

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

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

**COPY**

APPLICATION OF DAVID H. ARRINGTON  
OIL & GAS, INC., FOR COMPULSORY POOLING,  
LEA COUNTY, NEW MEXICO

Case No. 14497

Consolidated with:

APPLICATION OF MARSHALL & WINSTON, INC.,  
TO CANCEL OPERATOR'S AUTHORITY, TERMINATE  
A SPACING UNIT, AND APPROVE A CHANGE OF  
OPERATOR, LEA COUNTY, NEW MEXICO

~~Case No. 14538~~

APPLICATION OF AGAVE ENERGY COMPANY FOR  
AUTHORITY TO INJECT, LEA COUNTY,  
NEW MEXICO

Case No. 14720

REPORTER'S TRANSCRIPT OF PROCEEDINGS  
COMMISSIONER HEARING

BEFORE: JAMI BAILEY, Chairman  
DR. ROBERT BALCH, Commissioner  
SCOTT DAWSON, Commissioner

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December 8, 2011  
Santa Fe, New Mexico

This matter came on for hearing before the New  
Mexico Oil Conservation Commission, JAMI BAILEY,  
Chairman, on Thursday, December 8, 2011, at the New  
Mexico Energy, Minerals and Natural Resources Department,  
1220 South St. Francis Drive, Room 102, Santa Fe, New  
Mexico.

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1                   CHAIRMAN BAILEY: This is the meeting of  
2 the Oil Conservation Commission on December 8th, 2011, in  
3 Santa Fe, in Porter Hall.

4                   To my left is Dr. Robert Balch, designee of  
5 the Secretary of Energy and Minerals and Natural  
6 Resources. To my right is Scott Dawson, designee of the  
7 Commissioner of Public Lands.

8                   All three Commissioners are here, and so there  
9 is a quorum. Commissioners, have you had a chance to  
10 look at the minutes of the previous hearing?

11                   COMMISSIONER DAWSON: I have.

12                   COMMISSIONER BALCH: I have.

13                   CHAIRMAN BAILEY: Do I hear a motion to  
14 adopt the minutes?

15                   COMMISSIONER DAWSON: I'll motion.

16                   COMMISSIONER BALCH: Second.

17                   CHAIRMAN BAILEY: All those in favor say  
18 aye.

19                   Then I will sign on behalf of the Commission  
20 and transmit them to the Commission Secretary.

21                   On the docket we have several cases and  
22 deliberation of rulemaking concerning horizontal well  
23 rules. We have agreed to have the deliberations on the  
24 rulemaking to follow after we hear all three cases. So  
25 those of you who are here only to hear the deliberations

1 for the horizontal well rule, it will be at least a full  
2 day, probably, or into the afternoon to hear the cases.  
3 So you may be excused, if you want to, and come back when  
4 you want to.

5 On the docket we have Cases 14497, which is  
6 the Application of David H. Arrington Oil & Gas for  
7 compulsory pooling in Lea County, New Mexico; and  
8 Application of Marshall & Winston, Inc., to cancel an  
9 operator's authority and terminate a spacing unit, and  
10 approve a change of operator, in Lea County, New Mexico.  
11 These cases will be consolidated for purposes of this  
12 hearing, and one order will be issued for both cases.

13 Do I have appearances for these cases?

14 MR. CARR: May it please the Commission?  
15 My name is William F. Carr, with the Santa Fe office of  
16 Holland & Hart. We represent David H. Arrington Oil &  
17 Gas, Inc., in these consolidated cases.

18 With me is my partner Larry Montano, who will  
19 assist me in the presentation of the evidence. We have  
20 four witnesses.

21 MR. BRUCE: Madam Chair, Jim Bruce of  
22 Santa Fe representing Marshall & Winston, Inc. I have two  
23 witnesses.

24 CHAIRMAN BAILEY: Shall we take the David  
25 Arrington case first? Have your first witness called.

1 MR. CARR: Could I make a very brief  
2 opening?

3 CHAIRMAN BAILEY: You may make a brief  
4 opening statement.

5 MR. CARR: May it please the Commission.  
6 David H. Arrington Oil & Gas, Inc., is here today seeking  
7 an order compulsory pooling Morrow Formation and other  
8 formations under a 320-acre gas spacing unit or a  
9 160-acre gas spacing unit, depending on the depth of the  
10 well.

11 The purpose of the application is to attempt a  
12 re-entry in the Morrow Formation, and we believe the  
13 evidence will show that Mr. Arrington is entitled to an  
14 order under the Oil & Gas Act.

15 The evidence will show you that in the south  
16 half of this section, 80 acres are owned by Marshall &  
17 Winston, the balance by Arrington and Arrington's  
18 partners.

19 The well was drilled in 2004 by Mr. Arrington.  
20 He owns 75 percent of it and paid three-quarters of the  
21 costs, and Marshall & Winston paid their one-quarter of  
22 the costs. The well produced for a time and was  
23 abandoned. The Arrington lease expired. The JOA  
24 expired.

25 And Arrington has gone out and re-leased the

1 acreage and acquired a surface easement to access the  
2 well to go in and, based on their experience with other  
3 deep Morrow gas wells, in fact, we'll show you pumping  
4 liquids off the well, re-establishing production from  
5 that deeper zone.

6 Prior reviews of this well by Arrington and  
7 current reviews by Marshall & Winston suggest that this  
8 will not be an economic effort. But today Arrington is  
9 asking you to give him the opportunity to try new  
10 technology and, based on his experience with similar  
11 wells, to try and re-establish Morrow production.

12 Unless we can re-enter this well, run this  
13 test and have 90 days to do it, it's, I think, fairly  
14 safe to say the Morrow will not be tested. And even  
15 though the evidence will show there are gas reserves in  
16 the Morrow, they will never be recovered and wasted.

17 So we're requesting 90 days to go in and  
18 attempt to re-establish Morrow production. Marshall &  
19 Winston propose to now re-complete the well in the Cisco  
20 Formation, and it's important to note that the well is  
21 actually located on the Marshall & Winston tract, and if  
22 re-completed in the Cisco, they would own 100 percent of  
23 the well and 100 percent of the production.

24 We're asking for 90 days. We were here well  
25 over a year ago asking for 90 days. I'm not suggesting

1 anyone caused the delay, but we could have been in and  
2 out four times by now.

3 If we are able to make a Morrow well, everyone  
4 will share and everyone will benefit. And if we do not,  
5 these reserves will be wasted.

6 We have four witnesses today: Monty Kastner  
7 will review the status of the lands in the area and  
8 background of this case; Brian Ball, our geological  
9 witness, who will give you the geological picture of the  
10 Morrow Formation in the area; Art Carrasco, our  
11 operations manager and engineer, who will review with you  
12 the way they propose to work over the well, if you allow  
13 them to do so; and Keith Bucy, who will provide  
14 information on the economics associated with this. Thank  
15 you.

16 CHAIRMAN BAILEY: Mr. Bruce?

17 MR. BRUCE: Madam Chair, I'll be quite  
18 brief.

19 I think Marshall & Winston's position was set  
20 forth in the pre-hearing statement, and it's been my  
21 experience that Commissioners always read those. I would  
22 just address a couple of things that Mr. Carr said.

23 Insofar as the well and the Morrow Formation,  
24 our expert petroleum engineer agrees that there is gas in  
25 the Morrow Formation underlying the south half of Section

1 26. That's not the issue. The issue is that it's  
2 uneconomic to recover.

3 There are the costs involved, the questionable  
4 rate of -- or the question of even bringing it back on  
5 production, the question of what rate it will come on,  
6 the pressure drops since this well was shut in six years  
7 ago, all lead to severe questions about the economics  
8 and, in fact, it is not economic to re-enter.

9 Furthermore, our land witness, Mr. Hammit,  
10 will testify about the chain of events leading up to this  
11 hearing today. And we do not believe that David H.  
12 Arrington has made a good-faith effort to force pool the  
13 parties in this well.

14 We would ask that the Commission affirm the  
15 Division's order which denied Arrington's application and  
16 grant the Marshall & Winston application. Thank you.

17 CHAIRMAN BAILEY: Would you call your  
18 first witness?

19 MR. MONTANO: May it please the  
20 Commission? Arrington calls Monty Kastner.

21 CHAIRMAN BAILEY: Would you stand to be  
22 sworn?

23

24

25

1 MONTY KASTNER

2 Having been first duly sworn, testified as follows:

3 DIRECT EXAMINATION

4 BY MR. MONTANO:

5 Q. Good morning, Mr. Kastner. Would you please  
6 state your full name for the record?

7 A. It's Monty W. Kastner.

8 Q. Where do you currently reside?

9 A. Midland, Texas.

10 Q. By whom are you employed?

11 A. David H. Arrington Oil & Gas.

12 Q. What is your current position with Arrington?

13 A. I'm vice president of land and legal.

14 Q. Have you previously testified before this  
15 Commission?

16 A. I have not.

17 Q. Have you previously testified before the Oil  
18 Conservation Division?

19 A. Yes, I have.

20 Q. Would you please tell the Commissioners a  
21 little bit about your educational background?

22 A. Okay. I attended Casper College in Casper,  
23 Wyoming from 1968 to 1971, where I started my career as a  
24 landman in 1971 working in the Powder River Basin.

25 To fast forward to the independent days, I

1 worked through -- with Texas Pacific Oil Company out of  
2 Abilene, Texas, later on in Dallas. I've held several  
3 positions with Texas Pacific, including exploration  
4 manager, land manager, land manager U.S.

5 From the Texas Pacific period I organized a  
6 land consulting firm, Kastner Land Services, and operated  
7 that until the point that I went to work for David H.  
8 Arrington in 2008.

9 Kastner Land Services still exists. Our  
10 customers, clients during the Kastner Land Services days  
11 included Chesapeake, where we worked Barnett shale;  
12 Burlington Resources, where we also worked the Barnett  
13 shale. So that's the summation of 40 years of land  
14 experience.

15 Q. Are you familiar with the applications in this  
16 case?

17 A. Yes, I am.

18 Q. Are you familiar with the lands at issue in  
19 those applications?

20 A. Yes, I am.

21 MR. MONTANO: We would tender Mr. Kastner  
22 as an expert witness in petroleum land matters.

23 CHAIRMAN BAILEY: Any objection?

24 MR. BRUCE: No objection.

25 CHAIRMAN BAILEY: He's so accepted.

1 Q. (By Mr. Montano) Would you briefly tell the  
2 Commission what it is that Arrington seeks in this  
3 application?

4 A. We're here today to seek a compulsory pooling  
5 order to be able to re-enter our Green Eyed Squealy Worm  
6 located in the south half of Section 26, 15 South, 34  
7 East, to re-establish the Morrow production we believe  
8 still exists. We seek a 320-acre spacing unit or a  
9 160-acre spacing unit, as the case may be as prescribed  
10 by the rules and regulations.

11 Q. How many wells does Arrington operate in New  
12 Mexico presently?

13 A. We have approximately 53.

14 Q. And how many of those are deep gas wells?

15 A. Probably 13.

16 Q. Would you please identify what's been marked  
17 as Arrington Exhibit Number 1?

18 A. Okay. It's a topo map showing the south half  
19 of Section 26 of 15 South, 34 East. In yellow, the  
20 yellow color depicts David Arrington's oil and gas  
21 leases. The green acreage indicates Marshall & Winston's  
22 mineral interests. The green line leading from the blue  
23 line -- which the blue line is a county road, and I don't  
24 recall the name. But the green line is the access -- the  
25 green and the red line is the access from the county road

1 to the Green Eyed Squealy Worm location.

2 Q. Thank you, Mr. Kastner. Would you turn now to  
3 what's been marked as Arrington Exhibit Number 2 and  
4 identify for the Commission what that exhibit is?

5 A. It's a chronology of events up to August 23rd  
6 of 2010, compiled under my supervision, indicating the  
7 events that occurred that are in our files that we're  
8 aware of from the date of the first oil and gas lease up  
9 through the August 23rd, 2010, date.

10 Q. Would you provide a brief summary of the  
11 efforts Arrington has made to develop this acreage?

12 A. Well, we originally drilled the well in 2004,  
13 produced it until 2007. And I think it was May of 2007  
14 it loaded up with water, and it produced intermittently  
15 until September 2007, wherein it was shut in.

16 We didn't do much more with the well. And  
17 I'll defer to my engineering colleagues to address those  
18 particular situations a little more clearly.

19 Then it was -- there was a point in time where  
20 we decided we might want to move up and look at the Cisco  
21 Formation. So we did make a proposal to Marshall &  
22 Winston to move uphole and take a look at the Cisco  
23 Formation.

24 Later on, after Marshall & Winston decided  
25 that they did not want to participate in that operation,

1 we re-visited the Morrow Formation and decided that there  
2 was gas there that we felt was left behind. And that was  
3 the purpose of the filing of the compulsory pooling  
4 today.

5 Q. Did the underlying oil and gas leases expire?

6 A. They did. The first set of oil and gas leases  
7 did expire.

8 Q. Did the joint operating agreement also expire?

9 A. Yes. It expired by its own terms.

10 Q. At some point did Marshall & Winston request  
11 that Arrington release the oil and gas leases?

12 A. They did.

13 Q. Did Arrington do that?

14 A. Yes, we did.

15 Q. I want to fast forward to your proposal to  
16 re-enter the Morrow. Can you tell the Commission  
17 approximately what date that was?

18 A. That's going to be May of 2010.

19 Q. What was Marshall & Winston's response to that  
20 proposal?

21 A. They declined to participate in that  
22 operation.

23 Q. Did Arrington then seek a forced pooling  
24 application?

25 A. We did. Shortly thereafter we applied for a

1 force pooling application.

2 Q. What happened with that application?

3 A. The application was denied by the Commission.

4 Q. By the Division; is that correct?

5 A. By the Division.

6 Q. And that's why we're before the Commission  
7 now?

8 A. Yes.

9 Q. If you would go back to June of 2010, did  
10 Arrington make any attempts, and did it successfully  
11 obtain an easement agreement?

12 A. Yes, we did, from the surface owner.

13 Q. If you'll turn now to what's been marked as  
14 Arrington Exhibit 3 and identify that for the Commission?

15 A. It was an easement that was entered into by  
16 the surface owner covering the south half of Section 26.  
17 And the purpose of the easement, we wanted to be sure  
18 that, in light that the oil and gas leases had expired,  
19 that we did have access to get to the wellbore and would  
20 enjoy any ownership that the surface owner may have.

21 Q. Did Arrington go out and re-lease the  
22 surrounding minerals?

23 A. Yes, we did.

24 Q. What is the current ownership in the south  
25 half of this section?

1           A.     I believe it to be 75 percent David H.  
2     Arrington and 25 percent Marshall & Winston.

3           Q.     What is the primary purpose of -- in this  
4     application, what is it specifically that Arrington is  
5     seeking?

6           A.     We are seeking to pool the south half of  
7     Section 26 from the surface to the base of the Morrow to  
8     re-enter our Green Eyed Squealy Worm and re-establish  
9     production in the Morrow Formation.

10          Q.     Other than Arrington's interest, what  
11     interests are going to be a part of this? What interests  
12     would have to be pulled?

13          A.     The Marshall & Winston interest covering the  
14     north half of the southwest quarter.

15          Q.     In other words, all other interests are owned  
16     by Arrington; is that correct?

17          A.     That's correct.

18          Q.     In your opinion, has Arrington made a  
19     good-faith effort to obtain the voluntary participation  
20     of Marshall & Winston in this application?

21          A.     I believe we have.

22          Q.     If you would turn next, Mr. Kastner, to what's  
23     marked Exhibit Number 4 and identify that exhibit for the  
24     Commission.

25          A.     Well, if I've got the right one here, this is

1 the application. Do I have the right one?

2 Q. I believe it's --

3 A. Is this the application?

4 Q. This is the affidavit.

5 A. I'm sorry. Yes, this is the affidavit by Mr.  
6 Carr.

7 Q. That was Mr. Carr providing notice to others  
8 of the OCD hearing; is that correct?

9 A. That's correct.

10 Q. Were Exhibits 1 through 4 produced under -- or  
11 compiled under your direction or by you?

12 A. Yes, they were

13 MR. MONTANO: If it please the Commission,  
14 we offer into evidence the exhibits marked as Arrington 1  
15 through 4.

16 CHAIRMAN BAILEY: Any objection?

17 MR. BRUCE: No objection.

18 CHAIRMAN BAILEY: Exhibits 1 through 4 are  
19 admitted.

20 (Arrington Exhibits 1 through 4 were admitted.)

21 MR. MONTANO: Nothing further of this  
22 witness.

23 CROSS-EXAMINATION

24 BY MR. BRUCE:

25 Q. Mr. Kastner, is there a well proposal in your

1 set of exhibits?

2 A. Not in the materials that I'm providing.

3 Q. Why not?

4 A. I think that was -- I think we have the  
5 proposal. It's in here. I don't have it in front of me.  
6 I think our engineers will get to that. But I think the  
7 proposal is in here.

8 Q. When you force pool someone, isn't there  
9 generally a proposal letter from the landman or someone  
10 from the company proposing exactly what is requested?

11 A. Yes.

12 Q. Is there one in here?

13 A. I don't know that there is.

14 Q. Again, why not?

15 A. I don't have an answer for that.

16 Q. And isn't it true that, in the original  
17 hearing, you said the proposal was sent out in May? That  
18 proposal letter wasn't submitted at the original hearing  
19 in this matter either, was it?

20 A. I don't recall. I don't know.

21 Q. In fact, the only letter submitted was a March  
22 2010 Cisco proposal to Marshall & Winston; isn't that  
23 correct?

24 A. I believe that's correct.

25 Q. If you'll turn to your Exhibit 3, Mr. Kastner?

1 If you go down to paragraph 4, could you state for me  
2 what David H. Arrington Oil & Gas, Inc.'s, opinion is of  
3 the meaning of that paragraph?

