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

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

APPLICATION OF GOODNIGHT MIDSTREAM PERMIAN, LLC FOR APPROVAL OF A SALTWATER DISPOSAL WELL, LEA COUNTY, NEW MEXICO.

CASE NOs. 20720, 20721, 20722, 20723

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

September 19, 2019

Santa Fe, New Mexico

BEFORE: PHILLIP GOETZE, CHIEF EXAMINER
KATHLEEN MURPHY, TECHNICAL EXAMINER
DANA Z. DAVID, LEGAL EXAMINER

This matter came on for hearing before the New Mexico Oil Conservation Division, Phillip Goetze, Chief Examiner; Kathleen Murphy, Technical Examiner; and Dana Z. David, Legal Examiner, on Thursday, September 19, 2019, at the New Mexico Energy, Minerals and Natural Resources Department, Wendell Chino Building, 1220 South St. Francis Drive, Porter Hall, Room 102, Santa Fe, New Mexico.

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

APPEARANCES

FOR APPLICANT GOODNIGHT MIDSTREAM PERMIAN, LLC:

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

FOR INTERESTED PARTY NEW MEXICO STATE LAND OFFICE:

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

INDEX

	PAGE
Case Numbers 20720, 20721, 20722 and 20723 Called	5
Goodnight Midstream Permian, LLC's Case-in-Chief:	
Witnesses:	
Nathan Alleman:	
Direct Examination by Mr. Rankin	6
Cross-Examination by Examiner Goetze	16, 24
Cross-Examination by Examiner Murphy	37
Steve A. Drake:	
Direct Examination by Mr. Rankin	39
Cross-Examination by Examiner Murphy	60, 76
Cross-Examination by Examiner Goetze	61, 68
Cross-Examination by Examiner David	76
Thomas E. Tomastik:	
Direct Examination by Mr. Rankin	78
Cross-Examination by Examiner Murphy	97
Statement by Ms. Antillon of the State Land Office	98
Proceedings Conclude	98
Certificate of Court Reporter	99

EXHIBITS OFFERED AND ADMITTED

	PAGE
Case Number 20720:	
Goodnight Midstream Permian, LLC Exhibit Numbers 1 and 2	16
Goodnight Midstream Permian, LLC Exhibit Numbers 3, 4 and 5	50
Case Number 20721:	
Goodnight Midstream Permian, LLC Exhibit Numbers 1 and 2	23
Goodnight Midstream Permian, LLC Exhibit Numbers 3, 4 and 5	60
Case Number 20722:	
Goodnight Midstream Permian, LLC Exhibit Numbers 1 and 2	30/31
Goodnight Midstream Permian, LLC Exhibit Numbers 3, 4 and 5	68
Case Number 20723:	
Goodnight Midstream Permian LLC Exhibit Numbers 1 and 2	37
Goodnight Midstream Permian, LLC Exhibit Numbers 3, 4, 5 and 6	75

(9:01 a.m.)

EXAMINER GOETZE: Next is 20721, 20722, 20723 and Case Number 20720, application of Goodnight Midstream Permian, LLC for approval of a saltwater disposal well, Lea County, New Mexico. It is being consolidated with 20721, 20722, 20723. In light of that, they will also have the same application title.

Call for appearances.

MR. RANKIN: Good morning, Mr. Examiner.

Adam Rankin appearing on behalf of the Applicant in these cases.

We have three witnesses today.

MS. ANTILLON: Andrea Antillon on behalf of the State Land Office for all four cases, 20720, 20721, 20722 and 20723.

I have no witnesses, just a statement to make.

EXAMINER GOETZE: May the witnesses please stand, identify themselves to the court reporter and be sworn in?

MR. DRAKE: Steve Drake.

MR. ALLEMAN: Nathan Alleman, ALL Consulting.

MR. TOMASTIK: Tom Tomastik, ALL Consulting.

(Mr. Drake, Mr. Alleman and Mr. Tomastik sworn.

MR. RANKIN: Mr. Examiner, if I may take a moment to pass out the exhibits. I'd like to present each case through each witness all at once, if that's okay.

EXAMINER GOETZE: Yeah. I mean, we have an application -- four applications. Two are the same horizon. Two are another same horizon. The concern is about the individual characteristics of the well. I would imagine that that in general construction will be similar, but we can have a discussion about each and then note any difference. How about that?

MR. RANKIN: That sounds -- sounds --

EXAMINER GOETZE: That sounds peachy keen?

MR. RANKIN: Peachy keen.

EXAMINER DAVID: We like peachy keen.

MR. RANKIN: With that, Mr. Examiner, I'd like to call my first witness, Mr. Nathan Alleman.

NATHAN ALLEMAN,

after having been previously sworn under oath, was questioned and testified as follows:

DIRECT EXAMINATION

BY MR. RANKIN:

Q. Good morning, Mr. Alleman.

Will you please state your full name for the record?

A. Nathan Alleman.

Q. By whom are you employed?

A. ALL Consulting.

Q. And what is your position with ALL Consulting?

A. I'm a regulatory specialist and a project manager.

Q. Have you previously testified before the Division?

A. I have.

Q. And have you had your credentials as an expert in regulatory matters and SWD wells accepted as a matter of record?

A. Yes, I have.

Q. Will you please briefly summarize very briefly your prior experience permitting SWD wells in New Mexico and elsewhere?

A. Sure. I've managed the permitting of over 100 saltwater disposal wells throughout Texas, New Mexico, Louisiana, Oklahoma. And specifically in -- specifically in New Mexico, we have managed the permitting of over 75 saltwater disposal wells.

Q. And what is your role in the permitting of these disposal wells?

A. I'm a project manager for the -- for the saltwater disposal well applications. I compile and manage a team of experts, landmen, geologists and engineers, and oversee the overall completion of the applications in compliance with OCD's regulations.

Q. And you've been participating in the permitting of SWDs and the filing of C-108s in New Mexico in the Permian Basin?

A. Yes. That's correct.

Q. And you're familiar with the C-108 applications that were filed in each of these four cases?

A. I am.

Q. And you're familiar with the status of the lands and the notice that was provided in each case?

A. That's correct.

Q. And you've also conducted a review to identify all those affected parties who you've identified as being entitled to notice in this case under the Division rules?

A. That's correct.

MR. RANKIN: Mr. Examiner, at this time I would retender Mr. Alleman as an expert witness in saltwater disposal regulatory matters.

EXAMINER GOETZE: Ms. Antillon?

MS. ANTILLON: No objection.

EXAMINER GOETZE: So qualified.

Q. (BY MR. RANKIN) Mr. Alleman, we're going to take each case one at a time. So the first case we'll talk about is 20720, which is the Pudge Saltwater Disposal well. Before you, you have an exhibit packet for that case. Will you please just briefly summarize what it is Goodnight Midstream is requesting with this application before the Division?

A. Goodnight seeks authorization to drill and operate the Pudge Saltwater Disposal G No. 1.

Q. And is Exhibit Number 1 a copy -- a full and complete copy of the C-108 application that was filed administratively before the Division?

A. It is.

Q. And did you prepare that application for submission to the Division?

A. Yes.

Q. And it was filed administratively, but we're here at hearing today because the application was protested?

A. That's correct.

Q. And who was the protestant?

A. The State Land Office.

Q. Do you have an understanding for why the State Land Office protested this application?

A. My understanding is that they protested because our surface-hole location is within a half mile of state-owned surface.

Q. Okay. Let's go ahead and talk about the location. If you would turn to page 4 of Exhibit 1 in the C-108, will you just review for the examiners what the location is for this proposed injection well?

A. Yes. This well is 2,043 feet from the north line and 2,504 feet from the east line of Section 10, Township 22 South, Range 36 East.

Q. Okay. And what is the proposed injection interval formation and approximate depths that you're seeking to inject here?

A. We're looking to inject into the Glorieta Formation of depths from 5,750 feet to 6,500 feet.

Q. And just to -- you have an engineering witness to testify to this, but just for -- to get the numbers out there, what are the proposed average and maximum injection rates for this well?

A. Our proposed maximum injection rate is 20,000 barrels of water per day with an average of 12,500 barrels of water per day.

Q. And how about -- looking at page 5 of your C-108 under item number seven, that's where you have your operational conditions identified, right?

A. That's correct.

Q. And what would be the anticipated maximum injection operating pressure for the well?

A. The maximum injection pressure, surface-injection pressure, would be 1,150 feet, which is in accordance with the .2 psi per foot.

Q. Okay. And I think you said .2 psi per foot.

A. Oh. So yes. Sorry. 1,150 psi.

Q. And do you have an expectation what the average injection pressure would be based on this operation?

A. Approximately 575 psi.

Q. Now, will this be an open or closed injection well system?

A. This will be a closed system.

Q. And that will be a commercial injector?

A. That's correct.

Q. And what's the status of the lands on which the well is located?

A. This is fee surface and fee minerals.

Q. Now, is the C-108 complete? Does it contain all the information, to the best of your understanding, as required for approval by the Division?

A. Yes, it does.

Q. Is this an expansion of an existing project, or is this a new project?

A. A new project.

Q. Let's talk about the parties here. Does -- looking at page 36 of the C-108 in Exhibit 1, is this a list of all the parties that you've identified as being required -- entitled to notice within the half-mile area of review for this well?

A. It is.

Q. And that includes the surface owner?

A. Correct.

Q. Now, also listed here is the State Land Office. Did you also give notice to the State Land Office?

A. We did.

Q. Now, looking at -- flipping back to your Exhibit 1 at page 14, what does this map show on this page?

A. Page 14 shows the leases within -- within the area of our surface-hole location. It indicates a .5 mile -- there's a buffer for .5 miles, and all the leaseholders within .5 miles were notified of the application.

Q. Okay. And all the individuals were identified in that table we just reviewed; is that correct?

A. That's correct.

Q. Now, let's see. And now the people you've identified on this map and in the table we just

reviewed, were those all based on the ownership of the title of the lands and the interest as recorded in the Division's records and in the records of the County at the time the application was filed?

A. Yes.

Q. Now, looking -- flipping back again -- I'm sorry. I could have done this in a better sequence. But starting at page 37, going back to the end of Exhibit 1, are those the certified green card receipts indicating that all those individuals that we just identified had received notice of this application?

A. They are.

Q. Including the State Land Office?

A. That's correct.

Q. All right. Now, we also provided notice by publication. Is that identified on page 35 of Exhibit 1?

A. It is.

Q. And it reflects that an advertisement ran in the newspaper of general circulation in Lea County reflecting all the necessary information for publication of these saltwater disposal wells?

