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. 12,485
APPLICATION OF COLEMAN OIL AND GAS, INC., FOR APPROVAL OF A PILOT PROJECT, INCLUDING AN EXCEPTION TO RULES 4 AND 7 OF THE SPECIAL RULES AND REGULATIONS FOR THE BASIN-FRUITLAND COAL GAS POOL, FOR THE PURPOSES OF ESTABLISHING A PILOT PROGRAM TO DETERMINE THE COMMERCIAL FEASIBILITY FOR FRUITLAND COAL GAS WELLS, SAN JUAN COUNTY, NEW MEXICO	)	ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner

September 7th, 2000

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID R. CATANACH, Hearing Examiner on Thursday, September 7th, 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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I N D E X

September 7th, 2000
Examiner Hearing
CASE NO. 12,485

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A P P E A R A N C E S

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By: WILLIAM F. CARR

* * *

WHEREUPON, the following proceedings were had at 10:32 a.m.:

EXAMINER CATANACH: At this time we'll call Case 12,485, the Application of Coleman Oil and Gas, Inc., for approval of a pilot project, including an exception to Rules 4 and 7 of the Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool, for the purposes of establishing a pilot program to determine the commercial feasibility for Fruitland Coal gas wells, San Juan County, New Mexico.

Call for appearances in this case.

MR. CARR: May it please the Examiner, my name is William F. Carr with the Santa Fe law firm Campbell, Carr, Berge and Sheridan. We represent Coleman Oil and Gas, Inc., in this matter, and I have two witnesses.

EXAMINER CATANACH: Any additional appearances?

Will the two witnesses please stand to be sworn in?

(Thereupon, the witnesses were sworn.)

ALAN P. EMMENDORFER,

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

DIRECT EXAMINATION

BY MR. CARR:

Q. Will you state your name for the record, please?

A. Alan P. Emmendorfer.

Q. Mr. Emmendorfer, where do you reside?

A. Arvada, Colorado.

Q. By whom are you employed?

A. Coleman Oil and Gas.

Q. And what is your position with Coleman Oil and Gas?

A. I'm one of the geologists in the Denver office.

Q. Mr. Emmendorfer, have you previously testified before this Division and had your credentials as an expert in petroleum geology accepted and made a matter of record?

A. Yes, I have.

Q. Are you familiar with the Application filed in this case on behalf of Coleman?

A. Yes, I am.

Q. Are you familiar with the status of the lands in the portion of the Basin-Fruitland Coal Gas Pool which is the subject of this hearing?

A. Yes.

Q. Have you made a geological study of the area which is the subject of the application?

A. Yes, I have.

Q. Are you prepared to share the results of your work with Mr. Catanach?

A. Yes.

MR. CARR: Are the witness's qualifications acceptable?

EXAMINER CATANACH: They are.

Q. (By Mr. Carr) Initially, would you explain to the Examiner what it is that Coleman is proposing in this case?

A. Mr. Examiner, Coleman is proposing to establish a pilot program to determine the commercial feasibility for Fruitland Coal Gas wells in the subject portion of the Basin-Fruitland Coal Gas Pool. Further, we hope to demonstrate the benefits of well interference and that this will show that commercial production is feasible in this portion of the Basin-Fruitland Coal Pool.

Q. Has Coleman reviewed this proposal with the Aztec Office of the Oil Conservation Division?

A. Yes, we have. Before we made the Application we talked to Mr. Chavez in Aztec and told him what we would like to do and why, and he was supportive of the plan.

Q. If your Application is granted, you proposed to place two wells on one 320-acre spacing unit; is that not correct?

A. That is correct.

Q. Have you agreed with Mr. Chavez that if you are able to establish commercial rates, that once you establish those rates, one of those wells will be shut in and not

produced on that 320-acre unit?

A. That's correct, and that was something that Mr. Chavez said would need to be done for his support in this Application.

Q. That was a condition on his support?

A. Yes, it was.

Q. You're going to cover the land and geological portion of this case, correct?

A. Correct.

Q. And then Mr. Thompson will review the engineering aspects?

A. That is correct.

Q. And he will discuss what is a commercial well and those portions of the Application?

A. Yes.

Q. Could you briefly state what Coleman is seeking with this Application, the particular items that you're requesting be approved?

A. Okay. Coleman seeks to drill five Basal Fruitland Coal wells on a 160-acre fivespot pattern. One of the wells has already been drilled, the Juniper Number 1. Three of the other four wells would be drilled at standard locations. One well, the fifth well, would be drilled at a nonstandard location to effect a 160-acre fivespot.

With these five wells we hope that the producing wells will accelerate the dewatering of the Fruitland Coal in this particular area, and we can see if commercial production can be established. If commercial production can be established, then we plan to apply this knowledge to the area and further develop our acreage on a 320-acre basis.

