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 CHESAPEAKE PERMIAN, L.P., FOR COMPULSORY POOLING AND AN UNORTHODOX OIL WELL LOCATION, LEA COUNTY, NEW MEXICO	CASE NOS. 13,287
APPLICATION OF CHESAPEAKE PERMIAN, L.P., FOR COMPULSORY POOLING AND AN UNORTHODOX OIL WELL LOCATION, LEA COUNTY, NEW MEXICO	and 13,288
	(Consolidated)

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner

June 24th, 2004

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID R. CATANACH, Hearing Examiner, on Thursday, June 24th, 2004, at the New Mexico Energy, Minerals and Natural Resources Department, 1220 South Saint Francis Drive, Room 102, 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

June 24th, 2004
Examiner Hearing
CASE NOS. 13,287 and 13,288 (Consolidated)

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E X H I B I T S

Case 13,287

Applicant's	Identified	Admitted
Exhibit 1	6	14
Exhibit 2	7	14
Exhibit 3	10	14
Exhibit 4	11	14
Exhibit 5	18	27
Exhibit 6	21	27

Case 13,287

Applicant's	Identified	Admitted
Exhibit 1	12	14
Exhibit 2	12	14
Exhibit 3	-	14
Exhibit 4	-	14
Exhibit 5	25	27
Exhibit 6	26	27

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A P P E A R A N C E S

FOR THE APPLICANT:

KELLAHIN & KELLAHIN
117 N. Guadalupe
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Santa Fe, New Mexico 87504-2265
By: W. THOMAS KELLAHIN

* * *

WHEREUPON, the following proceedings were had at 9:44 a.m.:

EXAMINER CATANACH: All right, at this time I will Call Case 13,287, which is the Application of Chesapeake Permian, L.P., for compulsory pooling and an unorthodox oil well location, Lea County, New Mexico.

Call for appearances in this case.

MR. KELLAHIN: Mr. Examiner, I'm Tom Kellahin of the Santa Fe law firm of Kellahin and Kellahin, appearing on behalf of the Applicant.

In addition to this case, for purposes of hearing, Mr. Catanach, we would ask that you also call the next case and that for purposes of hearing, the testimony be consolidated with separate orders issued for each case.

EXAMINER CATANACH: Okay, at this time I'll call Case 13,288, Application of Chesapeake Permian, L.P., for compulsory pooling and an unorthodox oil well location, Lea County, New Mexico.

Call for additional appearances in Case 13,287 or 13,288.

There being none, do you have witnesses, Mr. Kellahin?

MR. KELLAHIN: Yes, sir, I have two witnesses to be sworn.

EXAMINER CATANACH: Will the witnesses please

stand to be sworn?

(Thereupon, the witnesses were sworn.)

MR. KELLAHIN: Mr. Examiner, our first witness is Lynda Townsend.

LYNDA F. TOWNSEND,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Ms. Townsend, for the record, would you please state your name and occupation?

A. Lynda Townsend, I'm a senior landman for Chesapeake Permian, L.P.

Q. Where do you reside, ma'am?

A. Guthrie, Oklahoma.

Q. On prior occasions have you qualified as an expert petroleum landman before the Division?

A. Yes, I have.

Q. And you've testified in that capacity before?

A. Yes, sir.

Q. Have you been involved in prior compulsory pooling cases?

A. Yes, sir.

Q. Pursuant to your employment for Chesapeake, have you assumed the land responsibilities for consolidating

these interests for these wells from the prior interest owner, which was Concho Oil and Gas?

A. Yes, sir, I have.

Q. There's been a transition from Concho to Chesapeake?

A. Yes.

Q. When we look at the exhibits, have you satisfied yourself as to the ownership within each of the 40-acre oil-spacing units?

A. Yes, sir.

Q. And for both cases have you made yourself aware of who the offsetting interest owners are towards whom each of these two wells encroaches?

A. Yes, sir.

MR. KELLAHIN: Mr. Catanach, we tender Ms. Townsend as an expert petroleum landman.

EXAMINER CATANACH: Ms. Townsend is so qualified.

Q. (By Mr. Kellahin) Ms. Townsend, let's look at Exhibit 1 from Case 13,287, which is the State "22" 2 well. Let's start with Exhibit 1 and have you identify for us what we're seeing with this display.