A. That's correct.

Q. In your opinion, did Goodnight Midstream undertake a good-faith effort to locate and identify all

the correct parties and their valid addresses required for notice within the half-mile area of review?

A. Yes.

Q. Are there any unlocatable interests or notice parties, that is, parties proven to -- identify a correct and valid address?

A. No.

Q. Now, looking at Exhibit 2 in your exhibit packet, is this a copy of an affidavit that was prepared by myself and my law firm reflecting that we have provided notice to the party that protested this application?

A. It is.

Q. And behind that affidavit, is there a copy of the letter that was sent to the State Land Office reflecting that we gave them notice of today's hearing?

A. Yes.

Q. And the following page is a certified -- status of the certified mailing reflecting that they did actually receive this notice?

A. That's correct.

Q. Of course, they're here today.

Now, in addition to notice, I wanted to talk about one other issue before we left the C-108 altogether, and that is water sampling. If you would

turn to page 22 of Exhibit Number 1, was Goodnight Midstream able to identify freshwater wells within a one-mile area surrounding the proposed location of this well?

A. Yes. We identified three -- three water wells within the -- within a one-mile radius, and two of those -- we contacted the landowners. Two of those were identified to be fresh and active water wells, and those wells were sampled.

Q. Okay. And were those samples included in the C-108 packet?

A. Yes, they were.

Q. And are those on the following pages?

A. Yes.

Q. And actually the very initial subsequent page, 23, reflects your efforts to obtain those water samples and the location of those wells; is that correct?

A. That's correct.

Q. And then the following pages contain the lab reports reflecting the results of those water samples --

A. That's correct.

Q. -- is that right?

Very good.

MR. RANKIN: With that, Mr. Examiners, I would move the admission of Exhibits 1 and 2 into the

records and pass the witness.

EXAMINER GOETZE: That would be for 20720.

MR. RANKIN: Just for 20720.

EXAMINER GOETZE: Ms. Antillon?

MS. ANTILLON: No objection.

EXAMINER GOETZE: Exhibits 1 and 2 for Case Number 20720 are so entered into record.

(Goodnight Midstream Permian, LLC Exhibit Numbers 1 and 2, in Case Number 20720, are offered and admitted into evidence.)

MR. RANKIN: Pass the witness for questioning.

MS. ANTILLON: No questions.

EXAMINER GOETZE: Ms. Murphy?

EXAMINER MURPHY: No questions.

CROSS-EXAMINATION

BY EXAMINER GOETZE:

Q. I notice this is designated as a G well, which I assume stands for Glorieta. Do we have a twin for this in the San Andres in the same area?

A. Yes, we do.

Q. Okay. And that is?

A. That will be the Beltre that we'll bringing up shortly.

Q. Okay.

EXAMINER GOETZE: That's all the questions I have for this witness on this case.

MR. RANKIN: Thank you very much, Mr. Examiner.

With that, I'd like to ask Mr. Alleman to stay seated, and we'll move on to Case Number 20721.

May I just -- for the record, Mr. Examiner, Mr. Alleman has been previously qualified today in the prior case.

EXAMINER GOETZE: I'll let you carry it through. I'm not going ask you to do that for each case.

MR. RANKIN: Very good.

EXAMINER GOETZE: We may be bureaucratic, but we won't torture you.

So proceed with each case.

Q. (BY MR. RANKIN) Mr. Alleman, let's turn to your exhibit packet for Case Number 20271. What is the name of the well that is associated with this application?

A. This is the Sosa SA 17 No. 2 well.

Q. And what is it that Goodnight Midstream is seeking with this application?

A. We seek authorization to drill and operate this well.

Q. Looking at Exhibit 1, is this the C-108 that

you prepared and submitted to the Division administratively for approval of this well?

A. Yes.

Q. And, again, this was protested by the State Land Office, which is why it went to hearing today?

A. That's correct.

Q. And your understanding for why the State Land Office protested?

A. Similarly, it was because the surface-hole location is within a half mile of state-owned lands.

Q. Will you please review for the examiners, referring to page 4 of Exhibit 1, the location of this well?

A. This well is 470 feet from the south line and 1,850 feet from the west line of Section 17, Township 21 South, Range 36 East.

Q. And what will be the proposed injection formation and injection intervals for this well?

A. The proposed injection formation is the San Andres with an injection interval of 4,500 to 5,350.

Q. And turning to the next page of Exhibit Number 5, will you just review for the examiners what the proposed maximum and average injection rates will be for this well?

A. The maximum injection rate would be 25,000

barrels of water per day, with an expected average of 17,500 barrels of water per day.

Q. And what will be the injection -- injection -- surface-injection pressures?

A. The maximum surface-injection pressure will be 900 psi -- again, that's per OCD regulations -- with an average surface-injection pressure of 450 psi.

Q. Will this be an open or closed injection well system?

A. Closed.

Q. It will be a commercial injector?

A. Correct.

Q. And what are the status of the lands on which this well is located?

A. This is fee surface and BLM minerals.

Q. And is the C-108 complete and does it contain all the information that is necessary for approval by the Division under the UIC regulations?

A. Yes, it does.

Q. Now, this will be a new project as opposed to an existing project expansion?

A. Correct. It'll be a new project.

Q. Now, let's look at -- let's turn to page 14 of Exhibit Number 1. Will you review for the examiners what that map shows?

A. Uh-huh. Page 14 shows the mineral leases within one-half mile of our proposed surface-hole location, and the mineral -- the leaseholders are included in the notices -- notice of application.

Q. And if you flip to page 27, is that a tabulation of all the parties you've identified as being entitled to notice under the Division rules within that half-mile area of review?

A. It is.

Q. And that includes the surface owner, as well as the BLM in this case?

A. That's correct.

Q. Now, flipping over to page 15 -- rather -- I'm sorry. Let me go back to page 13. What does that map show?

A. 13 shows the oil and gas wells per OCD's records that are within -- within two miles of the proposed surface-hole location.

Q. Let me see. And then page 15 of that exhibit, is that a tabulation of all the wells that are within the half-mile area of review; is that right?

A. That's correct.

Q. That are reflected on that map?

A. That's correct.

Q. Now, were all the parties you've identified as

being entitled to notice, were they all identified based on the title of the lands and the interest as recorded in the records of the County and the OCD records and the BLM records at the time the application was filed?

A. Yes, they were.

Q. Do pages 28 through 30 of Exhibit 1 -- do they reflect that notice was provided by certified mail, return receipt requested to each of those parties identified?

A. Yes, they do.

Q. Did you also provide notice by publication as reflected on page 26 of the exhibit?

A. Yes. That's correct.

Q. In your opinion, did Goodnight Midstream undertake a good-faith effort to identify all the correct and valid addresses for parties within the half-mile area of review required for notice?

A. Yes.

Q. Were there any unlocatable parties that you could not find a correct address for in that area?

A. No.

Q. Turning to Exhibit 2 in your exhibit packet, is this a copy of the affidavit prepared by my law firm reflecting that we had provided notice to the State Land Office of this hearing because they had protested this

application?

A. Yes.

Q. On the second page, is that a copy of the letter that was sent to the State Land Office?

A. It is.

Q. And the last page of that exhibit, is that a copy of the certified mailing status --

A. Yes.

Q. Now, as with the other case real quickly, we talked about the water sampling. Turn to page 22 of your Exhibit Number 1. What does that exhibit page reflect?

A. Page 22 shows the water wells of record that were within -- located within one mile of our surface-hole location.

Q. Were you able to assess any of those water wells to take water samples?

A. Yes. We were able to get in touch with one landowner to collect a water sample. Two of the other water wells were determined to be temporary abandoned. They were not active at the time. There was one -- there was one other water well that -- owned by the U.R. Cattle Company. After calling all the available phone numbers and sending a letter to the available address, we did not -- we were not able to contact that

landowner. And a field survey -- there was not a -- there was not a reasonable address or residence to be able to go knock on the door at the time.

Q. So your efforts in the well locations that you identified on the map are included in the table on page 23 of the exhibit; is that correct?

A. That's correct.

Q. Okay. And then for the well that you were able to collect water samples for, those samples are starting on pages 24, 25 of the -- page 24 of the exhibit; is that right?

A. That's correct.

MR. RANKIN: With that, Mr. Examiner, I would move the admission of Exhibits 1 and 2 into the record.

EXAMINER GOETZE: Ms. Antillon?

MS. ANTILLON: No objection.

EXAMINER GOETZE: For Case Number 20721, Exhibits 1 and 2 are so entered into the record.

(Goodnight Midstream Permian, LLC Exhibit Numbers 1 and 2, in Case Number 20721, are offered and admitted into evidence.)

MR. RANKIN: With that, I'd pass the witness, Mr. Examiner.

EXAMINER GOETZE: Ms. Antillon?

MS. ANTILLON: No questions.

EXAMINER MURPHY: No questions.

CROSS-EXAMINATION

BY EXAMINER GOETZE:

Q. The well location, is that a stock tank or a windmill, or was it real?

A. It said -- it said that it was used for -- used for livestock watering. We did not have permission to go onto their property, so we could not see that.

Q. Oh, no. They will shoot you.

(Laughter.)

A. I appreciate that ahead of time.

Q. Thank you for that information.

EXAMINER GOETZE: Mr. David, do you have any questions?

EXAMINER DAVID: I have no questions.

EXAMINER GOETZE: As far as 20721 -- we can move to the second one.

MR. RANKIN: Thank you, Mr. Examiner.

Q. (BY MR. RANKIN) Mr. Alleman, will you please -- before you is an exhibit packet. Will you please explain to the examiners what it is that Goodnight Midstream is seeking with respect to this application?

A. Goodnight seeks authorization to drill and permit this -- the saltwater disposal well for the

Beltre SWD SA No. 1.

Q. And in the exhibit packet in front of you, Exhibit Number 1, is that the C-108 that you prepared and submitted and filed administratively with the Division for approval of that well?

A. This is.

Q. And, again, this well was protested by the State Land Office, which is why we're at hearing today?

A. Correct.

Q. What is your understanding for the basis for the State Land Office's objection here?

A. Being within -- our surface-hole location being within one-half mile of state-owned lands.

Q. Turning to page 4 of Exhibit 1, will you review for the examiners the location of this proposed well?

A. The surface-hole location is 2,118 feet from the north line and 2,374 feet from the east line of Section 10, Township 22 South, Range 36 East.

Q. And what are the proposed injection -- what's the proposed injection formation and approximate depth of the injection intervals here?

A. The proposed injection formation is the San Andres with an injection interval of 4,450 feet to 5,750 feet.

Q. Turning to the next page of your Exhibit Number

5 and referring to item number seven on that page, will you review for the examiners what the proposed injection volumes will be and the intersection pressures?

