STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:	)	CASE NO. 12,560
APPLICATION OF DAVID H. ARRINGTON OIL AND GAS, INC., FOR COMPULSORY POOLING, DIRECTIONAL DRILLING AND AN UNORTHODOX WELL LOCATION, LEA COUNTY, NEW MEXICO	)	ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Hearing Examiner

December 21st, 2000

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, MICHAEL E. STOGNER, Hearing Examiner, on Thursday, December 21st, 2000, at the New Mexico Energy, Minerals and Natural Resources Department, Porter Hall, 2040 South Pacheco, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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I N D E X

December 21st, 2000
Examiner Hearing
CASE NO. 12,560

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A P P E A R A N C E S

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By: WILLIAM F. CARR

* * *

WHEREUPON, the following proceedings were had at 8:31 a.m.:

EXAMINER STOGNER: Okay, proceed to page 3, and at this time I'll call Case Number 12,560, which is the Application of David H. Arrington Oil and Gas for compulsory pooling, directional drilling and an unorthodox well location in Lea County, New Mexico.

At this time I'll call for appearances.

MR. CARR: May it please the Examiner, my name is William F. Carr with the Santa Fe law firm Campbell, Carr, Berge and Sheridan. I represent David H. Arrington Oil and Gas, Inc., and I have two witnesses.

EXAMINER STOGNER: Any other appearances?

Will the witnesses remain standing at this time to be sworn?

(Thereupon, the witnesses were sworn.)

EXAMINER STOGNER: Mr. Carr?

MR. CARR: Thank you, Mr. Stogner.

DALE DOUGLAS,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. CARR:

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

A. Dale Douglas.

Q. Mr. Douglas, where do you reside?

A. In Midland, Texas.

Q. By whom are you employed?

A. I'm a self-employed landman.

Q. What is your relationship with David H. Arrington Oil and Gas, Inc.?

A. I perform contract land services for Arrington.

Q. Have you previously testified before this Division and had your credentials as an expert in petroleum land matters accepted and made a matter of record?

A. Yes, sir.

Q. Are you familiar with the Application filed in this case on behalf of Arrington?

A. Yes, sir.

Q. Are you familiar with the status of the lands in the area which is the subject of this hearing?

A. Yes, sir, I am.

MR. CARR: Mr. Stogner, we tender Mr. Douglas as an expert witness in petroleum land matters.

EXAMINER STOGNER: So qualified.

Q. (By Mr. Carr) Initially, Mr. Douglas, would you review for the Examiner what it is that Arrington seeks with this Application?

A. Yes, sir, he seeks an order pooling all minerals from the surface to the base of the Morrow formation

underlying the west-half equivalent of irregular Section 31, Township 15 South, Range 36 East, in the following manner:

Lots 1, 2, 3, 4, in the east half of the west half, which is the west-half equivalent for all formations developed on 320-acre spacing --

Q. Now, Mr. Douglas, in this 320-acre spacing unit, there are no 320-acre-spaced existing pools within a mile of this spacing unit; is that --

A. That is correct.

Q. Okay, what about the 160-acre spacing?

A. Okay, we're seeking to pool Lots 1, 2, in the east half of the northwest, which is the northwest-quarter equivalent for all formations developed on 160-acre spacing.

Q. And again, there's no development on 160 spacing within a mile of the spacing unit; is that right?

A. That is correct.

Q. Okay, what about 80-acre spacing?

A. On 80-acre spacing, it would be the east half of the northwest quarter for all formations developed on 80-acre spacing, which is in the Undesignated West Lovington-Strawn Pool, and the southeast quarter of the northeast quarter for all formations developed on 40-acre spacing, which would be in the Townsend-Permo-Upper Pennsylvanian

Pool.

Q. All right, identify the well to which these spacing units will be dedicated.

A. They will be dedicated to the proposed Royal Stimulator Well Number 1, which is to be drilled at an unorthodox surface well location, being 1465 feet from the north line and 1936 feet from the west line of Section 31, to a depth sufficient to test all formations from the surface to the base of the Wolfcamp formation, which is targeted to be penetrated at 1765 feet from the north line and 1836 feet from the west line, which is at an orthodox location in that formation.

Q. Once you penetrate the Wolfcamp, what does Mr. Arrington propose to do with the well?

A. The well would then be directionally drilled in a southwesterly direction to an unorthodox location in the Strawn formation, which would be penetrated at a targeted point of 2336 feet from the north line and 1636 feet from the west line.