A. Yes, sir. With the square red box in the middle, that's the 40-acre spacing unit that will be dedicated to this well, and it also shows the unorthodox well location in the small red circle. The 40-acre units surrounding

that are the offsetting 40 acres and the people that own those, the entities that own those.

To the direct north is Yates Petroleum, and Chesapeake owns the other remaining units around us. And those units around us have the very same interests.

Q. The red box is the standard location window within the 40-acre spacing unit?

A. Yes, sir.

Q. So the black outline for that area has an ownership that's the same as the other 40-acre tracts that indicate Chesapeake as the operator?

A. Yes, sir.

Q. So we have common ownership as to two of the 40s towards whom the well encroaches?

A. Yes, sir.

Q. Let's set that aside for a moment. Let's look at Exhibit Number 2. Starting with the first page of Exhibit Number 2, can you describe for us if we're looking at a tabulation of all the interest owners within the proposed 40-acre spacing unit?

A. Yes.

Q. This well is intended to be drilled from the surface down through the base of the Wolfcamp?

A. Yes, sir.

Q. And when we look at that ownership, it's as

represented on the first page of Exhibit Number 2?

A. Yes.

Q. Have you satisfied yourself to the best of your knowledge that the names and addresses for these parties are correct?

A. Yes, sir.

Q. And that you've tabulated to the best of your knowledge the correct working interest percentage in the spacing unit?

A. Yes.

Q. As we move across the display, there's a column saying Participate.

A. Uh-huh.

Q. There's a series of yes's and then there's some no's?

A. Uh-huh.

Q. What do those represent?

A. Those were the elections under the proposal letter. The yes's have agreed to participate in the well, the no's do not want to participate in the well.

Q. The no's are electing not to participate pursuant to a contract?

A. It will be pursuant to a JOA that is being negotiated right now.

Q. So the only interest owner on this list for which

you're seeking to force-pool their interest is the first one, this Matrix Production Company and Matrix New Mexico Holding, L.L.C.?

A. Yes, sir.

Q. Let's turn to page 2 of Exhibit 2 and have you identify what we're seeing on that display.

A. This was the proposal letter that was sent out on the State "22" Number 2 well. It was sent out by Michael Braun, who's a consulting landman for us, and it was under my direction.

Q. And when we look at page 3, there's a tabulation of owners?

A. Yes.

Q. This represents all the owners, then, in the spacing units?

A. Yes, sir.

Q. Following that, did Mr. Braun send these interest owners a proposed AFE?

A. Yes, he did.

Q. Is it attached to this package?

A. Yes, it is.

Q. Is this AFE still the one intended to be used by Chesapeake for drilling the well?

A. Yes, sir.

Q. And is it identical to the one that was used

under Concho's name?

A. Yes.

Q. When we look at the operator, we have a different ownership entity from the entity that proposes to operate the well?

A. Exactly.

Q. The ownership company is called what?

A. The ownership company is Chesapeake Permian, L.P.

Q. And the operating company that you asked to be designated the operator is -- ?

A. Chesapeake Operating, Inc., who's the sole general partner.

Q. To finish Exhibit 2, then, attached to that are the return receipt cards --

A. Yes.

Q. -- for the well-proposal letters?

A. Yes.

Q. Let's turn to Exhibit 3 now, and explain to Mr. Catanach the -- a summary of the merger whereby Chesapeake Permian, L.P., acquired under this merger concept the Concho interest.

A. In March of 2004, Chesapeake Permian, L.P., Chesapeake Permian Corporation, merged with Concho Exploration, Concho Resources, Concho Oil and Gas, and Concho Resources, G.P. As a result, the surviving entity

was Chesapeake Permian, L.P.

Q. And then when we look at the second page of the certificate, down at the bottom we find that Chesapeake Operating, Inc., is the sole general partner of the Chesapeake Permian, L.P., limited partnership?

A. Yes, sir.

Q. And then finally with regards to this set of exhibits, there's an Exhibit Number 4.

Have you reviewed this Exhibit Number 4 and satisfied yourself that notice of this hearing has been sent to all the parties for whom you seek to have force pooling?

A. Yes, sir.

Q. And are you also satisfied yourself that notice has been sent to Yates Petroleum Corporation for the well location and, in addition, pursuant to Division Rules, you've notified all your working interest owners in the adjoining tracts that Chesapeake also operates?