A. The maximum injection rate will be 25,000 barrels of water per day with an expected average injection rate of 17,500 barrels of water per day and the maximum surface-injection pressure will be 890 psi, which is in accordance with OCD's regulations, with an expected average injection pressure of 445 psi.

Q. Now, will this be an open or closed injection system?

A. Closed.

Q. Will it be a commercial injector?

A. That's correct.

Q. And what is the status of the lands on which this proposed well is located?

A. It is on fee surface and fee minerals.

Q. Does the C-108 contain all the information required by the Division for approval?

A. Yes, it does.

Q. And this will be a new project?

A. That's correct.

Q. Looking at page -- starting on page 13, please review for the examiners what's on page 13.

A. Page 13 shows the oil and gas wells within the

area specifically. The oil and gas wells are within the one-half-mile area of review.

Q. And are all the wells that you've identified from OCD records included on this map?

A. That's correct.

Q. And on page 15, is that a table that reflects the information for each of those wells that you've identified on this map?

A. Yes, it does.

Q. And then flipping over to page 14, what does that map show?

A. This map shows the leases in the area of the surface-hole location, specifically leases within the .5-mile area of review.

Q. And flipping over to page 36 of Exhibit 1, does that identify each of the parties you've identified as being entitled to notice within that half-mile area of review?

A. It does.

Q. Including the surface owner?

A. That's correct.

Q. And while they're not listed here, you also provided notice to the State Land Office of this administrative application?

A. They are listed on the leasehold operators'

list --

Q. Oh, I see.

A. -- the Commission of Public Lands.

Q. Sorry. I missed that.

And the following pages, from 37 to 39, reflect that each of those parties did receive notice of this administrative application?

A. Yes.

Q. You also provided notice by publication as reflected on page 35?

A. That's correct.

Q. And that's an Affidavit of Publication just showing that it actually did run in one of the papers in the county?

A. That's correct.

Q. And the notice that you provide to each of these parties was based on the valid and correct addresses in the records of the County and of OCD at the time the application was filed?

A. That's correct.

MR. RANKIN: I'm getting confused by what I said in this case by the last case.

EXAMINER GOETZE: Yeah.

Q. (BY MR. RANKIN) In your opinion, did Goodnight Midstream undertake a good-faith effort to identify the

valid and correct addresses for all the parties entitled to notice?

A. Yes.

Q. Did you identify any unlocatable parties or parties that you could not confirm had a valid and correct address?

A. There were none.

Q. Looking at Exhibit 2, is that a copy of the affidavit prepared by me reflecting that we provided notice of this hearing to the sole protestant in this case?

A. Yes.

Q. The following pages are the letter and the status of the mailing that went out to that party?

A. That's correct.

Q. And then let's turn to page 22 of Exhibit Number 1. Mr. Alleman, did you make an effort to identify -- collect freshwater samples within a one-mile area of the proposed well?

A. We did.

Q. And is that reflected on the map on page 22?

A. That's correct.

Q. Will you explain for the examiners what you -- whether you were able to collect water samples and where they were?

A. Uh-huh. We identified three water wells within -- within one mile. And two of these -- two of these water wells were determined to be freshwater wells and actively producing, so they were sampled. The third was -- the contact was unaware of that well being present, and the files for the -- the files for the well in the State Engineer's Office indicated that that file was being closed.

Q. So you only collected samples for two of the wells. Are those sample results reflected on pages 24 through 33 of Exhibit Number 1?

A. Yes, they are.

MR. RANKIN: With that, Mr. Examiner, I'd move the admission of Exhibits 1 and 2 in Case Number 20722.

MS. ANTILLON: No objection.

EXAMINER GOETZE: Very good.

MR. RANKIN: Pass the witness.

EXAMINER GOETZE: Well, let's put these in the record.

MR. RANKIN: Oh, yeah. You can do that.

EXAMINER GOETZE: Case Number 20722, Exhibits 1 and 2 are so entered into the record.

(Goodnight Midstream Permian, LLC Exhibit Numbers 1 and 2, in Case Number 20722, are

offered and admitted into evidence.)

MS. ANTILLON: No questions.

EXAMINER GOETZE: Ms. Murphy?

EXAMINER MURPHY: No questions.

EXAMINER GOETZE: No questions?

Let's proceed on to 20723.

MR. RANKIN: Thank you, Mr. Examiner.

Q. (BY MR. RANKIN) Mr. Alleman, will you please explain what it is, in Case Number 20723, that Goodnight Midstream is requesting of the Division?

A. They're seeking authorization to drill and operate the Nolan Ryan G No. 2.

Q. And is Exhibit Number 1 in that packet in front of you in that case, is that a copy of the full and complete C-108 that was filed by you on behalf of Goodnight Midstream and the Division?

A. It is.

Q. And the reason that we're here again is because the application was protested by the State Land Office; is that correct?

A. That's correct.

Q. Do you have an understanding for why it was protested again?

A. Because the surface-hole location is within one-half mile of state-owned lands.

Q. Turning to page 4 of Exhibit 1, will you review for the examiners the location of this proposed well?

A. The surface-hole location for this well is 785 feet from the south line and 1,605 feet from the east line of Section 13, Township 21 South, Range 36 East.

Q. And referring to that same page, will you identify for the examiners what the proposed injection formation is in the approximate injection intervals for this well?

A. The proposed injection formation will be the Glorieta with an injection interval of 5,200 feet to 5,600 feet.

Q. And turning to the next page, 5, looking at item number seven on the C-108, will you review for the examiners what the proposed injection rates will be, as well as the surface injection pressures for this well?

A. The proposed maximum injection rate is 20,000 barrels of water per day with an expected average of 12,500 barrels of water per day. The proposed maximum surface-injection pressure is 1,040 psi per OCD's regulations, and the average injection pressure is expected to be approximately 520 psi.

Q. And will this be an open or closed injection system?

A. Closed.

Q. Will it be a commercial injector as well?

A. That's correct.

Q. What's the status of the lands on which this proposed well will be located?

A. This is on fee surface and fee minerals.

Q. And, again, is the C-108, to the best of your understanding, complete and contain all the information required for approval by the Division?

A. It is.

Q. And this is a new project?

A. Correct.

Q. Okay. Turning to page 13, will you please review for the examiners what this map shows?

A. This map shows the oil and gas wells per OCD's records within two miles of our surface-hole location.

Q. And then all those wells you've identified within a half-mile area on that map are reflected on the table contained at page -- this number is really small. Well, it's 15. And I give you my word it's page 15, but you can't read it. Okay? Is that correct?

A. Yes.

Q. And that contains all the information of the location and names of those wells and the API numbers necessary for the Division to conduct its review?

A. Correct.

Q. Now, flipping over to page 14, what does that map show on your exhibit?

A. Page 14 shows the leaseholds in the area of the proposed surface-hole location, specifically leaseholds within one-half mile of the surface hole, which would be required to be notified of the application.

Q. And then looking at page 28 of Exhibit Number 1, are those the parties you've identified as being entitled to notice of this application?

A. They are.

Q. And that includes, again, the Commissioner of Public Lands and the BLM in this case?

A. That's correct.

Q. And you identified these parties based on the addresses of record, title and county, Division and BLM records at the time this application was filed?

A. That's correct.

Q. And in your opinion, did Goodnight Midstream undertake a good-faith effort to identify valid and correct addresses for the notice parties?

A. Yes.

Q. Did you identify any unlocatable interests for whom you did not have a valid and correct address?

A. We did not.

Q. And then flipping to page 29, to the end of

Exhibit 1, are those all the green cards reflecting that notice of this administrative application went out to each of those parties?

A. Yes, it does.

Q. And did Goodnight also provide notice by publication as required by the regulations?

A. We did.

Q. Is that reflected on page 27 by a notice -- an Affidavit of Publication in the newspaper in the county where the well is located?

A. It is.

Q. Okay. Flipping to Exhibit 2, is that a copy of the affidavit prepared by my law firm reflecting that we gave notice of today's hearing to the sole protestant in this case, the State Land Office?

A. Yes.

Q. Included in that exhibit is a letter that went to the State Land Office, and then the last page is a copy of the tracking information reflecting that the notice to the State Land Office was actually received for today's hearing?

A. That's correct.

Q. Now, as with the other cases, were you able to identify some freshwater samples within a one-mile area of the proposed well?

A. Yes, we were.

Q. And did you prepare a map reflecting the location of those wells on page 22 of Exhibit 1?

A. We did.

Q. Tell me about those wells and how many you were able to find and whether or not you collected samples.

A. We were able to contact landowners and collect two water samples from these -- from the wells that were within one mile.

Q. How many wells did you find within one mile?

A. I believe there were seven.

Q. Okay. And a number of these, you either sampled or already had samples on record; is that correct?

A. That's correct.

Q. And the information on each of those wells and their locations is reflected on page 23?

A. That's correct.

Q. And then the samples for the wells that are on file -- or that you were able to collect, those are included on subsequent pages of this exhibit?

A. That's correct.

MR. RANKIN: With that, Mr. Examiner, I would move the admission of Exhibits 1 and 2 in Case Number 20723.

MS. ANTILLON: No objection.

EXAMINER GOETZE: Exhibits 1 and 2 in Case Number 20723 are so entered.

(Goodnight Midstream Permian, LLC Exhibit Numbers 1 and 2, in Case Number 20723, are offered and admitted into evidence.)

MR. RANKIN: With that, Mr. Examiner, I will pass the witness for questioning.

MS. ANTILLON: No questions.

EXAMINER GOETZE: No questions.

CROSS-EXAMINATION

BY EXAMINER MURPHY:

Q. I have a request. Is it possible to get an exhibit with all four of these wells shown so that you can relate one to the other, since some of them are San Andres and some are Glorieta?

A. In terms of surface-hole locations?

Q. Yes.

A. Yes. We would be able to do that.

Q. Is it possible to get a C-102 on these --

A. Yes.

Q. -- and make sure I get the Division's location data in decimal degrees?

A. Sure.

Q. Thank you.

EXAMINER GOETZE: We are trying to enter the 20th century -- 21st century. So we are using GIS and decimal degrees --

THE WITNESS: Got it.

EXAMINER GOETZE: We do that. And especially your applications, that will help us a lot.

THE WITNESS: Right. We will do that going forward.

EXAMINER GOETZE: Thank you.

And we just got done with the Nolan Ryan No. 1. I have no questions of this witness on this one.

MR. RANKIN: Thank you very much.

Mr. Examiner, may I take a break to get a drink of water?

EXAMINER GOETZE: No, you can't. You have to talk dry. Actually, your next witness coming up, I think we're all going to take a break. Let's do 15.

