problem.

16 HEARING OFFICER HARWOOD: Mr. Beck, I'll  
17 turn it over to you for Rice Operating.

18 MR. BECK: Mr. Chair, Commissioners, Hearing  
19 Officer, Rice Operating Company and Permian Line  
20 Service, LLC, want to state their position. They  
21 want to underscore the OCD's concern for  
22 institutional stability. All of that supports  
23 denying Empire's applications to revoke Goodnight's  
24 valid injection permits in these hearings.

25 You heard a little bit about Rice and



1 the Permian from Mr. Rankin. Rice began operating in  
2 New Mexico in the 1950s. It currently operates three  
3 saltwater disposal systems, including the Eunice  
4 Monument, EMont, EME Saltwater Disposal System.

5 The EM articles of agreement were  
6 executed in June 1958, almost 67 years ago. Gulf oil  
7 Corporation, Empire's predecessor in interest, was an  
8 original party to the articles of agreement for the  
9 EME SWD system. In addition, over the last 60 years  
10 Rice has operated as many as nine saltwater disposal  
11 systems in and around that area.

12 Permian Line Service was established in  
13 2013. Its predecessor in interest began in the early  
14 1980s as a line servicer and roustabout company  
15 primarily for Rice.

16 In addition, Permian Line Service  
17 operates the N-11 well in the EMSU and the L-21. All  
18 of Rice's and Permian Line Service's wells inject  
19 into the San Andres what you heard referred to as the  
20 Goodnight disposal zone. They all inject on vacuum  
21 only.

22 Rice has operated wells including wells  
23 dating back to the 1950s, including in the EME system  
24 in the EMSU, as you heard.

25 This hearing raises concerns not only

1 for the commission, not only for the OCD, not only  
2 for Empire and Goodnight, not only for the  
3 interveners Rice, Permian and Pilot. As the Division  
4 points out in its direct testimony from Deputy  
5 Director Powell, and I'll quote, "This action does,  
6 however, have the potential to have not only regional  
7 effects, but also more profound, far-reaching  
8 consequences."

9 He goes on to point out that the OCD  
10 would specifically point out, through the respective  
11 applications, one of the remedies sought is adverse  
12 actions regarding previously issued OCD, orders  
13 pertinent to the operator's injection authority.

14 Deputy Director Powell wishes to convey  
15 the importance of only doing so with an abundance of  
16 caution and offers the following in support, that  
17 when operators apply for OCD permits to inject, they  
18 do so through rules promulgated by the OCC. It  
19 should be recognized that the rules promulgated by  
20 the OCC now allow an offset operator with concerns  
21 the opportunity to contest a permit prior to  
22 issuance.

23 Empire's predecessors and interest never  
24 did that, and as I mentioned Gulf Oil Corporation was  
25 part of the EME system, the same EME system in which

1 Empire remains a party today.

2 A result of such permit approval leads  
3 operators to invest money, time, equipment costs and  
4 other expenses in both preparing to apply for the  
5 permit, but also afterwards in the actual process of  
6 implementing the permit by preparing a well site,  
7 drilling a well and then subsequent injection. In  
8 essence, operators rely on the injection permit as  
9 the bedrock for the operator's investment in a given  
10 well or wells.

11 The oil and gas industry is built on  
12 nearly a century of regulations and statutes executed  
13 through permits and orders, permits and orders that  
14 were validly issued to Goodnight, which Empire now  
15 seeks to revoke.

16 Direct testimony of Deputy Director  
17 Powell goes on to say it is in the interest of OCD  
18 and, therefore, New Mexicans and the regulated  
19 community, for OCC to build and maintain a stable and  
20 reliable regulatory structure that yields industry  
21 compliance with OCD regulations and statutes. Such  
22 consistency reduces uncertainty for operators working  
23 in a dynamic interest industry. A dependable  
24 regulatory regime likewise allows for operators to  
25 act efficiently, which in turn generates tax revenues

1 for the state. Therefore, the risks of adversely  
2 affecting existing orders are significant and should  
3 only be done with cautions and only if there is an  
4 abundance of evidence.