At that point, the well would then be further directionally drilled in a southwesterly direction to an unorthodox bottomhole location in the Atoka-Morrow formation, which is targeted at 2200 feet from the south line and 933 feet from the west line of Section 31.

Mr. Baker, who will also be testifying here, will

have a well profile that will actually show where each of these penetration points are on the wellbore.

Q. Mr. Douglas, let's go to what has been marked for identification as Arrington Exhibit Number 1. Would you identify that exhibit and review it for Mr. Stogner?

A. Yes, sir, this is a land plat, with the west-half equivalent of Section 31 colored in yellow. It is an irregular section in that the Lots 1, 2, 3 and 4 run from north to south on the west side of the section.

Also you will note on the plat the proposed surface location for this well, with a black line that goes in a southwesterly direction, which would show the proposed bottomhole location.

Q. And the well is actually located on the northern city limit of the City of Lovington; is that correct?

A. That is correct. The dark black outline you see on the map is the City of Lovington boundary.

Q. Mr. Douglas, what is the status of the acreage in the west half of irregular Section 31?

A. All of the acreage in the west half of Section 31 is fee acreage.

Q. And what is the primary objective in this well?

A. The primary objective is the Wolfcamp formation.

Q. Are there secondary objectives?

A. Yes, sir, the secondary objective would be the

Morrow.

Q. Let's go to what has been marked as Arrington Exhibit Number 2, and I would ask that you now review that for Mr. Stogner.

A. Exhibit Number 2 is a breakdown of ownership in each of the tracts that we would be pooling. It's broken down on 40-acre spacing at the top, 80 acres, 160 acres and the 320 acres. Under each tract I have broken out the ownership in the well. The percentage of each respective unit that I've attributed to Arrington include all parties that are committed to drilling the well.

The ones that are listed, Matty Pou, Thelma Champion and Anson Energy Corporation, are parties in the first three tracts that we have not yet reached an agreement with; and then on the 320-acre spacing you will see the addition of five names, the Christmas family, that we have not reached an agreement with.

Q. Mr. Douglas, are there interest owners in this west-half spacing unit that you have been unable to locate?

A. No, sir, we've contacted everyone.

Q. All right. Looking at Exhibit 2, I'd ask you to review for the Examiner the status of the interest -- of the negotiations with each of these interest owners.

A. Okay. Anson Energy Corporation, out of Oklahoma City, is the owner of a leasehold estate that would

underlie the west-half unit. We have recently reached an agreement with Anson. We do not have the document signed and in our possession, but we have reached an agreement with them.

Q. Once they've signed, they would not be subject to pooling?

A. That is correct.

Q. What about Matty Pou and Thelma Champion?

A. Matty Pou and Thelma Champion are represented by an attorney out of Dallas who has recommended that we pool their interests. They are not willing to reach an agreement with us.

Q. In the 320-acre unit, you also have a number of individuals listed, five of them. Who are they, and what is the status of the negotiations with those individuals?

A. Okay, those five parties are Bradford A. Christmas; Candy Christmas; Helen Jane Christmas Barby, Trustee; Joyce Ann Brown and Mary T. Christmas Holladay.

We are negotiating through their attorney in Midland. He has advised us that he has received some of the leases but not all of them. We have further been advised that he has taken those leases in his name, and we have not reached an agreement with him, nor do we necessarily expect to.

Q. At this point in time, is there anything of

record that would suggest that these interests are in anyone other than the members of the Christmas family identified on Exhibit 2?

A. No, sir, they're not.

Q. Could you identify for us first when you first proposed this well to the individuals identified on Exhibit 2?

A. Yes, sir, we proposed the well by letter of October the 3rd of this year in which we proposed the drilling of the well, asking for their participation or, in the alternate, if they elected not to participate, to reach an agreement with us regarding their mineral stake.

Q. And when did you -- You had previously contacted these entities about the development of this acreage?

A. Yes, we originally contacted all these parties back in July of 1998, was when we started our work on this prospect.

Q. In your opinion, have you made a good-faith effort to obtain the voluntary participation of all interest owners in the subject spacing unit?

A. Yes, sir, we have.

Q. Is Exhibit Number 3 a copy of a letter that you sent to each of these interest owners in October proposing the well?

A. Yes, sir, it is.

Q. And since that time you have been in communication with each of these individuals or their legal representatives in an effort to obtain their voluntary participation?