EXAMINER MURPHY: Five of?

EXAMINER GOETZE: Yeah. Let's go towards five of. Let's take a break, and we'll submerse into your next witness.

(Recess, 9:38 a.m. to 10:01 a.m.)

EXAMINER GOETZE: Let's go back on the record and your next witness.

MR. RANKIN: Thank you, Mr. Examiner.

I'd call Goodnight's second witness, Mr. Steve Drake.

STEVE A. DRAKE,

after having been first duly sworn under oath, was questioned and testified as follows:

DIRECT EXAMINATION

BY MR. RANKIN:

Q. Good morning, Mr. Drake.

Will you please state your full name for the record?

A. Steve Allen Drake.

Q. By whom are you employed?

A. Goodnight Midstream.

Q. In what capacity?

A. I am vice-president of geology and reservoir engineering.

Q. And have you previously testified before the Division?

A. Yes.

Q. And were your credentials as an expert in geology accepted as a matter of record?

A. Yes.

Q. Will you just briefly, for the benefit of the examiners before you today, summarize your education and work experience as a petroleum geologist?

A. I have a bachelor's and master's degree in geology, and I have worked in underground injection control in several different capacities for private companies. I have handled gas storage, waterflood formation and operations. I've handled saltwater disposal in New Mexico, Texas and North Dakota. And I monitor the performance of all of Goodnight's wells that are in operation.

Q. And are you familiar with the applications that were filed in the three cases that are being considered by the Division today?

A. Yes.

Q. Have you conducted a study of the geology and the lands that are the subject area of these wells?

A. Yes.

MR. RANKIN: Mr. Examiner, I would retender Mr. Drake as an expert in petroleum geology.

EXAMINER GOETZE: Ms. Antillon?

MS. ANTILLON: No objection.

EXAMINER GOETZE: He's so qualified.

MR. RANKIN: Thank you very much.

Q. (BY MR. RANKIN) First turn to the first case here in the series, 20720, and that's the case that pertains to the proposed Pudge SWD G well; is that correct?

A. That is correct.

Q. Now, you're familiar with the geology that is within the subject area within the well -- within the area of the subject well?

A. Yes, I am.

Q. What is the proposed injection zone formation for this well?

A. Glorieta.

Q. What are the approximate intervals for the injection depth?

A. 5,750 to 6,500.

Q. Okay. Now, does the C-108 contain the information -- the geologic information necessary for approval?

A. Yes, it does.

Q. And that's at page 5 of Exhibit Number 1?

A. Yes.

Q. Now, you've prepared some additional exhibits and testimony that will elucidate further your analysis of this injection zone and why you believe it's suitable for injection?

A. That's correct.

Q. Will you please review for the examiners just generally? Give us an overview of the geology in the area and the overlying and underlying injection zone and

then also of the injection zone and why you believe, in this case, it's a suitable area for injection?

A. Can you give me the reference to the geologic tops?

Q. Sure. I think they are --

EXAMINER GOETZE: I believe it's five.

MR. RANKIN: Yes.

THE WITNESS: Page 5?

Q. (BY MR. RANKIN) It should be page 5, but I'm not sure if it contains all the tops in there.

A. I don't think we did.

But the setting here is we have potable water down to about 180 feet in what is referred to as red beds. This is not really great quality water. It has a salinity component to it and an iron component. We have not identified it extending anywhere deeper than 180 feet. We will then have the -- well, the red beds extending down to the Rustler at about 1,300 feet. We'll be setting our surface casing down to the Rustler.

Below that, we'll have the Salado until we reach the carbonates and anhydrites at the base of that interval. We do pass out of that into the Tansill-Yates-Queen-Seven Rivers-Grayburg of the Artesia Group. Below that is the San Andres, which is an extensive, 1,000-foot-thick carbonate interval. Below

that, we will have the Glorieta and then other Leonard carbonates underneath the Glorieta before we would reach the base of the Leonard.

Q. You have an exhibit that zeros in on the geology above and below the injection interval; is that correct?

A. Yes, I do.

Q. Is that Exhibit Number 3 in your exhibit packet?

A. It is.

Q. Will you review for the examiners what this exhibit shows and discuss in more detail the rocks above and below and how they will help to contain the injection fluids in this area?

A. Yes. What we have here are two logs that are on either side of the proposed location, the Pudge 1G. The blue-colored bands represent the presence of porosity in the San Andres interval above the Glorieta. The Glorieta porosity is shown in the green tone. What we see is that the well to the right has very well-developed porosity over a very long interval. It is very small, but the depth column is in 100-foot intervals, the labeling is. So we're talking about an interval that is several hundred feet thick.

The well on the left-hand side is a sonic

log, and it does not manifest the porosity visually like the neutron density does because a lot of this is vug and fracture porosity, and the sonic log doesn't see that. But we do see that the interval is present, and it is confined by 300 feet of the tight rock barrier above it and 350 feet of tight rock barrier below it.

Q. So you've examined the available geologic data on the proposed injection formation in the area?

A. Yes, I have.

Q. And have you come to the conclusion of whether or not you believe the formation -- the injection zone here will be able to contain the injection fluids and keep them within that zone?

A. Yes, it will.

Q. Now, has Goodnight Midstream prepared a geologic statement by you indicating that you have reviewed all the geologic summations and identified the hydrological connections between the proposed injection zones and any transfer of drinking waters?

A. Yes. I have prepared that statement, and no, there are not any connections between the injection zone and any potable drinking water.

Q. Is that included in your exhibit packet, Exhibit Number 4?

A. It is.

Q. Now, as to hydrocarbons within the area, are there any -- within the vicinity of this proposed well, are there any zones that are productive of hydrocarbons?

A. There are zones that are productive of hydrocarbons, and we are not in any close proximity to them. And we do have the exhibit.

Q. Okay. Let's turn to that. Exhibit Number 5; is that correct, Mr. Drake?

A. Yes, it is.

Q. Will you review for the examiners what Exhibit Number 5 shows and refer to each of the features on the map?

A. Yes. Okay. What we're looking at here, the black contours are structure contours on top of the Glorieta Formation. Posted on that are several different pieces of information. The green circles are places where the Glorieta has produced hydrocarbons. The gray circles are places where the Glorieta was penetrated and not productive of hydrocarbons, saltwater wet. So we see that there are limits to the field, proven limits, where the hydrocarbons are not present.

The Pudge location is in Section 10 at the bottom center of the map, and it is a gold diamond, if you see where that is on the map. So we're a long ways away from the green circles, which are the Glorieta

production.

The other symbols on this map, there are dark-blue symbols with labels that are a volume of water. Those are existing saltwater disposal wells and the volume of water that has been disposed into each one of them.

And then the lighter blue, which are mostly centered at the top left of the map and then there's two at the lower right, those are water supply wells, which have pulled water out of the San Andres Formation. And the volume of water that's been pulled out, that water was used for waterflooding in the Monument field and the Arrowhead field.

So we have more water pulled out than we put water in. And, of course, I'm speaking to all of the activity in the area because we really want to see the context in which our wells are being placed.

Q. On that note, Mr. Drake, you have prepared -- or prior to the filing of these applications and the previous applications that the company has filed, you've undertaken a fairly extensive study of the condition of this area and have determined that it's a very suitable location for injection wells; is that right?

A. That is correct.

Q. And that's essentially, as you were alluding

to, that there were significant volumes of water extracted from these zones over time?

A. Yes.

Q. And that makes then ideally suitable and capable of receiving large volumes of disposal to accommodate the -- everything that's going on in the Permian at this point; is that correct?

A. That is correct.

Q. So you have no doubt, based on that and on the historical context and your sort of mass balance evaluation of these zones, that the Glorieta here can accept and receive the proposed volumes and rates that you're proposing for this well and the wells in the area?

A. Yes.

Q. Now -- so in your opinion, Mr. Drake, will there be any impairments or any impacts to hydrocarbon production in this area that's depicted on this map based on your injections?

A. We do not see any interference with offset operator production.

Q. Now, let's talk about fresh water in the area. When you were giving your geological review, you identified there were some zones of fresh water -- relatively fresh water within this area. Which were

they again?

A. It was the near-surface red beds down to a depth of about 180 feet.

Q. Are you aware of any other sources of fresh water below those zones?

A. No. There is not any.

Q. Now, are there any -- let's see. We did that. In your opinion, then, Mr. Drake, based on your analysis of the -- of the geologic strata and the ability for those zones, with the underlying and overlying strata containing the injection, is there any threat or risk to underground sources of fresh water in the area?

A. No, there is not.

Q. Now, let's talk about the injection source here. Do you have an idea of what the source of the injection fluids will be?

A. It will be a very broad range of sources. It can be from zones within the Artesia Group, as well as the Delaware, but it will be dominated by water from the Bone Spring and Wolfcamp out in the Delaware Basin.

Q. And have you been able to collect and report on what the water chemistry is for the water you propose to inject?

A. Yes, we have.

Q. Okay. And if you would turn to page 18 in Exhibit Number 1 in the packet before you, is that a tabulation of the produced water that you will be injecting into the Glorieta in this area?

A. Yes, it is.

Q. Those contain all the -- all the analytes necessary to establish the compatibility of that water?

A. That's correct.

Q. Now, you've also prepared a water chemistry analysis of the injection zone as well?

A. Correct.

Q. Is that identified on page 20 of your Exhibit Number 1?

A. Yes, it is.

Q. I apologize for the scale of the print.

EXAMINER GOETZE: That's pretty bold considering that we had a complaint about our little docket.

MR. RANKIN: I don't know that I complained about it.

(Laughter.)

EXAMINER GOETZE: Okay. We'll make an exception.

Q. (BY MR. RANKIN) Now, Mr. Drake, that table identifies the water samples you were able to collect

for the receiving formation?

A. That is correct.

Q. And based on -- on these samples and the samples for the produced water that you propose to inject, have you identified any concerns of the compatibility between those two fluids?

A. We do not have any concerns.

Q. I want to make sure I got everything.

In your opinion, Mr. Drake, will the granting of this application be in the best interest of conservation, the protection against waste and the protection of correlative rights?

A. Yes, it will.

MR. RANKIN: Mr. Examiner, at this time I would move the admission of Exhibits 4 -- 3, 4 and 5 into the record.

MS. ANTILLON: No objection.

EXAMINER GOETZE: Exhibits 3, 4 and 5 in Case Number 20720 are entered.

(Goodnight Midstream Permian, LLC Exhibit Numbers 3, 4 and 5, in Case Number 20720, are offered and admitted into evidence.)

MR. RANKIN: No further questions.

EXAMINER GOETZE: Very good.

MS. ANTILLON: No questions.

EXAMINER MURPHY: No questions.

