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:

APPLICATION OF MATADOR PRODUCTION COMPANY AND MEWBOURNE OIL COMPANY FOR POOL CREATION, POOL RECLASSIFICATION, AND SPECIAL POOL RULES, EDDY COUNTY, NEW MEXICO. CASE NO. 15535

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

August 18, 2016

Santa Fe, New Mexico

BEFORE: WILLIAM V. JONES, CHIEF EXAMINER
DAVID K. BROOKS, LEGAL EXAMINER

This matter came on for hearing before the New Mexico Oil Conservation Division, William V. Jones, Chief Examiner, and David K. Brooks, Legal Examiner, on Thursday, August 18, 2016, at the New Mexico Energy, Minerals and Natural Resources Department, Wendell Chino Building, 1220 South St. Francis Drive, Porter Hall, Room 102, Santa Fe, New Mexico.

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APPEARANCES

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FOR CONCHO RESOURCES:

WILLIAM F. CARR, ESQ.
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ALSO PRESENT (via telephone): Karen Sharp, NMOCD, District 2 Office

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EXHIBITS OFFERED AND ADMITTED

(8:56 a.m.)

EXAMINER JONES: Call Case Number 15535, application of Matador Production Company and Mewbourne Oil Company for pool creation, pool reclassification, and special pool rules, Eddy County, New Mexico.

Call for appearances.

MR. BRUCE: Mr. Examiner, Jim Bruce of Santa Fe representing the Applicants, Matador and Mewbourne. I have three witnesses.

EXAMINER JONES: Any other appearances?

MR. CARR: May it please the Examiner, William F. Carr, senior counsel, for Concho Resources. I'm entering my appearance for COG Operating, LLC. I do not have a witness.

EXAMINER JONES: Let me call our District 2 Office on the phone. They're just going to listen in, if that's acceptable. I'm not sure about providing comments afterwards.

EXAMINER BROOKS: Well, if nobody objects.

MR. BRUCE: No objection.

EXAMINER JONES: We'll wait until afterwards, and we'll ask you if you have any comments.

MS. SHARP: I'll be very quiet.

EXAMINER JONES: Okay. Will the witnesses please stand, and the court reporter swear the

witnesses?

(Dr. Ned Frost III, Chris Carleton, and Drew Robison sworn.)

CHRIS CARLETON,

after having been first duly sworn under oath, was questioned and testified as follows:

DIRECT EXAMINATION

BY MR. BRUCE:

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

A. Chris Carleton, Dallas, Texas.

Q. And who do you work for and in what capacity?

A. I work for Matador as a landman.

Q. And what are your responsibilities as a landman at Matador?

A. Review title, prepare assignments, farm-outs and joint operating agreements for wells to be drilled in southeast New Mexico.

Q. And have you previously testified before the Division?

A. Yes.

Q. And were your credentials as an expert petroleum landman accepted as a matter of record?

A. Yes.

Q. And are you familiar with the lands involved in

this application and the pools that are the subject of this hearing?

A. Yes.

MR. BRUCE: Mr. Examiner, I tender Mr. Carleton as an expert petroleum landman.

EXAMINER JONES: Any objection?

MR. CARR: No objection.

EXAMINER JONES: He is so qualified.

Q. (BY MR. BRUCE) Mr. Carleton, what are the Applicants seeking in this case? And I'd refer you to Exhibit 1.

A. Exhibit 1 is our application, and we're seeking to create a Wolfcamp pool in Eddy County to establish acreage and dedication size, 320 acres, with a depth interval classified as the Wolfcamp, and modify setback requirements to 330 acres -- or 330 feet from the units, and no limitation on density allowable. Any well that's currently producing, no change will be made to those units. Only the name of the pool will change.

Q. And the name of the proposed pool is the Downey-Wolfcamp Gas Pool; is that correct?

A. That is correct. This will set up clear parameters in southeast Eddy County to protect correlative rights and prevent waste.

Q. Could you turn to Exhibit 2 and explain what is

going on in this map?

A. Exhibit 2 is an area locator map, and it shows the area that we're seeking in southeast Eddy County to create this pool.

Q. And that's the area highlighted -- or outlined in red, correct?

A. That is correct.

Q. And behind the first page, is that a list of the township and ranges included in the red area?

A. Yes.

Q. What is Exhibit 3?

A. Exhibit 3 shows the existing Wolfcamp wells and their unit sizes. As you can see, most of these are spaced on 320 acres currently.

Q. You said wells. These are the Wolfcamp pools, right?

A. Pool -- yeah, the pools and their unit sizes.

Q. Pool and unit size. Thank you.

A. Corresponding wells.

Q. Moving on to Exhibit 4, what does this reflect?

A. These are the Wolfcamp pool maps provided by Paul Kautz a week ago. And as you can see, there are several pools, approximately 61 pools, and it shows their sizes. And right now it's unclear how areas in white will be covered, and it's hard to tell exactly

what -- what the parameters were for setting up these boundaries. We've drilled wells -- Wolfcamp wells off of one pad, going into two different sections where they're in two different pools, and you can see that there's been upper and lower Wolfcamp pools set up currently as well.

Q. And will the other technical witnesses discuss the Wolfcamp Formation in this area?

A. Yes.

And Exhibit 5 also lists out all the pools shown on Exhibit 4. And there are some pools in here with special pool rules. Those are referenced with their special pool order on Exhibit 5.

Q. Okay. So Exhibit 5 lists all the pools -- all the currently existing pools, to the best of your knowledge?

A. Yes.

Q. Whether it's oil or gas, and set forth behind that are a few OCD orders setting up special rules for certain Wolfcamp pools?

A. That's correct.

Q. And you would ask that all of these pools are abolished and simply be covered -- all of the acreage would be covered by the Downey-Wolfcamp Gas Pool?

A. That is correct.

Q. And, again, as to existing wells, it's really up the operator. You can leave it on the current spacing, or you could come before the Division and ask, say, to increase it from 160 areas to 320 acres?

A. That is correct. Only the name will change, and they'll have the option to come forth.

Q. So there are no equities being affected by this application?

A. Correct.

Q. Okay. Let's discuss operators. What is Exhibit 6?

A. Exhibit 6 shows the existing Wolfcamp operators in the area. And we found about 30 Wolfcamp operators in this area, and some are operating under multiple names. So we've reached out to -- reached out to these operators.

Q. Okay. So, for instance, OXY USA and OXY USA WTP, obviously the same personnel are involved, just a different company name?

A. That's correct.

EXAMINER BROOKS: Did you say Exhibit 6?

THE WITNESS: That's correct, Exhibit 6. The list of the operators and the map kind of shows where they're operating. Yes.

EXAMINER BROOKS: Okay. List of operators.

Okay. Thank you.

THE WITNESS: Uh-huh.

Q. (BY MR. BRUCE) How was the information on the wells and the operators obtained, Mr. Carleton?

A. Through the research of the OCD online registry.

Q. Okay. So if something is wrong, it's the Division's fault, right?

EXAMINER JONES: I knew that was coming.

(Laughter.)

Q. (BY MR. BRUCE) Did Matador and Mewbourne meet with the Division and discuss this proposal or this type of proposal over the past, what, nine, ten months?

A. That's correct. Starting in December of 2015, we've met with the Division several times and had phone calls prior to that where we've discussed the creation of this pool, and they've been very involved.

Q. Okay. And did Matador and Mewbourne reach out to these operators listed on Exhibit 6 to discuss this application?

A. Yes. And we've gotten support letters, which is shown on Exhibit 7, from approximately 77 percent of the operated -- or operators operating the wells on the map shown on Exhibit 6. And we've been in contact with all the major active operators in the area, as well as

other operators with Wolfcamp. Even if we did not get support letters, we've been talking to them and have gotten no opposition.

Q. Okay. And Exhibit 7 is copies of support -- letters of support?

A. That's correct.

Q. And is there a rough percentage of the number of horizontal operators by wells who agreed -- who have signed letters of support?

A. Yes. Approximately 77 percent have shown support.

Q. But you haven't received any opposition?

A. That's correct.

Q. Let's discuss one more thing, and this goes into the number of pools and number of operators, et cetera. You mentioned some -- some of the pools are considered upper Wolfcamp pools. Others cover the entire Wolfcamp zone. Where are the land implications if there is a depth severance that there are two Wolfcamp pools covering the same acreage?

