

1       ?                   STATE OF NEW MEXICO  
2                   ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT  
3                   OIL CONSERVATION DIVISION

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

ORIGINAL

CASE 15398

7       APPLICATION OF BC OPERATING, INC.  
8       FOR AUTHORIZATION TO INJECT, LEA COUNTY,  
9       NEW MEXICO.

10                   REPORTER'S TRANSCRIPT OF PROCEEDINGS  
11                   EXAMINER HEARING  
12                   November 12, 2015  
13                   Santa Fe, New Mexico

14       BEFORE:     WILLIAM V. JONES, CHIEF EXAMINER  
15                   PHILLIP GOETZE, EXAMINER  
16                   GABRIEL WADE, LEGAL EXAMINER

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17                   This matter came on for hearing before the  
18       New Mexico Oil Conservation Division, William V. Jones,  
19       Chief Examiner, Phillip Goetze, Examiner, and Gabriel  
20       Wade, Legal Examiner, on November 12, 2015, at the New  
21       Mexico Energy, Minerals, and Natural Resources  
22       Department, Wendell Chino Building, 1220 South St.  
23       Francis Drive, Porter Hall, Room 102, Santa Fe, New  
24       Mexico.

25       REPORTED BY:     ELLEN H. ALLANIC  
                          NEW MEXICO CCR 100  
                          CALIFORNIA CSR 8670  
                          PAUL BACA COURT REPORTERS  
                          500 Fourth Street, NW  
                          Suite 105  
                          Albuquerque, New Mexico 87102

## A P P E A R A N C E S

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1 (Time noted 3:00 p.m.)

2 EXAMINER JONES: We have one more case on  
3 the docket. Let's call case 15398, the Application of  
4 BC Operating, Inc., for Authorization to Inject, Lea  
5 County, New Mexico.

6 Call for appearances.

7 MR. McMILLAN: Mr. Examiner, Seth McMillan,  
8 Montgomery and Andrews, on behalf of BC Operating, Inc.  
9 I have some exhibits, if I may approach.

10 EXAMINER JONES: Any other appearances? Did  
11 the other parties dissolve in this case?

12 EXAMINER GOETZE: No. We will make note  
13 that this was a protested well application, that the  
14 protestant dropped it, but we continued on with  
15 hearing -- well, Amtex made an appearance, but we wanted  
16 to hear this case since there were issues concerning  
17 what was submitted in application.

18 EXAMINER JONES: Okay.

19 MR. McMILLAN: In brief, we are here to  
20 address the concerns of Mr. Goetze two weeks ago. And  
21 we have three witnesses today. On first blush, that may  
22 sound like a bit of overkill. I promise to keep my  
23 examinations short and sweet, and then turn the  
24 witnesses over to you for questions. And,  
25 importantly, BC Operating wanted to make sure that there

1 were no questions unanswered or concerns unaddressed  
2 today, so we brought along the three principals  
3 involved in developing the revised plan for the subject  
4 well.

5 EXAMINER JONES: All right. Will the  
6 witnesses please stand and the court reporter swear the  
7 witnesses.

8 (WHEREUPON, the presenting witnesses  
9 were administered the oath.)

10 MR. McMILLAN: I would call our first  
11 witness, Deane Durham.

12 DEANE DURHAM  
13 having been first duly sworn, was examined and testified  
14 as follows:

15 DIRECT EXAMINATION

16 BY MR. McMILLAN:

17 Q. Would you please state your full name and place  
18 of residence.

19 A. My name is Deane Durham, Midland, Texas.

20 Q. And by whom are you employed and in what  
21 capacity?

22 A. I am a petroleum engineer employed by BC  
23 Operating in the capacity of the drilling engineer of  
24 the company.

25 Q. Are you authorized to testify today on behalf of

1 BC Operating?

2 A. I am.

3 Q. Have you previously testified before the Division  
4 or one of its examiners and had your credentials  
5 accepted and made a matter of record?

