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: 14667

APPLICATION OF WILLIAMS PRODUCTION COMPANY LLC FOR A PROJECT AREA FOR THE MANCOS PARTICIPATING AREA IN THE ROSA UNIT, SAN JUAN AND RIO ARRIBA COUNTIES, NEW MEXICO.

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: WILLIAM V. JONES, Technical Examiner
DAVID K. BROOKS, Legal Examiner

July 7, 2011

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, WILLIAM V. JONES, Technical Examiner, and DAVID K. BROOKS, Legal Examiner, on July 7, 2011, at the New Mexico Energy, Minerals and Natural Resources Department, 1220 South St. Francis, Drive, Room 102, Santa Fe, New Mexico.

REPORTED BY: Irene Delgado, NM CCR 253
Paul Baca Professional Court Reporters
500 Fourth Street, NW, Suite 105
Albuquerque, New Mexico 87102

A P P E A R A N C E S

FOR THE APPLICANT:
HOLLAND & HART LLP
OCEAN MUNDS-DRY
110 N. Guadalupe, Suite 1
Santa Fe, NM 87501

FOR SAN JUAN BASIN RESOURCES:
JAMES BRUCE
P.O. Box 1056
Santa Fe, NM 87504

I N D E X

EXAMINER BROOKS: Okay. Very good. Back on the record. Okay. At this time we will call Case Number 14667, application of Williams Production Company LLC for a project area for the Mancos participating area in the Rosa Unit, San Juan and Rio Arriba Counties, New Mexico.

Call for appearances.

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

MR. BRUCE: Mr. Examiner, Jim Bruce of Santa Fe representing San Juan Basin Resources LLC. I have no witnesses.

EXAMINER BROOKS: Very good. Do you want to make an opening statement, Ms. Munds-Dry?

MS. MUNDS-DRY: You know how fond I am of opening statements, so this morning we will proceed to our first witness, if that's okay with you.

EXAMINER BROOKS: We need to -- how many witnesses?

MS. MUNDS-DRY: I just have one.

EXAMINER BROOKS: Do you have any witnesses?

MR. BRUCE: No, sir.

EXAMINER BROOKS: Witness, please stand and be sworn.

(Witness sworn.)

EXAMINER BROOKS: Please be seated. You may proceed.

MS. MUNDS-DRY: Thank you, Mr. Examiner.

KENLEY HAYWOOD McQUEEN JUNIOR

(Having been sworn, 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, Junior.

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

A. I reside in Tulsa, Oklahoma.

Q. By whom are you employed?

A. I'm employed by Williams.

Q. And what do you for Williams?

A. I'm the director of the San Juan Asset Team.

Q. Have you previously testified before the Division and were your credentials accepted and made a matter of record at that time?

A. I have, and they were.

Q. Are you familiar with the application that Williams has filed in this matter?

A. I am.

Q. Have you made a study, an engineering study of the subject lands and are you familiar with the status of the

lands in the area?

A. Yes, I am.

MS. MUNDS-DRY: We tender Mr. McQueen as an expert in petroleum engineering.

EXAMINER BROOKS: So qualified -- well, Mr. Bruce, do you have any objections?

MR. BRUCE: No.

EXAMINER BROOKS: So qualified.

UNIDENTIFIED SPEAKER: Would you like me to pull up the projector?

MS. MUNDS-DRY: It doesn't bother me if he wants to try it while we proceed. It's up to you, Mr. Brooks, if it distracts you -- or do you want to take a break?

EXAMINER BROOKS: Let's take a break and let him do that. We'll just sit here and -- unless he takes a long time.

UNIDENTIFIED SPEAKER: It shouldn't take very long.

(Recess taken.)

EXAMINER BROOKS: Let's proceed with this one, then.

MS. MUNDS-DRY: Okay. There we go.

Q. (By Ms. Munds-Dry) Okay. Mr. McQueen, I was about to ask you to summarize for the Examiners what Williams seeks with this application.

A. Williams is seeking primarily three considerations in this case. First of all, we are asking for the

designation of a project area to include all of the initial Mancos participating area within Rosa Unit. We are asking that the project area include both vertical and horizontal existing wells and future wells, and we are requesting that the future amendments to this project area be handled administratively.

Q. And, Mr. McQueen, if you could turn to what's been marked as Williams Exhibit Number 1, which we have on the hard copy, and if you could identify and review this exhibit for the Examiners, please.