A. Yes. There are lease -- lease implications as far as Pugh Clauses and depth severances that could create clouds on title in the future of where these leases are Pughed out and what the ownership is, as well as changing the unit size after allocation of production

is already set, and compulsory pool issues as far as who you need to pool. And if some parties are pooled and pay their cost ahead of time under the order and then are cut out of the unit, it creates a problem as far as getting their money back, and royalty owners as well. They're paying royalties on leases where potentially they wouldn't have the right to if the unit is either shrunk down or size changes. Getting those royalties back is probably not going to happen.

Q. And, again, some of these implications will be discussed by other witnesses; is that correct?

A. That's correct.

Q. Could you turn to Exhibit 8? And, you know, when you mention -- you're changing the setbacks from 660 feet, the standard gas well unit setback, to 330 feet, correct?

A. Correct.

Q. Are some or probably almost all operators at this point, whether they're drilling in a gas pool or not, seeking 330-foot setbacks for their wells?

A. That's correct. And Exhibit 8 shows a map of where operators have gotten approved nonstandard location orders. And our research shows that there have been 54 approved in Eddy County since 2010, and that's only through administration orders. So that doesn't

also count ones done through the forced pooling process.

Q. With 330-foot setbacks, you wouldn't have to go through that process?

A. That's correct.

Q. And could you explain the process Matador goes through for obtaining a nonstandard location and discuss a little bit the cost involved in that?

A. There's the 20-day notice period, and before that, we research title in surrounding sections. And in many of these, there is not a Wolfcamp operator, so we'll have to do some extensive title work on the surrounding units to determine who we need to notify that we're applying for the NSL.

Q. There's a lot of cut-up fee land out here?

A. That's correct. And that cut-up fee land ends up costing title -- or title costs up to $10,000 in some cases for these nonstandard locations.

Q. That's just not counting my costs?

A. Not counting your costs, yes.

And we regularly receive nonstandard location applications or notices from other operators as well.

Q. So it's those costs and the time involved that are affecting all operators?

A. That's correct.

Q. Now, when it comes to the nonstandard locations, those are requested by the technical staff of the various operators, right?

A. That's correct.

Q. So then it's thrown on your shoulder to take care of the problem?

A. Yes.

Q. And approval of this order -- this application would do away, for the most part, with that and save a lot of people time and money?

A. Yes.

Q. Okay. And was notice of this application given to the operators that you listed in the prior exhibit?

A. Yes.

Q. And is that reflected in my Affidavit of Notice, Exhibit 9?

A. Yes.

Q. And the listing of the operators not only included the proposed Downey pool but operators within a mile of that pool; is that correct?

A. That's correct.

MR. BRUCE: Mr. Examiner, Exhibit 9 is my Affidavit of Notice. For once, my notice was almost totally complete, but I did miss one operator, which is OXY. And even though I sent a notice to Lanexco at

their division-registered address, an envelope hasn't come back yet. So we are going to need to supplement the notice and probably publish notice against Lanexco. So I'd ask to continue this hearing for four weeks so that notice can be completed.

Q. (BY MR. BRUCE) To summarize, again, if this application is approved from a land standpoint, how do you think the current development in the Wolfcamp would be improved?

A. On the front end, as far as permitting, there is less -- less up front. As far as nonstandard locations, the cost savings there were addressed, and there is no guesswork when choosing which pool your well is going to be a part of. It will be all part of the Downey pool. And it clarifies commingling issues, which saves money as well. And there could be instances where the pools are set up now where a well is drilled through two sections with two different pools, and the operator wouldn't be allowed to produce because of downhole commingling issues. So it prevents that from happening. And it clarifies production and allocation in these units. There is no chance of them shrinking in the future if a change -- Division has them changed from oil to gas or vice versa, which, as addressed earlier, could causal allocation of royalties and working interest

issues.

Q. A couple of things --

A. Yeah.

Q. -- related to that. You mentioned commingling. And that hasn't been mentioned yet, and I believe another witness will address this. But are there situations where an operator has drilled a well that crosses from one pool to another?

A. That's correct. Yes.

Q. And the Division has required the operator to get a commingling order for that?

A. Yes, because drilling from one pool into the next pool causes downhole commingling issues, and this would prevent that from happening. And I touched on earlier, there are some pools with special pool rules right now, and this will create a level playing field for everybody. This is one pool with all the same rules rather than some folks getting special rules depending on what pool they're in.

Q. And, again, existing wells will be left alone unless the operator desires to change to the Downey-Wolfcamp, change that particular well unit so that it's covered by this --

A. That's correct.

Q. Were Exhibits 1 through 9 either prepared by

you or under your direction or in conjunction with Mewbourne Oil Company?

A. Yes.

Q. And in your opinion, is the granting of this application in the interest of conservation and the prevention of waste?

A. Yes.

MR. BRUCE: Mr. Examiner, I move the admission of Exhibit 9 -- 1 through 9.

MR. CARR: No objection.

EXAMINER JONES: Exhibits 1 through 9 are admitted.

(Matador/Mewbourne Exhibit Numbers 1 through 9 are offered and admitted into evidence.)

EXAMINER JONES: Mr. Carr, did you make a prehearing statement?

MR. CARR: No, I didn't.

EXAMINER JONES: Would you like to allow Mr. Carr to question the witness?

MR. CARR: I have no questions.

MR. BRUCE: Has anybody ever stopped him before?

(Laughter.)

EXAMINER JONES: He's unstoppable.

MR. CARR: I have no -- I hate to do this, but I have no questions.

EXAMINER JONES: Okay.

CROSS-EXAMINATION

BY EXAMINER JONES:

Q. So 61 pools involved. And are you asking to abolish those pools -- technically to abolish them?

A. Yes.

Q. Okay. Was that stated in the application?

MR. BRUCE: It is stated in the application. It's not in the heading of the case, but it's stated in the application.

EXAMINER JONES: Okay. It's stated in the application. So the people that got notice were noticed of that?

Q. (BY EXAMINER JONES) Have you ever objected to NSLs that were proposed at 330 feet by other operators?

A. Matador has not objected to those.

Q. Never objected in this area to those?

A. No.

Q. Okay. These special pool rules in some cases, what do they -- can you summarize what they consist of for some of the pools? Are any of them related to spacing -- to well spacing?

A. Just going through them quickly now, it looks

like the Order Number R-11396 -- I apologize. I haven't read through these too -- too deeply, but it does look like the first one sets spacing at 160 acres with 330-feet setbacks.

Q. For oil?

A. For oil. That's correct. Yeah.

Q. Okay. So there is -- there is a range of different special pool rules involved.

I guess one of the questions is calling it -- calling it a gas pool versus a pool that could have either gas or oil in it with the same spacing for gas or oil. Because if you use the nomenclature gas, it implies -- it makes a gas pool.

MR. BRUCE: That is correct. And our engineer will discuss that in more detail --

THE WITNESS: Yes.

MR. BRUCE: -- the reason for that.

Q. (BY EXAMINER JONES) Okay.

How about -- this goes down -- this play seems to go down into Texas. Are you familiar with how they're spaced in Texas?

A. I haven't done much work in Texas, but I'm familiar that there is 467-foot setbacks, and some Wolfcamp wells are up to 640-acre pools. 330s -- or 330 setbacks. Excuse me.

Q. With 330 setback?
A. Yes.
Q. People are, in general, drilling for liquids, is that correct, whatever they can get?
A. Whatever they can get, yeah. And the engineers will speak more on that.
Q. So is there a range of different spacing sizes in Texas, or is it -- am I showing my ignorance of Texas proration?
A. I'd also be showing my ignorance. I haven't worked too much in that area.
Q. Okay. And you're not asking for any change in the Division's policy of nonstandard locations for diagonal -- the Pythagorean Theorem type stuff?
MR. BRUCE: No, sir.
EXAMINER JONES: At least that wasn't advertised.
Q. (BY EXAMINER JONES) What conversations have you had with other landmen of these other companies? Are they totally in support, or has anybody had an issue?
A. I haven't talked to anybody who's been opposing it. They've been -- had favorable thoughts towards it, said that helps out on leases and allocation of royalty and working interest owners. They also had the same land concerns that I've brought up, if pools start

changing, and they've been in favor of approving this application.

