

STATE OF NEW MEXICO

ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

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

Case No. 20801, 20803,  
20804, 20805

Application of Vista Disposal  
Solutions, LLC, for approval  
of a salt water disposal well  
in Lea County, New Mexico

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

THURSDAY, OCTOBER 3, 2019

SANTA FE, NEW MEXICO

This matter came on for hearing before the  
New Mexico Oil Conservation Division, Examiner Richard  
Goetz, Examiner Dylan Rose-Coss, and Legal Examiner Eric  
Ames on Thursday, October 3, 2019, at the New Mexico  
Energy, Minerals, and Natural Resources Department,  
Wendell Chino Building, 1220 South St. Francis Drive,  
Porter Hall, Room 102, Santa Fe, New Mexico

Reported by: Mary Therese Macfarlane  
New Mexico CCR 122  
PAUL BACA COURT REPORTERS  
500 Fourth Street NW, Suite 105  
Albuquerque, New Mexico 87187

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16 I N D E X

17	CASE NUMBER 20801 CALLED	PAGE
18	APPLICANT WITNESSES:	
19	NATHAN ALLEMAN.	
20	EXAMINATION BY MR. PADILLA:	5
21	CROSS EXAMINATION BY MS. BENNETT:	33
22	THOMAS E. TOMASTIC	
23	EXAMINATION BY MR. PADILLA:	42
24	CROSS EXAMINATION BY MS. BENNETT:	52
25	JAMES D. ARTHUR	
26	EXAMINATION BY MR. PADILLA:	53
27	CROSS EXAMINATION BY MS. BENNETT:	74
28	CROSS EXAMINATION BY EXAMINER ROSE-COSS:	79
29	CROSS EXAMINATION BY EXAMINER GOETZ:	86
30	REDIRECT EXAMINATION BY MR. PADILLA:	90
31	CASE CONTINUED FOR SUBMISSION OF INFORMATION:	95

E X H I B I T I N D E X		
APPLICANT VISTA DISPOSAL SOLUTIONS, LLC,		
EXHIBITS:		
		PAGE
1	1	32
2	2	34
3	3	73/74
4	4	50/51
5	5	73/74
6	6	96
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
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25		

1 (Time noted 8:31 A.M.)

2 EXAMINER GOETZ: Moving on to the next, we will  
3 return to our original layout of cases.

4 Let us start with Case No. 20801,  
5 Application of Vista Disposal Solutions, LLC, for approval  
6 of a salt water disposal well in Lea County, New Mexico.

7 Call for appearances.

8 MR. PADILLA: Mr. Examiner, Ernest L. Padilla  
9 for the Applicant. I also want to consolidate that case  
10 for hearing with Cases 20803, 20804 and 20805.

11 We have three witnesses. Also with us is  
12 the president and CEO of Vista Disposal, who is the  
13 Applicant, Mr. F. Austin Swift. He is sitting here in the  
14 back.

15 Why don't you stand up?

16 So three witnesses.

17 EXAMINER GOETZ: Very good. Other appearances.

18 MS. BENNETT: Good morning. Deana Bennett from  
19 Modrall Sperling on behalf of NGL Water Solutions Permian,  
20 LLC. And I entered my appearance in Case No. 20801 20803,  
21 20805.

22 EXAMINER GOETZ: Okay. Would it be inconvenient  
23 for you, seeing how we are going to consolidate, we'll  
24 play this game of ask the questions for those which you  
25 have made an appearance, and then we won't let you ask

1 questions about 20804?

2 MS. BENNETT: That's fine. Thank you.

3 EXAMINER GOETZ: Okay. Thank you.

4 MS. BENNETT: Thanks.

5 EXAMINER GOETZ: Okay. Any other appearances?

6 (Note: No response.)

7 Very good. Will the witnesses stand,  
8 please identify yourself to the court reporter, and be  
9 sworn in?

10 (Note: Whereupon the designated witnesses were  
11 duly sworn.)

12 EXAMINER GOETZ: And for the record we are  
13 consolidating Cases 20801, 20803, 20804, and 20805, which  
14 all have a similar application description, being:  
15 Application of Vista Disposal Solutions, LLC, for approval  
16 of a salt water disposal well in Lea County, New Mexico.

17 Mr. Padilla?

18 MR. PADILLA: Mr. Examiner, we'll call Nathan  
19 Alleman as our first witness

20 NATHAN ALLEMAN,

21 having been duly sworn, testified as follows:

22 DIRECT EXAMINATION

23 BY MR. PADILLA:

24 **Q. Mr. Alleman, please state your name.**

25 A. Nathan Alleman.

1           Q.    Mr. Alleman, have you previously testified  
2 before the Oil Conservation Division, and, if so, tell us  
3 in what capacity.

4           A.    Yes, I have testified before the Oil  
5 Conservation Division as an expert on salt water disposal  
6 well permitting.

7           Q.    Are you -- have you done the same procedures for  
8 this application before the Division today as you have  
9 done in the past?

10          A.    Yes, I have.

11          Q.    And, uh, what -- how have you become familiar  
12 with the application before the Division in terms of the  
13 work that you have done to prepare for this hearing?

14          A.    Yes, I'm familiar.

15          Q.    And did you work on the C-105 -- or -108 that's  
16 going to be an exhibit here?

17          A.    Yes, I helped manage the completion of the  
18 C-108s.

19                MR. PADILLA: We tender Mr. Alleman as a  
20 regulatory expert for purposes of this hearing.

21                EXAMINER GOETZ: MS. Bennett?

22                MS. BENNETT: No objection.

23                EXAMINER GOETZ: He is so qualified.

24          Q.    Mr. Alleman, let's start off first with the  
25 application, the 801 application which is the Charles

1 Federal Salt Water Disposal No. 1 well.

2 Let me direct your attention to the C-108,  
3 and have you tell us what that is.

4 A. Okay.

5 Q. Generally what does it contain?

6 A. The C-108 is the injection application for the  
7 Charles Federal SWD No. 1.

8 Q. And -- okay. Let's -- let's go on to the guts  
9 of this application, basically, which is contained on page  
10 4 of the application, and start there and tell us more or  
11 less about the well.

12 A. Sure. This application is for a salt water  
13 disposal well that is on BLM surface and BLM minerals.  
14 It's located 1368 feet from the north line and 1885 feet  
15 from the west line of Section 35, Township 25 South, Range  
16 32 East.

17 It has a total depth of 18,770 feet and a  
18 proposed injection interval into the Devonian and Silurian  
19 formations with an interval of 17,475 feet to 18,770 feet.

20 The proposed -- on the next page we get  
21 into the injection operations.

22 Q. Okay.

23 A. Yes, sir?

24 Q. Before we go into that, what kind of -- are you  
25 going to talk about the well design or is that another

1 **witness?**

2 A. That would be our engineer and geologist can  
3 discuss the applicability of that.

4 **Q. Okay. You're on page 5. What does that**  
5 **contain?**

6 A. Yes. On page 5 it indicates that we have a  
7 proposed maximum injection rate of 30,000 barrels of water  
8 per day with an average injection rate of 15,000 barrels  
9 of water per day. This will be a closed system, and we  
10 have a proposed maximum injection, surface injection  
11 pressure of 3,495 psi, which is in line with the .2  
12 psi-per-foot regulation in New Mexico. We have an average  
13 injection pressure of 1500 to 2000 psi.

14 **Q. Okay. Now, the geologic description is going to**  
15 **be given by another of our witnesses?**

16 A. That's correct.

17 **Q. Okay. Let's go on now to the attachment portion**  
18 **of the C-108 and tell us what is contained on page 9.**

19 A. Page 9 is the wellbore diagram that reflects the  
20 same information that was found earlier in the C-108. It  
21 has the casing design, tubing designs, cement information  
22 and such. And again, if needed, our engineers can go  
23 over the applicability of that well design.

24 **Q. Page 10 is simply an example of the packer**  
25 **equipment used?**

1           A.    Yes, it's representative of the type of packer  
2 we would expect to use.

3           **Q.    And page 11 is data on the packer itself, right?**

4           A.    Correct.

5           **Q.    Okay.  Let's go to attachment 2 on page 13.**

6                               **What does -- what do those circles**  
7 **represent?**

8           A.    Page 13 is a map of the oil and gas wells that  
9 are located within two miles of our surface hole location,  
10 and it has a buffer of -- a one-mile buffer that indicates  
11 the wells that are within the notification radius for this  
12 application.

13           **Q.    Anything significant in that?**

14           A.    Not specifically.  We will get to the details of  
15 what was included in that AOR evaluation here shortly.

16           **Q.    What's on page 14?  What is that?**

17           A.    Page 14 is map of the same scale showing the  
18 leases within two miles of our surface hole location, and  
19 it indicates whether they are BLM or SLO leases or  
20 private.

21                               And these, the lessees indicated on this  
22 map were used to develop our notification list for the  
23 Notice of Application.

24           **Q.    Page 15?**

25           A.    Page 15 is a map showing the existing deep --

1 existing salt water disposal wells in the area of surface  
2 hole location. As the map shows, there were no existing  
3 salt water disposal wells within a mile and a half of our  
4 location.

5 **Q. Why did you use a mile and a half?**

6 A. The mile and a half is the guideline provided by  
7 OCD for setbacks between deep salt water disposal wells.

8 **Q. Page 16, what's that?**

9 A. Page 16 is the -- is a list of all the wells  
10 that were -- that are located within one mile of our  
11 surface hole location. The important thing to notice here  
12 is the column on the far right indicates that none of  
13 these wells, none of these identified wells penetrate the  
14 top of our injection zone.

15 So we did not have any problem wells.

16 **Q. Page 17?**

17 A. Page 17 is simply a location map indicating the  
18 proximity of our surface hole location to potash areas.  
19 The map shows that we are well outside of any potash  
20 areas, so no -- there were no considerations associated  
21 with notice for potash listings.

22 **Q. Let's go now to Attachment No. 3, dealing with**  
23 **water sources.**

24 **What kind of water sources are you going**  
25 **to -- or are intended to go into the injection well?**

1           A.    We expect that these injection wells would take  
2 water from Wolfcamp and Bone Springs Formations, and we've  
3 provided analysis of those samples from those waters from  
4 those formations.

5           **Q.    And what did those samples indicate as far as**  
6 **compatibility with the disposal zone?**

7           A.    Our engineers analyzed the water sources and  
8 found that there would be no issues with our disposal  
9 zone.

10          **Q.    Okay.  Attachment 4 is another analysis for**  
11 **injection formation of water.  Uh, what is on page 22?**

12          A.    22 is a listing -- page 22 has a listing of the  
13 water samples from our injection formation that we found  
14 publicly available.  And, again, our engineers reviewed  
15 this data along with the source water analyses and  
16 determined that there would be no issues with  
17 incompatibility of the fluids.

18          **Q.    So that's just sample size that you took from**  
19 **Wolfcamp and Bone Spring wells in the area?**

20          A.    That's correct.

21          **Q.    What's on Attachment 5, which would be page 24?**

22          A.    Page 24 shows -- is a water well map that shows  
23 a one-mile buffer around our surface hole location, and  
24 indicates that based on the State Engineer's data there  
25 are no water wells within one mile of our surface hole.

1 Q. Okay.

2 A. The following page would be a table showing the  
3 specific details about any water wells that were  
4 identified, but in this case there are none.

5 Q. So those well locations are in light-colored  
6 squares on page 24?

7 A. I would assume that those are oil and gas well  
8 locations.

9 Q. But no water wells.

10 A. No water wells.

11 Q. Attachment 6, the Induced Seismicity Assessment  
12 Letter, we're going to call Mr. Arthur to testify about  
13 that, this letter, correct?

14 A. That's correct.

15 Q. So we'll bypass that.

16 Now, you have on page 31, a page that says  
17 Exhibits. You're not going to talk to us about faults.  
18 Mr. Arthur or our geologic witnesses are going to testify  
19 as to those aspects of this case, correct?

20 A. That's correct.

21 Q. Okay. So if we take page 32, 33, 34, those are  
22 for our other experts?

23 A. That's correct.

24 Q. What's on pages 35 through the end of the  
25 exhibit?

1           A.    Attachment 7 starting at page 35 is our  
2   documentation of Public Notice and our Notice of  
3   Application Letters that were sent to the affected  
4   persons.

5                       Attachment 6 (sic) is an Affidavit of  
6   Publication documenting that we did provide public notice  
7   per OCD's regulations.

8           **Q.    And to whom did you give Notice?**

9           A.    Notice of Application letters were sent to the  
10   landowner, who in this case was BLM, the OCD District  
11   Office, which was District 1, and then any leasehold  
12   operators within one mile.  And if BLM or SLO had mineral  
13   ownership within one mile Notice was also sent to them.

14                       In this case BLM received Notice, and so  
15   did the State Land Office.

16           **Q.    Okay.  And page 38 through 40 are return**  
17   **receipts that you got from the various individuals on page**  
18   **37, correct?**

19           A.    Correct.

20           **Q.    All right.  Do you have anything further on**  
21   **Exhibit -- on 1?**

22           A.    I do not.

23           **Q.    Let's move on to Exhibit No. 2 and ask you what**  
24   **that is.**

25           A.    Exhibit No. 2 is a map showing our surface hole

1 location for the Charles Federal SWD No. 1, along with  
2 other pending salt water disposal Application in the area  
3 and existing salt water disposal approvals.