A. Earlier this year we submitted to the BLM an application for a participating area in the Mancos Producing Interval, and we submitted this application based on geological inference rather than proration unit -- by proration unit. And the initial expansion area was approved by the BLM on May 19 of this year and basically includes all of this brown area in the Rosa. The total PA expansion area is 24,118.76 acres. The project area that we are asking for is slightly less than that, 23,948.75 acres. The difference in those two numbers is 170.01 acres, and that is due to some parties -- and you can see them right here in the white, Section 33, 34, and 32 North, 6 West, and in Sections 3, 4 -- excuse me -- 2, 3 and 4. There are some parties that never dedicated their acreage to the units, so the project area that we are asking for today excludes that 170.01 acres and

is 23,948.75 acres in size.

Q. I believe, Mr. McQueen, you can see it on the hard copy better. There is a very slight white strip in Section 2 that you can see a little easier?

A. Correct.

Q. And when was the participating area approved by the BLM?

A. The participating area was approved May 19, 2011.

Q. If you could turn to what's been marked as Williams Exhibit Number 2, and this should be our next slide, and review what this shows the Examiners.

A. We are asking for a project area that covers 43 contiguous sections in West Rosa. That's 79 contiguous proration units in West Rosa less the uncommitted acreage, and we have outlined those sections in the respective townships on this slide.

Q. And if you could refer to our next slide, which has also been marked as Williams Exhibit Number 3, and explain for the Examiners how Williams proposes to treat the uncommitted acreage in the unit and within the proposed project area.

A. For those parties that have not committed their acreage to the unit, we would utilize a 660 foot setback from the perimeter of the uncommitted acreage, and that will apply until and unless there is an agreement with the uncommitted

interest owners.

Q. Turn next to -- actually, before we do that, let's discuss for a minute -- and then we have an exhibit which is Exhibit Number 11, I believe, McElvain had originally expressed some concern with this application, and I believe the Division has received a letter from McElvain withdrawing their objection, but if you could look at what's been marked as McElvain Exhibit Number 11, Mr. McQueen, which should be the last document in your package there.

A. Yes.

Q. What is this document?

A. This is basically a letter agreement between Williams and McElvain outlining the fact that McElvain has withdrawn their protest to this.

Q. And has Williams -- and has Williams and McElvain reached an agreement as to how to allocate costs within that uncommitted acreage?

A. Yes. We have proposed a cost allocation procedure to McElvain. The same procedure will be proposed to all parties that are in the uncommitted acreage. And basically the proposal that we have made is that the cost allocation will be divided among the parties based on how much the horizontal lateral is in the uncommitted acreage compared to what the entire length of the horizontal lateral is. And the horizontal lateral length for this computation is defined by

the terminus or toe of the lateral out to the heel -- to either the first perforation or the first port that's used for stimulation.

Q. And is the idea there then would be in the uncommitted acreage to ensure all parties are paying their share of costs and receiving their share of production?

A. That's correct.

Q. Before we turn to our next exhibit, what are the rules, to refresh the Examiners, that govern the development of the Basin Mancos Pool?

A. The rules that govern the Basin Mancos Pool are 320 acre spacing. The wells drill no closer than 660 feet per spacing unit, and well density is four wells per spacing unit.

Q. Thank you. If you please turn to what's been marked as Williams Exhibit Number 4, and it should be our next slide, and explain the history of Mancos Development that Williams has undertaken in the Rosa.

A. We have been to the Commission a number of times in order to gain considerations toward the development of the Mancos Pool. And, very quickly, the first one of these is the Gallup was produced from several wells within Rosa, and there were a number of small Gallup pools that had been set up with within the confines of Rosa. The Gallup is a more or less undefined interval in the larger Mancos interval, and

our interest was in the entire Mancos interval, not in the Gallup pool. So with Order R-13063, we abolished all of the existing Gallup Pools within the confines of the Rosa Unit and established the Rosa-Mancos Pool.

The second thing we did was ask for exceptions to the horizontal rules with Order 13204. Basically this related to how the penetration point was defined in horizontal wells. Because the Mancos is a very thick formation, 1800 feet thick, in fact, we needed a penetration point defined where we entered the formation rather than having the penetration point defined at the top of the formation, because our primary interest in the Mancos Reservoir is in the lower section of the Mancos rather than at the top.

The next case that was approved by the Commission was regarding NSL locations, pre-approval for NSL locations. The next hurdle we had to cross was related to determination of commercial wells in our Mancos area. In order to bring acreage into a participating area or initially establish a participating area, the BLM has economic criteria, commerciality determinations, if you will, that must be met.

