

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

Application of Devon Energy Production Company, LP,
for approval of a pilot infill drilling project in
the Pictured Cliffs formation in a portion of the
Northeast Blanco Unit, and for special well location
requirements, Rio Arriba and San Jan Counties, New
Mexico.

Case No. 14546

November 18, 2010
8:15 A.M.
Santa Fe, New Mexico

HEARING EXAMINER: RICHARD EZEANYIN
TECHNICAL ADVISOR: DAVID BROOKS

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THE WITNESSES:

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LIST OF EXHIBITS

- 1. Maps
- 2. Pilot Infill Area List
- 3. Offset Owners Maps
- 4. Affidavit of Notice
- 5. Order of the Division
- 6. NEBU Application
- 7. Township 31 List
- 8. BLM Letter - 8/31/10

1 (Note: In session at 8:30.)

2 HEARING EXAMINER EZEANYIN: We call Case
3 14546. Application of Devon Energy Production
4 Company, LP for approval of a pilot landfill
5 drilling project in the Pictured Cliffs formation in
6 a portion of the Northeast Blanco Unit and for
7 special well location requirements, Rio Arriba and
8 San Juan counties. Call for appearances.

9 MR. BRUCE: Mr. Examiner, Jim Bruce of
10 Santa Fe representing the applicant. I have two
11 witnesses.

12 MR. CALLAHAN: Mr. Examiner, I am Tom
13 Callahan of the Santa Fe law firm of Callahan &
14 Callahan. I am appearing this morning on behalf of
15 ConocoPhillips. We have no position and no
16 witnesses.

17 HEARING EXAMINER EZEANYIN: Any other
18 appearances? Okay. May the witness state your name
19 and stand to be sworn.

20 MS. WOLDRIDGE: Jan Woldridge.

21 MR. SINGLETARY: Chris Singletary.

22 JAN WOLDRIDGE
23 after having been first duly sworn under oath,
24 was questioned and testified as follows:

25 EXAMINATION

1 BY MR. BRUCE

2 Q. Would you please state your full name for
3 the record?

4 A. Peggy Janet Woldridge.

5 Q. Where do you reside?

6 A. McLoud, Oklahoma.

7 Q. Who do you work for and in what capacity?

8 A. I am a senior landman for Devon Energy
9 Corporation.

10 Q. Have you previously testified before the
11 Commission?

12 A. Yes, I have.

13 Q. Were your credentials as an expert
14 petroleum landman accepted as a matter of record?

15 A. Yes.

16 Q. Are you familiar with the land matters
17 involved in the application?

18 A. Yes, I am.

19 MR. BRUCE: Mr. Examiner, I tender
20 Ms. Woldridge as an expert petroleum landman.

21 HEARING EXAMINER EZEANYIN: She will be so
22 qualified.

23 Q. Would you identify Exhibit 1 and
24 describe it for the examiner.

25 A. This is a plat of the entire northeast

1 Blanco unit. What you see in yellow is the Pictured
2 Cliffs participating area which is the proposed
3 pilot that we request permission for to drill the PC
4 infill wells. In the outline in blue which sounds
5 this, it shows the Mesa Verde participating area
6 which we will be drilling Mesa Verde PC wells.

7 Q. To clarify, you are seeking up a pilot
8 infill drilling project?

9 A. Yes, sir.

10 Q. The upper quadrant outlined in black and
11 blue is the area that you seek the infill project?

12 A. Yes.

13 HEARING EXAMINER EZEANYIN: Which one? I
14 am looking at the yellow. Which is the yellow?

15 MR. BRUCE: Mr. Examiner, if I could.

16 Q. First of all, Ms. Woldridge, starting at
17 the very upper right and heading southward it goes
18 around in blue, and then there's a black line taking
19 off to the west and then it goes to the north. Is
20 all that area in the pilot infill drilling project?

21 A. Yes, it is.

22 Q. And what is the yellow?

23 A. The yellow is the Pictured Cliffs
24 participating area.

25 HEARING EXAMINER EZEANYIN: So then the

1 remainder on the upper right is part of the project
2 area? But the yellow is the Pictured Cliffs
3 participating area?

