STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:	)	CASE NO. 12,296
APPLICATION OF BURLINGTON RESOURCES OIL AND GAS COMPANY TO AMEND RULE 7 OF THE SPECIAL RULES AND REGULATIONS FOR THE BASIN-FRUITLAND COAL GAS POOL FOR PURPOSES OF CHANGING WELL LOCATION REQUIREMENTS FOR COAL GAS WELLS, SAN JUAN, RIO ARRIBA, McKINLEY AND SANDOVAL COUNTIES, NEW MEXICO	)	ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: MARK ASHLEY, Hearing Examiner

January 20th, 2000

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, MARK ASHLEY, Hearing Examiner, on Thursday, January 20th, 2000, at the New Mexico Energy, Minerals and Natural Resources Department, Porter Hall, 2040 South Pacheco, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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Examiner Hearing
CASE NO. 12,296

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A P P E A R A N C E S

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* * *

WHEREUPON, the following proceedings were had at 10:29 a.m.:

EXAMINER ASHLEY: This hearing will now come back to order, and the Division now calls Case 12,296.

MR. CARROLL: Application of Burlington Resources Oil and Gas Company to amend Rule 7 of the Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool for purposes of changing well location requirements for coal gas wells, San Juan, Rio Arriba, McKinley and Sandoval Counties, New Mexico.

EXAMINER ASHLEY: Call for appearances.

MR. KELLAHIN: Mr. Examiner, I'm Tom Kellahin of the Santa Fe law firm of Kellahin and Kellahin, appearing on behalf of the Applicant, and I have two witnesses to be sworn.

EXAMINER ASHLEY: Any additional appearances?

Will the witnesses please rise to be sworn in?

(Thereupon, the witnesses were sworn.)

MR. KELLAHIN: Mr. Examiner, I've handed you a green booklet that contains Burlington's exhibits in this case. In addition, I have given you a copy of the Division Order R-10,987-A. This is an order entered by Examiner Stogner, effective February 1st of 1999. I've turned the order for you back to Exhibit A.

This was an application by Burlington that

accomplished, among other things, a relaxation of the well-location requirements for the Blanco-Mesaverde Pool. You can see in Exhibit A down in Numeral 1B that there are some changes for well-location requirements in the Blanco-Mesaverde. The outer boundary setbacks went from 790 to 660, and there was an interior quarter-quarter setback of 130 feet, and that went to 10.

In addition, there's a special category of well flexibility for federal exploratory units. As you may remember, there are a number of federal exploratory units in the San Juan Basin. They often contain an entire township. We maintain these rules to the outer boundary of the unit, but within the unit itself there's additional flexibility so that a spacing unit within the unit could be standard, even if it's ten foot off the boundary line.

The reason that was done, among other things, was to recognize that there was need for additional flexibilities, not only for topographic reasons but for taking the best opportunity for a location based upon infill drilling the Mesaverde, there were geologic-based reasons.

In addition, it recognized the fact that Mr. Stogner, processing unorthodox well locations administratively in the Mesaverde, did hundreds of these, and seldom if ever was there any objection. So the rule

was changed.

After this was done, Mr. Stogner suggested that if Burlington would accommodate the Division, that we would sponsor rule changes for certain other pools so that they would all be consistent. One of the pools being considered is the Basin-Dakota, and that case is currently being processed by Mr. Stogner.

This one we have before you today is for the Basin-Fruitland Coal Gas Pool, the notion being that the future in the San Juan Basin is principally driven by using a single wellbore and commingling one or more of these formations. It's not unusual to see the coal commingled with PC. And you know from the rule changes to Rule 104 that were accomplished this summer that PC rules are 660. So we're looking for uniformity of well-location requirements. That's the only thing we're changing in the coal gas rules. We're not changing any of the other rules.

As part of this process, then, with the assistance of the Aztec office, we obtained a list of what we believe to be all the operators in the coal gas pool, and we sent notices to those interest owners. The notices were back in October of this year. To the best of my knowledge, there is no objection from any of the operators to changing the rules.

Our presentation this morning, then, is to have

Mr. Alexander go through the details of what we're proposing to accomplish, and then we'll have an engineering witness that will talk to you about what is the opportunity in the coal gas and why it's necessary and appropriate to relax the location requirements.

With that introduction, Mr. Examiner, I direct my attention to Mr. Alexander.

ALAN ALEXANDER,

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. My name is Alan Alexander. I'm currently employed as a senior land advisor for Burlington Resources in their Farmington, New Mexico, office.

Q. On prior occasions, Mr. Alexander, have you testified as an expert petroleum landman before the Division?

A. Yes, sir, I have.

Q. And as part of your employment with your company, are you responsible for knowing and understanding the various pool rules for the wells and pools in the San Juan Basin?