6 A. Yes. Several years ago, I testified in this room  
7 for a Palo Petroleum as a petroleum engineer.

8 Q. Are you familiar with the application filed in  
9 this case?

10 A. Yes.

11 Q. Are you familiar with the lands that are the  
12 subject of this application?

13 A. Yes, I am.

14 MR. McMILLAN: Mr. Examiner, I would tender  
15 Mr. Durham as an expert petroleum engineer.

16 EXAMINER JONES: He is so qualified.

17 Q. Mr. Durham, is it your understanding that at the  
18 October 29th hearing in this matter the Hearing Examiner  
19 had some concerns about the cementing and casing program  
20 for this well?

21 A. That is my understanding, yes.

22 Q. And has BC Operating had the opportunity to take  
23 those concerns into consideration and revise the plan  
24 for this well?

25 A. We have.

1 Q. And have you been involved directly in this  
2 process?

3 A. Yes, I have.

4 Q. And what has been -- just briefly, what has been  
5 your role?

6 A. My main focus was to examine the existing P and A  
7 wellbore and study it for pressure integrity and for  
8 concerns between the Capitan Reef and our zone of  
9 interest for saltwater disposal.

10 Q. Let's take a look at your Exhibit 21.

11 MR. McMILLAN: And, Mr. Hearing Examiner, we  
12 are numbering our exhibits today beginning with Exhibit  
13 21, as the last exhibit of the October 29th hearing was  
14 Exhibit 20. And we may be referring back to exhibits  
15 tendered and accepted at the October 29th hearing.

16 I have a couple of copies in front of me, if  
17 need be.

18 EXAMINER JONES: I am sure Mr. Goetze has  
19 one.

20 EXAMINER GOETZE: Probably it's going to end  
21 up with me, so proceed and we will share if we need.

22 MR. McMILLAN: Okay. Thank you.

23 Q. Looking at Exhibit 21, can you begin by  
24 identifying for us the proposed injection zone?

25 A. Yes. So the illustration, Exhibit 21, is a

1 wellbore diagram I drew. And it shows the wellbore  
2 where it will be after BC Operating cleans out to 8299  
3 minus.

4 And the saltwater zone picked by our geologist  
5 who was here two weeks ago is from 5,790 feet at the top  
6 and 6,970 feet at the bottom. Again, this depicts where  
7 we clean out and prior to running a full suite of cement  
8 bond logs and examination logs.

9 Q. Can you point out on this diagram where the  
10 Capitan Reef has been identified by geologist Mike  
11 Moylett?

12 A. Yes. The geologist also identified the top and  
13 bottom of the Capitan Reef, the top being at 4,105 feet,  
14 the bottom being at 5,030 feet.

15 Q. Can you briefly summarize for us what you -- what  
16 BC Operating understood the Examiner's concerns to be on  
17 October 29th?

18 A. The Examiner was concerned about a hole in the 9  
19 and 5/6ths casing, the intermediate casing.

20 And as noted on Exhibit 4, page 5 and a sundry  
21 notice, it did say they were running the scab liner to  
22 repair a hole in the 9 and 5/8ths casing. And they did  
23 so to repair that.

24 Q. Have you identified on this diagram where you  
25 believe the most likely spot for this hole could be



1 located?

2 A. I have. I used the original well surveys, which  
3 is Exhibit 122, from the well. And by examining that I  
4 saw a trend of increasing angle in the hole up to four  
5 and three quarter degrees at 4378.

6 And then by them drilling ahead with that angle  
7 in the hole -- and shortly after that, within the next  
8 150 feet or so, it dropped of pretty drastically back to  
9 almost a vertical well.

10 So we feel like subsequent drilling in the area  
11 and the rubbing of the drill pipe on the casing, the  
12 most likely spot for that hole would be at or near 4378,  
13 probably within that depth or slightly -- maybe 100 or  
14 150 feet below that. In general, that's where the hole  
15 is we feel.

16 Q. And is that identified in red on Exhibit 21?

17 A. It is. It is identified in red at 4378, and it  
18 is within the Capitan Reef.

19 Q. Is this generally the area of concern that BC  
20 Operating focused on in developing a revised plan for  
21 the cementing and casing of this well?

