STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

ORIGINAL

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

CASE NO. 14290

APPLICATION OF WILLIAMS PRODUCTION COMPANY, LLC, FOR APPROVAL OF AN EXCEPTION TO THE PROVISIONS OF RULE 19.15.16, OR IN THE ALTERNATIVE, A SPECIAL RULE FOR THE ROSA UNIT, THAT AUTHORIZES THE USE OF THE POINT WHERE THE DIRECTIONAL WELLBORE PENETRATES THE TOP OF THE PRODUCING INTERVAL WITHIN THE POOL AS THE PENETRATION POINT FOR THE DIRECTIONAL WELLS IN THE ROSA UNIT AREA, SAN JUAN AND RIO ARRIBA COUNTIES, NEW MEXICO.



REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

October 15, 2009
Santa Fe, New Mexico

BEFORE: TERRY WARNELL: Hearing Examiner
DAVID BROOKS: Technical Advisor

This matter came for hearing before the New Mexico Oil Conservation Division, Terry Warnell Hearing Examiner, on October 15, 2009, at the New Mexico Energy, Minerals and Natural Resources Department, 1220 South St. Francis Drive, Room 102, Santa Fe, New Mexico.

REPORTED BY: PEGGY A. SEDILLO, NM CCR NO. 88
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I N D E X



A P P E A R A N C E S

For the Applicant: OCEAN MUNDS-DRY, ESQ.
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Santa Fe, NM 87501

For OCD: MIKAL ALTOMARE, ESQ.
Oil Conservation Divison
Environmental Bureau
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HEARING EXAMINER: Let's go back on the record with Docket 36-09, and we'll call Case 14290, the Application of Williams Production Company, LLC, for the approval of an exception to the provisions of Rule 19.15.16, or in the alternative, a special rule for the Rosa Unit that authorizes the use of the point where the directional wellbore penetrates the top of the producing interval within the pool as the penetration point for the directional wells in the Rosa Unit area, San Juan and Rio Arriba Counties, New Mexico.

Call for appearances.

MS. MUNDS-DRY: Good afternoon, Mr. Examiner, Ocean Munds-Dry of the law firm of Holland and Hart, LLP, here representing Williams Production Company, LLC this afternoon, and I have one witness.

MS. ALTOMARE: Mikal Altomare on behalf of the Oil Conservation Division, and I have one witness.

HEARING EXAMINER: And that witness is Steve Heyden who is on the phone; is that correct?

MS. ALTOMARE: Correct.

HEARING EXAMINER: All right. Ms. Munds-Dry, you may call your first witness.

KENLEY McQUEEN,

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

DIRECT EXAMINATION

BY MS. MUNDS-DRY:

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

A. My full name is Kenley Haywood McQueen, Jr.

Q. And where do you reside, Mr. McQueen?

A. I reside in Tulsa, Oklahoma.

Q. And by whom are you employed?

A. I'm employed by Williams.

Q. And what is your position with Williams?

A. I'm the Regional Director for the San Juan Asset Team.

Q. Have you previously testified before the Division?

A. I have previously testified before the New Mexico Oil Conservation Commission and my credentials as an expert in petroleum engineering were accepted and made of record.

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

A. I am.

Q. And have you made an engineering study of the

area?

A. I have.

MS. MUNDS-DRY: Mr. Hearing Examiner, we would tender Mr. McQueen as an expert witness in petroleum engineering.

HEARING EXAMINER: Mr. McQueen is so recognized.

Q. Mr. McQueen, could you briefly summarize what Williams seeks with this application?

A. Yes. Under the current rules, obtaining the maximum horizontal lateral link in a spacing unit is not possible without an NSL application.

And the problem is exacerbated when the targeted formation is thick, particularly if the horizontal lateral is targeted in the lower portion of thick formation. We therefore are seeking an exception to Rule 19.15.16 for the Rosa Unit.

In the definitions of the penetration point and the producing interval, these alternative definitions will focus on the downhole geometry of the wellbore rather than the surface location of the well.

Q. And if you could please turn to what's been marked as Williams Exhibit No. 1 and identify and review that for the Examiner?

A. Exhibit 1 demonstrates our casing plan for our horizontal wells. The 7 inch intermediate liner is

cemented such that the end of that 7 inch is the beginning of our horizontal section.