A. Yes, sir, we have.

Q. Would you identify what has been marked as Exhibit Number 4?

A. Exhibit Number 4 is the AFE for the drilling of this test well, which was mailed out with this proposal letter.

Q. And what are the totals as reflected on this exhibit?

A. The totals for the AFE are -- the drilling, or the dryhole cost, would be $1,054,200. Additional cost for completion would give a completed well cost of $1,565,000.

Q. Are these costs in line with what's charged by other operators in the area for similar wells?

A. Yes, sir.

Q. Is Exhibit Number 5 an affidavit confirming that notice of this Application and hearing have been provided to each of the individuals subject to pooling in accordance with Oil Conservation Division rules and regulations?

A. Yes, sir, it is.

Q. Have you made an estimate of the overhead and administrative costs to be incurred while drilling a well

and also while producing it if it is successful?

A. Yes, sir, the drilling well rate would be $6000 a month, and the producing well rate at $600 a month.

Q. And are these costs in line with what's charged by other operators for similar wells in the area?

A. Yes, sir, they are.

Q. Do you recommend that these figures be incorporated into the order which results from today's hearing?

A. Yes, sir, I do.

Q. Does David H. Arrington Oil and Gas, Inc., seek to be designated operator of the subject well?

A. Yes, sir.

Q. And will Arrington also present a geological witness to review the technical portions of this case?

A. Yes, sir, it will.

Q. Were Exhibits 1 through 5 either prepared by you or compiled under your direction?

A. Yes, sir, they were.

MR. CARR: Mr. Stogner, at this time I would move the admission into evidence of Arrington Exhibits 1 through 5.

EXAMINER STOGNER: Exhibits 1 through 5 will be admitted into evidence.

MR. CARR: And that concludes my direct

examination of Mr. Douglas.

EXAMINATION

BY EXAMINER STOGNER:

Q. Mr. Douglas, in referring to Exhibit Number 4, you said that this cost was in line with other wells drilled in the area to a similar depth; is that right?

A. Yes, sir.

Q. Okay, how much more are you anticipating for the directional drilling cost?

A. I'm not sure I have that information. It may be that Mr. Baker in his testimony --

MR. CARR: Mr. Examiner, Mr. Baker has worked on the AFE and he can provide that information to you. We could do that now, or if you'd like to do that as part of his presentation.

EXAMINER STOGNER: Let's do that with part of his presentation --

MR. CARR: Yes, sir.

EXAMINER STOGNER: -- if you would make sure to go over that.

MR. CARR: Yes, sir, I'll do that.

Q. (By Examiner Stogner) Now you testified that the primary objective was the Wolfcamp. What's your understanding on the Wolfcamp? Is that going to be oil or gas?

A. It should be oil.

Q. It should be oil. Do you know if that's spaced on 40 or 80?

A. It would be spaced on 40, and that pool is the Undesignated Townsend Permo-Upper Penn Pool.

EXAMINER STOGNER: Your second witness, what's his qualifications?

MR. CARR: He is a geologist.

EXAMINER STOGNER: Okay, if you will cover that, because Wolfcamp is not part of the upper Penn, so we'll need to go through that.

MR. CARR: Yes, sir.

EXAMINER STOGNER: Permo-Upper Penn, okay. But still go over that with him.

MR. CARR: Okay.

EXAMINER STOGNER: I just realized that. Okay.

Yeah, I do stand corrected, I apologize about that, since the Wolfcamp would be part of that Permo-Upper Penn. Most of my dealings with Lovington has been back to the east, west and south. This is the first time I've had one in the north for a while, and --

MR. CARR: It's sort of frightening, based on what we've done to the east, south and the --

EXAMINER STOGNER: A new direction.

Q. (By Examiner Stogner) Okay, Exhibit Number 3,

this shows a letter, October the 3rd. Was this the first written communication with these parties?

A. No, sir, the first contact was through telephone conversation, and then just general offer letters to acquire leases from the party, back in 1998.

Q. Oh, in 1998 --

A. Yes, sir.

Q. -- was the first time?

A. Yes, sir.

Q. Now, has this been an ongoing project since 1998, or did it take a lull or -- put on the back burner?

A. It's been an ongoing project. We had additional technical work to do. Some of the parties were more difficult to deal with, and we wanted to make certain we were going forward. But we continued negotiations throughout that time period. The offers were always on the table and they had never been withdrawn.

