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. 20556, 20557

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

June 14, 2019

Santa Fe, New Mexico

BEFORE: PHILLIP GOETZE, CHIEF EXAMINER
DAVID K. BROOKS, LEGAL EXAMINER

This matter came on for hearing before the New Mexico Oil Conservation Division, Phillip Goetze, Chief Examiner; and David K. Brooks, Legal Examiner, on Friday, June 14, 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

FOR INTERESTED PARTY/PROTESTANT BLACKBEARD OPERATING, LLC:

JAMES G. BRUCE, ESQ.
Post Office Box 1056
Santa Fe, New Mexico 87504
(505) 982-2043
jamesbruc@aol.com

INDEX

EXHIBITS OFFERED AND ADMITTED

(10:33 a.m.)

EXAMINER GOETZE: So in discussion with counsel, we've agreed to take the two following cases together since they are related, and this would be Case Number 20556, application of Goodnight Midstream Permian, LLC for approval of a saltwater disposal well, Lea County, New Mexico, and Case Number 20557, application of Goodnight Midstream Permian, LLC for approval of a saltwater disposal well, Lea County, New Mexico.

Call for appearances.

MR. RANKIN: Mr. Examiner, Adam Rankin, with the law firm of Holland & Hart, appearing today on behalf of the Applicant. I've got four witnesses.

MS. ANTILLON: Andrea Antillon on behalf of the State Land Office, and I have no witnesses, just a statement.

MR. BRUCE: Mr. Examiner, Jim Bruce representing Blackbeard Operating, LLC, and I have no witnesses.

EXAMINER GOETZE: And for the clarity of me, Blackbeard is a holder of mineral interests? What are we doing?

MR. BRUCE: Mr. Examiner, Blackbeard is an operator of shallow production in the area and is just

interested in the case. We're not objecting to it.

EXAMINER GOETZE: Very good. Thank you.

With that, you have the same witnesses?

MR. RANKIN: I do, Mr. Examiner. And if it would be permissible, I would ask to incorporate Mr. Adams' testimony in the prior case into these other three cases as well just so I don't have to re-call him. He'll say the same thing.

EXAMINER GOETZE: You mean you don't want him to go up there and earn his keep?

(Laughter.)

MR. RANKIN: It's up to him. It was a trip to Santa Fe.

But I would ask, if we could, just to incorporate that testimony into these cases because it's the same testimony.

EXAMINER GOETZE: We will reference to Case --

MR. RANKIN: 20555.

EXAMINER GOETZE: Yes.

-- the testimony that you wish and then move on with the technical.

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

With that, I'd like to call our second

witness in this case -- in both Case 20556 and Case 20557, Mr. Nate Alleman.

EXAMINER GOETZE: First of all, I think I get an exhibit?

MR. RANKIN: Oh, yes.

NATHAN ALLEMAN,

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

DIRECT EXAMINATION

BY MR. RANKIN:

Q. Mr. Alleman, you have previously testified before the Division and had your credentials as an expert in SWD permitting and regulatory matters accepted as a matter of record; is that correct?

A. That's correct.

MR. RANKIN: Mr. Examiner, at this time I would move to retender Mr. Alleman as an expert in SWD permitting and regulatory matters.

EXAMINER GOETZE: Ms. Antillon?

MS. ANTILLON: No objection.

EXAMINER GOETZE: He is so qualified in both cases.

Q. (BY MR. RANKIN) Mr. Alleman, taking each in turn, starting with Case Number 20556, what is it that Goodnight Midstream is seeking with this application?

A. Goodnight Midstream seeks authorization to drill and inject into the Robinson SWD No. 1. Are we doing both at the same time?

Q. We'll run through the Robinson first, and then we'll move over to the Scully.

So the Robinson SWD No. 1, in Case Number 20556, tell me where is that well to be located? If we look at what's before you in your exhibit packet, turn to Tab Number 1 and refer to the Tab Number 1, if you could review the location of this well.

A. It is located in Section 4, Township 22 South, Range 36 East, Lea County, New Mexico.

Q. And what injection intervals are you going to be injecting into here?

A. The Glorieta.

Q. And what are the depths approximately for the perforation -- or the location of these injection intervals?

A. The injection interval will be 5,750 to 6,500 feet.

Q. And what will be the estimated injection rates and maximum rates for this well?

A. The average -- average rate would be approximately 12,500 barrels -- barrels of water per day with a maximum of 25,000 barrels of water per day.

Q. How about the maximum surface operating injection pressure? What will that be based on the depths here?

A. Based on the depths and the 0.2 psi per foot, it will be 1,150 psi.

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

A. Closed system.

Q. And it will be operated as a commercial well?

A. That's correct.

Q. And what is the status of the land that is subject to this application?

A. It is private surface and state minerals.

Q. Has the company prepared a C-108 that satisfies the Division requirements for approval?

A. They have.

Q. Is that marked as Exhibit B?

A. It is.

Q. And did you oversee the preparation of this C-108?

A. I did.

Q. And is the C-108 complete?

A. It is.

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

A. This is a new project.

Q. Let's look at Tab Number 1, and just again identify -- I don't know that you gave us the footages, but what are the proposed locations?

A. The footage calls will be 1,868 feet from the north line and 1,564 feet from the west line of Section 4, Township 22 South, Range 36 East.