The 7 inch liners are cemented in place to prevent any migration of gas, water or oil up the hole. After the 7 inch cement job sets, the 6 3/4 in hole is drilled and a 4 1/2 inch long spring is set but only cemented from the end of the 7 inch liner back to surface.

The 4 1/2 inch production liner is not cemented through the producing zone to minimize formation damage. Individual simulation stages along this 4 1/2 inch production casing is isolated by external swell packers.

Q. Thank you. And Mr. McQueen, would you turn to what has been marked as Exhibit 2 and identify this document for the Examiner?

A. Exhibit 2 are the current rules. And we would like to call your attention to two definitions, F and H.

Definition F is the penetration point. And under the current rules, it's defined as the point where a directional well penetrates the top of the pool from which it is intended to produce.

And the producing interval under the current rules is defined as that portion of the directional well drilled inside a pool's vertical limits between its penetration point and its terminus.

Q. And just so that we're all clear and we're all

on the same page -- I know the Examiners know the rules, but I just want to point out what constitutes a directional well, what we call a horizontal well, and what constitutes a standard location for a directional well, and if you could turn to the fourth page at the top where it gives the definition or explanation for the directional drilling project area, B-1.

A. Right. The definition of directional wellbore is directional drilling within a project area. The appropriate division district office may grant a permit to directionally drill a wellbore if the producing interval is entirely within the producing area or at an unorthodox location that the Division previously approved.

Q. So if I understand this correctly, then a horizontal wellbore is standard if the producing interval is entirely within the producing area, otherwise you need to seek an unorthodox location?

A. Correct.

Q. If you could then turn to what's been marked as Exhibit 3 and identify this document and describe the difficulty of complying with this rule in terms of Williams' current drilling program.

A. Exhibit 3 is intended to demonstrate our current dilemma which we will encounter in our Macus Horizontal program. The surface location is offset from the section

line by 660 feet, so it's a standard location. The Macus is 1,500 feet at this location, and the vertical depth of the Macus ranges from 5,500 feet to 7,000 feet.

My identified target for landing the horizontal section is at 6,800 feet. Under the current rules, the penetration point would be at 5,500 feet, and my producing interval would be from 5,500 to 6,800.

We believe that a better definition of our penetration point should be at 6,800 rather than the 5,500, and the producing interval should begin at the end of my 7 inch intermediate liner, which would be 1,160 feet from the section line. This point is labeled as First Perforation on Exhibit 3.

One of the unfortunate outcomes of the current rules is that as I decrease the distance of my maximum horizontal reach by the distance it takes me to take a turn to the horizontal section -- which is 500 feet in this example, this distance eliminates about 13 percent of what could be my maximum horizontal length of 3,960 feet which would still allow the 660 foot setbacks on each side of the horizontal lateral.

So the only way to overcome this dilemma under the current rules is to file an unorthodox NSL application so that the surface can be moved closer to the section line.

In spacing units where the Macus has been incorporated into a participating area, then the maximum horizontal length would increase to 5,260 feet, since I only had 10 foot setbacks.

Q. Okay. If you could then turn to Exhibit No. 4 and explain to the Examiner what this shows.

A. Exhibit 4 is our preferred method for approaching our horizontal Macus program by defining the penetration point as the end of the cemented intermediate liner or casing when the production string is uncemented or if the production string is cemented at the occurrence of the first perforation.

This definition for producing interval would also be modified accordingly and defined as the interval from the penetration point to the terminus.

These changes would alleviate the need to file an unorthodox NSL in order to maximize our horizontal length. It would also relieve us from locating the surface location in the same section as the horizontal section, thereby allowing us to utilize many existing well pads in the Rose Unit.

Q. Mr. McQueen, would the granting of this application allow for the more efficient production of reserves in the Rosa Unit?

A. Yes, it would.

Q. And would the granting of this application permit access to more of the producing formation resulting in more efficient production of these reserves, thereby preventing waste?

A. Yes, it would, by allowing us to have a longer horizontal section.

Q. Would the granting of this application impair correlative rights for any interest owner in the Rosa Unit?

A. No. In actuality, we believe that the interest owners' correlative rights are improved by the modification of these rules.