4 **Q. And how was this relevant to this hearing today,**  
5 **this map?**

6 A. Well, so we use this map in initially picking  
7 our proposed locations as a part of a more detailed  
8 evaluation, but what -- the relevant details of this, you  
9 can see that our Charles surface hole location is  
10 approximately -- just less than a half mile east of  
11 Permian Oil Field Partners, Monsoon Federal SWD No. 1  
12 application. That's currently an Administrative  
13 Application, and the date at the bottom of that label is  
14 the date on which OCD's data show that Application was  
15 received, on July 9, 2019.

16 **Q. And when did you apply?**

17 A. OCD's data indicates that our Application was  
18 received on August 14, 2019.

19 **Q. Okay. But there are no -- this indicates there**  
20 **are no other salt water disposal wells within your**  
21 **mile-and-a-half radius?**

22 A. That's correct. There are no approved salt  
23 water disposal wells within our mile-and-a-half radius.

24 As we identified, the Monsoon was within a  
25 mile and a half. We went ahead and obtained that

1 application from OCD's website and performed a technical  
2 review on that application, and we noted a couple of  
3 deficiencies in that particular application, one of which  
4 was that their Public Notice stated that their injection  
5 formation only included the Devonian, but throughout their  
6 Application they specifically cite the Devonian and  
7 Silurian. And those are two separate, two distinct pool  
8 names, Devonian versus the Devonian/Silurian. So their  
9 Public Notice did not include the proper information.

10 Additionally, on their well maps, their AOR  
11 maps, the C-108 requires that we show on a map all of the  
12 wells within two miles, identify those on a map, and their  
13 map did not identify all of the well locations.

14 So that was another deficiency that we  
15 noted in their application.

16 **Q. Has Permian objected to your well proposal?**

17 A. To my knowledge, they have not.

18 **Q. Okay. Do you have anything further on Exhibit**  
19 **No. 2?**

20 A. I do not.

21 MR. PADILLA: Mr. Examiner, we will move on to  
22 the next case, which is Case 20-0803, for the Justin  
23 Federal Salt Water Disposal Well.

24 **Q. Mr. Alleman, let's go over this C-108, which is**  
25 **Exhibit 1, in the same manner as we did the first case.**

1     **Let's move on to page 4 of that exhibit and have you tell**  
2     **us where the well is that's shown on page 4, and the**  
3     **specifics of the well.**

4           A.     Sure.  This application -- and all four of those  
5     Application are very similar, so the wellbore design is  
6     generally the same, with some changes in depths and such.  
7     But we can certainly go over the differences between the  
8     two.

9                     This is for the Justin Federal SWD No.1.  
10    It is located 2401 feet from the north line and 194 feet  
11    from the east line of Section 25, Township 25 South, Range  
12    34 East.  It has a total depth of 19,300 feet.  Again, the  
13    well design is very similar to the previous application  
14    that we went over, and pooling is -- the injection  
15    formation is still the Devonian/Silurian.

16           **Q.    Is this well deeper than the other well, the**  
17    **first well that we talked about, the Charles?**

18           A.    It is by about 600 feet.

19           **Q.    Okay.  And I take it that's because of the**  
20    **geology.**

21           A.    Correct.

22           **Q.    Okay.  Let's go to page 9.  That's a well**  
23    **schematic, right?  And it's cemented all the way down like**  
24    **the other well?**

25           A.    That's correct, cemented to surface, yes.

1           **Q.   Okay.  And --**

2           A.   One difference on this one, based on its depth  
3   it does have a proposed maximum injection surface  
4   pressure.  So we have a maximum surface pressure of 3,624.

5           **Q.   I don't think I asked you what the injection  
6   rates for this well were going to be.**

7           A.   All the injection rates will be the same.  We  
8   have a maximum injection rate of 30,000 barrels of water  
9   per day with an average rate of 15,000 barrels of water  
10   per day.

11          **Q.   Okay.  And the packer information is the same as  
12   the other case?**

13          A.   That's correct.

14          **Q.   All right.  Let's go to attachment 2 and page  
15   13, and tell us what's on page 13.**

16          A.   So, again, page 13 shows the oil and gas wells  
17   within two miles of our surface hole location.

18          **Q.   Any other injection wells there?**

19          A.   Not within our one-mile area of review, there  
20   are not.

21          **Q.   Okay.  Page 14, is your lease map, right?**

22          A.   That's correct.

23          **Q.   And what's on page 15?**

24          A.   Again, page 15 is a map showing salt water  
25   disposal wells within the area of our surface hole

1 location. It indicates that there are no active salt  
2 water disposal wells within 1 1/2 miles.

3 **Q. And 16 is just your research on that, right?**

4 A. Yes. 16 shows the oil and gas wells within one  
5 mile of our surface hole location, and indicates there are  
6 no wells that penetrate the top of our injection interval.

7 **Q. And you're not close to potash in this well,**  
8 **right?**

9 A. Correct.

10 **Q. On page 17.**

11 A. Correct.

12 **Q. Okay. Let's go to page 19 and 20, which**  
13 **involved your water sources from Wolfcamp and Bone Springs**  
14 **production.**

15 **What do you have to say about compatibility**  
16 **of injection -- injecting the water into the formation?**

17 A. Attachment 3 and Attachment 4 are the same as  
18 the previous application. They show the analysis of our  
19 expected source water, as well as formation water from the  
20 Devonian. And, again, our engineers have indicated that  
21 after review of these analyses there would be no  
22 compatibility issues.

23 **Q. Okay. Page 24 is another aerial view of your**  
24 **location. Tell us about that.**

25 A. This is another water well map showing that there

1 are no water wells within one mile of our surface hole  
2 location per State Engineer data, therefore no water wells  
3 were sampled as a part of this application.

4 **Q. And so page 25 would be a blank, right?**

5 A. Correct.

6 **Q. Now, Attachment 6, we are going to have**  
7 **Mr. Arthur testify about that, all the way through -- or**  
8 **Mr. Tomastic, all the way through page 35, correct?**

9 A. That's correct.

10 **Q. Tell us about what you did about giving notice**  
11 **of this application to the various interest owners**  
12 **surrounding the proposed well?**

13 A. Page 36 is, again, our Affidavit of Publication  
14 documenting that we did provide public notice per OCD  
15 requirements.

16 Page 37 is a list of the affected persons  
17 that received Notice of Application. Again, that includes  
18 the landowner, the OCD district office, oil and gas  
19 operators within one mile, and leaseholders within one  
20 mile. Once again BLM and State Land Office have mineral  
21 ownership within one mile, so both parties were notified.

22 **Q. Anything further that you have to say about**  
23 **Exhibit No. 1 in Case 20803?**

24 A. No.

25 **Q. Let's go to on Exhibit No. 2 and tell us what is**

1     **contained in that exhibit.**

2           A.     Similar to the last map, Exhibit 2 shows the  
3     pending salt water disposal Application and active salt  
4     water disposal wells, if there were any, within the area  
5     of our surface hole location. In this case our -- based  
6     on the data that we've received from OCD, our surface hole  
7     location is not within 1 1/2 miles of any pending  
8     Application or active deep salt water disposal wells.

9           **Q.     So there is absolutely no conflict on this one**  
10    **with respect to other deep disposal wells?**

11          A.     That's correct.

12          **Q.     Anything further on Exhibit 2?**

13          A.     No.

14          **Q.     Let's go on to Case No. 20804 and have you tell**  
15    **us what is contained in Exhibit 1 of that case, which is**  
16    **the C-108. And let's start out like we did on the others**  
17    **and move into page 4 again, and then tell us the specific**  
18    **data for that well as shown on Exhibit 4.**

19          A.     This application --

20          **Q.     On page 4. I'm sorry.**

21          A.     This application is for the Karen Federal SWD  
22    No. 1. It is located 2,334 feet from the south line and  
23    2416 feet from the west line of Section 5, Township 26  
24    South, Range 34 East, in Lea County, New Mexico.

25                         We have a total depth of 19,000 feet on

1 this well, with a proposed injection formation of Devonian  
2 and Silurian, and an injection interval of 17,800 feet to  
3 19,000 feet.

4                   Again the casing information is going to be  
5 very similar to the previous Applications.

6                   You see on the next page, on page 5, we  
7 have a proposed maximum injection rate of 30,000 barrels  
8 of water a day, similar to the other Applications, with a  
9 proposed maximum surface injection pressure of 3,560 psi.

10           **Q. Okay. We are not going to talk about geologic**  
11 **data at this point, but let's go on now to page 9, which**  
12 **is the wellbore diagram?**

13                   **That's pretty much the same as the wellbore**  
14 **diagrams in the two prior cases, correct?**

15           A. That's correct, just some differences in depths.

16           **Q. Cemented all the way to the bottom, right?**

17           A. That's correct.

18           **Q. Pages 10 and 11 are packer information of the**  
19 **proposed packer that you would use, right?**

20           A. Right.

21           **Q. Just like the other wells.**

22                   **Let's go to the map on page 13, and tell us**  
23 **where that is and how it's important in this case.**

24           A. Page 13 shows the oil and gas wells within two  
25 miles of our location, and then page 14 identifies the

1 leases within two miles of our surface hole location.

2 Q. Let me take you back to page 13.

3 Is there any significance that you find  
4 within the one-mile circle and the two-mile circle in  
5 terms of suitability for disposal as requested by this  
6 application?

7 A. We did not identify any problem wells within our  
8 one-mile area of review. We also did not, on a map here,  
9 in a couple of pages we will indicate there were no deep  
10 water disposal wells within 1 1/2 miles.

11 Q. So none of these miles that are shown here  
12 penetrate the disposal zone, right?

13 A. Let me confirm that.

14 That's correct. Page 16 indicates that  
15 none of these wells within a one-mile area of review  
16 penetrate the top of our injection zone.

17 Q. Okay. Let me take back where I interrupted you  
18 on page 14. You were starting to tell us about the  
19 leases. That's just a regular lease map, right?

20 A. That's correct, showing all the leases within  
21 two miles of our surface hole location.

22 Q. Page 15 shows there are no other Application  
23 proposed for a mile and a half?

24 A. Correct.

25 Q. Okay. What is page 16?

1           A.    Page 16 is our AOR data, showing -- it lists all  
2   the wells within one mile of our surface hole location.  
3   And again that far-right column indicates none of these  
4   wells within one mile penetrate the top of our injection  
5   interval.

6           **Q.    And you're not anywhere on page 17 close to**  
7   **potash reserves?**

8           A.    That's correct.

9           **Q.    Let's go to page 19 and 20.**

10                   **That's the same water analysis that you had**  
11   **in the other two Application, correct?**

12           A.    That's correct.  And again our engineers  
13   reviewed the data, indicated there were no compatibility  
14   issues between the source water and the formation water.

15           **Q.    What's page 22?**

16           A.    Page 22 is a listing of formation water analyses  
17   that we were able to identify from the Devonian and the  
18   Fusselman formations in the --

19           **Q.    And that's to determine compatibility from**  
20   **produced waters that you're going to inject into this**  
21   **formation, correct?**

22           A.    Correct.

23           **Q.    Page 24 is another moonscape.  What does that**  
24   **show?**

25           A.    Page 24 shows water wells within one mile of our

1 surface hole location. In the northwest corner of that  
2 one-mile buffer you can see that there are three water  
3 well locations that are within a one-mile radius.

4 Our next page shows a table that indicates  
5 the details associated with that, with those water wells.  
6 We did contact and spoke with the water well owner that  
7 was listed per the State Engineer data, Mr. Dinwiddie. He  
8 informed us that the wells in the ranch were sold to  
9 Intrepid Potash in May of 2019.

10 We made multiple attempts to contact  
11 Intrepid to ask about the status of their water wells but  
12 we never received any return calls from anybody that was  
13 familiar with these water wells or their current status.

14 **Q. Intrepid Potash did object to the Administrative**  
15 **Application, correct?**

16 A. They did not. They protested the Justin  
17 application, but that has since been resolved.

18 **Q. All right. And you didn't hear anything about**  
19 **this one on this case?**

20 A. That's correct.

21 **Q. All right. Okay. Let's jump to the Notice**  
22 **provisions since we are not -- you're not going to talk**  
23 **about seismicity or geologic descriptions.**

24 **So let's go to page 36. What is that?**

25 A. Page 36 is the Affidavit of Publication

1 documents that we provided Public Notice for this  
2 application.

3 Q. Okay. And the rest of the exhibit is the green  
4 cards that you received from all of the applicants?

5 A. That's correct.

6 Q. I mean all of the surrounding owners.

7 A. Correct.

8 Q. All right. Anything further on this exhibit?

9 A. No, sir.

10 Q. Okay. Let's go to Exhibit No. 2 on this  
11 application.

12 What are all the circles shown in here?

13 A. This map shows --

14 Q. Let me ask you: What is it? What is this  
15 exhibit?

16 A. This map shows the surface hole location of the  
17 Karen Federal SWD No. 1, along with known pending and  
18 approved deep salt water disposal wells or their  
19 application in the area.