Q. What about the royalty owners? What about the base royalty owners like the Land Office or BLM?

A. I haven't had as many conversations with them, but I imagine if somebody who had been receiving royalties under a well gets cut out, they wouldn't appreciate that.

Q. Okay. So basically you really haven't had conversations with them about it, or they haven't come forward after seeing this and said anything about it?

A. That's correct.

Q. And I guess we're going to talk about the reservoir and allowables and all that later.

EXAMINER JONES: Mr. Brooks?

CROSS-EXAMINATION

BY EXAMINER BROOKS:

Q. Is this going to -- is this change going to include provisions retaining the spacing unit for existing wells?

A. Yes. The operators of existing wells will be able to retain their spacing unit, or they can come and request to have them changed to the new pool.

Q. Okay. So you're going to have an exception to the statewide rule which requires conformity of the

spacing units to grandfather existing spacing units?

A. Yes.

Q. You said it's an option?

A. That's correct.

Q. That's all I have.

RECROSS EXAMINATION

BY EXAMINER JONES:

Q. So basically on these pools that are spaced something other than 320, you're going to abolish those pools. So --

A. The name will change, but the spacing unit will remain the same, unless they would like to come forward and change it.

Q. Okay. I just -- the rules on notice for members of the pool how the spacing units actually get affected, can you address whether you've complied with that or not?

A. As far as notifying operators within the existing pool of this application?

Q. Notifying operators or people that would be -- actual people that would be getting revenue.

MR. BRUCE: Mr. Examiner, no existing well units would be changed. Therefore, nobody's revenue is changing. No correlative rights or equities are affected. So I don't believe we need to name the

interest owners on the individual well units, just the operator.

EXAMINER JONES: Okay.

Mr. Brooks?

EXAMINER BROOKS: Well, I assume that's correct, but the fact that the operator would have the option to change the spacing raises a question because that doesn't seem to be contemplated in the rule. But --

MR. BRUCE: Well, in the application, it says that in compliance with Division procedures, they could come forth and change it, and that would require notice to their interest owners.

EXAMINER BROOKS: Okay. Yeah. That should take care of it. I thought it probably would. That's why I asked the question a minute ago. Yeah. I presume it would.

EXAMINER JONES: So all the operators have been noticed?

MR. BRUCE: That's correct.

EXAMINER JONES: Even the operators that have complied with 660 setbacks --

MR. BRUCE: That's correct.

EXAMINER JONES: -- in the previous lease?

So somebody's going to be drilling a well

closer to them because the rules are changing?

MR. BRUCE: That is true. And, of course, a lot of those would be vertical wells, too. There are old vertical wells out here. But as you will see from the discussion of the geologist and the engineer, I mean, people aren't drilling simply one well in these well units anymore because the reservoir is so thick and so potentially productive.

EXAMINER JONES: Okay.

MR. BRUCE: One thing, Mr. Examiner, in looking at the orders attached to the back of Exhibit 5, jogging my memory banks, my old memory banks, one of them -- the newer order from the Santa Fe Snyder case is a pool rules case setting 160-acre spacing for that one pool, and I don't even know if that pool has grown outside of that area. The others were older.

If you'll recall, until 1975, the Wolfcamp was based on 160 automatically. Wolfcamp gas wells were spaced on 160. Automatically, in these other cases, refer to attempts to increase the spacing of certain Wolfcamp depths was from 360 to 320, which was then superseded by a statewide rule.

EXAMINER JONES: That's something only you or Mr. Carr would remember.

MR. BRUCE: He was present at that hearing.

MR. CARR: I was present. I may not remember.

I do have just a question. As I understand this, you're establishing a new sort of base rule for the area. Existing wells and units are excepted or grandfathered, and it doesn't change the procedures for getting exceptions or --

MR. BRUCE: Correct.

MR. CARR: -- as to unit size or location in the future.

MR. BRUCE: Correct.

MR. CARR: That's all.

Q. (BY EXAMINER JONES) Okay. Do you talk any to our district office about -- do you have a regulatory person here today? Who do you work with on your regulatory matters? Have they talked to our districts or the BLM about the paperwork that's going to be involved switching wells over a different pool name?

A. As far as filing the sundries?

Q. The sundries or the C-102s and the C-104s to switch the wells.

A. No. I have not -- not had discussions with those offices on that.

MR. BRUCE: Mr. Examiner, my thought on that is if -- you know, first of all, the well units are

left as is. If the operator decides -- has a, say, 160-acre horizontal well unit and wants to increase it to 320, he'd have to follow procedures for notification to his interest owners, and he would have to file the new C-102. And insofar as notification, we talked about this yesterday and suggest that the order require the two applicants to notify the operators of any change in the pool name. So remove that burden from the Division, and tell them that they're required to file just a sundry notice as a new pool destination.

EXAMINER JONES: Okay. We can talk -- since we're going to continue for four weeks, we can get that hashed out with our regulatory person. And your proposal sounds reasonable, but I have to make sure it works.

MR. BRUCE: It's kosher with them?

EXAMINER JONES: Kosher.

Okay. I don't have any more questions. Thanks.

MR. BRUCE: Call Mr. Frost to the stand.

EDMUND "NED" LOCKE FROST III, Ph.D.

after having been previously sworn under oath, was questioned and testified as follows:

DIRECT EXAMINATION

BY MR. BRUCE:

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

A. Dr. Edmund Locke Frost III.

Q. And where do you reside?

A. Dallas, Texas.

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

A. I work for Matador Resources as their chief geologist.

Q. And as chief geologist, what are your duties?

A. My duties are to guide, direct and ensure the quality of all staff work. I lead a team of ten geoscientists. I conduct regional exploration projects and other specialized projects, and then I interact with investors, offset operators, vendors and other outside entities such as universities.

Q. And with technical people from other operators?

A. That's correct.

Q. Have you previously testified before the Division?

A. I have not.

Q. Would you describe your educational employment history to the Examiners?

A. Sure. I received my bachelor's from University

of Colorado in geology, and then I received -- in 1999, and then I received my doctorate in geology from the University of Texas in 2007.

I started my career with ConocoPhillips in their subsurface technology company in 2007. In 2011, I went to the Bureau of Economic Geology as a research associate there, and then I joined Matador in 2014.

Q. And where was that?

A. I'm sorry. The Bureau of Economic Geology is at the University of Texas. That's their state survey. And then I joined Matador in 2014.

Q. Do you have any professional associations?

A. Right now, AAPG and WTGS.

Q. And are you familiar with the application and the geology involved in this case?

A. Yes, I am.

MR. BRUCE: Mr. Examiner, I tender Dr. Frost as an expert in petroleum geology.

EXAMINER JONES: Any objection?

MR. CARR: No objection.

EXAMINER JONES: He is qualified as an expert in petroleum geology.

Q. (BY MR. BRUCE) First off, on a nontechnical subject, could you give a brief explanation of how the proposed pooling got its name?

A. Yeah. We have proposed to name the pool after Marlon Downey who is a special advisor to Matador. He is a geologist who worked his way through the ranks of Shell, ultimately becoming their international president, and then was also the president of Arco International.

The reason we've chosen Mr. Downey is that he was influential with guiding Matador into early entry into unconventional plays such as the Haynesville and the Eagle Ford and also ultimately entry into the Delaware Basin and the Wolfcamp pool that we're proposing here today in Eddy County.

Q. Thank you.

Have you conducted a geologic study of the lands located within the proposed pool and adjacent to the pool as part of this application?

A. I have.

Q. And have you prepared exhibits to demonstrate the geology involved in the Wolfcamp?

A. Yes.

Q. Would you please turn to Exhibit 10 and describe its contents?

A. Yes. So Exhibit 10 shows the top of the proposed pool structure map. This will be the top of the Wolfcamp, and it shows this in true vertical depth

subsea. The lighter green colors represent the shallower depth, and the cooler blue colors represent a deeper depth. And you can see a basic -- a basic gentle dip off to the east, and these dips are about one to two degrees. The wells that we use to make this map are symbolized here. On the -- on the map itself is the small well icons. And this is the proposed pool limit that the map is outlined to.

