

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

ORIGINAL

Second Amended Application of Chevron USA, Inc. for
approval of a salt water disposal well, Eddy County,
New Mexico.

Case No. 14593

March 17, 2011
8:15 A.M.
Santa Fe, New Mexico

HEARING EXAMINER: WILLIAM JONES

DAVID BROOKS, Esq.

For The Applicant:

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1 HEARING EXAMINER JONES: Let's call Case
2 14593, Second Amended Application of Chevron, U.S.A.
3 for approval of salt water disposal well in Eddy
4 County, New Mexico. Call for appearances.

5 MR. CARR: May it please the examiner, my
6 name is William F. Carr with the Santa Fe office of
7 Holland and Hart. We represent Chevron in this
8 matter and we have two witnesses.

9 HEARING EXAMINER JONES: Any other
10 appearances? Will the witnesses please stand and
11 state your names?

12 (Note: Witnesses Comply.)

13 MR. BRUCE: At this time we call
14 Mr. Pequeno.

15 DANIEL PEQUENO
16 after having been first duly sworn under oath,
17 was questioned and testified as follows:

18 EXAMINATION

19 BY MR. CARR

20 Q. Would you state your full name for the
21 record, please.

22 A. My name is Daniel Pequeno.

23 Q. Mr. Pequeno, where do you reside?

24 A. Midland, Texas.

25 Q. By whom are you employed?

1 A. Chevron, U.S.A.

2 Q. What is your position with Chevron,
3 U.S.A.?

4 A. I am a landman.

5 Q. Mr. Pequeno, have you previously testified
6 before the New Mexico Oil Conservation Division?

7 A. Yes, sir.

8 Q. Did you testify before Examiners Jones and
9 Brooks?

10 A. Yes, I have.

11 Q. At the time of that testimony were your
12 credentials in petroleum land matters accepted and
13 made a matter of record?

14 A. Yes, sir.

15 Q. Are you familiar with the application
16 filed in this case on behalf of Chevron for salt
17 water disposal in the Skelly Unit No. 902 well?

18 A. Yes, sir.

19 MR. CARR: May it please the examiners, we
20 tender him as an expert in petroleum land matters.

21 HEARING EXAMINER JONES: So qualified.

22 Q. Would you briefly summarize what it is
23 Chevron seeks?

24 A. Chevron is seeking approval to utilize for
25 injection its Skelly Unit Well No. 902, which is

1 located in 1650 feet from the north line and 990
2 feet from the west line, Unit E of Section 50,
3 Township 17 and Range 31. This well is for
4 injection of as much as 10,000 barrels of water per
5 day at a maximum injection pressure of 1684 PSI or
6 at .2 pound per foot of depth to the top of the
7 injection interval into the Wolfcamp and Cisco
8 formations in a lateral open hole interval from 8418
9 feet to 10,534 feet and a perforated interval from
10 8552 feet to 9766 feet.

11 Q. Mr. Pequeno, when was the application
12 originally filed with the Division?

13 A. Chevron sought the administrator approval
14 back in October 26, 2010. On November 15th we were
15 advised by Mr. Jones that we needed to come to a
16 hearing due to the close proximity of another well,
17 another producing well that is, in the same horizon,
18 namely the Apache Butter Pecan well.

19 Q. Can you identify for the examiners what is
20 marked as Chevron Exhibit 1?

21 A. Yeah. Exhibit 1 is the affidavit of
22 notification giving notice to all of the leasehold
23 operators and surface owners.

24 Q. And to whom has notice been provided?

25 A. Notice was provided to the Bureau of Land

1 Management as the surface owner of the land on which
2 the well is located and all of the leaseholders and
3 operators within one mile of the proposed disposal
4 well.