20 Q. There's a known application here that  
21 Rattlesnake 16 SWD No. 1.

22 A. Yes. Our data indicated that was an approved  
23 salt water disposal location.

24 Q. How far away is that well?

25 A. Close to two miles away. It's outside of more

1 than a mile and a half away.

2 **Q. Okay.**

3 A. This map does indicate there are three pending  
4 deep salt water disposal Application within a mile and a  
5 half of the Karen surface hole location. Up to the  
6 northwest we have -- these or all Permian Oil Field  
7 Partner Application. To the northwest we have the Black  
8 Hole Federal SWD No. 2. To the southeast we have the  
9 Torrent SWD No. 1, and to the southwest we have the Gunner  
10 Deep 5 Fee SWD No. 1.

11 The Gunner Deep 5 Fee SWD 1, based on OCD's  
12 dat was received after our application for the Karen  
13 Federal SWD No. 1.

14 We went ahead and reviewed all of these  
15 Application for technical viability, and similar to the  
16 last Permian Oil Field application we reviewed, there were  
17 issues where the Public Notice did not state the correct  
18 injection formation, it stated a Devonian injection  
19 formation only, whereas the application seemed to be -- it  
20 was injection formation throughout the C-108 was the  
21 Devonian and Silurian, indicating that proper Public  
22 Notice was not provided.

23 And, similarly, the oil and gas wells  
24 within two miles of their surface hole locations on all of  
25 these Application, we -- you could not identify -- they

1 did not identify all of the well names.

2 **Q. Have any of these Application gone to hearing?**

3 A. Not to my knowledge. The Torrent SWD No. 1 is  
4 listed as being protested, but I am unaware if that has  
5 gone to hearing.

6 **Q. Do you have anything further on this Exhibit 2?**

7 A. I do not.

8 Let's go on to the last case, which is case  
9 20805 Let's looks at the C-108 in that case which is  
10 Exhibit No. 1.

11 Again let us jump to the guts of the case,  
12 which are on page 4. Tell us what's contained on page 4  
13 in terms of this particular well.

14 **Q. This application is the Katherine Federal SWD 1,**  
15 **located 707 feet from the north line and 1992 feet from**  
16 **the east line in Section 24, Township 25 South, Range 32**  
17 **East.**

18 The proposed injection formations are the  
19 Devonian and Silurian Formation with an injection interval  
20 of 17,720 feet to 19,000 feet, so 19,000 feet would be the  
21 total depth of this well.

22 The casing information is very similar to  
23 the previous Application.

24 On the next page, page 5 indicates we have  
25 a proposed maximum injection rate of 30,000 barrels of

1 water per day and proposed maximum surface injection  
2 pressure of 3,544 psi.

3 Q. That's the same on all of these Application  
4 right, the same proposed injection rate and pressures?

5 A. The rate is the same on all of the Applications  
6 but the pressures vary based on the top of the injection  
7 interval for application.

8 Q. Okay. And is that within the OCD requirements  
9 on the depth of the well?

10 A. Yes, all of these meet the .2 psi-per-foot  
11 requirement.

12 Q. Let's go to the attachment on page 9, which is  
13 the wellbore diagram, which looks to me that it's the same  
14 thing as all the other wellbore diagrams. Correct?

15 A. That's correct. Or very similar with variations  
16 based on depth.

17 Q. Packer information is the same as the others on  
18 pages 10 and 11.

19 Let's go to your maps on page 13.

20 What is the first map?

21 A. Page 13 shows a map of the oil and gas wells  
22 within two miles of our surface hole location. There is a  
23 buffer for one mile, which is our area of review for this  
24 well. There were -- none of the wells within one mile  
25 penetrated the top of our injection interval, and there

1 were no known deep salt water disposal wells within 1 1/2  
2 miles.

3 Q. When you look at this map over to the northeast  
4 and the southeast there are a number -- are they  
5 producing -- a number of wells there, horizontals. Are  
6 they producing oil and gas wells?

7 A. Yes, most of those indicate that they are new  
8 gas wells. Producing wells, yes.

9 Q. What's on page 14?

10 A. Page 14 shows the leaseholds within two miles of  
11 our surface hole location?

12 Q. Are there any unleased minerals on that map?

13 A. We did not identify any.

14 Q. What's on page 16?

15 A. Page 16 is a listing of the oil and gas wells  
16 within our one-mile area of review. And again our review  
17 indicated that none of these wells penetrated the top or  
18 our injection interval.

19 Q. No potash issues, as shown on page 17, right?

20 A. That's correct.

21 Q. Okay. Source water analysis on pages 20 and  
22 21 -- or 19 and 20 are the same as all the other  
23 Applications, right?

24 A. That's correct.

25 Q. No incompatibility there?

1 A. Based on our engineer's review there was not.

2 Q. Okay. And tell us again what is on page 22.

3 A. 22 is a listing of the water analyses we  
4 identified for the Devonian and Fusselman formations in  
5 the area.

6 Q. And let's go to page 24. Is that your fresh  
7 water search?

8 A. Yes. This is a map indicating that the State  
9 Engineer's Office did not show any water wells within one  
10 mile of our surface hole location.

11 Q. So you would draw a blank on page 25.

12 A. That's correct.

13 Q. All right. Let's jump now to the Notice  
14 requirements on page 35, I believe.

15 Anything there? Okay. Tell us -- that's  
16 your Public Notice? On page 36, I'm sorry.

17 A. That's correct. That's our Affidavit of  
18 Publication indicating that we provided proper Public  
19 Notice. On the following page we have a listing of the  
20 affected persons that received notice of this Application.  
21 That includes the landowner, OCD District office,  
22 operators of wells within one mile, and if BLM or State  
23 Land Office had mineral ownership within one mile, they  
24 would have been notified. In this case there was no State  
25 Land Office minerals within one mile so they were not

1 notified, but BLM was.

2 **Q. It's on federal acreage, right?**

3 A. That's correct.

4 **Q. On all Applications has BLM given you any grief**  
5 **about these Applications?**

6 A. No, they have not had any issue with our  
7 Applications.

8 **Q. Okay. Anything further on Exhibit No. 1 of case**  
9 **20805?**

10 A. No, sir.

11 **Q. Let's go on to your Exhibit No. 2, and tell us**  
12 **what that is in this case.**

13 A. Exhibit 2 two shows a map of the Katherine  
14 Federal SWD No. 1 surface hole location and the pending  
15 deep salt water disposal Application in the area, along  
16 with existing deep salt water disposal Application in the  
17 area.

18 This map shows that based on OCD'S data  
19 there are no pending deep salt water disposal Application  
20 or active deep salt water wells within one mile -- a mile  
21 and a half of the Katherine location.

22 **Q. Okay. Anything further on Exhibit No. 2?**

23 A. No, sir.

24 MR. PADILLA: Mr. Examiner, we ask that Exhibits  
25 1 and 2 in Cases 20801, and 20803, 20804 and 20805 be

1 admitted into evidence.

2 EXAMINER GOETZ: Okay. In case 20801, any  
3 objections?

4 MS. BENNETT: No objection subject to the  
5 further discussion of Attachment 6 by Mr. Arthur.

6 EXAMINER GOETZ: Haven't introduce that one,  
7 so...

8 MS. BENNETT: It's a part of an exhibit.

9 EXAMINER GOETZ: Is it part of Exhibit 1?

10 MS. BENNETT Well, his letter is part of Exhibit  
11 1, but no objection, subject to the...

12 EXAMINER GOETZ: That's what we're after.

13 So in Case 20801 Exhibits 1 and 2 are so  
14 entered.

15 Case 20803, again the opportunity?

16 MS. BENNETT: No objections subject to the  
17 request that, or the acknowledgement that Attachment 6 has  
18 not yet been testified to.

19 EXAMINER GOETZ: Very good. Exhibit 1 and 2 two  
20 Case 20803 are entered.

21 In Case 20804 you have nothing to say about  
22 that one, so...

23 MS. BENNETT: Well...

24 Just kidding.

25 EXAMINER GOETZ: Exhibits 1 and 2 are so

1 entered.

2 In Case 20805?

3 MS. BENNETT: No objection subject to the  
4 acknowledgement that Attachment 6 has not yet been  
5 testified to.

6 EXAMINER GOETZ: Very good. Case 20805 Exhibits  
7 1 and 2 are so entered

8 MR. PADILLA: We will pass the witness at this  
9 time.

10 EXAMINER GOETZ: Very good.

11 In that case, Ms. Bennett.

12 CROSS EXAMINATION

13 BY MS. BENNETT:

14 A. Good morning. Thank you for being here again.

15 I'd like to start off with the exhibits in  
16 Case No. 20801. I just have a few questions and they will  
17 be the same basic questions for each case, but since the  
18 maps are slightly different for each case I'll just go  
19 through them stepwise.

20 So for Case 20801 I wanted to start off  
21 with Exhibit 2. And Exhibit 2, in the lower-right-hand  
22 corner says SED source pending an existing deep SWD as  
23 provided by NMOCD on 9-24-2019; is that right?

24 A. That's right.

25 Q. So this map was prepared after you had submitted

1 your Administrative Application.

2 A. That is correct.

3 Q. And it was prepared in advance of the hearing  
4 today?

5 A. That's correct.

6 Q. For this hearing. Okay.

7 So I just wanted to compare Exhibit 2 with  
8 pages 13 and 15 of the C-108, or the exhibits to the  
9 C-108.

10 Uhm, when I look at Exhibit 2, it looks  
11 like there's a lot of pending and existing deep SWDs on  
12 Exhibit 2. Are those identified on page 13 somewhere?

13 A. Page 13 shows a map of the active oil and gas  
14 wells, whether those are producing wells or injection  
15 wells, that were available at the time of the Application.  
16 None of the pending deep salt water disposal wells that  
17 are indicated in Exhibit 2 will be on this -- on the map  
18 on page 13 of Exhibit 1, partially because they are not  
19 approved locations and that data was not available at the  
20 time of the Application.

21 Q. So Exhibit 13 only shows approved SEDs, approved  
22 at the time that you filed the C-108?

23 A. That's correct.

24 Q. Okay. And that probably answers my question  
25 about the difference between Exhibit 2 and Exhibit 15, as

1 well -- or page 15 of Exhibit 1. Excuse me.

2 On page 15 of Exhibit 1, again that only  
3 shows your proposed well and then one SED versus what's  
4 shown on Exhibit 2.

5 A. Yes. Page 15 of Exhibit 1 shows approved deep  
6 salt water disposal wells that were approved and publicly  
7 available at the time of application.

8 Q. Okay. Receive it's -- okay.

9 Today we were originally going to hear the  
10 Vista Applications until this last-minute notice issue  
11 came up. How many pending Vista Applications are there,  
12 Administrative Applications and -- in addition to the  
13 eight that were on the docket for today?

14 A. To my knowledge there are not -- there are no  
15 other Applications that are pending.

16 Q. So there's only eight.

17 A. Correct.

18 Q. Eight Vista. Okay.

19 A minute ago Mr. Padilla asked you a  
20 question about status of the discussions with BLM or if  
21 you've gotten any grief from BLM.

22 Where are you in your discussions with BLM  
23 about the Charles Federal SWD. So recently in 2019 BLM  
24 has asked us to hold off on conducting onsite staking  
25 meetings and such until we've gotten through the protests

1 and hearings for any of the C-108 Applications with OCD.

2 So they have been provided Notice. So they  
3 have received the Notice of Application, and have not  
4 protested any of our Applications.

5 Q. But they have asked to hold off on the staking  
6 for the APD?

7 A. That was not specific to these locations.

8 Q. Oh.

9 A. That was a general rule or general guideline  
10 whenever we are setting up the onsite staking meetings.

11 Q. For this one you mentioned your Exhibit 2 shows  
12 the Charles Fed within a half mile of the Permian Oil  
13 Field Partners Admin Application that was submitted before  
14 your application; is that right?

15 A. That's correct.

16 Q. Just out of curiosity you said that you were  
17 able to get Permian's Application from OCD's Website and  
18 then do a technical analysis on it.

19 I'm just curious: How did you get the  
20 Administrative Application from OCD's Website?

21 A. It's publicly available on their search engines.

22 Q. When you look -- let's look at the Notice  
23 exhibits on pages 35 and 36, or through 41.

24 Was Notice of this hearing today given to  
25 any of the affected parties?

1 A. Mr. Padilla?

2 MR. PADILLA: Yes.

3 MS. BENNETT: Is that shown in any of the  
4 exhibits that are available?

5 MR. PADILLA: Not yet.

6 MS. BENNETT: Okay.

7 Q. Just out of curiosity, or to clarify, pages 38  
8 through 41 aren't actually the signature cards, are they?  
9 Or they are just showing that Certified Mail was sent to  
10 these folks?

11 A. That's correct. These are mailing  
12 confirmations.

13 Q. Does it show when it was delivered?

14 A. It does not.

15 MS. BENNETT: Okay. Those are the only  
16 questions I have on this case. Let's -- same questions,  
17 basically, for Case No. 20803.

18 So this Exhibit 2 was prepared on 9-24-2019  
19 OR the sources were given to you or determined for you,  
20 from you, for you on 9-24-2019?