Q. Is that the location that's proposed for this well?

A. It is.

Q. Now, looking at Tab 2 -- sorry -- Tab 4, what does that show?

A. That shows the -- the largest buffer is a two-mile buffer, and then we have the middle -- the middle circle is one mile, and then the smallest circle is one-half mile, which constitutes the area of review for this well, and it shows all the oil and gas wells of record within that area of review.

Q. The next map on the next page, what does that show?

A. This page has the same -- the same radii, but this one shows the leases within each radii.

Q. And you used these maps to identify all parties entitled to notice?

A. That's correct.

Q. And is that list of parties identified behind Tab 10?

A. It is.

Q. And who is the surface owner here?

A. The surface owner is Llano Estacado Properties, LLC.

Q. That's the owner?

A. That's correct.

Q. And all the other parties you've identified, based on your oversight of the land work that was done, identify all these interest owners?

A. That's correct.

Q. And looking at Tab 9, is that a copy of the Affidavit of Publication that was prepared giving notice of this case in the newspaper in the county where the well is located?

A. It is.

Q. And is Tab 11 a copy of the green cards indicating that Goodnight Midstream sent notice of its administrative application to each of the parties you've identified?

A. It is.

Q. In your opinion, did Goodnight Midstream undertake a good-faith effort to identify all the correct addresses of all the parties entitled to notice

in this case?

A. They did.

Q. And were there any unlocatable interest owners, that is, parties that you were not able to identify or obtain a valid and correct address?

A. No.

Q. To the best of your knowledge, were the addresses valid and correct?

A. Yes.

Q. Is Exhibit D a copy of the affidavit that was prepared by my office reflecting that we provided notice to the parties who protested this case?

A. It is.

Q. Is the next page of that exhibit a letter that was sent to those parties?

A. Yes.

Q. And the following pages, is that a USPS tracking sheet indicating that we had provided a certified mailing and notice to those parties?

A. Yes.

Q. And the last page of that exhibit is a tabulation reflecting that each of those parties actually did receive notice?

A. Yes, it is.

MR. RANKIN: Mr. Examiner, with that, I

would move the admission of Exhibits B and C and ask that Exhibit A be incorporated from the prior testimony of Mr. Adams in Case Number 20555.

EXAMINER GOETZE: State Land Office?

MS. ANTILLON: No objection.

EXAMINER GOETZE: Exhibits A, B and C are so incorporated.

(Goodnight Midstream Permian, LLC Exhibits A, B and C are offered and admitted into evidence.)

MR. RANKIN: Mr. Examiner, I think it might make sense to pause now for any questions on this well before I move to the next well.

EXAMINER GOETZE: I think the areas of review will probably be very similar.

MR. RANKIN: You want to go to the next one?

EXAMINER GOETZE: Yeah. Let's take a look and move on to the Scully saltwater disposal well. And, again, our understanding is that this is -- the approach and a discussion for later, this is one big hole, yet two broken-up intervals. With our consideration as to how approval -- we should look at both of them together. So let's pursue the Scully.

MR. RANKIN: Okay.

Q. (BY MR. RANKIN) So in Case Number 20557, Mr. Alleman, what is it that Goodnight Midstream seeks in this application?

A. Goodnight Midstream seeks to obtain authorization to drill and inject into the Scully Saltwater Disposal Well No. 1.

Q. And before you is an exhibit packet with exhibits marked A, B, C, D. If you turn to Exhibit B, is this the C-108 that was prepared and filed administratively in this case?

A. It is.

Q. Did you oversee the preparation and submission of this C-108 application to the Division?

A. I did.

Q. And does it contain all the information that is required?

A. Yes, it does.

Q. What are the -- looking at Tab Number 1, behind that Exhibit B, what are the proposed injection intervals for this well?

A. The proposed injection interval is 4,450 feet to 5,750 feet.

Q. And where will this well be located?

A. This well will be located 1,724 feet north of the north line and 1,607 feet from the west line of

Section 4, Township 22 South, Range 36 East in Lea County, New Mexico.

Q. And just in terms of general overview, what are the estimated injection rates for this well?

A. We're looking at approximately an average of 17,500 barrels of water per day with a maximum of 35,000 barrels of water per day.

Q. Again, we'll have an engineer who will testify more about this, but what are the -- based on the depths and intervals here, what is the maximum surface-operating-injection pressure for this well?

A. The maximum surface injection pressure would be 890 psi.

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

A. Closed.

Q. And it will be a commercial injection well?

A. Yes.

Q. And tell me about the land here. Is it -- what is the status of the land on the surface where the well is located?

A. The surface is privately owned.

Q. And how about the subsurface?

A. The minerals are state minerals.

Q. Now, has the company -- let's see. I went over

that with you.

Is this an expansion on an existing project or a new project?

A. A new project.

Q. Let's look at Tab Number 1 again, and just review the location. I don't think we talked about this one yet, did we, footages for this well?

EXAMINER GOETZE: Yes.

THE WITNESS: Yes.

MR. RANKIN: We did?

EXAMINER GOETZE: Yes.

I would ask you to -- let's clarify for the record. The Scully to the Robinson, roughly how far away?

THE WITNESS: About 150 feet apart.

Q. (BY MR. RANKIN) Okay. Now, let's talk about the area of review you undertook. Turn to Tab Number 4 and review for the examiners the various maps behind this tab and what they reflect.