Q. What is Exhibit 11?

A. Exhibit 11 is a thickness map or an isochore of the Wolfcamp and the pool that we're proposing. Basically what we have is a shallow -- or a thinner Wolfcamp in the yellow colors and a thicker Wolfcamp section in the -- in the blue colors again here. You can see that the Wolfcamp thickness ranges from about 600 feet at its thinnest in the northeast and southwest portions of the pool to about 2,600 feet off to the -- I'm sorry -- the northwest and southwest. And then as we go off to the -- to the southeast, the pool thickens to about 2,600 feet there. And we consider this whole interval to be -- excuse me -- productive within the pool limits here. Even at its thinnest, we would consider this prospective for horizontal completions.

Q. When you're looking -- overall you say it goes from 800 feet thick, say, in the northwest corner to

2,600 feet, but if you're looking at just individual well units, 320-acre well units, within the Wolfcamp, you would expect the thickness to be pretty constant throughout any individual well unit?

A. Yeah, that's correct. I mean, we're mapping this over townships. And if you look at the change within any section or any unit here, there effectively would be no change.

Q. It's pretty marginal?

A. Yeah. Exactly.

Q. Would you move on to Exhibit 12 and discuss the well logs you've looked at in this area.

A. Sure. So Exhibit 12 is a cross section running from the northwest corner of the proposed pool to the southeast corner of the proposed pool. The well logs are hung. There are datums on the proposed pool top, which is the top of the Wolfcamp, and then you can see the pool base basically dropping down across this cross section from left to right as the Wolfcamp thickens.

And this basically matches the previous exhibit, Exhibit 11, that the thickness is here reflected on the pool, reflects thicknesses on Exhibit 11. And really we would consider any of these rocks in here prospective to be -- to be targeted, and that's why we've chosen to put this all into one pool.

And this, I guess, pool definition is also how we've applied for nonstandard locations, and any applications to the OCD have this pool outline as well.

Q. And it's not being submitted as an exhibit, but this is paragraph three of the application. Could you just briefly summarize the pool definition -- proposed pool definition for the Examiner?

A. Right. So for the pool type log here, we are basically looking at saying 9,204 -- I'm not seeing -- to a base of 11,525. And in our opinion, that would be the entire Wolfcamp.

Q. Can you, for the record, identify the well and its API number used for the type log?

A. Yes. That's the OXY Benelli [phonetic] Number 1. The API is 3001534881.

Q. Thank you.

A. And that's -- Exhibit 12 and Exhibit 13 will be the center log here, that star.

One thing that I didn't point out that I'd like to point out here is that there are production numbers on the base of this cross section. These are production numbers from -- from the Wolfcamp. And in green, we have oil. In gray, we have gas. And in red, we have GOR. And this would be from vertical production in the Wolfcamp.

Q. And Exhibit 13 is another type log, correct?
A. Yup. Exhibit 13 is effectively a cross section running from northeast to southwest. And here, again, this sort of shows the thickness variation of the Wolfcamp pool as it's proposed across the area. The pool type log is again in the center. Oil, gas and GOR are reflected at the base of each of these -- at the base of each of these wells.
Q. And are you asking that the Division consider the entire Wolfcamp interval to be developed within one 320-acre standard well unit?
A. We are.
Q. And there are no interior or vertical subdivisions suggested in this new pool?
A. No.
Q. Do you have an opinion as to whether an order entered by the Division reducing the setback requirements to 330 feet -- will that prevent waste and protect correlative rights?
A. Yes. We feel that is the case.
Q. And the next witness will address this also?
A. That's correct.
Q. In your opinion, is the granting of this application in the interest of conservation and the prevention of waste?

A. Yes, it is.
Q. And were Exhibits 10 through 13 prepared by you or under your supervision?
A. Yes.
MR. BRUCE: Mr. Examiner, I move the admission of Exhibits 10 through 13.
EXAMINER JONES: Any objection?
MR. CARR: No objection.
EXAMINER JONES: Exhibits 10 through 13 are admitted.
(Matador/Mewbourne Exhibit Numbers 10 through 13 are offered and admitted into evidence.)
EXAMINER JONES: Mr. Carr, do you have any questions?
MR. CARR: No, I do not.

CROSS-EXAMINATION

BY EXAMINER JONES:
Q. Sounds like Mr. Downey is quite accomplished and would be a good choice. I'm not sure that our practice on naming pools allows this, but if -- if it does, it sounds like it would be good.
A. Yeah. Mr. Downey is a geologist's geologist, we would say. He's a true craftsman. But it's Matador's tradition to often name wells after

influential shareholders or investors, so we're continuing that here.

EXAMINER BROOKS: Since he's a geologist, perhaps Paul would be willing to make an exception to the rules.

THE WITNESS: That's right.

MR. BRUCE: Mr. Examiner, are you going to rename the Sugar pools and the rest of those then?

EXAMINER JONES: I'm sure there's been exceptions in every practice we've had around here (laughter).

Q. (BY EXAMINER JONES) Can you talk about the transition -- is there Abo here, first of all, or is it just Bone Spring going into Wolfcamp?

A. It is. It's Bone Spring going into Wolfcamp here. This is all really out in the Basin center, so there wouldn't be any Abo or Clear Fork equivalent or any sort of that stuff.

Q. So the transition -- I guess from the bottom going up, from the Penn up into the Wolfcamp, that was the big extinction event or something that happened? What were the changes that mark your Penn versus the Wolfcamp?

A. Yeah. So we tend to pick the Penn on top of that first major carbonate that comes into the Basin.

You can sort of see on this right log. It looks like you're on Exhibit 13. These, sort of, lighter grays, that's where we tend to pick the Basin pool, the base of the Wolfcamp. There's a lot going on in the Basin at that point. Mountains are being built to the south. And as a geologist, I'm happy to oblige you with the story of the Basin.

But really, kind of what you see from the base in the Pennsylvania is you have tectonics beginning to end, and you have the Wolfcamp margins as we know them and Kemnitz and some of these other Wolfcamp reef plays beginning to develop and sediments being put into the Basin in a more organized fashion. So typically as we define the Wolfcamp, it's a pretty heterolithic stack of shales, carbonates, sandstones and siltstones. But typically it's what we define as something requiring horizontal wells and multistage fracture treatments.

Q. But typically it's -- so you say it's all types of rock, then, but it's offshore -- it's not the only type --

A. No. No. This would be deposited in a deep-water basin.

Q. Deep-water basin?

A. Yeah.

Q. Okay. So you have some -- any of these reefs

going through here or --

A. We do not.

Q. -- or algal mounds or anything like that?

A. No, we do not.

Q. Okay. I don't have a geologist with me to ask the smarter questions, but basically it looks like you've got some -- and I've heard some stories of the upper part of the Wolfcamp being actually more oily than the lower part being more gas. Is that -- is there a story behind that, or is that over in Lea County and not here in Eddy County?

A. I think the next witness probably can address that better. Yes. I believe he has that actually prepared, yeah.

Q. Okay. So he'll talk about the reservoir, but the actual rock itself, as far as being a reservoir rock, incapable of not receiving some source hydrocarbons and storing them and having them available for drilling, where are the targets in this area for horizontal drilling and why?

A. We've view most of these targets as unconventional targets in the respect that anything that is here would have very low permeability and porosity, so most of the storage of hydrocarbons is going to be in the source rocks themselves.

So when we -- when we look at this, it's typically, on the well logs, the darker intervals on the first tract here, which is our gamma ray. So the hotter gamma ray from a very qualitative sense would represent the more organic-rich intervals, so typically we target those.

In the upper Wolfcamp, we target a couple tight sands in there, but -- and, you know, frankly, I think as an industry, we're really still learning within this pool what the targets are that we've tracked. We've tried a few benches in here, and Mewbourne has tried a few similar benches, a few different ones, that, you know, I think we're pretty still early on in fully understanding the amount of targets in the Wolfcamp here.

Q. Okay. So do you consider this a resource play, or do you consider it a play where you have a discovery well that is associated with a reservoir that you can actually define by looking at a log and then expand it by drilling? In other words, why should we call this all one gigantic pool?

A. Right. Well, I think I would define it as a resource play. Obviously, there are sweet spots within any resource play, and I think that goes to the second part of your questions, is that there are subtle

variations within the rock that make some areas better than others.