22 A. It is. Because of those concerns we were --  
23 well, No. 1, wanted to isolate the zonal integrity, the  
24 pressure integrity of the existing wellbore. And then  
25 we have a plan going forward -- that will be addressed

1 to the other two witnesses -- of how to remedy this and  
2 remediate it.

3 Q. Is it your understanding that there was also a  
4 concern about a possible 6-foot gap and can you explain  
5 -- can you address that concern?

6 A. Yes.

7 Also on Exhibit 4, page 5, there is a mention of  
8 setting the scab liner, the 7 and 5/8ths scab liner at  
9 at 4939 feet, cementing it in place. And then it went  
10 on. The last line of that sundry notice says, Tested  
11 the casing and seal on top of casing to 2,500 pounds and  
12 held okay.

13 We have also included Exhibit 23, which is a  
14 boeing seal assembly, a packer and seal assembly. They  
15 were common to run back then in these cases, they would  
16 have, on that same sundry, page 5 of Exhibit 4, the  
17 first line says ream to 9 and 5/8ths casing.

18 They run probably a mil or a billion there and  
19 dress the top of that existing liner off and then run  
20 the seal assembly. And they would offset, set above the  
21 existing top of the liner and pump their cement job,  
22 which it says they did.

23 And at that point, they would have set down in  
24 it, set the packer and the seal assembly, the lead seal  
25 on that. And it did mention they tested that lead seal

1 after that 2,500 pounds.

2 So we feel that 4,939 foot, it appeared there  
3 might be a six-foot gap between the top of the liner and  
4 the bottom of that scab liner. We feel like that's not  
5 the case. So we feel like it's a seal and a pressure  
6 integrity there.

7 Q. Whether or not this six-foot gap does indeed  
8 exist, is it your understanding that the revised plan  
9 for this well would address that problem if it is, in  
10 fact, a real problem?

11 A. Yes. We are concerned about those same things,  
12 the hole in the casing mentioned and the age of the  
13 casing. So we feel like our plan going forward does  
14 address that and does provide integrity for the wellbore  
15 going forward.

16 Q. And our subsequent witness is going to speak with  
17 specificity to the BC Operating plan for this wellbore?

18 A. They will.

19 Q. Were Exhibits 21 through 23 prepared by you or at  
20 your direction and were they found in the well file for  
21 this well in the OCD records?

22 A. They were.

23 MR. McMILLAN: Mr. Hearing Examiner, I would  
24 tender at this time exhibits -- move for the admission,  
25 rather, of Exhibits 21 through 23.

1 EXAMINER JONES: Exhibits 21 through 23 are  
2 admitted.

3 (BC OPERATING INC. EXHIBITS 21 through 23  
4 were offered and admitted.)

5 MR. McMILLAN: And that's all I have on  
6 direct for Mr. Durham.

7 EXAMINATION BY EXAMINER GOETZE

8 EXAMINER GOETZE: Since it's my case, I will  
9 say that I have no more questions or any questions for  
10 you. With the evidence provided in the exhibits you've  
11 addressed a lot of my questions. And we will see what  
12 the subsequent witnesses present, so no further  
13 questions for you as a witness.

14 THE WITNESS: Thank you.

15 EXAMINER GOETZE: Thank you.

16 MR. McMILLAN: I call our next witness,  
17 Billy Moore.

18 BILLY MOORE  
19 having been first duly sworn, was examined and testified  
20 as follows:

21 DIRECT EXAMINATION

22 BY MR. McMILLAN:

23 Q. Mr. Moore, would you please state for the record  
24 your full name and place of residence.

25 A. Billy Steven Moore, Odessa, Texas.

1 Q. By whom are you employed and in what capacity?

2 A. I am employed by BC Operating as a petroleum  
3 engineer.

4 Q. Are you authorized to testify today on behalf of  
5 BC Operating?

6 A. Yes.

7 Q. And have you previously testified before the  
8 Division or one of its examiners and had your  
9 credentials accepted and made a matter of record?