4 A. Which paragraph?

5 Q. The fourth paragraph.

6 A. The intention of that paragraph is to grant  
7 David H. Arrington exclusive use of the road.

8 Q. So if this easement is valid, Marshall &  
9 Winston would be unable to access its acreage to develop  
10 the Cisco Formation; isn't that correct?

11 A. Using our road, that's correct.

12 MR. BRUCE: That's all I have, Madam  
13 Chair.

14 MR. MONTANO: Madam Chair, if I may ask a  
15 couple of follow-up questions with Mr. Kastner?

16 CHAIRMAN BAILEY: Sure.

17 REDIRECT EXAMINATION

18 BY MR. MONTANO:

19 Q. Mr. Kastner, have you had an opportunity to  
20 look at Marshall & Winston's prehearing statement in this  
21 matter?

22 A. Yes, I did.

23 Q. And what I just handed you is one of Marshall  
24 & Winston's exhibits. And at the bottom of the page,  
25 it's page 27 of their exhibits. Do you see that?

1 A. Yes.

2 Q. Would you identify that letter for the  
3 Commission?

4 A. It's a letter dated May 20th of 2010, from  
5 David H. Arrington Oil & Gas to Marshall & Winston. It's  
6 a letter inviting them to join in the re-establishment in  
7 the Morrow production in our Green Eyed Squealy Worm sent  
8 by me. It has the usual elections, "I elect to  
9 participate. We elect not to participate."

10 Q. Is this the proposal that Mr. Bruce asked you  
11 about?

12 A. I believe it is.

13 Q. It's not a part of Arrington's application,  
14 but it is an exhibit to Marshall & Winston's application;  
15 is that correct?

16 A. As I understand, yes.

17 MR. MONTANO: Nothing further.

18 CHAIRMAN BAILEY: Any cross?

19 RECROSS EXAMINATION

20 BY MR. BRUCE:

21 Q. Again, Mr. Kastner, why didn't you include it  
22 in your exhibit package?

23 A. I think it was originally put in the original  
24 compulsory pooling application. That was my  
25 understanding. Was it not in that application?

1 Q. In which application?

2 A. In the first compulsory pooling application.

3 Q. Well, it's not for me to answer questions.

4 But I would suggest that the Commissioners could go back  
5 to the exhibits presented at the Division level, and this  
6 letter was not presented. I would represent to the  
7 Commission that fact. Of course, Mr. Hammit will comment  
8 on this letter in due course.

9 Q. And then this letter was sent May 20th. When  
10 was the pooling application filed?

11 A. I believe it was on May 25th.

12 Q. Okay. Marshall & Winston probably had a  
13 chance to respond to this letter before you filed the  
14 pooling application; is that correct?

15 A. That could be, yes.

16 MR. BRUCE: That's all I have.

17 CHAIRMAN BAILEY: Do you have any  
18 questions, Commissioner Dawson?

19 COMMISSIONER DAWSON: I have no questions.

20 CHAIRMAN BAILEY: Commissioner Balch?

21 COMMISSIONER BALCH: I have no questions.

22 EXAMINATION

23 BY CHAIRMAN BAILEY:

24 Q. You mentioned that Arrington has 13 deep  
25 wells. How many of those are Morrows?

1           A.     I'll defer to our engineering group. I don't  
2     have that count myself.

3           Q.     Okay. If the well has not produced since July  
4     of 2007, why are you attempting to compulsory pool and  
5     re-enter the well three years later?

6           A.     I would again defer to our engineering group  
7     to answer those questions. It's outside my experience.

8                     CHAIRMAN BAILEY: We have no further  
9     questions.

10                    MR. MONTANO: Thank you, Madam Chair. We  
11     would like to call our next witness, Brian Ball.

12                             BRIAN BALL

13           Having been first duly sworn, testified as follows:

14                             DIRECT EXAMINATION

15     BY MR. MONTANO:

16           Q.     Good morning, Mr. Ball.

17           A.     Good morning.

18           Q.     Would you please state your full name for the  
19     Commission?

20           A.     Brian Ball.

21           Q.     Where do you live?

22           A.     Midland, Texas.

23           Q.     And by whom are you employed?

24           A.     David H. Arrington Oil & Gas.

25           Q.     What is it that you do for Arrington?

1 A. I'm an exploration manager.

2 Q. Have you previously testified before this  
3 Commission?

4 A. No, sir.

5 Q. Have you previously testified before the Oil  
6 Conservation Division?

7 A. Yes, I have.

8 Q. Did you testify before the Division in this  
9 matter?

10 A. Yes, I did.

11 Q. Would you please provide a brief summary to  
12 the Commission of your educational and work experience?

13 A. I went to the University of Wisconsin,  
14 Madison, where I graduated with Bachelor's in Science and  
15 Geology and Geophysics in 1979. And I went to East Texas  
16 State University, graduated with a Master's degree in  
17 1981.

18 I then moved to Midland and worked in Midland  
19 my whole career. I started with Gulf Oil. I've worked  
20 for an independent, Doyle Hartman, there. I worked 18  
21 years for Unocal. And I've been with David Arrington the  
22 past six years.

23 And I am a professional certified geologist in  
24 Arkansas, Mississippi and Texas. I have testified also  
25 at the Texas Railroad Commission and many times at the

1     Arkansas Oil and Gas Commission.

2           Q.     Mr. Ball, are you familiar with the  
3     applications in this case?

4           A.     Yes, I am.

5           Q.     Have you prepared any exhibit for this case?

6           A.     Yes, I have.

7                   MR. MONTANO:  At this time we would tender  
8     Mr. Ball as an expert in geology.

9                   CHAIRMAN BAILEY:  Any objection?

10                  MR. BRUCE:  No objection.

11                  CHAIRMAN BAILEY:  He's so admitted.

12           Q.     (By Mr. Montano)  Mr. Ball, what is  
13     Arrington's primary objective in re-entering this well?

14           A.     To re-establish production in the Morrow  
15     Formation.

16           Q.     Mr. Ball, do you have Exhibit Number 5?

17           A.     Yes, sir.

18           Q.     Did you prepare this exhibit?

19           A.     Yes, sir.

20           Q.     Would you please explain to the Commission  
21     what this exhibit is?

22           A.     This is a composition exhibit of well logs  
23     from the Green Eyed Squealy Worm.  And I'm showing a  
24     resistivity log on the left, a porosity log on the right.

25                   And you can see at the top of the Morrow

1     Clastics Zone and our two main producing zones, Upper  
2     Morrow Sands and Lower Morrow Sands. This well cumed  
3     over 397 million cubic feet of gas and over 11,000  
4     barrels of oil and 17,000 barrels of water.

5                 We have the zones marked for the perforations  
6     in each of the intervals.

7             Q.     What does this exhibit tell you about the  
8     chance of re-establishing production in the Morrow?

9             A.     Well, we have a good quality Morrow section  
10    here, and we've already made quite a bit of production  
11    from it. Nothing has really changed over time as far as  
12    the rock properties or anything like that in the  
13    reservoir. So, we should be able to re-establish  
14    production from it.

15            Q.     As an expert in geology, do you believe it is  
16    reasonable to try to re-establish production in the  
17    Morrow?

18            A.     Yes, sir.

19            Q.     Was Arrington Exhibit Number 5 either compiled  
20    by you or under your direction?

21            A.     It was.

22                   MR. MONTANO: Madam Chair, we move into  
23    evidence Arrington Exhibit 5.

24                   CHAIRMAN BAILEY: Any objection?

25                   MR. BRUCE: No objection.

1 MR. MONTANO: I have no further questions  
2 at this point.

3 MR. BRUCE: Just a couple of questions.

4 CROSS-EXAMINATION

5 BY MR. BRUCE:

6 Q. The well we're here for today is in the  
7 southeast quarter of Section 26?

8 A. Yes, sir.

9 Q. Are there other producing Morrow wells in  
10 Section 26?

11 A. There is. To the north, Yates Petroleum has  
12 drilled a well there around the same time as this well  
13 was drilled, a little before this, 2003, I believe.

14 Q. Is that well still producing?

15 A. I don't know.

16 MR. BRUCE: I think that's all I have,  
17 Madam Chair.

18 CHAIRMAN BAILEY: Commissioner Dawson, any  
19 questions?

20 COMMISSIONER DAWSON: I do.

21 EXAMINATION

22 BY COMMISSIONER DAWSON:

23 Q. In Section 26 there are other Morrow wells  
24 within Section 26 that are producing or have produced?

25 A. Yes. There's a -- Yates has a well just north

1 of this well, about 2,000 feet north, that was drilled  
2 just prior to the drilling of this well.

3 Q. Is that in the northeast quarter?

4 A. Yes, sir.

5 Q. Do you remember what the cumulative production  
6 is on that well?

7 A. I don't.

8 Q. Did you do a cross-section between that well  
9 and your well to ascertain if you were producing from the  
10 same zones as that well?

11 A. I did not for this prospect, because I was not  
12 involved in the development of this prospect. The  
13 company has a cross-section that they include that well  
14 on that. It showed it to be correlateable. I did not  
15 bring that. I did not make that. But it does look  
16 correlateable to this well.

17 Q. Is Yates still operating that well?

18 A. I don't know.

19 Q. Does that well also produce oil or do you  
20 know?

21 A. That I can't remember.

22 Q. What about the one in the northwest quarter?  
23 Do you know anything about that well?

24 A. No, I hadn't really looked at it.

25 COMMISSIONER DAWSON: No further

1 questions.

2 CHAIRMAN BAILEY: Commissioner Balch?

3 EXAMINATION

4 BY COMMISSIONER BALCH:

5 Q. Do you have an idea of what incremental  
6 production you would expect if this well were  
7 successfully re-completed?

8 A. I'm going to let the engineering group that  
9 did the analysis give you that information.

10 Q. How many of the deep wells that Arrington has  
11 in the 53 wells are deep Morrow wells?

12 A. I would say half.

13 Q. Six or seven?

14 A. Yes. Um-hum.

15 COMMISSIONER BALCH: That's all I have.

16 CHAIRMAN BAILEY: I'll use the same  
17 question that I had before.

18 EXAMINATION

19 BY CHAIRMAN BAILEY:

20 Q. How many of these six or seven have used new  
21 technology that was referred to in the opening  
22 statements?

23 A. In Arrington, I believe on one.

24 Q. And why now, when the well quit producing so  
25 many years ago?

1           A.       It was -- we didn't -- we tried -- I think the  
2       engineer will answer that. But we've come up with some  
3       new technology that we didn't think of using at that time  
4       to re-establish production in Morrow wells.

5                   CHAIRMAN BAILEY: I have no other  
6       questions.

7                   Do you have any cross?

8                   MR. MONTANO: I do not. Thank you, Madam  
9       Chair. We would like to call our next witness, Mr. Art  
10      Carrasco.

11                   ART CARRASCO

12                   Having been first duly sworn, testified as follows:

13                   DIRECT EXAMINATION

14      BY MR. MONTANO:

15           Q.       Good morning, Mr. Carrasco. Would you please  
16      state your full name for the record?

17           A.       My name is Art Carrasco.

18           Q.       Where do you live?

19           A.       I live in Midland, Texas.

20           Q.       By whom are you employed?

21           A.       By David Arrington Oil & Gas.

22           Q.       What is your current position with Arrington?

23           A.       I work as engineer and operations manager.

24           Q.       Have you previously testified before this  
25      Commission?

1 A. No, I have not.

2 Q. How about the Oil Conservation Division? Have  
3 you testified there?

4 A. Yes, I have.

5 Q. Would you please provide a brief summary of  
6 your educational and work background?

7 A. I graduated in 1980 from New Mexico State with  
8 a degree in Civil Engineering. I immediately went to  
9 work for Halliburton as a field engineer, worked in  
10 several departments there supervising and designing field  
11 jobs, cementing jobs, stimulation jobs.

12 After that I moved up into a technical advisor  
13 capacity and worked with different customers in designing  
14 stimulation treatments and cement jobs on their wells.

15 I worked in-house with Exxon, with Marathon,  
16 and an independent, Ware Oil & Gas, where I worked with  
17 their teams in designing the stimulation work and  
18 cementing work on their wells in different areas, areas  
19 in Wyoming, New Mexico, California, South Texas, wherever  
20 they happened to be working.

21 In 2006 I went ahead and retired from  
22 Halliburton and went to work for David Arrington as a  
23 completion engineer, looking after the stimulation jobs  
24 on the wells he was working on in the Fayetteville Shale,  
25 Floyd Shale and the Barnett Shale.

1 Q. Would it be fair to say that most of your work  
2 experience has been as a completion engineer?

3 A. Yes, sir.

4 Q. Have you previously testified as an expert  
5 engineering witness?

6 A. Yes, I have.

7 Q. Where have you done that?

8 A. The Texas Railroad Commission.

9 Q. Did you also testify as an engineering expert  
10 before the Oil Conservation Division?

11 A. Yes, I have.

12 Q. Are you familiar with the applications filed  
13 in this case?

14 A. Yes, I am.

15 Q. And have you prepared any exhibits for this  
16 application?

17 A. Yes, I have.

18 MR. MONTANO: At this time we would tender  
19 Mr. Carrasco as an expert engineering witness.

20 CHAIRMAN BAILEY: Any objection?

21 MR. BRUCE: No objection.

22 CHAIRMAN BAILEY: He's so accepted.

23 Q. (By Mr. Montano) Mr. Carrasco, please tell  
24 the Commission when you first became familiar with this  
25 Green Eyed Squealy Worm well?

1           A.       When I first came to work for David Arrington,  
2       this was the first well I looked at prior to getting  
3       involved in the major project we had going on. The well  
4       had gone down. It had loaded up. And it looked like it  
5       was a good candidate to clean up and bring back to  
6       production.

7                   Typically, if we were swabbing the wells when  
8       they would load up with water, we would flood the wells  
9       in. On this well we could not get the swab down due to  
10      some obstructions in the tubing.

11                  At that time we decided to go in and clean the  
12      tubing out with coal tubing, got that cleaned out, and it  
13      appeared that the well was still -- would still make some  
14      gas but also made some water.

15                  At that time I acidized the well. It looked  
16      like a good candidate for a frack job. We ran bottomhole  
17      pressures on it and it had substantial bottomhole  
18      pressure on it. We went ahead and fracked it.

19                  During the frack job the well screened out.  
20      We did get some sand in it. And the well would flow, but  
21      it would always load up and die. It was making too much  
22      water to produce on its own. At that point we produced  
23      it intermittently just trying to see what the well would  
24      make.

25           Q.       Just for clarity's sake, around what time did

1 you make those commercial efforts?

2 A. That was back in 2007.

3 Q. Have you since gone back and worked on this  
4 well?

5 A. No, we have not.

6 Q. Would you please identify what's been marked  
7 as Arrington Exhibit Number 6?

8 A. Exhibit 6 is an AFE cost estimate to go back  
9 into the Green Eyed Squealy Worm and run an artificial  
10 lift in it to try to re-establish production.

11 Q. Why is it that Arrington decided to take  
12 another look at this Morrow well?

13 A. At the time when it was apparent that we could  
14 not go back up into the Cisco, before we went ahead and  
15 abandoned the bottom zone, we thought we'd take one more  
16 look at it to make sure we weren't leaving anything  
17 behind.

18 Q. At this time did Arrington have some  
19 significant interest in the Barnett Shale?

20 A. During this time frame, we were in the middle  
21 of a \$500 million capital project, drilling wells in the  
22 Barnett Shale and Fayetteville Shale and the Floyd Shale.  
23 We had anywhere from five to eight rigs running at the  
24 same time.

25 Q. Would it be fair to say that Arrington at that

1 time was focused primarily on the Barnett Shale?

2 A. Fair to say, yes, sir.

3 Q. If I could turn back to what's been marked as  
4 Arrington Exhibit Number 6, would you please tell the  
5 Commission what this shows and what the total costs are?

6 A. Basically, what this is is a real simple  
7 workover to go in and run rods and pump on this Squealy  
8 Worm. The cost at that time was estimated at \$160,000.

9 Q. How long ago was this AFE put together?

10 A. In, I believe, May of 2010.

11 Q. Do you think that the costs have increased  
12 since you first compiled this AFE?

13 A. I would suspect that the price of materials  
14 have gone up and services, so I would say yes.

15 Q. Do you have a sense percentage-wise of how  
16 high that has gone up?

17 A. I would estimate at least 20 percent, 25.

18 Q. Is Arrington willing to spend this money in  
19 order to test the Morrow?

20 A. Yes, we are.

21 Q. Are these costs in line with what other  
22 operators are charging?

23 A. Yes, they are.

24 Q. In this AFE, have you made an estimate of the  
25 overhead and administrative costs that would be spent on

1 this test?

2 A. Our overhead costs are about \$8,000 while the  
3 well is in the drilling and completion phase per month,  
4 and 800 when they're in the production phase.

5 Q. If the Commission were to grant Arrington's  
6 application, would you recommend that these figures be  
7 modified possibly by a number increase and be  
8 incorporated into any order that results from this  
9 hearing?

10 A. Yes, I do.

11 Q. Is Arrington requesting a risk charge?

12 A. Yes, we are.

13 Q. And is that risk charge limited just to the  
14 costs of re-entering this well?

15 A. Yes.

16 Q. Is Arrington seeking to remain operator of  
17 this well?

18 A. Yes, we are.

19 Q. If you would turn next to what's marked  
20 Arrington Exhibit Number 7. Would you identify that  
21 exhibit for the Commission?

22 A. It's an exhibit that was put together just to  
23 provide a brief procedure on the workover that would be  
24 entailed in putting the well on artificial lift.

25 Q. Will adding an artificial lift help produce

1 from the Morrow?

2 A. Yes, it will.

3 Q. And when is it that you thought about this  
4 artificial lift and helped us to implement it?

5 A. During this time, we had another well called  
6 the Bells Hopper Number 2 that had a similar type of  
7 issue. The well would load up and cease producing gas.  
8 But when we would go ahead and swab on it, it would  
9 produce for a little while.