5 Q. Are these leasehold operators identified
6 in Chevron Exhibit 2?

7 A. Yes, sir.

8 Q. And that's on Pages 34 through 36 of that
9 exhibit?

10 A. Yes, sir, they are.

11 Q. Mr. Pequeno, go back one page to Page 33,
12 the plat. Would you explain what this shows?

13 A. Okay. The plat on Page 33 shows the
14 outline of our Skelly unit which we operate and also
15 shows the two circles around the proposed well for
16 injection, and since this well is a horizontal well
17 and we felt like maybe it would extend down to
18 Section 22, we made an effort to notify the surface
19 owner again, which is the Bureau of Land Management
20 and all the offset operators around there.

21 Q. So because it's a horizontal well you have
22 two areas of review?

23 A. Yes, sir.

24 Q. And you have one centered around the
25 surface location on the bottom hole location?

1 A. Right.

2 Q. The acreage between?

3 A. Yes, sir.

4 Q. And you notified everyone?

5 A. That's correct.

6 Q. Will Chevron call an engineering witness
7 to review the technical portions of this case?

8 A. Yes, sir. We have an engineer, Edgar
9 Acero will be commenting.

10 Q. Was Chevron Exhibit 1 prepared by you or
11 compiled under your supervision?

12 A. That's correct.

13 MR. CARR: May it please the examiners, at
14 this time we move the admission of the Notice
15 Affidavit, Chevron Exhibit 1.

16 HEARING EXAMINER JONES: Exhibit 1 will be
17 admitted.

18 (Note: Exhibit 1 admitted.)

19 MR. CARR: That concludes my direct
20 examination of the witness.

21 HEARING EXAMINER JONES: I guess I have a
22 question. How deep is the Skelly unit, the top and
23 the bottom? Is it a statutory unit?

24 THE WITNESS: It's a BLM, yes.

25 HEARING EXAMINER JONES: Okay. So do you

1 know the depths of the top and the bottom?

2 MR. CARR: Mr. Jones, perhaps Mr. Acero
3 would be better to respond to that.

4 HEARING EXAMINER JONES: Fine. But it
5 doesn't go down through this horizon, does it? Do
6 you know if it includes the Wolfcamp and the upper
7 pen?

8 THE WITNESS: It doesn't include the upper
9 pen, I don't believe. Just the Wolfcamp and the
10 Cisco.

11 HEARING EXAMINER JONES: Okay. Thank you.
12 The lower permian might?

13 THE WITNESS: Yes, sir.

14 HEARING EXAMINER JONES: We will ask him.

15 MR. CARR: Mr. Jones, we need to ask
16 Mr. Acero that because the upper pin is the Cisco.

17 HEARING EXAMINER JONES: Okay. And you
18 talk about an interval that you are applying for.
19 Then you talk about a perforated interval, and I
20 realize they are two different things but are you --
21 do you want the option of the whole interval to
22 perforate in the future? And did you represent it
23 that way in your application? Or do you just want
24 the existing perms to be the limit?

25 THE WITNESS: At this time I defer to

1 Mr. Acero.

2 MR. CARR: I think we are really in the
3 area of the engineer.

4 HEARING EXAMINER JONES: That's fine.

5 MR. BROOKS: Well, Mr. Jones asked you
6 Skelly Unit a statutory unit, and I was not really
7 sure from your answer whether you -- what your
8 answer was, because you said it was a BLM unit and
9 that raises the question. I'm not sure this even
10 matters if it doesn't raise the formation that we're
11 dealing with.

12 MR. CARR: I think it was not formed for
13 something statutory.

14 MR. BROOKS: I was assuming that was
15 probably the case. I was assuming Mr. Pequeno was
16 probably not aware of that and it was perhaps
17 misstated so I wanted to correct the record. That's
18 all I have.