Q. Back to that Exhibit Number 4, you're talking about the similar cost to other wells in the area. Are you talking about in the Lovington area, or are there any of these included up to the north part of that map on Exhibit Number 1?

A. The wells that I'm referring to in this area would be generally from the -- maybe up to a mile north of this Section 31 and primarily back west.

Q. Is that well that you referred to, up to the north, marked on this map, Exhibit Number 1?

A. Well, you should be able to spot on the map. It would be in Section 29, which is the direct northeast offset to 31. There was another well that was drilled in the southeast quarter. It's actually in the northeast of the southeast, you'll see that well symbol there.

Q. What's the name of it?

A. It was called the Prince Nymph.

Q. Prince Nymph.

A. Another fishing fly.

Q. Oh, well, wonderful. Now, the name of this well is going to be what?

A. The Royal Stimulator.

Q. Royal Stimulator. Which is another fly, I take it?

A. Yes, sir.

Q. Well, you're not the first one to use flies. I believe there are some wells in northwest New Mexico called the Royal Humpie, the Yellow Humpie and -- which I understand are also flies, so...

A. I think that's correct.

EXAMINER STOGNER: I have no other questions of Mr. Douglas at this time.

MR. CARR: Mr. Stogner, at this time we would

call Bill Baker.

BILL D. BAKER, JR.,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. CARR:

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

A. Bill D. Baker, Jr.

Q. Mr. Baker, where do you reside?

A. In Midland, Texas.

Q. By whom are you employed?

A. David H. Arrington Oil and Gas.

Q. What is your position with David H. Arrington Oil and Gas?

A. I'm his exploration manager.

Q. Have you previously testified before this Division?

A. Yes, sir, I have.

Q. At the time of that testimony, were your credentials as an expert witness accepted and made a matter of record?

A. Yes, sir, they have been.

Q. And how were you qualified at that time? As a geologist?

A. Yes, sir.

Q. Are you familiar with the Application filed in this case?

A. Yes, sir, I am.

Q. Have you made a geological study of the area which is the subject of this Application?

A. Yes, sir, I have.

Q. Are you prepared to review the results of your work with the Examiner?

A. Yes, sir, I am.

MR. CARR: Mr. Stogner, are the witness's qualifications acceptable?

EXAMINER STOGNER: They are.

Q. (By Mr. Carr) Mr. Baker, as Mr. Arrington drilled other Wolfcamp and Morrow wells in this area?

A. Yes, sir, we have.

Q. And based on that work, are you able to respond to questions that spring from the AFE concerning the well?

A. Yes, sir, I think so.

Q. Could you go to Exhibit Number 4, the AFE --

A. Yes, sir.

Q. -- and would you identify on that exhibit where the costs associated with the directional portion of this wellbore can be found?

A. Yes, sir, I will. Mr. Stogner, if you would look

under -- up there at the very top on your AFE, there's "Drilling - Footage", "Drilling - Daywork" and "Drilling - Directional". This particular well, we're going to bring Baker INTEQ, who is a directional drilling company, on in the approximate depth of 9700 feet, and their cost from 9700 feet to TD is an approximate $130,000, if you'll see over there under your "Drilling" column, and that is that their cost alone.

At that particular point also, your drilling rig -- At this time in which we put this together we were still on footage rates, and you actually kick over to a day rate when you go to a directional plan, and so you have to bring in those 25 days of drilling at $7400, which is an incremental $185,000 too. From approximately 9700 foot down you've got directional costs associated through the directional drilling and the rig.

Q. When we talk about these costs comparing to the costs incurred with other wells in the area, there may not be another well exactly like this?

A. Correct, correct.

Q. When you're looking at these cost figures, could you tell us where the other wells are in which similar costs have been incurred which you can use to construct this AFE?

A. Right, and Mr. Examiner, the wells that are

probably more in line with this type of AFE are located to the west, over in the Townsend-Morrow field, which is slightly off of Exhibit Number 1, that plat that I gave you. And these are mostly Yates's wells. The Yates Gallagher well was a good one. Arrington has drilled one over there, the Mayflower 1.

We've also done a number of horizontal wells over there where we've had directional costs, but they would be located about three miles west of us in the Townsend-Morrow field. It would be just almost due west of Lovington, sir.