10 A. Yes. At the beginning of this case.

11 Q. And that, in fact, took place on October 29th?

12 A. Yes.

13 Q. Are you familiar with the application filed in  
14 this case?

15 A. Yes.

16 Q. And are you familiar with the lands that are the  
17 subject of this application?

18 A. Yes.

19 MR. McMILLAN: Mr. Hearing Examiner, I  
20 tender Mr. Moore as an expert petroleum engineer.

21 EXAMINER JONES: He is so qualified.

22 Q. Mr. Moore, let's first look at your Exhibit 24.  
23 Is this a revised area of review diagram showing your  
24 half mile area of review and neighboring wells?

25 A. Yes. Last time it was a larger graph. And I

1 knew the examiners would like a more accurate and  
2 focused picture, so we zoomed in and made this half-mile  
3 radius AOR. Nothing has changed on it in what wells are  
4 inside of the half mile, because it's the same half  
5 mile.

6 Q. So this exhibit was developed, essentially, at  
7 the request of the Examiner at the October 29th hearing  
8 for a less cluttered AOR diagram?

9 A. Yes.

10 Q. And is this intended to replace or to supplement  
11 BC Operating's Exhibit 1?

12 A. Yes.

13 Q. Now, you'll recall that at the October 29th  
14 hearing, the examiners had some concerns about the  
15 cementing and casing program for this well, correct?

16 A. Yes.

17 Q. You have taken the opportunity to examine these  
18 concerns and revise the plan for the cementing and  
19 casing of this well?

20 A. Yes.

21 Q. Let's look at your Exhibit 25. Is Exhibit 25 a  
22 revised version of what was previously pages 15 to 17 of  
23 BC Operating's C-108?

24 A. Yes, it is.

25 Q. And to be clear, the C-108 was Exhibit 3 at the

1 earlier hearing, correct?

2 A. Yes.

3 Q. Let's go ahead and explain to the Examiners the  
4 changes that BC Operating is proposing to its original  
5 cementing and casing plan for the Pearson well; are  
6 there a total of five changes; is that correct?

7 A. A total of five, yes.

8 Q. Are those five changes listed with specificity on  
9 the fourth page of your Exhibit 25?

10 A. It is, yes, the fourth page.

11 Q. And are those changes incorporated into the plan  
12 shown on the first three pages of Exhibit 25?

13 A. Yes.

14 Q. Let's take them a step at a time. Could you  
15 please explain the first change and the purpose for the  
16 change and what you expect it to accomplish?

17 A. Yes. So the change number 1 occurs in step 15.  
18 We're now going to install a five-and-a-half casing from  
19 7,200 feet all the way to surface. And then also cement  
20 it to surface.

21 And this should give adequate isolation of the  
22 Capitan Reef that is located from 4,105 feet to 5,030  
23 feet. And it will also give -- it will also take place  
24 in isolating in case that six-foot zone was there. It  
25 will go over that and also go over any hole that was in

1 the 9 and 5/8ths area, because this cement will be going  
2 to surface.

3 Q. Let's turn now to the second proposed change.

4 Can you explain to us what that change is and  
5 what it's intended to accomplish.

6 A. Step No. 2 is also for step 15 in the C-108. And  
7 it is changed to show the cement job that will ran to go  
8 behind the 5 and 1/2 casing all the way to surface.

9 The cement job will be 175 sacks of Class C at  
10 the tail and 200 sacks of Halliburton Lite to lead.

11 Q. And generally the purpose of that change?

12 A. That's where we are really trying to make sure we  
13 give you all, the Examiners, a feeling of we are going  
14 to have everything isolated because we plan on showing  
15 that cement to surface. We are going to make sure it  
16 gets to surface.

17 Q. Let's take a look at the third proposed change.  
18 Explain to us what that is and what it is intended to  
19 accomplish.

20 A. The third change comes in Step 17. And it is the  
21 change from 20,000 barrels per day maximum water to  
22 7,500 barrels a day max, due to the fact of this is to  
23 stay under the erosional velocity of steel inside of a  
24 3 and 1/2 fiberglass line tubing.

25 Last time, the Examiner, I could tell, he was a



1 little bothered when I said 20,000, which was in a 7 and  
2 5/8ths. So I went back -- and the big point here is we  
3 are going from -- we were going to have a 5 and 1/2  
4 tubing, and now we are going into a 3, 3 and 1/2 tubing.