4 THE WITNESS: Yes.

5 HEARING EXAMINER EZEANYIN: Is that what
6 you are seeking to do on that Pictured Cliff?

7 THE WITNESS: Yes.

8 HEARING EXAMINER EZEANYIN: Not this
9 quarter -- not this part here? This is where you
10 are looking at?

11 THE WITNESS: Yes, that's correct.

12 HEARING EXAMINER EZEANYIN: I'm sorry, go
13 ahead.

14 MR. BRUCE: That's okay, Mr. Examiner.

15 Q. Then you have some blue colors. What is
16 that?

17 A. The blue color is to indicate where we
18 have paying wells and the Pictured Cliffs PA
19 expansions are pending approval.

20 Q. And do you, based on other wells you have
21 in the area and other wells that you intend to
22 drill, would you anticipate the yellow area
23 expanding?

24 A. We would. At this point we probably have
25 four wells, I think, that we have not received well

1 determinations on, and I think -- you know, so that
2 could be another four quarter sections --

3 Q. Okay.

4 A. -- if they are paying wells.

5 Q. Just to be clear, in the southern portion
6 of the map there's some Pictured Cliffs PAs. These
7 are not involved in the application.

8 A. That's correct.

9 Q. And what is Exhibit 2?

10 HEARING EXAMINER EZEANYIN: Before you
11 leave that area, I see the two blue sections there.
12 Is that where you have the paying wells?

13 THE WITNESS: Yes, sir.

14 HEARING EXAMINER EZEANYIN: And they have
15 infill currently? Infill well currently.

16 THE WITNESS: Not on these two, no. The
17 only infill we have is in Section 19, I believe.

18 HEARING EXAMINER EZEANYIN: Section 18? I
19 think you have it in Section 18.

20 THE WITNESS: Yes, yes, you are right.

21 MR. BRUCE: And the engineer will discuss
22 that infill well.

23 Q. Is Exhibit 2 simply a legal description of
24 the land in the pilot infill area?

25 A. Yes, it is.

1 Q. Now, what are the Pictured Cliffs pool
2 rules?

3 A. The Pictured Cliff pool rules are that
4 wells spaced on 160 acres with one well per quarter
5 section and the well can be no closer than 660 feet
6 to a quarter section line or closer than ten feet to
7 a quarter quarter section line.

8 Q. What does Devon seek in this case?

9 A. It seeks permission to drill two PC wells
10 per quarter section within the entire pilot area.
11 In addition, within the PA, as it may be expanded
12 from time to time, Devon requests it be allowed to
13 drill wells no closer than 660 feet from the outer
14 boundary of the PA and no closer than ten feet to a
15 section, quarter section or quarter quarter section
16 line.

17 Q. So within the participating area, the
18 yellow and blue areas as it may be expanded, you
19 request not only two wells but you request relief
20 from the well setback requirements?

21 A. Yes, sir.

22 HEARING EXAMINER EZEANYIN: From what I
23 heard you say, the well setback currently is 60 feet
24 from the boundary and 10 feet from the quarter
25 quarter section, but what is different from what you

1 are looking for? What setback do you want? I want
2 to understand that.

3 MR. BRUCE: Mr. Examiner, what they are
4 looking for, for instance, in the participating
5 area, if it's on the outside of the participating
6 area they want a setback of 660 feet.

7 HEARING EXAMINER EZEANYIN: From the
8 outside?

9 MR. BRUCE: From the outside. But if you
10 look at, say, the heart of the interior of the PA,
11 the heart of the PA, they would like to be able to
12 drill wells ten feet from a quarter section line.

13 HEARING EXAMINER EZEANYIN: Not the
14 interior, the quarter section line?

15 MR. BRUCE: In other words, they wouldn't
16 have to have a 660 foot setback from the quarter
17 section line.

18 HEARING EXAMINER EZEANYIN: Within the
19 unit? Okay.

20 MR. BRUCE: Within the participating area.

21 Q. And within the participating area

22 Ms. Woldridge, would ownership be uniform?

23 A. Yes, sir.

24 HEARING EXAMINER EZEANYIN: Okay. I think
25 you need to state that very clearly, that ownership

1 is identical in all respects and you want the
2 setback requirement.