21 A. Yes.

22 Q. So this map was prepared in advance of this  
23 hearing?

24 A. That's correct.

25 Q. No not part of the C-108?

1           A.    That's correct.

2           **Q.    And are there differences between this map and**  
3 **pages 13 and 15 of Exhibit 1?**

4           A.    Yes, there was significant differences in the --  
5 page 13 of Exhibit 1, first off shows oil and gas  
6 producing wells, whereas our Exhibit 2 does not show  
7 producing wells.  And again, page 13 on Exhibit 1 showed  
8 only the salt water disposal wells that would have been  
9 approved at the time of Application, as opposed to  
10 Exhibit 2 that has data that was more current that was  
11 provided and obtained after the Application was made.

12          **Q.    On Exhibit 2, the Justin Federal SED**  
13 **doesn't have a 1.5 mile radius circle drawn around it,**  
14 **does it?**

15          A.    That's correct.  We rely on the 1.5 mile  
16 radiuses of the offset wells to indicate its proximity.

17          **Q.    So it looks like, though, that's basically right**  
18 **on the line or very close to the line of Powderhorn SWD 1.**

19          A.    It is near that 1 1/2 mile line but it is  
20 specifically outside of the 1 1/2 mile radius, and it was  
21 set in that location based on other constraints that are  
22 not identified on this map.

23          **Q.    And just to confirm that the Certified Mail**  
24 **exhibits on pages 38 to 40 aren't actually signature**  
25 **cards, they're just proof that Certified Mail was done.**

1 A. These are the mailing confirmations.

2 Q. But they don't show that the letters were  
3 received.

4 A. That's correct.

5 Q. All righty. Let's look then at Exhibit 2 for  
6 Case 20805. Same questions.

7 So on Exhibit 2 for Case 20805, was this  
8 exhibit prepared in advance of this hearing?

9 A. It was.

10 Q. From data that was gathered after the date of  
11 your administrative application?

12 A. That's correct.

13 Q. And on Exhibit 2 there's a number of pending  
14 deep SWDs and existing SWDs shown by their AORs, right?

15 A. That's correct.

16 Q. Like so many so that you can't -- there's only  
17 one little tiny sliver of land that doesn't have a pending  
18 or active SWD on it?

19 A. That's correct.

20 Q. And that's where the Katherine SWD No. 1 is to  
21 be located?

22 A. That's correct.

23 Q. So it's outside the 1.5 mile radius for all  
24 these other SWDs but there's a number of SWDs around it,  
25 proposed or existing around it.

1           A.     That's correct.

2           Q.     And are the differences between this Exhibit 2  
3     and pages 13 and 15 of Exhibit 1 because Exhibit 2 was  
4     prepared after pages 13 and 15 of Exhibit 1, and  
5     Exhibit 1, pages 13 and 15 only show active SWDs as  
6     opposed to pending SWDs?

7           A.     That's correct. In addition, page 13 does  
8     identify producing wells as opposed to just deep salt  
9     water disposal wells.

10          Q.     And just to clarify, the green cards that are  
11     attached as pages 38 through 41, as with the other cases  
12     these are green cards that were sent out with notice of  
13     the Administrative Application, right?

14          A.     That's correct.

15          Q.     And they don't show that these letters were  
16     received, only that they were sent out.

17          A.     That's correct.

18          Q.     The Katherine Fed. and the Justin Fed. are also  
19     on federal land. So are you taking the same sort of  
20     stepwise approach with BLM as you're taking with the  
21     Charles Fed., which is to say that BLM has asked you  
22     generally to hold off on onsite staking meetings until  
23     after the protests here are resolved?

24          A.     That's correct.

25                 MS. BENNETT: Thanks. No further questions.

1 EXAMINER GOETZ: Very good.

2 Would you like to have any questions on  
3 either of the Application?

4 EXAMINER ROSE-COSS: The only thing that I would  
5 like to say is that kind of a simple request. When I'm  
6 reviewing these on page, like 14, the lease maps, of the  
7 exhibits I'm looking at the Katherine Federal right now.  
8 I don't consider myself a man with blue/green color  
9 blindness, there's a lot of shades of green on this map,  
10 and I can't tell what they are

11 So simple request that in the future that  
12 maybe some cross hatching or not so many shades of green.

13 THE WITNESS: We will certainly do our best to  
14 do that. As you understand, there are -- based on the  
15 number of leases, you run out of colors fairly quickly.

16 EXAMINER ROSE-COSS: I do understand that, as  
17 well.

18 So that's all I have to say. But thank you  
19 for your testimony.

20 THE WITNESS: Sure.

21 EXAMINER GOETZ: Mr. Ames, do you have any  
22 questions?

23 MR. AMES: No, sir.

24 Examiner GOETZ: All right. I have no questions  
25 for this witness, except well design.

1                   Who did the well design?

2                   THE WITNESS: That was prepared by our engineer,  
3 Dan Arthur.

4                   EXAMINER GOETZ: So we will talk with Mr. Arthur  
5 about it.

6                   Very well. No questions for this witness.

7                   So let's bring up your next one. But let's  
8 take a break, come back in -- quarter of, and let's  
9 proceed with your next witness.

10                  MR. PADILLA: All right

11                                 (Time noted 9:35 a.m.)

12                  EXAMINER GOETZ: Let's go back on the record.

13                                 Mr. Padilla.

14                                 (Time noted, 9:45 a.m.)

15                  MR. PADILLA: Mr. Examiner, we will call  
16 Mr. Tomastic to testify.

17   THOMAS E. TOMASTIC,

18                   having been previously sworn, testified as follows:

19   DIRECT EXAMINATION

20 BY MR. PADILLA:

21                  **Q. Mr. Tomastic, please state your full name.**

22                  A. Yes. Thomas E. Tomastic.

23                  **Q. I always mispronounce it.**

24                  A. That's okay.

25                  **Q. Mr. Tomastic you're a geologist, correct?**

1           A.    Correct.

2           **Q.    Tell us a little bit more about your**  
3 **qualifications to be a geologic witness in this case.**

4           A.    Sure.  I have a Bachelor's and Master's degree  
5 in geology from Ohio University.  I have had 37 years  
6 experience in the oil and gas industry in salt water  
7 disposal, drilling completion, perforating, fracking,  
8 injection tests, and also spent 25 and 1/2 years as the  
9 senior geologist in the underground injection control  
10 section at the Ohio Department of Natural Resources.  I  
11 not only have done industry work but also regulatory for  
12 25 and 1/2 years.  And also during my regulatory career I  
13 did hundreds of ground water investigations, both related  
14 to mining and oil and gas operations.

15          **Q.    You've been qualified as an expert geologist and**  
16 **a UIC expert --**

17          A.    Yes.

18          **Q.    -- before the Oil Conservation Division?**

19          A.    Yes.

20                MR. PADILLA:  We tender Mr. Tomastic as an  
21 expert geologist and UIC expert.

22                EXAMINER GOETZ:  Any objections?

23                MS. BENNETT:  No objection.

24                EXAMINER GOETZ:  He is so qualified.

25          **Q.    Mr. Tomastic, let's start off with Exhibit**

1    **No. 1, the geologic portion. And I know you wanted to**  
2    **correct something on the well schematic, or at least note**  
3    **it for the examiners, and let's turn to page 9 of**  
4    **Exhibit 1 in Case 20801.**

5           A.    Yes.

6           **Q.    Exhibit No. 1.**

7           A.    Oh, Exhibit 1.  Yes.

8           **Q.    What is it that you wanted to note on Exhibit**  
9    **No. 1, the C-108, as far as...**

10          A.    Oh, the C-108.  Okay.

11                         Yes.  What we wanted to note on there, on  
12    the Permian-Rustler Formation for the USDW, what we have  
13    been doing at this point is setting casing 25 feet below  
14    the top of the Permian-Rustler Formation into the first  
15    anhydrite.  It's come to our attention that there may be  
16    some issues with the deeper part of the Rustler may have  
17    USDW fluid in it, so we will do some further evaluation  
18    not only on the Rustler but also on the Salado Formation  
19    that has the salt in it.

20          **Q.    So the way -- say on page 9 of Exhibit 1 of the**  
21    **C-108, you need to go further down with the cement?**

22          A.    We will do a further evaluation just to  
23    determine if there is a need to go deeper to ensure  
24    protection of the USDWs.

25          **Q.    Okay.  Let's go now to Exhibit -- I believe it's**

1 Exhibit No. 4. Exhibit 4.

2 A. Yes.

3 Q. What is that?

4 A. That's the geologic analysis that ALLConsulting  
5 has prepared for the Vista SWDs in Lea County, New Mexico.

6 Q. Let me ask you: Is this Exhibit 4 the same  
7 throughout each of the cases?

8 A. Yes, it is.

9 Q. Okay. So we don't have to go -- this applies to  
10 all the wells under consideration here today?

11 A. Correct.

12 Q. All right. Let's start out with Exhibit 4, and  
13 tell us what it is and what it contains.

14 Exhibit 4 is again, like I say, the  
15 geologic analysis of the -- not only the injection zone in  
16 the Devonian-Silurian but also the confining zones within  
17 the upper part and within the lower part above and below  
18 the proposed injection zones.

19 So basically the upper confining zone is  
20 the Woodford Shale. In this area it's approximately 200  
21 feet average thickness. Devonian-Silurian injection  
22 formations are the formations that we are targeting, and  
23 typically in this area we're looking at almost  
24 approximately 1600 feet across the area of thickness from  
25 the Devonian and Silurian injection zones.

1           The porosity is typically -- this is based  
2 on open-hole logs that we were able to evaluate. Porosity  
3 ranges from 2 to 15 percent and averages about 6 percent,  
4 and there's about 200 feet of net porosity thickness  
5 within that 1600 feet that will take fluid.

6           The better porosity zones are obviously on  
7 the logs are indicated by fractures or bugs, which is  
8 typical of secondary porosity development, and that's  
9 indicated by the hole enlargement typically on your  
10 caliper log.

11           So most of the porosity developed in the  
12 Devoonian-Silurian is secondary porosity.

13           The lower confining units we looked at the  
14 Montoya and Simpson groups. Typically in this area the  
15 thickness is averaging around 960 feet.

16           The maps, the thickness maps that are  
17 included in this exhibit show the various ranges of  
18 thickness for the Montoya and Simpson in this vicinity.  
19 Additionally, we evaluated a well drilled by Amareda-Hess,  
20 API No. 30-0253307 that was drilled in Section 6 of Lea  
21 County in 1995, and that drilled to the base of the  
22 Montoya Group at 16,538 feet.

23           The geologic analysis across the Montoya  
24 indicates there is about a 286-foot section of rock from  
25 16240 to 16526 that's very tight, very nonporous, which

1 will act as a significant confining layer below the  
2 proposed injection zone to prevent fluid migration down  
3 into the Montoya or into the basement.

4 Q. How far are you from the -- from the base of the  
5 Montoya and Simpson groups to the basement?

6 A. The depth of the basement in this area is  
7 approximately 1650 to 2000 feet below the proposed  
8 injection zones in the distal wells.

9 Q. So is it your opinion this is adequate,  
10 especially the lower confining zones, to protect against  
11 migration into the basement?

12 A. Correct.

13 Q. That's your opinion?

14 A. Yes.

15 Q. Okay. Go ahead. You were explaining.

16 A. Well, I was going to explain the depth of the  
17 basement, but we already have.

18 So, as we see, we have upper confinement  
19 with Woodford Shale and we have lower confinement within  
20 the Montoya and Simpson Groups, and we're approximately  
21 1650 to 2000 feet above Precambrian Basin with the  
22 injection zones within the Devonian and Silurian  
23 Formations.

24 Q. Look on page 7 of your Exhibit 4.

25 A. Yes.

1           **Q.    What's on page 7?  What is that map?**

2           A.    This page 7 is a map showing the proposed  
3    locations of the Vista SWD Devonian-Silurian injection  
4    wells and also the locations of the current active  
5    Devonian-Silurian injection wells in the area.

6           **Q.    So the red dots are your proposed wells?**

7           A.    Correct.

8           **Q.    And which are the existing wells?**

9           A.    The green triangles.

10          **Q.    All right.  Anything else of significance on  
11    this exhibit, this page?**

12          A.    Just on page 11 and 12 we've listed the  
13    information based on the formation tops obtained from the  
14    nearby Devonian-Silurian injection wells, and then also  
15    the thickness data that was obtained from these well  
16    records.

17                   And then on page 12, Appendix C are the  
18    geophysical logs that we utilized for obtaining additional  
19    data from the Devonian and Silurian.  We had one complete  
20    well that went through and penetrated the entire zone, and  
21    the rest of them were partial penetrations.

22          **Q.    Okay.  And that's the information on page 11?**

23          A.    Yes.

24          **Q.    Okay.**

25          A.    And then on page 14 and 15 we've included --

1 Appendix D is the Montoya Formation thickness map from  
2 Jones 2008, and then on page 15 Appendix D the Simpson  
3 Formation thickness map, again from Jones 2008.

4 Q. So that's right smack in the -- or exactly on  
5 that are the injection proposals.

6 A. On which map?

7 Q. On page 14.

8 A. 14? They would be in Lea County, the injection  
9 locations.

10 Q. Let me direct your attention now to -- are you  
11 done with Exhibit 4?

12 A. Yes.

13 Q. Let me direct your attention now back to  
14 Exhibit 1 of Case 805 -- or 801, I'm sorry. Doesn't  
15 matter -- where you have the exhibits starting on page 31.