19 HEARING EXAMINER JONES: Thank you very
20 much.

21 MR. CARR: May it please the examiners, at
22 this time we call Edgar Acero.

23 EDGAR ACERO
24 after having been first duly sworn under oath,
25 was questioned and testified as follows:

EXAMINATION

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BY MR. CARR

Q. Would you state your name for the record,
please?

A. My name is Edgar Acero.

Q. Where do you reside?

A. Midland, Texas.

Q. By whom are you employed?

A. Chevron U.S.A.

Q. What is your position is Chevron U.S.A.?

A. I'm a production engineer.

Q. Have you previously testified before the
New Mexico Oil Conservation Division?

A. No.

Q. Could you review for Examiners Jones and
Brooks your educational background?

A. I received a bachelor of science and
mechanical engineering from the University of Texas
at Austin in May of 2002.

Q. Since that time would you review your work
experience?

A. In 2002 I started to work for Kellogg,
Brown & Root, which is an engineering firm. I
worked there as an equipment engineer. In 2006 I
started to work for Chevron as a facilities

1 engineer. In 2009 I changed positions and became a
2 production engineer, and that is my current role.

3 Q. Does your geographic area of
4 responsibility for Chevron include the portion of
5 Southeast New Mexico involved in this case?

6 A. Yes.

7 Q. And are you familiar with the application
8 filed in this matter on behalf of Chevron?

9 A. Yes.

10 Q. Did you prepare the C-108 in this case or
11 have you reviewed it? Can you testify to its
12 accuracy?

13 A. Yes.

14 MR. CARR: At this time we tender
15 Mr. Acero as an expert witness and production
16 engineer.

17 HEARING EXAMINER JONES: Where did you
18 work for KBR?

19 THE WITNESS: I worked downtown -- as far
20 as the location?

21 HEARING EXAMINER JONES: Yes.

22 THE WITNESS: Downtown in Clinton.

23 HEARING EXAMINER JONES: What part of the
24 country did you work?

25 THE WITNESS: I was located in Houston but

1 I worked several projects. I worked a couple
2 projects on Chevron offshore. The Benguela-Belize
3 project, the Tombua Landana project and the Agbami
4 project. I also worked another project onshore
5 which was the ESSO Chad project. In addition to
6 that, I also worked a refinery in India, Reliance,
7 and a couple other smaller jobs.

8 HEARING EXAMINER JONES: Mr. Acero is so
9 qualified.

10 Q. Would you identify what's marked as
11 Chevron Exhibit 2?

12 A. Yes, this is the Oil Conservation Division
13 Form C-108 application for authorization to inject,
14 and it includes Pages 1 through 36.

15 Q. Additional information has been submitted
16 to the OCD since the application was filed last
17 October?

18 A. Yes, that's correct.

19 Q. And all of that information is contained
20 in this form C-108?

21 A. Yes.

22 Q. And it's all been previously provided to
23 the Division?

24 A. Yes.

25 Q. Does this application or this form contain

1 all information required by Form C-108?

2 A. Yes.

3 Q. And has the application itself been
4 provided all affected parties?

5 A. Yes.

6 Q. Is this an expansion of an existing
7 project?

8 A. No.

9 Q. And why is Chevron seeking additional
10 disposal authority in this area?

11 A. There's an additional injection needed
12 since Chevron is currently developing this area.

13 Q. Let's go to the map that is, I believe,
14 Page 9 in this exhibit. Would you refer to that and
15 review the information thereon for the examiners?

16 A. Yes. This shows the Skelly Unit
17 boundaries. It also shows all the wells within a
18 two-mile radius from the Skelly Unit 902. The
19 Skelly Unit 902 well is located in Unit E, Section
20 15, 1650 FNL and 990 FWL, Township 17 South, Range
21 31 East in Eddy County, New Mexico.

22 This map also shows a half-mile radius
23 which is an area of review, and that half-mile
24 radius is around the Skelly Unit 902. Also included
25 in the half-mile radius area of review are all the

1 wells that penetrated the Wolfcamp formation.