Q. Now, Mr. Baker, you've prepared exhibits for presentation here today?

A. Yes, sir, I have.

Q. Let's go now to what has been marked Arrington Exhibit Number 6 --

A. Okay.

Q. -- and I would ask you to first identify that exhibit and then review the information on it for the Examiner.

A. Okay. Mr. Examiner, Exhibit Number 6 is a structure map on the top of the lower Wolfcamp beta marker, and this is a regional marker that sits directly on top of our principal, primary pay horizon that the well is targeted for, which is a lower Wolfcamp carbonate shelf margin mound.

The reason for the structure map here, as I will show in Exhibit 7 and 8, is that we are attempting to get updip from a well that tested oil and significant volumes of water. So this will be an updip stratigraphic pinchout, trying to gain structural relief to get up out of water. So structure is a key element to this particular prospect.

This prospect right here also identifies our proposed location. It also shows a two-well cross-section with our proposed location -- it is Exhibit 8 that I will go through in just a moment, and that is cross-section A-A'.

Q. Now, within a mile of this Wolfcamp proposed location, there are actually two upper Pennsylvanian pools, are there not?

A. Yes, sir.

Q. And what are those?

A. Those are the Undesignated Cauldale-Permo-Penn and the Undesignated Townsend-Permo-Penn.

Q. Let's go to what has been marked Exhibit Number 7. Can you identify and review that, please?

A. Mr. Commissioner, Exhibit Number 7 is an interval isopach of the lower Wolfcamp, what I call the Second Brother, carbonate mound. And this particular carbonate mound runs in a northeast-southwest orientation. It's a very narrow shelf-margin carbonate.

This one also shows cross-section A-A' on it and the proximity of our proposed location to the two key wells that I will show in Exhibit 8 that help define the shelf margin. This particular exhibit right here shows that we should have approximately 25 to 30 feet of net lower Wolfcamp Second Brother pay, and this in combination with Exhibit Number 6, we hope to be updip in this particular carbonate mound by about 50 feet.

Q. So you're not in the thickest portion --

A. No, sir.

Q. -- of this unit, but when you factor in the water that's experienced off to the south and the east, this is the prime location, in your opinion?

A. Correct. As I mentioned earlier, in this particular case structure is a very key element. You do want to have reservoir-quality rock, but you want to encounter as much reservoir-quality rock as you can in the most structurally advantageous position. So I'm pushing my structure as much as possible.

Q. All right, Mr. Baker, let's take a look at your cross-section, Exhibit Number 8. Would you review first the index map and then the information on the cross-section itself?

A. Okay. Mr. Examiner, Exhibit Number 8 is a structural cross-section, A-A', that I've mentioned on

Exhibit 6 and 7. The index map down there located in the center of this particular exhibit shows the relationships of the wells to our proposed location.

On your left-hand side would be A, and this is also to the far western edge of the cross-section, and then it will move to the right through A', which would be located in the most downdip structural position and also on the farthest right-hand portion.

We'll start over on the left-hand portion here and identify the Mallard Petroleum Bartholomew Number 1 well. This well was drilled in 1966 as a Wolfcamp test. It was an extension of the Townsend-Permo-Penn field. I have marked the top of that lower Wolfcamp Beta marker, which is my structural horizon that's a regional structural marker that I mentioned.

And then down in green right there, I have put the top of the Second Brother reef, this Wolfcamp reef package or shelf-margin package that we are attempting to go to.

If you will notice, there are also two drill stem tests noted on this one. These two drill stem tests, the first one recovered 30 feet of mud, the second one did recover 330 feet of gas and 50 feet of gas-cut mud. The flowing pressures and shut-in pressures indicate, along with this porosity log, that this well was situated in the

most updip-type portion of the shelf margin. It did not encounter any porosity or any commercial hydrocarbons here.

If you continue to move to the right you can see the position of the Arrington Royal Stimulator "31" Number 1. Since this is a structural cross-section, you'll see the structural proximity that we hope to encounter. It will be slightly downdip to the Bartholomew well, but we are hoping to still encounter porosity in this Second Brother Reef position.

If you continue on to the right you'll see the Mesa Petroleum Mattie Burns Number 1. This is the key well. This well was drilled in April of 1978. It was also a Wolfcamp test.

If you will notice here, that down in the Second Brother Reef section you will see a nice clean carbonate reef system developed, with a significant amount of porosity developed in the reef.