5           OCD's position in this case is that the  
6 burden lies with the operator moving for that adverse  
7 modification to demonstrate to the commission the  
8 level of information to meet such a threshold to  
9 justify an order of modification. That threshold to  
10 justify the order of modification is an abundance of  
11 evidence.

12           This represents an existential threat to  
13 the regulated industry's efficient operations.  
14 Empire has not and cannot meet that significant  
15 threshold of an abundance of evidence to warrant  
16 revocation of validly issued permits, permits which  
17 had the ability and the opportunity itself and  
18 through its predecessor and interest to object to,  
19 but as you heard from Mr. Rankin, it did not.

20           As you heard from the OCD, all operators  
21 in this area recognize that the San Andres is a  
22 commercially viable disposal target for permit  
23 operations throughout the area.

24           We all know disposal water is a  
25 necessary byproduct of oil and gas production. All

1 parties here commercially disposed in the San Andres,  
2 Goodnight, Rice, Permian, Pilot and even Empire.

3 In the OCD's prehearing statement, UIC  
4 Manager Philip Goetze says that he reported to the  
5 EPA in 2020 that, quote, the industry is still  
6 interested in using the San Andres as a disposal  
7 zone.

8 There's additional support for denying  
9 Empire's applications found in the OCD's response to  
10 Goodnight's motion for partial summary judgment on  
11 the EMSU unitization orders. The OCD points out it's  
12 recognized facing relief-affecting validly issued  
13 orders, there are legal principles, including stare  
14 decisis and laches that weigh in support of  
15 precluding such relief.

16 In that filing, the OCD said, quote,  
17 Goodnight-sought relief will result in regulatory  
18 instability and is well past ripe for consideration  
19 to the point reconsideration would cause a mix of  
20 harms.

21 It says that in relation to a  
22 unitization order that was entered in 1984, 41 years  
23 ago, it says that overturning that would result in  
24 regulatory instability as well as entice operators to  
25 challenge longstanding unitization and other orders.

1           The OCD points out that the doctrine of  
2 laches should preclude that; that parties should not  
3 be permitted to grieve about orders it and other EMSU  
4 operators could have addressed long ago. In the  
5 OCD's words, and I'm sorry I'm not as good at Latin  
6 as Mr. Moander is invokes the doctrine of ab assuetis  
7 non fit injuria, and luckily right, in that pleading  
8 after he says that, he says what it means in English,  
9 which I can read, which is no injury is done by  
10 things long acquiesced.

11           While Rice and Permian disagrees with  
12 the application of that to the 1984 unitization  
13 order, it applies here for Rice and Permian  
14 specifically, where Rice has had validly issued  
15 Division permits to inject for over 60 years into the  
16 San Andres, or what you heard referred to as  
17 Goodnight's disposal zone.

18           Now, this isn't to stress a parade of  
19 horrors or talk about concerns in the abstract.  
20 Empire filed applications to revoke Rice's and  
21 Permian injection permits, including for the over  
22 60-year-old well that Mr. Rankin described to you  
23 earlier today. As part of these proceedings, the  
24 commission stayed those applications. It lifted that  
25 stay to dismiss all of those applications, but

1 without prejudice. And it did so because Empire  
2 specifically reiterated in those dismissals that it  
3 wanted to have the opportunity to refile those cases  
4 and seek to invalidate Rice's and Permian's  
5 longstanding injection permits in the future.

6 So Rice and Permian stand behind  
7 Goodnight, and they reiterate the far-reaching  
8 implications to the regulated industry and Empire's  
9 requested relief here to revoke Goodnight's validly  
10 issued injection permits. The commission should not  
11 grant that relief.

12 To the extent that the commission  
13 decides to grant relief, it should do so with these  
14 thoughts in mind. And it should do so in a narrowly  
15 tailored manner, that recognizes the necessary  
16 industry reliance on the institution of the  
17 commission and the Division, including respecting  
18 validly issued Division orders. Thank you.

19 HEARING OFFICER HARWOOD: Thank you,  
20 Mr. Beck. I believe that that concludes all the  
21 scheduled presentations for today. Is that the  
22 understanding of the commission?

23 MR. RUBIN: Mr. Hearing Examiner, Members of  
24 the Commission, I was considering whether or not I  
25 needed to make any initial comments, give any

1 additional advice to the commission.