5 That's going to really restrict in that it does  
6 not (incomprehensible) go down; it substantially goes  
7 down with the maximum volume. And 7,500 barrels per day  
8 is the max without eroding that.

9 Q. Very good.

10 Let's take a look at your fourth proposed change.  
11 Can you explain it to us and the purpose.

12 A. So that goes into the next future job, Procedure  
13 No. 3, and that's Step 3. It's changed to the new 5 and  
14 1/2 casing. All that's there is to show that I was  
15 taking care of my business, that we are changing from  
16 being in the 7 and 5/8ths; now we are going into this  
17 new 5 and 1/2 casing.

18 Q. And, finally, the fifth proposed change, please  
19 explain it to us and the purpose.

20 A. It is Step 11, which is running the injection  
21 equipment. It shows the new dimensions of the tubing to  
22 be used and also the new size of the Arrowset  
23 nickel-plated injection packer.

24 Also included is the new setting depth of  
25 5,740 feet, which is being changed so that BC Operating

1 is just 50 feet above the top perf. And that is to  
2 leave room for if BC has to go in and do remedial work,  
3 we can work uphole a little bit and still stay within  
4 the guidelines of 100 foot but above your top perf.

5 The new tubing is a fiberglass line tubing, NOV,  
6 which is 3 and 1/2 J55.

7 And then the new packer was going to be a 7 and  
8 5/8ths, which would have been in that 7 and 5/8ths  
9 casing. It is now going to be a 5 and 1/2 Arrowset  
10 nickel plated packer.

11 Q. I am going to jump ahead just a bit here.

12 Mr. Moore, generally, in your opinion, will this  
13 new program maintain the injection fluids within the  
14 injection zone?

15 A. Yes.

16 Q. Now, is it possible in looking at Step 13 of the  
17 revised plan -- this is on the first page of  
18 Exhibit 25 -- is it possible that the cement bond log  
19 that will be run pursuant to Step 13 could show cement  
20 up and above the Capitan Reef?

21 A. Yes, it could.

22 Q. Would this finding have any effect on BC  
23 Operating's revised plan for this well?

24 A. No. To satisfy the Commission and also BC  
25 Operating, even if the bond log shows cement up above

1 the Capitan Reef, we're still going to run a brand new 5  
2 and 1/2 casing and cement to surface. That would be  
3 because we want -- we understand that that's 1970s  
4 casing. We want a new casing and we want to make sure  
5 that we're taking the best precautions we can to not  
6 neglect anything that could possibly happen.

7 Q. And, likewise, could the cement bond log run in  
8 Step 13 also potentially show that the hole discussed in  
9 Mr. Durham's testimony has, in fact, been covered?

10 A. Yes. By the assumption that Mr. Durham was able  
11 to have given, if the cement is anywhere close to the  
12 cements that are -- the last testimony will be given  
13 says that should show that that hole was covered for  
14 sure as well anyhow.

15 Q. But if that finding is made in Step 13, would  
16 that alter BC Operating's plan for -- revised plan for  
17 the cementing --

18 A. It still would not. We would still say with the  
19 5 and 1/2 casing all the way to surface with the cement.

20 Q. Mr. Moore, were Exhibits 24 and 25 prepared by  
21 you or at your direction?

22 A. Yes, they were.

23 MR. McMILLAN: Mr. Examiner, I would move  
24 for the admission of Exhibits 24 and 25 at this time.

25 EXAMINER JONES: 24 and 25 are admitted.

1 (BC OPERATING INC. EXHIBITS 24 and 25 were  
2 offered and admitted.)

3 MR. McMILLAN: Okay. That's all I have for  
4 Mr. Moore.

5 EXAMINATION BY EXAMINER JONES

6 EXAMINER JONES: So you are starting out,  
7 from the bottom of the hole, you're going to have a  
8 5-inch liner up to 500 feet or so. And then what  
9 happens from there up?