A. Yes.

Q. Let's turn now to the second case, which is 13,288, and it deals with the Burrus "27" 9 well.

A. Yes, sir.

Q. Does your testimony as to the first case apply in all respects to the second case?

A. Yes, sir.

Q. Again, let's illustrate for Mr. Catanach on Exhibit 1, what are you demonstrating here?

A. This again is the plat that shows the 40-acre spacing unit to be dedicated to this well, which is the southeast northwest, it will be Unit F, and the 40-acre surrounding units, which are all owned by Chesapeake and have common ownership with the southeast northwest.

Q. On Exhibit 2, then, have you done in a similar fashion as to the first case --

A. Yes, sir.

Q. -- a tabulation?

A. Yes.

Q. And when we look at the percentages, Chesapeake has consolidated 69-plus percent of the working interest owners?

A. Yes.

Q. The outstanding interest is this Matrix group?

A. Yes.

Q. Have you had conversations about both these wells with representatives of Matrix?

A. We've had numerous conversations, both Michael Braun and myself.

Q. As a result of your last conversation with them, when did that take place?

A. It would have been last Friday.

Q. What did they advise you?

A. They advise that we would go ahead and pool them, that they would use the pooling time as just an extension of the proposal time and the election time.

Q. Is the drilling sequence for these wells such that it creates the opportunity for the Matrix group to, in effect, ride the well down?

A. Yes.

Q. So there's a possibility that they could learn the results of the well before their 30-day election period expires under the pooling order?

A. Yes, and that's already happened in the past.

Q. Do you have a recommendation to the Examiner for a risk factor penalty to apply in this case?

A. Yes, sir.

Q. The Division allows a maximum of cost plus 200 percent; is that what you're seeking?

A. Yes.

Q. Do you have a recommendation to the Examiner for overhead rates to apply to these two wells?

A. Yes, sir, we just pooled the Harris 3 C Number 1 and an order was issued on May 3rd, in which we had asked for $6500 drilling overhead and $600 monthly.

Q. Does that order also include an escalator provision --

A. Yes.

Q. -- for your overhead rates?

A. Yes.

MR. KELLAHIN: Mr. Catanach, for your information, that is Case 13,247 and it is Order R-11,236. And if I may approach your bench, I'll give you a copy.

EXAMINER CATANACH: Certainly. Thank you.

Q. (By Mr. Kellahin) Ms. Townsend, that prior case involved pooling the same party that you're seeking to pool in these two cases?

A. Yes, sir.

MR. KELLAHIN: Mr. Catanach, that concludes my examination of Ms. Townsend.

We move the introduction of Exhibits 1 through 4 in each of those cases.

EXAMINER CATANACH: Exhibits 1 through 4 will be admitted.

EXAMINATION

BY EXAMINER CATANACH:

Q. Ms. Townsend, in the case of the Burrus well, the offset operators -- in that situation are they again common --

A. Yes.

Q. -- with the spacing unit?

A. Yes, sir.

Q. But you did notify the working interest owners anyway --

A. Yes.

Q. -- of that unorthodox location?

A. Yes.

Q. Okay. I'm noticing some discrepancy in the well locations between -- if you go to the first case, your initial letter proposal is a different well location than what you have advertised in this case today?

A. Well, that was the original location before it was staked off of the XY's, and we had to move it due to some surface problems from the 300 to the 217, and all the working interest owners are aware of that also.

Q. They are all aware of it?

A. Yes.

Q. So the location that's reflected in the advertisement for the case, that is the true location?

A. That is the correct location, yes, sir.

Q. For both of the wells?

A. Yes.

Q. And all of the working interest owners and offset operators are aware of the new location?

A. Yes.

MR. KELLAHIN: That's reflected in the applications that were sent to all these parties.

Q. (By Examiner Catanach) Okay. And the only party we're pooling in both cases is Matrix Production Company?

A. Yes, sir.

MR. KELLAHIN: It appears in two different ways. They have a Matrix Production Company and then a Matrix New Mexico Holdings, L.L.C.

Q. (By Examiner Catanach) Okay, and you wish to designate Chesapeake Operating, Incorporated, the operator of these wells?