10 We went ahead and installed a plunger lift on  
11 it, and it really did not -- we did not get the results  
12 that we wanted. And immediately we went in there and  
13 added an artificial lift to it, put it on a rod pump and  
14 re-established production in the well.

15 Q. I think Commissioner Bailey has asked of the  
16 13 or so deep gas wells Arrington has in New Mexico, how  
17 many of those are in the Morrow; do you know?

18 A. I would estimate five or six. I don't have  
19 that exact number.

20 Q. And I think you were talking about this. But  
21 has Arrington used this artificial lift technology to  
22 bring back into production a Morrow well?

23 A. It would be the Bells Hopper Number 2, yes.

24 Q. Can you kind of provide some more information  
25 about the Bells Hopper Number 2 Well?

1           A.     Bells Hopper Number 2 well was put on  
2     artificial lift in December of 2007. And prior to  
3     putting it on lift, the well was not producing at all.  
4     After it was put an artificial lift, it averaged about  
5     316 mcf a day. And since then, it has produced 175  
6     million cubic feet of gas.

7           Q.     Was it also loading up with water?

8           A.     Yes, it was.

9           Q.     In your opinion, will this re-entry attempt  
10    that Arrington is seeking in the Morrow Formation be in  
11    the best interest of conservation of oil and gas?

12          A.     In my opinion, it is.

13          Q.     Will it prevent the waste of oil and gas?

14          A.     Yes, sir. It will allow us to get these  
15    reserves that would be lost if we abandoned this well.

16          Q.     If Marshall & Winston's application were  
17    granted and Arrington's were denied, would that prevent  
18    Arrington from being able to go in and later produce from  
19    the Morrow?

20          A.     It would prevent it or make it extremely  
21    difficult. It would be several years before we would be  
22    able to go down and gather these reserves. There's a  
23    chance of damaging the wellbore during the completion in  
24    the upper zone. There's a chance of dumping additional  
25    junk in the hole or loading up the well with water that's

1 not compatible with the formation and damaging the  
2 reservoir.

3 Q. If the Commission were to see fit to grant  
4 Arrington's application, how long would Arrington need to  
5 re-commence operations at this well?

6 A. We would probably need somewhere in the  
7 neighborhood of 30 days or so to file the permitting  
8 charges and get all the equipment lined up and  
9 everything. And then also another couple of months to  
10 implement the job and successfully test the well.

11 Q. Would it be fair to say that if the Commission  
12 were to give us 90 days, that would give us a good  
13 opportunity to re-commence operations?

14 A. It would give us enough time to get the job  
15 done. The only caveat would be depending on what it  
16 would take to repair the well or get the well back to  
17 whatever situation it was, whatever condition it was when  
18 we left it. I understand there's been some work done on  
19 the well, and to what extent, I don't know what that work  
20 has been.

21 Q. Is it safe to say that until you actually get  
22 into the well, you're not going to be able to pin down  
23 exactly how long it will take to get this back in line?

24 A. Yes.

25 Q. Were Exhibits 6 and 7 either compiled by you

1 or under your direction and supervision?

2 A. Yes.

3 MR. MONTANO: At his time we would move  
4 into evidence what's been marked Arrington Exhibits 6 and  
5 7.

6 MR. BRUCE: No objection.

7 CHAIRMAN BAILEY: There has been a  
8 question whether or not Exhibit 5 was entered into the  
9 record.

10 MR. MONTANO: Madam Chair, I apologize. I  
11 thought Mr. Ball had presented that exhibit.

12 MR. BRUCE: I don't have any objection,  
13 Madam Chair.

14 MR. MONTANO: We would move for the  
15 admission of Exhibit 5 into evidence.

16 CHAIRMAN BAILEY: We will admit Exhibits  
17 5, 6 and 7 at this time.

18 (Arrington Exhibits 5, 6 and 7 were admitted.)

19 MR. MONTANO: Thank you. At this time I  
20 have no further questions of this witness.

21 CROSS-EXAMINATION

22 BY MR. BRUCE:

23 Q. Mr. Carrasco, you did issue a memo to the  
24 working interest owners in July 2007, recommending that  
25 the Morrow be abandoned and that a Cisco completion be

1 attempted; correct?

2 A. That's correct.

3 Q. And I'll probably have my witness go over it.  
4 But there was talk about the well ceased producing in  
5 2007. Really it ceased producing commercial quantities  
6 in early 2006, did it not?

7 A. For the most part, yes.

8 Q. Now I just want to be clear on a couple of  
9 things. Your AFE, Exhibit 6, you're saying you would --  
10 basically this -- the line items in this AFE would be the  
11 same as if you did an AFE today, except the costs would  
12 be increased 20 to 25 percent overall?

13 A. Just depending what goods and services have  
14 gone up, yes.

15 Q. Now I just want to be clear. You said there's  
16 new technology. Is that new technology reflected in your  
17 Exhibit 7 for re-entering these types of deep gas wells  
18 and putting them back on production?

19 A. On step number eight, it says, "Go in hole  
20 with rods and pump." That's the new technology that was  
21 going to be introduced to the gas well.

22 Q. So you're not going to re-stimulate the well  
23 or anything; right?

24 A. At this point I don't see any reason to.

25 Q. You're simply -- and I'm not a petroleum

1 engineer. You're going to pump the water off and put it  
2 back on gas production; right?

3 A. That's the plan, yes.

4 Q. If it was so simple, why wasn't that done in  
5 2006 or 2007?

6 A. During that time frame, we did not have the  
7 experience in bringing wells back using this type of  
8 technology, not until we had the Bells Hopper  
9 re-completion that we brought that on.

10 Also during that time, just visiting with  
11 other engineers through SPE meetings and casual  
12 conversations I heard of people doing that, putting  
13 artificial lifts on the wells and getting the water off  
14 of them.

15 Q. The Bells Hopper Number 2 that you mentioned,  
16 how long was that well shut in prior to the work on it?

17 A. It was shut in for about -- it looked like  
18 about eight months, six months or so. At that time we  
19 went up and tried another zone up the hole. That was not  
20 very commercial, so we went ahead and squeezed that zone  
21 off, went back down to the Morrow and put it on  
22 artificial lift at that time.

23 Q. Had that well ever been communicated with the  
24 Lower Morrow, which is oftentimes wet?

25 A. I'm not familiar with what the logs look like

1 on that well.

2 Q. What type of water production rates do you  
3 have on that well?

4 A. Currently?

5 Q. Start off with that, sure.

6 A. Somewhere -- just a few barrels a month, 10 to  
7 20, depending on -- it's very sporadic.

8 Q. Could you identify for us any other wells  
9 where this was done and it was successful?

10 A. There's been some other wells. One particular  
11 that was worked on by Bass, and I'll defer to Keith Bucy  
12 for the particulars on that well.

13 Q. Do you know the current condition of the  
14 wellbore?

15 A. I do not.

16 Q. This question was asked of the geologist about  
17 other offsetting wells completed in Section 26, completed  
18 in the Morrow. Are you aware of those?

19 A. I'm aware they exist. I'm not aware of where  
20 their production intervals are or what has been done with  
21 them.

22 MR. BRUCE: That's all I have.

23 CHAIRMAN BAILEY: Commissioner Dawson?

24 COMMISSIONER DAWSON: I do have a few  
25 questions.

## EXAMINATION

1

2 BY COMMISSIONER DAWSON:

3 Q. Mr. Ball, do you know what's the distance or  
4 how far is the Bells Hopper Number 2 that you're  
5 referring to? How close to this re-entry candidate, the  
6 Green Eyed Squealy Worm; do you know?

7 A. Mr. Carrasco.

8 Q. I'm sorry.

9 A. It's about four miles away.

10 Q. Four miles?

11 A. Yes.

12 Q. What did you say that the -- how much has that  
13 well produced since you put the artificial lift on it?

14 A. 175 million cubic feet. It's averaged about  
15 316 a day, I think is what it comes out to.

16 Q. Do you have an idea what it costs to  
17 re-complete that well?

18 A. At this point I don't have the actual cost.  
19 But I would say it's real similar to what this one was.  
20 The well already had tubing in it. All we had to do was  
21 buy the rods and the pump and do the work on it, just  
22 install it. It would be real similar to this same  
23 amount.

24 Q. Has that well paid out the costs that you  
25 incurred to re-complete it?

1 A. Yes, it has.

2 Q. Do you know how much or what the return on  
3 your investment is so far, roughly?

4 A. I've not done the economics on that well, no,  
5 sir.

6 COMMISSIONER DAWSON: No further  
7 questions.

8 CHAIRMAN BAILEY: Dr. Balch?

9 EXAMINATION

10 BY COMMISSIONER BALCH:

11 Q. Do you know what the production rate from the  
12 Green Eyed Squealy well was before it watered out?

13 A. It was making about, from what I remember,  
14 350- to 400,000 a day.

15 Q. Do you expect that the re-completion, if  
16 successful, should restore that rate?

17 A. I don't know if it will go up to that rate.  
18 But it should get most of that back, yes, sir.

19 Q. And you have a feeling for what your  
20 incremental gas would be?

21 A. I think I'll let Keith answer that. He's run  
22 the economics on it and has that number.

23 COMMISSIONER BALCH: That's all I have.

24

25

1 EXAMINATION

2 BY CHAIRMAN BAILEY:

3 Q. You recommend monthly charges of \$8,000 and  
4 \$800. Those are significantly higher than others that  
5 we've seen come across in the Division. On what do you  
6 base your \$8,000 and \$800?

7 A. Just on the -- what it costs to operate.  
8 We're a small company, so we don't have the big staff  
9 that it takes to drive the prices down for all these  
10 different services.

11 Q. Do you have other wells that you're charging  
12 equal amounts per month?

13 A. I don't have those numbers in front of me.  
14 These are just the numbers that I've been asked to use  
15 just in the AFEs, just for estimating.

16 CHAIRMAN BAILEY: Any redirect?

17 MR. MONTANO: I do have a couple of  
18 questions.

19 REDIRECT EXAMINATION

20 BY MR. MONTANO:

21 Q. You mentioned that Bells Hopper 2, the  
22 artificial lift was implemented in 2007; is that correct?

23 A. Correct.

24 Q. And Mr. Carrasco, is it fair to say that your  
25 expertise is in completion, as opposed to production?

1 A. It's fair to say, yes.

2 Q. Would it be fair to say back in 2007, you  
3 personally did not have the expertise to implement that  
4 artificial lift?

5 A. That's correct. My expertise was more in the  
6 well completion, the fracturing work, up until the point  
7 it goes on production. After that I was not ever really  
8 involved in those types of decisions or recommendations.  
9 When I was working for Halliburton, that was not  
10 something that I did on my normal day.

11 Q. Then in 2007, within Arrington itself, would  
12 you say that there was a gap in expertise with respect to  
13 that specific use of an artificial lift?

14 A. Yes, it was.

15 Q. And is it Mr. Bucy that has more expertise in  
16 that area?

17 A. That's correct.

18 MR. MONTANO: That's all I have.

19 CHAIRMAN BAILEY: Your witness may be  
20 excused.

21 MR. MONTANO: Thank you, Madam Chair. Our  
22 last witness is Mr. Keith Bucy.

23

24

25

1 KEITH BUCY

2 Having been first duly sworn, testified as follows:

3 DIRECT EXAMINATION

4 BY MR. MONTANO:

5 Q. Good morning, Mr. Bucy. Would you please give  
6 your full name for the Commission?

7 A. Keith E. Bucy.

8 Q. Where do you live?

9 A. Midland, Texas.

10 Q. Where do you work?

11 A. David H. Arrington Oil & Gas.

12 Q. What do you do for Arrington?

13 A. I'm the general manager.

14 Q. Have you previously testified before this  
15 Commission?

16 A. No, sir.

17 Q. Have you previously testified as an expert  
18 engineer before other commissions?

19 A. Yes, sir.

20 Q. Which ones are those?

21 A. Texas Railroad Commission.

22 Q. Would you provide a brief history of your  
23 educational and work history?

24 A. I graduated from Texas A&M University in '76  
25 with a Bachelor of Science in Petroleum Engineering. I

1 worked for Amoco Production Company in Odessa and Houston  
2 for several years.

3 In 1979 I went to work for Bass Enterprises in  
4 Midland, Texas. I worked for them for 28 years, various  
5 production engineering, reservoir engineering roles. I  
6 was an engineering manager. I was the operations  
7 drilling and production superintendent for 10 years. And  
8 my final position there was division manager in Midland.  
9 We operated over 1,000 wells in Texas and New Mexico, had  
10 120 employees.

11 In September of 2007, I took early retirement  
12 and went to work for David Arrington Oil & Gas in  
13 Midland. He transferred me to Granbury, Texas, to run  
14 the Barnett Shale operation. We had five drilling rigs  
15 running at the time. I worked there for two years until  
16 we completed the drilling operations. He transferred me  
17 back to Midland in October of 2009, as the general  
18 manager for the oil and gas company and the pipeline  
19 companies.

20 Q. So roughly in late 2009, is it, that you would  
21 have moved from the Barnett Shale into your current  
22 position?

23 A. Yes, sir.

24 Q. Are you familiar with the applications that  
25 have been filed in this case?

1           A.     Yes, sir.

2           Q.     And have you prepared any exhibits for  
3 presentation to the Commission in this case?

4           A.     Yes. I've done production forecasts and  
5 economics.

6                   MR. MONTANO: At this time we would tender  
7 Mr. Bucy as an expert in engineering, petroleum  
8 engineering and in engineering economics.

9                   MR. BRUCE: No objection.

10                  CHAIRMAN BAILEY: He's so accepted.

11           Q.     (By Mr. Montano) Mr. Bucy, when did you first  
12 become familiar with this Green Eyed Squealy Worm well?

13           A.     In late 2009, shortly after I came back to  
14 Midland.

15           Q.     Mr. Carrasco testified about Arrington being  
16 able to return to production one well, a Morrow well.  
17 Can you testify about your personal experience with  
18 respect to other companies that have done the same thing?

19           A.     When I was at Bass, we operated probably three  
20 dozen or more Morrow wells in New Mexico. Of those, we  
21 had five or six that were on artificial lift.

22                   And whenever I got involved with this well, at  
23 first we were looking at going uphole to Cisco. I  
24 started looking at the production curves on it and  
25 realized it was making significant gas when it loaded up.

1 And I asked the question, "Did we ever consider putting a  
2 rod and a beam lift," and they had not at that time.

3 So Mr. Arrington asked me to look into it. So  
4 I looked back at some of the wells we had done at Bass.  
5 One well, in particular, the Eddy Unit 39, I knew quite a  
6 bit about it. I'd worked on it. It had been producing  
7 about 3- or 400 bcf a day and loaded up. It had been  
8 down for several months.

9 We put it on artificial lift in 1997, and to  
10 date, looking back on the production a few months ago,  
11 it has produced 1.25 bcfs since being put on artificial  
12 lift.

13 So I knew personally that that well was  
14 significant. We had some other wells that weren't as  
15 good but very similar, in that they loaded up and died,  
16 we'd put them on artificial lift, and they came back to  
17 similar rates that they were producing before they died.

18 Q. Is it fair to say that most of your work  
19 experience has been on the production side of things?

20 A. Yes, sir, production and reservoir.

21 Q. Would it also be fair to say that you have  
22 more experience than Mr. Carrasco does in this area?

23 A. Yes, sir.

24 Q. Speaking specifically to the Green Eyed  
25 Squealy Worm, when did you first analyze that well and

1     what it is that we're trying to do here?

2           A.     I believe it was in April of 2010. It was the  
3     point where I believe it became obvious we weren't going  
4     to do an uphole completion and started looking at it.  
5     And like I said, I talked to Mr. Arrington and indicated  
6     to him I thought the well could be -- we could  
7     re-establish commercial production.

8           He asked me to analyze it, so I pulled the  
9     production data out and put it in our economics program  
10    and did a forecast and ran economics. And it looked like  
11    the economics were very robust, so I reported back to him  
12    that I thought it would be a commercial venture.

13          Q.     Please turn to what's been marked as Arrington  
14    Exhibit 8.

15          A.     Okay.

16          Q.     Would you please tell the Commission what this  
17    exhibit is?

18          A.     This is the output from the economics program  
19    that we run. It's a commercial program called PHD Win.

20                 It shows the production forecast for oil and  
21    gas from this well. I used a \$90 flat oil price, a \$4  
22    flat gas price, and \$3,000 a month operating costs, and  
23    100 percent working interest, 75 percent net revenue  
24    interest.

25                 You can see towards the bottom in the center

1 of the page the economic factors there showing that the  
2 payout will be less than half a year, rate of return is  
3 greater than 1,000 percent.

4 Q. So would it be fair to say, based on these  
5 projections, that this well would be economical?

6 A. Yes, sir.

7 Q. Turn to what's been marked as Arrington  
8 Exhibit Number 9.

9 A. Yes, sir.

10 Q. Would you please identify what this exhibit is  
11 for the Commission?

12 A. Two curves here. The second one that I have  
13 here shows the production -- natural production from the  
14 well with my forecast of oil and gas production going  
15 forward. And that was as if we had never shut down. So  
16 I took the same forecast and shifted it forward in time  
17 to mid 2011 and started the projection there using the  
18 prices in 2011.

19 Q. What does your projection show?

20 A. That the well will recover an excess of bcf of  
21 gas and 48,000 barrels of oil.

22 Q. Were Exhibits 8 and 9 either compiled by you  
23 or under your direction and supervision?

24 A. Yes, they were.

25 MR. MONTANO: At this time, we would move

1 for the admission of Arrington Exhibits 8 and 9.

2 CHAIRMAN BAILEY: Any objection?

3 MR. BRUCE: No objection.

4 CHAIRMAN BAILEY: So admitted.

5 (Arrington Exhibits 8 and 9 were admitted.)

6 MR. MONTANO: Thank you, Madam Chair. I  
7 have no further questions at this time.

8 CROSS-EXAMINATION

9 BY MR. BRUCE:

10 Q. Mr. Bucy, I take it your projections state  
11 that the well will come back at the same rate it was  
12 previously producing?