But I think from a completion and a targeting standpoint, the reason we've advocated to put this all as one pool is that anything within this section really would be completed and targeted roughly the same way. And if you were to take a stratigraphic interval from the northeast corner down to the southwest corner, you're effectively going to try and complete it the same way. So it's a resource play in that sense, but there always is some variability there that makes some areas better than others.

Q. Okay. So the pools that are existing right now, they were discovered by maybe bailouts from Morrow wells or something?

A. Right. Right.

Q. So why were -- why were -- those were -- were those conventional reservoirs?

A. Many of them were. They did not require modern multistage stimulation. They probably had a little bit of acid put on them and they flowed. We have not targeted those as much. For us, we -- you know, some of those targets are potentially still available here, but really for us and I believe for Mewbourne, we've kind of targeted the more unconventional organic-rich intervals

here. So the preexisting pools were far more conventional in nature in terms of their exploration and how they were found and their exploitation and how they were developed.

Q. Okay. So -- so those pre -- those 61 pools, they're not -- the new -- the new concept of the horizontals with the big frac jobs and targeting the organic-rich shales are -- it's a totally different concept that requires a big pool to manage it efficiently; is that correct?

A. To my knowledge. And that's our assertion. I can't speak to every one of the 61 pools out there, but it's our assertion that modern development, it would be advantageous to create a large pool that's planned with the requirements that Mr. Carleton has already outlined and that will be outlined by the next witness as well.

Q. Okay. So geologically you can see this as one big package, and it's sourced from below or inside?

A. Are you talking about from hydrocarbon?

Q. Yeah.

A. Yeah. I mean, we're basically -- when we talk about the old -- the old kitchen, you know, versus reservoir, I mean, we're drilling in the kitchen right now. So we're targeting the source rocks themselves.

Q. Okay. Okay. What about the Wolfbone? Is

this -- are you familiar with the Wolfbone that's -- in other words, is there going to be a situation where we have somebody drilling, right, at the very top of this Wolfcamp play or right at the bottom of the Bone Spring and logically wanting to carve out part of your pool vertically?

A. I can't speak to other operators -- other operators at Matador. We don't view the Lower 3rd Bone Spring to be prospective in this part of Eddy County. That's not to say that that couldn't change with time.

On the base of the pool, we -- I mean, there is -- effectively, once you go below the -- the pool base, you're now at the conventional targets, so Atoka, Morrow and Strawn. So those would be completed differently, in our opinion. So I think that the base of the pool, there's very little risk of that, and in our opinion, I think there is very little risk of that. I think there have been very few Lower 3rd Bone Spring completions in this part of the Eddy County, so we see that as a low risk.

Q. Okay.

A. But that's from Matador's perspective, and we can't speak for every operator. But, again, I think it's low risk. And the Wolfbone is -- as it was originally done, was done as a vertical play where they

would drill down to the base of the Wolfcamp and really frac anything that had porosity and looked like it would produce oil all the way up to the Bone Spring, and that is certainly not what we've advocating for here.

Q. Okay. What about the Cisco Canyon -- or the Upper Penn? Is that -- is that going to be prevalent here and going to interfere with this pool on the bottom part?

A. No. I mean, the Cisco Canyon -- the canyon is in the base of the -- that is included in the base of this pool, but Cisco Canyon production as we know it typically exists further to the west and to the northwest and Dagger Draw.

And one reason we've advocated to include that here is we feel it provides sort of the most operational clarity, that the pick of the base of the pool here is pretty straightforward. When we actually start trying to pick the top of the Wolfcamp -- I'm sorry -- the top of the Cisco or the top of the canyon, that's actually a very difficult pick, and really breaking those out of the separate pools would cause a scenario, which you outlined earlier of the Wolfbone, where you potentially would have people trying to get right under the existing pool.

So for us, we've -- we've -- we've rolled

that into the Wolfcamp pool. Operationally, that's how most operators pick the Wolfcamp now, but we feel like that's the most straightforward and probably the one that will generate the least amount of headaches moving forward.

Q. But you're not proposing a vertical setback in those pools? That wasn't advised at all?

MR. BRUCE: No, sir.

Q. (BY EXAMINER JONES) Okay. What about managing the pools? Are you going to drill any cores and try to learn more about it as time goes on? You've got this huge resource here so --

A. Yeah. We always try and learn more. I wouldn't want to speak to Matador's data-acquisition plans, but I will say that we are always eager to learn more about this.

Q. Well, the manager is not going to know to do it unless you tell him --

A. Yes.

Q. -- that he needs to do it, and then he'll probably tell you no, but at least --

A. Trust me. Trust me. My -- the executives are very tired of me talking about data collection.

Q. But you've got to keep talking --

A. Yes.

Q. -- because otherwise, you know, some day there won't be any targets.

A. No. Exactly. Matador takes that very seriously. We do acquire data, and I know Mewbourne does as well.

Q. Okay. Have you talked to any other geologists with other companies? Are they on board with this?

A. I personally have not spoken to any of the other geologists. I know that the -- the geologists who operate in this area have spoken to a number of other operators, and I believe they are in support.

Q. Okay. And Paul Kautz is our geologist in Hobbs. Have you talked to him?

A. I personally have not.

Q. Okay. Okay. I thank you very much.

A. You're welcome.

EXAMINER JONES: Mr. Brooks?

MR. BROOKS: No questions.

THE WITNESS: Thank you.

MR. CARR: I'd like to just get one thing for clarification, following up on your questions about the Wolfbone pool.

Again, we're not precluding people coming back later with an appropriate case in this area to establish some special rules for there if required.

MR. BRUCE: "If required."
MR. CARR: And if we can show geologically that we would need different rules for Wolfbone or different spacing there or anything, that's all -- we're not changing that. We're just trying to get rid of all of this and start with a clean field.
MR. BRUCE: No new Division procedures are intended with this application.
MR. CARR: Just want to be sure because I was confused by that.
THE WITNESS: Apologize.
EXAMINER JONES: Thank you, Mr. Carr.
MR. BRUCE: You want to continue on, Mr. Examiner?
EXAMINER BROOKS: Let's take a brief recess.
EXAMINER JONES: Yeah, a ten-minute break.
(Recess 9:52 a.m. to 10:08 a.m.)
EXAMINER JONES: Back on the record in Case Number -- the Matador case.

DREW ROBISON,

after having been previously sworn under oath, was questioned and testified as follows:

DIRECT EXAMINATION

BY MR. BRUCE:

Q. Would you state your name for the record?

A. Drew Robison.

Q. And where do you reside?

A. Midland, Texas.

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

A. Mewbourne Oil Company. My background is as a reservoir engineer, and I'm currently the assistant exploration manager of our Midland office.

Q. In that capacity, what are your duties?

A. I manage our, as I mentioned, exploration office in Midland, consisting of our geologists, landmen and reservoir engineers.

Q. And how long have you been doing this?

A. I've been working for Mewbourne a little over ten years and about nine of those in the Permian.

Q. Have you previously testified before the Division?

A. Yes.

Q. And were your credentials as an expert petroleum reservoir engineer accepted as a matter of record?

A. Yes, they were.

Q. And have you studied the -- this Wolfcamp

reservoir, the subject of this application today?

A. Yes.

Q. And are you familiar with the engineering matters related to this application?

A. Yes, I am.

MR. BRUCE: Mr. Examiner, I tender Mr. Robison as an expert reservoir engineer.

EXAMINER JONES: Any objection?

MR. CARR: No objection.

EXAMINER JONES: He is qualified as an expert in reservoir engineering.

Q. (BY MR. BRUCE) And have you overseen an engineering study in preparation for this application?

A. Yes, I have.

Q. And have you prepared exhibits to demonstrate the results of your study?

A. Yes.

Q. Would you turn to Exhibit 14 and discuss the contents of that map?

A. Yes. Exhibit 14, which is the large-scale map you have, is a binder of a smaller version, easier to read, of this larger-scale map. It's a regional map highlighting the Wolfcamp or wells produced from the within our pool boundaries. And what we have done is taken the cumulative production and calculated GOR for

each well and color-coded each well by that GOR.

In December, when we met with the Division, kind of the preliminary steps to creating this pool, it was communicated to us that a rule of thumb of 3,000 GOR cutoff. Anything in the gas well, anything less -- oil well to expand on that from 1,000 to 3,000. It was kind of a gray area. It's hard to determine whether it's oil or gas, and below 1,000 is pretty definitively oil well. We wanted to represent here the extent of the gas production throughout this area.