You will also notice that there were two drill stem tests taken across this particular interval. The first one recovered 30 feet of gas-cut oil and 180 foot of gas-cut mud. It had 600 cc.'s of oil in the sample chamber and 1467 pounds on the final shut-ins.

The second drill stem test, which was located directly below the first one, recovered 3716 feet of very slightly gas cut formation water. This one also had shut

in pressures of 1842 pounds. This particular well did not have pipe run on it and was not perf-tested, but you can clearly see that there is some oil in the very top portion of the reservoir with a substantial amount of water. What we're hoping to do is get updip to this well and still maintain enough porosity in an updip position to make a commercial well, commercial oil well.

Q. Now, Mr. Baker, you've been talking about the upper Penn and Wolfcamp with your first three exhibits.

A. Yes, sir, I have.

Q. Let's now go to the secondary objective, the Atoka-Morrow, and I'd ask you to refer to your seismic montage, which is Exhibit Number 9, and review that for Mr. Stogner.

A. Okay, Mr. Commissioner, at the time that we were putting this project together, since it was a Wolfcamp, we did do a 3-D survey. That was part of the time delay. As Mr. Douglas said, this prospect has been going on since 1998. We did subsurface and then realized that there was a need for some 3-D seismic.

We conducted a 3-D seismic survey, and one of the things that popped out of it was a very nice graben in the Atoka-Morrow system, and this is noted on this Exhibit 4 (*sic*), which has a time structure on the top of the Chester limestone, at the very top of the montage, and then it has

an arbitrary line B-B' that comes through our proposed bottomhole location.

And what we're attempting to do here, Mr. Commissioner, is to put our bottomhole location in probably one of the deepest parts of this ditch in an attempt to explore for Morrow clastic systems that we believe were deposited in structural lows at the time of deposition.

As you can see from the time-structure map, our proposed bottomhole location will be just slightly west of the deepest part of this ditch. This is also referenced on this B-B'.

If you will look down at B-B', the arbitrary seismic line, you'll see that I have placed markers on the right-hand margin over there that show where the Strawn is located, Strawn clastics. Down below you see the Atoka marker located in blue, the Morrow limestone in red and then the Chester in green.

As you move from right to left on this arbitrary line, you'll notice that as you move to our proposed location that there is a big fault system, big graben system right in there, and our bottomhole location proposed to be pretty much right in the middle of that system.

I should also mention that there is not any Atoka-Morrow production within three miles, four miles of this proposed location. So this is a very rank Wildcat

target that we're going after. It's a proven concept back to the west.

Q. Mr. Baker, what do you recommend as a risk penalty to be assessed against any interest owner who does not voluntarily participate in this well?

A. Well, due to the risk in both the Wolfcamp and the high risk in the Atoka-Morrow, I think the maximum of 200 percent should be assessed.

Q. Is it your testimony that this well could, in fact, not be a commercial success?

A. Yes, sir, definitely.

Q. Let's go to what has been marked as Arrington Exhibit Number 10. Would you identify this and review it for the Examiner?

A. Okay, Mr. Commissioner, this is our well profile data sheet, and this is basically a schematic prepared by Baker-Hughes INTEQ kind of outlining the proposed directional portion of the hole.

This indicates that Baker would come on and tie into our wellbore at 9700 feet. And because we are having to kick so far -- and this is a relatively long kick -- you have to begin building your angle up shallow, or else you encounter too much of an angle down deep, you basically can't do it. So that's why they're coming on at 9700 feet. And at that particular time, we will begin to build angle.

We will cross our primary objective in the Wolfcamp, about 300 feet south of our surface location, at a true vertical depth of approximately 10,700. And we're putting this angle in, Mr. Commissioner, so that we can continue on to build to a maximum degree of 45 degrees in order to be able to connect into the Atoka system at the deepest part of this ditch.

If you will follow this plot, just continue it on down, when you get down to a depth of approximately 11,600, this is where we anticipate intersecting the Strawn formation. At this particular time we would be out approximately 900 feet in a vertical sense from our surface location. At this particular time we would be at a maximum degrees of about 43 degrees, 42.5 degrees.

We would continue to build very slightly and intersect the Atoka, the top of the Atoka, down at a true vertical depth of 12,500 or a measured depth of approximately 13,165, and at that time we're running about 45 degrees. And that's about where we anticipate encountering the top of the prospective sand systems.

And Mr. Commissioner, from the top of that Atoka down to the top of the Chester, which is an approximate 1000-foot interval, we could encounter Morrow clastic systems anywhere in there. So it's very difficult for me to tell you exactly where that pay horizon could encounter.