16 What is on page 22? What are you trying to  
17 show?

18 A. 22?

19 Q. Yes. Oh, I'm sorry. 33 -- 32.

20 A. I believe Mr. Arthur was going to testify to the  
21 seismic activity and faulting.

22 Q. How about page 33?

23 A. Page 33 is the SNIP of the map published by Snee  
24 and Zoback in 2018 showing the problematic fault slip  
25 potential for the area across the Permian and Delaware

1 Basin.

2 **Q. And what's your opinion about that?**

3 A. I mean, based on their research that was done,  
4 most of the known faulting in the area is optimally  
5 oriented in a north/south trend and not in the typical  
6 critical stress field that is typically evident for  
7 inducing of seismicity.

8 And again, Mr. Arthur will testify on  
9 this --

10 **Q. Okay.**

11 A. -- in more detail.

12 **Q. And how about page 34? That's in your ballpark,**  
13 **isn't it?**

14 A. Yes. That's just a basic stratigraphic geologic  
15 chart across the entire Delaware Basin.

16 **Q. Is that the same as what you have on Exhibit 4,**  
17 **which is on page 9? Or less.**

18 A. Very similar, but Exhibit -- Appendix B on  
19 page 9 in Exhibit 4 is more of a concentration on the  
20 deeper formations from the Ordovician through  
21 Mississippian.

22 **Q. So basically they show the same thing.**

23 A. And this is focused on the deep rocks.

24 **Q. Okay. In terms of the injection interval, do**  
25 **you see any problems at all with the proposal to dispose**

1 of water through these -- through all four wells that are  
2 in consideration here?

3 A. No.

4 MR. PADILLA: Mr. Examiner, we offer Exhibit  
5 marked 4 in Cases 20801, -803, -804 and -805.

6 EXAMINER GOETZ: Very good.

7 In case 20801, Ms. Bennett?

8 MS. BENNETT: No objection.

9 MR. PADILLA: We pass the witness.

10 EXAMINER GOETZ: We will get there.

11 MR. PADILLA: Okay.

12 EXAMINER GOETZ: Exhibit 4 is so entered in the  
13 record.

14 In case No. 20803?

15 MS. BENNETT: No objection.

16 EXAMINER GOETZ: Very good. Exhibit 4 is  
17 entered in the record.

18 Case No. 20804, Exhibit 4 is entered in the  
19 record.

20 And in case No. 20805 --

21 MS. BENNETT: No objection.

22 EXAMINER GOETZ: Exhibit No. 4 is entered in the  
23 record.

24 Ms. Bennett, your witness.

25 MS. BENNETT: Thank you.

CROSS EXAMINATION

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BY MS. BENNETT:

Q. Good morning, Mr. Tomastic. Thanks again for being here.

A. Sure.

Q. I just had a couple of questions for you.

So you prepared Exhibit 4; is that right?

A. Yes.

Q. And it's dated September, 2019, on the bottom?

A. Yes.

Q. So this was prepared after the administrative application was submitted?

A. Correct.

Q. Do you know, are you familiar with how far apart the Vista proposed wells are?

A. Uhm.

Q. Just looking at -- I don't know who prepared Exhibit 5, we haven't gotten to that yet, but it shows all of the Vista proposed wells on it.

A. No, I didn't review that.

Q. So you don't know how far apart they are?

A. Well, I know based on reviewing the C-108 we were -- there was nothing within a mile and a half that was existing at that time.

Q. And I guess what I'm trying to get at is: How

1 far apart are the Vista wells from one another? Like, how  
2 far is the most easternmost Vista well from the  
3 westernmost proposed Vista well, or the northernmost  
4 proposed?

5 A. We -- I mean, the map that we put together on  
6 Exhibit 4 kind of shows that, but we didn't really draw  
7 any distance between the Vista wells at all.

8 Q. So you don't really know?

9 A. I mean, based on that map you can see they are  
10 fairly well spaced apart.

11 Q. And so maybe like five miles, some of them five  
12 miles apart, the Charles to the Karen, for example?

13 A. I mean, it would be a guess.

14 Q. Yeah, I'm guessing here, too. But, in any  
15 event, my question really goes to the fact, though, that  
16 you only prepared one geologic analysis for all --

17 A. Correct.

18 Q. -- three, even though they could be as far as  
19 five miles away from each other.

20 A. But we analyzed the geologic data within that  
21 entire area.

22 Q. And created a sort of an aggregate?

23 A. As you are well aware, there's not a lot of data  
24 to work with, but, yeah, we go out typically 10 miles away  
25 from an existing well to collect the data, just trying to

1 get as much information as possible for the deep geologic  
2 information.

3 Q. But there's nothing in Exhibit 4, for example,  
4 that I could look at to see the exact depths of -- or the  
5 thickness of the Devonian on the target injection zone  
6 just for the Charles Fed. or for just for the Justin Fed.

7 A. That would be within the wellbore diagram that  
8 we would have the average thickness. So each individual  
9 C-108 wellbore diagram would have the thickness of the  
10 injection interval.

11 Q. And how did you determine the thickness of the  
12 injection interval for each of the individual C-108s?

13 A. Based off the analysis of well-completion  
14 records, and geophysical logs when available.

15 Q. Did you create cross sections for those?

16 A. No, we did not.

17 MS. BENNETT: Thank you. Those are the only  
18 questions I have. Thank you.

19 THE DEPONENT: Okay.

20 EXAMINER GOETZ: Any questions Mr. Rose-Coss?

21 MR. ROSE-COSS: No.

22 EXAMINER GOETZ: No questions?

23 MS. ROSE-COSS: No questions.

24 EXAMINER GOETZ: Okay.

25 MR. AMES: None.

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CROSS EXAMINATION

BY EXAMINER GOETZ:

Q. Then I will again reaffirm the fact -- let's take a look at where you've matched the Salado --

A. Correct.

Q. -- in that case. And the casing is there. But the Rustler, we would like to keep that Salado so that we're not going to have future issues with it.

So revisit that with the BLM --

A. Okay.

Q. -- and provide us an update and a casing design for each of these wells.

A. Okay.

EXAMINER GOETZ: Very good. I have no more questions.

MR. PADILLA: That's all I have for this witness. And we will call Dan Arthur

JAMES DANIEL ARTHUR,

having been duly sworn, testified as follows:

(Note: Nothing omitted.)

DIRECT EXAMINATION

BY MR. PADILLA:

Q. Mr. Arthur, please state your name.

A. My name is James Daniel Arthur.

Q. Where are you From?

1           A.    Tulsa, Oklahoma.

2           **Q.    Mr. Arthur, you've testified before the Oil**  
3 **Conservation Commission in the past, correct?**

4           A.    Yes, sir.

5           **Q.    In what capacity?**

6           A.    Uhm, I have testified in the Division as a  
7 petroleum engineer expert on induced seismicity, and  
8 various UIC program regulatory matters.

9           MR. PADILLA:  We tender Mr. Arthur as an expert  
10 as a petroleum engineer and in UIC.

11          MR. ROSE-COSS:  That's enough, I think.

12          EXAMINER GOETZ:  Ms. Bennett?

13          MS. BENNETT:  No objection.

14          EXAMINER GOETZ:  He is so qualified.

15          **Q.    Mr. Arthur, have you prepared for introduction**  
16 **at this hearing, Cases 20802, 20803, 20804 and 20805**  
17 **exhibits?**

18          A.    Yes, sir.

19          **Q.    Have you been at the wheel in preparing this**  
20 **case?**

21          A.    Yes, sir.

22          **Q.    These cases, I should say.**

23          A.    All of these.  All of Vista's.

24          **Q.    Mr. Arthur, let's direct your attention to**  
25 **Exhibit No. 3 in Case 20801.**

1 A. Okay.

2 Q. I also want to direct your attention to that  
3 portion of Exhibit 1 which has your letter.

4 Let me find it. It's on page 27. It's the  
5 letter addressed to Mr. Goetz.

6 And this was your original information with  
7 regard to the Administrative Application and the  
8 Application for the Charles Federal SWD-1, correct?

9 A. Right.

10 Q. Now, would that letter be the same as is  
11 contained in exhibits in the four cases, 20803, 20804 and  
12 20805?

13 A. So the letter is very similar, and I think it  
14 would be helpful to make a point-out to some of the basis  
15 of that. And that goes back to page 9.

16 Q. But they're all tied together --

17 A. They're all tied together.

18 Q. -- with your Exhibit No. 3.

19 A. Correct.

20 Q. All right. Let's talk about Exhibit No. 3, and  
21 let's start out on page 2, and tell us what you're trying  
22 to depict, or tell us on page 2 of Exhibit 3.

23 A. So, if you -- if you look at Exhibit 3,  
24 Exhibit 3 is based on the details of what we plan for each  
25 individual application, all four of these, including the

1 wellbore diagram that defines the top and bottom of the  
2 injection zone, our confining unit. It's also based on  
3 the geology that Mr. Tomastic did, looking at both -- not  
4 only the upper confinement but the lower confinement.

5 I would say in this case as we looked at  
6 fault slip potential, we had some better data, closer, of  
7 wells that did go through the entire section and had  
8 geophysical log information on the lower part of the  
9 Silurian, the Montoya and Simpson, showing them to be very  
10 tight, which gave us perhaps better closer information  
11 than we've had in some Application that have been  
12 discussed through here.

13 And that was positive.

14 The letter that I had that we include in  
15 all our Application is a summary of the fall slip  
16 potential for each of those wells and in the general area,  
17 but specific to each well submitted.

18 And what I would say is that the -- the  
19 memo included in the application does not include a fault  
20 slip potential model, so this was us looking at the area,  
21 looking at some of the information that Mr. Tomastic  
22 talked about with faults in the area and their concerns  
23 with critical stress and things that we've done, similar  
24 approaches that we've done on all the Application we  
25 submit not only here in Southeast New Mexico but Texas,

1 Oklahoma, Ohio, and other areas.

2 So this is a pretty common practice that we  
3 go through in looking at that.

4 Now, on Exhibit 3 on page 2 what we try to  
5 do is to look at the eight different permit Applications  
6 that Vista has proposed, four of which we are talking  
7 about today, and we were able to cover all of those eight  
8 permit Application with what was two FSP analysis areas.

9 So this first page goes through some of the  
10 basic things that we've done. And we've used a common  
11 scenario for these Application, as we have in other  
12 Application, and as other experts have used in their types  
13 of analyses.

14 So we've used, you know, 100-square-mile  
15 radius, we've used a couple of scenarios, because, you  
16 know, we don't know the exact details of what the  
17 Devonian-Silurian injection reservoir is going to be, so  
18 we've made kind of high and low assumptions. But even on  
19 our high assumptions we've been very conservative, I  
20 think, so the results that we get and provide, we believe  
21 are really extremely conservative, and to the point where  
22 what we also even did is we included hypothetical faults  
23 to give us an even-more conservative thing.

24 So the looks of what we're doing is trying  
25 to get an idea of what this would do with reservoir

1    pressurization and the potential for induced seismicity  
2    for each of these individual permits.

3           **Q.    Mr. Arthur, on the first bullet point you say**  
4    **100 square miles each, in parentheses, (100 square miles)**  
5    **for each well.**

6           A.    For each of the two analysis areas that we did.  
7    And I'll show you those here shortly.

8           **Q.    Are all the wells included in the --**

9           A.    For those two areas we have all eight wells  
10   included.

11          **Q.    Okay.  Let's go on.**

12          A.    Then on page 3, this is just -- in a full  
13   disclosure sort of approach, what we've done is try to  
14   take a lot of the data that we utilize for the FSP  
15   analysis from, you know, vertical stress gradient and  
16   other things, and information where we've gotten data to  
17   build it, for input into the FSP model.

18                   I'll note that, you know, we're using  
19   published data, data that we got from geophysical logs,  
20   data that we've gotten from research, data looking for --  
21   you know, other experts.  You know, various, you know,  
22   different things.

23                   But this is -- you know, this is a best  
24   guess, but it's still in a lot of ways hypothetical.

25          **Q.    Okay.  I notice that the first item you have**

1 listed on page 3 in your table there, you have -- well,  
2 the first two lines are the Snee & Zoback studies. And  
3 those relate back to page 33 of the C-108?

4 A. And page 33 in the C-108 is an exhibit from  
5 something that they published. They've -- they've  
6 published several things throughout the years, and I've  
7 worked with Dr. Zoback on a number of induced seismicity  
8 issues through that time.

9 But that's where -- that's -- this is the  
10 paper where that exhibit is from.

11 Q. Okay. Let's go on to page 4. What do you have  
12 there?

13 A. So, in these -- you know, from an injection well  
14 data there's five deep Class 2 injection wells active in  
15 2019 within the two areas.

16 You know, no active deep Class II wells  
17 included in the Texas region.

18 We looked at monthly average injection  
19 rates, you know, calculated from the injection start date  
20 through July of 2019. We have the eight proposed Vista  
21 salt water disposal wells or deep Siluro-Devonian salt  
22 water disposal wells in those two reviews, and we've  
23 assumed, based on Mr. Alleman's testimony, the Application  
24 of injection at 30,000 barrels a day for the model log.