So if you look at the high percentages of wells coded with the red color, the majority of the wells within this boundary are gas wells, under that rule of thumb, the 3,000 GOR cutoff. We chose the boundaries. And if you look in the northeast part of this map, we excluded a portion up there because we didn't feel like we had sufficient data. There are townships that don't have any Wolfcamp production, and then some of the Wolfcamp production there is more in that gray area, that 1,000 to 3,000 GOR. So, again, we didn't think we had sufficient data, so that's why we cut it off where we did.

From that -- a few other points from that meeting we had was the Division did not want to sever the Wolfcamp into -- into multiple horizons, and I think

Mewbourne and Matador agree with that. It would be a difficult thing to do. And we did not want to have overlapping pools within the Wolfcamp. And that's the reason for the abolishment of the existing pools, so we don't have overlapping pools within the Wolfcamp.

Q. You're not a geologist, but from your study of the area, if there was an upper Wolfcamp pool, would it kind of be hard to define either the bottom of that upper Wolfcamp and the start of a lower Wolfcamp?

A. That's correct.

These are unconventional reservoirs, and we're still learning where to target within the formation. And there are a lot of variables involved, including frac size and completion design. And so by severing that, I think we create a lot of future issues, where the current top of the -- the proposed top of the Wolfcamp, which is pretty much the industry standard, on the top of the Wolfcamp, and what the Division recognizes is what we're sticking with.

Q. And if there was an upper Wolfcamp pool in this area, would it require a -- really a -- I'm trying to think of the right way to put this without sounding greedy, but an issue with vertical setbacks that might leave a lot the reservoir unexposed?

A. That's correct. It would.

Q. Which would be a waste of reserves?

A. Correct.

And one other point on the pools, one of the previous exhibits lists out the pools, and there are currently 61. I just wanted to point out that many of those are wildcat pools. Probably a third of those are still classified as wildcats. They really haven't been put into established pools yet. And, again, we're just trying to establish some clarity here and making sure that we have a consistent playing field across the whole area.

Mewbourne's had instances where we've had -- where we've drilled across pool lines and had to get downhole commingles on wells, or we've drilled off a lease line, mirroring another well, and they were placed in a pool with special pool rules and special allowables, and we were placed in a pool without those special rules, and so we had to restrict our well, which is the offset, which was able to produce its full allowable. And we're just trying to minimize cases like that.

Q. Now, this came up with respect to the other witnesses. But we're at the south end of the state of New Mexico. These Wolfcamp producers continue down into West Texas; do they not?

A. Yes, they do.
Q. And at Mewbourne, are you also in charge of West Texas Permian development?
A. Yes, I am.
Q. Could you address a little bit about the pools and the spacing and the setback there?
A. Yes.

In Texas, there are a few different pools. But just to the south of Eddy County, the major pool there is called Phantom Wolfcamp, and it's spaced up to 640 acres in the Wolfcamp, with 330-foot setbacks perpendicular to the wellbore and actually 200 feet from the heel of the toe. So you're able to take the heel of the toe even further. And it seems to work well, and all the operators are in support of that.

There are a few other fields, too, that would encompass the Wolfcamp that have special rules very similar to that. It does seem to work well.

Q. Thank you.

Why don't you move on to Exhibit 15 and discuss the type of reservoir you believe exists in the Wolfcamp in this area?

A. Exhibit 15 is taken from the textbook "Properties of Petroleum Fluids" by McCain. When we're doing our engineering study, we were trying to determine

the reservoir fluid type, and it seems to us that the data we have in this area is likely a retrograde condensate reservoir, retrograde gas reservoir. The four points you have here are what McCain defines as the characteristics of a retrograde gas reservoir.

So the first one is a GOR of approximately 3,300 to 150,000, and he says those are pretty loose and not definitive cutoffs. The same thing on the stock tank liquid gravity of 40 to 60 degrees. The third one describes the stock tank, the color of it, lightly colored, brown, orange, greenish, or water-white. Those three are very broad definitions and kind of provide a range for what's reasonable, and it's hard to say it's a specific cutoff in either way. And the stock tank liquid description, that's something that's not readily available either. It's not something that's provided on a completion report. So outside of us, Mewbourne and Matador, actually going to the field, that's not some data we have in a database.

The fourth one and probably the most definitive is the reservoir fluid composition was a half tank plus of less than 12.5 mole percent. The problem with this is it requires PVT data, which is very expensive. We do have -- Exhibit 18 is the PVT data we have, and I'll go through that in a minute. But it's

not something I think any company wants to do on a regular basis because it can cost, on average, $30,000 per well to go do. And especially with oil prices where they are today, getting data collection -- you know, a budget for data collection is not something that management's on board with right now.

Q. Well, let's walk through your analysis. Could you identify Exhibit 16 and what that shows about the proposed -- wells in the proposed pool?

A. Yes. Exhibit 16 is basically taking the data from the map, which is the Wolfcamp producers within the proposed boundary, and it's a distribution of water, cumulative frequency plots, of the GORs for those wells. And what we're showing here is that 92 percent of the wells have a GOR greater than the 3,000. That's why we've decided to approach this as designating this as a gas pool because we think, in all statistical likelihood, the majority of these wells would fall above that 3,000 GOR. And that's why we want to consider these gas wells.

If you look, there is 8 percent that are below that. Many of those are either commingled with Bone Spring vertically, they're already in an existing gas pool or the same proration unit as a gas well or there are production issues. And I've highlighted some

of those on the map. There are comments next to some of the wells that are in green or in gray.

A lot the wells in gray are flaring gas. And so the production data we have, it's maybe only for a few months, but it's probably not complete. And then some of the older wells, maybe they've never even turned the well to gas sales. Even though the IP would show 20,000 GOR, they would only sell a couple hundred barrels of oil and move on to another zone. So I think the likelihood could even be greater than 92 percent that you're going to encounter gas.

Q. So there are some reporting issues simply because at the beginning life of the well, they might be flaring gas that doesn't show up?

A. That's correct.

Q. Go ahead.

A. That's all I have for Exhibit --

Q. Exhibit 17 then.

A. -- 16.

Yes. Exhibit 17 -- I know originally API gravity was one of the rules of thumb, I'll call it, that the Division used for determining whether it's a gas well or an oil well. What I plotted here is the API gravity versus that GOR. Unfortunately, API gravity data is not readily available. There is a box for it on

all completion reports, but a lot of operators leave that blank. And so we don't have that data for the previous -- well, Exhibit 16 has about 250 wells. This, I think, has 60 or 70 wells that we have data points on. But what we're trying to show here is the API gravity of all these wells falls within McCain's range of a reasonable retrograde gas stock tank liquid gravity.

And also I've highlighted two points, and these are two points where Mewbourne had data. And they seem to represent on the lower end of the range of that API gravity and even on the lower end of the GOR range, but they were confirmed with PVT data that they're gas wells.

Q. And what is Exhibit 18?

A. Exhibit 18 is the PVT data we had available. It's data that Mewbourne's collected and also Matador has collected. We also added Cimarex. In their case, when they amended the pool rules around White City -- I think it was Case Number 15430. Oh, yeah, it's at the bottom there -- we used that data in this table, also. So I guess to get a full PVT analysis, you have to go get surface samples, physically recombine them in a lab and place them at reservoir conditions, and then measure the composition of that fluid. So it is a costly -- a costly test.

When we met in December, I believe we communicated to the Division that neither Mewbourne or Matador had any data at that time, and we have since went and collected this data to help with our case.

We have five data points here, and all of them show to be retrograde gas reservoirs and that their initial reservoir pressure was above the dew point, which is the second-to-right column, the lab-measured saturation pressure, which is going to be your dew point for a gas reservoir.

And then the final column is that heptanes plus. We did not have that data on the Cimarex well, but in the four wells that Mewbourne has, all of those are less than the 12-and-a-half percent which McCain says is the most definitive cutoff for determining retrograde gas versus a bubble -- reservoir.

Q. Do you consider the -- across the proposed pool, do you consider the reservoir fluid across this area to be relatively similar?