A. Yes, sir.

Q. Okay. I just want to verify the overhead rates as $6500 drilling and $600 producing?

A. Uh-huh, yes, sir.

Q. Okay. Have all the other interest owners that have agreed -- have they actually signed agreements?

A. They have.

Q. Okay.

A. They have.

EXAMINER CATANACH: I think that's all I have, Mr. Kellahin.

MR. KELLAHIN: Okay, thank you.

THE WITNESS: Thank you, sir.

EXAMINER CATANACH: Thank you.

MR. KELLAHIN: At this time, Mr. Catanach, we'd call Mr. David Godsey.

DAVID A. GODSEY,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. For the record, sir, would you please state your name and occupation?

A. David Godsey, I'm a geologist with Chesapeake Energy.

Q. On prior occasions, Mr. Godsey, have you testified as an expert geologist before the Division?

A. Yes, I have.

Q. Pursuant to your employment with Chesapeake, are you the principal geologist that has recommended to your management the drilling of these wells at these unorthodox locations?

A. Yes, I am.

Q. And has management accepted your recommendations?

A. Yes.

Q. Are we about to look at a summary of the technical reasons that cause you to believe that the proposed unorthodox location is the optimum location in each of these 240s in which to drill this well --

A. Yes.

Q. -- these wells?

MR. KELLAHIN: We tender Mr. Godsey as an expert petroleum geologist.

EXAMINER CATANACH: He is so qualified.

Q. (By Mr. Kellahin) Let's turn to Exhibit 5 of the first case, which is 13,287, and we're looking at the State "22" 2. Start off and tell us what we're seeing before we talk about the details.

A. Okay, this is a map essentially of the net porosity isopach of this area, specifically Section 22 is what's shown on this map. The yellow background is merely a representation of the gross Chesapeake leasehold, indicated in yellow. The colors from blue through green to orange to red indicate increasing amounts of porosity as gleaned from a combination of well control and 3-D seismic interpretation.

Q. Let's step back a minute. Both of these wells are targeted to be Wolfcamp oil wells?

A. Yes, they are.

Q. When we look at this kind of 3-D seismic interpretation, we often see this displayed as an indication of structure. Is that what we're seeing here?

A. No, it's not, this is not a representation of structure at all. This is a representation of porosity development in the Trinity, quote, unquote, Burrus pay, which is the producing zone for this area.

Q. We'll come back and have you illustrate to Mr. Catanach how you do that, but first of all let's look at Exhibit 5 as the summary. If we look within the red circle, what does that -- the red square, what does that represent?

A. The red square is the orthodox box for that 40-acre unit.

Q. While it's very difficult to see, Mr. Godsey, can you describe for Mr. Catanach the approximate unorthodox location as it would be reflected on this display?

A. Yes, the -- I do apologize, that location doesn't show up very well on this display, but if you look very closely, in the lightest green color immediately to the northeast outside of the orthodox box, just inside there you can very lightly see a very light red circle, which would represent the unorthodox location we requested.

Q. On my display, Mr. Godsey, the red circle turns out to be a very faint black line.

A. Very faint. I guess the red on top of the green turns out to be more black in the display, I guess.

Q. Let's talk about the color code. When you're looking at this type of color code, which is the best possible color that will give you the greatest opportunity to intersect the Wolfcamp with a zone of the greatest potential porosity?

A. The hotter colors are the areas of greatest porosity development. The cooler colors are the areas with the least amount of porosity development. So in this color scheme the dark blue which you see there would be poorest porosity development, and it progresses up through the light blue to the turquoise color, through the green phase, into the orange, and then red would be the greatest amount of porosity development.

Q. For this spacing unit, it appears from this display that the greatest opportunity is going to be in an area that's the light green?

A. That's correct, for this location.

Q. Is it appropriate for the Examiner in this case to apply the maximum risk factor penalty of 200 percent?

A. I think so. This is a risky play where we're utilizing, as well as we can, state-of-the-art seismic data to pinpoint locations to give us the greatest chance of making a commercial well.

Q. On this display there is a -- I would call it a cross-section line. There's a dashed black line that runs from the western portion up through the standard location on up to the north. See that line?

A. Yes.

Q. What does that represent?

A. That line is a seismic line that we extracted out

of the 3-D seismic volume to illustrate what we're mapping on and the relationship between the porosity development and nonporosity development within the pay interval.