EXAMINER DAVID: No questions.

EXAMINER GOETZE: I have no questions of this witness.

MR. RANKIN: Mr. Examiner, if I might -- I meant to ask this before -- point this out from some questions from Examiner Murphy about the relative location of the wells.

EXAMINER GOETZE: Proceed.

Q. (BY MR. RANKIN) Mr. Drake, if you would turn to -- I think Exhibit 5 is the exhibit that would do it.

And if this is not adequate, I would be happy to supply an additional exhibit?

But, Mr. Drake, Exhibit 5, does it indicate on this map the locations of the other wells that are currently before the Division at this time?

A. It indicates three of the four.

Q. Three of the four. All right.

And then you have to combine another map with another exhibit?

A. That's right.

MR. RANKIN: So with that, we'll go ahead and submit one exhibit that shows all four together.

EXAMINER GOETZE: Something that we can expand and see?

MR. RANKIN: Yes.
THE WITNESS: Yes.
EXAMINER MURPHY: Thank you.
EXAMINER GOETZE: And it includes other existing operators as well?
THE WITNESS: It does.
EXAMINER GOETZE: Okay.
MR. RANKIN: Very good.
With that, I have no further questions of this witness in this case.
EXAMINER GOETZE: In that case, let's move on to the next one.

Q. (BY MR. RANKIN) Okay. Mr. Drake, you have an exhibit packet for the next case in this series, Case Number 20721. Do you have that before you?

A. I do.

Q. That's good.

This is the case related to the Sosa SWD well; is that correct?

A. That is correct.

Q. Okay. Now, as with the other case, you're familiar with the geology and have conducted a study of the geology in the area of this proposed well?

A. Yes, I am.

Q. What is the formation that you propose to

inject to in this area, as well as the proposed injection intervals -- the approximate depths here you propose to inject into?

A. We propose to inject into the San Andres Formation from a depth of 4,500 feet to a depth of 5,350 feet.

Q. And referring to Exhibit 1 in your packet before you, if you would turn to page 5, item number seven on that page, does this contain the overview of the geology in the area?

A. Yes, it does.

Q. And in addition, you prepared some additional exhibits highlighting or emphasizing in more detail discussing the proposed injection zone and the overlying rocks just above and below the injection zone?

A. That's correct.

Q. Referring to Exhibit Number 3 in your exhibit packet, will you just review for the examiners the strata immediately above and below the proposed injection zone and explain to the examiners how, in your opinion, the proposed injection will be contained by the geology in the area?

A. Goodnight Midstream drilled the Snyder Ryno No. 1 in July of 2018. That's the log that you see immediately to the right of the proposed location which

is also in Section 17. When we drilled this well, we did a fair amount of work and model logging, as well as drill-padding analysis as to what type of rocks and porosity we were passing through.

During the period of time that we were drilling this well, we had significant loss of circulation in the San Andres porosity intervals. It was unable to hold a column of fluid. And as I discussed earlier, the reason it cannot hold a column of fluid is because over 500 million barrels of water have been pulled out of the San Andres by the water supply wells that supplied the Grayburg waterflood at the Monument Unit. And as a result, it has created an opportunity in that this is a very vast subnormally pressured reservoir where we can put water in it for a long time before it's back to normal. And once it's back to normal, then you would start where a normal saltwater disposal well begins in terms of pressuring up a horizon.

The thicknesses here are significant. The porosities are good. The formation is dolomite. It's competent rock. It has barriers and seals, which are dominantly anhydrite, and we find those to be very good barriers and seals. So we find this as being a very high-quality location.

Q. So those barriers you're referring to are both overlying and underlying the injection interval?

A. That is correct.

Q. And those, in your opinion, would be adequate to contain the injection fluids within the zone you propose to inject into?

A. Yes.

Q. So based on your analysis, Mr. Drake, it's your opinion that there is no question that the proposed injection zone will be able to contain the volumes of fluid proposed for injection and that they will stay within the zone?

A. Yes.

Q. And as with the prior case, have you prepared a geologic statement yourself reflecting that you've not identified in your review any hydrologic connection between the injection intervals here and any sources of underground drinking water?

A. Correct. We do not have any indication that it will communicate with any source of drinking water.

Q. And that statement is included in your exhibit packet as Exhibit Number 4?

A. It is.

Q. Now, let's talk about hydrocarbons in the area. You haven't evaluated whether or not there are any

prospective zones or intervals within your injection vicinity?

A. Correct.

Q. And is there any hydrocarbon production within the area of the well?

A. There is no San Andres hydrocarbon production, as well as the documentation that 500 million barrels of saltwater have been taken out of the zone without any shows of hydrocarbon. So this one is very well-documented as to what water was in place under initial conditions.

Q. And if you would turn to Exhibit 5 in the packet, the last exhibit there, will you just review for the examiners what this shows and how you used it in your analysis?

A. Okay. This is a structure -- the gray -- the black lines are contours -- structural contours on top of the San Andres Formation. We have several different symbol sets here. It's obvious that the picture is very busy. But you will see that there is a green polygon, and inside of it is a very large number of both green triangles and blue triangles. The green polygon is the Grayburg waterflood unit. The green triangles are Grayburg producers, and the blue triangles are Grayburg injectors. So we have a patterned waterflood here, and

this flood is very mature and near the end of its economic life and is becoming a hand-me-down project, as it is now sold off to new owners.

The other overlays that we have on this, there are quite a few symbol sets. Gold are -- the gold circles are operating Goodnight Midstream saltwater disposal wells. We have three. The gold diamonds are not drilled SWD applications by Goodnight. The blue diamonds are SWD applications by another operator, but we're just showing the density and location of all data.

And then as I described before, the dark blue circles are existing saltwater disposal wells by other operators, and the light blue circles are water supply wells that pull water out of the formation. Many of those are at the end of their service life and no longer functioning or abandoned.

The brown polygon on the left center of the map is the 3D seismic survey that we purchased over the area, which gives us supplemental geologic information about thicknesses and structures.

The Sosa location, which we are currently discussing, is the gold diamond on the center left of the map in Section 17 and within the seismic survey. What we see here is that there is no San Andres oil and gas production on the map. The San Andres has been a

saline aquifer at every location.

Q. In your opinion, Mr. Drake, will the injection into the San Andres here -- will it be protective of the production for hydrocarbons in the overlying formations?

A. That is correct.

Q. So in your opinion, there will be no -- no impact or impairment to any correlative rights as a result of this proposed injection?

A. That's correct.

Q. Now, in your prior testimony in Case Number 20720, you gave an overview of the geology in the area. That is applicable here as well --

A. It is.

Q. -- generally?

Now, are there -- based on your overview of the geology here, are there freshwater zones in the shallower areas of this -- of this -- for this area?

A. Yes. As we described earlier, down to about 180 feet, there are water wells in the surface red beds.

Q. And to your knowledge, are there any deeper sources of fresh water, drinking water in this area?

A. There are not any.

Q. And in your opinion, will injection into this well, as a result of the geology, impair or harm or damage in any way the sources of fresh water in the

shallower zones?

A. It will not.

Q. Now, do you have an idea of what your injection fluids will be? We discussed that previously. Same case for this well?

A. It will be the same sources for this well.

Q. Which are principally going to be Bone Spring, Wolfcamp?

A. Bone Spring, Wolfcamp.

Q. And you have been able to obtain water chemistry analyses of those source fluids?

A. Yes.

Q. Those are identified on page 18 of Exhibit Number 1?

A. Yes, there were.

Q. And that includes the water chemistry analyses that you would need to determine compatibility issues?

A. That is correct.

Q. And flipping to page 20, you also were able to obtain water analyses for the receiving reservoir as well; is that right?

A. That is correct.

Q. Okay. And based on those water samples, you have not identified any concerns for the compatibility over the water chemistry as far as you have determined?

A. No concerns over water compatibility.

Q. And in your opinion, will the granting of this application be in the best interest of conservation of resources, protection against waste and the protection of correlative rights?

A. It will be.

MR. RANKIN: Mr. Examiner, at this time I would move the admission of Exhibits 3, 4 and 5 for the record.

EXAMINER GOETZE: Ms. Antillon?

MS. ANTILLON: No objection.

EXAMINER GOETZE: In Case Number 20721, Exhibits -- is that 3, 4 and 5?

MR. RANKIN: 3, 4 and 5.

EXAMINER GOETZE: Are so entered.

(Goodnight Midstream Permian, LLC Exhibit Numbers 3, 4 and 5, in Case Number 20721, are offered and admitted into evidence.)

MR. RANKIN: No further questions.

MS. ANTILLON: No questions.

CROSS-EXAMINATION

BY EXAMINER MURPHY:

Q. Can you say if the Wolfcamp or the Bone Spring produces more water, which one, or is it both?

A. For the area in which we're gathering, the Bone

Spring will produce more water per barrel of oil, if that's a way to express it as a ratio, and the Wolfcamp does.

Q. Is it higher TDS, or is it still -- they're both kind of comparable?

A. I think there's a broad range there. There's a lot of change of grade, but in a true generality, the Bone Spring salinity will be higher.

Q. Thank you.

EXAMINER GOETZE: My turn?

CROSS-EXAMINATION

BY EXAMINER GOETZE:

Q. Just a quick question: Do you know where you are relative to the reef -- the Capitan Reef?

A. We are approximately three-and-a-half to four miles east of the reef.

Q. Very good.

EXAMINER GOETZE: No more questions.

MR. RANKIN: Thank you, Mr. Examiner.

With that, I'll move on to the next.

EXAMINER GOETZE: The one I'm working on, 22.

MR. RANKIN: Yeah. We'll catch up here.

Q. (BY MR. RANKIN) Mr. Drake, will you please find before you the exhibit packet for Case Number 20722?

A. Yes.

Q. And is this the application in the exhibit packet that relates to the Beltre SWD SA No. 1 well; is that correct?

A. That is correct.

Q. Are you familiar with the geology in the area of the subject well?

A. Yes, I am.

Q. What is the proposed injection formation for this well and the approximate injection intervals?

A. The injection formation is the San Andres, and it is from a depth of 4,450 feet down to 5,750 feet.

Q. And referring to page 5 in Exhibit 1, item number -- Roman numeral VIII on this exhibit, does this page contain the information -- geologic information necessary for the C-108?

A. That is correct.

Q. In addition, you prepared a more detailed analysis of the overlying and underlying geologic structures and the proposed injection zone for this well; is that correct?

A. That is correct.

Q. Referring to Exhibit 3, will you just outline for the examiners what the geologic setting is for the proposed injection interval here and the overlying and

underlying strata that you have identified as being sufficient to contain the injection fluids in this area?