3 Q. Let me ask a couple follow-up questions.
4 Again, when a participating area is formed and then
5 enlarged, all interest ownership, working royalty
6 and overriding royalty ownership is uniform?

7 A. Absolutely.

8 Q. And within that participating area,
9 essentially, you want to be allowed to drill wells
10 ten feet off of any quarter section line or section
11 line or quarter quarter section line?

12 A. That's correct.

13 HEARING EXAMINER EZEANYIN: And you are
14 asking that because it's identical. That's why you
15 are asking for that?

16 A. Yes. And that conforms with the same
17 rules with the other PAs, the Mesa Verde as far as
18 the setbacks are concerned.

19 Q. Now, we are talking about drilling
20 Pictured Cliffs wells, but what Devon is talking
21 about here in this pilot area, they are not
22 stand-alone Pictured Cliff wells, are they?

23 A. No, the PC wells will be completed as --
24 the recompletions of existing deeper wells are in
25 connection with new Mesa Verde wells that may be

1 drilled.

2 Q. Again, the Mesa Verde participating area
3 covers not only the pilot infill area but virtually
4 almost the entire unit?

5 A. The entire unit, absolutely.

6 Q. So with respect to deeper wells, Mesa
7 Verde or Dakota, what are the pool rules in the
8 area?

9 A. They are spaced on 320 acres with two
10 wells allowed per border section.

11 Q. So you'd be able to drill -- say a Mesa
12 Verde well, two wells on each quarter section, and
13 if this application is granted you could also
14 complete the PC interval in each of those wells?

15 A. Yes, that's correct.

16 HEARING EXAMINER EZEANYIN: Are you also
17 seeking something --

18 MR. BRUCE: No.

19 HEARING EXAMINER EZEANYIN: Why are we
20 talking about that now?

21 MR. BRUCE: It's simply to point out --
22 there's a couple of things. First and foremost,
23 Mr. Examiner, they are not -- Devon is not going to
24 go drill a Pictured Cliffs well. All the wells it's
25 talking about initially will be deeper wells. And

1 the Mesa Verde already allows and the Dakota, two
2 wells per quarter section. So this will just allow
3 Devon to complete that Mesa Verde. Even where it
4 already has an existing PC well or PC completion in
5 the quarter section, it will allow it to have
6 another PC completion.

7 HEARING EXAMINER EZEANYIN: Okay. I see
8 what you are trying to do.

9 Q (By Mr. Bruce) Ms. Woldridge, topography is
10 important in this area, is it not?

11 A. Yes, it is.

12 Q. What is it like?

13 A. If you refer back to Exhibit 1, you can
14 see the river and you can see the blue outline of
15 the Navajo Lake. The restrictions, the BLM
16 restrictions on the drilling on the property is
17 very, very strict. They prefer that we not have any
18 new surface damage, and we do a very good job of
19 trying to make sure that we don't drill anything new
20 unless we absolutely have to. We try to stay within
21 our limits and they are very particular about what
22 we drill the closer we get to the lake, those kinds
23 of things. We must minimize the surface disturbance
24 and allowing Pictured Cliff completions in the
25 existing wells will do that.

1 HEARING EXAMINER EZEANYIN: Are the lines
2 on federal or mixed?

3 THE WITNESS: Federal for the most part,
4 85 percent federal.

5 HEARING EXAMINER EZEANYIN: And state or
6 fee?

7 THE WITNESS: Probably about 5 percent
8 fee, if that.

9 Q. Next, Exhibit 3. What does that reflect?

10 A. Exhibit 3 simply shows the position in the
11 San Juan Basin and shows the contiguous federal
12 units to the acreage that's in question. Everything
13 is a federal unit with the exception of to the north
14 you will see to the northwest that one is in Section
15 2, Four Stars, the operator of the section, and
16 directly to the north of Section 6 in the northeast
17 bumper unit you see Burlington is the operator of
18 that acreage. Both of those are not in federal
19 units.