Q. Let's go to Exhibit 6. That line is, then, what we're beginning to show on Exhibit 6?

A. Yes, Exhibit 6 is that line represented -- you see on the map. It comes from the west -- in an east-west direction to approximately just past the center point of the 40-acre unit, and then turns to the northeast, goes through our location and off the edge of the map.

Q. Let's start at the top of the map. There is a rig displayed on the top, and then there's a red line projected down from that point, going vertically through the cross-section down. What does that line represent?

A. Right, where the rig falls on the seismic line and the red line projecting below it, that is a representation of the location that we're requesting to drill.

Q. Can you use that line and take us vertically down to where you see a point that represents the interpreted top and the bottom of this Wolfcamp pay interval you're trying to access?

A. Yes, as you follow that line down the page, you'll come to a hotter-colored area with a red line through it. It's labeled "Trinity 'Burrus' porosity" over

on the right side of the display. That hotter-colored area, which the location is centered in, is the porosity development that we interpret from the seismic data.

Q. Take us over to the left of that display, along that point, and show us where you would be if the well is required to be at the closest standard location.

A. Well, the closest standard location would fall, really, just to the left of the red line, which is the -- what we glean to be the maximum extent of the commercial porosity development. So it would fall, really, just into the greenish color on the seismic line.

Now, let me back up with one explanation here. The absolute color scheme you see on the seismic line and the color scheme on the map are not necessarily identical as far as blue being blue and green being green, et cetera. The reason for that is, on the seismic line we're seeing the entire color spectrum display of the amplitude of the seismic data, whereas on the map we're looking and applying color only to the portion that has an amplitude that would represent porosity. Otherwise, we'd have color -- otherwise you wouldn't see the yellow part, you'd have just, you know, bluer and bluer colors as you went through there.

But it still holds in the relative sense that the hotter colors are the more porous interval, and the cooler

colors are the nonporous intervals.

Q. Let's take this display, and starting with the projection of the unorthodox well location wellbore, going downward through the Trinity Burrus porosity, on downward, there's a point at which that projection intersects a horizontal line that's also red.

A. Yes.

Q. And below that, then, we have some shading of hot reds and yellows. What does that represent?

A. Well, the red line you see drawn through the seismic data is a seismic reflector that we can map on regionally throughout the area. It would approximate the well-known mapping horizon in New Mexico called the Double X marker. It's just a very good horizon to map on throughout the area. We can tie it continuously with the well control.

Now, below that, in that hotter-colored region that you see extending across the seismic line, that is an interval of the lower Wolfcamp that we call this area. There is some porosity development within it. There's also shale within it.

Now, shale can give you a similar-looking amplitude to porosity, so it is very -- well, it's very important to stay within the interval that you're working in, to interpret the porosity development. If you get off

into a different lithology, et cetera, then you could confuse a hot amplitude with the porosity when it's really not.

Q. So a standard location for this well, drilling through the Wolfcamp, would not intersect a marker below the red line that's indicative of Wolfcamp porosity?

A. Not in this case. Right in here there have been -- in Section 22 I believe there were two or three -- three other wells that went deep enough to see that lower Wolfcamp section, and there's no commercial production in that lower Wolfcamp section from those wells.

A case in point, the well that you see to the west of our location, the Field Greathouse Number 1, you see it -- it's depicted on the seismic line and on the map area there. It went all the way through that Wolfcamp section and found no commercial hydrocarbons in the lower Wolfcamp.

Q. So for the spacing unit that's the subject of this case, unless the well is drilled at the unorthodox location, you're not going to be able to access this zone of porosity in the Wolfcamp?

A. That is correct. A case in point here, if you look at that seismic line and go from our requested location in that hot-colored area, as you proceed to the left on the line you'll see we come out of the hot color

into the greens and then into blues. If you follow that all the way over to the Field Greathouse well, you'll see in that equivalent interval of the Trinity Burrus porosity, you'll see it's all blues and greens, and that is a depiction of no porosity development, or no commercial porosity development, within that interval, and that is what that well found. It is a dry hole.

Now, just below that where you do start to see some hotter colors below that blue and green, in that Field Greathouse, you can trace that interval all the way across the seismic line. It cuts -- and if you go actually below where our porosity is depicted on our requested location -- that is essentially the contact between the -- say the dolomite, which is the pay interval for this Trinity Burrus pay and the typical Wolfcamp lime horizon, which many workers will map on that contact between dolomite and limestone.