2 Based upon what I've heard by the very  
3 capable attorneys here and by the excellent  
4 presentations, I don't really see too much in the way  
5 of red herrings. I don't want to get in the way of  
6 lunch, but there are, if I may -- and of course I  
7 have the luxury of taking you all to -- of giving you  
8 advice in closed session at the end of this, as well.

9 But if I may, I do have one point that I  
10 would like to address to counsel, as it would be  
11 helpful for me ultimately in advising the commission,  
12 if I may.

13 HEARING OFFICER HARWOOD: Don't let me  
14 constrain you on time. We've got all afternoon for  
15 lunch. Take the time you need, Mr. Rubin.

16 MR. RUBIN: I just have one comment I think  
17 at this point, perhaps two, and then we'll break for  
18 lunch.

19 My first issue that occurred to me that  
20 might be helpful here, something from the parties, is  
21 to the extent that there is an ROZ that's dependent  
22 upon CO2 flooding, this goes back to my state  
23 engineer days, to the extent that that is -- there's  
24 an impairment argument to be made based upon  
25 increased costs to Empire, I am not sure what the



1 impairment standard would be as to what would be more  
2 than a de minimus cost, what is the cost that would  
3 constitute an impairment of correlative rights.

4 I don't know if I'm going to hear  
5 testimony on that. We certainly had case law that  
6 talks about how it's about variable costs, not fixed  
7 costs. And the case law they talked to, that goes to  
8 that point. That would be something that might be  
9 helpful for me to hear.

10 There's been a lot of -- there's been  
11 some discussion about laches and delays, and I can  
12 tell the parties here that I do have a concern about  
13 equitable issues such as laches in what has come  
14 before and stability coming into play, when we  
15 have -- when this commission has a statutory  
16 obligation, which as stated capable by the lawyers,  
17 goes to protecting correlative rights, avoiding  
18 waste, avoiding drowning, and also the standards that  
19 govern produced water injections, as well.

20 Now, of course, like a district court  
21 situation, Empire has a lawsuit against Goodnight,  
22 and the doctrine of laches in District Court might be  
23 a good defense to that trespass case. But here, I am  
24 concerned that this commission do anything based upon  
25 upsetting what came before if it gets in the way of

1 honoring its statutory obligations now.

2 So I think that's probably helpful for  
3 the parties to hear, as well. But that's all I have.  
4 Thank you.

5 HEARING OFFICER HARWOOD: Thank you,  
6 Mr. Rubin.

7 Then is there anything further based on  
8 Mr. Rubin's statements that the parties would like to  
9 respond to or address at this time? I guess it falls  
10 into the category of food for thought between now and  
11 Monday morning.

12 And if there's nothing further, then  
13 Mr. Rozatos, I'll leave it to you to, you know, do  
14 the technicalities necessary to bring this meeting to  
15 a close, with the understanding that we'll all be  
16 back here Monday morning at 9 o'clock. All right?

17 CHAIR ROZATOS: Just like our hearing  
18 officer said, we are now dismissed until Monday  
19 morning at 9 o'clock.

20 All opening statements were made.  
21 Evidentiary hearing will start on Monday, so we'll  
22 see you all on Monday. Thank you.

23 (Proceedings adjourned.)  
24  
25

1 RE: NEW MEXICO OIL CONSERVATION COMMISSION

2  
3 REPORTER'S CERTIFICATE

4 I, PAUL BACA, CCR #112, DO HEREBY CERTIFY  
5 that the foregoing transcript was prepared from a  
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7 to typewritten transcript by Kelli Gallegos, and that  
8 the foregoing pages are a true and correct  
9 transcription of the recorded proceedings, to the best  
10 of our knowledge and hearing ability. The audio  
11 quality was FAIR to POOR.

12 I FURTHER CERTIFY that I am neither employed  
13 by nor related to nor contracted with (unless excepted  
14 by the rules) any of the parties or attorneys in this  
15 matter, and that I have no interest whatsoever in the  
16 final disposition of this matter.

17   
18

PAUL BACA

19 NEW MEXICO CCR #112

Commission Expires: 12/31/25

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[changing - commission]

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**[empire - equipment]**

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[grayburg - hearing]

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[hearing - impacted]

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