25 Q. Page 5?

1           A.    So page 5 is our two FSP modeling areas.  The  
2 lower-left one is Area 1, the one to the right is Area 2.  
3 We show each of the eight Vista wells there, as well as  
4 other existing deep SWDs.

5           **Q.    Okay.  Page 6?**

6           A.    And then as we go through these next few pages,  
7 we go through the two areas.  And as I noted, what we've  
8 done is included two scenarios.

9                        So the first scenario -- and this is true  
10 for both scenarios or both areas -- is Scenario 1, we  
11 estimate porosity at 5 percent, permeability at 10  
12 millidarcies.  We pick an injection interval that covers  
13 the wells that are in that area and have an estimated  
14 thickness with high porosity at 5 percent or more at only  
15 100 feet.

16                       So this is a pretty conservative estimate.

17                       And what you see on the results from the  
18 modeling -- and we actually did modeling scenarios at 5  
19 years, 10 years, 20 years, 25 years.  I'm showing you the  
20 end result here, the 25-year scenario of Scenario 1, or  
21 Area 1, and you get 0.00 potential for induced seismicity  
22 in area.

23                       On page 7, this is a slightly different  
24 technical basis.  For this we assume an estimated porosity  
25 of 10 percent estimated permeability of 100 millidarcies,

1 same injection interval, and an estimated porosity  
2 thickness within our injection zone of only 250 feet.

3 And you can see from the map on the middle  
4 of the -- this is a snapshot from an FSP model --  
5 very little pressure build-up under that scenario.

6 We actually think we have greater porosity  
7 permeability and porous thickness than even Scenario 2,  
8 but even when we ratchet this down under Scenario 1 and  
9 Scenario 2 we still get 0.00 fault slip potential through  
10 any of the years, and ultimately at the 25-year time  
11 frame.

12 **Q. So when you use the 250 feet, you're reducing**  
13 **that by --**

14 **A. A lot.**

15 **Q. A lot.**

16 **A. Yeah. So injection formation thicknesses, if**  
17 **you look at our wellbore diagram, you know we've got an**  
18 **injection interval of 17,500 to 18,700. This is, you**  
19 **know, a rather thick interval, and we're assuming that**  
20 **only a very small portion of that large interval, you**  
21 **know, has decent porosity permeability to accept injection**  
22 **fluids.**

23 We believe that it's much greater than  
24 that. We've seen other experts on FSP analysis actually  
25 propose the entire interval as being able to be porous and

1 permeable. The deepest FSP logs don't necessarily show  
2 that, but there's also a lot of secondary porosity and so  
3 forth that we believe to be present in the  
4 Siluro-Devonian, and likely any of those scenarios are  
5 pretty conservative.

6 **Q. Okay.**

7 A. Then on page 8, this is -- this is the second  
8 area. So if we look at, you know, this area, this one,  
9 you know, includes the Karen, Kathy and Justin wells.

10 One of the differences in this area, as  
11 opposed to Area 1, is we do have some existing faults that  
12 we show. We have two existing faults.

13 Also, we -- I will point out that in the  
14 Applications we have an exhibit where we show the distance  
15 from the well to the nearest known fault, and that  
16 probably ranges between the four Application from I think  
17 2.6 miles to nearly 10 miles away.

18 But, nonetheless, we do -- you know, we do  
19 have existing faults here. We can see from the  
20 orientation of these that the faults don't appear to be  
21 oriented in some critical stress, uhm, you know, location  
22 or orientation.

23 I'll also note that the model that we  
24 utilize, and this was a question I discussed at even the  
25 last hearing, we assume these to be normal faults. We

1    assume -- you know, the model assumes that these intersect  
2    the entire injection interval.  And it doesn't appear that  
3    that's the case, but that's what we assume.  So we're  
4    assuming like worst case on worst, on worst case, and in  
5    that and even with known faults here, at our Scenario 1,  
6    which is our most conservative range, we get a fault slip  
7    potential of 0.00 after 20 years.

8                    And again if we look at this on page 9 on  
9    Scenario 2 --

10            **Q.    20 years or 25?**

11            A.    25 years.  Sorry.

12                    So Scenario 2, which we utilized our 10  
13    percent porosity instead of 5 percent and 100 milidarcy  
14    permeability as opposed to 10 in a permeable interval of  
15    250 feet instead of 100 feet, we get very little pressure  
16    buildup over the 25-year model period.  And again we get a  
17    fault slip potential from the modeling based on this for,  
18    you know, these three wells, of 0.00.

19            **Q.    Okay.**

20            A.    And then on page 10 is really just a kind of a  
21    summary of my conclusions from this analysis.

22                    There's, you know, two mapped Precambrian  
23    faults in the 100-square-mile review of the FSP area 2,  
24    which each show a fault slip potential of 0.00 over 25  
25    years in both the high and low geologic scenarios.

1                   And I'll point out: You know, we're not  
2 injecting into the Ellenburger that has a direct  
3 connection to the Precambrian. We're injecting into the  
4 Silurian-Devonian, we've seen good lower confinement, from  
5 at least the data that we have available, so the modeling  
6 that we're doing is probably unrealistically conservative,  
7 and yet we are still getting a 0.00 fault slip potential.

8                   Now, the thing that I think is important to  
9 realize is that we're still looking at faults that have  
10 that orientation. And, you know, one of the issues that  
11 we've had in states like Oklahoma and Texas is faults that  
12 we didn't know were there.

13                   So this is taking into account that there  
14 may be faults there that nobody knows about, right? And  
15 even in those cases, which I would say this is probably  
16 more a representation of, is even if there's faults that  
17 we don't know are there, the fault slip potential here is  
18 extremely low and apparently insignificant.

19                   So the second conclusion is faults  
20 generated from FSP Area 1 are consistent with known,  
21 high-angle normal faulting regime of Southeast New Mexico,  
22 you know, and all showed FSP potential of 9.00 a.m.

23                   The third conclusion is known faults in  
24 Southeast New Mexico do not align with the horizontal  
25 stress fields, and are not likely to slip.

1                   So Mr. Tomastic talked a little bit about  
2 this in his testimony, but we're still trying to give a  
3 worst-case basis so that we can, you know, address those  
4 concerns and make sure that the action and activity that  
5 Vista is going to be is not a risky -- or putting any sort  
6 of undue risk towards the environment or induced  
7 seismicity and so forth.

8                   The FSP modeling through 25 years with  
9 injection rates that are likely over estimated, I would  
10 say, over that entire period show no risk of potential  
11 fault slip in the area.

12                  What I'll note is the unconventional  
13 development that we see today, we're using a lot more  
14 water, a lot more early water, but that water production  
15 goes down over time. So the idea of these production  
16 wells getting drilled up and that water carrying on at  
17 super-high levels infinitely is pretty remote. The water  
18 production levels are going to go down over time, so when  
19 we look 20, 30, 40 years out, we estimate that that water  
20 production would be lower.

21                  So by assuming that high level of injection  
22 over that entire time frame, is, we believe, another  
23 conservative assumption.

24                  Then the areas present -- as an overall  
25 conclusion, we believe these areas present little or no

1 risk for injection-induced seismicity.

2 Q. So, Mr. Arthur, if you increase -- assuming that  
3 you have good porosity throughout the disposal intervals,  
4 those numbers come even lower, right?

5 I mean, how can you go below zero?

6 A. I would say that when you look at fault slip  
7 potential as a risk, with what we see here, that risk is  
8 already extremely low, but if we were to look at this --  
9 really, from what we did in the memo that we included, we  
10 didn't see any faults of concern. We are not in the  
11 Ellenburger, we have good lower confinement, we've got  
12 good upper confinement. Silurian-Devonian appears to be a  
13 very good suitable injection zone. We've got a wellbore  
14 design with multiple areas of protection, we've got a  
15 pretty thick interval. I mean, the potential for this in  
16 overall risk appear very low.

17 Q. So essentially you've covered your memo now,  
18 right?

19 A. Correct.

20 Q. And let me direct your attention to page 32 of  
21 the C-108 on Case 20801. Mr. Tomastic referred us to you  
22 as to that page.

23 A. So this is -- page 32 in this Exhibit 1, of  
24 Exhibit 1, is -- really what we're trying to do is to show  
25 kind of the distance to known faults. And this -- a

1 similar exhibit to this is shown in each of the C-108s.

2 And it's part of -- you know, what I like  
3 to look at as if there are known faults in the area, you  
4 know, how close are we?

5 And this has come into play not only for  
6 our assessment, but this is one of the things that in  
7 regulatory permitting that we see in the State of Texas.  
8 The State of Texas does something similar where if you are  
9 closer to a fault that they are concerned about or a  
10 seismic event, things that they are doing now is requiring  
11 bottom hole pressure tests, depth rate tests and so forth.

12 In the case of all four of these permits,  
13 we're not very close to known faults. The known faults  
14 are in the Precambrian, which is not necessarily the zone  
15 that we're injecting into, you know, although there could  
16 be faults there.

17 You know, we don't think that in the  
18 analysis that we've done. You know. There's still a lot  
19 of data being collected, but I think it's important to  
20 note that we tried to look at, you know, our wells to,  
21 uhm, other deep salt water disposal wells, some of which,  
22 uh -- as well as seismic events and so forth. And really  
23 from what we could see we're a good distance away, and we  
24 haven't found anything in any of the Application that  
25 gives us pause.

1 Q. Okay. Are you done with Exhibit 3?

2 A. Yes, sir.

3 Q. Let's move on to Exhibit 5, and tell us what  
4 that is. It's a map of circles.

5 A. So one of the things that we wanted to look at,  
6 and I think that what Exhibit 5 does, really is it  
7 provides kind of an overview of what the Division's  
8 dealing with and what everyone that's trying to help meet  
9 the needs of the industry for managing water is dealing  
10 with.

11 So in this area of Southeast New Mexico  
12 there is a very, very high demand for disposal wells, as  
13 well as water managements transportation and all that, so  
14 what we've really tried to do, you know, really starting  
15 with meetings with Mr. Goetz and others, is to not only  
16 track the existing deep salt water disposal wells but  
17 those that are approved and those that are proposed.

18 And if you look at this map we show the  
19 various Vista wells that we have. You can see the other  
20 wells that are in the area, ones that were submitted after  
21 the Vista well Application that we submitted, as well as  
22 other ones. And you can imagine that, you know, today, in  
23 today's environment with the Division, there's -- you  
24 know, we have a guideline of being at least a mile and a  
25 half away from other wells. So we are really trying hard

1 to do that.

2                   You can see from this that the Division is  
3 going to have a lot of work to do in sorting out that for  
4 a lot of wells with a lot of different people, and even to  
5 that point of noting -- you know, we've tried hard on the  
6 Vista wells to really try to seek out and find those areas  
7 that are at least a mile and a half from any other  
8 existing well, or even any other well that has had an  
9 application submitted.

10                   So we're trying diligently in that,  
11 although there's also a window where you don't know where  
12 somebody else could be providing an application. And  
13 hence, you know, those are things that we also look at,  
14 is -- you know, is what we've been advised is kind of  
15 first in the door, you know as far as who would get  
16 approval. So as we do that, we look at other Application  
17 and whether they have adequate technical basis and have  
18 done everything or whether they have inadequacy.

19                   So we've followed through on that, done  
20 those evaluations, as well.

21                   And so you know, I'll tell you I've given  
22 two presentations on best practices on salt water disposal  
23 well permitting around the country and in New Mexico, and  
24 we're all trying to be perfect. And this map really shows  
25 that.

1                   I will note one other thing, is that when  
2 you look at the basis of what we're seeing on this map,  
3 this is a lot of dots with one-and-a-half-mile circles  
4 around them, right? That one-and-a-half-mile circle, the  
5 basis of that is an attempt to try to manage injection  
6 reservoir pressurization. So what the New Mexico OCD has,  
7 the approach they've taken is this 1-1/2-mile setback.

8                   There's certainly alternatives to that.  
9 You know, the Texas Railroad Commission is requiring  
10 bottom hole pressure tests and step rate tests and things  
11 to see what that is, because right now we're guessing at  
12 some of this stuff.

13                   You know, we don't know what this is.  
14 There's not enough data. Once all these wells get drilled  
15 and we're operating for five or ten years, we are going to  
16 know. We're going to have a lot better data on what we  
17 predicted versus what's actually happening, and it may be  
18 at that point that the Division says: Oh, we could have  
19 them a half mile apart and that's adequate, or you may  
20 say, we need them 10 miles apart.

21                   But the point of what we're trying to show  
22 here is that we have diligently tried to work within the  
23 Division's requirements for setback. We have some on here  
24 that aren't -- where we have other Application that have  
25 been submitted prior to ours. Every one of those has a

1 deficiency.

2                   But in the big scheme of things, when you  
3 look at this map you could certainly see what perhaps led  
4 Mr. Goetz to look at that one-and-a-half-mile setback,  
5 because this sort of the density of deep disposal wells in  
6 a similar reservoir that are high volume is unusual if you  
7 look back over the last 40 years or whatever of the  
8 underground injection control program.