20 Q. And were all of the offset operators
21 notified of this hearing?

22 A. Yes, they were. All the operators were
23 notified.

24 Q. Is that reflected in the affidavit of
25 notice submitted as Exhibit 4?

1 A. Yes, it is.

2 Q. And the Bureau of Land Management and the
3 Oil Conservation Division were notified of the
4 application, were they not?

5 A. Yes, sir.

6 Q. Were Exhibits 1 through 4 prepared by you
7 or under your supervision or compiled from company
8 business records?

9 A. Yes, sir.

10 Q. Is the granting of the request in interest
11 of conservation and prevention of waste?

12 A. Absolutely, yes, sir.

13 Q. I move the admission of Exhibits 1 through
14 4.

15 HEARING EXAMINER EZEANYIN: Exhibits 1
16 through 4 will be admitted.

17 (Note: Exhibits 1 through 4 admitted)

18 MR. BROOKS: No questions.

19 HEARING EXAMINER EZEANYIN: I know you
20 have another witness who can give me more data, but
21 I am hazy on -- I know you mentioned that in the
22 valley you are allowed one well with infill, right?
23 Those are the deep formations. Now when you come up
24 with the Pictured Cliffs, you want to import that to
25 the Pictured Cliffs so you can have one original

1 well and the one infill in the Pictured Cliffs,
2 right.

3 THE WITNESS: Yes, sir.

4 HEARING EXAMINER EZEANYIN: What I am
5 trying to understand is exactly what you are asking
6 for. See, that's why. So that if the other is
7 approved so we can give you exactly what you are
8 asking. That's why I want to ask all these
9 questions. And one of the questions that we come up
10 is in that unit, Blanco Unit, I am aware it has been
11 approved for pilot test and we want to see how that
12 is doing.

13 MR. BRUCE: The engineer will have data.

14 HEARING EXAMINER EZEANYIN: So now that I
15 understand that was your idea we can go along with
16 the data. Okay.

17 MR. BRUCE: I call Mr. Singletary I to the
18 stand.

19 CHRISTOPHER SINGLETARY
20 after having been first duly sworn under oath,
21 testified as follows:

22 EXAMINATION

23 BY MR. BRUCE

24 Q. Please state your full name and city of
25 residence.

1 A. Christopher Singletary. I live in Edmund,
2 Oklahoma.

3 Q. Who do you work for and in what capacity?

4 A. Devon Energy and I am a reservoir
5 engineer.

6 Q. Have you previously testified before the
7 Division as a reservoir engineer?

8 A. Yes.

9 Q. And were your credentials as an expert
10 accepted as a matter of record?

11 A. Yes.

12 Q. Are you familiar with the engineering
13 matters involved in the application?

14 A. Yes.

15 MR. BRUCE: I tender Mr. Singletary I as
16 an expert reservoir engineer.

17 HEARING EXAMINER EZEANYIN: I know you
18 have been admitted. You have a degree in petroleum
19 engineering?

20 THE WITNESS: I have a degree in
21 mechanical engineering from Louisiana Tech
22 University and I worked as a reservoir engineer for
23 Devon Energy over this project for almost three
24 years now.

25 HEARING EXAMINER EZEANYIN: You are

1 registered as a registered professional engineer?

2 THE WITNESS: No.

3 HEARING EXAMINER EZEANYIN: That's okay.
4 Go ahead.

5 Q. First of all, Mr. Singletary, what is
6 Exhibit 5?

7 A. This is the order from the previous
8 application we made for the pilot recompletion of
9 the NEBU 321 in the Pictured Cliffs so the first of
10 the -- it's a recompletion for an infill PC pilot.

11 Q. Will you discuss the results of that
12 recompletion in your testimony?

13 A. Yes.

14 Q. Why don't you go to Exhibit 6. It's a
15 mass of exhibits stapled together, and why don't you
16 just run through that and tell the examiner why you
17 think infill drilling is needed in this area.

18 A. Some of this is an overview and a lot of
19 this has been covered previously in the 321 PC
20 application but I thought we needed to at least get
21 back familiar with what was applied for in that
22 case. This first slide just states some things that
23 Jan's testimony already covered, but also that
24 infill pilot was approved in July of 2009 and the
25 well was actually recompleted in September of 2009.