Q. Let's move over into the second set of exhibits for the second case and look at Exhibits 6 and 7 [*sic*] in Case 13,288 for the Burrus "27" 9 well. Starting again with Exhibit 5, it gives us the overview of the 3-D seismic display.

A. Right, the color-scheme, the setup on both maps are the same. Again in red, you see the orthodox box depicted in the red square there on the map. You can see a

little more clearly this time the location that we're requesting at this hearing for the Burrus "27" 9, and again, you can see the porosity development depicted by the color isopaching here that we're trying to target with our location.

Again, you also see a seismic line on there running from southwest of the orthodox box, through that orthodox box and our location, turning and then going to -- in a north northwesterly direction, through the Burrus Number 7, which is a producing well to the north of our unit.

Q. Let's go to Exhibit 6 in this case and have you describe for us what you see on this summary.

A. Okay, Exhibit 6 is a seismic line, again, that you see depicted on Exhibit 5. Same color scheme and format as we saw on the previous seismic line.

Again, you see a drilling rig in red with a red line below that. That would be the representation of our requested location. As you follow that line down the seismic section, you'll see the hot-colored area with the red line drawn through it, and that is the development of the Trinity Burrus porosity we've interpreted in the seismic data.

As you follow that from our location to the east, you can see where that hot color disappears into greens and

then comes back in again, and then to the far right of the line you see the dashed line, which is the Burrus Number 7, which is a producing well in this Trinity Burrus porosity. And basically that gives you a good look at what a producing interval looks like in the seismic data.

Again, also, the deeper horizons below that in red, you can see the Wolfcamp Double-X marker, so you can see that this seismic section is very similar to the previous one shown.

Q. In each of these cases, Mr. Godsey, is the proposed unorthodox location superior to any location within the standard drilling blocks?

A. Absolutely.

MR. KELLAHIN: Mr. Catanach, that concludes my examination of Mr. Godsey.

We move the introduction of his Exhibits 5 and 6 in each of the two cases.

EXAMINER CATANACH: Exhibits 5 and 6 in each of the cases will be admitted as evidence.

MR. KELLAHIN: That concludes our presentation.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Godsey, how thick is this Trinity Burrus sand -- I mean, not sand but interval?

A. Well, the gross interval of pay gets up to

approximately 50 feet. The net porosity or net pay in productive wells ranges from a few feet up to around 30 on the high side, out of that 50-foot gross interval.

Q. What does the Burrus Number 7 have? Do you recall?

A. I was afraid you were going to ask me that, since I didn't bring the data. I'd be glad to get that information and send it to you.

At this point I can only guess, and I can guarantee you if I got the exact number right it would be a pure guess. It's somewhere in the 15- to 20-feet range, is my recollection, but I'd be glad to supply you that information.

Q. How do you determine what the commercial cutoff is for this porosity?

A. That's a good question. This is a -- it's not always very easy, but in this case we have a pretty good bit of well control to tie into the seismic data. We do have sonic logs on numerous wells that have been drilled in here, which help tie us very accurately to the seismic data itself by creating a synthetic seismogram.

Then we take the porosity logs, and by that I'm utilizing the neutron density logs, and look at the porosity development with them, within them. And we look at it -- it's kind of an iterative process where you look

at the amount of porosity that you have, and is the well good, bad or dry, and compare that to the amplitude that you see on the seismic data until you get something that fits.

A case in point would be on Exhibit 5 for the State 22 Number 2, that map. In the southeast corner of the map, Unit P, is the Burrus Number 2 well, drilled in a very large blue area. That was drilled by our predecessors in this property, and the vertical well actually is a noncommercial dry hole.

After attempting a completion and being unsuccessful in making a commercial well, then they went back in and cut a window and drilled a horizontal so that the end of the horizontal leg ended up in the southeast, in that hot color to the southeast quadrant of the map, made a commercial well there.

Utilizing that well and some of the other wells in here we can, you know, start figuring out what amplitude would represent how much porosity.

So effectively for a -- in this field, for this pay, effectively approximately a 10-percent porosity cutoff seems to fit the best with a combination of the seismic data, amplitude anomaly we see, and making a commercial well.