A. That is correct.

Q. In addition, you have assisted me in trying to present a case before the Division to change the Fruitland Coal Gas rules with regards to well locations?

A. Yes, sir.

MR. KELLAHIN: All right, we tender Mr. Alexander as an expert witness.

EXAMINER ASHLEY: Mr. Alexander is so qualified.

Q. (By Mr. Kellahin) Let's turn to the exhibit book, Mr. Alexander, and show the Division what you and I have prepared for his consideration. What is behind Exhibit Tab Number 1?

A. Behind Exhibit Tab Number 1 we have the Application that requests the setback change for the Basin-Fruitland Coal Pool.

Q. Is Burlington Resources knowledgeable and experienced about drilling producing Fruitland Coal Gas wells in the Basin-Fruitland Coal Gas Pool?

A. Yes, sir, we are.

Q. The Application indicates that you operate approximately 908 Fruitland Coal Gas wells; is that true?

A. That's correct.

Q. Let's turn to Exhibit 2. As part of processing this Application, did you locate what you believe to be a complete list of the operators in the San Juan Basin that

have Basin-Fruitland Coal Gas operations?

A. Yes, sir, as you mentioned before, we worked with the Aztec office of the OCD to determine what the proper list for the Fruitland Coal Operators might be. Since we were doing applications for both the Basin-Dakota and the Fruitland Coal, we found it more economic, and there's quite a few owners to -- operators to notify, we found it more economic to put both applications in the same list. So that's why you will see behind Exhibit Tab Number 2 the heading of that list as Basin Dakota and Basin Fruitland Coal operator list.

Q. This list was compiled from the records of the OCD office in Aztec?

A. Yes, sir, that's correct.

Q. And to the best of your knowledge, it's complete?

A. Yes, sir.

Q. The notice for hearing and these applications were sent by certified mail, were they not?

A. Yes, sir, they were.

Q. And behind the tabulation of lists of operators are copies of the green return receipt cards for the certified mailing?

A. That is correct.

Q. To the best of your knowledge, are you aware of any objection by any of the operators to changing the well-

location requirements in Basin-Fruitland Coal Gas Pool?

A. I have received no objections to date.

Q. Let me turn your attention to the configurations of the pools. If you'll look behind Exhibit Tab Number 3, let's fold out the first map display and have you describe for me what you're attempting to illustrate with this first map.

A. The first map shows with a green border, as you will see down in the legend, the Basin-Fruitland Coal Pool outline. This pool is like the Dakota Pool, but it's a little different than normal pools in that the pool was described by order, and it doesn't expand according to the drilling activity in the region. That's why you will notice the well spots that are on the map do not necessarily coincide with the pool boundaries.

And on that map we have also delineated the overpressured area of the Basin-Fruitland Coal Pool, which we would like to discuss. We have some considerations along with our Application that they address specifically to the overpressured area.

Q. It's well recognized by the industry, including Burlington, that there is an area within the coal gas that, when initially drilled, was overpressured?

A. Yes, sir.

Q. And that has been generally defined by

development at this point?

A. That's correct.

Q. And the -- it looks like a blue -- is this a --

A. It's a blue outline.

Q. The blue outline would indicate what Burlington believes to be the approximation of the overpressured, underpressured line?

A. That is correct.

Q. If you're outside of that area, you're in the area known as the underpressured area of the coal gas pool?

A. That's correct.

Q. Do the current coal gas rules that the Division has for the pool make any distinction in terms of rules between the overpressured and underpressured area?

A. No, sir, they do not.

Q. Do you propose that there be any distinction in well-location requirements based upon the overpressure-underpressure issue?

A. We do not.

Q. Okay. Generally describe for me what you mean when you talk about the overpressured coal area. What is that intended to mean?

A. Well, in layman terms and to the outside world it essentially means that a portion of the Basin-Fruitland Coal Pool that is very prolific and has produced

considerable amounts of gas and an area that is probably, as Mr. Nelms can testify to, is probably being adequately drained on a spacing of one well per 320 acres at this time.

Q. In the underpressured area, you're still on 320-acre coal gas spacing?

A. Yes, sir.

Q. The future opportunity for wells to be drilled by Burlington is generally in what area of the coal gas pool?

A. It would generally be in the underpressured portion of the pool, since the overpressured portion of the pool has been to a large degree already developed, and there's very little opportunity left in that area.

Q. What's the advantage to Burlington and the industry of having the Division rules for the Blanco-Mesaverde, Basin-Dakota and Basin-Fruitland Coal Gas have the same well-location requirements?