13 A. I dropped it a little bit. The rate it was  
14 producing at in mid 2006 was 600 mcf a day, and I started  
15 my projections at 500, because we did produce some gas  
16 after that.

17 Q. If you look at your projection, right at the  
18 end of 2005, it was producing 400 a day, and you're  
19 projecting it will come back at 500 a day, aren't you?

20 A. I looked at mid 2006, where it started  
21 loading. You can see the deflection down there. That's  
22 when the liquid loading started. So that was 600 mcf a  
23 day, so I started at 500, because it was heading and  
24 flowing intermittently during those subsequent months.

25 Q. There have been a couple of mentions of Bells

1 Hopper, and Mr. Carrasco said it's only producing a few  
2 barrels of water per month. So obviously it hadn't been  
3 producing much water before it was shut in?

4 A. When it was first put on artificial lift, I  
5 believe it was making 30 barrels of water per day, and it  
6 did that for several months. Then the water production  
7 has declined to about two to three barrels a day.

8 Q. If the well we're here for today is  
9 communicating with the wet lower Morrow, would you expect  
10 water production to go up or down?

11 A. The water production shows that it was making  
12 about 30 barrels of water a day, whenever it started  
13 loading up and dying. So that's why I anticipate it to  
14 be making 30 barrels of water a day and about 2.9 barrels  
15 per million cubic feet of condensate also.

16 Q. Have you looked at any other wells in Section  
17 26 producing from the Morrow?

18 A. No, sir. I'm aware that there is another  
19 well.

20 Q. Okay. Do you know if it's still producing?

21 A. I do not.

22 Q. If it was still producing, would there be a  
23 pressure drop over time over the last six years, as this  
24 well was shut in almost six years ago?

25 A. In my experience, of the three dozen or so

1     Morrow wells that we had, we had quite a few that were  
2     drilled very close to each other. And there were only  
3     two wells out of the three or four dozen that ever had  
4     pressure communication with each other.

5           Q.     So you don't know if this well is in pressure  
6     communication with the other well you just talked about?

7           A.     I do not know that.

8                   MR. BRUCE: That's all I have, Madam  
9     Chair.

10                   CHAIRMAN BAILEY: Commissioner Dawson?

11                                 EXAMINATION

12     BY COMMISSIONER DAWSON:

13           Q.     Do you know what's approximated, the Eddy Unit  
14     Number 9, the well that you're referring to, how far is  
15     that from Green Eyed Squealy Worm?

16           A.     The EA 39 is south of Carlsbad. I don't know  
17     exactly how far it is, but it's at least 40 or 50 miles.

18           Q.     Does that well produce from the upper middle  
19     and Morrow zones also?

20           A.     The Middle Morrow.

21           Q.     And do you know roughly what it costs to  
22     re-complete that well or to put it on artificial lifts?

23           A.     In 1997, probably \$50,000. I might point out  
24     that of the 160,000 that we're looking at here, there's  
25     only 40,000 really at risk. If we fail, that's all going

1 to be recovered and credited back to the partners. It's  
2 not a very high risk workover.

3 Q. That well has made 1.25 bcf?

4 A. Since being put on artificial lift.

5 Q. Did it make some oil?

6 A. No. It makes about a couple barrels of water  
7 a month now. Initially, when we put it on, it was  
8 making, I believe, 20 or 30 barrels of water a day, and  
9 it declined down to very little water.

10 COMMISSIONER DAWSON: No further  
11 questions. Thank you.

12 CHAIRMAN BAILEY: Commissioner Balch?

13 COMMISSIONER BALCH: No questions.

14 EXAMINATION

15 BY CHAIRMAN BAILEY:

16 Q. For your exhibit on economic projection, you  
17 use \$90 oil and \$4 gas?

18 A. Yes.

19 Q. When was the last time gas was \$4?

20 A. I don't know. But I did these back in April,  
21 when we thought we were going to be doing the work then,  
22 so I have not re-visited them. But I can assure you that  
23 even if I drop it to \$2, it's going to look great.

24 CHAIRMAN BAILEY: That's all I have.

25 Any redirect on those questions?

1 MR. MONTANO: Just one follow-up question.

2 REDIRECT EXAMINATION

3 BY MR. MONTANO:

4 Q. The other well in Section 26 that has been  
5 referenced, I believe it was related to Yates, does  
6 Arrington have any interest in that production?

7 A. Not that I know of.

8 MR. MONTANO: That's all I have.

9 MR. BRUCE: Can I ask one follow-up in  
10 response to one of Mr. Dawson's questions?

11 CHAIRMAN BAILEY: Yes.

12 RECROSS EXAMINATION

13 BY MR. BRUCE:

14 Q. You mentioned in your economic projection you  
15 used \$160,000; correct?

16 A. Yes, sir.

17 Q. You didn't use the \$200,000 which Mr. Carrasco  
18 said this would now cost?

19 A. No, sir.

20 MR. BRUCE: Thank you.

21 CHAIRMAN BAILEY: Your witness may be  
22 excused.

23 MR. MONTANO: Thank you, Madam Chair.  
24 That concludes our presentation.

25 CHAIRMAN BAILEY: Shall we take a

1 10-minute break and be back at 10:20?

2 (A recess was taken.)

3 CHAIRMAN BAILEY: Let's go back on the  
4 record. You have your first witness?

5 MR. BRUCE: I do. I call Mr. Hammit to  
6 the stand.

7 KEVIN HAMMIT

8 Having been first duly sworn, testified as follows:

9 DIRECT EXAMINATION

10 BY MR. BRUCE:

11 Q. Would you please state your name and city of  
12 residence for the record?

13 A. Kevin Hammit. I live in Midland, Texas.

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

15 A. I'm a vice president of land for Marshall &  
16 Winston, Inc., there in Midland.

17 Q. Have you previously testified before the Oil  
18 Conservation Division as an expert witness?

19 A. Yes, I have.

20 Q. Would you please summarize your educational  
21 and employment background for the Commissioners?

22 A. I attended and graduated from Eastern New  
23 Mexico University in 1976. I went into the oil and gas  
24 business as a landman in 1982. I was self-employed as an  
25 independent landman until 1987, approximately. At that

1 point in time I went into a contract with Exxon  
2 Corporation in their sales group. I worked there for  
3 approximately two years.

4 Then in 1989, I was offered a position with  
5 Marshall & Winston, and I've been there ever since.

6 Q. In your position with Marshall & Winston, are  
7 you the landman in charge of this area of Southeast New  
8 Mexico?

9 A. Yes.

10 Q. Are you familiar with the land matters  
11 involved in these cases?

12 A. Yes, I am.

13 MR. BRUCE: Madam Chair, I tender  
14 Mr. Hammit as an expert petroleum landman.

15 MR. CARR: No objection.

16 CHAIRMAN BAILEY: He's so admitted.

17 Q. Mr. Hammit, let's run through your exhibits.  
18 And maybe first we'll spend some time very briefly going  
19 over the history of the well here today.

20 Before we get into that, Marshall & Winston  
21 participated in the drilling of Green Eyed Squealy Worm  
22 well, did it not?

23 A. That's correct. We were in the unique  
24 position of leasing our minerals to Arrington and later  
25 seen a prospect from Arrington Oil & Gas, in which we

1 participated in the drilling of the well.

2 Q. You said, "leased your minerals." What is the  
3 ownership of the mineral interest, not the working  
4 interest, but mineral interests of the north half  
5 southwest quarter of Section 26?

6 A. Marshall & Winston owns 75 percent of the  
7 minerals. We have an oil and gas lease from the other 25  
8 percent mineral interest owner. So we have currently 100  
9 percent ownership in that tract.

10 Q. As I said, you leased your interests and then  
11 participated as a working interest owner also in the  
12 Green Eyed Squealy Worm development?

13 A. That's correct.

14 Q. Looking at the first page of your Exhibit 1,  
15 does that reflect the production from the well ever since  
16 it was drilled?

17 A. Yes, it does. This came from  
18 drillinginfo.com. It indicated that the well ceased  
19 production in January of 2006. There was a workover  
20 attempt, a re-completion attempt in March of 2007 that  
21 was unsuccessful. So essentially the well has not  
22 produced in commercial quantities since January of 2006.

23 Q. The pages of your Exhibit 1 are numbered.  
24 What is page 2 and what does it reflect?

25 A. Page 2, unlike a chart, it's a table. And it

1 reflects the production from the Green Eyed Squealy Worm  
2 for all years that it was producing. And it was current  
3 as of last year and still remains current.

4 Q. It just confirms what you have on page 1?

5 A. That is true. The two go together.

6 Q. And page 3 is part of that again?

7 A. That would be right.

8 Q. What is page 4?

9 A. This came from the prospect that was presented  
10 to us by Arrington as we elected to participate in their  
11 trade. This reflects the tract, the south half of  
12 Section 26, where the Green Eyed Squealy Worm is located.  
13 There was an AMI surrounding the lands. This was part of  
14 their presentation to us, and we inserted it here just to  
15 give the Commissioners a shot of what the land situation  
16 was at the time.

17 Q. The next few pages are just, I believe, the  
18 APD for the well?

19 A. That would be correct. As we're going through  
20 it here, the original drilling of the well, as we  
21 participated in it, coming out of our files and inserted  
22 in there. And we did participate in the original  
23 operation, the drilling of the well.

24 Q. If you go to page 8 there's a completion  
25 election. Did Marshall & Winston join in the completion

1 of the well?

2 A. Yes.

3 Q. Under the JOA there's a separate election for  
4 both commencing the well and then a completion election?

5 A. That's right. Back in the old days with  
6 vertical wells, we had a case in point election, and we  
7 did elect to be in the completion of the well.

8 Q. There's some filings with the Oil Conservation  
9 Division. What do they reflect?

10 A. As you get through those pages, it was a  
11 successful well. As it was drilled, we established  
12 protection through Arrington in the Morrow Zone, and it  
13 was a good well.

14 Q. Then on page 12, I think that's the AFE for  
15 the initial drilling of the well?

16 A. That is right.

17 Q. You can tell it's older, because the cost is  
18 less than \$3 or \$4 million dollars; is that correct?

19 A. Things have evolved.

20 Q. If you go to page 13 and the next several  
21 pages, what do those pages reflect?

22 A. Starting with page 13, that was the  
23 documentation AFE for the re-completion. After  
24 production, it ceased in the Green Eyed Squealy Worm to  
25 re-establish production. We received the request or the

1 question if we wanted to participate in that operation,  
2 and we did.

3 Q. That's your -- the election by the president  
4 of Marshall & Winston is on page 15?

5 A. That's right.

6 Q. If you look at page 14, what do you identify  
7 mid-way down what Arrington thought would be the  
8 estimated production from the re-completion?

9 A. It appears that they anticipated that  
10 production could be restored to approximately 400 mcf a  
11 day.

12 Q. If you move on to page 17, what is that?

13 A. That is the notice from Mr. Carrasco after the  
14 operation had been performed in the re-completion and his  
15 determination that it was not successful, that there was  
16 a water situation in there that kept the Morrow  
17 re-completion from being successful.

18 He also made mention that -- and I'm getting  
19 ahead of myself. I thought there would be a comment in  
20 here about the Cisco Formation. I take it back. I do  
21 see it now. There was a mention there that there would  
22 be a chance of an opportunity in the Cisco interval above  
23 the Morrow.

24 Q. This memo reflects that commercial production  
25 ceased in January 2006?

1 A. That is right.

2 Q. And does Marshall & Winston agree with that?

3 A. That is right. From the information we have,  
4 that appeared to be true.

5 Q. The well had communicated with a wet lower  
6 Morrow interval; correct?

7 A. That is the information that we received.

8 Q. Now, you mention the Cisco interval. If you  
9 move to pages 18, 19 and 20, what does that reflect?

10 A. A subsequent request for participation or a  
11 request if we wanted to participate in a Cisco completion  
12 uphole in an oil bearing zone above the Morrow.

13 Q. Under the JOA at that point, the interests of  
14 the parties were spread surface down below to the Morrow?

15 A. I don't have the Exhibit A to the JOA in front  
16 of me. But if I recall right, it went from surface  
17 either to all depths or at least through the Morrow.

18 Q. At that point, all of the working interest  
19 owners had at least a contractual interest in the Cisco?

20 A. That would be right.

21 Q. What was Marshall & Winston's contractual  
22 interest in the Cisco at that time?

23 A. We would have had 26 percent. I take that  
24 back. I think that is ours before payout interest. At  
25 least a 26 percent. It might have been reduced if the

1 Green Eyed Squealy Worm had paid out at that point in  
2 time. But certainly a significant interest in the Cisco  
3 re-completion.

4 Q. And again, Marshall & Winston, as a working  
5 interest owner, elected to participate in the proposed  
6 Cisco?

7 A. As you see on page 20, we thought that was a  
8 good zone to be completing in. So we did sign off to  
9 participate in that re-completion attempt.

10 Q. If you go through the next few pages, page 24  
11 and 25 and 26, you just have the re-completion prognosis,  
12 wellbore sketch and AFE for the Cisco completion?

13 A. That is right. That is the documentation, the  
14 prognosis and the actual AFE for that Cisco  
15 re-completion.

16 Q. Since production was not re-established, did  
17 the oil and gas leases in the south half of Section 26  
18 expire?

19 A. Yes. They were all beyond the primary term.  
20 There was nothing to perpetuate in any of the oil and gas  
21 leases in Section 26.

22 Q. Did the JOA also expire?

23 A. Yes. By the terms of the JOA, it likewise  
24 would have terminated.

25 Q. Once that terminated, what was Marshall &

1 Winston's working interest in a proposed Cisco  
2 re-completion?

3 A. You're talking for our purposes?

4 Q. Yes.

5 A. We felt like it was a very viable prospect.  
6 From having participated in the well previously, we saw  
7 an opportunity to re-complete in the Cisco Formation with  
8 100 percent. Our 75 percent of the minerals we owned and  
9 then obtained a lease on the remaining 25 percent mineral  
10 interests, we could have had 100 percent in the proration  
11 unit for the Cisco Formation.

12 Q. As of March 2010, Marshall & Winston owned 100  
13 percent of the working interest in the Cisco?

14 A. That's correct.

15 Q. Do you still own that working interest?

16 A. Yes, we do.

17 Q. Would you turn -- keeping Exhibit 1 in front  
18 of you, Mr. Hammit, if you'd turn to Exhibit 1A, what  
19 does that reflect?

20 A. That is a letter dated March 10th of 2010,  
21 that we received from Arrington proposing the completion  
22 in the Cisco Formation.

23 Q. And again, at that point, Marshall & Winston  
24 owned 100 percent of the working interest?

25 A. That's right.

1 Q. And what did Arrington propose?

2 A. They proposed to share the interest  
3 fifty-fifty.

4 Q. You would have been diluted by half in this  
5 proposal?

6 A. That is right.

7 Q. And if you look down in the lower right-hand  
8 corner of this exhibit, you'll see that this was  
9 Arrington Exhibit 4 at the original hearing in this  
10 matter, was it not?

11 A. It shows that, yes.

12 Q. This was the only well proposal letter that  
13 they submitted at that September 2010 hearing?

14 A. That is what I recall.

15 Q. Skip over a few pages of your Exhibit 1 and go  
16 to page 32. Did Marshall & Winston desire to proceed  
17 with a Cisco completion?

18 A. Yes, we did. We put together an APD and  
19 application for a permit to drill to re-enter the  
20 wellbore.

21 Q. Was the APD rejected by the Division?

22 A. At that time, it was.

23 Q. Was that because Arrington was still the  
24 operator of record?

25 A. We could not take over operation there until

1 we could be designated the operator, and Arrington would  
2 not do that.

3 Q. Arrington was still listed as operator, even  
4 though the well ceased producing at that point, about  
5 four and a half years?

6 A. There would still be responsibilities, for  
7 what I know, for proper plugging and abandoning of the  
8 well. So yes, they were still operator of the well.

9 Q. Turn back to page 27 of Exhibit 1. What is  
10 that?

11 A. That is a subsequent request for participation  
12 or opportunity offer, if you will, to participate in the  
13 operations to re-establish production in the Green Eyed  
14 Squealy Worm in the Morrow Formation.

15 Q. What was Arrington's proposal insofar as your  
16 participation in this proposed operation?

17 A. There's a reference to the original JOA, which  
18 is a little unusual, because the JOA had terminated by  
19 this point in time.

20 Q. When it says, "We invite you to participate in  
21 the operation," based on your interest in the original  
22 designated pool unit, which I think you just testified  
23 would be -- would have been 26 percent?

24 A. Or something less than that. That's true.

25 Q. Under this proposal, what we're talking about

1 is, even though you have 100 percent in the Cisco,  
2 Arrington first proposed that you dilute your interest to  
3 50 percent by that March letter?

4 A. That is right.

5 Q. And then by this letter, they propose that you  
6 dilute your interest to 26 percent?

7 A. That is right.

8 Q. Pretty generous with your interests, aren't  
9 they, Mr. Hammit?

10 A. I think we prefer to have 100 percent in the  
11 opportunity.

12 Q. Now, to your recollection, and I think  
13 Mr. Kastner confirmed this, within just a few days of  
14 this Morrow well proposal, a pooling application was  
15 filed; correct?

16 A. That is my understanding, within a few days of  
17 one another.

18 Q. And Marshall & Winston did receive notice of  
19 the pooling application?

20 A. We did.

21 Q. Did you inform Arrington that you are not  
22 interested in their proposal?

23 A. Yes, we did.

24 Q. At that point, did Marshall & Winston contact  
25 me and the application to change operators and ask that

1 that be filed?

2 A. Yes.

3 Q. So what we have is a Cisco Canyon proposal in  
4 March 2010?

5 A. That's right.

6 Q. When you said no, there was a Morrow well  
7 proposal in May of 2010?

8 A. Yes.

9 Q. Then Marshall & Winston -- then immediately  
10 Arrington files its pooling application?

11 A. That is right.

12 Q. And subsequently, I believe in June, Marshall  
13 & Winston filed its application to change operators?

14 A. Yes, we did pursue that.

15 Q. What was the next event in this matter on a  
16 timeline? Did Marshall & Winston ask Arrington for a  
17 release of record of its oil and gas leases?