A. Yes. We are looking at two wells that form a cross section that is the basis of Exhibit 3. The well in Section 10 of 22-36 is on the right-hand side, and a well in Section 9 of 22-36 is on the left, and our proposed well will be in the G lot of Section 10. We have the Queen-Grayburg intervals identified above the injection interval. There are barriers within that. The Upper Grayburg is 200 feet of tight rock. The Lower Grayburg is saltwater-bearing rock with some porosity. The Upper San Andres is a dolomite and anhydrite that will give us about a 100-foot barrier. There are porosity intervals within the 1,000-foot-thick San Andres. The middle and lower are very well developed. There are intervening barriers in between each of those that are labeled, and they're anywhere from 100 to 400 feet thick. We have 300 feet of tight rock, which is dominantly a limestone, and a very good barrier at the base of the San Andres before we go into the Glorieta porosity.

Q. Based on this analysis, it's your opinion that the injected fluids will stay within the zone based on this geologic setting?

A. Yes, they will.

Q. And you have prepared a geologic statement reflecting your opinion that your -- your analysis of the available geologic in the area and your opinion that there are no hydrologic connections between the injection zones and the underground source of drinking water?

A. No, there is not.

Q. And that the statement you prepared, is that Exhibit Number 4 in your packet?

A. Yes, it is.

Q. Now, as to hydrocarbons and production in the area, is there any hydrocarbon activity or production within this region?

A. There is. Our shallow gas and condensate producers from the upper part of the Artesia Group, the Seven Rivers, Queen and Grayburg stratigraphic, do have production.

Q. Have you prepared an exhibit that reflects some of that production that you can refer the examiners to, your analysis?

A. Yes, I have.

Q. Is that Exhibit Number 5 in your packet?

A. It is Exhibit Number 5.

Q. Will you review for the examiners what this exhibit shows and how it formed your analysis?

A. This map and the contours on top of the San Andres Formation, those are the gray and black lines. The location we're discussing is the gold diamond in the bottom center of the map near the Section Number 10. The other background labeling that has no particular symbols, those are producing wells within formations that I named, the Queen, Seven Rivers and Upper Grayburg. None of them penetrate deep enough to see -- or communicate with the San Andres. The barriers at the top of the San Andres will be adequate to prevent communication to those hydrocarbon intervals.

We have no existing saltwater disposal wells within a mile of us. The closest one is an old well up to the north that is pre-records. I'm not even sure how much water might have gone into that well pre-1992. I believe that the completion was back in 1960s. So we do not have offset injection.

We do have offset extraction. The well to our west-northwest has pulled 8 million barrels of water out of the ground in the San Andres, and we believe that that will have reduced the bottom-hole pressure in the formation giving us a favorable injection condition.

Q. Now, Mr. Drake, you mentioned that there are no other injectors around you at the time in the zone, but this is a twin location for your proposed Sosa SA 17

well in the Glorieta; is that correct?

A. That is correct.

Q. Okay. And Mr. Goetze has previously asked whether there was a twin location for the Glorieta. That's that --

A. That's correct. We will have one of each.

Q. Okay. So in your -- in your analysis here, then, will the proposed injection impair or impede any development of hydrocarbons within the vicinity of this well?

A. I do not believe it will.

Q. Now, you previously testified about overlying -- you've given an overview of the geology in the area and identified some shallow sources of fresh water. Are those sources present in this location as well?

A. They are present. And in this area, we see indications of surface-water production down to 212 feet below the surface, and, again, it would be from the red beds.

Q. And you're not aware of any other sources of fresh water or drinking water below that depth?

A. No. There are not any.

Q. And based on your prior testimony, in your opinion, there would be no impacts or harm to any of

those underground sources of fresh water as a result of your proposed injection?

A. No harm, no impact. We don't see any ability to communicate with sources of drinking water.

Q. And, again, you've been able to obtain the -- as before and they're on the same pages here -- copies of the water sample analyses for the source fluids, as well the receiving fluids; is that correct?

A. Correct.

Q. And those are on pages 18 and 20 of your Exhibit Number 1, respectively; is that correct?

A. Yes.

Q. Based on those analyses and the chemistry you've identified, you don't expect any compatibility issues upon commencement of injection?

A. I don't think there will be any compatibility issues.

Q. Mr. Drake, based on your analysis and your review, is it your opinion that the granting of this application will be in the best interest of conservation of resources, the protection against waste and the protection of correlative rights?

A. Yes, it will.

MR. RANKIN: Mr. Examiner, at this time I would move the admission of Exhibits 3, 4 and 5 into the

record.

MS. ANTILLON: No objection.

EXAMINER GOETZE: Thank you.

Exhibits 3, 4 and 5 in Case 20722 are so entered.

(Goodnight Midstream Permian, LLC Exhibit Numbers 3, 4 and 5, in Case Number 20722, are offered and admitted into evidence.)

MR. RANKIN: No further questions. Pass the witness.

EXAMINER GOETZE: Any questions?

MS. ANTILLON: No questions.

EXAMINER MURPHY: No questions.

CROSS-EXAMINATION

BY EXAMINER GOETZE:

Q. Okay. Question number one: How close are you to the reef relative to this location?

A. I'm going to -- we are probably three to three-and-a-half miles from the reef at this location with a difficulty, depending on whose map we're looking at, as to where the eastern boundary of the reef is.

Q. It is subjective. The concern the Division has is there's still a great debate about the hydrologic connection between the San Andres and the structure. And so when we look at that, we're looking down the

road. We assume this project will be going on for 20, 30 years. We see what impacts will be there, and we'll find out the hard way. But in the primacy agreement, we're still responsible for seeing that interaction, making sure that we don't have an impact on the reef at this time based on its classification.

Back to Figure Number 3, I notice that we go through our third porosity zone and then drill 300 feet into what we classify as tight rock. Why would we do that? Are you hoping to find something, or is this --

A. Well, since we're sitting in cable -- since we're cased-hole completion --

Q. That's correct.

A. -- and we will choose to perforate the porosity intervals, we want to, one, make sure that we're far enough past the porosity zone that our entire logging tool is below it when we start pulling up. So we do need some --

Q. You need some.

A. Yeah, at the bottom.

Typically, that's 150 feet. I believe this drawing shows 280 feet. So it may be excessive, but I don't think that we have any intention of perforating that lower portion.

Q. I just wanted to see what you're thinking.

A. Uh-huh.

Q. And I'm sure the log response may show you another zone, which has --

A. It's entirely possible we'll have some very --

Q. Find some stringers, yeah.

EXAMINER GOETZE: No more questions for this witness on this case.

MR. RANKIN: Thank you, Mr. Examiner.

I'll move on to the fourth case in the series.

Q. (BY MR. RANKIN) Mr. Drake, if you would please identify in front of you there the case packet, exhibit packet, for Case Number 20723 and confirm this is the exhibit packet for the proposed Nolan Ryan G2 SWD well; is that correct?

A. That is correct.

Q. And you're familiar with the study of the geologic in the area for the subject well?

A. Yes.

Q. And what is the proposed injection formation and what are the approximate depths for your injection intervals here?

A. The formation is the Glorieta, and the depths are 5,200 feet to 5,600 feet.

Q. And does the C-108 contain the required geologic information under item number eight at page number 5 in your Exhibit Number 1?

A. Yes, it does.

Q. Have you also prepared a more detailed exhibit reflecting your analysis and opinions on the ability of this injection zone to contain through the geologic strata the proposed injection fluid?

A. Yes, I have. I believe that's Exhibit 3.

Q. Will you review for the examiners what this exhibit shows, your opinions and your conclusions about the ability of this zone to contain the injected fluids?

A. Yes. What we have here are two logs, the Gulf Leonard to our east, which is in Section 24, and the Tidewater Marshall, which is in Section 13. Our location will be in between. The proposed interval that is the porosity zone is shown in the green polygon in approximately the middle of the page. What we have here is well-developed porosity within the saltwater-bearing Glorieta Formation. We have 100 to 150 feet of limestone, low-porosity tight rock above us separating us from the porosity intervals in the San Andres. And then below us, we have hundreds of feet of low-porosity tight rock in the Paddock, Blinebry, Tubb and Drinkard.

Q. Based on your assessment and analysis of the

geology in the area and the overlying and underlying strata, it's your opinion that the injection fluids will stay in zone here?

A. Yes, they will.

Q. And as a consequence of that, they will not impair or threaten any underground sources of drinking water, in your opinion?

A. That is correct.

Q. You've prepared a geologic statement, identified as Exhibit 4, reflecting your analysis. There will be no -- there is no connection between the zone you're injecting into and any underground sources of drinking water?

A. That is correct.

Q. Now, with regard to the hydrocarbon issue, are there any zones productive of hydrocarbons in the vicinity of the proposed well?

A. There are producing wells, and we address those in Exhibits 5 and 6.

Q. Okay. Will you just review for the examiners your analysis and what those two exhibits show?

A. Okay. In Exhibit 5, we have a structure map at the top of the Glorieta Formation. The gray and black lines show the structural configuration. The green circles are Glorieta hydrocarbon-producing wells. The

gray circles are wells that drilled through the Glorieta and did not find hydrocarbons. It was either a tight condition or saltwater-bearing.

The location that we are proposing is the gold diamond below the number 13 to the east center of the exhibit. There is no Glorieta production within two miles of us, and there are several wells updip to our east and south which penetrated the Glorieta with -- and proved salt water present.

Q. In your opinion, then, based on the location of the well and the geology, is this zone prospective for hydrocarbon where you're proposing to inject into?

A. It is not.

Q. Now, what about Exhibit 6? I assume you're done.

A. Yes, I am.

Exhibit 6 is to take a look at the next horizon down below us. So our neighbor underneath would be a zone called the Paddock. We did the same type of analysis. The structure contours here are on top of the Paddock Formation. The green circles are wells that produced hydrocarbon from the Paddock, and the gray circles are wells that penetrated the Paddock and were either tight or saltwater wet, a nonproductive condition.

We are, again, the gold diamond in the south center of Section 13, which is on the right-hand side center of the page. And we have updip control that shows that we are not in any hydrocarbon column at this location.

Q. So in your opinion, there will no impairments or impacts to any hydrocarbon production in this zone either?

A. That is correct. We don't intend on penetrating this formation, but we did want to make sure we took a look at what were the hydrocarbon conditions below us.

Q. And so as a result of your analysis, in your view, there will be no impact or impairment of correlative rights as a result of the proposed injection into this zone?

A. Correct.

Q. Now, as with the other cases, you have the same set of -- the same source water will be proposed to be injected into this well?