1 Now the well has been producing for 14
2 months, has performed very comparably with the
3 offset 160-acre wells and it's produced 200 million
4 cubic feet to date. No interference has been seen
5 with the offset wells to this point.

6 We also made pressure tests, and I will be
7 showing those to try to justify the rule change. We
8 presented this project to the BLM in July of 2010
9 and received their letter of support in August of
10 2010.

11 The next page there just shows the unit
12 and where it's located within the basin and just
13 gives some general information regarding the
14 Pictured Cliffs or the geology there. It's a shaly
15 sand upper Cretaceous in age, and in our area the
16 main PC interval is 120 to 150 feet thick. There's
17 two PC sands in the area, one we call the upper PC
18 which is 40 to 60 feet thick and a basal fruitland
19 coal interval which is ten to 20 feet thick, and
20 then the main PC interval.

21 This is the only interval of wells that we
22 are discussing is completed in. They haven't been
23 completed in the upper PC and there's no commingling
24 with the basal coal.

25 I think I may have said this, but it's

1 around 3300 feet measured depth, typically is the
2 depth of the sand in this area.

3 Q. What's the next page?

4 A. The next page shows the 321 recompletion
5 and it shows the offsets, 223, 241, 224 and 333.
6 The red line shows the distances to the offsets and
7 the ellipses there in yellow represent the
8 calculated drainage areas and are oriented in the
9 direction of our expected frac growth orientation.
10 This is just shown to kind of show you where this is
11 located.

12 Again, this is stuff that was shown in the
13 original recompletion applications. There's very
14 few wells because of the surface disturbance issues
15 in the unit that have been drilled off pattern with
16 the other wells. So like they tried to drill from
17 the same pad so the Dakota Mesa Verde wells will be
18 drilled basically at the same location as the PC
19 wells. So there's not many places you can do a
20 recompletion that's off pattern and spaced between
21 the existing PC wells to try to get an infill test.

22 HEARING EXAMINER EZEANYIN: I want you to
23 look at that page where you have 321 and 224, 333.
24 Could you just tell me what it is you are trying to
25 demonstrate with that configuration? I know it

1 approved for your pilot, but you are trying to
2 demonstrate something there? I want to understand
3 what you are trying to demonstrate.

4 THE WITNESS: This represents the
5 spacing --

6 HEARING EXAMINER EZEANYIN: I want you to
7 go slow. We want to understand what you are saying.
8 You prepared this, so go slow and tell me what those
9 surrounding wells -- you indicated in circles what
10 they are doing with each one.

11 THE WITNESS: The idea here is just to
12 show -- for the recompletion of the 321 the purpose
13 was to have a well that we could cheaply test that
14 was not going to cause any new surface disturbance
15 that would be spaced in such a way that would be
16 similar to where we would drill additional infill PC
17 wells.

18 So this is the type of spacing, you know,
19 centered among the offsetting 160 PC wells where we
20 would be looking to drill additional Mesa Verde and
21 PC wells. This configuration approximately is what
22 we will be looking when we would come in and drill
23 new infill Mesa Verde PC wells and the type of
24 spacing where those would be.

25 The drainage ellipses are just intended to

1 show that based on our calculation, that drainage
2 area was less than 160 acres and that there was
3 additional gas that could be recovered by completing
4 the 321 well.

5 HEARING EXAMINER EZEANYIN: Okay. You did
6 the calculation?

7 THE WITNESS: Yes. On the next page I
8 will discuss a little more about how we did that, if
9 that's okay.

10 HEARING EXAMINER EZEANYIN: Sure.

11 THE WITNESS: The drainage area
12 calculations were performed based on decline curve
13 EURs being compared to volumetric gas in place
14 calculations. Those were done for 13 wells in the
15 unit where open hole logs were available. So a lot
16 of the wells here only have case still logs and we
17 are not able to do the log analysis necessary to
18 make the gas in place calculations. Those
19 calculations resulted in an average drainage area of
20 100 acres and a recovery factor of the gas in place
21 in the 160 proration unit of about 50 percent, which
22 is low for this type of production.