2 Q. Are there any other injection wells in the
3 area of review?

4 A. No.

5 Q. There are not?

6 A. Not in the area of review.

7 Q. Does this exhibit contain all the
8 information required by form C-108 on all wells
9 within the area?

10 A. Yes.

11 Q. And where is that set forth in the
12 exhibit?

13 A. That's Pages 10 through 11.

14 Q. When you work with this table and the
15 preceding map, you have everything required by the
16 form?

17 A. That's correct.

18 Q. Let's go to Page 33 of this exhibit, and I
19 would ask you to identify the producing well in the
20 area that was the source of the concern raised by
21 the Division.

22 A. This map shows Well No. 1, which is the
23 Butter Pecan Federal No. 1. This well is currently
24 producing from the Southeast Henshaw Wolfcamp oil
25 pool. This well is operated by Apache, and Apache

1 has not raised any objection. This is a marginal
2 well producing approximately three to four barrels a
3 day.

4 Q. That's located in the southwest southwest
5 of Section 10?

6 A. Correct, yes.

7 Q. All right. Let's go to Page 8 of the
8 exhibit. I would ask you to identify this for the
9 examiners.

10 A. This is the proposed Skelly Unit 902, and
11 we plan to inject in the Wolfcamp formation and the
12 Cisco formation. For the Wolfcamp formation, for
13 the open hole, the top of the window is 8418 feet
14 and the true vertical depth is 8552. The measured
15 depth is 10,534 feet and at the true vertical depth
16 of 8530 feet. The perforated interval is from 8552
17 to 9386 feet, and for the Cisco formation the
18 perforated interval is from 9661 to 9766, and most
19 of the injection will be going into the Cisco
20 formation.

21 Q. Are there other hydrocarbon productive
22 zones in this immediate area?

23 A. Yes, the Seven Rivers, San Andres, the
24 Yesso, Abbo, Wolfcamp and Moro.

25 Q. Let's go to the schematic of the proposed

1 completion of the well, which again is Page 8, and I
2 would ask you to review how you intend to actually
3 complete the well for injection.

4 A. We plan to place the packer above the open
5 hole. We do not plan on plugging off the open hole.
6 By doing this, this could lead to long-term
7 integrity issues which would then lead us to
8 possibly plugging and abandoning the well. The plan
9 for the tubing is to use line tubing and the annulus
10 will be filled with corrosion inhibitor and also
11 pressure-tested as required by federal regulation.

12 Q. Did you say you were going to run that
13 mechanical integrity test on the well?

14 A. That's correct, a pressure test.

15 Q. When the Division was raising questions
16 about the application, they asked us to identify the
17 depth of the Pennsylvania and Cisco formation. What
18 is that?

19 A. 9444.

20 Q. And at what depth is the DV tool set in
21 the well?

22 A. 8695 feet.

23 Q. And did cement circulate below the DV
24 tool?

25 A. Yes, it did.

1 Q. Will Chevron set a cast iron bridge plug
2 in the well?

3 A. Yes, and that is depicted on the wellbore
4 diagram.

5 Q. Are you going to cement inside the well
6 within 200 feet below the intended disposal point?

7 A. Yes.

8 Q. And that's shown on this diagram?

9 A. Yes.

10 Q. All right. In the Exhibit No. 2, Pages 12
11 through 17 are a number of wellbore schematics.
12 What are those?

13 A. These are of the plugged and abandoned
14 well within the area of review.

15 Q. Have you reviewed these?

16 A. Yes.

17 Q. Are all wells adequately plugged and
18 cemented to ensure they will not become vehicles for
19 migration of injected fluids out of zone?

20 A. Yes.

21 Q. What volumes are you proposing to inject?

22 A. Average daily rate is 3,000 barrels of
23 water per day with the maximum daily rate of 10,000
24 barrels.

25 Q. Open or closed system?

1 A. Closed.

2 Q. Do you plan to inject under pressure?

3 A. Yes.

4 Q. What pressures?

5 A. Average pressure is 200 PSI and the
6 maximum pressure is 1684.

7 Q. Is the 1684 PSI figure, in fact,
8 two-tenths pound per depth to the top of injection?

9 A. Yes.

10 Q. And if Chevron needs to go above that
11 pressure limitation, will you justify the increased
12 pressure with a division witness step rate test on
13 the well?