A. Yes.

Q. Let's turn to Exhibit 19.

A. Exhibit 19 -- the previous exhibits were more testifying to why we think these should be spaced on 320s. I think now, the next couple of exhibits, are going to be why we think we should have 330 setbacks and

why we think that is reasonable.

Exhibit 19 is just a cartoon exhibiting the different stress directions. And what we're showing here is that the fracs tend to initiate -- the fracture is in red there. They tend to initiate in the direction of the maximum horizontal stress.

In this area, Mewbourne and Matador -- and I believe Cimarex testified to this also -- we believe the frac orientation is roughly north 45 east, so essentially due northeast to southwest.

Q. Part of that -- part of the effect of that is some operators prefer to drill lay-downs; others prefer to drill stand-ups?

A. That's right. Yeah.

Looking at the map, you'll see in this area, both east-to-west laterals and north-to-south laterals, and I think we're pretty fortunate to be able to do that. There are a lot of areas that you're not able to drill in either direction, to drill perpendicular to that maximum horizontal stress. So this allows a lot more flexibility for land issues.

Q. It's up to the operator; gives them more flexibility?

A. That's correct.

Q. Okay. And the data -- what you just talked

about, north 45 degrees east, that's consistent with what Mewbourne and other operators have experienced in drilling and completing the Wolfcamp wells in this area?

A. That's correct.

Q. Before we get to the next exhibit, if I could summarize for you -- or have you summarize for me, you do believe this is a gas reservoir?

A. Yes, I do.

Q. And as a result, should it be spaced on 320-acre units?

A. Yes.

Q. With 330-foot setbacks -- we'll get into that in a minute -- will that allow additional flexibility in drilling wells?

A. Yes, it will.

Q. And will there be any adverse effect on offsets?

A. No, there will not.

Q. Let's go to discuss the well spacing and the well locations. Could you -- how about looking at Exhibit 20, and move to Exhibit 21 and discuss what you're showing?

A. Okay. Exhibit 20 is a cartoon so you can visually see the potential waste with 660 setbacks. What we've done here is we've set up a west half unit

and an east half unit, and we're showing three wellbores in each of those units with 660 setbacks.

In orange there, those are the projected drainage pattern from those fractures. So that's following a northeast to southwest frac orientation. And we're making some assumptions here on half lengths based on data we have. This is very -- this is an unconventional reservoir, so the permeabilities are very low. That's why we don't think we're draining past 660 from the wellbores. And in all likelihood, it's more like 330 from those wellbores.

Mewbourne has a company that's drilled wells as close an 880 feet apart, so that would be potentially a 440 setback, with no interference between wells. We are currently drilling and Matador is too wells that are 660 apart and testing that idea. The data points we have that show at least a 440 setback, I think help us make the point that 660 is too much and will cause waste.

So with that and with the three wells per 320, this yellow area highlighted around the outside of the boundary of each unit is what we would call undeveloped hydrocarbons and potential waste. In calculating that area, it's roughly 220 acres of potential waste.

Q. And if you have 330 setbacks?

A. The next exhibit is the same spacing between wells but with 330-foot setbacks. And what it allows us to do is increase recoveries by 52 percent. These are rough estimates, just kind of an example of what could potentially happen. There are a lot of different horizons, and we're still learning, and a lot of different variables involved, frac size and where you target your lateral. We're representing these as all targeting the same interval.

And the example I mentioned earlier about Mewbourne putting wells 880 apart, those were in the same interval. So there are going to be different horizons, and there is a lot we're still learning. But allowing us to do this will also save on facility costs versus being on 160s. We won't have to file surface commingles on different proration units, and we'll be able to -- any well within the same 320 will then be able to share the same surface facilities.

Q. And the Wolfcamp is a low-permeability reservoir?

A. That's correct.

Q. And so that is one of the main reasons 330 setbacks -- 330-foot setbacks won't affect any offset operator?

A. Correct.

Q. And you got to it. If the application is approved -- you already mentioned surface facilities -- one set of surface facilities for a single 320-acre well unit. At this point in development -- I'm sure you discussed this with Matador -- certainly Mewbourne isn't certain how many wells will be drilled in what different depths of the Wolfcamp at this point?

A. I think our spacing is unknown. We have quite a reasonable range right now what we expect, and we do know it's going to be more than one well per 320. And we're going to need to space them tighter than 1,320 [sic] feet between wellbores, and that's why we're here today. But we are still learning.

Q. But with allowing the 320 acres, it gives a lot more flexibility with respect to well locations?

A. That's correct.

If we put a quarter-quarter line in the middle of each of those 320s, if we determine that six wells per section is the proper spacing, we would not be able to develop it on 160s. And so I do know if we go to go 160s, we will have waste just because of the creation of additional boundaries that we'll have to work around.

Q. And with the current 660-foot setbacks and, of

course, when you get into the intervals within a well unit, that's what's leading Mewbourne, Matador and other operators to file a large number of NSL applications?

A. That's correct. It seems to be pretty standard in the industry now, both Texas and southeast New Mexico, to be going at least 330 feet from the boundaries.

Q. Okay. Let's talk about -- in that regard, Mewbourne and Matador are drilling wells at various depths throughout the Wolfcamp at this point?

A. That's correct.

Q. Not just in one hot zone that people see?

A. Right.

I would say the majority of the wells have been drilled horizontally in roughly the same interval in the middle of the Wolfcamp, but we are testing. I believe I've seen seven different distinct target zones. We don't know how they relate to one another, though. The first -- the first target zone, the second -- can you drain the first target zone with the second zone and the third with the second? And that's why creating severances within the -- within the Wolfcamp would be a difficult thing to do.

Q. Let's discuss allowables just briefly. You're asking that this be declared a gas pool?

A. That's correct.
Q. And under a normal -- under statewide rules, a gas pool does not have any oil allowable here?
A. Correct.
Q. And that's what you're asking for here?
A. That's correct.
Q. And is it your understanding even if a well, either a horizontal or a vertical, was drilled in one of the 320-acre units and appeared by all evidence to be an oil well, it would still be considered a gas well spaced on 320 acres?
A. That's correct.
Q. And with no allowable?
A. Correct.
MR. BRUCE: And that was taught to me by a certain guy named Mike Stogner, Mr. Carr's twin brother.
(Laughter.)
MR. CARR: I have a response, but we'd have to ask that it be stricken from the record.
(Laughter.)
Q. (BY MR. BRUCE) Mr. Robison, do you believe that the creation of the Downey-Wolfcamp Gas Pool and the institution of the special rules will simplify development and operation of the pool compared with having dozens and dozens and dozen of separate pools in

this area?

A. Yes, it will.

Q. And do you believe that the granting of this application is in the interest of conservation and the prevention of waste?

A. Yes.

Q. And were Exhibits 14 through 21 either prepared by you or under your supervision?

A. Yes, they were.

MR. BRUCE: Mr. Examiner, I move the admission of Exhibits 14 through 21.

MR. CARR: No, sir.

EXAMINER JONES: Exhibits 14 through 21 are admitted.

(Matador/Mewbourne Exhibit Numbers 14 through 21 are offered and admitted into evidence.)

MR. CARR: No questions.

CROSS-EXAMINATION

BY EXAMINER JONES:

Q. Do you have any idea of what pressures you're getting when you drill into this reservoir?

A. Yes. The Wolfcamp in this area is overpressured. I think we've seen gradients from .6 to .75 psi per foot.

Q. Okay. Okay. What abandonment pressure would you assume within -- I guess within the frac complex of one well?

A. That's a difficult question with horizontal wells and unconventional wells.

Q. Okay.

A. As you know, your drainage is a lot different. It's -- basically, we're only draining a few feet away from the rock we touch with a frac, and so you're not really pulling down a reservoir pressure in a traditional sense. So I think in a lot of instances, I think it would be how much time you're going to leave the well shut in. And probably, maybe if I was ballparking, 1,000 pounds abandonment when you get a tighter reservoir. It would be difficult to draw it down to much lower than. But it's so early in the life of this play, it's difficult to say.

Q. Those samples you did for reconstituted PVTs, were you able to get a -- draw a curve on -- on the -- actually how it -- so just calling it retrograde gas condensate [sic] kind of decide where -- where the curve is on that or --

A. Are you talking about like a phase envelope?

Q. Phase envelope.

A. Yes. I don't -- I don't believe we actually

got one, but what we're seeing, though, is that the initial reservoir pressure is above that dew point. So at its initial state, it's all gas in the reservoir.