Our operating agreement in Rosa is probably the oldest one in the San Juan. It's 1948 vintage. It has different considerations than some of the later named or -- excuse me -- numbered units that are in San Juan, and there

was some amount of discussion that was required with the BLM and State Land Office as to how capital should be apportioned for the purpose of determining commerciality.

In a number of our wells we had had three zones producing, the Mesa Verde, the Mancos, and Dakota, and our position was -- and we believe was supported by our operating agreement, and eventually was also supported by BLM and SLO -- was that the appropriate way to do commerciality determination was Copas cost allocation of the respective costs to the individual zones in the well.

So once we cleared that hurdle, we had consensus with the BLM NSL on how to conduct our commerciality determinations. The wells, of course, have to be deemed commercial before they can be brought into the PA. Once we cleared that hurdle, we submitted our PA expansion to the BLM. And we took a different approach on this expansion because we had drilled 49 wells across the proposed project area. We asked that this entire area be brought into a participating area by geologic inference rather than proration unit -- by proration unit.

And to support geologic inference, we had to demonstrate geologic continuity across the project area, geophysical or seismic continuity across the project area, and production continuity across the project area. And we met all of those criteria sufficient to satisfy BLM, and they

subsequently approved the initial Mancos PA expansion on May 19, 2011.

We expect the two hearings that we have before you today, this one and a request for increased density in the Mancos will conclude our commission work related to moving ahead with the Mancos development on a horizontal basis.

As you saw in the map earlier, there is a majority of the unit is not in the participating area. That area is primarily on the US Forest Service, and the reason that we did not bring that area into the initial participating area is that our data-gathering efforts there are approximately a year to 18 months behind our data gathering areas over in the west. We started in the west. That's where we have concentrated our efforts and now we are looking to the east.

We have an application in front of the Forest Service for a 3-D seismic shoot. We expect to get final approval on that this fall. We will begin the seismic shoot next spring. We have pretty much conducted or concluded our study of geology on that side, and we are currently completing the four science wells that we drilled vertically in 31 North, 4 West. If all of this data is supportive of further Mancos development, then we would proceed with submitting a second geologic expansion area for part or all of the area that's shown in green on the map.

Q. Thank you, Mr. McQueen. Let's review, before we go

to Exhibit Number 5, in particular, the definition of project area within the horizontal well rule. What is that definition in 19.15.16?

A. Simply stated, a project area is the area that an operator designates on a Form C-102. The spacing unit's outer boundaries enclose a combination of complete and contiguous spacing units.

Q. So Williams is seeking to make one large project area with a large combination of complete contiguous spacing units to coincide with this participating area?

A. That's correct.

Q. If you could refer to our next slide, which is marked as Williams Exhibit Number 5, and explain to the Examiners why Williams wants to form a project area for the entire Mancos participating area.

A. There are several reasons we are interested in forming this project area. First of all, the project area removes the arbitrary boundaries that are imposed by the spacing units. We drilled two horizontal Mancos wells in 2010, and because of the rules that were in place at the time, we were forced to keep the productive portion of that lateral within the spacing unit.

So 5,240 feet was the maximum length that we could obtain in that lateral based on the spacing rules with a project area that will allow us to drill longer-length

laterals and thereby optimize the length of laterals that are required to strike the gas.

The second thing the project area does for us is it optimizes our surface locations. As I'm sure you're aware, in Rosa, about 91 percent of the acreage is under federal control, either BLM or US Forest Service, and they are putting a very high emphasis on mitigation of surface disturbances. In fact, where possible, they are encouraging us to utilize existing surface disturbances for drilling our Mancos horizontals.

When we're not forced to lay that lateral within the spacing unit, then we have some latitude of moving the lateral about the axis in the existing surface pad, and so the project area will give us the flexibility of minimizing surface impacts in Rosa.

The two additional things the project area does for us is it eliminates the NSL filings and it eliminates simultaneous filings.

Q. Let's turn to Williams Exhibit Number 6. Identify and review this document for the Examiners.

A. As I indicated earlier, we have drilled and completed 49 vertical wells in the west -- western portion of Rosa. These wells were drilled -- the vertical wells were drilled in 2007 through 2009. In addition to the 49 verticals, we also drilled the two horizontal wells that are

located right here in Section 23 in 2010.