14 A. Yes.

15 Q. What is the source of the water you
16 propose to inject in this well?

17 A. The disposed water will be from lease
18 projection from the Yesso formation.

19 Q. Could you identify the material contained
20 on Page 24 of this exhibit?

21 A. This is the water analysis report by Baker
22 Petrolite. This water is from the Yesso formation.

23 Q. Are there any compatibility issues with
24 the water as proposed?

25 A. No.

1 Q. Are there fresh water zones in the area?

2 A. No.

3 Q. Have you examined all available geologic
4 and engineering data on the subject area?

5 A. Yes.

6 Q. As a result of the examination, have you
7 found any evidence of faults or hydrologic
8 connections between the injection zone and any other
9 source of drinking water?

10 A. No.

11 Q. Mr. Acero, what will be the impact of the
12 proposed injection or disposal on the productivity
13 of this reservoir?

14 A. We do not anticipate the injected water to
15 migrate to offsetting wells. The only possible
16 impact on the reservoir will most likely be an
17 increase in pressure where this would help an offset
18 producing well and not hurt it if that well is
19 producing from the Wolfcamp formation, but the
20 majority of the injection water will be going into
21 the Cisco formation.

22 Q. You see no possibility for damage to the
23 reservoir as a result of the proposed injection?

24 A. No, it would help, not damage.

25 Q. Let's go to Chevron Exhibit 2, Page 18.

1 Would you explain what this is and what it shows?

2 A. This shows a production history for the
3 Skelly Unit 902 Wolfcamp. This shows production
4 rates versus time, and this well is currently shut
5 in due to uneconomic volumes.

6 Q. That was shut in back in what, 2009?

7 A. That's correct.

8 Q. What is the plot shown on Page 23?

9 A. This is a historical production plot. It
10 shows production rates versus time. This is for the
11 Butter Pecan Federal No. 1, and as you can see,
12 based on the latest tests available, it's a marginal
13 well producing between three to four barrels of oil
14 a day.

15 Q. This is that one producing well within the
16 area of review?

17 A. Yes.

18 Q. In your opinion will approval of this
19 application be in the best interest of conservation,
20 the prevention of waste and the protection of growth
21 rights?

22 A. Yes. By approving the application we will
23 not have to shut in production, and currently it's
24 difficult to get enough trucks to transfer the water
25 so there will be a less environmental exposure if

1 the application is approved.

2 Q. How soon are you ready to go in terms of
3 converting this well to injection?

4 A. The rig is ready to move on to the well
5 immediately. We are trying to keep other rig busy
6 in the Skelly Unit since we are currently waiting
7 for this application to be approved.

8 Q. Do you request the order, therefore, be
9 expedited to the extent possible?

10 A. Yes.

11 Q. I believe you testified that Exhibit 2 was
12 either prepared by you or compiled under your
13 direction; is that correct?

14 A. Yes.

15 MR. CARR: May it please the Examiners, at
16 this time we move into evidence Chevron Exhibit 2.

17 HEARING EXAMINER JONES: Chevron Exhibit 2
18 will be admitted.

19 (Note: Exhibit 2 admitted.)

20 MR. CARR: That completes my direct
21 examination.

22 HEARING EXAMINER JONES: I have it
23 written -- I don't actually remember -- it was
24 Apache that operates the offset well?

25 THE WITNESS: Yes, that's correct.

1 HEARING EXAMINER JONES: They didn't
2 object at all?

3 THE WITNESS: No, they did not.

4 HEARING EXAMINER JONES: Was their well a
5 vertical well or one of these horizontal?

6 THE WITNESS: The wellbore is located
7 here. It's vertical. Let me find it.

8 HEARING EXAMINER JONES: Have you talked
9 to Apache?

10 THE WITNESS: I have spoken to their
11 landman.

12 HEARING EXAMINER JONES: But their
13 reservoir engineer, they don't have any plans to try
14 any horizontal Abbo or Wolfcamp wells in the area?