A. Since it is becoming more and more difficult to locate wellbores in the Basin, mostly due to surface and geologic and archaeologic constraints, it becomes very important, along with the fact that we are in a very mature basin and we are depleting the basin, and the opportunity to drill a stand-alone well really doesn't exist much anymore, therefore with all of those considerations it's probably appropriate that we look in the future to

combining reservoirs into a single wellbore.

And if we combine reservoirs into a single wellbore, we need the setback requirements to be similar, if not exactly the same, for all of those reservoirs, to eliminate the need for nonstandard location administrative orders being filed with the Division.

Q. Let me have you explain the plat that shows the outline for the Basin-Fruitland Coal Gas Pool. The outline of the pool was defined by Division order, was it not?

A. Yes, sir, that's correct.

Q. And so an entire area of the Basin was initially included in the pool?

A. That's correct.

Q. It does not follow the convention of pool expansion utilized in southeastern New Mexico where you would start with a small area, you could drill a well within a mile, you began to link up and expand your spacing units?

A. It does not follow that convention.

Q. Let's turn to the next display. Identify and describe what you're showing here.

A. The next display is a map also, and on it we would like to present the concept of how these pools overlie each other, therefore the applicability of combining reservoirs in the same wellbore.

In the red outline we have the Blanco-Mesaverde Pool, in the blue outline we have the Basin-Dakota producing area. And I would like to point out that this is a producing area, as opposed to the Basin-Dakota Pool outline. The pool outline for the Dakota expands out much larger, similar to the coal outline.

Q. Describe for us how that happened.

A. It was set by order in the Basin-Dakota Pool rules, and it generally conforms to all of San Juan and all of Rio Arriba and one section down in Sandoval, less and except two or three other Dakota gas pools. So that outline is set by order.

But it's more helpful to look at the producing area, as opposed to the Dakota Pool outline, I believe, in this Application this morning.

And again we have some of the Basin-Fruitland Coal Pool outlined on this same map to show you how these reservoirs tend to overlie each other.

Q. What was the source of the data to generate these maps?

A. These maps came from the working committee, a committee of the NMOCD, that is currently considering new commingling rules, and that is the source of these maps, and most of the information was either taken from OCD or from R.W. Byram's books.

Q. All right. Let's turn to the final map.

A. The final map, since it is a fairly busy map, we chose not to display as an overlay on the other maps. It's a map of the Pictured Cliffs pools that are in the San Juan Basin. As you can see, there are several of those pools, and that's one reason we didn't attempt to overlie those. On the others, it's just too busy.

The Pictured Cliffs formation is one of the primary pools that we believe industry will use in the future to commingle with the Fruitland Coal to recover the remaining reserves in both pools.

Q. The purpose of showing this display is what, sir?

A. It's, again, to show how these pools tend to overlie each other in their proximity, one to the other, and to show the great opportunity that there is to combine pools in a single wellbore.

Q. Let's go to Exhibit 4 and look at an illustration of what you're proposing the Division do in terms of a rule change.

A. This is a dramatic land plat that shows the actual changes in the areas available to be drilled in for both of the pools. The blue-hached area are the current rules for the Basin-Fruitland Coal Pool, and they prescribe setbacks of 790 feet from the outer boundaries of the GPU, the gas proration unit, and 10 feet from the internal

boundaries, and also 130 feet from the half-section line.

What we would propose would match the Blanco-Mesaverde Pool, and that would be to establish setbacks 660 feet from the GPU units, the outer boundaries, and then ten feet from all internal boundaries, including the half-section line. What that does from a surface standpoint is, it gives you an increase in acreage available to locate wellbores without being nonstandard, and it moves that amount of acreage up from 84 acres to about 119 acres that would be available to an operator to locate a standard gas well.

Q. Describe for the Examiner the basis for changing the Blanco-Mesaverde Pool to give additional flexibility for wells located within federal exploratory units.

A. Within Federal exploratory units, we have a unique ownership situation in those units where the units provide for the ways and means that all parties share in production inside a federal exploratory unit. So you do not have any significant correlative-rights issue in a federal exploratory unit within the boundaries.

Therefore, if we have ways and means of providing for correlative-rights issues and the proper sharing of production, then we saw the need to have additional area to locate wells without going nonstandard, since you do not get into those issues.

And we requested and obtained in the Blanco-Mesaverde Pool order permission to locate wells ten feet from any boundary within a federal exploratory unit, as long as we were not encroaching to the outside of the unit. And if you get within a half-mile buffer zone of the outside of the unit, which would encroach upon non-unit acreage, then we follow the standard setbacks for the Blanco-Mesaverde Pool. In other words, you would have to be 660 feet off of those lines.

But we feel that as long as you're internal to the federal exploratory unit and we do not have correlative-rights problems, then the added flexibility to locate wells because of topography and archeological and geological reasons is well worth having.