9           **Q. Do you have anything else to add to your**  
10 **testimony, Mr. Arthur?**

11           A. No, sir.

12           MR. PADILLA: Mr. Examiner, we tender  
13 Exhibits 3, 5 and those portions of Exhibit -- of the --  
14 let's see. The attachment.

15           EXAMINER GOETZ: We've already entered the  
16 C-108s, so we will just recognize it is included. We are  
17 done with that exhibit.

18           MR. PADILLA: We will offer, then, Exhibits 3  
19 and 5.

20           EXAMINER GOETZ: Very good.

21           MR. PADILLA: We're done.

22           EXAMINER GOETZ: Okay. In Case 20801, Ms.  
23 Bennett?

24           MS. BENNETT: No objection.

25           EXAMINER GOETZ: Exhibits 3 and 5 are so

1 entered.

2 In Case 20803?

3 MS. BENNETT: No objection.

4 EXAMINER GOETZ: Okay. Thank you. Exhibits 3  
5 and 5 are also entered.

6 Case 20804 Exhibits 3 and 5 are entered.

7 In Case 20805, Ms. Bennett?

8 MS. BENNETT: No objection.

9 EXAMINER GOETZ: Okay. Exhibits 3 and 5 are so  
10 entered.

11 And I believe it is your witness, Ms.  
12 Bennett.

13 MS. BENNETT: Thank you.

14 Good morning, Mr. Arthur.

15 THE WITNESS: Good morning.

16 MS. BENNETT: Thanks for being here.

17 THE WITNESS: You're welcome.

18 MS. BENNETT: I just have a few questions based  
19 on Exhibit 3 and Exhibit 5.

20 CROSS EXAMINATION

21 BY MS. BENNETT:

22 Q. So on Exhibit 3 you testified a little bit ago  
23 it was the worst case of the worst case of the worst case  
24 scenario, that it was super conservative in terms of your  
25 slip-fault-probability analysis; is that right?

1 A. Right.

2 Q. And then Exhibit 5, though, shows like, as you  
3 were just talking about, a number of proposed and existing  
4 SWDs in the area of the proposed Vista wells. Like, a  
5 lot.

6 Is that fair to say? I can't count how  
7 many.

8 A. Exhibit 5 does include a visual of all of the  
9 existing and proposed wells. Obviously many of those  
10 won't get permitted, but it shows what has been submitted.

11 Q. But your fault slip potential analysis didn't  
12 include the proposed wells, other than the Vista wells,  
13 right?

14 A. It included the Vista wells and existing wells.

15 Q. So a subset of what's on Exhibit 5.

16 A. That's correct. Depending on the well, yes.

17 Q. And then on page -- well, in your Induced  
18 Seismicity Statement that you included -- and my questions  
19 on these exhibits go to all of the cases that NGL has  
20 entered an appearance in, just to be clear.

21 On page 27 it talks about how you looked at  
22 USGS activity and TexNet, I think.

23 A. Are you on Exhibit 1?

24 Q. Yeah, Exhibit 1. Sorry. Page 27.

25 So you talk about looking at the historic

1 seismic activity, historic for faulting in the area, the  
2 USGS catalog data base. I saw elsewhere that you looked  
3 at TexNet. But then you note that Vista does not own  
4 either 2D or 3D seismic reflection data in the area of the  
5 subject well.

6 **Has Vista considered installing seismic**  
7 **monitoring at any of its wells?**

8 A. So seismic monitoring would be something that  
9 they would be open to, as well as testing if it was  
10 believed to be necessary. Based on what we're seeing  
11 here, we have -- we do have data that's, I would say,  
12 that's showing lower confinement is \*\* very sealing  
13 (phonetic) within 10 to 15 miles of our proposed  
14 locations, depending on which well. That was very  
15 positive. We don't always have stuff that close that  
16 shows both the thickness and the characteristics of that.

17 The faults that we do show are deep faults  
18 that don't appear to go into the Siluro-Devonian.

19 So we're not seeing something that would  
20 lead us to see a necessity for that in these. If the  
21 Division determine that, you know, everybody that permits  
22 a well into the Siluro-Devonian needed to have seismic  
23 monitors and do testing, I'm sure we would comply with  
24 that.

25 **Q. But it isn't part of the proposal in your C-108**

1 or any of the materials that you have submitted today?

2 A. No, ma'am.

3 Q. Thanks. A minute ago, and I think this is  
4 consistent with Mr. Alleman's testimony today, you talked  
5 about the fact that this Exhibit 5 shows in pink, I guess,  
6 the deficient deep WSD Applications.

7 Are those the Permian Oil Field Partners  
8 Application --

9 A. Yes, ma'am.

10 Q. -- that Mr. Alleman was testifying about  
11 earlier?

12 And are those closer than a mile and a half  
13 to some of the Vista proposed wells?

14 A. So there are -- there's one well that is within  
15 a mile and a half that was submitted afterwards, and then  
16 there are four wells that were submitted just before  
17 Vista's that are within a mile and a half of -- at least  
18 one of their wells. And each of those wells that were  
19 submitted before have deficiencies.

20 Q. Thanks. The other question I had is in  
21 Exhibit 1. Again if you look at Exhibit 1 in this  
22 question, 20801. Case 20801, the C-108.

23 A. Which page.

24 Q. Sorry. Page 2, Item 12: Applicants for  
25 disposals wells must make an affirmative statement that

1 they have examined available geologic and engineering data  
2 and find no evidence of open faults or hydrologic  
3 connection to USDWs. And I'm paraphrasing there.

4 Do you see that?

5 A. Uh-huh.

6 Q. Is your letter that's Attachment 6, starting on  
7 page 27, is that Induced Seismicity Potential Statement  
8 designed to comply with XII?

9 A. So I believe it does comply with XII, although  
10 the connection between underground sources of drinking  
11 water would be addressed in other portions of the  
12 application.

13 Q. Okay. So the letter -- sorry, the report or  
14 statements --

15 A. Addresses the open fault -- I mean, uh --

16 Q. But not the hydrologic connection.

17 A. Yes.

18 Q. Okay. Thank you.

19 Just what I was going to say about that is  
20 that same question applies to all the cases in which NGL  
21 has entered its appearance so I don't have to repeat the  
22 questions for all three cases.

23 A. And we believe that we've adequately addressed  
24 that question and concern from the form.

25 MS. BARNETT: Thanks. No further questions.

1 EXAMINER GOETZ: Mr. Rose-Coss?

2 EXAMINER ROSE-COSS: Okay.

3 CROSS EXAMINATION

4 BY EXAMINER ROSE-COSS:

5 Q. Well, you mentioned that all of the faults that  
6 you have mapped on page 13 of Exhibit 5 are deep and don't  
7 cut the Devonian, so I'm not --

8 A. Page?

9 Q. 13.

10 A. Of Exhibit 5?

11 Q. Exhibit 3. I'm sorry.

12 A. Uh. So around page 8, 9?

13 Q. 13 where you have the location of the proposed  
14 Vista SWDs in proximity to the known faults.

15 A. So these are deep identified faults. They don't  
16 appear to be, but we are trying not to make a judgment of  
17 whether they are. So the model assumes that they are,  
18 that they are in the Silurian-Devonian, but from our  
19 analysis it doesn't appear that they are.

20 Q. What is your analysis based on? You don't have  
21 the seismic data.

22 A. We don't have seismic data. It's looking at the  
23 published information, the geophysical logs that we've  
24 looked at, the geological analysis and so forth.

25 We don't have 2D of 3D seismic that we've

1 been able to look at, but we've got publications from  
2 that, that that's how they depict it, as deep faults.

3 **Q. So in implying that these faults are from**  
4 **pre-Devonian times, are you going to venture a guess at**  
5 **how they formed and they didn't form as normal faults? Or**  
6 **did they?**

7 A. So they're -- that's our -- what's published is  
8 that they're -- you know, as I noted earlier -- let me  
9 find it.

10 That they're -- that behind normal faults.  
11 That's what the publications show. But again, you know,  
12 we don't have that, you know, detailed of data. I don't  
13 have 2D or 3D seismic data. Moreover, from -- I will say  
14 the experiences that we've had in reviewing 2D and 3D  
15 seismic data, it's difficult to even look at that data to  
16 be able to see if there's an at-risk fault. It's not  
17 always apparent.

18 The other thing I would say is that even  
19 with a lot of that 2D and 3D seismic data, it wasn't  
20 focused on this depth level.

21 So a lot of times, of some of the times  
22 where we have looked at it for some of the companies we've  
23 worked for, the producers, as you get real shallow or real  
24 deep the data quality goes down a lot, and it gets really  
25 hard to interpret.

1           So I will tell you one thing that, you  
2 know, we're trying to do, is look at available cores, you  
3 know, and other logs. We're going out to New Mexico Tech  
4 to get a better handle, as to the degree possible. But a  
5 lot of the seismic that we have looked at in other areas  
6 for other companies has been pretty difficult to really do  
7 that kind of interpretation.

8           But what we do know is from the research  
9 that has been done we're not seeing a likelihood of  
10 presence of critically stressed faults. You know. We've  
11 assumed that the faults are there.

12           We could, in addition to adding  
13 hypothetical faults to, say, an FSP analysis, we could go  
14 and start adding, you know, hypothetical injection wells  
15 around there. Maybe, you know, add to go to 50- or  
16 100,000, you know, barrels of water per day, and all sorts  
17 scenarios.

18           But what I will say is that when we look at  
19 this, to be able to even get the numbers to get up above  
20 0.00 on a fault slip potential modeling, you have to be  
21 well over 100,000 barrels a day for us to even get like a  
22 0.01.

23           **Q. I was curious, too, if on your fault-slip models**  
24 **you're just running it using the Vista SWDs.**

25           A. Any existing disposal wells that would be there

1 and the Vista wells.

2 **Q. And do you ever run it with all of the proposed?**

3 A. We have not run it with the proposed wells, but  
4 based on the area and size, a lot of those wells would be  
5 more out to the -- more the outer boundaries. We don't  
6 know what those wells -- when they will be installed, if  
7 they'll ever be installed. And it would be, you know -- I  
8 mean, one of the things, you know, as a former regulator,  
9 you try to look at things on a -- you know, on a risk  
10 basis. And that's how we looked at an underground  
11 injection control program from the early '80s.

12 But, you know, this is kind of new  
13 territory, and we're trying to look at things on a risk  
14 basis, on a conservative basis, but how far do you go?

15 Now, in that lines you could look at what  
16 those are, what you're pressuring up at, you know, from  
17 that FSP analysis. We could be doing, you know, bottom  
18 hole pressure tests, even step rate tests, other sorts of  
19 tests, seismic monitors, a lot of different things that we  
20 could do, and could do ongoing throughout the life of  
21 these wells. You'll start seeing that with your reporting  
22 data, to be able to see what people are injecting as far  
23 as rate, and what those pressures are, to get a better  
24 handle of that over time. So you may find out that  
25 everybody's going to be injecting at 30, 40, 50,000

1 barrels a day, and the pressures they are injecting is  
2 going up super fast, but you may find out that it's -- you  
3 know, it's really not being anywhere near the issue that  
4 it is.

5                   And even this, we didn't model or add wells  
6 that might be proposed or might be in there, but keep in  
7 mind out of say a 2000-foot interval on the Charles well,  
8 for example, we only assumed 100 or 250 feet of that even  
9 having permeability for injection. So, I mean, a small  
10 portion of our overall interval.

11                   So it's like, how many -- should I increase  
12 that to the whole interval and add some other wells, or --  
13 it's a tough thing when you look at how far do you go.

14           **Q. I was curious, too, on your model you said 100**  
15 **or 200 feet. How did you distribute that between the**  
16 **1,000 feet injection.**

17           A. So -- like, on one of them it's over 2,000.  
18 But you don't distribute it in that fashion. You just  
19 pick. And the model allows you to pick a thickness. So  
20 it's not as detailed as you might be thinking to where you  
21 were, you know, making different intervals. We just pick  
22 a total thickness.

23           **Q. But that's not how it would be in reality.**

24           A. No, none of this modeling is complete reality.  
25 We'll find that once we drill the well and do the testing

1 and do injection and get that.

2 So all we're trying to do now is do the  
3 best that we can with the data that we have, and this is  
4 the approach I've taken.

5 So we could use -- there's certainly  
6 different approaches that we could take. We could have  
7 assumed a full thickness and more wells, or, you know, not  
8 put hypothetical faults in there, or put more hypothetical  
9 faults. I mean, there's a lot of different things we  
10 could have done.

11 What we tried to do, and I think what we've  
12 seen even from some of the other experts have done, we're  
13 not all exactly the same. You know, we chose to pick a  
14 smaller overall thickness, which would mean more chance  
15 for more rapid pressure buildup. And if you get the  
16 pressure buildup and there's a critically stressed fault,  
17 you're going to have a higher chance of initiating some  
18 sort of seismicity than you would if you spread that over  
19 a larger thickness.

20 **Q. Sure. I guess you ran through that model, and**  
21 **the question that I'm curious of is: If you put in more**  
22 **wells would that make it, increase your odds from .001**  
23 **to...**

24 **A.** So we haven't tried to model that. We have done  
25 other models where there's more active injectors in there,

1 and it really hasn't made much difference.