18 A. There was a point in time where contractually  
19 the leases had terminated. We had made a request of a  
20 release of oil and gas leases from Arrington.

21 Q. Did you also request that the JOA be  
22 terminated?

23 A. Along with that, we felt like the JOA by it's  
24 own terms had terminated also, that request was made  
25 also.

1 Q. What was Arrington's initial response?

2 A. We could not get them to agree to deliver  
3 releases of either of those.

4 Q. What action did you take?

5 A. We went to District Court in Lovington, New  
6 Mexico, and pursued an action to get a release of oil and  
7 gas lease and a release of JOA.

8 Q. Were the releases eventually executed?

9 A. Yes.

10 Q. And are those reflected in Marshall &  
11 Winston's Exhibits 3 and 4?

12 A. That would be right. We have of course  
13 recorded the release of oil and gas lease. The release  
14 of JOA, I don't know if that's something that would be  
15 recorded. But we did obtain that.

16 Q. But that wasn't until August of 2010?

17 A. That is true.

18 Q. In the interim, also Arrington obtained that  
19 easement that you've seen?

20 A. Yes.

21 Q. Which would have denied access over certain  
22 roads to the well site; correct?

23 A. That appears to be the intent.

24 Q. A few housekeeping matters. What is Exhibit  
25 5, Mr. Hammit?

1           A.       That would be the surface use agreement that  
2       we obtained from the surface owner as we commenced our  
3       operations after being designated operator of the  
4       wellbore in our lands located in the north half southeast  
5       quarter of Section 26.

6           Q.       Did you talk about the surface use agreement?

7           A.       Yes.

8           Q.       That's Exhibit 5A?

9           A.       I apologize.

10          Q.       Have you been in touch with the surface owner  
11       for a number of months beforehand firming up this --

12          A.       We had, as things were moving along, with  
13       anticipation that we might get a favorable result from  
14       the previous hearing, that we had been in contact with  
15       Mr. Caswell, the surface owner.

16          Q.       And what I'm looking at is Exhibit 5, the oil  
17       and gas lease.

18          A.       Okay.

19          Q.       And is this the oil and gas lease that you  
20       mentioned that covers 25 percent of the working interest  
21       in the north half southeast quarter?

22          A.       Yes, sir. This lease has since been extended.  
23       It was for a six-month period and was extended and is  
24       current.

25          Q.       Just as confirmation of the ownership, if you

1 look at your Exhibit 2, just briefly, what is Exhibit 2?

2 A. That would be the drilling title opinion that  
3 Arrington obtained at the time the Green Eyed Squealy  
4 Worm well was being drilled.

5 Q. On the first page it shows that in the north  
6 half of the southeast quarter of Section 26, Marshall &  
7 Winston owns 75 percent of the mineral interests?

8 A. Yes.

9 Q. And at that point, it was leased, as you  
10 testified?

11 A. Our mineral interest was leased to Arrington  
12 at that time, as was the Winston partners' interest.

13 Q. They own one-fourth or 25 percent of the  
14 mineral interests?

15 A. That's right.

16 Q. I think there's been enough title stuff. But  
17 what is Exhibit 6?

18 A. You're going to have to describe it to me,  
19 because I don't have it in front of me.

20 MR. BRUCE: Madam Chair, if I can approach  
21 the witness?

22 CHAIRMAN BAILEY: You may.

23 Q. Is Exhibit 6 simply a run sheet of instruments  
24 affecting the south half of Section 26?

25 A. Okay. Well --

1 Q. It does reflect the recorded oil and gas lease  
2 on the last page to Marshall & Winston, Inc.; correct?

3 A. It does show that.

4 Q. Does Marshall & Winston wish to proceed with  
5 development of the Cisco reservoir?

6 A. We are positioned to move promptly on this, as  
7 we were the previous time, yes.

8 Q. In your opinion, has Arrington sufficiently  
9 complied with the statute regarding making a good-faith  
10 effort to pool this acreage?

11 A. We do not believe so.

12 Q. In your opinion, is the granting of Marshall &  
13 Winston's application in the interest of conservation and  
14 the prevention of waste?

15 A. At this point, we do believe so.

16 Q. Were Exhibits 1 through 6 either prepared by  
17 you or compiled from Marshall & Winston's business  
18 records?

19 A. Yes.

20 MR. BRUCE: Madam Chair, I'd move the  
21 admission of Marshall & Winston's Exhibits 1 through 6.

22 MR. CARR: No objection.

23 CHAIRMAN BAILEY: I do have a question  
24 though on Exhibit 1. I don't believe that you went  
25 through all of the pages. I think you went through page

1 27 and then skipped over to 32.

2 MR. BRUCE: If so, if I could --

3 CHAIRMAN BAILEY: Maybe not.

4 MR. BRUCE: -- I think with just a  
5 question, if you go to --

6 Q. (By Mr. Bruce) Mr. Hammit, if you could turn  
7 to page 18?

8 A. Yes.

9 Q. Pages 18 through 30, is that simply the well  
10 proposal made by Arrington regarding proposed 2007 Cisco  
11 completion together with the prognosis, the AFE and the  
12 wellbore sketches and the election letters?

13 A. Yes, that is right.

14 Q. That's through page -- that's pages 18 through  
15 26; correct?

16 A. Right. Inserted in there may be one statement  
17 or the one notice from Mr. Carrasco.

18 Q. Pages 27, 28, 29 and 30 are the May 2010  
19 Morrow proposal from Arrington?

20 A. Skipping forward significantly, those would be  
21 the ones that -- that is the proposal in May of 2010 for  
22 re-completion in the Morrow Formation.

23 Q. And 31 through 36, is that related to Marshall  
24 & Winston's APD?

25 A. That's correct, documentation related to our

1 proposed Cisco completion.

2 MR. BRUCE: Does that cover your --

3 CHAIRMAN BAILEY: Yes, it does. Exhibits  
4 1 through 6 are admitted into the record.

5 (Marshall & Winston Exhibits 1 through 6 were admitted.)

6 MR. BRUCE: And I pass the witness.

7 CHAIRMAN BAILEY: Do you have any  
8 questions?

9 MR. CARR: Just a couple.

10 CROSS-EXAMINATION

11 BY MR. CARR:

12 Q. Mr. Hammit, look at page 4 of the plat.

13 A. Yes.

14 Q. This, I believe, you identified was part of  
15 the prospect or something proposed to you by Arrington?

16 A. Yes.

17 Q. It has an AMI outline. What is the status of  
18 that AMI?

19 A. That AMI terminated prior to even the leases  
20 terminating.

21 Q. And is it fair to say that Marshall & Winston  
22 does not own interest in the north half of 26?

23 A. That's correct.

24 Q. At this time, you have been able to obtain the  
25 releases of both the lease and the JOA?

1 A. Yes.

2 Q. You have not been able to reach an agreement,  
3 I assume, with Mr. Arrington for the development of this  
4 section?

5 A. No, I have not.

6 Q. Do you understand that Mr. Arrington has  
7 acquired a new lease on interests in the south half of  
8 the section?

9 A. Yes. He has acquired leases in the south half  
10 of Section 26. I'm not aware that he has leased the  
11 whole thing.

12 Q. If a well is completed in the Cisco, do you  
13 know what the spacing is for wells in the Cisco?

14 A. I believe it is 40 acres with optional 80  
15 acres.

16 Q. Marshall & Winston would own the entire well  
17 and production if it were a Cisco well?

18 A. That's correct.

19 Q. If it was in the south half of this section,  
20 Marshall & Winston would own 25 percent of the south  
21 half?

22 A. If it was diluted out through the entire south  
23 half, that's correct.

24 MR. CARR: That's all I have. Thank you.

25 MR. BRUCE: I have no follow-up.

1 CHAIRMAN BAILEY: Commissioner Dawson?

2 COMMISSIONER DAWSON: I have no questions.

3 CHAIRMAN BAILEY: Commissioner Balch?

4 COMMISSIONER BALCH: I have no questions.

5 CHAIRMAN BAILEY: I don't either. You may  
6 be excused.

7 You may call your next witness.

8 MR. BRUCE: I call Mr. Savage.

9 JOHN SAVAGE

10 Having been first duly sworn, testified as follows:

11 DIRECT EXAMINATION

12 BY MR. BRUCE:

13 Q. Would you please state your full name and city  
14 of residence, please?

15 A. John D. Savage, Midland, Texas.

16 Q. What is your profession?

17 A. I'm a petroleum -- a professional engineer,  
18 petroleum reservoir engineer.

19 Q. And you mentioned professional. Are you a  
20 registered professional engineer in the State of Texas?

21 A. Yes, sir.

22 Q. Who is your official employer or who do you  
23 work for?

24 A. Williamson Petroleum Consultants.

25 Q. What is your relationship to Marshall &

1 Winston in this case?

2 A. They've hired me to evaluate this reservoir.

3 Q. Have you previously testified before the Oil  
4 Conservation Division?

5 A. Yes, I have.

6 Q. Have you testified before the Commission?

7 A. No.

8 Q. Would you please summarize your educational  
9 and employment background?

10 A. I graduated from the Naval Academy in '66,  
11 went back to school in '80, graduated from Texas A&M in  
12 1982 with a petroleum engineering degree.

13 I went to work for First National Bank in  
14 Midland right out of school. In '83, when the bank  
15 failed, I was hired by Sipes Williamson, who subsequently  
16 changed their name to Williamson Petroleum Consultants,  
17 and I've been there ever since.

18 Q. And on behalf of Marshall & Winston, did you  
19 conduct an examination of the well we're here for today  
20 and the adjoining reservoir?

21 A. Yes, I have.

22 Q. Have you prepared for submission today what is  
23 marked Marshall & Winston Exhibit 7?

24 A. Yes, I have.

25 MR. BRUCE: Madam Chair, I tender

1 Mr. Savage as an expert petroleum engineer.

2 MR. CARR: No objection.

3 CHAIRMAN BAILEY: He's so accepted.

4 Q. Mr. Savage, I took the liberty of numbering  
5 the pages of your exhibit. And as you go through  
6 these -- you know, the hearing has been continued off and  
7 on again for a while. As you're going through these  
8 exhibits, because we didn't update it in time, as your  
9 going through these exhibits, on some of them with  
10 respect to production, et cetera, if you could comment on  
11 any updated production data from the wells in this area?

12 A. Okay.

13 Q. Let's start off with page 1.

14 A. Page 1 is what we call a decline curve. It  
15 has the gas, oil and water production for the Green Eyed  
16 Squealy Worm, which is now called M&W Fee Number 1. And  
17 it also has the calculated stream of yield, which is it  
18 in barrels per million, barrels of oil per million.

19 Q. And you have projections on the right-hand  
20 side. What are those?

21 A. Those are my judgments of what the future  
22 would look like on this well if it was re-completed for  
23 gas, which is in red, the oil, in green.

24 Q. If it was successfully re-completed?

25 A. Yes.

1 Q. There's no guarantee of success in this  
2 matter, is there?

3 A. No, there isn't. And that's built into my  
4 curve.

5 Q. Discuss pages 2 through --

6 A. Two through 5?

7 Q. -- 2 through 5 for the Commissioners, and  
8 discuss the economics of Arrington's proposed  
9 re-completion.

10 A. Two through 5 are the cash flows that are  
11 represented by this curve that we just looked at. Two  
12 and 4 being what we call data input pages. That is the  
13 data that we inputted to create that projection and the  
14 economics.

15 And pages 3 and 5 are reserve and economic  
16 pages. Those are the calculations of that data input.  
17 The difference between the two is when I was -- these are  
18 daytime in June of 2011. I've updated these. And  
19 sometimes I have a confusion. I talk about what's on  
20 these things and how I did them.

21 But this particular set, the first set of  
22 pages 2 and 3 are my opinion of what the well will do  
23 without any kind of -- without any kind of risk  
24 associated with the price that I use, which was 450, and  
25 without a chance of success risk.

1           The second cash flow was to show that I -- if  
2   ~~I used a chance of success here of 75 percent, and it~~  
3   went from a marginal economic situation to a negative.  
4   And I just wanted to show that -- I didn't want to say  
5   that's what the risk is, because I didn't have an  
6   opportunity to get into all the elements of the risk.

7           I have since looked at data that might give me  
8   a better idea. But at the time, I just wanted to show  
9   that with any consideration of risk, which I guess most  
10   companies do when they do any kind of a workover, they  
11   would show what it could be and they would show, of  
12   course, what the bottom would be.

13          Q.     Let's just hit a couple of highlights here.  
14   First of all, on page 2, the second column from the left,  
15   that 192.78, does that reflect your estimation of the  
16   cost of re-entry at the time you originally did these?

17          A.     No. I was just taking data. At the time, the  
18   only AFE I had was from the ex-operator.

19          Q.     Of \$160,000?

20          A.     It was about 160,000. And I applied a 15 or  
21   20 percent increase to it because of the time frame in  
22   between, without considering whether it was a correct AFE  
23   or not.

24          Q.     Fine. But you come up with 192,000, 193,000,  
25   which is pretty similar to what Mr. Carrasco just

1 testified about a little while ago?

2 A. Uh-huh.

3 Q. If you turn over to page 4, you used an even  
4 higher gas price and oil price than Arrington has used,  
5 have you not?

6 A. Yes. Because we work for clients, it's our  
7 habit to use -- well, we'll use what our client wants to  
8 use and put that in our report. But when we're just told  
9 to do it without any instructions or any boundaries as to  
10 -- and that was our charge here -- I used what I would  
11 think would be the effective date price at that time.

12 And so what this represents here, and this has  
13 been sometime since I did it, effective date price would  
14 either be the day of the effective date if we past it, or  
15 the average of the prices for the period before, month  
16 before.

17 Q. But again, you used more optimistic price  
18 assumptions than Arrington did?

19 A. That was the -- those are the current prices.

20 Q. Even then, you come up with marginal economics  
21 as reflected in the lower right-hand corner of page 3?

22 A. Yes, sir.

23 Q. And then when you go to pages 4 and 5, this is  
24 where you did your -- you just assumed there might be a  
25 75 percent chance of success in the re-entry?

1           A.     75 gave me a discounted revenue that was -- I  
2 ~~didn't want to get this down to zero. But I wanted to~~  
3 show at that risk, it went negative on a 10 percent  
4 discount. It was not trying to say that I thought  
5 anything about 75 percent as a chance of success. It was  
6 just saying that at that point, this thing goes negative  
7 when you take discounting into account.

8           Q.     But obviously, in this proposed re-entry,  
9 would you give it a 100 percent chance of success?

10          A.     Of course not.

11          Q.     Let's move on to your -- how you got some of  
12 your numbers and what you looked at in assessing how the  
13 well might perform. First of all, what is page 6?

14          A.     This is a just a lease plat map of the area  
15 around where the well is located.

16          Q.     And you have a cross-section on there?

17          A.     I have three wells that are highlighted and  
18 common descriptions. And if there's a cross-section of  
19 those three wells.

20          Q.     Okay. Were all three of those wells completed  
21 in the Morrow Formation?

22          A.     They were all three completed in the Morrow.

23          Q.     Would you move on to your cross-section and  
24 describe that, page 7, and describe that for the  
25 Commissioners?

1           A.     Page 7 is that cross-section of those three  
2 ~~with the green line being the top of the sand, the target~~  
3 sand.

4                   Also, there are perforations on two of the  
5 logs. Two of the wells have perforations in this  
6 particular sand and are producing from this sand -- or  
7 excuse me -- have produced from this sand.

8                   The third well, the Maxwell Trust 26, the one  
9 on the left, I have not found perfs in that well, so I  
10 don't know if there's any production from that zone. I  
11 don't think so.

12           Q.     Certainly two wells produced from this  
13 reservoir in Section 26?

14           A.     Yes. And one is currently producing.

15           Q.     And that is the Maxwell well in the  
16 northeast --

17           A.     Maxwell 26 Number 1, in the northeast quarter.

18           Q.     At this point, based on what I've heard today,  
19 that well has been producing for 10 or 11 years?

20           A.     That well was producing -- it started  
21 producing in 2002, about a year and a half before the  
22 Green Eyed. I had seemed that that was why the Green  
23 Eyed was drilled.

24           Q.     And then what is Exhibit 8?

25           A.     Exhibit 8 is that same map we saw on six, but

1 it has an isopach laid on top of it with the thicker zone  
2 being the brighter color.

3 Q. So there is a Morrow reservoir -- you do not  
4 dispute there is a Morrow reservoir across a large chunk  
5 of Section 26?

6 A. No. That's what I'm showing here.

7 Q. Now, there are portions of well logs, pages 9,  
8 10 and 11. Could you just comment briefly on those?

9 A. Those are the log sections of the gamma ray,  
10 density neutron log of those three wells. The first one  
11 being the Maxwell 26, the next one Green Eyed Squealy  
12 Worm, and the third one, Maxwell Trust 26 1.

13 I've highlighted the gamma ray trace, which is  
14 the one on the left, to show where the clean sand is in  
15 that well. Then I've highlighted also the porosity  
16 indication, gas affect indication, on the trace to the  
17 right, which is the neutron density for the three wells.

18 Q. Just to show that this sand does extend across  
19 Section 26?

20 A. Yes.

21 Q. Let's move on to your Exhibits 12 and 13.  
22 First identify page 12 and describe what that shows, and  
23 I might ask you a few follow-up questions.

24 A. Page 12 is the decline curve for the Maxwell  
25 26 1 Well, which was the first well drilled in this

1 reservoir that's in the northeast quarter of Section 26.  
2 ~~It was first produced in 10 of 2002, and has continued to~~  
3 produce every month until current. The last production  
4 on this production curve is, if you'll notice up in the  
5 titling, April of 2011.

6 Q. Now, this well continues to produce. There  
7 was a question before about if there is any -- anybody  
8 knew of any communication between this well and the Green  
9 Eyed Squealy Worm. In your opinion, is there?