Q. Let's turn to the exhibit book where the tab is marked Exhibit 6. Identify and describe what you're including in this portion of the book.

A. Behind Exhibit Tab 6 is a listing of the wells that Burlington drilled during 1999. We just wanted to show to the Commission that we had substantial activity in the Fruitland and the Dakota Pools, and the Mesaverde pools, which are really the subject of these kind of hearings.

And the other operators have had substantial activity, and we forecast substantial activity in the years

to come for all of those pools.

Q. In your position as a petroleum landman for your company, Mr. Alexander, are you aware of any issue that would cause the impairment of correlative rights or the occurrence of waste if these rules are changed to conform to the Blanco-Mesaverde pool rule changes?

A. No, sir, I am not. And we did take the opportunity to talk with the working committee that is currently underway with the Aztec office to investigate proper density for the Basin-Fruitland Coal Pool. We gave them this issue, and the committee reported back to us that they favored adoption of these rules for the setback changes.

Q. That's a working group that's being sponsored by the OCD office in Aztec?

A. Yes, sir, that's correct.

Q. It includes Division personnel and operators in the Fruitland Coal Gas Pool?

A. Yes, sir, that is correct.

MR. KELLAHIN: Mr. Examiner, that concludes my examination of Mr. Alexander.

We move the introduction of his Exhibits 1 through 4 and Exhibit 6.

EXAMINER ASHLEY: Exhibits 1 through 4 and 6 will be admitted as evidence at this time.

EXAMINATION

BY EXAMINER ASHLEY:

Q. Mr. Alexander, could you restate again how this is going to relate to the overpressured and underpressured areas within the pool --

A. Yes, sir.

Q. -- for the entire pool?

A. We're proposing adoption of the setback change for the entire pool, and we did consider the application of these changes to the overpressured area. And Mr. Nelms can talk further about that to give you a comfort factor that making these changes in the overpressured area, which historically has been very prolific, will not cause any substantial correlative-rights issues.

I can go over the main merits with you of the reasons, that if you would like to follow up with him, you can do so.

Q. Okay.

A. There's several things going on, and we talked with the working committee about this situation also.

Number one is that nearly all of the acreage up there that can be developed has been developed already, and therefore there will be very few new wells drilled in the overpressured area.

The second reason, I believe, to consider the

adoption of these rules up there is that we have substantially drained the overpressured area. Pressures up in that are, I believe, range from 1300 to 1600 pounds per square inch. Currently you will probably not see any area up there that's above 500 pounds per square inch.

So that area has already been substantially drained, and any new well that would be drilled in those areas up there would be drilling into a depleted reservoir, and therefore I do not believe that you would see a correlative-rights issue because of that.

The third reason I think that we can consider here is the completion type in the overpressured envelope is very important to getting the prolific production out of that area, and the completion type is an open-hole recavitation, as compared to a cased, perforated and fracture-stimulation method.

The recavitation is practically no longer available to operators in that area because of the depletion of the reservoir. In order to really successfully recavitate the well, you need the higher pressures.

Therefore, we do not seek future completions in that area, being the open-hole recavitation, and they will most likely have to be cased, perforated and fracture-stimulated, which is not the most efficient completion for

the Fruitland Coal reservoir. And therefore the drainage factor will be much lower, and again we see that we probably will not have a correlative-rights issue because of that situation also.

That's the reason that we don't recommend to the Commission that we carve out the overpressured area. We just don't see any major correlative-rights issues up there by changing the setbacks 130 feet.

Q. Okay. How does -- Let me change that. You're aware of the downhole commingling committee that's been working on changing some of the pools that are currently downhole commingled to have a more streamlined approval process, that they have documented downhole commingling in the particular pools that are being commingled?

A. Yes, sir. I'm not on that committee but I'm aware of its existence, or the rules that are being formulated.

Q. Are any of these, like the Blanco-Mesaverde or the Basin-Dakota or the Basin-Fruitland Coal, being considered as pools that have already been substantially commingled, therefore you don't have to go through the full-blown process of downhole commingling?

A. Yes, my understanding, that is correct. And it's my understanding that they probably will classify one of those pools in the Fruitland Coal -- that would include the

Fruitland Coal also.

I do not know for a fact that that will be presented at the next Division hearing, but I was visiting with Mr. Ken Collins who is on that committee, and he is developing the maps and the statistics to get approval for the Fruitland Coal as one of those pre-approved commingling areas. But I have not heard the final result, if the committee will adopt that at this point or not.

EXAMINER ASHLEY: Okay. I have nothing further. Thank you.

RALPH L. NELMS,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Nelms, for the record, sir, would you please state your name and occupation?