Q. Have you notified the BLM of this application?

A. Yes, we have notified the BLM and have received no objections.

Q. And have you discussed this application with the OCD Aztec office?

A. Yes. We actually discussed this in some detail with Mr. Heyden, the state geologist in Aztec, and believe that Mr. Heyden supports our application.

Q. And you understand Mr. Heyden is on the phone and will testify here shortly?

A. Yes.

Q. Has Williams notified all interest owners in the unit of this application?

A. Yes, we contacted all interest owners in the Rosa Unit.

Q. And have you had any response to this application?

A. We have had no objections from our interest owners to this application.

Q. And is Exhibit No. 5 a copy of the notice letter that was sent to all interest owners along with the notice affidavit, the affidavit of publication, as well as the list of interest owners and the return receipt?

A. That's correct.

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

A. They were.

MS. MUNDS-DRY: We move the admission of Exhibits 1 through 5 into evidence.

MS. ALTOMARE: No objection.

HEARING EXAMINER: Exhibits 1 through 5 are admitted.

MS. MUNDS-DRY: And that concludes my direct examination of Mr. McQueen.

CROSS-EXAMINATION

BY MS. ALTOMARE:

Q. I have just one clarification, and you may have addressed this and just in my attempt to try and process

all of the technical stuff I might have missed it.

I know that you addressed the starting point of -- the penetration point is to be located at the end of the intermediate cemented liner?

A. Yes.

Q. Am I phrasing that correctly?

A. Right.

Q. That was one of the things that you had actually clarified in your discussions with Mr. Heyden; is that right?

A. That's correct.

Q. Was one of the other things that you discussed with him the point that any uncemented casing that is exposed to the formation in the pool will have to comply with setbacks to be at a standard location?

A. Yes.

Q. Okay. I just wanted to clarify that point as well.

MS. ALTOMARE: I believe those are my only questions. Thank you.

HEARING EXAMINER: Thank you. David, any questions?

MR. BROOKS: No questions.

HEARING EXAMINER: Mr. McQueen, on your first exhibit there, in that 4 1/2 inch production casing,

typically how many different zones there will you perforate, and do you frac them individually?

THE WITNESS: We use external swell packers to isolate our simulation zones. We also stimulated this activity. But those are typically located 500 feet apart. So each 500 feet of lateral in the horizontal section receives a separate stimulation zone.

HEARING EXAMINER: So you just would go in there basically and break it up every 500 feet?

THE WITNESS: That's right.

HEARING EXAMINER: And stimulate frac it. Do you do any logging in the horizontal section?

THE WITNESS: We plan to on the initial wells, yes. We have already drilled and completed 30 some wells this summer, vertical section, so we feel that we have a fair representation of what the physical character looks like and where the sweet spots are in the Macus.

HEARING EXAMINER: Okay. And then if you do log that horizontal section, is that going to be MWD, or do you pump a wire line down there, or how do you --

THE WITNESS: You have to either pump -- if you log the horizontal section, you either have to pump your tool down the hole, or you have to run it in on coil tubing.

HEARING EXAMINER: But you wouldn't be doing any

measurements while drilling?

THE WITNESS: We do MWD for the directional landing of the wellbore. So we're receiving that information back as to depth and that sort of information.

But we are a partner with Bill Bear Company in a similar exploitation up in Gothic Shale in paradox spacing. And they've been employing this technology fairly successfully up there, and we plan to duplicate that down here in Rosa.

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

MS. MUNDS-DRY: Then neither do we.

HEARING EXAMINER: No other witnesses?

MS. MUNDS-DRY: No other witnesses on this case.

HEARING EXAMINER: Ms. Altomare, you may call your witness.

MS. ALTOMARE: I'd like to call Mr. Steve Heyden who is prepared to give testimony telephonically.

STEVEN HEYDEN,

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

DIRECT EXAMINATION

BY MS. ALTOMARE:

Q. Can you provide your full name for the record,

please?

A. Steven Heyden.

Q. And can you spell your last name, please?

A. H-e-y-d-e-n.

Q. What is your title with the Oil Conservation Division?

A. I'm the District geologist for District 3, the San Juan Basin.

Q. Okay. And are you familiar with the application now pending before the Hearing Examiners in this case?

A. Yes, I am.

Q. And have you spoken with Mr. McQueen or other representatives of Williams regarding their application?

A. Yes.

Q. What were your original concerns upon reviewing Williams' application in this matter?

A. Well, we had a discussion with Williams and the BLM and I about this, and the only reservation I had was that we had to start what we called the starting point of penetration at the last point of cementation of the string.