Q. Okay. I guess -- so how close would you need to drill for the wells to actually be in communication with each other so that you might take a section and drill it up real close and then maybe reinject the gas so you could recover more from your reservoir?

A. Right. I don't know that we know that yet. I know it's going to be less than 880 feet between wells.

Q. Okay.

A. But I don't think we have an answer to that yet.

Q. Okay. Well, speaking of that, the stress magnitude and direction, is your frac height higher than your frac length? In other words, your half length of your frac if you consider it going laterally --

A. Right.

Q. -- is that not as high as it's going vertically?

A. No. I think we're getting similar heights to lengths or less height to length. But it depends on where in the formation we target the lithology. Do you have frac barriers? Do you have some -- carbonates come and go in different areas. The carbonates provide

pretty good frac barriers. Since we're not targeting those -- I mean, there are a lot of variables.

Q. Okay. So your behavior on your fracs when you do it -- so basically you want to drill stand-up wells, north-south wells?

A. We're open -- within this boundary, I think we're comfortable drilling either east-west or north-south.

Q. And your fracs go off about the same? I mean, when they turn and hit the stress direction, they're --

A. Correct.

Q. Why didn't you ask for the 200-foot heel-and-toe relief here?

A. Well, I guess a few things. We've never seen that done in New Mexico. That was something that I've only seen in Texas. Since we started preparing this application, I've seen a few isolated cases now. We've noticed, as an offset operator, where operators are doing that in, I believe, the Avalon, but maybe in the Wolfcamp, also.

Q. Okay.

A. But with the frac orientation being northeast-southwest in Texas, I think the orientation starts to change a little bit.

Q. Oh, okay. Okay.

So is your company big into gas processing? In other words, are you -- you own the processing facilities, or do you like to have a third party take care of that?

A. We do not own the -- I believe Matador's putting in a gas processing plant, but Mewbourne does not. We use third party.

Q. Okay. But it sounds like there is a lot of money in the liquids, you know, the propane and the --

A. Correct.

Q. -- butane and everything.

So is that true, that's a lot of what you're getting when you drill these wells? So by the time they get to surface, they're back into the -- well, the reservoir's actually going to change as the pressure goes down --

A. Right.

Q. -- itself, which is not good?

But you're actually drilling these for liquids, is that correct --

A. Yes.

Q. -- economically?

A. The liquids make it -- if it was just the gas component, we would -- these would not be economical wells. But, I mean, a lot of the wells we're drilling

have EURs of 4 to 5 bcf of gas.

Q. Oh, they do?

A. So there are significant reserves there in the Wolfcamp.

Q. Oh, okay.

So how would you manage this reservoir the best way? You're the exploration manager now, but you're also a reservoir engineer --

A. Yes.

Q. -- so how would you -- what would you do to this reservoir to get the most out of it --

A. Right.

Q. -- and keep from getting laid off from your company because you spent so much money?

A. I would say we're still learning there. We're testing choke management to see if we get additional liquid recoveries. If we can -- the fundamental of a retrograde gas reservoir is you want to stay above that dew point for as long as possible. You want the hydrocarbon molecules migrating out of the formation as a gas, and you don't want the liquid to start dropping out of the formation. You could start having some condensate blockage and decrease in relative perm.

So Mewbourne, as a company, we are restricting our wells initially, and we're trying to

learn what that -- the optimum rate to produce that is. Again, we're changing frac size. We're changing lateral lengths. We're doing a lot of different things. We try to just be gradual in opening chokes, and I believe Matador does the same thing. And we don't go to full open choke from the beginning. So some of our wells have been on a couple years, and they still have some choke on them.

Q. So it's critical to get a good frac job and kind of get -- so do you drill a bunch of wells and frac them all at the same time?

A. I think that's ideal. If not, you create pressure sinks, where if you get too close to a well, then you'll get a preferential frac direction towards that pressure sink. So yeah, ideally, we'd probably drill this whole thing at once and frac it all at once, and that's not realistic. I know Matador's doing it and Mewbourne is now, where we're drilling multiple wells at a time and trying to frac them together.

Q. What about pilot holes? Do you plan on drilling a certain number of per section?

A. No. The reservoir is so continuous across this area and there are so many existing vertical wells, it's pretty easily mappable.

Q. Oh.

A. And being -- there is not a lot going on structurally. I don't know of many faults through the area, so we're able to predict pretty well without drilling pilot holes. And to date, Mewbourne has not drilled any pilot holes in the Wolfcamp. We haven't felt it was necessary.

Q. Do you have any models set up? And you have all the data you need for the relative perms and the fluid -- all the fluid data or updating you need to best predict?

A. I don't think we need to. We don't have any core date or anything on the Wolfcamp right now. The reservoir fluid data we do have from the PVT now.

Q. So the dry mechanism is just gas expansion in the reservoir then?

A. Right.

Q. And there are no rates -- you don't consider this to be a rate-sensitive situation at all?

A. Like production rate sensitive?

Q. Yeah, except for the limitations of what you talked about earlier.

A. Right. Right. And yeah, a lot the reason we are choking holes back is due to the saltwater disposal capacity, pipeline capacity. I mentioned a lot these wells are having to vent gas. There are gas take-away

issues in this area. So it's not always just reservoir management. But it's causing us to be conservative, I think, with our choke management.

Q. Okay. So both of your companies have gotten together and you agree on this proposal?

A. Yes.

EXAMINER JONES: Mr. Brooks?

EXAMINER BROOKS: No questions.

EXAMINER JONES: Mr. Carr, any more questions?

MR. CARR: No, sir.

EXAMINER JONES: I don't think we have anything else.

We might ask Karen to say a word or two, if she's still on the line.

Karen?

MS. SHARP: I'm still here. Thank you. I do have a couple of questions, but it's mostly clarification because I don't understand some of these procedures here. I'm definitely not an expert in any of this, but when you start talking about paperwork, my ears perked up little about bit.

EXAMINER JONES: Well, first of all, is the Applicant okay with her asking a question or two?

MR. BRUCE: Yes.

EXAMINER JONES: Okay, Karen. Comments mainly, but, you know, if you have -- because we're going to continue this for four weeks.

MS. SHARP: I just did have one comment concerning the paperwork, and that is if there is going to be two on two [sic], a plat required for each well because of the pool change, the name of the pool change and the pool code as well. And, of course, that's going to affect -- affect taxation and revenue, too. So I don't know exactly what all we're going to have to have, but I know each well involved is going to have to have a C-102 filed just for the pooling name change, if nothing else. You know, if the acreage stays the same, the dedication will -- you know, that's -- that's to be determined also. But just for the pool name change, it's going to have to be filed for that reason.

EXAMINER JONES: Okay.

MS. SHARP: I also was curious about -- you talk about wells drilled and wells to be drilled. Well, what about the wells currently permitted and not drilled? Will they fall under this -- can they keep the same acreage, or will they be required to change prior to drilling the well? I wasn't sure about that. I looked through the papers, and I couldn't find anywhere where it says "abolish." So I'm not -- I'm not

real clear on that either. In the next four weeks or whatever the continuation is on this, I'm sure you guys can straighten me out.

EXAMINER JONES: Okay. Okay. Thanks, Karen. And we will ask the Applicant to get their -- I guess one Applicant here, but two companies basically spearheading this. So maybe a regulatory person can talk to -- you know, make sure the BLM and the State, OCD --

MR. BRUCE: We'll do that.

EXAMINER JONES: Anything else, Karen?

MS. SHARP: That was all. Thank you.

EXAMINER JONES: Thank you for listening.

MR. BRUCE: That's all I have, Mr. Examiner.

EXAMINER JONES: Okay. Thank you-all for coming.

And with that, we'll continue case 15535 until September the 15th.

(Case Number 15535 concludes, 10:46 a.m.)

STATE OF NEW MEXICO
COUNTY OF BERNALILLO

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I, MARY C. HANKINS, Certified Court Reporter, New Mexico Certified Court Reporter No. 20, and Registered Professional Reporter, do hereby certify that I reported the foregoing proceedings in stenographic shorthand and that the foregoing pages are a true and correct transcript of those proceedings that were reduced to printed form by me to the best of my ability.

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