This line right here is the boundary between BLM jurisdiction and the Forest jurisdiction, and you can see most of the wells have been drilled on the BLM side of the unit. We do have six additional wells that we drilled on the Forest Service. As I mentioned earlier, we have ongoing data gathering efforts in East Rosa to determine the Mancos viability over here. And in 2010 we drilled four vertical science wells in 31 North, 4 West.

For the express purpose of making that determination we have collected additional core from these wells, as well as extensive logging, and those wells are currently being completed in respective Mancos zones, and we expect to have all four of these wells completed before the forest closure on November 1.

Q. Thank you, Mr. McQueen. I would like you now to discuss Williams' plans to develop the Mancos. If you could turn to Williams Exhibit Number 7.

A. We affectionately call this map our Fruit Loop Map at Williams. The colors are definitive. Basically what we have done here is identified what will be the required surface locations for a horizontal Mancos development program in Rosa. And we -- we believe that that will require approximately 93 different surface pads located across Rosa. And the configuration for these pads is that they are located

on the North-South Axis approximately one mile -- excuse me -- one half mile apart. And on the East-West Axis, they are located approximately two miles apart.

So what this allows us to do from the horizontal development standpoint is we can drill a mile lateral in this direction and a mile lateral in this direction. So the surface pad, even though some sections have two and some sections have none, the surface pad disturbance averages out to one surface pad per section. The ones shown in red are surface pads that have been surveyed and are in the process of being permitted. The surface pads in yellow are those located on the BLM portion of the Rosa Unit that have not yet been surveyed, and the green pads are those located on the Forest side of the Rosa Unit and have not yet been surveyed.

You can see the yellow ones are idealized locations. They lie in a straight line. They haven't been surveyed, so adjacent surface disturbance has not been identified with those. In the red you can see that they do not quite lie in a straight line, and that is because all of these are on existing surface disturbances. With the project area, this is one of the things that we are afforded is the flexibility to move these surface locations a bit and simply lengthen the lateral on one side and shorten the lateral on the other side to make sure we get the full Mancos reservoir access to that.

Q. Let's go to Williams Exhibit Number 8 in your next

slide.

A. This slide shows our proposed lateral development in Middle Mesa. Middle Mesa is defined for us as that portion that is west of the San Juan River or west of the reservoir, and it's approximately 57 hundred acres of our entire unit that's in San Juan County. Our plans are to access four identified intervals within the Mancos Zone. And what I have shown here are half of those laterals that will be required. And you will that they are color coded, and one of those is colored an olive color, and one of those is colored a black color, and they are alternate as we go down through the reservoir.

So these refer to the respective zones. The zones that we have identified in the Mancos we have given arbitrary names that correspond with colors. So the olive zone and the black zone are two of the primary zones, in fact, the two primary zones that we developed in most of our vertical wells drilled to date.

So the plan is to drill these laterals. The laterals that are in the same reservoir are approximately one quarter of a mile apart, 1320 feet apart. So the distance from this olive lateral to the next olive lateral here is 1320 feet. And then between those, which would be 660 feet to the black interval, we would have another lateral sitting in there. And the plan is not to lay these on top of each

other, but simply offset them in separate zones as we go, and then through stimulation practices, connect up the reservoirs between those two respective laterals.

We also have a plan in place with the BLM in order to further minimize surface disturbance. Our proposal is to construct remote frac sites, and because of the topography that's present in Middle Mesa, we will be required to have two of those remote frac sites. And the reason for that is because of the large amount of water that's used to stimulate the Mancos, we have to have an on-site retention pond that holds that volume of water when we get ready to stimulate.

And that area required for the pond is approximately two acres, and so rather than having an additional two-acre disturbance on all eight of these drilling sites, our proposal is to locate one pond here in the south to serve the south six drilling pads, and one pad in the north to service these two drilling pads here.

So if you work out the math related to the surface disturbance, we cut in half the amount of surface disturbance required for stimulation. The other thing we plan to do is on both of the stimulation -- remote stipulation pads is where we set up the Halliburton equipment, and the frac will actually be pumped remotely from that site via pipeline to the respective drilling pads, and then after all the laterals in the area are drilled and put on, these remote frac sites

are leveled and remediated back to their original conditions.

Q. Thank you, Mr. McQueen. Let's turn to what's been marked as Williams Exhibit Number 9, which should also be your next slide. Identify that for the Examiners, please.

A. This slide shows basically a continuation of the development scenario that I described in Middle Mesa. And this scenario moves over into the BLM portion of -- east of the lake in Rosa. I will point out that this is one of our existing horizontal laterals right here in 23. The other one is a little harder to see, but it's just south of that that runs through here. But basically this is our plan for all of these interior drilling locations, we would expect to have four laterals extending out into each identifiable Mancos zone.