A. Sure. The first map has, again, a two-mile radius, a one-mile radius and then the half-mile radius. The half-mile radius constitutes the area of preview for this well. The first map under Tab Number 4 shows oil and gas wells within -- within that half mile, again extending to two-mile per regulation. And then the map

behind that shows the same radii but shows leaseholds within those -- within those areas.

Q. Are these the maps you used to reflect the parties entitled to notice in this case?

A. That's correct.

Q. And if you look behind Tab Number 10, does this table identify the parties that you identified as requiring and entitled to notice in this case?

A. It does.

Q. Including the surface owner?

A. That's correct.

Q. And is Tab Number 9 a copy of the Affidavit of Publication that was prepared giving notice of this administrative application?

A. It is.

Q. And behind Tab Number 11, are these the green cards reflecting that each of those parties that you identified as being entitled to notice actually received notice by certified mail?

A. Yes.

Q. In your opinion, did Goodnight Midstream undertake a good-faith effort to identify all the correct addresses and -- of the parties entitled to notice in this case?

A. Yes, they did.

Q. Were there any unlocatable parties or parties for whom you did not have a valid and correct address?

A. No.

Q. Looking at Exhibit C, is this a copy of the affidavit that was prepared by me reflecting that we gave notice to the parties who protested this case?

A. It is.

Q. The following page is a letter that I sent to those parties?

A. Yes.

Q. And following that is the tracking sheet showing that we provided notice by certified mail to each of those parties?

A. Yes.

Q. The final page of the exhibit is a copy of the status of those mailings showing that each party actually did receive notice?

A. Yes.

MR. RANKIN: Now, with that, Mr. Examiner, I would move to admit Exhibits D and C and incorporate the testimony of Mr. Adams in Case 20555 and the admission of Exhibit A as well.

EXAMINER GOETZE: Okay. In Case Number 20557, you've selected A, B and C?

MR. RANKIN: A, B, C.

EXAMINER GOETZE: Thanks.

Ms. Antillon?

MS. ANTILLON: No objection.

EXAMINER GOETZE: We've got Mr. Bruce in the back.

MR. BRUCE: I don't have any questions.

EXAMINER GOETZE: Not questions. Exhibits. Pay attention. Do you wish to protest the exhibits?

MR. BRUCE: No.

EXAMINER GOETZE: Exhibits A, B and C in Case Number 20557 are so entered into record.

(Goodnight Midstream Permian, LLC Exhibits A, B and C are offered and admitted into evidence.)

MR. RANKIN: With that, Mr. Examiner, I pass the witness for questioning in both cases.

EXAMINER GOETZE: Ms. Antillon?

MS. ANTILLON: No questions.

EXAMINER GOETZE: Mr. Bruce?

MR. BRUCE: No questions.

EXAMINER GOETZE: Mr. Brooks?

EXAMINER BROOKS: No questions.

CROSS-EXAMINATION

BY EXAMINER GOETZE:

Q. Any federal -- federal estate within the

one-half-mile radius?

A. There was not, only private and state, and both were notified.

Q. Very good. Thank you. No further questions.

MR. RANKIN: With that, Mr. Examiner, I would ask that Mr. Alleman be excused, and we will call our third witness in these cases.

EXAMINER GOETZE: Very good.

Thank you.

STEVE DRAKE,

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

DIRECT EXAMINATION

BY MR. RANKIN:

Q. Mr. Drake, will you please state your full name for the record?

A. Steve Drake.

Q. And you've previously testified before the Division and had your credentials as an expert in petroleum geology accepted as a matter of record just today?

A. Yes.

Q. Are you familiar with the application filed in these two cases?

A. Yes.

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

EXAMINER GOETZE: Ms. Antillon.

MS. ANTILLON: No objection.

EXAMINER GOETZE: Mr. Bruce?

MR. BRUCE: No objection.

EXAMINER GOETZE: And I may suggest that since the geology is in the same -- that you probably could cover both cases with the same discussion.

THE WITNESS: Correct.

MR. RANKIN: I'll try to make that happen.

Q. (BY MR. RANKIN) Mr. Drake, you're familiar with the geology in this area and the San Andres -- sorry -- in this injection zone for both these cases, the Robinson and the Scully wells?

A. Yes, I am.

Q. What is that injection interval or zone and formation here?

A. For the Robinson, we're -- I'm wanting to inject into the Glorieta Formation at 5,270 feet, and in the Scully, we're wanting to inject into the San Andres Formation at 4,200 feet.

Q. And just to be clear, I would ask you to turn to Exhibit B in the Robinson case and just confirm the

intervals. I just want to make sure the record is clear on the proposed depths for the injection interval for the Robinson.

A. Correct. Did you say 10B?

Q. B, Tab 1.

A. Yeah. The interval is 5,750 to 6,500.

Q. And the interval for the Scully well in the next case, I want to make sure that was --

A. It is 4,450 to 5,750.

Q. So the Robinson is in the Glorieta Formation; is that correct?

A. Yes.

Q. Okay. And let's -- let's review the geology for the Robinson well. Tell me more about the -- is all the geology required by this application contained within the C-108?