But we will traverse through that, maintain pretty much -- Well, we'll actually start to drop angle once we cross the top of the Atoka, but we'll still be in the 35- to 40-degree range, and then continue the well on down to the top of the Chester and TD the wellbore.

Q. Mr. Baker, in your opinion, will the approval of this Application and the drilling of the proposed well be in the best interest of conservation, the prevention of waste, and the protection of correlative rights?

A. Yes, sir, it will.

Q. Were Exhibits 6 through 10 prepared by you or compiled under your direction?

A. Yes, sir, they were.

MR. CARR: Mr. Stogner, at this time we would move the admission into evidence of Arrington Exhibits 6 through 10.

EXAMINER STOGNER: Exhibits 6 through 10 will be admitted into evidence.

MR. CARR: And that concludes my direct examination of Mr. Baker.

EXAMINATION

BY EXAMINER STOGNER:

Q. Mr. Baker, Exhibit Number 10 -- I'm just going to refer to that -- what's your proposed casing program on this well?

A. Well, sir, we've done this two different ways. You generally will go ahead and you'll drill down your surface hole, run your big string of surface, and then you'll drill down through the San Andres and you'll run your 8-5/8 or your 9-5/8, depending on whether or not you believe you're going to have a dual completion.

And this is one of the things that our engineering department is currently looking at, is whether to run 7-inch casing or 5-1/2-inch casing. We have determined at this particular time that we are going to continue the wellbore on down with a 7-7/8-inch hole and probably do a single completion in it with 5-1/2-inch casing.

To date, we have been able to do these without having to run any type of an intermediate string, based principally on the fact that there are not any high-pressure formations out in here to give your hole any bad integrity; it's good hole integrity. We have done these wells without having to run a deep string until we get to TD. And at TD we would propose just running the 5-1/2.

Now, one of the alternatives is, if we get down to the top of the Atoka and we start encountering some heating shales, which periodically happens in the Atoka, our engineer has said that we could run the 5-1/2-inch casing and then drill out with -- I believe it's a 4-3/4-

inch bit, and run liner at that particular time. That's a secondary plan in the event that we run into problems.

But barring any problems, Mr. Commissioner, we'll just have those two strings of casing and then take it all the way to the bottom.

Q. I was more interested at this point in the production casing, because in your Exhibit Number 4 you show that you're going to run 5-1/2 down 9000 feet, and then I don't show a liner on here down to the Morrow, so I was a little confused if you're going to cement your tubing, as proposed to this, but it sounds like --

A. No, sir --

Q. -- you might have some other options.

A. No, sir, what he's done here, Mr. Commissioner, if you'll look at it, is, he has two grades of 5-1/2 there. He has 9000 feet of 5-1/2 -- that's a stronger grade of pipe -- and then he's running 5500 feet of a second grade of pipe there. Yes, sir, I believe that's what that is.

Q. Okay, I see that -- So your plan is to run the casing all the way down into the Morrow --

A. Yes, sir.

Q. -- as opposed to completing the Wolfcamp and then going down and putting a liner, if successful, into the Morrow?

A. As long as there's no problems, yes, sir, that is

our plan.

Q. Now, you were talking about a dual completion. How would this well be completed if you've got a successful Morrow completion?

A. Well, basically, of course I'm not qualified in the engineering department, but what our engineers have talked about doing is, you would probably produce the gas -- I guess that would be produced up the back side, and then you'd produce oil up the tubing, is the way you'd do it.

Mr. Commissioner, I can tell you from the experience that we've had that unless the Wolfcamp tested tremendous, and the Morrow tremendously, we would probably end up doing a single completion. We have found that to actually be a better way of recovering the hydrocarbons more efficiently.

Q. Have you been utilizing this dual-completion method out there in any of these other wells?

A. Yes, sir, we have tried it back over where -- in our Mayfly area, where we have drilled some Strawn-Atoka-Morrows over there, and we've had mixed results with doing a dual completion. They have been commercial wells, but it seems to me like when you focus on one particular formation you tend to get better frac-job stimulations and better recovery and then come to the second one later.

When you tend to do them both, you just don't seem to quite get the recovery that you do out of a single completion.

Q. On any of these dual completions, how about your intermediate? Did you leave your intermediate out in those dual-completed wells?