23 Then the decline curve EUR versus that
24 volumetric gas in place calculation showed 40
25 percent of the gas in place would be recovered from

1 the wells offsetting the NEBU 321. So we went
2 through in detail in the previous pilot application
3 of the methods used, the shaly sand log analysis
4 method used and then the decline curve estimation
5 methods used to come up with these so, you know, the
6 next table shows --

7 HEARING EXAMINER EZEANYIN: And the
8 calculation is just that one well, not the infill,
9 right?

10 THE WITNESS: Yes. The calculations are
11 based on what would be recovered from the existing
12 parent wells.

13 HEARING EXAMINER EZEANYIN: The 160?

14 THE WITNESS: That's right. This page
15 just shows what was shown in the NEBU 321 pilot. It
16 shows the four offsetting wells, their cumulative
17 production, what the predicted EUR curves were and
18 the volumetric calculated gas in place for those 160
19 acre proration units and then what that represents
20 as far as a recovery factor goes. So, you know, on
21 a total, that's what that 40 percent came from.

22 The next page shows -- the wells with the
23 blue dots are where the volumetric -- the gas -- I'm
24 sorry, the log analysis and the volumetric
25 calculations were performed. Those were the 13

1 wells that I discussed earlier. So that is kind of
2 the background leading up to this point of the
3 application.

4 All of my remaining information is the
5 results of the 321 recompletion. So this page shows
6 a rate versus data production graph for the four
7 offsetting 160 acre Pictured Cliffs wells and then
8 also for the 321. The 321 is shown in red, and this
9 shows that the 321 performance has been comparable
10 if not better actually than the offset parent wells.

11 Also, looking at the character of the
12 decline wells of the parent wells, they have not
13 changed materially, or at least in a way that we can
14 detect, since the 321 has been brought online.

15 Q. So there was no interference by completing
16 the 321 well?

17 A. Yes.

18 HEARING EXAMINER EZEANYIN: 321 is an
19 infill, right?

20 THE WITNESS: Yes. So the next page just
21 shows another way of showing the same thing, which
22 is to take the production from all of those wells
23 and represented as producing day so they all start
24 on Day 1 and go forward. The 321 well is shown in
25 red and the average of the offset parent wells is

1 shown in blue.

2 So what that shows is just that it's
3 performing better than the average of the offset
4 160-acre wells, the infill wells. And then the
5 actual offset wells are shown in gray. It's
6 performing better than any well except the NEBU 324
7 which is the only of the original 160-acre wells
8 that has performed better than the 321.

9 Q. You would not expect that if the NEBU 321
10 location had been drained by the existing wells?

11 A. Correct. And one thing here, because we
12 had some shut-ins, it made it difficult to make the
13 comparison. So the next page is just another way of
14 looking at the same thing again. It shows the rate
15 versus Cum production where the 321 is performing as
16 well or better than the offsets.

17 Q. On the graph, that's the average of all of
18 the offsets? If I look at all of the offset wells?

19 A. Yes.

20 HEARING EXAMINER EZEANYIN: The 321 is
21 performing better?

22 THE WITNESS: Than the average of the
23 offset wells, that's correct. The only one of the
24 offset wells that's performing better than the 321
25 is the NEBU 324.

1 HEARING EXAMINER EZEANYIN: Why is that?

2 A. I think it's quality of the pay. There's
3 some variance in the permeability and net pay of
4 these wells and that determines within some range
5 how they perform. The one that you are looking at
6 now, that's an attempt to smooth out some of the
7 shut-in periods we had with the 321. So it's a rate
8 versus cumulative production graph. So basically it
9 just shows that at the point that these wells
10 reached 200 million cubic feet per day of cumulative
11 production, the 321 is producing at a higher rate
12 than three of the four offset wells. You see it in
13 red there. That's the production -- that's all of
14 the production performance information that I have.