A. Yes.

Q. Is that marked behind Tab Number 2?

A. Yes.

Q. Will you review for the examiners the geology for this proposed well, the Robinson, and we'll talk about the Scully together and the differences between the two. And if necessary we can bounce between the two exhibits.

A. Yes.

Q. So start with the Robinson in the Glorieta.

A. We have the Rustler and Salado Formations down to about 3,000 feet where we would have the Artesia Group, the Tansill, Yates, Queen, Penrose and Grayburg. That would extend from about 3,200 feet down to about 4,000. Top of the San Andres would be around 4,000 feet and extend down to 5,750. Our proposed perfs start at 44-, so we are not cutting perforations in the top 350 feet.

In order to have a standoff from shallower production above us, in the Glorieta well, we'll be perforating from 5,750 down to 6,500. These are basin siltstones -- dolomitic siltstones that are fairly thick when you're off structure. They thin as you go on structure. And below the Glorieta are the carbonates of the Leonard.

EXAMINER BROOKS: Do you have an exhibit that reflects this?

THE WITNESS: I have an exhibit in the Scully that reflects that. It's the cross section behind Exhibit E, Tab E.

Q. (BY MR. RANKIN) why don't we go ahead and turn to that exhibit in the Scully case, 20557.

EXAMINER BROOKS: Did you say C?

MR. RANKIN: E.

EXAMINER BROOKS: E. Okay.

Q. (BY MR. RANKIN) Mr. Drake, will you just go ahead and review for the examiners what the first page of this exhibit shows? And if you would refer specifically to the location of these two wells in that overview map of the cross section?

A. Okay. The overview map for the cross section, you'll see a red star. The two wells, Scully and Robinson, would be about 160 feet apart, and they would be in the center of that star. The six -- or five wells in -- it is six wells, displayed in the cross section are highlighted by the yellow circles and connected by the black line. And then we project the location of the Scully into that cross section between the first and second wells.

One thing I would like to point out is in the reproduction of the cross section, the gray bars, which are seen here in the original (indicating), did not reproduce, so as a result, it degrades what it is we're trying to demonstrate.

Q. Yeah. You can kind of -- if you look, there is a faint indication on the left side where those gray bars were.

A. Would be. And so could we --

Q. Yeah. I'll make sure we have a better copy for

the record?

MR. RANKIN: But if I might, Mr. Examiner, approach, you can view --

EXAMINER GOETZE: Color my own? Thank you very much.

MR. RANKIN: And I'll make sure I produce a better copy. Sorry it did that.

EXAMINER GOETZE: And this is the Scully?

THE WITNESS: Correct.

So we're looking at the Artesia formations. Those that are productive from gas are shown in pink. Those that are productive from oil are shown in green. And then the alternating white and gray would be -- the anhydrite permeability barriers are shown, as well as the porous and permeable intervals. You can see in the log in the center of the page that there are significant resistivity changes between the tight rock and the permeable rock. We have a pretty good confidence here that the anhydrite barriers will be very good seals in terms of preventing upward migration.

And we also have -- we have the map behind D.

Q. (BY MR. RANKIN) And before we move out of this exhibit, Mr. Drake, reflected on this cross section is the location of the Scully well?

A. Correct.

Q. And the Robinson well would be in the same approximate orientation with respect to the other wells --

A. Yes, roughly the same location. Its perforated interval would begin at the word "Glorieta" and extend down off the page.

Q. So -- so the -- the same geologic seals that you just referred to for the Scully are in place for the Robinson?

A. Correct. And we would be 8,000 feet deeper.

Q. Okay. So those seals would affect the same containment for both these wells?

A. Correct.

Q. Okay. Now you're going to move on to Exhibit D and explain more about the geology for both these wells by reference to that exhibit.

A. That's correct. In the Scully, behind Tab D, we have a map, and in the Robinson, behind Tab C, we have a map.

So if I could start with the Glorieta first, which is the Robinson behind Tab C. What we see on this page -- has everyone found that satisfactorily?

EXAMINER BROOKS: Don't wait for me.

THE WITNESS: Okay.

What we have here is a structure map on top of the Glorieta surface. The contours are shown in black lines. The Robinson is shown in the black label with a gold circle at its location.

We looked for anyplace in the area where the Glorieta is productive of hydrocarbons. We marked all wells that are productive of hydrocarbons in the Glorieta with a green circle. You will see that there are green circles approximately five miles to the north. It was the only place we found the Glorieta designated as a hydrocarbon-producing zone.

The gray circles on the map are wells that were drilled deep enough to penetrate and evaluate the Glorieta but discovered or produced no hydrocarbon. So gray circles indicate a well deep enough to see the zone and did not produce. We have five gray -- four gray circles in the area of the Robinson.

And then I'll also point out that our structural position of the Robinson is 500 feet downdip from the producing -- nearest producing structure. So not only are we four miles to the west, but we're also 500 feet downdip. Even though those wells did not produce in the Glorieta, they did produce in the Blinebry, Paddock or Drinkard, which are formations that exist below us, but we do not see those formations

productive in the area we're in. And we are 500 feet downdip.

Q. (BY MR. RANKIN) And you have a similar map for the Scully in Exhibit D of that exhibit packet?

A. That is correct. So if we look at the map behind D in the Scully packet, again we see a structure map. The black contours -- or the black lines are the structure contours. On this map, we have several different colored symbols. You'll see three different shades of blue, and I hope they are distinguishable.