A. My name is Ralph Nelms. I'm a senior reservoir engineer with Burlington Resources in Farmington, New Mexico.

Q. Mr. Nelms, on prior occasions have you testified before the Division as an expert petroleum engineer?

A. I have.

Q. Pursuant to your employment, have you been investigating on behalf of your company the proposed rule

changes for the Basin-Fruitland Coal Gas Pool?

A. I have.

Q. Specifically, have you examined the issues concerning the overpressured and underpressured areas of the pool?

A. I have.

Q. In your opinion, is it appropriate to change the rules for the pool for well locations as we're proposing without regard to making a distinction between the overpressured and underpressured area?

A. It is appropriate.

Q. Let's turn to the map that Mr. Alexander left us with, which has the overpressure/underpressure line. Describe for us from an engineering perspective what was the original explanation for the difference.

A. In the area shown on Exhibit 3, within the blue outline, that area we refer to as the overpressured Fruitland Coal area. That area is characterized by initial reservoir pressures of as high as 1600 p.s.i. These wells flowed naturally on their own, there was no stimulation required. The completion technique was cavitation. And that area is now spaced 320 acres, and we feel that on 320 acres that is being sufficiently drained.

The area has a high permeability. If you'll look on Exhibit Number 5, we show average permeability in the

Fruitland Coal and San Juan Basin of approximately 1.35. That's effective permeability to gas, based on pressure transient test analysis and simulation results.

We present a range here of .3 to 4.5 millidarcy. The 4.5 millidarcy would represent the overpressured Fruitland Coal permeabilities in the reservoir, and the .3 millidarcy would represent the permeability we'd expect in the underpressured areas.

Q. If we have a well in the underpressured area, describe for us its typical characteristics.

A. In the underpressured Fruitland Coal area we rarely see pressures more than 600 pounds. Those wells must be completed by a hydraulic fracture and normally foam fracturing. It's very common now, since that pressure has been pulled down from 500 or 600 pounds, to see pressures in the 200- or 300-pound range. Almost all of these wells in the underpressured Fruitland Coal area require compressors.

Q. When we look at the future opportunity for additional Fruitland Coal Gas Pool wells, where will that opportunity be exercised?

A. I believe primarily in the underpressured Fruitland Coal area. If we look at the economics of development in the underpressured Fruitland Coal area, those wells have to have reserves in excess of 500 million,

600 million standard cubic feet, for a stand-alone new-drill well.

The thing that's attractive about making the spacing equivalent for the underpressured Fruitland Coal and the PC and the Mesaverde is that areas where marginal reserves now exist and wells cannot be drilled as a stand-alone Fruitland Coal would be economic for dual completion as a PC-Fruitland Coal or a Fruitland Coal-Mesaverde.

In those particular areas where the underpressured Fruitland Coal reserves are marginal, that's probably the only way that you'd be able to economically recover those reserves. And you can go down as low as about 200 million on a dual-completed Mesaverde -- or dual-completed Fruitland Coal, PC or Mesaverde and recover those reserves.

So essentially by making these setbacks the same, that will allow operators to plan for development for both reservoirs at the same time and prevent waste by recovering those reserves that would not be recovered if they had to be economic stand-alone underpressured Fruitland Coal wells.

Q. Is there any question in your mind as a reservoir engineer that the Fruitland Coal Gas wells in the underpressured area have drainage radiuses that would be comparable to 160 acres or less?

A. Right now the committee is studying that, the industry committee. And because the reservoir is so much tighter and because the pressure there is so much lower, the probability that we're draining in excess of 160 or much less in the underpressured Fruitland Coal area.

Q. When the overpressured area was initially developed, there would have been potential concern about drainage areas initially, would it not?

A. That's correct.

Q. Is it any longer an issue of concern?

A. The reservoir pressures have been pulled down substantially. We're seeing lower pressures at this point in time, and at the overpressured area we're also seeing application of compression to accelerate development of those reserves.

The overpressured reservoir is declining at about 20 percent per year exponentially, so that reservoir is pulled down. And with those lower pressures, the likelihood of increased correlative-right problems is very minimal, due to the effect of making these offsets the same.

Q. Do you have any reservations as an engineer in recommending to the Division that they uniformly change the well-location requirements for the entire pool to be consistent with those requirements now approved for the

Blanco-Mesaverde Pool?

A. I have no reservation with the recommendation to make the setbacks the same for the underpressure-overpressure as the Mesaverde and the PC.

MR. KELLAHIN: That concludes my examination of Mr. Nelms.

We move the introduction of his Exhibit Number 5.

EXAMINER ASHLEY: Exhibit 5 will be admitted as evidence at this time.