15 The rest of the information is based on
16 pressure testing that we did. On September 9th of
17 2009 we checked the initial pressure after
18 perforating the 321 and before the well was
19 fracture-stimulated. We ran bottom hole pressure
20 gauges and monitored for a one-day buildup. The
21 final pressure was 1420 PSI. The pressure was still
22 building, but this is very similar to offset
23 original 160-acre wells in the area where we perform
24 similar tests. And I will show you that again.

25 Then in October of 2009 the well was shut

1 in for some shallow -- there had to be a shallow
2 casing squeeze on some of it and also had to be some
3 surface construction and compressor move. So the
4 well was shut in for 35 days at that time. We
5 monitored the surface pressure and the pressure
6 built to 1360 pounds, which translates approximately
7 to 1428 bottom hole pressure. This was after
8 cumulative production of 41 million cubic feet.

9 Then in March of 2010 we ran bottom hole
10 pressure gauges for an eleven-day pressure buildup
11 test. I made an analysis of the pressure buildup
12 test but there was some uncertainty in getting a
13 really high quality match there. But the pressure
14 test shows the reservoir pressure there was a
15 minimum of 1390 pounds.

16 Then we made a comparison to an eight-day
17 pressure buildup done at the NEBU 224 in May of 2009
18 to show that the 224 well had undergone significant
19 depletion and that depletion had not been seen at
20 this point of the NEBU 321.

21 So the next graph, the rate from the 321
22 is shown in red and the pressures are shown in black
23 so you can see when the well was shut in, the
24 pressure measurements. That's just to give you an
25 idea over time when the shut-ins occurred and what

1 those pressure buildup tests looked like.

2 The next piece of paper shows where we had
3 these initial pressure checks done after perforating
4 and before fracture stimulation, and those wells are
5 shown with the red dots. Actually, one well that
6 did not get highlighted here is the NEBU 335 which
7 is just -- it's in Section 25 in the northeast
8 quarter so that was for some reason an error on the
9 graph.

10 Anyway, the point here is there's an
11 average of 1500 pounds which was the initial
12 pressure from the wells where this was looked at and
13 a pressure grading of .4 PSI per foot and the 321
14 had a pressure grading and pressure that was very
15 similar to that, .4314.

16 Then the last page here just shows a
17 comparison of the bottom hole pressure versus ours
18 from shut-in for the NEBU 321, shut in on March 2010
19 and the NEBU shut-in after that well accumulated 540
20 million cubic feet. In an eight-day period it built
21 around 350 pounds. A build-up analysis there showed
22 the reservoir pressure to be around 534 pounds.

23 During that same time period, the 321
24 built to 700 pounds and, you know, that reservoir
25 pressure from a build-up analysis was a minimum of

1 1390 pounds.

2 Q. Again, the NEBU 324 is the best well in
3 the area?

4 A. Yes.

5 Q. Real quickly, what is Exhibit 7?

6 A. Exhibit 7 is just a list of the quarter
7 sections of the possible infill Mesa Verde PC wells
8 that we would like to be able to drill under this
9 pilot project.

10 Q. So that's where you initially intend to
11 drill Mesa Verde wells and those would be the
12 initial additional PC completions?

13 A. That's correct.

14 Q. And finally, did you meet with the Bureau
15 of Land Management regarding your project?

16 A. Yes.

17 Q. Was the District Office of the Division
18 invited to that meeting also?

19 A. Yes.

20 Q. And what is Exhibit 8?

21 A. This is their letter of recommendation
22 regarding this project.

23 Q. And will Devon comply with the terms that
24 the BLM put at the bottom of the letter?

25 A. Yes.

1 Q. One final thing regarding this letter. In
2 Paragraph 2 at the bottom, Mr. Singletary, what does
3 the BLM state in its letter regarding the
4 recompletion of existing wells?

5 A. It says that Devon has expressed to the
6 BLM that the proposed Pictured Cliffs infill
7 development be accomplished by recompleting existing
8 Mesa Verde and Dakota well bores, which are
9 currently being developed on 80-acre effective
10 spacing.