First you will see that there is a medium or royal blue with a "WSW" and a number below it. That is the amount of water that has been extracted from the San Andres in each one of those wells. Then there are Navy blue circles with "SWD" and a number below them, and that is the amount of water that has been injected into the San Andres in those wells. And then up to the north, you will see that there are four light blue diamonds. Those are SWD permits that have been granted but not yet drilled. So we're trying to account for all future known locations, as well as those existing.

And then inside of the green polygon at the top of the map, you will see green triangles which indicate Grayburg producers, and then you will see blue triangles which indicate Grayburg injectors. So we are,

at the Scully location, very far outside of any of the current oil and gas activities in the San Andres zone, and we are downdip from production that does exist on the structure off to our east.

Q. So based on that analysis and your review of these exhibits, D and E, as to the Scully, is it your opinion that injection into that well will not result in any impairment or negative production from any hydrocarbon-producing zones --

A. That is correct.

Q. -- as a result of your injection?

Now, you gave testimony previously in Case 20555 as to the suitability for the San Andres Formation for injection.

MR. RANKIN: Mr. Examiner, I would ask, just to save time, if we could incorporate his testimony as to the San Andres in this case as well if other counsel do not oppose.

EXAMINER GOETZE: Counsel?

MS. ANTILLON: No objection.

MR. BRUCE: No objection.

EXAMINER GOETZE: Thank you.

Yes.

Q. (BY MR. RANKIN) Okay. Now, Mr. Drake, is it your opinion that the San Andres is suitable for

injection, the same as it was -- the same analysis and same conclusion that you gave previously in Case 20555?

A. I believe that it is. I do not have any reasons to say that this will be different. It is farther from our known data points, so we are exploring a little bit. But at the same time, I believe that the same conditions of having a pressure-depleted reservoir to put water into exist.

Q. Okay. And that's -- and that's -- again, we're talking about the Scully well?

A. Correct.

Q. Now, as to the Robinson well, you're looking here to inject into the Glorieta Formation; is that correct?

A. Yes.

Q. We have not yet addressed that formation, so tell me a little bit more about the geology in the Glorieta and your determination that it is suitable for injection and to receive the volumes and rates you're proposing.

A. We drilled our Ted well in Section 28. It is a Glorieta injector disposal well. It is currently functioning intermittently because we do not have permanent power to the site yet, so we are running it on diesel and generators. But the tests that we've done on

the well are quite favorable. We're injecting between 8- and 12,000 barrels a day. And although it is a short period of time and I haven't really been able to collect the data yet to really know what the stable pressures will be long term, we're seeing very favorable pressures under 1,000 pounds.

So we anticipate that the Robinson well will behave in similar fashion. We believe that it will have actually a better stratigraphic interval, thicker and higher porosity than the Ted based on the logs around it, and we anticipate it will have a similar performance.

Q. Now, you previously also gave testimony in this Robinson case about the location of offsetting hydrocarbon production. And it is your opinion, based on that analysis and location of this well and the gradient of the different formations, that the injection into the Glorieta zone here will not impair any production and offsetting wells within the area that you just reviewed?

A. That is correct.

Q. You testified, when you were reviewing the cross section, about geologic seals that would contain the injection for both these wells above the zones. Are there also geologic seals that will contain the

injection below?

A. There are. The Leonard is very low porosity off structure. And although the stratigraphic equivalents of the Blinebry and Paddock are present, they are not reservoir-quality rock. And as a result, there has been little or no production from them besides the fact that we're 500 feet below the known oil-water contact in the existing field.

Q. So there is sufficient tight geologic structures below that will contain the injected fluid?

A. Yes. There are barriers below us that will contain us from penetrating the deeper rock.

Q. Okay. Now, let's move on to talk about production of the fresh water. Are there freshwater zones in the area for both these wells?

A. Yes. There is freshwater production from the Rustler Formation.

Q. And approximately what depth are wells producing water from in the Rustler?

A. I think on average it's around 120 feet, but I believe there is one well that might be as deep as 300.

Q. Just a little shy of 300. I think that's what the information contained in the C-108 shows.

Let's see. It's Tab 8, Mr. Drake.

A. Yes.

Q. If you would turn to Tab 8 in both of your exhibit packets and review for the examiners what this map shows.

A. Okay. What we have are a half-mile-radius circle and a one-mile-radius circle and then the locations of three wells identified that have produced fresh water.

Q. And was Goodnight Midstream able to collect samples for these wells?

A. Yes, we were.

Q. Now, if you turn to the next page, is there a table that reviews the efforts that Goodnight Midstream undertook to try to collect water samples from these three wells within the mile area?

A. Yes. And if I recall, these wells were not functioning --

Q. Right.

A. -- and as a result, we were not able to recover water from the three that were in this area.

Q. Okay. And this table just kind of reviews your efforts to identify the history and background of these wells and to try to collect water from them; is that right?

A. Correct.

Q. So as a result, there are no samples within a

mile that you were able to collect?

A. I don't think there were. No.

Q. Now, in your opinion, based on your review of the geology and the containing strata, is it your opinion that there will be any risk of impairment to offsetting freshwater zones in the area?