10 UNIDENTIFIED VOICE: That's the old one.

11 EXAMINER JONES: Okay.

12 EXAMINER GOETZE: I'll go ahead and take  
13 some questions.

14 EXAMINATION BY EXAMINER GOETZE

15 EXAMINER GOETZE: So are you satisfied with  
16 the reduction in tubing size, that it will still  
17 adequately meet your requirements for your intent in  
18 this --

19 THE WITNESS: Yes, it will.

20 EXAMINER GOETZE: Thank you very much for  
21 including this change in design.

22 The only other thing I would ask of you is  
23 if this is approved, that when your folks run your  
24 cement bond logs, do make them aware that you are  
25 running a light cement -- and many a heartburn is a

1 result of people running some bond logs showing cement  
2 not being there when it actually is.

3 So you are putting this much effort, make  
4 sure you carry on with any after cementing work to make  
5 sure that your logs are representative of anything that  
6 is placed.

7 At this point, you have answered all my  
8 questions, and I have no further.

9 EXAMINER GOETZE: Off the record.

10 (Discussion off the record.)

11 EXAMINER JONES: So it's all LE, all the way  
12 to the top?

13 MR. WADE: We're back on the record.

14 EXAMINER JONES: The 5 and 1/2 casing?

15 THE WITNESS: Yes.

16 EXAMINER JONES: Okay.

17 (Discussion off the record.)

18 EXAMINER GOETZE: We're back on the record.

19 EXAMINER JONES: I don't have any more  
20 questions, either.

21 EXAMINER GOETZE: Thank you very much.

22 THE WITNESS: Okay.

23 MR. McMILLAN: Mr. Hearing Examiner, we have  
24 one more witness who pulled together some really neat  
25 exhibits showing us a little bit of the history here.

1 I don't know if his testimony is absolutely  
2 necessary, but he came a long way.

3 Would you like to hear Mr. Carrasco testify  
4 briefly and see if you have any questions for him?

5 EXAMINER JONES: Sure.

6 ART CARRASCO  
7 having been first duly sworn, was examined and testified  
8 as follows:

9 DIRECT EXAMINATION

10 BY MR. McMILLAN:

11 Q. For the record, sir, please state your full name  
12 and place of residence.

13 A. My name is Art Carrasco, Midland, Texas.

14 Q. By whom are you employed and in what capacity?

15 A. By BC Operating. I am the senior completion  
16 engineer.

17 Q. Are you authorized to testify on behalf of BC  
18 Operating?

19 A. Yes, I am.

20 Q. Have you previously testified before the Division  
21 or one of its examiners?

22 A. Yes, I have.

23 Q. And were your credentials accepted and made a  
24 matter of record?

25 A. Yes, they were.

1 Q. Are you familiar with the application filed in  
2 this case?

3 A. Yes, I am.

4 Q. And with the lands that are the subject of this  
5 application?

6 A. Yes, I am.

7 MR. McMILLAN: Mr. Hearing Examiner, I  
8 tender Mr. Carrasco as an expert petroleum engineer.

9 EXAMINER JONES: He is so qualified.

10 THE WITNESS: Thank you.

11 Q. Mr. Carrasco, what has been your involvement in  
12 the development of the revised plan for this well?

13 A. After the last hearing, I picked up, went through  
14 all the available information from the OCD website and  
15 rebuilt a history of the well using that information.

16 Q. Let's look at your Exhibit 26.

17 A. Okay.

18 Q. Exhibit 26 has a number of pages to it. Let's  
19 see. It looks like 7 pages. Can you tell us what  
20 Exhibit 26 shows and lead us, in fairly summary fashion,  
21 through what your diagrams show.

22 A. Yes. The first page shows my interpretation of  
23 the plugged and abandoned wellbore -- the state of the  
24 plugged and abandoned wellbore before it was plugged.  
25 And it shows all the casing strings, the scab liner, and

1 the production string that was run at the time.

2 When you go to the second page -- I mean, I went  
3 back to square one. That's the surface pipe. It showed  
4 the depth it was set at, about how much cement was run,  
5 I assume some yields and weights, because that was not  
6 in the OCD information. But Halliburton Lite is usually  
7 mixed about that weight and Class C is about that  
8 weight.