A. That's correct.

Q. Principally, Wolfcamp or Bone Spring?

A. Yes.

Q. You prepared a water chemistry analysis for the source water, as well as the receiving formation?

A. Yes.

Q. And those are reflected on pages 18 and 20 of Exhibit Number 1?

A. Yes.

Q. Based on your review and analysis, is there any risk or concerns about water-chemistry issues with compatibility of the receiving fluids with the source fluids?

A. No concerns about compatibility.

Q. Mr. Drake, based on your analysis, is it your opinion that the approval of this application is in the best interest of the protection of resources -- the conservation of resources, the protection of correlative rights and protection against waste?

A. That's correct.

MR. RANKIN: Mr. Examiner, at this time I would move the admission of Exhibits 3, 4, 5 and 6 in Case Number 20723.

EXAMINER GOETZE: Ms. Antillon?

MS. ANTILLON: No objection.

EXAMINER GOETZE: Exhibits 3, 4, 5 and 6 for Case 20723 are so entered.

(Goodnight Midstream Permian, LLC Exhibit Numbers 3 through 6, in Case Number 20723, are offered and admitted into evidence.)

EXAMINER GOETZE: Do you want to pass the witness?

MR. RANKIN: Pass the witness.

MS. ANTILLON: No questions.

CROSS-EXAMINATION

BY EXAMINER MURPHY:

Q. Mr. Drake, your exhibits are interesting and I appreciate that, but could you redo them so I could read them?

A. Their native scale is a much larger page, and they have been reduced to fit in this book.

MR. RANKIN: Ms. Examiner, would you prefer if we send them to you electronically so you can manipulate them?

EXAMINER MURPHY: Yes.

EXAMINER GOETZE: So we can see them.

EXAMINER MURPHY: Thank you.

THE WITNESS: And they do exist in that format, and yes, they are readable.

EXAMINER GOETZE: Mr. David, do you have any questions? Fire away.

CROSS-EXAMINATION

BY EXAMINER DAVID:

Q. Perhaps this is a silly question, but I was just comparing this to the previous file, looking at

the -- what exhibit are we looking at here? Hold on here. Bear with me just a second, Mr. Drake.

So I'm looking at Exhibit Number 3. So the previous file that we were talking about, the hole going below the producing zone in order to accommodate the logging equipment but this one it doesn't. Is there that an inconsistency or --

A. We're trying to not go too far below here because this -- because the Paddock is a recognized hydrocarbon zone in the area, we are not proximal to that production. But we will try to have enough rathole that we can log the well but no more.

Q. And so the 50 feet would accommodate that?

A. Yeah, because I can move the location of where the tools are in the string to get the ones at the top that are basically at the bottom that I really want to cover the whole zone.

Q. Thank you very much.

MR. RANKIN: No further questions, Mr. Examiner.

At this time I would --

EXAMINER GOETZE: Don't I get to ask?

MR. RANKIN: Oh, I'm sorry.

EXAMINER GOETZE: Yeah. No further questions.

(Laughter.)

MR. RANKIN: I'm sorry. You're just teasing me.

EXAMINER DAVID: It's Talk Like A Pirate Day, so we're all talking like pirates.

MR. RANKIN: I would ask that Mr. Drake be dismissed and call my third witness in these cases.

EXAMINER GOETZE: Very good. Call your third witness.

THOMAS E. TOMASTIK,

after having been previously sworn under oath, was questioned and testified as follows:

DIRECT EXAMINATION

BY MR. RANKIN:

Q. Mr. Tomastik, would you please state your full name for the record?

A. Yes. It's Thomas E. Tomastik.

Q. And where are you employed?

A. At ALL Consulting.

Q. In what capacity?

A. As senior geologist and regulatory specialist.

Q. Have you previously testified before the Division and had your credentials as an expert in petroleum geology and in saltwater disposal regulatory matters?

A. Yes.

Q. Would you please just briefly, for the benefit of the examiners before you who weren't there at the time you were qualified, review your educational and work experience in saltwater disposal?

A. Sure. I have a bachelor's of science degree in geology and a master's of science degree in geology from Ohio University. I've been involved for 37 years in the oil and gas industry, disposal industry and from the regulatory side of it.

I spent six years as a consultant drilling oil and gas wells and six Class II injection wells and then 25-and-a-half years as the senior geologist in the underground control section for the Ohio Division of Oil and Gas Permitting and Oversight of Class II and Class III injection wells in Ohio and also conducted hundreds of groundwater investigations regarding both mining and oil-and-gas-related incidences.

And since that time, I've been employed with ALL Consulting for five years, and I've been doing Class II work in the Appalachian Basin, Texas, Oklahoma, New Mexico at this point, including in Louisiana, including drilling and completion, well workovers, mechanical integrity testing, injection testing, acidizing of some of these wells.

Q. And you're familiar with the applications that were filed in each of these four cases?

A. Yes.

Q. And have you conducted an analysis and prepared exhibits reflecting the proposed well design and whether the injection will impair any of the other wells in the area?

A. Yes.

MR. RANKIN: Mr. Examiner, at this time I would retender Mr. Tomastik as an expert in petroleum geology and in saltwater disposal regulatory matters.

MS. ANTILLON: No objection.

EXAMINER GOETZE: Very good. He's so qualified.

Q. (BY MR. RANKIN) Mr. Tomastik, are you familiar with the -- let's turn first to the first exhibit packet in your batch over there for Case Number 20720, which relates to the proposed Pudge SWD well?

A. Yes.

Q. Are you familiar with C-108 in this case?

A. Yes.

Q. If you would please turn to page number 13 of Exhibit Number 1 and just review what this map shows here for the examiner.

A. Yes. This is the area-of-review map that ALL

Consulting did for the Pudge SWD showing the half-mile radius for the required regulatory area of review and then also a one-mile and a two-mile radius around the proposed saltwater injection well location to show all of the other wells that are within the one- and two-mile radius.

Q. And the wells that are identified within the half-mile area of review are tabulated on subsequent page 15 of that exhibit; is that correct?

A. Correct.

Q. And based on the table of data, have you identified any wells that have been PA'd?

A. Yes. There were two wells that were PA'd, but none of those wells penetrated the injection zone in the half-mile area of review.

Q. Okay. So based on your analysis of the area of review and the wells within that zone, have you identified any concerns or risks that any of those wells will serve as conduits for the escape of fluid from injection zone to other areas?

A. Yes. The evaluation says that -- shows that none of these wells within the half-mile area of review would serve as conduits for migration of injection fluid.

Q. So in your opinion, would the proposed casing

well design be protective of underground sources of fresh water, as well as hydrocarbon production in offsetting areas?

A. Yes.

Q. Now let's talk about the well design and operations for this proposed well. Flipping back to page 4 in Exhibit Number 1, will you -- I'm sorry. Actually, let me -- let's go to page 9 of your wellbore schematic. Just review for the examiners, if you would, the proposed casing program and well design for this well.

A. Yes. We're proposing to drill 20-inch borehole and set approximately 120 feet of conductor casing and cement that to surface, and then we will drill to approximately a depth of 1,795 feet and set approximately 1,795 feet of 9-5/8 surface casing, and that will be cemented to surface. Then we will -- which is through the -- 25 feet through the first anhydrite unit within the Rustler Formation as required by the regulatory guidelines. And then we will drill an 8-3/4-inch borehole to the total depth of 6,550 feet, and we will set 7-inch producing casing at 6,560 feet and cement that back to surface.

Q. Based on the depths and locations of your casings and cement, is it your opinion that this design

will be protective of fresh water and drinking water in the area and any other offsetting hydrocarbon production?

A. Yes.

Q. Let's talk about the operations here for this well, the operation parameters. Let's flip back to page 5 -- I'm sorry -- 4 -- oh, no, 5. Sorry. 5 of Exhibit 1 and just review for the examiners --

A. Sure.

Q. -- the operational parameters for this well.

A. Yes. And we're proposing the maximum injection rate of 20,000 barrels a day and average injection rate of 12,500 barrels per day. We will be using a closed system. Proposed maximum pressure is 1,150 psi based on the regulatory requirement of .2 psi per foot, and we're looking at an average injection pressure of 575 psi.

Q. Based on your analysis, is this well capable of injecting those volumes and maintaining the maximum operating injection pressure at the surface?

A. Yes.

Q. And if Goodnight requires in this case or needs an additional increase in operating pressure, will it request a step-rate test witnessed by the OCD?

A. Yes.

Q. Now, what about monitoring of the wellbore? Is

there going to be a system in place to monitor the integrity of the wellbore during injection?

A. Yes. There will be -- the injection tubing that is 4-1/2-inch will be set within approximately 20 feet of the top perforation of the injection zone. That annular space will be filled with a freshwater and a corrosion inhibitor, and then the mechanical integrity test will be performed prior to injection operations. An electronic SCADA system will be in place where we're monitoring continuously the injection pressure and the annulus pressure to maintain continuous mechanical integrity.

Q. And as to confirming the integrity of the cement job, will there be a cement bond log run to confirm?

A. Yes. There will be a cement bond log run to confirm the cementing of the 7-inch production casing.

Q. Is there any plan to stimulate the well after it's been drilled before injection?

A. There most likely will be a small acid job to clean up the perforations.

Q. In your opinion, will the granting of this application be in the best interest of conservation of resources, protection against waste and the protection of correlative rights?

A. Yes.

MR. RANKIN: Mr. Examiner, at this time I would pass the witness.

EXAMINER GOETZE: Ms. Antillon?

MS. ANTILLON: No questions.

EXAMINER MURPHY: No questions.

EXAMINER GOETZE: No questions.

EXAMINER DAVID: I have no questions either.

Q. (BY MR. RANKIN) Mr. Tomastik, we'll move on to the next series of cases, and I think my intent here is to -- rather than review everything, because I think the design and operation will be roughly similar, to point out any differences in the casing design and proposed drilling.

A. Okay.

Q. So let's look at Case Number 20721 and flip to Exhibit 1, page 9. Other than the depths and the -- the depths of the setting here of your -- of your casing strings, are there any other substantive differences in this well and its proposed design than the one we just reviewed?

A. No.

Q. And so you'll have the same protections in place, same monitoring systems, and you'll run a cement

bond log just as you stated you would on the other case?

A. Correct.

Q. And otherwise, all the depths and information contained in the wellbore diagram are correct --

A. Correct.

Q. -- based on your proposed --

Now, let's look at the area of review in this case for the Sosa well. Turn to page 13, if you would, in Exhibit Number 1 and review for the examiners what this map shows.

A. Yes. This is the area-of-review map created for the Sosa SA 17 No. 2 showing the required regulatory half-mile area of review, but also the one- and two-mile radius around the proposed Sosa location showing all of the existing wells and proposed wells within the one- and two-mile radius.