A. No, we will not. We're 4,400 feet below the existing Rustler Aquifer and no communication with it.

Q. So in your review, Mr. Drake, you've reviewed the geologic and engineering data and have satisfied yourself that there is no evidence of a hydrologic connection between the injection zones and any sources of fresh water or drinking water in the area?

A. That's correct.

Q. That is true for the Robinson and the Scully wells?

A. That is true for both wells.

Q. Now, as to the source of the injection fluids for both cases, again, the same sources that you discussed previously, going to be in the range of formations. Will you review quickly?

A. Yeah. The majority of the water will be coming from Bone Spring and Wolfcamp producers in the Delaware Basin. There could be minor amounts of water from other formations.

Q. And did you also collect a review of the water chemistry for the expected zones that you'll be injecting into these two wells?

A. That's correct.

Q. Is that behind Tab 6?

A. Yes, it is.

Q. In both cases?

A. Yes.

Q. And behind Tab 7, you were also able to provide the water chemistry analyses for the receiving formation?

A. Yes.

Q. And in your view, looking at the water chemistry and the history of injection and the commingling of these waters, is there any risk of scaling or other compatibility issues that may come up?

A. Right. So far in our experience with the Ted is we see no scaling problems in the Glorieta, and in our experience with the Piper, we have no scaling problems in the San Andres.

Q. I think that's all I wanted to cover for both of these.

Mr. Drake, based on your analysis and review of the geology and the formations and the injection intervals here and offsetting hydrocarbon

production, is it your opinion that injection into these two wells will be protective of conservation of resources, will protect against waste and correlative rights --

A. Yes.

Q. -- and protect correlative rights?

I always get that mixed up (laughter).

And that's true for both of these wells?

A. Yes, it is.

MR. RANKIN: Mr. Examiner, at this time I would move admission, in Case Number 20556, of Exhibit C, and then in Case Number 20557, Exhibits D, E -- oh, you know what? We didn't talk about one exhibit.

Q. (BY MR. RANKIN) I think it might be worth --

A. Yup. Which one?

Q. Exhibit F in Case Number 20557.

A. Correct.

Q. Mr. Drake, what does this exhibit show?

A. The wells shown with a gas star and/or a solid black circle are operated by Blackbeard Oil & Gas, and we show a half-mile-radius circle from the location of the Scully and the Robinson.

Q. Is it your understanding, Mr. Drake, that Blackbeard has filed a protest of these two wells, the Robinson and Scully?

A. Yes. That is correct.

Q. And what is the purposes of this map? What does it show?

A. It's showing where their wells are and what the proximity is to our proposed operation.

Q. And have you evaluated the concerns that Blackbeard has raised, that there may be some impact to their production in their shallower producing zones?

A. Yes. We were trying to speak to that earlier when we were discussing the cross section and saying that we -- we do not believe that water will migrate up into the zones being produced and that we have a significant standoff below the base of their formation.

Q. Not only is there a vertical standoff, but you've identified some geologic strata that would seal off the injection --

A. That is correct. Anhydrite barriers are present.

Q. And then you've got this lateral distance between your -- your injection and their production as well?

A. Correct.

MR. RANKIN: With that, Mr. Examiner, I would move the admission, in Case 20557, Exhibits D, E and F, and in Case 20556, Exhibit D.

EXAMINER GOETZE: And just for point of clarity, since we used to do this, do you wish to have your witness make a statement about the source of where these came from?

MR. RANKIN: Source of --

EXAMINER GOETZE: That they were drawn under his supervision or someone else's.

Q. (BY MR. RANKIN) Mr. Drake, did you -- did you prepare the exhibits I just referenced yourself, or did you oversee the preparation?

A. Yes, I did.

MR. RANKIN: Mr. Examiner, I would move their admission.

EXAMINER GOETZE: For the record, we are looking at the introduction, in Case 20556, of D, and in Case 20557, D, E and F.

Ms. Antillon?

MS. ANTILLON: No objection.

EXAMINER GOETZE: Mr. Bruce?

MR. BRUCE: No objection.

EXAMINER GOETZE: Very good. Then in Case 20556, Exhibit D is so entered, and in Case 20557, D, E and F are so entered.

(Goodnight Midstream Permian, LLC Exhibit D in Case Number 20556 and Exhibits D, E and

F in Case Number 20557 are offered and admitted into evidence.)

EXAMINER GOETZE: Ms. Antillon, any questions?

MS. ANTILLON: No questions.

MR. BRUCE: No questions.

EXAMINER GOETZE: Mr. Brooks?

EXAMINER BROOKS: No. No questions is what I meant.

CROSS-EXAMINATION

BY EXAMINER GOETZE:

Q. Well, I've only got one question. Since it is one of these things we look at in confining layers and whatnot, what keeps the two wells from communicating? Do we have enough separation, or is there a feeling -- or are we going to have both talking to each other during the injection phase?

A. I believe that the lower part of the San Andres is the tightest part, that the bottom formations have not been altered to dolomite, and as a result, they are deep-water limestones that were deposited as a shelf that was back-stepping through time in that the subsidence was faster than deposition. And as a result, they were never in the water depth that was favorable for converting them to dolomite, which is where our

permeability comes from. So I feel like we have 3- to 400 feet of tight limestone at the base of the San Andres that will separate us from the Glorieta. And I also feel like our casing cement will be a design and be adequate to withstand the injection in the shallow well behind pipe in the deep well.