EXAMINATION

BY EXAMINER ASHLEY:

Q. Mr. Nelms, you said in the overpressured area initially pressures were about 1600?

A. Correct.

Q. And now they're currently --

A. -- in the range of 400 to 500. We haven't seen much in excess of 500 at this point. Normally 400 is about what we see.

Q. Is that for a new completion?

A. That would be for a new completion. For a clean-out we've gone back into wells and we've cleaned about -- Most of those wells were completed by cavitation, and every four or five years it's necessary to go clean them out, and when we do that we'll see pressures now at about 400 pounds, 450 pounds.

Q. Are there currently any wells being drilled, new wells being drilled, in the overpressured area?

A. Not to my knowledge. It's pretty much been fully developed at this point. It's mainly recompletions and clean-up of existing wells.

Q. It was mentioned earlier by Mr. Alexander that the recavitation is not really used anymore, because you've essentially developed that area. If there was to be a well drilled out there, a new well that was drilled, would you use the cavitation process again?

A. We probably would not at this point in time because it wouldn't be effective. There wouldn't be enough bottomhole pressure to really cavitate that coal.

What we're doing now is, we're going in and cleaning out the open-hole completions or pulling the old liners, milling out the old liners and then casing and cementing and fracturing those wells.

Q. And initial pressures in the underpressured area were 600?

A. That's probably about the highest we're seeing in the underpressured.

Q. And what are they currently?

A. They're in the range of 200 to 300 p.s.i. There are some areas where wells see those higher pressures, but that's kind of unusual at this point. There hasn't been as

much drainage in the underpressure as there has been in the overpressure because of the low permeability. There probably still are some areas in the underpressured where you'll see those higher pressures. But again, the permeabilities are so low and the production rates are so low that it requires compression to produce those wells. They'll come in at 120 a day, maybe 200 a day.

Q. And back to the overpressure area, the drainage is approximately, or was, or is approximately 320 acres?

A. It was set at 320 because of the higher permeabilities and the higher pressures. At that time it was thought that the one well per 320 would drain the 320 effectively.

Q. And the underpressured area is approximately 160, the drainage?

A. Well, there's kind of a debate going on right now on what that is. The Committee that's doing the research on the 160 is thinking about in the underpressured areas 160 may be required to efficiently drain the gas from those underpressured coal reservoirs.

There hasn't been a full consensus at this point in time, but because of the lower permeabilities and lower pressure it may be more likely that it will be required to go to 160s on the underpressure. But at this time that's not a definite --

Q. Okay. Move down to 160 or move up to 160?

A. Well, move down from 320s to 160s in the underpressure. That's being investigated right now.

Q. Okay. Now, in your Exhibit 5, the average permeability for the Fruitland Coal is 1.35 millidarcies?

A. Correct.

Q. That's overall average, including underpressured and overpressured?

A. That would be overall average, underpressure and overpressure.

Q. And could you break that out for me again as far as what the permeability is in the overpressured versus the underpressured?

A. In the overpressured, we estimated about 4.5 millidarcies would be a good average, in the underpressured about .3. There are some exceptions to that number, when you have -- In the overpressured zones some of those wells that were very highly productive and very overpressured probably exceeded that number. But that's kind of an average number for the overpressure.

Q. And you feel that in the overpressured area the changing of the setback requirements will not affect -- or not encroach or violate correlative rights?

A. I think the impact would be very, very minor, very insignificant at this point in time, because of the

low reservoir pressures.

EXAMINER ASHLEY: Okay. I have nothing further. Thank you.

THE WITNESS: Thank you, sir.

MR. KELLAHIN: That concludes our presentation, Mr. Ashley.

EXAMINER ASHLEY: There being nothing further in this case, Case 12,296 will be taken under advisement.

(Thereupon, these proceedings were concluded at 11:10 a.m.)

* * *

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 12296, heard by me on 1-20, 2000.

Mark Ashley, 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 January 25th, 2000.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 2002

CASE 12296: **Continued from December 2, 1999 Examiner Hearing**

Application of Burlington Resources Oil & Gas Company to amend Rule 7 of the Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool for purposes of changing well location requirements for coal gas wells, San Juan, Rio Arriba, McKinley and Sandoval Counties, New Mexico. Applicant seeks to amend Rule 7 of the Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool to (a) change the well location boundary requirements from not closer than 790 feet to not closer than 660 feet to any outer boundary of a spacing unit and from not closer than 130 feet to not closer than 10 feet to any quarter-quarter section line or subdivision inner boundary; and (b) to add well location requirements for federal exploratory units.