15 THE WITNESS: I could not answer that. I
16 don't know.

17 HEARING EXAMINER JONES: The well that you
18 are converting, how long ago was it drilled and
19 fractured? Or was it fractured?

20 THE WITNESS: When it was in the Wolfcamp
21 it was in, I believe, 1997.

22 HEARING EXAMINER JONES: 1997. Okay. So
23 there's no possibility of putting one of the modern
24 fracture treatments on it and making it into a
25 producer?

1 THE WITNESS: No. It's hit the economic
2 limit currently in the Wolfcamp.

3 HEARING EXAMINER JONES: So you think the
4 reservoir is gone?

5 THE WITNESS: That's correct.

6 HEARING EXAMINER JONES: And the
7 application, you are asking for 8418 to 9766?

8 THE WITNESS: That is correct.

9 HEARING EXAMINER JONES: Okay. And this
10 well, will it handle excess water that you can't
11 handle otherwise in the Skelly Unit?

12 THE WITNESS: Yes, it's for on-lease
13 production. We currently have a well drilling
14 program at the moment, so this well will be critical
15 to the success of that project.

16 HEARING EXAMINER JONES: Are you actively
17 drilling it right now?

18 THE WITNESS: Yes, that's correct.

19 HEARING EXAMINER JONES: Okay. And the
20 Skelly Unit, are you familiar with the top and the
21 bottom of the Skelly Unit, whether it's a defined
22 top of the unit or the bottom of the unit?

23 THE WITNESS: It's the Yesso. As far as
24 the Skelly, that's where we are producing from,
25 Paddock/Blaine.

1 HEARING EXAMINER JONES: Okay. I noticed
2 all the producing wells were shallower.

3 THE WITNESS: The area we are currently
4 developing is in the Yesso.

5 HEARING EXAMINER JONES: And the San
6 Andres is an old --

7 THE WITNESS: Chevron is not operating the
8 San Andres.

9 HEARING EXAMINER JONES: But the Skelly
10 Unit does have San Andres, doesn't it? It's just
11 operated by someone else?

12 THE WITNESS: Correct.

13 HEARING EXAMINER JONES: If you don't mind
14 sending me a -- I don't know if you have this on
15 your computer but if you will send me this area
16 review table by E-mail?

17 THE WITNESS: Absolutely.

18 HEARING EXAMINER JONES: Send it to your
19 attorney and he will send it to me.

20 MR. CARR: I think I have it in E-mail
21 version. I will send it to you.

22 HEARING EXAMINER JONES: Okay. And I see
23 most of them are shallower anyway, so we won't
24 actually -- I only see actually three wells. This
25 is the Skelly Unit 903; is that correct?

1 THE WITNESS: 902.

2 HEARING EXAMINER JONES: So it's only two
3 wells. Delay that. You don't have to do that.
4 That's all my questions.

5 MR. BROOKS: No questions.

6 HEARING EXAMINER JONES: Thank you very
7 much.

8 MR. CARR: That concludes my presentation.

9 HEARING EXAMINER JONES: We admitted the
10 exhibits.

11 MR. CARR: We admitted the exhibits and I
12 am ready to leave.

13 HEARING EXAMINER JONES: Okay. We will
14 take Case 14593 under advisement. Let's take a
15 five-minute break.

16 (Note: The hearing stood in recess at
17 9:07.)

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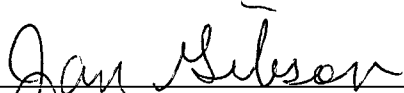
I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. _____
heard by me on _____.

_____, Examiner
Oil Conservation Division

REPORTER'S CERTIFICATE

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
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