Q. Very good. You've answered my question.

EXAMINER GOETZE: I have no more questions for this witness.

MR. RANKIN: Thank you, Mr. Examiner.

Mr. Drake, you may be excused.

And I have our fourth witness in these cases, Mr. Tomastik.

THOMAS E. TOMASTIK,

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

DIRECT EXAMINATION

BY MR. RANKIN:

Q. Good morning, Mr. Tomastik. Will you please state your full name for the record?

A. Thomas E. Tomastik.

Q. Have you previously testified before the Division and had your credentials as an expert in petroleum engineering and in saltwater disposal design and operations accepted as a matter of record?

A. Yes, as of today.

Q. Have you reviewed the C-108 applications that were filed in both of these cases?

A. Yes.

Q. And have you undertaken a study of the engineering and the operations design of the well in both of these cases?

A. Yes.

Q. As well as the wells in the offsetting area of review?

A. Yes.

MR. RANKIN: Mr. Examiner, at this time I would retender Mr. Tomastik as an expert witness in petroleum engineering and in saltwater design and operation.

EXAMINER GOETZE: Ms. Antillon?

MS. ANTILLON: No objection.

EXAMINER GOETZE: Mr. Bruce?

MR. BRUCE: No objection.

Q. (BY MR. RANKIN) Mr. Tomastik, let's take each of these in sequence, first Case 20556, the Robinson SWD No. 1 well. Will you please turn to what's been marked as Tab Number 4 in Exhibit B, and let's first talk about the area of review. And review for the examiners what the maps behind this tab show?

A. Yes. The map on this tab on Exhibit A shows the half-mile area of review and then a mile and two-mile radius.

Q. And those show all the wells within that radii?

A. Correct.

Q. And if you flip behind Tab Number 5, is that a tabulation of all the well data required by the Division within the half-mile area-of-review radius?

A. Correct.

Q. And have you identified in that area, in those wells, any wells that are PA'd that actually penetrate the proposed injection well in this area?

A. Yes. There are five wells that are plugged and abandoned. None penetrate the injection zone.

Q. And as a result of that determination, is it your opinion that there are no wells within the area of review that require remediation or will potentially serve as a conduit to move injected fluids out of the injection zone?

A. Correct.

Q. Looking at the well design operation, let's turn to Tab Number 1 in Exhibit B. Just review for the examiners the operational -- well, let's first start with the wellbore design. Tell me a little bit about how this well is to be designed. What's the well

construction?

A. Yes. The well construction for the Robinson SWD will be drilling a 12-1/4-inch borehole to 495 feet and setting 9-5/8 casing and cementing the surface casing to surface to protect the USVWs [sic] and the potable freshwater zones. And then the well will be drilled to a total depth of 6,600 feet, and 7-inch production casing would be set at -- excuse me -- 7-inch production casing will be drilled at 5,750 and cement the production casing and cement it back to surface, and then they would drill open hole to a total depth of 6,600 feet.

Q. If you flip to Tab 3, is that a depiction of the wellbore diagram that is being proposed?

A. Yes.

Q. And does it reflect the well construction that you just reviewed -- outlined?

A. Yes.

Q. Let's talk about the operations. Going back to Tab 1, will you review for the examiners what the operational parameters are for this well, including the estimated volumes and pressures for injection? Did I say the right tab? I think it's in Tab 1.

A. I think it's in Tab 2.

Q. Okay. Tab 2.

A. The proposed average injection rate is 12,500 barrels per day. Maximum injection rate is 25,000 barrels per day, with a maximum proposed surface injection pressure of 1,150 psi based on the 2-psi-per-foot regulatory requirement, with a proposed average injection pressure of 575 psi.

Q. In your opinion, based on the review from Mr. Drake and your own analysis, will the well be capable of injecting those volumes at that maximum injection limitation?

A. Yes.

Q. If Goodnight Midstream requires an increase in the surface injection pressures, will it request an OCD-operated -- OCD-witnessed step-rate test?

A. Yes.

Q. In your opinion, is the casing design of this well and the cement plan protective of freshwater sources in the area?

A. Yes.

Q. How will Goodnight Midstream monitor the integrity of the well during injections?

A. The tubing and packer will be set within 20 or 30 feet at the top of the open-hole injection zone, and that will be pressured tested to the maximum allowable pressure test, witnessed by OCD, and a corrosion

inhibitor with an inert fluid will be put into the annular space. And then the SCADA electronic system will be monitoring electronically the annulus and injection pressure at the surface to maintain continuous mechanical integrity.

Q. And how about prior to injection? Will Goodnight Midstream undertake any efforts to confirm the integrity of the cement?

A. Yes, with a cement bond log on the production casing.

Q. And is there a plan to stimulate this well prior to injection?

A. There possibly will be an acid stimulation on the formation.

Q. And in your opinion, Mr. Tomastik, is there -- is this application and the granting of the application in the best interest and the protection of -- the conservation of resources, the protection of correlative rights and the protection against waste?

A. Yes.

MR. RANKIN: Mr. Examiner, at this time I would pass the witness for questioning unless you want me to move on to the next wellbore construction design, which I think is very similar. We can probably just do them at once.

EXAMINER GOETZE: Yeah. Again, they're related --

MR. RANKIN: Yeah.

EXAMINER GOETZE: -- but we will have a question about the concept of open hole.