9 And you'll also -- and so -- what went through  
10 the surface part came back and went to the intermediate  
11 part. They actually ran a three-stage intermediate.

12 The first stage, they cemented, using only about  
13 60-something percent excess on it. And the second stage  
14 was cemented shortly thereafter, using almost  
15 300 percent excess -- 285 is what I figured out. And  
16 then they went back and they cement the third stage.

17 After that they -- they tested the shoe. They  
18 tested the shoe and then they went ahead and started to  
19 drill out.

20 They subsequently drilled out just 5 feet or so  
21 and lost circulation. At that time, I assume they went  
22 ahead and ran a retainer at the bottom of that 9 and  
23 5/8ths and squeezed the shoe and the lost circulation  
24 interval with 350 sacks of cement.

25 They drilled out the squeeze and everything held,



1 so I assume they went ahead and they drilled on.

2 They drilled on down to 11,098 feet, set a 7 and  
3 5/8ths liner, with the top of the liner about 4,945, and  
4 went ahead and cemented that, using a tack and squeeze  
5 method.

6 They went ahead and tacked the bottom of the  
7 liner with -- I am trying to figure out how much cement  
8 they used -- with almost 1,400, 1,500 cubic feet of  
9 cement. And then they came back and squeezed the liner  
10 top with an additional 150 sacks of cement. And if you  
11 figure that excess of cement that they ran over the  
12 two-hole volume, it came out to about 200 percent excess  
13 cement over the whole two-hole volume.

14 They went ahead and tested that liner top after  
15 they drilled it out and it held. And then they  
16 continued on to drill the production hole part of the  
17 well.

18 And, subsequently, somewhere along the process,  
19 they rubbed a hole in the 9 and 5/8ths due to the  
20 crooked hole that Deane alluded to earlier in that area.  
21 And they went ahead and they ran a scab liner. They ran  
22 a really heavy weight scab liner, I guess to be able to  
23 take some of the abuse of drilling on forward and still  
24 maintain pressure.

25 When they ran that liner, the record shows that

1 they -- they set the bottom of the casing 6 feet above  
2 the liner top. And then they went ahead and cemented  
3 it. And then they went ahead and pressure tested the  
4 liner top to make sure of pressure integrity.

5 And my past experience in kind of listening and  
6 reading what the sundry notices say, the particular  
7 procedure at that time was to go in the hole with a  
8 boeing type casing seal, lead seal. And you go down and  
9 you tag the liner top, you pick up five to ten feet, and  
10 do your cement job.

11 Once you get your cement displaced, you go ahead  
12 and set back down on the liner top, engage the grapples  
13 on the lead seal. That attaches the upper liner to the  
14 lower liner. And then you expand the lead seals and  
15 create your pressure seal there.

16 They went ahead and they drilled out all the  
17 cement from inside the liner. And they tested it to  
18 2,500 pounds -- I believe it was 2,500 pounds, and it  
19 held fine.

20 I am assuming they tested that with fresh water.  
21 So that probably put about 4,000-something psi across  
22 that perceived lake.

23 So in my opinion, I don't think there's a gap  
24 there at all. But, anyway, it was tested, the  
25 2,500-pound surface pressure.

1           And they came back -- when they got finished with  
2 all that, they went ahead and they finished drilling  
3 their hole. And when they tested the 7 and 5/8ths shoe  
4 again, they went ahead and put more pressure on it, so  
5 that tested that liner top again.

6           I am sorry. I was wrong. They tested the liner  
7 top previously. When they first set the original liner,  
8 they tested it. And then, after they drilled everything  
9 out, they tested it again. So that liner top  
10 has withstood the pressure.

11           And then the last diagram that is in there is my  
12 interpretation of what the wellbore looks like after it  
13 was plugged and abandoned, showing the cement plugs  
14 inside the wellbore with the cement cap on the plug on  
15 top of the five-inch liner, a subsequent 50-sack cement  
16 plug with 8,300 feet.

17           And the other cement plugs across the liner top  
18 and liner bottom of 7 and 5/8ths. And then above that,  
19 two more plugs covering the DV tools, to make sure the  
20 cement crosses the DV tools.