10 A. Definitely.

11 Q. How is that reflected on page 12?

12 A. This particular curve -- this well was  
13 producing around 12,000 a month in early 2004, when the  
14 Green Eyed was drilled. Soon after the Green Eyed being  
15 drilled and coming -- I don't remember the come on  
16 rate -- about 33,000 a month -- this well started being  
17 affected by it almost immediately, and it continued to  
18 decline.

19 It finally flattened out. It went from 12,000  
20 a month and went down to a little over 4,000 a month, and  
21 it seemed to have sought its equilibrium with the Green  
22 Eyed being on, and then the Green Eyed was shut in.

23 If you notice after -- on that curve, at 2006,  
24 where I have the notation, you'll see that this well  
25 starts increasing. And we all know that wells don't

1     increase unless we add energy to the reservoir, or in  
2     this case we're not competing anymore in that reservoir  
3     for the gas.

4                 So it increased until -- I guess the highest  
5     rate is mid 2007. Then after that, the well has started  
6     in a shallow decline since then.

7                 Q.     So there is communication or this was  
8     communication between the two wells. And the Maxwell  
9     well has continued to produce to this day. Has that  
10    resulted in a further drop of reservoir pressure?

11                A.     I did a volumetric study also to have some  
12    sense for what we're looking at, because we don't have a  
13    lot of data points here. And the third well is not  
14    producing from it, so I can't judge how good that well is  
15    going to be or how big the connected reservoir is.

16                So I looked at the volumetrics within -- because  
17    my producing wells were in Section 26, I looked at the  
18    volumetrics, the gas in place and the recoverable gas in  
19    Section 26. And by those calculations, using my isopach,  
20    I get about 1.8 bcf to be recovered out of this  
21    reservoir.

22                Q.     What type of pressure drop has there been in  
23    the reservoir since the Green Eyed Squealy Worm has  
24    ceased producing?

25                A.     I did not have -- it seems the pressures

1 aren't required to be submitted to the State anymore  
2 because they're just not available, so I don't know the  
3 exact pressures.

4 But I did do a pressure study of the Morrow  
5 wells within 5 to 10 miles around, enough to where I had  
6 enough data points, to see what kind of pressure  
7 gradients are in the Morrow. And the pressure range that  
8 I get is somewhere between .35 and .48 or something, and  
9 a normal gradient is .435.

10 So not knowing whether the wells with the  
11 least gradient were affected by another well and were in  
12 a depleted situation or what, the average I used for my  
13 pressure calculations and my volumetrics, I used a normal  
14 gradient for the Morrow.

15 So in doing that, I created a plot to see -- a  
16 P over Z plot which is used as a material balance method  
17 of calculating gas reservoirs, in which you take cume  
18 production and you plot pressure divided by its  
19 compressibility and it gives you a straight line, and you  
20 can calculate -- normally you use it to calculate what  
21 the ultimate recovery would be.

22 But I already had an ultimate recovery, so  
23 what I was trying to do was get the line between that  
24 point and the first point. So that I knew that whatever  
25 cume I had, I could go to there and go along my X axis,

1 go to the cume I want to see, like today's cume, and go  
2 up and say, "I think the pressure is going to be here if  
3 my volumetrics are correct."

4 So I did that between the time Squealy Worm  
5 was shut in and now. And the pressure at the time the  
6 Squealy Worm was shut in, according to that plot, was  
7 somewhere close to 2,800 pounds. And the pressure plot  
8 now is around 2,200 pounds. So we've had with the  
9 production that Maxwell 26 has cumed during that period  
10 of time, we've had a 600 pound pressure drop.

11 Q. You've been assuming a re-completion attempt  
12 would be successful. Would that affect recovery of  
13 reserves from that well?

14 A. That's why wells decline over time.

15 Q. You were here and you listened to Arrington's  
16 engineers testify, did you not?

17 A. Yes, I did.

18 Q. I think their testimony was that the well  
19 would come on at approximately 500 mcf a day?

20 A. (Witness nods head.)

21 Q. Is that correct? You have to speak for the  
22 court reporter.

23 A. That's what they testified, yes.

24 Q. Have you conducted a search of records  
25 regarding Morrow wells that were brought on after being

1 shut in to determine what type of rate you could  
2 anticipate in this well even if the re-entry was  
3 successful?

4 A. One of the things I did, because we had so  
5 much time to do it, I did go back and look at the -- I  
6 pulled data on all the Morrow wells in Lea County, and  
7 then I took a subset of those wells that had any kind of  
8 a zero production month. And then I separated those into  
9 producing wells that had that condition and nonproducing  
10 wells, meaning wells already shut in.

11 And I didn't want to go through -- when I got  
12 to those wells, it was about 300 wells. One hundred of  
13 them were still producing, which, to me, meant if they  
14 had shut-in periods, they were brought back on  
15 successfully.

16 The other ones, which was 200 wells, was a  
17 much bigger subset of wells. I just said, "They're not  
18 producing now. I'm not going to go in and try to find  
19 out if they were successful, if they tried to get them  
20 back on."

21 So I looked at the hundred wells. Now we're  
22 talking about the entire Lea County. I didn't note  
23 whether they were in the south or north half, thinking  
24 that maybe the Morrow is different, you know, as you go  
25 up and down the county. And then I really wanted to get

1 wells, because I like to work as close to analog as  
2 possible when I start making judgments.

3 And so then I looked at wells. Now, the Green  
4 Eyed produced water around 30 barrels a day, and it also  
5 was shut in for about 70 months. So I took a subset of  
6 the producing wells and got them down to -- and I used 30  
7 months as a cutoff for the subset as far as the shut-in  
8 period, because I needed to have a representative -- I  
9 had to have something to do. If I was looking at 70  
10 months, I don't think I would have found one. I think  
11 that was the largest number.

12 Q. You were looking at wells that had been shut  
13 in for over 30 months?

14 A. Long periods of time that had water rates  
15 equal to or greater than Squealy Worm. And not knowing  
16 anything else about the wells, those were going to be my  
17 analogs, and I looked at those and took an average of the  
18 shut-in rates and an average of the rates that they came  
19 back on, and that difference was 53 percent. Meaning the  
20 average well of those wells when they were brought back  
21 on came on at 53 percent of their shut-in rate.

22 So that -- I had built new cash flows and used  
23 that in my calculations, and I came surprisingly close to  
24 these. I don't know that we need to introduce them. But  
25 my ultimate recovery from using that method is a

1 projection that's similar to this.

2 Q. If a well was capable of producing at 400 to  
3 500 per day before shut-in, after 30 months, just using  
4 your average, it would come in at 200 to 250 a day?

5 A. Yes. But in this case, of course, we have  
6 competition for the reserves. So there's another issue  
7 as far as what would impact that come-on rate, and the  
8 issue of pressure depletion.

9 Q. And those items would affect economics, would  
10 they not?

11 A. Yes.

12 Q. Now, what about well costs? You used in your  
13 original projection a little over 190,000, which is what  
14 Arrington projected today, roughly about the same amount.  
15 Do you know the current condition of this wellbore?

16 A. I know something about it.

17 Q. And what conditions in that wellbore would  
18 increase re-entry costs above that 190,000 or \$200,000  
19 level?

20 A. I understand that Marshall & Winston has  
21 already started their re-completion to the Cisco and  
22 already have perforated the well. So those perforations  
23 are going to need to be squeezed if we go in and just  
24 want to pump this well off.

25 The other thing that I understand about this

1 wellbore is that Arrington has dropped a fish in this  
2 well, and of course, I think it was testified to. And  
3 that fish, the top is represented to be only two feet  
4 from the bottom perf. I think that's right, two feet  
5 from the bottom perf. I think the fish top is  
6 represented to be at 13,006 feet and the bottom perf is  
7 13,004 feet.

8 Q. Would this lead to increased costs upon  
9 re-entering?

10 A. It's probably one reason why they're not going  
11 to go in and try to re-stimulate. I mean the other  
12 reason is that --

13 MR. CARR: I object. This is just  
14 speculation. He doesn't know why they're not  
15 re-stimulating the well. He's just asking him to be  
16 speculating on what Arrington would be doing.

17 MR. BRUCE: I asked Mr. Carrasco if they  
18 were re-stimulating the well, and he said no.

19 MR. CARR: That's what he said, but we  
20 can't speculate on why. That's not something he knows.  
21 He's not qualified to render that opinion.

22 THE WITNESS: I agree.

23 MR. CARR: Thank you.

24 CHAIRMAN BAILEY: Objection sustained.

25 THE WITNESS: I apologize.

1 But whether the fish will interfere with their  
2 operations, I'm not sure. Whether the fish is really at  
3 that point, I'm not sure.

4 I do know that in fishing operations and when  
5 you have junk in the hole, there's always confusion as to  
6 exactly where it is, and it seems to move, and doesn't  
7 seem to always move down.

8 When people go back in the hole they seem to  
9 have problems in wells with fish in them, with junk in  
10 them. So it is something that needs to be taken into  
11 account.

12 Q. This could reasonably lead to increased  
13 re-entry costs?

14 A. Yes. In getting to the costs I would use this  
15 time, this time I asked Marshall & Winston because they  
16 had taken over the well and had started operations in the  
17 well. And so I asked them about, "Well, if you were  
18 going to go back in and do what they're going to do" --  
19 because the first time, I have no reason to believe when  
20 they gave an AFE to a working interest owner, that it  
21 would not be a correct AFE, so I'd use it.

22 But in this case, I'm further down the road  
23 and I know a little more about it, and they've come  
24 back -- Marshall & Winston have come back into the  
25 wellbore and started operations, I asked them what it

1 would cost them to do what Arrington wants to do, so they  
2 gave me a new number.

3 And that number -- they included a couple  
4 hundred thousand for a fishing job, to take care of that  
5 fish. And they gave me a cost of -- to go in and  
6 squeeze, put this well on pump and to deal with the fish,  
7 of \$700,000.

8 Q. Again, that would adversely affect economics?

9 A. Certainly.

10 Q. So what you identified are several items that  
11 would affect economics. One would be re-entry costs;  
12 correct?

13 A. Yes.

14 Q. Competition from the well in the northeast  
15 quarter?

16 A. Yes.

17 Q. The pressure drop over the last five, six  
18 years?

19 A. Yes.

20 Q. And one that we didn't discuss much, but if  
21 the gas price isn't going to be 4.50 as set forth in your  
22 economics, that would have an adverse effect?

23 A. Yes.

24 Q. Overall, do you see -- in your opinion, would  
25 the re-entry be economic?

1           A.     Taking into account those issues and the  
2     water -- the issue that water standing on that formation  
3     for 70 months, and that water possibly being from a  
4     different reservoir than this sand, yes.

5           Q.     I think one final --

6           A.     You want me to tell you what that was for,  
7     this exhibit?

8           Q.     Oh, yes. Yes, sir, page 13?

9           A.     Yes.

10          Q.     Yes, please.

11          A.     The purpose of this exhibit was just to show  
12     what I thought the capacity projection would be for this  
13     reservoir from these two wells.

14                 So I just show the production up until the  
15     time the Squealy Worm was shut in and made a projection  
16     off of that, and saying, "This is what these two wells,  
17     if they did produce, this is what they would have  
18     produced out of this wellbore, and this is what I thought  
19     the performance would be."

20                 One of the reasons I wanted to do this is so  
21     that I could come forward on this curve with today's cume  
22     so I could see what the affect of pressure would have  
23     been on my projection.

24                 So what I did was, this black line, in 2008,  
25     was the point at which both of them were producing. They

1 would have cumed today's cume at that point. And that  
2 shows me the affect of the pressure drop in the  
3 reservoir.

4 Q. Okay. Then a couple of final things. Did you  
5 look at either public data or industry data on the Bells  
6 Hopper well that was discussed by the engineer?

7 A. I apologize for looking at my phone during the  
8 hearing, but I asked my secretary -- because I knew that  
9 Arrington had a successful completion in one of the  
10 Morrow wells, and I had looked at it before but none of  
11 the numbers had stuck with me as to -- that I could  
12 comment on, other than the fact that it was a successful  
13 re-completion.

14 It wouldn't be what I would consider an  
15 analog, because it was only shut in six to eight months.  
16 It didn't have an issue with additional water, and the  
17 water -- and it never produced, at least reported to the  
18 State, it never produced more than 10 barrels a day of  
19 water.

20 So it really wasn't similar to the Squealy  
21 Worm which had production rates above 30 barrels a day in  
22 water. And the other thing was that when they did bring  
23 it back on, it came back on at a rate that was around 50  
24 percent of the shut-in rate.

25 Q. That would confirm your study of Lea County

1 Morrow wells?

2 A. Yeah. I mean it didn't make any -- it  
3 supports what I was trying to say about these wells. But  
4 some wells come back on at the original rate. In my  
5 average, I have good wells and I have really poor wells.

6 Now, I have excluded all the failures, because  
7 I can't tell how many failures I have. But of the ones  
8 that were successes, I can tell you what the average  
9 recovery would be.

10 Q. And the Bells Hopper was right at that  
11 average?

12 A. Yes, it was.

13 Q. Was Exhibit 7 prepared by you, Mr. Savage?

14 A. Yes.

15 Q. And in your opinion, is the granting of  
16 Marshall & Winston's application in the interest of  
17 conservation and the prevention of waste?

18 A. Yes, it is.

19 MR. BRUCE: I'd move the admission of  
20 Exhibit 7, pages 1 through 13 of Exhibit 7.

21 MR. CARR: No objection.

22 CHAIRMAN BAILEY: Exhibit 7, pages 1  
23 through 13 are admitted.

24 (Marshall & Winston Exhibit 7 admitted.)

25 MR. BRUCE: And I pass the witness.

## CROSS-EXAMINATION

1

2 BY MR. CARR:

3 Q. Mr. Savage, when you were hired by Marshall &  
4 Winston, what were you asked to do?

5 A. They wanted to know the remaining reserves in  
6 the reservoir.

7 Q. Were you asked to assess the risks involved of  
8 a re-entry in the Arrington well?

9 A. I don't remember.

10 Q. You're first few exhibits have at the top of  
11 them "Risk." Isn't that what you were actually trying to  
12 determine, how risky this would be?

13 A. No. It may have been part of the  
14 conversation, but it wasn't the topic of the  
15 conversation. I mean --

16 Q. Today you've testified about the risks, have  
17 you not?

18 A. That's what I do. Whether I call it that or  
19 not, that's what I do when I draw on an analog or when I  
20 do any work. I can think of the -- I can see the upper  
21 and the lower of what I'm -- when a client comes to me  
22 for an answer, he wants the most likely. Whether he says  
23 it or not, he wants the most likely. He has to say it  
24 differently to get something else.

25 Q. My question was: Today you were testifying

1 about the risks?

2 A. I used the term, "risk," so the Commission  
3 would understand what some of these terms mean.

4 Q. Were you not testifying about the risks?

5 A. Yes, I was.

6 Q. Okay. That was the question. You're  
7 testifying today about risks?

8 A. Not totally, no.

9 Q. Have you not testified today about --

10 A. There are things today I've testified to that  
11 had nothing to do with risks.

12 Q. But you did testify today about things that  
13 had something to do with risk?

14 A. I will answer that question yes.

15 Q. So today you have testified about the risk  
16 involved?

17 A. But not only the risk. Yes.

18 Q. I didn't ask you that. Would answer the  
19 question?

20 A. Yes.

21 Q. Did you testify today about the risk involved?

22 A. Yes, sir.

23 Q. Now, you've worked on the Morrow Formation in  
24 the past, have you not?

25 A. I have 29 years of reservoir evaluation

1 experience.

2 Q. Did some of that involve the Morrow?

3 A. I would guess that I looked at the Morrow in  
4 every one of those years.

5 Q. And you're familiar with the Morrow, yes?

6 A. Off and on, yes.

7 Q. When I go and start working on a well in the  
8 Morrow, isn't it fair to say you really don't know what  
9 you can produce on an individual Morrow well until you  
10 get in there and try?

11 A. That's exactly right.

12 Q. You did the study, you testified, of about 100  
13 wells that had been shut in and then returned to  
14 production?

15 A. Yes.

16 Q. And you stated that on average they came back  
17 at about 53 percent?

18 A. A subset of those wells on average came back  
19 at that, yes.

20 Q. That was an average number?

21 A. That's right.

22 Q. You also testified that some wells come back  
23 at their original rate, did you not?

24 A. Yes, sir.

25 Q. And you don't know what an individual well

1 does until you go test that individual well; isn't that  
2 right?

3 A. Not exactly.

4 Q. If you go out and test a Morrow well, do you  
5 know exactly what it's going to do prior to completing  
6 your test?

7 A. You don't know the exact numbers.

8 Q. Thank you. That's what I'm asking. You  
9 talked about having looked at the Bells Hopper well and  
10 looked at some data?

11 A. Yes.

12 Q. Have you ever recommended that you put a  
13 pumping unit or artificial lift on a deep gas well?

14 A. No one has ever asked me to do that.

15 Q. Are you familiar with the wells and the tests  
16 that were discussed by Mr. Bucy and the success that he  
17 had while he was with Bass by doing this?

18 A. I don't remember his testimony, other than  
19 just general words, what he did.

20 Q. Are you familiar with any of those particular  
21 situations?

22 A. No.

23 Q. Now, you looked at the reservoir; correct?

24 A. Yes.

25 Q. If we look at your Exhibit Number 12 -- page

1 12, if I understood your testimony, this showed that  
2 there was communication across the reservoir; it was a  
3 competitive reservoir?

4 A. Yes.

5 Q. And when the Squealy Worm was producing, it  
6 was affecting the Maxwell well?

7 A. Yes.

8 Q. And at this point in time, only the Maxwell  
9 well is producing; is that right?

10 A. Currently only the Maxwell is producing.

11 Q. And I understood your testimony to be that  
12 there are Morrow reserves -- you had an isopach that  
13 showed them -- throughout 26?