Q. Based on the plan of development that you have reviewed here today, if you could summarize your conclusions for the Examiners as to why your project area would benefit Williams.

A. The project area concept gives us the flexibility to overcome the hurdles that are forced upon us with the existing spacing units, and we intentionally expanded the participating area across all of this area so that we would have common interests for all parties, and that way we could assure that correlative rights were being protected.

We can also assure ourselves that we are getting the

maximum gas recovery by placement of laterals in this fashion where we no longer have to force fit the laterals into the respective spacing units.

Q. Is the idea then to get the same benefit you get from a participating area and match that with forming a project area overlaying that participating area?

A. That's correct.

Q. And, Mr. McQueen, is Williams Exhibit Number 10 our notice packet which includes my affidavit indicating notice of this -- proper notice was given of this hearing, a copy of the letter that was sent to affected interest owners, an affidavit of publication showing notice was provided in the newspaper, and Exhibit A which indicates that the parties that were notified and the application and the green cards that came from -- or went to and came from the parties that were notified?

A. That is correct.

Q. And who did Williams notify? Did we notify all interest owners in the Mancos participating area?

A. We identified all working interest and developing interest owners.

Q. Did we notify offset operators?

A. All offset operators were notified, yes.

Q. Did we notify the State Land Office and the BLM?

A. That's correct, we did.

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Q. Has Williams met with the BLM and the Forest Service regarding this application?

A. We have. We met with the BLM on June 14, and reviewed this application with them. They had no objections. The Forest Service has been a little more difficult to coordinate with this summer due to their fire-fighting activities out west, but I did speak with the Jicarilla ranger district ranger on June 28 by telephone and briefed him of the application, and he had no issues with the application.

Q. And have you or anyone met with the OCD Aztec office regarding this application?

A. Yes. We also met with representatives of the OCD Aztec office on June 14.

Q. And has Williams received any objection to this application?

A. We initially received an objection from McElvain, but these issues have since been resolved and we submitted their letter withdrawing their protest. That's Exhibit 11.

Q. Mr. McQueen, will the approval of this application be in the best interest of conservation, the prevention of waste, and protection of correlative rights?

A. Absolutely.

Q. And were Exhibits 1 through 11 either prepared by you or compiled under your direct supervision?

A. They were.

MS. MUNDS-DRY: Mr. Examiner, we move to admit Exhibits 1 through 11 into evidence.

EXAMINER BROOKS: Any objection, Mr. Bruce?

MR. BRUCE: No objection.

EXAMINER BROOKS: Exhibits 1 through 11 are admitted.

(Exhibits 1 through 11 admitted.)

MS. MUNDS-DRY: And that concludes my direct examination of this witness. I pass the witness.

EXAMINER BROOKS: Mr. Bruce?

CROSS-EXAMINATION

BY MR. BRUCE:

Q. Just a couple of questions. Looking at the last slide, Mr. McQueen, are you anticipating, for the most part, laterals be a mile long?

A. That's our -- we believe that's an optimal design parameter.

Q. Okay.

A. Because of the surface constraints that I described, we expect a variance between 4 to 6,000 feet in lateral length, but we think that the mile lateral or slightly longer is optimal for our operations.

Q. Okay. Okay. At this point you don't have any plans for, say, two-mile laterals?

A. No. No, sir. Our North Dakota operations are drilling some of those long lateral wells, and there is -- there is really a number of operational issues associated when you get longer than about 7,000 feet. And we believe, based on what we are observing in our area, that that's going to be our maximum target length.

Q. Now when you talk about the setback, it gives -- and this is on your Exhibit 1, which was simply your introductory exhibit, are you seeking, when you say 660-foot setbacks, are you seeking 660-foot setbacks from the outer boundary of this PA, or would it be less than that?

A. Yes. In fact, if you look at this map you will see that there is a red border around the perimeter of the map. That is the 660-foot setback that we will observe.

Q. Okay. And as you know, I'm representing San Juan which is one of the uncommitted parties here. There are several in the acreage that you pointed out on your Exhibit 1 map. The plan is to drill across these uncommitted tracts, also, is it not?

A. It is.

Q. And a lot of those tracts are already subject to communitization agreements committing their interest at least to the communitized area.

A. That's correct.

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

might have a short comment at the end.