CASE 12328: **Application of John L. Cox for an Unorthodox Oil Well Location, Lea County, New Mexico.** Applicant seeks an exception to Division Rule 104.B (1), revised by Division Order No. R-11231, issued by the New Mexico Oil Conservation Commission in Case No. 12119 on August 12, 1999, to drill its State "14-A" Well No. 1 at an unorthodox Pennsylvanian oil well location 1330 feet from the North line and 2530 feet from the East line (Unit G) of Section 14, Township 12 South, Range 33 East. The SE/4 NE/4 of Section 14 is to be dedicated to this well in order to form a standard 40-acre oil spacing and proration unit for the Undesignated Bagley-Pennsylvanian Pool. This unit is located approximately 16 miles west of Tatum, New Mexico.

CASE 12003: **Reopened - Continued from December 16, 1999 Examiner Hearing**

In the matter of Case 12003 being reopened pursuant to the provisions of Division Order No. R-11053-A, which order established temporary special rules and regulations for the Featherstone-Bone Spring Pool in Lea County, New Mexico, including a provision for 80-acre spacing units. Operators in the Featherstone-Bone Spring Pool may appear and show cause why the temporary special rules for the pool should not be rescinded.

CASE 12319 **Continued from January 6, 2000 Examiner Hearing**

Application of Nearburg Exploration Company, L.L.C. for Compulsory Pooling, Eddy County, New Mexico. Applicant seeks an order pooling all mineral interests from the surface to the base of the Morrow formation in the following manner: the N/2 for all formations/pools developed on 320-acre spacing including the Logan Draw Morrow Gas Pool, the NE/4 for all formations/pools developed on 160-acre spacing, the S/2 NE/4 for all formations/pools developed on 80-acre spacing, and the SE/4 NE/4 for all formations/pools developed on 40-acre spacing, all in Section 30, Township 17 South, Range 27 East. Applicant proposes to dedicate these pooled units to a well to be drilled at a standard gas well location in the SE/4 NE/4 of Section 30. Also to be considered will be the cost of drilling and completing the well and the actual operating costs and charges for supervision, designation of applicant as the operator of the well and a charge for risk involved in drilling the well. The area is located approximately 4 miles southeast of Artesia, New Mexico.

CASE 12285: **Continued from January 6, 2000, Examiner Hearing.**

Application of Nearburg Exploration, Company, L.L.C. for Compulsory Pooling, Lea County, New Mexico. Applicant seeks an order pooling all mineral interests from the surface to the base of the Morrow formation underlying the N/2 for all formations developed on 320-acre spacing including but not limited to the Undesignated San Simon Wolfcamp Gas Pool, the NW/4 for all formations developed on 160-acre spacing, the N/2 NW/4 for all formations developed on 80-acre spacing, and the NW/4 NW/4 for all formations developed on 40-acre spacing, all in Section 17, Township 22 South, Range 35 East. Applicant proposes to dedicate these pooled units to a well to be drilled at a standard gas well in the NW/4 NW/4 of Section 17. Also to be considered will be the cost of drilling and completing the well and the allocation of the cost thereof, as well as actual operating costs and charges for supervision, designation of Nearburg Producing Company as operator of the well, and a charge for risk involved in drilling and completing the well. The area is located approximately 10.5 miles southwest of Oil Center, New Mexico.

CASE 12329: **Application of EOG Resources, Inc. for a Unit agreement, Lea County, New Mexico.** Applicant seeks approval of a unit agreement for its proposed Red Hills North Unit Area containing 4198.20 acres, more or less, of Federal and State lands comprising all or portions of Sections 6, 7, 8, 17 and 18, Township 25 South, Range 34 East, and all or portions of Sections 1, 12 and 13, Township 25 South, Range 33 East. Said unit area is located approximately 19 miles west by north of Jal, New Mexico.

CASE 12330: **Application of Ameristate Oil and Gas, Inc. for Compulsory Pooling, Lea County, New Mexico.** Applicant seeks an order pooling all mineral interests from the surface to the top of the Mississippian formation or 12,900 feet, whichever is lesser, in the E/2 for all formations developed on 320-acre spacing including but not limited to the Undesignated South Shoe-Bar-Mississippian Gas Pool, the NE/4 for all formations developed on 160-acre spacing, the N/2 NE/4 for all formations developed on 80-acre spacing, and the NE/4 NE/4 for all formations developed on 40-acre spacing including but not limited to the Undesignated West Lovington-Upper San Andres Pool, the Undesignated Vacuum Grayburg-San Andres Pool, and the Undesignated Vacuum Abo Reef Pool, all in Section 13, Township 17 South, Range 35 East. Applicant proposed to dedicate these pooled units to its State 13 Well No. 1 to be drilled at a standard gas well in the NE/4 NE/4 of Section 13. Also to be considered will be the cost of drilling and completing the well and the actual operating cost thereof as well as actual operating costs and charges for supervision, designation of applicant as the operator of the well and a charge for risk involved in drilling the well. The area is located approximately 9 miles southwest of Lovington, New Mexico.