Another example in the well control here would be

on that same map, the State 22 Number 1, which is in Unit H on this. That well, again, is in a blue area. It had just slightly more porosity than the Burrus Number 2.

The Burrus Number 2 actually had zero feet of porosity greater than 10 percent, but it had about 8 feet greater than 6 percent and did not make a commercial well, whereas the State 22 Number 1 had just a few feet that reached 10-percent porosity.

After several larger and larger acid jobs, they did make a commercial well out of that -- this is our predecessors -- but it was a very marginal well -- I think it came in something on the order of about 30 barrels a day; it's currently doing around 15 barrels a day -- whereas the typical other Burrus wells out here with better porosity development and drilled in what we see as the hotter color region, some of them are 200-plus-barrel-a-day wells.

Q. Now, there's no scale on these maps. How do you determine what you're looking at here in terms of -- is this -- are you mapping porosity?

A. Correct. You're talking about no scale as far as the contour interval?

Q. Right.

A. Right, this would effectively be about a 5-foot contour interval.

Now, keeping in mind -- and I'm only giving that an approximation, because the resolution of the seismic data, when we're looking at a gross-interval of porosity development that is 50 feet or less, then, you know, the seismic data really limits you a little bit. When I say 5 feet, maybe it's more like 7 feet contour interval. It is kind of approximate.

What we do have a good handle on is, where is zero, which is depicted by the blue line there for commercial porosity.

Q. Now, this is 10-percent or greater?

A. We are using a 10-percent porosity cutoff, yes, and that ties in with wells that did or did not make commercial wells.

If you don't have -- we have not found a well right in here that has made a commercial well with less than 10-percent porosity. It had to have some 10-percent porosity or it did not make a well.

Q. So if you go by these maps, for instance, the State "22" Number 2 would have -- Can you estimate how many feet of porosity that would have?

A. I'm estimating it to have something in the order of 20 feet.

Q. And that, to you, would make a commercial well?

A. Yes, it would.

Q. If you moved back to a standard location anywhere in that window, you lose all of the effective porosity?

A. We might get anywhere from -- you know, we would have either zero up to maybe two or three feet, is our interpretation of that.

And if we have to drill there, my recommendation to Chesapeake would be not to drill. We have found this is another one of those plays that is very site-specific for your location.

Q. Okay. And with regards to the Burrus "27" 9, you're kind of looking at the same situation. Is that about the same thickness?

A. That's the same thing there. What we have -- you can see on that map just a small little segment of blue color in there, and we'd be trying to get something that's going to be on the order of, you know, two or three feet of porosity. And again, if I have to drill there I would recommend to Chesapeake not to drill the well.

Q. At your proposed location, what do you estimate that to be?

A. At the proposed location, I'm expecting on the order of 15 feet. I'd be glad to get 20.

Q. And a standard location you're probably looking at -- did you say two or three feet maybe?

A. At best, yes.

Q. The same for the "22" 2?

A. Yes.

Q. Have you guys utilized this method of trying to find the porosity, to drill wells?

A. Yes, we have. Utilizing this method we have drilled -- let's see, this year we've drilled four wells that -- we drilled two of them -- I'm sorry, three wells in the hotter-color region, anything from green to orange to red, and they're good wells.

One of them -- Let's see, we drilled in the section to the east, Section 23, we drilled the Burrus "23" 3, the "23" 5, and we just drilled and are completing now the Burrus "23" Federal Number 1, all in Section 23, and they've made commercial wells.

We have also drilled just recently the Harris "3" C Number 1 in Section 3 of the township immediately to the south. This is just a mile and a half or so away. The same stuff, the same horizons. There, we were in the -- kind of a blue-green color, and we have now temporarily abandoned that well, which supports our interpretation that we have to be in this green stuff, or we cannot find commercial pay.

Q. Is this basically the only target in the well?

A. Yes, it is.

MR. KELLAHIN: Okay, that's all I have, Mr.

Kellahin.

MR. KELLAHIN: That concludes our presentation.

EXAMINER CATANACH: Okay, there being nothing further, Cases 13,287 and 13,288 will be taken under advisement.

(Thereupon, these proceedings were concluded at 10:27 a.m.)

* * *

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 13287, 13288 heard by me on June 24 2004.

David R. Catanach, Examiner
Oil Conservation Division

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 June 30th, 2004.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 16th, 2006