14 A. Yes.

15 Q. And those reserves are being recovered by the  
16 Maxwell well in the north half of the section?

17 A. That's correct.

18 Q. Do you know if Marshall & Winston owns  
19 anything in the north half of the section?

20 A. No. Marshall & Winston does not own anything  
21 in this well.

22 Q. Do you know if Arrington owns anything in that  
23 well?

24 A. I don't know the ownership of that well.

25 Q. Okay. So today the only well producing is the

1 Maxwell well shown on page 12?

2 A. By my judgment, yes.

3 Q. And if there is no production from any well in  
4 the south half of the section, the reserves that you say  
5 are there are going to be drained by an offsetting  
6 operator?

7 A. It's a competitive reservoir. This well sees  
8 the reservoir that Squealy Worm saw, which was in the  
9 south half, I believe.

10 Q. Doesn't the term "competitive" suggest there's  
11 more straws in the teacup?

12 A. It suggests communication.

13 Q. And if you're going to get your just and  
14 reasonable share of the reserves, you have to have an  
15 opportunity to go in and complete a well, do you not?

16 A. Yes.

17 Q. And unless some other well is drilled and  
18 completed in the Morrow in the south half of this  
19 section, there will be no opportunity to compete for the  
20 reserves that are now being produced out of the north  
21 half of the section; right?

22 A. When we talk about reserves, we have to talk  
23 about economics.

24 Q. If we --

25 A. And I'm answering all your questions about

1 reserves. And I want everybody to know that I'm  
2 excluding economics. I'm just talking about whether the  
3 well can get mcfs out of the ground. So all my yeses in  
4 regards to the reserves do not include economics to them.  
5 I want you to understand that.

6 Q. Following up on that, are you aware of any  
7 well that was ever drilled that didn't have the economic  
8 component in it?

9 A. Yes.

10 Q. Many?

11 A. I don't know what "many" means, but a lot of  
12 wells.

13 Q. If we look at exhibit page 8, this is an  
14 isopach of the Morrow; is it not?

15 A. Yes.

16 Q. There's only one well producing these reserves  
17 right now?

18 A. That's exactly right.

19 Q. That is a well in which Mr. Arrington and  
20 Marshall & Winston own no interest; is that right?

21 A. That's exactly right.

22 Q. And it is also Morrow production that  
23 underlies a tract in which they do own an interest?

24 A. Well, actually I'm not qualified to talk about  
25 ownership, current ownership in a well that's been shut

1 in as long as this. So if I've answered that question --

2 Q. That's fair. We'll ask about the south half  
3 of this section. If there's no well in the south half of  
4 this section, the reserves you've shown in the south half  
5 of the section are going to be produced by somebody else?

6 A. The south half of a the section -- in fact,  
7 the Squealy Worm is connected to this reservoir. If it  
8 was open to that zone, it could produce reserves out of  
9 it if it was capable.

10 Q. When you were discussing risk, among other  
11 things, as part of your testimony, did you ever discuss  
12 with Marshall & Winston whether or not you'd recommend  
13 they participate in the now proposed re-entry?

14 A. No, sir.

15 Q. Would you recommend they participate in this,  
16 knowing what you know?

17 A. No, I would not recommend -- yes, I would not  
18 recommend this.

19 Q. It's because it's high risk, in your opinion?

20 A. It is high risk to get economical reserves out  
21 of this well. In fact, it's high risk whether you'll  
22 produce it.

23 Q. Mr. Arrington has proposed to go in and do  
24 this, re-work this well, try and pump the liquids on it?  
25 You do know that?

1           A.     Yes.

2           Q.     And Marshall & Winston does not have to  
3 participate in that effort at all, do they?

4           A.     They have the right to refuse that.

5           Q.     And Mr. Arrington has re-leased the land and  
6 is willing to pay the costs, whatever you think they are  
7 now, or new numbers or old numbers. He's willing to pay  
8 all those costs and incur all those costs to fish or do  
9 whatever to re-establish production in the Morrow; you  
10 understand that?

11          A.     No.

12          Q.     Mr. Arrington isn't going to pay those costs?

13          A.     What I understand is that Mr. Arrington wants  
14 to unitize all formations from the surface to the bottom  
15 of the Morrow, which includes other reservoirs. Whether  
16 his intention is pure in making this venture economical  
17 or not, it may be economical from the standpoint that he  
18 has behind pipe reserves.

19          Q.     Do you know any of this or are you  
20 speculating?

21          A.     I just heard that.

22          Q.     That he is doing this from some other  
23 formation?

24          A.     I'm trying to answer your questions directly,  
25 that there are other things involved that I'm not -- I

1 wasn't hired to testify to and you're asking me to.

2 Q. You can say you don't know.

3 A. Okay.

4 Q. Did you know that Arrington asked for 90 days  
5 to go out and test the Morrow?

6 A. I think it was testified to here.

7 Q. And do you know, at the end of that period of  
8 time, if you can't re-establish production in the Morrow,  
9 the well could be used in the Cisco by Marshall &  
10 Winston? Do you know that?

11 A. No, I did not know that.

12 Q. If we, being Arrington, drilled a successful  
13 Morrow well, do you know what the spacing unit is for the  
14 Morrow?

15 A. 160s with optional 80s.

16 Q. Would you stand corrected at 320s with  
17 optional 160s?

18 A. Optional 80s.

19 Q. You could have an 80-acre well in the Morrow?

20 A. I believe so.

21 Q. You would agree that --

22 A. Let me say I'm not sure. But I know you can  
23 down space Morrow. Whether it be 320 to 160 --

24 Q. If you don't know, that's fine. But whatever  
25 it is, everyone in that spacing unit would share in the

1 production from the Morrow, correct, whether it's 80 or  
2 160 or 320?

3 A. Yes.

4 Q. If that's what's dedicated, everybody shares?

5 A. Yes.

6 Q. To get out there and test to see -- if you can  
7 pump those fluids off today and you can return this well  
8 to production, you have to have a wellbore, do you not?

9 A. Yes.

10 Q. If you can't go down there and test, and if  
11 you could establish production but you can't get down  
12 there and test, those reserves are left in the ground;  
13 correct?

14 A. Yes.

15 Q. And that would be waste?

16 A. I believe those wells will be produced, which  
17 is not waste. From the State's point of view, it's not  
18 waste.

19 Q. Which wells are you talking about?

20 A. The Maxwell 26.

21 Q. I'm asking about the well in the south half of  
22 the section.

23 A. You're asking about whether the loss -- you're  
24 asking about a loss, not a waste; right?

25 Q. I'm asking you that if you don't go down and

1 test, you don't have a chance to make a new Morrow well;  
2 correct?

3 A. You're personalizing this to me. If I don't  
4 drill that well, I will not recover -- I will not recover  
5 those reserves. I will not waste them. You know what I  
6 mean? They will not be wasted. It's not like I'm  
7 damaging and will not allow myself or anybody else to  
8 ever get those reserves. I'm confused by the term  
9 "waste."

10 Q. Is your testimony that you wouldn't recover  
11 them, but they could be drained by some other well in the  
12 reservoir?

13 A. I truly believe that this well here, because  
14 of my projections -- my volumetric reserves are 1.8 bcf.  
15 My current projection on the current producing well will  
16 take the reservoir to that number. So from my  
17 calculations, whether they're right or whatever, I have  
18 this well being able to recover all the reserves under  
19 Section 26.

20 Q. And how would you do that?

21 A. I mean that's what my projection shows on the  
22 well.

23 Q. How would you avail yourself of an opportunity  
24 to produce -- how would you recommend anyone avail  
25 themselves of an opportunity to today produce what's

1 under the south half of 26?

2 A. There are all these new plays in Texas, all  
3 these new plays, these Wolfcamp plays, those reserves  
4 were in the ground. They were in the ground for  
5 everybody to take. But they couldn't get them out  
6 economically, and they found a way to do that.

7 So everything is based on the economics of  
8 trying to get those reserves out of the ground for  
9 whatever reason. And I'm testifying that to my client,  
10 for my client, I would not recommend because the risk is  
11 too great and the return is not great enough for the risk  
12 that he's taking to participate in trying to get those  
13 reserves out of the ground.

14 Q. And that's your client's right to not do that?

15 A. Yes.

16 Q. And economics are a factor?

17 A. Yes.

18 Q. And if I had participated in the drilling of a  
19 well and paid 75 percent of the costs, and I thought  
20 there was a chance that I might produce a bcf of natural  
21 gas, and I could use an existing wellbore to test for 90  
22 days and then get out if it doesn't work, but the option  
23 would be to let somebody else complete it uphole and then  
24 have to go drill a brand new well, wouldn't that  
25 negatively impact the economics of my ability to develop

1 the remaining reserves that you said are there today  
2 under the south half of this section?

3 A. I don't have -- I only expect three-quarters  
4 of a B to be taken out of this reservoir by both wells.  
5 So your 1 bcf -- and the one bcf is an assumption that --  
6 it's somebody's opinion. So I really don't want to  
7 answer your question under those conditions.

8 Q. Okay. Answer this for me then. If I had a  
9 wellbore to go down and test the Morrow on a tract, and  
10 the only other option was to go drill another well that,  
11 if I'm unsuccessful, I'd have to plug and abandon,  
12 doesn't that second well sound like an unnecessary well  
13 to test the Morrow, instead of using the one that's  
14 there?

15 A. Things aren't as simple as your question, so I  
16 don't know whether to answer it or not.

17 MR. CARR: Then don't answer it.

18 I have no further questions of this witness.

19 CHAIRMAN BAILEY: Commissioner Dawson, do  
20 you have any questions?

21 COMMISSIONER DAWSON: I do have a few  
22 questions.

23 EXAMINATION

24 BY COMMISSIONER DAWSON:

25 Q. On your Exhibit 1, on the Green Eyed Squealy

1 Worm, when you look at this decline curve in contrast to  
2 the decline curve that you prepared on Exhibit 13, with  
3 the two-well summary, the decline curve on Exhibit 13, is  
4 that an exponential decline curve?

5 A. That is a hyperbolic out to about 2012, where  
6 you see another little dot, and then it's exponential.

7 Q. Then on Exhibit 1, what kind of decline curve  
8 is that? Is that a straight line?

9 A. Exponential.

10 Q. It looks like a straight line decline curve to  
11 me.

12 A. That's exponential.

13 Q. This is exponential?

14 A. Yes, sir. The performance is likely to be  
15 hyperbolic, but it's in the part of the hyperbolic part  
16 of the curve that's not changing too rapidly. And we're  
17 kind of coming out into -- if we look at the current well  
18 that's producing, it's exponential. So when this well  
19 comes back on, just exactly what both wells are going to  
20 do, I'm not sure. I've represented it in two different  
21 cases differently, but the reserves come out pretty much  
22 the same.

23 Q. So if Arrington was granted to re-enter that  
24 well and re-complete it in the Morrow, would you expect  
25 it to produce roughly about half of what the well to the

1 north, the Maxwell 26 1 well, would produce what it's  
2 currently producing?

3 A. I've had to take into account -- actually, if  
4 all things were -- if this well didn't have troubles --  
5 when this well wasn't having troubles, it was taking 75  
6 percent of the reserves out of the reservoir.

7 But in my judgment, because of the water and  
8 the potential damage which I've seen on a ton of wells  
9 that we've tried to go back in on in every reservoir  
10 where we've had water or some sort of fluid setting up  
11 against the formation, particularly a fluid wasn't  
12 produced in that formation, then we have problems with it  
13 unless we try to stimulate it and get through it.

14 I tried to take that into account, and I  
15 think it's realistic to take that into when we start  
16 talking about whether this is a valid proposal or not.  
17 This is my best judgment.

18 Q. Do you know if -- did you look at the  
19 completion cards on both of these wells when you were  
20 reviewing them?

21 A. I didn't look at completion cards. But I  
22 pulled the well records and some of the forms presented  
23 to the State.

24 Q. Do you know if they were stimulated in the  
25 same fashion?

1           A.     I can't remember. But the Morrow does not  
2 normally require much of a stimulation. It's just an  
3 acid --

4           Q.     Acidized roughly with the same amounts of  
5 acid?

6           A.     That's right.

7           Q.     On Exhibit 9, that's the Maxwell 21 well,  
8 that's north of the Green Eyed Squealy Worm; correct?

9           A.     Yes, sir.

10          Q.     When you look at the zone there that's roughly  
11 13,010 or 13,006 to 13,016 feet?

12          A.     Yes, sir.

13          Q.     Do you think that's where most of the reserves  
14 are coming from?

15          A.     You know --

16          Q.     The perforations aren't depicted on this log,  
17 but they're depicted on the Green Eyed Squealy Worm log,  
18 which is Exhibit 10.

19          A.     This is one of the reasons -- this well is  
20 obviously on the edge of the pay, okay? If I was looking  
21 at this well before it produced, I probably wouldn't have  
22 given it anything and I probably wouldn't have recommend  
23 it being opened.

24                   But apparently when this well was stimulated,  
25 it apparently saw enough of that reservoir to be able to

1 produce out of it. That's sort of reflected when we look  
2 at the production curves, when you see what the ability  
3 of this well to flow compared to the Green Eyed, and it's  
4 reflected in this right here.

5 But it's just that not all the data tells you  
6 the same thing whenever you evaluate data for a well.  
7 There's some inexplicable things. And this is one of  
8 them for me.

9 Q. Would you agree with me that the porosity on  
10 the Green Eyed Squealy Worm is better than the porosity  
11 on the Maxwell 26?

12 A. That's exactly right.

13 Q. Also, on the Maxwell 26, Exhibit 9, do you  
14 know if they perforated in those other stringers that are  
15 below --

16 A. It had prior perfs in it, yes.

17 Q. Are they still producing from those prior  
18 perfs that are equal to the perfs in the Green Eyed  
19 Squealy Worm down below the --

20 A. Now we're getting into different sands. And I  
21 do not remember the production total history of this  
22 well. I have to apologize about that.

23 Q. Okay.

24 A. But I do know sometimes we complete wells that  
25 look really good and they don't work, and sometimes we

1 have wells like this.

2 Q. I understand. Do you know what the -- the  
3 Maxwell Trust 26.1 in the northwest quarter of 26, do you  
4 know what the ultimate cumulatives were on that, total  
5 cumes before it ceased production?

6 A. The Maxwell Trust is producing out of a  
7 different Morrow zone. I was asked if these wells  
8 produced from Morrow, not exactly the same zone. I don't  
9 know how thick the Morrow is here, but there's production  
10 throughout the Morrow here in these wells.

11 Q. And there are several stringer sands?

12 A. From public record, this well has not been  
13 completed in this zone.

14 Q. It wasn't completed in that zone that was  
15 depicted on Exhibit 11, or do you know?

16 A. No. That zone -- there are no public  
17 recordings of perfs in that particular sand, but it is  
18 producing from the Morrow.

19 Q. It is currently producing?

20 A. I think it is. It's right where it really  
21 looks like it needs to be shut in. But I think it had  
22 production last month.

23 COMMISSIONER DAWSON: No further  
24 questions.

25

## EXAMINATION

1

2 BY COMMISSIONER BALCH:

3 Q. I have a question on Exhibit 7, page labeled  
4 12 of Exhibit 7. The water data appears to be  
5 incomplete. Do you know if that's a lack of data or a  
6 lack of production of water?

7 A. Some wells they're not reporting -- I just  
8 assumed that this is correct water production.

9 Q. So there is no water production?

10 A. Sometimes they're making water and sometimes  
11 they're not, not unusual for a well that doesn't make  
12 much water, that they may not -- you know, if it's a  
13 flowing well, it may not slug any water for a while and  
14 then cough up water and they'll report a few barrels.

15 So this is only -- the highest month is like  
16 two barrels in a day, so this is not unusual of a Morrow  
17 well. But some wells make a lot of water.

18 Q. So the last three years to your --

19 A. You would have to think that the last three  
20 years that it's not making water, that the well is not --  
21 I would assume it's not making water, because if it was  
22 making any water at all, that rate may not be able to  
23 lift it.

24 Q. Two wells that are in communication for  
25 purposes of oil and gas production, would you also not

1 expect water production to be in communication?

2 A. It depends where they are on structure. It  
3 could be.

4 Q. The producing well is down structure from  
5 the --

6 A. I know.

7 Q. So you would expect fluids to use gravity to  
8 be in communication?

9 A. I would agree. But both of these -- fairly  
10 unusual for Morrow wells -- have very similar yields.  
11 They produce pretty much the same oil per million, both  
12 of these wells do, quite oily for a Morrow sand. The  
13 expectation, of course, is gas.

14 I'm not sure that I would -- of course I  
15 didn't take water as a -- it didn't -- it's not one of  
16 those things that just -- sometimes you get involved in  
17 these things and you're focused in one direction, and all  
18 of a sudden the weight of something else comes and tells  
19 you I'm important too. That never happened with water.

20 There's so many different circumstances in the  
21 Morrow with the water. I can show you curve after curve  
22 and they're all different. They all make no sense at all  
23 with the water. I just don't know if -- and this is  
24 speculation. I just don't know if they report the water  
25 as well as they report the other fluids. I don't know.

1 I'm not an operations engineer. It's just really not  
2 my -- but I do do decline curve work, and I am aware of  
3 this. But it didn't mean to me -- I didn't have the  
4 suspicion that somehow this was not connected, mainly  
5 because there's such a strong connection in the producing  
6 gas.

7 Q. Your volumetric work which led to your  
8 pressure conclusions, did they take into account the  
9 entirety of the isopach on --

10 A. No. Section 26. The thing is, I only have  
11 three data points. I don't know how to enclose this  
12 reservoir. So you notice it's kind of -- the Morrow is  
13 laid down and -- you know, sort of in a north/south way  
14 like this. Stream channels look -- and pods within that.

15 So when you start representing limited amount  
16 of data, you have to have some way for closure, and you  
17 just put in -- you make it look like things you've seen  
18 before. Maybe a geologist wouldn't say, that but a  
19 reservoir engineer would. Because I look at a lot of  
20 geologists' representation of -- somehow there's a limit  
21 of data and you have to close it off. You either close  
22 it off or you let it go out. I just let it go. I didn't  
23 know how to close it off.