Q. And you've prepared a tabulation of the data for all the wells within the half-mile area of review --

A. Yes.

Q. -- on page 15 of that exhibit?

A. Correct.

Q. And have you identified in that review any wells that have been PA'd?

A. Yes. There are approximately six wells that have been PA'd in the half-mile area of review, but none

of the wells in the half-mile area of review penetrate the proposed injection zone.

Q. And based on your analysis of review of the wells in that zone, have you identified any concerns that any of these wells will potentially serve as a conduit for the escape of fluids coming from your injection zone?

A. Yes. We have created the evaluation, and none of these wells will be of concern to allow injection fluids to migrate out of the injection zone.

Q. Okay.

EXAMINER GOETZE: For the record, we do look at the active wells, too, because --

THE WITNESS: Sure.

EXAMINER GOETZE: -- well, I do, especially in areas where we've had horizontal drilling. Early horizontal drilling have a lot of just cement to base of the curvature and leading conduit up, so we do appreciate that you've looked at all wells in the area.

THE WITNESS: Sure.

Q. (BY MR. RANKIN) And so we've already talked about the well design in this case, and we'll follow the same design as the well we already discussed in the first case, the Pudge. And there are no differences other than the depths of some your strings based on the

location; is that right?

A. Correct.

Q. All right. So as to the operations of this well, turning to Exhibit 1, page 4, will you review for the examiners what the proposed operational parameters will be for this well?

A. It's actually on page 5.

Q. 5. Sorry.

A. Yeah. The proposed maximum injection rate is 25,000 barrels per day. The proposed average injection rate is 17,500 per day. It will be a closed system. The proposed maximum surface-injection pressure is 900 psi based on the .02 psi per foot per regulatory requirement. And the average proposed injection pressure is 450 psi.

Q. Based on your analysis and the rates you're proposing here, you'll be able to operate the well at those rates, maintaining the parameters required by the Division?

A. Yes.

Q. And if Goodnight requires an increase in operating pressure, will it request a step-rate test witnessed by the OCD if necessary?

A. Yes.

Q. And in your opinion, the other casing design

and operations proposed here, will they be protective of freshwater sources and offset hydrocarbon production?

A. Yes.

Q. And as far as monitoring, the same applies here. There will be an inert fluid in the annular and the SCADA system monitoring injection?

A. Correct.

Q. And I think we've covered all that.

Will there be any stimulation to this well prior to commencement of the --

A. Most likely there will be a small acid job to clean up the perforations.

Q. In your opinion, is the granting of this application in the best interest of the conservation of resources, protection against waste and the protection of correlative rights?

A. Yes.

MR. RANKIN: Mr. Examiner, at this time I pass the witness.

MS. ANTILLON: No questions.

EXAMINER MURPHY: No questions.

EXAMINER DAVID: No questions.

EXAMINER GOETZE: No questions in this case.

MR. RANKIN: Thank you, Mr. Examiner.

We'll move on to the next one.

Q. (BY MR. RANKIN) Mr. Tomastik, before you is the exhibit packet for Case Number 20722. You have that before you. You're familiar with the application that was filed in this case?

A. Yes.

Q. And you're familiar with the C-108 that was submitted?

A. Yes.

Q. If you would please turn to page 13 in Exhibit Number 1 and review for the examiners what that map shows.

A. Yes. This is the area of review for the Beltre SWD SA No. 1 showing the half-mile required regulatory area of review, plus an additional one-mile and two-mile radius around the proposed injection well showing all locations of all wells within the one- and two-mile radius of the well's location.

Q. So have you also included a page that reflects the tabulation of data for each of the wells within the half-mile area of review as well?

A. Correct.

Q. Those are on page 15?

A. Yes.

Q. And you've looked at the location and depths

and the casing design for these wells. And have you identified any PA'd wells that penetrate the injection zone?

A. There were three PA'd wells. They did not penetrate the injection zone, and none of the existing operating wells penetrate the injection zone either.

Q. And based on that analysis, have you identified any concerns or potential conduits that would serve as an escape of fluids from the injection zone to any other zones?

A. No. There is no -- no concern with any of the injection fluid migrating out of the injection zone.

Q. And based on that, is it your opinion that there will be any risk or harm to underground sources of drinking water or other offsetting hydrocarbon-production zones?

A. No. There will be no risk.

Q. Flipping to page 9 of Exhibit Number 1, this is the wellbore schematic. Does this well have the same casing design construction that you've identified in the prior case as well?

A. Yes.

Q. Are there any differences, substantive or even minor that -- other than the depths and the lengths -- depths of these different casing strings?

A. Correct.

Q. There are no differences?

A. No differences, no.

Q. So as for the operation of this well -- let's flip to page 5 of your Exhibit Number 1, and just review for the examiners the operational parameters proposed.

A. Yes. The proposed maximum injection rate is 25,000 barrels a day. The proposed average injection rate is 12,500 barrels a day. It will be a closed system. The proposed maximum injection pressure at the surface is 890 psi based on the regulatory requirement of .2 psi per foot. And the average injection pressure is proposed at 425.

Q. Again, will the rates and volumes for this well be able to maintain and operate within the maximum injection pressure set by the Division?

A. Yes.

Q. And if it's necessary, will Goodnight Midstream request an OCD-witnessed step-rate test to increase the injection pressures?

A. Yes.

Q. And as for the other cases and other applications, Goodnight proposes to conduct a cement bond log prior to injection to confirm the integrity of the cement?

A. Yeah. So it will be a cement bond log run on the 7-inch production casing to ensure the integrity of the cement job.

Q. And will there also be ongoing monitoring of the injection activity to confirm the integrity of the wellbore during injection?

A. Yes. There will be an electronic SCADA system in place to monitor both the injection pressures and the annulus pressure to continuously monitor the well for mechanical integrity.

Q. In your opinion, Mr. Tomastik, will this application, if granted, be in the best interest of conservation of resources, protection against waste and the protection of correlative rights?

A. Yes.

MR. RANKIN: Mr. Examiner, at this time I pass the witness.

MS. ANTILLON: No questions.

EXAMINER GOETZE: Questions in this case? Okay. Thank you.

EXAMINER MURPHY: No questions.

EXAMINER DAVID: No questions.

EXAMINER GOETZE: I have no questions in Case 20722.

Your next case, please.

Q. (BY MR. RANKIN) Mr. Tomastik, before you is the exhibit packet for Case Number 20723. Do I have that right?

A. Yes, sir.

Q. This is the application that was filed in this case that relates to the --

A. Yes.

Q. -- proposed Nolan Ryan G2 well; is that right?

A. Yes.

Q. Have you -- you're familiar with the C-108 that was filed?

A. Yes.

Q. Will you please turn to what's been marked as page 13 in that Exhibit Number 1?

A. Yes.

Q. And review for the examiners what this shows and your analysis?

A. This is the area-of-review map for the Nolan Ryan G2 showing the half-mile regulatory area of review and then a one-mile and a two-mile radius around the Nolan Ryan G2 location showing the locations of all the other wells within the one- and two-mile radius.

Q. Have you also prepared a tabulation of the data for each of those wells within the half-mile area of review in that radius?

A. Yes.

Q. Is that marked on page 15 in this exhibit?

A. Yes.

Q. And review for the examiners what your analysis is of those wells within the half-mile area.

A. There were two wells that actually penetrated the proposed injection zone, and ALL did the analysis of the casing and wellbore design and the cementing records to indicate that both of these wells, even though they penetrate the proposed injection zone, are properly sealed to prevent any migration of injection fluid out of the injection zone.

Q. And those wells you identified as penetrating the injection zone, they're still active wells? They are not PA'd wells, right?

A. Correct.

Q. All right. So based on your analysis, none of these wells identified, including the two that do penetrate the zone, they will not, in your opinion, function as a conduit for the escape of fluid out of the proposed injection into any other zones?

A. Yes. They will not function as a conduit for escape, injection fluid migration.

Q. So no -- no harm will come to any underground sources of drinking water, fresh water or to any

offsetting hydrocarbon production in the area?

A. Correct.

Q. All right. Let's flip over to page 9 of Exhibit Number 1. And just to confirm, Mr. Tomastik, this is the same well design construction as every other case we've presented today?

A. That is correct.

Q. No other substantive variations in design or -- other than the depths of these casing strings?

A. Correct.

Q. And, again, you intend to run a cement bond log and will be operating this well with a SCADA system for integrity?

A. Right.

Q. And will there be an acid wash job before you commence injection?

A. Yes.

Q. Flip over to page 5 of Exhibit Number 1 and just review for the examiners the proposed operating parameters for the well.

A. Yes. This well's proposed maximum injection rate is 20,000 barrels a day, with an average injection rate of 12,500 barrels a day. It will be a closed system. The proposed maximum injection pressure will be 1,040 psi based on the .2-psi-per-foot regulatory

requirement, with an average injection pressure of approximately 520 psi.

Q. In your opinion, will those proposed maximum surface operating pressures be achievable with the rates and volumes proposed?

A. Yes.

Q. And, if necessary, will Goodnight request an OCD-witnessed step-rate test to request an increase in injection pressure, if necessary?

A. Yes.

Q. I think that's everything.

And let's see. In your opinion, will the granting of this application be in the best interest of the production of resources, I guess is what it is, protection against waste and the protection of correlative rights?

A. Yes.

MR. RANKIN: Okay, Mr. Examiner. No further questions. Pass the witness.

MS. ANTILLON: No questions.

CROSS-EXAMINATION

BY EXAMINER MURPHY:

Q. One quick question: Are you a Buckeye?

A. Ohio University, a Bobcat (laughter).

Q. No more questions. Thanks.

(Laughter.)

EXAMINER GOETZE: Mr. David?

EXAMINER DAVID: No questions.

EXAMINER GOETZE: I do not have any questions for this witness.

MR. RANKIN: Well, in that case, Mr. Examiner, I ask that Case Numbers 20720 through 20723 be taken under advisement.

EXAMINER GOETZE: Ms. Antillon?

MS. ANTILLON: On behalf of the State Land Office, with regard to Cases 20720 through 20723, I just would like to say that the State Land Office is reviewing the applications and has concerns with these saltwater disposal wells based -- due to their close proximity to State Trust Lands.

EXAMINER GOETZE: Thank you.

With that said, we will take Cases 20720, 20721, 20722 and 20723 taken under advisement.

(Case Numbers 20720 through 20723 conclude, 11:12 a.m.)

STATE OF NEW MEXICO

COUNTY OF BERNALILLO

CERTIFICATE OF COURT REPORTER

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

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

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

DATED THIS 9th day of October 2019.

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