EXAMINER BROOKS: Okay. This participating area will work just like participating areas generally do, that is, you will -- the setbacks will be required from the exterior boundaries of the participating --

THE WITNESS: That's correct.

EXAMINER BROOKS: -- of the project area which will be the exterior boundaries of the participating. And for the uncommitted tracts, are those tracts fully uncommitted, or are they partially uncommitted, or what's the status of those tracts?

THE WITNESS: The area that I showed on white on I believe it's Exhibit 2 are fully uncommitted.

EXAMINER BROOKS: Okay. And those are the only uncommitted tracts within this designated area that's outlined in red? Looking at Exhibit 2.

THE WITNESS: They are the only uncommitted acreage in the project area. There are some additional partially committed acreage in East Rosa, the area that's shown in the green here, but we have not addressed those in this hearing since they are outside of the proposed project area.

EXAMINER BROOKS: So the proposed project area is only --

THE WITNESS: The brown.

EXAMINER BROOKS: Okay, the brown area?

THE WITNESS: Yes, sir.

EXAMINER BROOKS: And it's not -- it's not divided by that BLM Forest Service --

THE WITNESS: No, sir.

EXAMINER BROOKS: -- boundary. It's the area in brown on Exhibit 2?

THE WITNESS: Yes. And that basically corresponds to, if you look at where we've drilled our 49 initial wells, it basically corresponds to that area.

EXAMINER BROOKS: Now, you do -- are all these wells that you are doing, are they all going to be cased to completions.

THE WITNESS: Yes.

EXAMINER BROOKS: So you want to use the uppermost perforation as the definition for your producing unit?

THE WITNESS: Yes, sir. The one closest to the heel.

EXAMINER BROOKS: Right. Okay. I think that's all my questions. Mr. Jones?

EXAMINER JONES: Are you the brain child behind all of this? Did you come up with all this?

THE WITNESS: No. It's been a collaborative effort.

EXAMINER JONES: You were probably the brain child.

MS. MUNDS-DRY: He is very modest.

EXAMINER JONES: Yeah. Did it evolve from what's being done in other places, or just you looked at what you had here and decided how best to --

THE WITNESS: We are actually looking at it from, in the New Mexico context of the rules that we have available here and what rules needed to be changed to optimize the development of the reservoir. We -- we actually feel like that we may be plowing the ground here in New Mexico as far as approaches to large project areas and development of large unit areas for horizontal scenarios.

EXAMINER JONES: Before I forget, you've got the -- you are going to have to ramp up your compression and loop some of your lines or anything to get some of the --

THE WITNESS: Yes. Yes, sir. We have an active design program going on right now, and we expect to be both adding compression and looping a number of lines in the -- effectively replacing lines. Many of our lines are 4- and 6-inch gathering lines today, and with the two horizontals that we drilled last summer, we had to put in some 20-inch line in place, so we are expecting to basically rebuild the gas gathering infrastructure that's in Rosa to handle the gas that's going to be produced.

EXAMINER JONES: Do you have an idea about the initial pressure in the reservoir right now?

THE WITNESS: Yes.

EXAMINER JONES: Do you want to tell us, or do you not want to tell us that?

THE WITNESS: We -- we are seeing geopressure gradiance in the Mancos that is above normal gradiance, so that's helpful to us in that it's a little more gas there than what we would see, for example, in the Mesa Verde that's a subnormal pressure gradiant reservoir. But as you -- we have measured the pressure gradiance as we moved out of the Mesa Verde and moved into the Mancos. And as you get into the lower Mesa Verde, you start seeing a very distinct increase in PSI for --

EXAMINER JONES: Is that because it's the source rock, also? Probably?

THE WITNESS: It's related to, I think, the depositional considerations that took place in -- in the shales when it was deposited.

EXAMINER JONES: Okay. Your economics must predict an abandonment pressure in the future. Do you have an idea of what you are going to finally draw this down to some day?

THE WITNESS: Well, our -- our line pressure in Rosa today run in the realm of 80 to 100 PSI, so that would be our plan is to draw them down to that point. There may be even in some cases -- in our Fruitland wells, for example, there are advantages to adding wellhead compression to continue to draw down the wells, and then bumps that into the pipeline,

so that may be a scenario here that we need to consider as well as when we get later in the development life of the field.