24 Q. If you have two wells that are in competition  
25 on a structure, from point of view of pressure

1 performance over time, would you prefer to be downdip or  
2 updip in general, or does that make a difference?

3 A. In general, you'd probably want to be updip.  
4 But it could be that in a lot of situation structures,  
5 the updip part of the structure is tighter, not as good a  
6 reservoir.

7 Q. Except in this case the porosity has to be  
8 better updip?

9 A. Yes.

10 COMMISSIONER BALCH: That's all I have.

11 CHAIRMAN BAILEY: My questions were asked.

12 Do you have any redirect?

13 MR. BRUCE: Yeah. I didn't respond to any  
14 of Mr. Carr's questions before, just a couple of quick  
15 ones.

16 REDIRECT EXAMINATION

17 BY MR. BRUCE:

18 Q. Mr. Carr was asking you about risk, et cetera.  
19 What you were looking at was mainly economics, was it  
20 not?

21 A. Well, I was looking at reserves and economics.

22 Q. Reserves and economics. And again, regardless  
23 of a new well or re-entry, if it's not economic, you're  
24 not wasting reserves?

25 A. No.

1 Q. And Mr. Carr asked you some questions about  
2 you don't know what's going to happen in a Morrow  
3 re-entry, and you were going to comment on that and Mr.  
4 Carr cut you off. Are there factors that you can look at  
5 in determining the possibilities of re-entry?

6 A. I was not going to get to any specific  
7 factors. I was just going to get to the fact that every  
8 situation is different. All the situations, whether they  
9 be within a company or within that particular wellbore or  
10 within the structure of the regulations, every situation  
11 is different. That was all I was going to say.  
12 Sometimes we can get too broad, and I was getting  
13 uncomfortable with the broadness.

14 Q. Now, certainly you haven't heard anything here  
15 today -- well, look at page 8 of your Exhibit 7. The way  
16 you have mapped this, the better reservoir is to the west  
17 of the two producing wells or the two wells that have  
18 produced; correct?

19 A. Yes.

20 Q. And although you assigned a certain amount of  
21 reserves to it, and I don't know if you looked, but Mr.  
22 Bucy attributed almost 1.3 bcf of reserves to the Green  
23 Eyed Squealy Worm.

24 Do you know of anything that would prevent  
25 Arrington from drilling a well to the west in the thicker

1 part, the better part of the reservoir?

2 A. No. If this is correct, and it is based on  
3 the logs, obviously I'm looking at volumetrics just for  
4 Section 26. There is a limit to how far that Green Eyed  
5 Squealy Worm and also the Maxwell 26 can see as far as  
6 recovery of reserves. So I don't think it's wrong to use  
7 the lease boundaries, mainly because of where the  
8 reservoir is and where the wells are.

9 To assume these wells see across that lease  
10 line -- well, they may, at some very low rate, be able to  
11 continue to produce if they don't have water involvement.

12 But yes, this suggests that if Morrow  
13 reservoirs on average are greater than three wells, and  
14 that would be something I would look at if I was going to  
15 go out and jump and say, "Do I want to drill another well  
16 over there, even though I'd be inside this well and know  
17 that I have it?" But that would tell me that maybe that  
18 reservoir isn't too far on the other side of that other  
19 well.

20 If the average -- and I'm not a geologist.  
21 They have geologists. If the average reservoir size is  
22 such that you wouldn't do that in this area, then of  
23 course they wouldn't want to do it. And I don't have  
24 that expertise, so I can't comment totally on whether  
25 that would be a good idea.

1           Q.     Then finally, Mr. Carr questioned you about  
2     Arrington's opportunity to produce the well, the Green  
3     Eyed Squealy Worm, from the Morrow. Based on your  
4     review, they didn't take that opportunity in 2006, did  
5     they, after it was shut in?

6           A.     I thought -- oh, that was in 2007, they worked  
7     it over. That's correct.

8           Q.     In 2007 they worked it over briefly and  
9     abandoned it?

10          A.     Yes.

11          Q.     They didn't take the opportunity in 2008, did  
12     they?

13          A.     No.

14          Q.     They didn't take the opportunity in 2009, did  
15     they?

16          A.     No.

17          Q.     And the first half of 2010 they didn't take  
18     the opportunity, did they?

19          A.     No.

20          Q.     So they went years and years, and now they're  
21     complaining about opportunity?

22          A.     Yes.

23                   MR. BRUCE: That's all I have, Madam  
24     Chair.

25                   CHAIRMAN BAILEY: Do you think your

1 closing statements will take very long?

2 MR. CARR: Five, 10 minutes.

3 MR. BRUCE: Less than that. I'm shorter  
4 than Mr. Carr.

5 MR. CARR: He's briefer. I'm shorter.

6 CHAIRMAN BAILEY: Do you have any other  
7 witnesses?

8 MR. BRUCE: I have no further witnesses.  
9 This is the end of our case.

10 CHAIRMAN BAILEY: We'll go ahead and have  
11 closing statements, and then the Commission will go into  
12 executive session to deliberate this case and only this  
13 case, and then it's lunch time.

14 So why don't we proceed, and then we can go  
15 into executive session afterwards?

16 MR. BRUCE: Madam Chair, as Mr. Savage  
17 just got done testifying, this is not an issue of waste  
18 because the proposed re-entry is uneconomic. We submit  
19 that Mr. Savage presented the only reasonable case on the  
20 economics of this well.

21 Arrington did not take into account increased  
22 costs of re-entry, competition from the offset well, or  
23 the pressure drop over the last five to six years. They  
24 put in gas prices higher than they currently are, as Mr.  
25 Savage pointed out, water standing on this formation for

1 the last six years, not to mention it's from a different  
2 zone. All of what he talks about shows that any re-entry  
3 of this well, although it may produce some gas, will be  
4 uneconomic. And therefore, we don't think it's  
5 reasonable to grant Arrington's application.

6 In addition, when you look at the history of  
7 what occurred in the last couple of years, we think you  
8 should deny the application. As I mentioned, the well  
9 produced until 2006. Virtually nothing was done on it  
10 until March of 2010, when Arrington proposes a re-entry  
11 on the Cisco Canyon in which it owns no interest.

12 After Marshall & Winston informed Arrington  
13 that they weren't interested, the next thing that happens  
14 is in May 2010, Arrington files -- sends out a well  
15 proposal letter and immediately files a force pooling  
16 letter. And at that point, they propose participation  
17 based on an old expired JOA under which Marshall &  
18 Winston would get 26 percent of this Cisco Canyon.

19 As Mr. Hammit testified, they kept bargaining  
20 Marshall & Winston down. "You own 100 percent, but we'll  
21 give you 50 percent. You didn't like that. Well, we  
22 won't give you 50 percent. We'll give you 25 percent."

23 Furthermore, the course of events after that,  
24 they go get an easement that tries to essentially deny  
25 Marshall & Winston access to the well site. Then they

1 want release of record the expired oil and gas leases and  
2 the JOA. Marshall & Winston has to go to court.

3 Under Section 72-17, Arrington was required to  
4 make a good-faith effort to obtain the voluntary pooling,  
5 the voluntary joinder of the working interest owners  
6 before filing a pooling application. It didn't do that.  
7 In fact, it hasn't presented in either the Division case  
8 or in its exhibit package its proposal letters. I've  
9 never seen that before. I doubt I'll ever see it again.

10 In short, they have not conducted a good-faith  
11 effort, and based on lack of good-faith effort and the  
12 fact that the well is uneconomic in the Morrow, we ask  
13 that you deny Arrington's request and affirm the  
14 Division's order granting Marshall & Winston's request.  
15 Thank you.

16 MR. CARR: May it please the Commission?  
17 I'm going to read a couple of paragraphs during my  
18 closing. I'd like to give the orders and rules from  
19 which those paragraphs come, because then when I fail to  
20 read it correctly, everybody will know I can't read.

21 May it please the Commission? We've heard in  
22 Mr. Bruce's closing discussions about preventing Marshall  
23 & Winston from using a road, all kinds of issues that  
24 really weren't developed here. Because as you recall,  
25 the answer to the question about use of the road was it

1 was our road we were building.

2 The problem is that we can discuss a lot of  
3 collateral issues and confuse what we're doing here  
4 today. But we're here today because two operators with  
5 interests in a half section cannot reach an agreement.  
6 And it's interesting that we try and save our case by  
7 saying they didn't put their proposal letter in the  
8 exhibit packet, when in fact, it's before you because it  
9 was in theirs.

10 Arrington is seeking an order compulsory  
11 pooling the Morrow Formation to allow them to re-enter  
12 and attempt to re-establish Morrow production for 90  
13 days. That's what's behind this case.

14 We're talking about the Morrow Formation. We  
15 can sit here and speculate and Mr. Bucy say one thing and  
16 Mr. Savage say another. But we all know that when you  
17 talk about the Morrow, you do not know what you have  
18 until you go down there and take a look and you try. And  
19 Arrington is asking you to give him the opportunity to  
20 try, an opportunity for 90 days.

21 And it may not be economic, but if it isn't  
22 economic, Mr. Arrington is prepared to share that risk,  
23 so I would think Marshall & Winston would say, "Go spend  
24 your money. If you make a well, we'll take a quarter.  
25 If you don't we'll take it back and complete in the

1 Cisco."

2                   What I've handed out is the order entered by  
3 the Division denying the application in this case. If  
4 you turn to page 5, there is a paragraph, Roman Numeral  
5 IV E under "Conclusions regarding legal issues" in this  
6 case. And this is a correct statement, and I want to  
7 read it.

8                   "Section 70-2-17.C NMSA 1978, as amended,  
9 provides that the Division shall issue compulsory pooling  
10 orders 'to avoid the drilling of unnecessary wells, or to  
11 protect correlative rights, or to prevent waste.' Thus,  
12 David H. Arrington Oil & Gas, Inc., as the applicant for  
13 compulsory pooling, bears the burden of proving by  
14 appropriate geological and engineering evidence, that  
15 pooling should be granted for one or more of those  
16 reasons."

17                   There are three: To protect correlative  
18 rights or to prevent waste. As to the first of those  
19 reasons, the unnecessary well, if this re-entry is not  
20 approved, the only way to see if the Morrow can be  
21 returned under the south half of the spacing unit is to  
22 drill another well.

23                   I submit to you that denying 90 days' access  
24 to a wellbore we paid 75 percent of and forcing us to  
25 drill another would be an unnecessary well.

1                   And then we hear a lot about facts and  
2 numbers, estimates of reserves, all kinds of numbers, and  
3 depending on whether you listen to Mr. Savage or to  
4 Mr. Bucy or somebody else, very significant.

5                   But there are some things that aren't in  
6 dispute. There are Morrow reserves in the south half of  
7 Section 26 that can't be produced without a well. And  
8 Arrington would ask you for an opportunity to go out  
9 there and do that.

10                  And that takes us to the second test announced  
11 in that paragraph of the order, and that is that we have  
12 to show that we need to do this to protect correlative  
13 rights. The last two pages of the materials I gave you  
14 are the definitions out of the rules of the Oil  
15 Conservation Division. And the second-to-the-last page  
16 is the definition of correlative rights.

17                  I think you need to remember that you're here  
18 because of statute, and the statute not only empowers you  
19 to act, but it tells you what you're supposed to do. And  
20 the Oil & Gas Act says that you are empowered, and then  
21 it says, "It is your duty to prevent waste as defined in  
22 this act and to protect correlatives rights as defined  
23 herein."

24                  What is correlative rights? How is it  
25 defined? "Correlative rights," and it's highlighted,

1 "means the opportunity afforded, as far as it is  
2 practicable to do so, to the owner of each property in a  
3 pool to produce without waste."

4           The law says you afford us an opportunity.  
5 We're an owner in the pool. That's all we're asking you  
6 to do. But it's couched. It's not a stand-alone right.  
7 It's couched in terms with waste. And when you look at  
8 the definition of waste, which is the last paragraph,  
9 it's quoted on the last page of this material, you see  
10 that underground waste is defined -- I've highlighted  
11 part of it because it also talks about not wasting  
12 reservoir energy -- that the purpose and the definition  
13 as it applies today reads, "Underground waste is the  
14 drilling, equipping, operating or producing of a well or  
15 wells in a manner to reduce or tend to reduce the total  
16 quantity of crude petroleum oil or natural gas ultimately  
17 recovered from a pool."

18           We are asking you to let us test to see if we  
19 can return this well to production. If we don't, these  
20 reserves won't be produced. Some will be drained, some  
21 will be left. But if you deny our application and grant  
22 Marshall & Winston's, I submit you're taking an action  
23 that will tend to reduce the ultimate recovery ultimately  
24 obtained from this reservoir.

25           We're asking you for 90 days. Depending on

1     what they've done to the well, we might have to come  
2     back. But we should only be allowed to do that and seek  
3     an extension for good cause shown after notice is  
4     provided to them.

5                     But in 2010, in March of that year, when  
6     Mr. Bucy went to work for Arrington and they were trying  
7     to look at their properties, they decided this well was  
8     similar enough to what happened in their Bells Hopper,  
9     whatever the name of the well is, but that it merited and  
10    warranted spending a significant amount of money to see  
11    if the same thing could be done here. That's what  
12    they're asking you for permission to do.

13                    And I submit if you do that, you're going to  
14    enter orders that won't require the drilling of an  
15    unnecessary well; that will afford each interest owner an  
16    opportunity to produce without wasting his fair share,  
17    and if we can establish production in the Morrow within  
18    this short window of time, Arrington will benefit,  
19    Marshall & Winston will benefit, because everyone in the  
20    spacing unit will share. Thank you.

21                    CHAIRMAN BAILEY: Commissioners, would you  
22    like to go into closed session for deliberation on this  
23    case?

24                    COMMISSIONER DAWSON: I will.

25                    CHAIRMAN BAILEY: Do I hear a motion to go

1 into executive session for the sole and only purpose of  
2 deliberating this case?

3 COMMISSIONER BALCH: I make that motion.

4 COMMISSIONER DAWSON: I second.

5 CHAIRMAN BAILEY: All those in favor?

6 We will now go into executive session for the  
7 purpose of deliberating on this case, and then we will be  
8 holding lunch for everybody.

9 So we will reconvene at 1:30 to come back out  
10 of executive session.

11 (Whereupon the Commission went into executive session.)

12 (A lunch recess was taken.)

13 CHAIRMAN BAILEY: It is 1:32. The Oil  
14 Conservation Commission is reconvening after lunch.  
15 We've went into executive session. And do I hear a  
16 motion for the Commission to come out of executive  
17 session?

18 COMMISSIONER DAWSON: I'll motion.

19 COMMISSIONER BALCH: I'll second.

20 CHAIRMAN BAILEY: All those in favor?

21 The only topic of conversation during the  
22 executive session was to deliberate Cases 14497 and  
23 14538.

24 The Commission has agreed to grant the  
25 application of David H. Arrington Oil & Gas for

1 compulsory pooling. We will be issuing an order pooling  
2 all mineral interests from the surface to the base of the  
3 Morrow Formation in the following described spacing unit  
4 located in the south half of Section 26, Township 15  
5 South, Range 34 East, in Lea County, for the south half  
6 for all formations and/or pools developed on 320-acre  
7 spacing within this vertical extent, including the North  
8 Edison Morrow Gas Pool, the undesignated North Hume  
9 Morrow Gas Pool, and the undesignated Grassland Austin  
10 Gas Pool; and the southeast quarter for all formations  
11 and/or pools developed on 160-acre spacing within this  
12 vertical extent.

13               The unit is to be dedicated to the Green Eyed  
14 Squealy Worm Well Number 1 to be re-entered with the  
15 proviso that the Morrow Formation will be re-entered, and  
16 there will be a time limit of 90 days to test the Morrow.  
17 The Commission is taking this action because of its  
18 obligations under statutes to prevent waste and to  
19 protect correlative rights.

20               I ask both attorneys to give us findings of  
21 fact and conclusions of law by January the 9th, so that  
22 we can have an order to be signed at our next Commission  
23 hearing in January.

24               MR. BRUCE: When is the next Commission  
25 hearing?

1 MR. CARR: The 23rd

2 CHAIRMAN BAILEY: That concludes this  
3 case.

4 Shall we go off the record?

5 (A discussion was held off the record.)

6 CHAIRMAN BAILEY: The next case to be  
7 called is Case 14720, Application of Agave Energy Company  
8 for authority to inject, in Lea County, New Mexico.

9 Call for appearances

10 MR. LARSON: Gary Larson of the Santa Fe  
11 office of Hinkle, Hensley, Shanor & Martin, for the  
12 applicant, Agave Energy Company. I have three witnesses

13 MR. BRUCE: Madam Chair, Jim Bruce of  
14 Santa Fe, representing Kaiser-Francis Oil Company. I  
15 will have one witness.

16 CHAIRMAN BAILEY: Do you have opening  
17 statements?

18 MR. LARSON: I do.

19 MR. BRUCE: I don't, but I might respond  
20 to Mr. Larson's.

21 MR. LARSON: I will be brief, rather than  
22 short.

23 Madam Chair, Commissioners, Agave Energy  
24 requests the Commission's authorization to inject CO2 and  
25 H2S into Agave's proposed Red Hills AGI Number 1 well.

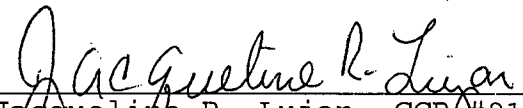
## REPORTER'S CERTIFICATE

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I, JACQUELINE R. LUJAN, New Mexico CCR #91, DO  
HEREBY CERTIFY that on December 8, 2011, proceedings in  
the above captioned case were taken before me and that I  
did report in stenographic shorthand the proceedings set  
forth herein, and the foregoing pages are a true and  
correct transcription to the best of my ability.

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

WITNESS MY HAND this 21st day of December,  
2011.

  
Jacqueline R. Lujan, CCR #91  
Expires 12/31/2011