11 Q. Have you spoken with the BLM about that
12 term existing?

13 A. Yes. I spoke with Jim Lovato on the phone
14 on November the 8th just to make sure that we were
15 on the same page, and he let me know that he
16 intended existing to mean even new Mesa Verde wells
17 that would be drilled; that they would still intend
18 that would be recompleted. He also said that if
19 there was any questions regarding that, to give him
20 a phone call. I did discuss that with him and he
21 was on the same page that that's what that was
22 intended to mean.

23 Q. So the BLM isn't limiting it to currently
24 existing wells, it's existing wells plus planned
25 development by Devon?

1 A. Yes. There's only one other well where
2 you could do another recompletion. So that was
3 never our intent, and I think they understood that
4 at the time and Mr. Lovato confirmed it.

5 Q. In your opinion, is the granting of the
6 application in the interest of conservation and the
7 reduction of waste?

8 A. Yes.

9 Q. And are Exhibits 5 through 8 prepared by
10 you or compiled from company records?

11 A. Yes.

12 MR. BRUCE: Mr. Examiner, I tender the
13 admission of Exhibits 5 through 8.

14 HEARING EXAMINER EZEANYIN: Exhibits 5
15 through 8 will be admitted.

16 MR. BRUCE: No further questions of the
17 witness.

18 MR. BROOKS: No questions.

19 HEARING EXAMINER EZEANYIN: One more
20 question I have for you. Did you demonstrate with
21 identical communication among those wells?
22 Communication between the wells like 224 -- any
23 communication.

24 THE WITNESS: No. I have not seen any.

25 HEARING EXAMINER EZEANYIN: Did you ever

1 do any calculation to show that there's no
2 communication between the wells, among the wells?

3 THE WITNESS: The issue with that is
4 because of how tight the formation is, the time to
5 do an interference test would be in like a year's
6 type of time frame with a shut-in. So the basic
7 idea is to analyze existing producing data to try to
8 confirm that instead of a pressure buildup.

9 HEARING EXAMINER EZEANYIN: Because what
10 they are trying to demonstrate is the basic question
11 that you have a pilot to do 321 and from what 321,
12 you know, is demonstrating it appears that an infill
13 may be necessary. That's why I am asking you
14 whether there's any interference or communication
15 among the wells.

16 THE WITNESS: We haven't seen any evidence
17 of interference or communication at this point.

18 HEARING EXAMINER EZEANYIN: Because that
19 would be something that we would have to look at,
20 but if it's not, then we can look at the performance
21 of 321 to see whether we could grant an infill on
22 other wells. Do you understand what I am trying to
23 ask you? It's going to take you a year to do
24 interference to demonstrate that.

25 THE WITNESS: Yes. The way we try to

1 demonstrate no interference is occurring is through
2 the analysis of the producing data.

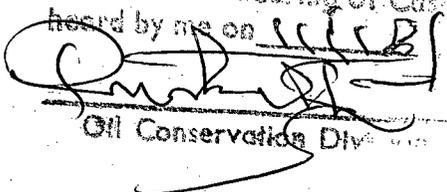
3 HEARING EXAMINER EZEANYIN: Okay. I would
4 ask that you try to draft what the client wants in
5 this case so we can take a look at it.

6 MR. BRUCE: I will do that.

7 HEARING EXAMINER EZEANYIN: Okay. Thank
8 you.

9 (Note: The case stood adjourned at 9:10.)

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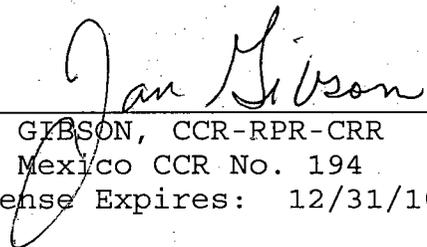
I do hereby certify that the foregoing is
a verbatim record of the proceeding
the Examiner hearing of Case 17576-B
heard by me on 11/15/17

Examiner
Oil Conservation Division

REPORTER'S CERTIFICATE

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I, JAN GIBSON, Certified Court Reporter for the State of New Mexico, 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 and was reduced to printed form under my direct supervision.

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.



JAN GIBSON, CCR-RPR-CRR
New Mexico CCR No. 194
License Expires: 12/31/10