A. You mean the shallow intermediate, sir?

Q. Yeah, your shallow intermediate.

A. We've always run that shallow intermediate. And generally, when we have attempted the dual completions, we have run 7-inch casing to do that, to give the engineers room to work in there. So basically what I'm talking about here is more like, and you can tell from our casing design program that we're probably planning on this being a single completion, unless it was just tremendous test in both zones.

Q. In any event, your casing program, you have been working with the Hobbs District Office?

A. Yes, sir. Yes, sir.

Q. Exhibit Number 9, you had talked about seeing this kind of graben feature back to the west in the deeper Atoka-Morrow; is that correct?

A. Yes, sir. Some of the 3-D surveys that we have conducted back over in the Townsend-Morrow have indicated similar-type graben systems and, depending on the timing of

these graben systems, different varying degrees of Morrow clastics and debris have been deposited in these graben systems. And almost every one of them is a wildcat, because you don't particularly know what was eroded off and deposited in them. The ones that have had Morrow clastics deposited down in it, they have been very prolific gas producers.

Q. What kind environment was that Morrow deposition in these grabens?

A. Well, there's multiple theories floating around, but part of it is, part of your Mississippian -- There are multiple unconformities in the Mississippian. Part of that Mississippian was eroded off, so you've got a detrital material, should I say, consisting of coarse-grain clastic system, clas debris that was eroded off of highs and simply dumped in these graben lows.

You also have some fairly coarse-grained sand systems, that appear to have been deposited from the north, that were influenced by this graben system. They went around the highs and stayed within the graben systems, and that's where you have some of your better sands.

So you've got multiple types of potential reservoirs down in there. That debris that I'm talking about, some of the people in Kansas call that the chat, and it's relatively localized. It generally happens around a

Mississippian high somewhere. The sand systems have generally been transported, probably from the north. And so you have several different types of deposition here.

Q. That Morrow-Mississippian sand, is that -- what, a shallow marine environment, deposition?

A. The chat would not be in a marine -- Well, depending on the time of the exposure and the time of the unconformity. The sand systems in there, we're thinking those are some type of fluvial system, more or less, is what we're interpreting at this particular point to be.

There's a number of theories out there. Some people believe them to be bar systems, marine bar systems. My personal opinion doesn't fall in line with that. I think they would be more fluvial.

Q. A deltaic --

A. Yes, sir, deltaic.

Q. -- environment?

A. Yes, sir, uh-huh.

Q. The 3-D seismic information that you are describing, Exhibit Number 9, when was that seismic run in this area? How long ago are we talking about?

A. We did multiple surveys in here, Mr. Commissioner, because we have several prospects in here, and they were done anywhere from 1998 through mid-1999. And consequently, we ended up merging three different data

sets and pulling all three of those data sets together, and that was done in late 1999 when all those date sets were converged.

Q. Finally on Exhibit Number 7, this is your isopach map --

A. Yes, sir.

Q. -- has there been any production in this little structure that you're showing? All your wells seem to be --

A. Show wells?

Q. Yeah.

A. Yes, sir, there has only been a couple of very marginal producers.

And if you'll look in Section 29, sir, you'll see two wells over there that we actually have colored in an orange color, and those were very marginal Wolfcamp producers. One of them made 3000 barrels, and the other one made 5000 barrels. Both of them are located further down in the system, down in what I believe to be the transition interval. But they did produce some hydrocarbons. Not commercial, but some hydrocarbons.

EXAMINER STOGNER: I don't have any other questions.

MR. CARR: That concludes our presentation in this matter.

EXAMINER STOGNER: Thank you for your most interesting presentation there, Mr. Baker.

THE WITNESS: Thank you, sir.

EXAMINER STOGNER: If there's nothing further in Case Number 12,560, then this matter will be taken under advisement.

MR. CARR: Thank you.

(Thereupon, these proceedings were concluded at 9:15 a.m.)

* * *

12560
21 December 2000

CERTIFICATE OF REPORTER

STATE OF NEW MEXICO)
) ss.
COUNTY OF SANTA FE)

I, Steven T. Brenner, Certified Court Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Division was reported by me; that I transcribed my notes; and that the foregoing is a true and accurate record of the proceedings.

I FURTHER CERTIFY that I am not a relative or employee of any of the parties or attorneys involved in this matter and that I have no personal interest in the final disposition of this matter.

WITNESS MY HAND AND SEAL December 22nd, 2000.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 2002