MR. RANKIN: Very well.

Q. (BY MR. RANKIN) Mr. Tomastik, let's move over to the next case, 20557, and walk through the -- first the area of review, turning to Tab Number 4. It's a very similar area of review, similar map to what you just reviewed?

A. Correct.

Q. This first map shows the location of the wells within the half-mile area of review, correct?

A. Correct, and also a one-mile and a two-mile radius.

EXAMINER GOETZE: Question?

EXAMINER BROOKS: Well, no, I don't have a question for the witness, but I wanted to be sure, and I didn't know when to chime in. The court reporter does have instructions -- is she preparing -- going to prepare a joint transcript in these two cases?

EXAMINER GOETZE: That's correct. We asked her first before we did anything.

EXAMINER BROOKS: That was very wise.

Q. (BY MR. RANKIN) Tab 4 reflects the various radii for the area of review. Is that what you were just saying?

A. Correct.

Q. And behind Tab Number 5, is that a tabulation of the data for all the wells that were identified within the half-mile area of review required by the C-108?

A. Correct.

Q. Have you identified any PA'd wells?

A. There were five wells that were plugged and abandoned and do not penetrate the injection zone.

Q. And, in fact, do any wells within the area of review penetrate either the injection formation or across the injection interval here?

A. No.

Q. As a result, is it your opinion that there are no -- no risk of creating a conduit, a pathway, of injection fluids from the injection interval through any of these wells to other formations?

A. Correct.

Q. Let's talk about the operations of the well. I feel like it's déjà vu. Let's turn to Tab 1 and just review. Is this well designed in a similar way to the prior well, to the Robinson well that you just reviewed?

A. Correct.

Q. Let's -- are there any differences in the wellbore design or well construction for this well compared to the Robinson?

A. No, other than total depth.

Q. What is the total depth for this well?

A. Total depth would be --

Q. I think if you turn --

A. 5,850.

Q. Yeah. And you're referring here to the wellbore diagram behind Tab 3?

A. Correct.

Q. And that shows the total depth for this well?

A. Yes.

Q. And no other design changes or differences between this one and the Robinson?

A. Correct.

Q. Let's turn to what's been marked as Tab 2 and just review for the examiners the operational parameters for this well, the approximate injection rates and pressures and other details about the operations of the well.

A. Yes. The maximum injection rate will be 35,000 barrels per day with an average injection rate of 17,500 barrels per day. The maximum surface pressure is 890

psi based on the .2 psi per foot by regulatory requirements, and the average injection pressure is estimated to be 445 psi.

Q. And based on this your analysis and review, will this well be capable of disposing of those volumes at the maximum injection rates -- maximum injection pressures be imposed in this well?

A. Yes.

Q. If Goodnight Midstream requires an increase in injection pressures, will it request an OCD-witnessed step-rate test to do so?

A. Yes.

Q. And in your opinion, is the casing design and well construction and cement plan as proposed protective of the freshwater zones in the area?

A. Yes.

Q. And is there a plan to stimulate this well?

A. There could be a possibility of stimulating with an acid stimulation.

Q. Now, how will Goodnight Midstream monitor the integrity of the well during operations and injections?

A. That will be monitored with a SCADA electronic monitoring system, which will monitor the annulus and the injection pressure electronically to maintain continuous mechanical integrity.

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

A. Yes.

MR. RANKIN: Mr. Examiner, with that review of the well design and construction in the area of review, I pass the witness for questioning in both cases.

EXAMINER GOETZE: Ms. Antillon?

MS. ANTILLON: No questions.

EXAMINER GOETZE: Mr. Bruce?

MR. BRUCE: No questions.

EXAMINER GOETZE: Mr. Brooks?

EXAMINER BROOKS: No questions.

CROSS-EXAMINATION

BY EXAMINER GOETZE:

Q. Okay. Just one question.

A. Sure.

Q. We don't like to do open hole that much anymore in the San Andres, and we have, at the recommendation of our previous pluggers in the Hobbs District, we'd like to see the casing and cement run all the way down. I know this is an additional cost and it certainly does impair some of the communication with the formation, but

we're looking down the road. And once these things do pressure up, it will be better to have something there we can control.

So other than that, your presentation, I have no questions.

MR. RANKIN: Mr. Examiner, would you like us to submit an updated wellbore diagram reflecting --

EXAMINER GOETZE: If I approve it, I'll give it to you.

MR. RANKIN: Okay. That's even better.

EXAMINER GOETZE: Thank you.

THE WITNESS: Thank you.

EXAMINER GOETZE: Yes?

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

With that, we'd move -- unless --

EXAMINER GOETZE: Well, you can do what you do, and she will do what she does.

MR. RANKIN: I would ask that these two cases be taken under advisement.

EXAMINER GOETZE: Okay. Very good.

Ms. Antillon.

MS. ANTILLON: With regard to both 20556 and 20557, the State Land Office is in the process of reviewing both of those applications, and it has

concerns with the saltwater disposal well spacing being in proximity to State Trust Land and also to each other, to both the wells.

EXAMINER GOETZE: Very good.

With that, 20556 and 20557 are taken under advisement.

And off the record now.

(Case Numbers 20556 and 20557 conclude, 11:27 a.m.)

(Recess, 11:28 a.m. to 11:46 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 27th day of June 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