CASE 12313: **Continued from December 16, 1999 Examiner Hearing**

Application of David H. Arrington Oil 7 Gas, Inc. for compulsory pooling and directional drilling of a horizontal well, Lea County, New Mexico. Applicant seeks an order pooling all mineral interests from the surface to the base of the Strawn formation, Northeast Lovington-Pennsylvanian Pool, underlying the following described acreage in Section 10, Township 16 South, Range 37 East in the following manner: (a) the NW/4 SW/4 for any formations and/or pools developed on 40-acre spacing and (b) the SW/4 in order to form a 160-acre Project Area, as defined by Division Rule 111.A(9), by combining two standard 80-acre oil spacing and proration units in order to accommodate a horizontally drilled wellbore. The applicant proposes to vertically drill its H & L Variance "10" Well No. 1 at a surface location 2130 feet from the South line and 330 feet from the West line (Unit L) of Section 10 to an approximate depth of 11,600 feet, kick-off, and then drill horizontally in an easterly direction a lateral distance of 1400 feet through the Strawn formation. The applicable drilling window or producing area [see Division Rule 111.A(7)] for the proposed wellbore is to be standard for any 40-acre unit and 80-acre units per the outer setback requirements for 80-acre units in the subject pool. Also to be considered will be the cost of drilling and completing this wellbore and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as the operator of the well and a charge for risk involved in drilling and completing the well. The location of the proposed well is approximately six miles east of Lovington, New Mexico.

CASE 12272: **Continued from December 16, 1999, Examiner Hearing.**

Application of Falcon Creek Resources, Inc. for authority to inject water into six wells in the proposed Teas-Yates Seven Rivers Unit Waterflood Project Area, Lea County, New Mexico. Applicant seeks approval to inject water into the Yates and Seven Rivers formations, West Teas-Yates Seven Rivers Pool, through 6 wells in its proposed Teas-Yates Seven Rivers Unit Waterflood Seven Rivers Pool, located in the following area:

Township 20 South, Range 33 East:
Section 4: SE/4
Section 9: N/2
Section 16: NE/4

This area is located approximately 5 miles northeast of the intersection of New Mexico Highways 176 and 62/180.

CASE 12331: **Application of Falcon Creek Resources, Inc. for Statutory Unitization, Lea County, New Mexico.** Applicant seeks an order unitizing, for the purpose of establishing an enhanced recovery project, all mineral interested in the Yates and Seven Rivers formations, West Teas (Yates-Seven Rivers) Pool, underlying 1,320 acres, more or less, of Federal, State and Fee lands in the following acreage:

TOWNSHIP 20 SOUTH, RANGE 33 EAST, NMPM
Section 4: SE/4
Section 9: S/2, NE4, S/2 NW/4, NE/4 NW/4
Section 16: N/2, N/2 SW/4, NW/4 SE4
Section 17: E/2 NE4, NE/4 SE/4

Said unit to be designated to the West Teas (Yates-Seven Rivers) Unit. Among the maters to be considered at the hearing will be the necessity of unit operations; the designation of a unit operator; the designation of horizontal and vertical limits of the unit area; the determination of the fair, reasonable; and equitable allocation of production and costs of production, including capital investment, to each of the various tracts in the unit area; the determination of credits and charges to be made among the various owners in the unit area for their investment in wells and equipment; and such other matters as may be necessary and appropriate for carrying on efficient unit operations; including but no limited to, unit voting procedures, selection, removal or substitution of unit operator, and time of commencement and termination of unit operations. Applicant also requests that any such order issued in this case include a provision for carrying any non-consenting working interest owner within the unit area upon such terms and conditions to be determined by the Division as just and reasonable. The unit area is located approximately 30 miles west by southwest of Hobbs, New Mexico.

CASE 12332: **Application of Falcon Creek Resources, Inc. for Approval of a Waterflood Project for its West Teas (Yates-Seven Rivers) Unit Area and Qualification of Project for the Recovered Oil Tax Rate pursuant to the Enhanced Oil Recovery Act, Lea County, New Mexico.** Applicant seeks an order approval of its West Teas (Yates-Seven Rivers) Unit Waterflood Project for injection of water in the Yates and Seven Rivers formations, West Teas-Yates Seven Rivers Pool through six injection wells located in the following described area:

TOWNSHIP 20 SOUTH, RANGE 33 EAST, NMPM
Section 4: SE/4
Section 9: S/2, NE4, S/2 NW/4, NE/4 NW/4
Section 16: N/2, N/2 SW/4, NW/4 SE4
Section 17: E/2 NE4, NE/4 SE/4