EXAMINER JONES: Is that -- would that -- do you think you are going to see any water coming in or other -- so, in other words, you can just keep on pulling it down, adding stages of compression, and you get just like -- kind of like the Fruitland, you just keep getting more, maybe not quite as good as the coal, but the shales are --

THE WITNESS: The shales are very strange with regard to water production. And the first two horizontals that we drilled, we pumped in excess of 20 acre feet in each one of those wells. And, to date, we have seen less than 30 percent of load back, and both of those horizontals are producing relatively small amounts of water. So the shale appears that it has an affinity for the water, and so we don't -- we don't expect to see any increased water production rates when we draw the reservoir down.

EXAMINER JONES: Okay. Do you -- are these three -- is it three zones, or did you give them color names, and are they sands within the shales, or are they just shales that show up better on your mud logs?

THE WITNESS: They are shales. And I'm going to discuss in the next hearing the specifics of how we identified the colors. We actually call those clusters, how

we identify those and what makes them productive, but the most productive areas of the Mancos is where we see fecal pellets from organisms that existed in that time.

EXAMINER JONES: That's quite detailed.

THE WITNESS: High TOC and --

EXAMINER JONES: When you started out today talking, you listed three things that -- that you wanted to do. I got the first -- Number 1 and Number 3, but I didn't write down Number 2. The first one I wrote down was project area including all pools in the Mancos PA, and then you listed the second one. Do you remember what you said? The third one was future amendments administratively. Just to bound them. And really I was kind of wanting to ask you about this, what kind of amendments you were looking at in the future.

THE WITNESS: The second item, Mr. Jones, was to include all of the existing vertical and horizontal wells in this project area, as well as all future wells that would be drilled.

EXAMINER JONES: That means to approve the project area as the wells are now, and with these four wells per section that are going to be each one of them in different zones -- okay. And the future expansion, would that include after you do your 3-D seismic and moving east?

THE WITNESS: Yes. If -- if the results are warranted and if commerciality determinations can be

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obtained, then our plans are to bring additional lands as are warranted into the participating area. And of course that would be the first PA expansion. BLM has, at least in my opinion, an odd way of numbering their expansions. The first expansion is really called the initial expansion. The second expansion which would encompass our East Rosa acreage, they call the first expansion after the initial expansion.

EXAMINER JONES: Okay. But definitely you hope to work your way all the way across?

THE WITNESS: Yes.

EXAMINER JONES: So there is going to be one pad per section. Is that kind of the average?

THE WITNESS: That's the average.

EXAMINER JONES: Average?

THE WITNESS: Yes.

EXAMINER JONES: And each one of the those pads will have four laterals?

THE WITNESS: Actually, part of this depends on our next hearing with regard to spacing.

EXAMINER JONES: Okay.

THE WITNESS: We plan to drill laterals both directions which would be both west and both east from that central pad. And we need two laterals per spacing unit per zone, so that means we need eight laterals for the four identified Mancos Zones that we are pursuing. And so, again,

this gets into our next hearing, but we basically have half the number that we need right now to fully exploit the Mancos.

EXAMINER JONES: Basically this hearing is just to create the project area?

THE WITNESS: Yes. But, in fact, goes hand in hand with the next hearing.

EXAMINER JONES: With the other one?

THE WITNESS: Uh-huh.

EXAMINER JONES: But in order to prove up the acreage to the east, you are drilling, and at the same time you drill you are coring, logging, and then 3-D seismic to tie into that. Can you see these zones with a 3-D seismic?

THE WITNESS: We can.

EXAMINER JONES: You can see those -- at least you can see inside the Mancos, or can you see --

THE WITNESS: Yes. Our geophysicists have actually been able to correlate the tops of these individual benches that I will describe in the next hearing all the way across Rosa with this 3-D seismic. And that's part of our motivation for collecting the 3-D seismic on East Rosa, so that we can continue to see where those tops are as they move across the east.

The other thing the seismic does for us is it allows us to avoid any obstacles that might be in the subsurface.

And, as you know, out in East Rosa there are some volcanic sills that are observable on the surface, and we want to make sure we understand where those are in the subsurface so we can avoid them if necessary.

EXAMINER JONES: But creation of this project area is necessary for your -- basically for your correlative rights after the limitations of the surface disturbances. Is that correct?

THE WITNESS: We believe the correlative rights are protected through the formation of the participating area.

EXAMINER JONES: Okay.

THE WITNESS: So before we had this large PA approved, we could have formed a project area to allow us to cross-sectionalize, but the working interest owners in each of those proration units were different or are different, and so to negotiate a project area among parties where you may have a lateral fully within one spacing unit and then only 40 acres into the next spacing unit becomes very problematic.