21           And then it shows where they went ahead and  
22 circulated to make sure of that cement between the 9 and  
23 5/8ths and 7 and 5/8ths liner and pumped down the 7 and  
24 5/8ths liner to ensure they had cement in there.

25           And then it also shows the cement plug that was

1 set at the surface inside the 7 and 5/8ths.

2 Q. So, essentially, the last page of Exhibit 26  
3 shows what the well looks like today?

4 A. Correct. That's what the wellbore should look  
5 like today.

6 Q. Let's take a look at your Exhibit 27. Is this  
7 your wellbore diagram for the repaired well?

8 A. Yes, it is. And what this exhibit shows is we  
9 would rig up and drill and clean out the 7 and 5/8ths  
10 all the way to that top plug at 8,300 feet. And then we  
11 would come and set the 5-and-1/2-inch casing string at  
12 7,200 feet and circulate that cement to surface using a  
13 single stage.

14 Q. In your opinion, will the revised cementing  
15 program ensure that the injection fluids are maintained  
16 within the injection zone?

17 A. Yes, they will.

18 Q. And were Exhibits 26 and 27 prepared by you or at  
19 your direction?

20 A. Yes, they were.

21 MR. McMILLAN: Mr. Examiner, I would move  
22 for the admission of Exhibits 26 and 27 at this time.

23 EXAMINER JONES: 26 and 27 are admitted.

24 (BC OPERATING INC. EXHIBIT 26 and 27 were  
25 offered and admitted.)

1 MR. McMILLAN: And that is all I have for  
2 Mr. Carrasco.

3 EXAMINER JONES: I am really glad you  
4 presented this because it was a very logical way to  
5 graphically show what the well file showed --

6 THE WITNESS: Thank you.

7 EXAMINER JONES: -- and your interpretation  
8 of what the well file showed also.

9 EXAMINATION BY EXAMINER JONES

10 EXAMINER JONES: But that 5,000 foot, there  
11 was a lost circulation zone there also, then, right?

12 THE WITNESS: Yes. When they drilled out  
13 from the first immediate, they drilled about five feet  
14 and they lost circulation. And they went ahead and  
15 squeezed that off and went ahead and drilled it out and  
16 tested it. And then they continued drilling on down.

17 EXAMINER JONES: So does that show that they  
18 didn't set their casing low enough?

19 THE WITNESS: Either they didn't set the  
20 casing low enough -- that is probably my  
21 interpretation.

22 EXAMINER JONES: But it looks like the  
23 surface water is protected here?

24 THE WITNESS: I would say it is, yes.

25 EXAMINER JONES: Okay. Thank you.

1 EXAMINATION BY EXAMINER GOETZE

2 EXAMINER GOETZE: My only question is who  
3 chose this beast to be nominated for reentry. On that  
4 note I have no further questions. Thank you very much.  
5 You answered all my questions and your presentation was  
6 very good.

7 EXAMINER JONES: Case 15398 is taken under  
8 advisement. And that concludes this docket.

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(Time noted 3:36 p.m.)

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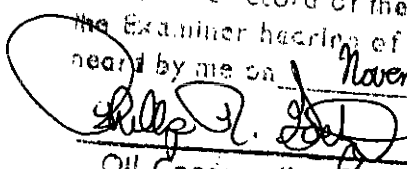
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I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 15398  
heard by me on November 12, 2015.  
  
Philip J. Jones, Examiner  
Oil Conservation Division

1 STATE OF NEW MEXICO )  
 2 ) ss.  
 3 COUNTY OF BERNALILLO )  
 4  
 5  
 6

7 REPORTER'S CERTIFICATE

8  
 9 I, ELLEN H. ALLANIC, New Mexico Reporter CCR  
 10 No. 100, DO HEREBY CERTIFY that on Thursday, November  
 11 12, 2015, the proceedings in the above-captioned matter  
 12 were taken before me, that I did report in stenographic  
 13 shorthand the proceedings set forth herein, and the  
 14 foregoing pages are a true and correct transcription to  
 15 the best of my ability and control.

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

22  
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