And it was either the 7 inch string or the liner was cemented at someplace below that. It really doesn't matter where the string penetrates the formation in question, it's where it's capable of starting production.

And we've commonly been using this with horizontal wells at this point. I had not considered it to be against the rules at all.

Q. And since the filing of the application, did you have an opportunity to meet with Williams representatives to discuss these concerns?

A. Yes.

Q. And were your concerns put to rest by discussing -- by what Mr. McQueen had to say about the starting point of penetration about what the intentions of Williams were with regard to this project?

A. Yes, they were. I might add that under our horizontal rules, a lateral has to begin and end at a standard location. It can cross boundaries in between, whether it's in one or more spacing unit, as long as it begins and ends at a standard location, it's considered to be a standard well.

Q. And the point that any uncemented casing that is exposed to the formation in the pool will have to comply with setbacks --

A. Right.

Q. -- to be a standard location. Was that another point that was discussed in the discussions with the BLM and with William representatives?

A. Yes.

Q. And are you now -- are any concerns regarding that now put to rest?

A. Yes. This works perfectly for me.

Q. Okay. Does the OCD and the Aztec district office have any remaining concerns regarding the proposal as it now stands being made in this application by Williams?

A. I think it's pretty much black and white. No concerns.

Q. Okay.

MS. ALTOMARE: No remaining questions for this witness.

MS. MUNDS-DRY: I have no questions for Mr. Heyden.

MR. BROOKS: Mr. Heyden, just to clarify what you said, that a horizontal well can go anywhere as long as it begins and ends at a standard location, that's not really quite true, is it, because it can never go more than 660 feet from the outer boundary of the project area, right?

THE WITNESS: They can pass through, we can string sections together into project areas.

MR. BROOKS: Yes, exactly, it's still -- the entire horizontal shaft has to be more than 660 feet from the outer boundary of the project area?

THE WITNESS: No, it can pass through an outer boundary of -- Oh, of the complete project --

MR. BROOKS: Of the complete project area.

THE WITNESS: Yeah, by stringing together spacing units.

MR. BROOKS: Yeah. But all of it has to be at least 660 feet from the outer boundary of the project area, right?

THE WITNESS: Unless it's in a federal drilling unit where the special pool rules allow it.

MR. BROOKS: Yeah. And then the unorthodox location rules don't apply --

THE WITNESS: Right.

MR. BROOKS: -- if it's in a federal exploratory unit that is -- That's true for most of the pools in the San Juan?

THE WITNESS: Yes.

MR. BROOKS: By special pool rules.

THE WITNESS: Yes.

MR. BROOKS: I was just trying to clarify, because what you said I thought was not quite correct.

THE WITNESS: It may have been an error of omission on my part.

MR. BROOKS: Yes. I just wanted to clarify the record. That's all I have.

THE WITNESS: Beginning and end of lateral was what I was --

MR. BROOKS: Yeah.

HEARING EXAMINER: Okay, Steve, I don't believe I really have any questions other than is there anything that we've talked about here this afternoon that you would like to explore further, or you're comfortable with what's been said?

THE WITNESS: I'm comfortable with what's been said.

HEARING EXAMINER: No further questions?

MS. MUNDS-DRY: No further questions.

MS. ALTOMARE: No further witnesses.

HEARING EXAMINER: Okay. Well, with that, then, we'll take Case No. 14290 under advisement.

(Whereupon, the proceedings concluded.)

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

_____, Examiner
Oil Conservation Division

STATE OF NEW MEXICO )
) ss.
COUNTY OF BERNALILLO )

REPORTER'S CERTIFICATE

I, PEGGY A. SEDILLO, Certified Court Reporter of the firm Paul Baca Professional Court Reporters do hereby certify that the foregoing transcript is a complete and accurate record of said proceedings as the same were recorded by me or under my supervision.

Dated at Albuquerque, New Mexico this 10th day of November, 2009.

PEGGY A. SEDILLO, CCR NO. 88
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