2                   So what we chose is to really do what we  
3 know. So I'm a big person in trying to let the data drive  
4 what you do. And we know that there's potential stuff,  
5 but we don't even know which ones of these, if any.  
6 Because a lot of the ones even close to ours could be  
7 canceled out by another well that's within a mile and a  
8 half of them.

9           **Q. But there will be others.**

10           A. But maybe not even within our model area. You  
11 know?

12                   So we could do that, but based on our past  
13 experience in other models, some of which, or all of which  
14 we've presented -- well, for this, for New Mexico that  
15 we've presented here, some of them had several active  
16 disposal wells in them, and -- you know, so active  
17 disposal wells versus maybe-permitted wells, you know, we  
18 didn't see that be a significant change.

19                   The biggest change, to me, was -- is that  
20 thickness. That thickness is going to give you something  
21 that's going to pressure up fast, versus considering a  
22 thicker interval and more wells.

23                   MR. ROSE-COSS: Wonderful. Thank you. I have  
24 no further questions.

25                   EXAMINER GOETZ: Mr. Ames.

1 MR. AMES: No.

2 EXAMINER GOETZ: Just a few things.

3 CROSS EXAMINATION

4 BY EXAMINER GOETZ:

5 Q. When you ran your models, did you use what  
6 injection rate for the surrounding wells? Did you use  
7 what was petitioned or did you use your daily, or...

8 A. No, what we did -- and we noted this, I think,  
9 on page 4. So we took the monthly average rate based on  
10 that calculation through July, 2019.

11 So a lot of the wells -- this is kind of  
12 the interesting thing, Mr. Goetz, that's happening, is  
13 there's lot of wells that are coming in with, you know,  
14 proposed max rates of 40-, 50,000 barrels a day, and not  
15 all of them are actually injecting on a daily basis at  
16 those max rates.

17 So we looked at how those wells have been  
18 performing, used those rates, and then used the max rates  
19 for our wells.

20 Q. So how does this account for saying a maturing  
21 of the system that's going to include pipelines later --  
22 which a lot of these wells are being put in for is, and  
23 it's not just trucks and tank batteries but for actual  
24 hard infrastructure.

25 A. That's correct. And so when we look at that and

1 look at those sorts of rates, we do see that there  
2 certainly could be, once pipelines come in, as more  
3 agreements between producers and say midstream companies  
4 are solidified, some of those rates could go up.

5 Now, what we've seen, even in these, if you  
6 look at these areas the majority of the wells within those  
7 areas are Vista's wells, and we've used those at the  
8 highest injection rates.

9 Now, if those other rates go up, what we  
10 see even there, if you look at the two scenarios between  
11 the two wells, we are still at a relatively low reservoir  
12 pressurization, which means low fault slip potential.

13 So based on what we're seeing, I still  
14 don't see, even with our most conservative assumption on  
15 thickness and permeability and porosity, there being a  
16 realistic, or I'd say a significant concern or risk on  
17 potential induced seismicity.

18 And I will say that it's important to  
19 realize that for this area, which really applies to more  
20 than Vista's wells, it applies to a bunch of these wells  
21 in the area, is -- you know, we've got a little bit of  
22 data. We've don't have, you know, oodles of data but  
23 we've got some data that shows that we have some really  
24 good lower confinement. And that was very important to  
25 me, to be able to see this compared to some of the other

1 areas that we've looked in where lower confinement looked  
2 good. But this looks extremely good.

3 Q. Well, one of the things that raises a concern  
4 with me, you gave the Maelstrom no value based upon its  
5 reported injection, but currently Chevron does have an  
6 application in to get a ceiling of 80,000 barrels a day  
7 there.

8 Also, to the east of that, the Salado Draw  
9 No. 13, which is also in the neighborhood of 30,000 there,  
10 and they are increasing their tubing size to the current  
11 seven-five.

12 A. Seven-inch?

13 Q. As well as --

14 A. If it would be helpful, I'm happy to rerun the  
15 model.

16 Q. Well, let's do this. Let's do this. Rerun the  
17 model at the higher rates.

18 A. Okay.

19 Q. And give us a level of confidence based upon the  
20 greatest dreams of men and machine, and realizing that we  
21 are looking down the road at a full system.

22 But I have that opportunity for you to  
23 consider it and then resubmit it.

24 So let's do that for each of the wells here  
25 today, is resubmit Exhibit No. 3, including the Salado

1 Draw SWD 13, that's 30025-42354. And then the Maelstrom  
2 SWD 30025-45127. And for the Maelstrom assume --

3 A. 80?

4 Q. 80, 75, in that neighborhood.

5 A. So what I would propose, if you would be  
6 agreeable to do this, would be to add another scenario.

7 Q. That would be fine. We leave that up to you to  
8 present your argument.

9 A. Okay.

10 Q. We just want to make sure that we've given  
11 consideration to things that are existing and are changing  
12 as we speak.

13 A. That information is good to know. And so we  
14 will rerun that with an added thing for both of scenarios.  
15 And add another scenario showing the overall thickness of  
16 the permitted zone.

17 EXAMINER GOETZ: Very good. I have no questions  
18 further for this witness.

19 MR. PADILLA: The only question I have is I have  
20 one more question.

21 REDIRECT EXAMINATION

22 BY MR. PADILLA:

23 Q. Mr. Arthur, you were asked by Ms. Bennett  
24 whether you had complied with page 2 with paragraph 12 in  
25 your statement on page 28 -- 27 and 28.

1                   I want to direct your attention to the  
2 **first full paragraph of page 28, and tell us what that**  
3 **says.**

4           A.   (Reading) Geologic analysis indicates that the  
5 proposed Devonian-Silurian injection zone is overlaid by  
6 approximately 200 to 400 feet of Woodford Shale, which is  
7 the upper confining zone and will serve as a barrier  
8 upward and deal with migration.

9                   Additionally, the Simpson Group that lies  
10 directly below the Montoya will act as a confining zone to  
11 prevent fluid from migrating downward into the underlying  
12 Ellenburger Formation and Precambrian basement rock.

13           Q.   **Doesn't that comply with the statement about**  
14 **fresh water contamination through upward migration of**  
15 **water?**

16           A.   I believe that it generally does, but I think  
17 what is also important is the wellbore diagram, the  
18 geology, and other portions of that.

19                   So that -- that I believe addresses it, and  
20 it certainly addresses the part of at least the answer of  
21 that. But that's not the only response that we provided  
22 in that.

23                   MR. PADILLA: Okay. That's all I have.

24                   EXAMINER GOETZ: You don't want to make a final  
25 statement, do you?

1 MS. BENNETT: No.

2 EXAMINER GOETZ: Thank you, Ms. Bennett.

3 Okay. We have the seismicity, we have the  
4 paperwork from you we still need.

5 MR. PADILLA: I'll file a motion for the  
6 continuance today.

7 EXAMINER GOETZ: Well, we can do this: We have  
8 the ability, since we are asking for more information.

9 I also want to see updated wellbore  
10 diagrams to give consideration to the Salado and what the  
11 BLM will want. So I would suggest you discuss with the  
12 BLM.

13 So let's see what we can do to protect more  
14 of the Rustler and isolate the Salado.

15 With that in mind, we will continue it.  
16 But --

17 MS. BENNETT: I just had a quick question for  
18 you. Two questions, actually.

19 One is on the Notice information. I was  
20 under the impression that we are going to get more  
21 information, more exhibits about Notice.

22 EXAMINER GOETZ: Oh, you got Notice?

23 MS. BENNETT: Then secondly, if Mr. Arthur  
24 prepares another scenario or two other scenarios, I assume  
25 those will be submitted to us.

1                   EXAMINER GOETZ: Remember, we never share with  
2 you.

3                   MR. BENNETT: Yes, I know that. Maybe you could  
4 submit them to somebody else. But could you share them  
5 with me, too?

6                   EXAMINER GOETZ: We could be more than happy,  
7 and we are required to do that. We understand that  
8 obligation.

9                   MS. BENNETT: And those will be submitted via  
10 email, or will those be at a subsequent hearing, or how  
11 will those be...

12                   EXAMINER GOETZ: What we will do is we will get  
13 them to you as soon as they provide it to us. The window  
14 for a continuance would have to be discussed since we  
15 don't shoot from the hip anymore.

16                   MS. BENNETT: Uh-huh.

17                   EXAMINER GOETZ: So with that in mind I don't  
18 see it happening in October.

19                   MS. BENNETT: But there would be an opportunity  
20 for me to review them and ask any follow-up questions I  
21 may have?

22                   EXAMINER GOETZ: As fast as we get to review  
23 them, you can review them, so...

24                   MS. BENNETT: Okay. Okay. Thank you.

25                   MR. PADILLA: Mr. Examiner, I would like to

1 offer Exhibit 6, which is four affidavits on Notices that  
2 I have.

3 EXAMINER GOETZ: Okay. What do we have?

4 THE WITNESS: Am I done?

5 EXAMINER GOETZ: You can step down, yes. You  
6 may go away.

7 So, Mr. Padilla, would you present these to  
8 Ms. Bennett so that she may take a look at them.

9 MR. PADILLA: I'll give her a copy.

10 EXAMINER GOETZ: Very good. We appreciate that.

11 (Note: Pause.)

12 MR. AMES: I'm sorry, Mr. Padilla.

13 MR. PADILLA: Yes.

14 MR. AMES: One question for you.

15 These affidavits that you provided, these  
16 all copied here one each for each case, these are notices  
17 that the application was mailed. Do you have affidavits  
18 for each case regarding the Adjudicatory Hearing Notice?

19 MR. PADILLA: We have the green cards attached  
20 to that that indicate that the addressees received a copy  
21 of the application.

22 MR. AMES: So this concerns the Application  
23 only; is that correct?

24 MR. PADILLA: Yes.

25 MR. AMES: Okay. Thank you.

1           MR. PADILLA: You'll notice there we got a whole  
2 bunch of them from EOG Resources A, B and C, but they were  
3 merged, and the reason I'm not for setting the four cases  
4 or all eight cases today is because EOG obviously got  
5 notice of -- they did call the conflict.

6           EXAMINER GOETZ: So you wish to enter these?

7           MR. PADILLA: Yes.

8           MS. BENNETT: No objection. I have a follow-up  
9 question, but super quick and it will be helpful.

10          EXAMINER GOETZ: Okay. Exhibit 6 for Case  
11 20801, no objection from Ms. Bennett on that?

12          MS. BENNETT: No.

13          EXAMINER GOETZ: So Case 20801 Exhibit 6 is  
14 entered.

15                    Case 20803 Exhibit 6?

16          MS. BENNETT: No objection.

17          EXAMINER GOETZ: Is so entered.

18                    Case No. 20804 is entered, Exhibit 6 is  
19 entered.

20                    And 20805, exhibit 6?

21          MS. BENNETT: No objections.

22          EXAMINER GOETZ: And so Exhibit 6 is so entered.

23                    So you have one more thing?

24          MS. BENNETT: Yes. This is against my own  
25 interest, but the application that you sent out had the

1 hearing date in it, right?

2 MR. PADILLA: Yes.

3 MS. BENNETT: Thanks.

4 EXAMINER GOETZ: Okay. Very good.

5 So with that we will take Cases 20801,  
6 20803, 20804, 20805 to be continued for the admission of  
7 requested information and modifications by the Division.

8 And with that -- is there any stipulations?

9 MR. AMES: (Note: Shakes head.)

10 EXAMINER GOETZ: That's good enough.

11 So with that, when we have the opportunity  
12 we will inform you of the calendar date. It won't be the  
13 next one but we will move on and then provide all parties  
14 the information on what docket it's posted to.

15 MR. PADILLA: Mr. Examiner, do you want us to  
16 come back to hearing actually and present those through  
17 live witnesses, or do you want us to just submit the  
18 information?

19 It seems to me --

20 EXAMINER GOETZ: Yeah, I think with the  
21 seismicity issue, the opportunity for that witness to be  
22 here for sure. Ms. Bennett does have the opportunity to  
23 cross, and it is one of the exhibits that we're asking for  
24 resubmittal.

25 The wellbore diagrams and well? I mean,

1 that's what is known as a minor modification and is really  
2 a decision by the Division and the BLM. So regardless of  
3 what NGL feels, we will still be dealing with making sure  
4 that the casing is set to our standard.

5 MR. PADILLA: Okay.

6 EXAMINER GOETZ: So, yes, I would bring at least  
7 one witness back for that particular exhibit.

8 MR. PADILLA: Okay. Thank you.

9 EXAMINER GOETZ: Let's take a 10-minute break.

10 (Time noted 11:22 a.m.)

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1 STATE OF NEW MEXICO )  
2 ) SS  
3 COUNTY OF TAOS )  
4

5 REPORTER'S CERTIFICATE

6 I, MARY THERESE MACFARLANE, New Mexico Reporter  
7 CCR No. 122, DO HEREBY CERTIFY that on Thursday, October  
8 3, 2019, the proceedings in the above-captioned matter  
9 were taken before me; that I did report in stenographic  
10 shorthand the proceedings set forth herein, and the  
11 foregoing pages are a true and correct transcription to  
12 the best of my ability and control.

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

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