So our solution was, rather than attempt to negotiate a project area for every lateral that we are going to drill in Rosa, is to first have a common interest so that when we drill across a spacing unit, the parties across in the next spacing unit have the identical interest as they do in the initial spacing unit. And so that's why we have waited until this point in time to ask for project area until

we have an approval of the BLM that gave us a constant interest across this entire area.

EXAMINER JONES: Okay. Thank you very much.

EXAMINER BROOKS: Okay. That's all I have. Is there any follow-up?

MS. MUNDS-DRY: I have nothing further for Mr. McQueen.

EXAMINER BROOKS: The witness may stand down. Mr. Bruce?

MR. BRUCE: I just had one thing.

EXAMINER BROOKS: From this witness?

MR. BRUCE: No.

EXAMINER BROOKS: The witness may stand down. And you may continue.

MR. BRUCE: Mr. McQueen had answered my question -- I asked the question, does Williams intend to drill across the uncommitted areas, and the reason is this: If we were just looking at a normal drilling of a horizontal well, people would share in production on an acreage basis.

EXAMINER BROOKS: Right. They would if they were force pooled.

MR. BRUCE: If they were force pooled.

EXAMINER BROOKS: If they were voluntarily pooled they would share on the basis of the agreement in which they agree.

MR. BRUCE: And, of course, there is no -- you know, with the uncommitted acreage there is no basis, and, you know, as long as Williams is willing to drill across the uncommitted acreage, as Mr. McQueen said, I don't think there is any issue with that. It's just that the people in the non-committed -- my client does not want to be short-changed if they stop the wellbore short and just don't cross the acreage, is my understanding.

EXAMINER BROOKS: I can understand that, and I think that's going to be a subject of -- that is going to be the subject of considerable discussion, compulsory pooling -- and are the task force of the horizontal wells. But as far as this case, what is your position at this point?

MR. BRUCE: As long as Williams is committed to drilling the participating -- the non-participating acreage as it is planning on drilling the other acreage, it's probably not an issue. In normal instances I think San Juan would rather see that if a wellbore pierced into the non-committed acreage, all of that non-committed acreage is in the well unit. You see what I'm getting at? As long as Williams -- and I have no qualms about Williams' good faith -- as long as they are willing to include the non-participating acreage to the same extent it's drilling across the participating acreage, that shouldn't be an issue.

THE WITNESS: If I might comment, Mr. Bruce. It's

actually advantageous to Williams to drill across that acreage from a standpoint of optimizing laterals because it's very likely there is additional reservoirs that could be contacted outside the uncommitted acreage that might be lost if we were forced, for example, to drill a lateral just in the uncommitted acreage area.

So we are very committed to drilling those laterals. It just makes sense from economies of scale and optimization of the lateral length that we allow the laterals to go all the way across the uncommitted --

MR. BRUCE: Maximization of laterals.

THE WITNESS: Exactly.

EXAMINER BROOKS: So you're not urging the Division to put any particular provisions on this subject in the proposed order?

MR. BRUCE: I can't see -- based on what Mr. McQueen has testified about, I can't see any.

EXAMINER BROOKS: Very good.

THE WITNESS: And we are working with the uncommitted owners at this time to reach papered agreements regarding the particulars of drilling the uncommitted acreage.

MS. MUNDS-DRY: We have already made one commitment to McElvain and are continuing our discussions with San Juan to try to reach a similar agreement, so we are endeavoring to

get everybody in agreement.

EXAMINER BROOKS: Well, as I observed at the beginning of this hearing, McElvain has notified the Division that they are withdrawing the objection. Anything further?

(No response.)

EXAMINER BROOKS: Very good. Case Number 14667 will be taken under advisement. We will take a five-minute break.

* * * * *

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 14667, heard by me on July 7, 2011.

David K. Brooks, Examiner
Oil Conservation Division

REPORTER'S CERTIFICATE

I, IRENE DELGADO, New Mexico CCR 253, DO HEREBY CERTIFY THAT ON July 7, 2011, proceedings in the above-captioned case were taken before me and that I did report in stenographic shorthand the proceedings set forth herein, and the foregoing pages are a true and correct transcription to the best of my ability.

I FURTHER CERTIFY that I am neither employed by nor related to nor contracted with any of the parties or attorneys in this case and that I have no interest whatsoever in the final disposition of this case in any court.

WITNESS MY HAND this _____ day of JULY 2010.

Irene Delgado

Irene Delgado, CCR 253
Expires: 12-31-2011