Q. Mr. Emmendorfer, there are special pool rules, as we know, in effect for the Basin-Fruitland Coal Gas Pool, correct?

A. Yes, there are.

Q. And you're seeking an exception to two of those rules for this one well; is that right?

A. That is correct.

Q. And what are the rules that you're seeking an exception to?

A. The first one is Rule Number 4, which are special pool rules and regulations for the Basin-Fruitland Coal Gas Pool, which were adopted by Order Number R-8768, which provides for each well to be located on a standard unit comprising 320 acres, more or less, comprising any two quarter sections of a single governmental section.

The second exception is Rule Number 7 where rules [*sic*] are to be located in either the northeast quarter or the southwest quarter of the section.

Q. And to be sure we don't have a misunderstanding on this, is Coleman asking the Division to approve 160-acre infill development?

A. No.

Q. Let's go to what has been marked as Coleman Exhibit Number 1. I'd ask you to identify it and then explain to the Examiner what it shows.

A. Okay. Exhibit Number 1 is a combination of isopach map of the Fruitland Coal, an activity map, and an acreage map.

I would like to direct you to the yellow acreage, which is Coleman's acreage. We own approximately 12 sections in this area, 24 and 10. I'd like to point out, Mr. Examiner, that the pilot project consists of all of Section 16 of 24 North, 10 West, and the south half of Section 9 and the east half of Section 17, all of 24 North, 10 West, and all located on Coleman Oil and Gas acreage.

In addition, I'd like to point out that our proposed pilot project is approximately three miles away from the nearest drilling that has been done to the Fruitland Coal formation, and we'll discuss those in a little bit more detail later.

Q. What is the character of the land in this area?

A. Okay, Section 16 is a state lease, and the remainder is pretty evenly divided between Federal and

Navajo-allotted.

Q. Also on this exhibit you have contours. This is an isopach map as well as an orientation plat?

A. That is correct.

Q. And what does this show you?

A. What I attempted to show with this isopach is that based on well control from deeper wells drilled in the area, that approximately 20 feet of basal Fruitland Coal is present within the area of our acreage position. And based on desorption data that we have for the area, we feel that 20 foot of coal, with the amount of gas in place, is enough reserves to produce commercial wells, should the dewatering process be affected.

Q. Is it fair to say that this pilot project has been located in such way as to, one, utilize an existing wellbore, and to basically stay in the center of acreage which is operated by Coleman.

A. That is correct. I'd point out that the Juniper Number 1 was drilled by Coleman in the southwest of Section 16. That's our existing well that is currently shut in, but we do have test data that will be presented during the engineering testimony. We wanted to utilize this well and drill the other four wells. And as you can see, it's pretty central to our acreage position and would allow us to then do additional 320 development, should commercial

production be established.

Q. Let's go to what's been marked Coleman Oil and Gas Exhibit Number 2. Would you identify and review that, please?

A. Exhibit Number 2 is a type log for our Juniper project, and this is the neutron density log for the Juniper Number 1 well, located in the southwest of Section 16, 24 North, 10 West, and it's just to show that the Fruitland Coal consists of only one basal coal member and approximately between 1300 and 1400 foot thick -- or depth, and that in this particular well the coal was 21 foot thick. It got marked on there where the existing perforations for this well were put into the coal and where the zone was stimulated, and to show that good quality coal does exist in the area.

Q. So we have the reserves in place. The question is, can we produce them at economic rates?

A. That's correct.

Q. Let's go back to Exhibit Number 1. Does this show Fruitland Coal development in the area?

A. Yes, it does. There's a general legend off to the upper right-hand corner of the map, but what we need to pay attention to is the triangles surrounding standard gas wells. Those are Fruitland Coal gas wells, symbol for this map.

And we'd like to point out that there are two wells that Dugan Production has drilled in Sections 1 and 2 of 24 North, 11 West, that they attempted to produce and could never get the water rate to decline and the gas to come up. And they plugged those a year or two ago.

To the south of the acreage position, Dugan has drilled one well in Section 35 of 24 North, 11 West, and a Coal well, Section 32 of 24 North, 10 West. In addition, they've drilled a well in the Section 35, same township, and that's all of the other drilling that's been done within the Township 24 North, 10 West, besides the one well that Coleman operates.

Dugan has also drilled two wells on this map over on 24 North, 9 West, and all of these wells are either shut in or have made minimal amounts of gas.

In addition, Coleman operates a well up in 25 North, 11 West, Section 35, that's shut in due to no gas and high water volumes.

And then Maralex has four wells drilled and producing water and not reporting any gas at this time, from wells also in 25 North, 11 West. I should point out that all existing wells are farther than three miles away from the proposed pilot project.

In addition, Dugan Production Company has two wells staked, one in the southwest of 20 and one in the

northeast of 29 of 24 and 10, but -- as our discussions with them, they have no plans in the immediate future of drilling these wells, and they've been on locations for about a year and a half now.

Q. Are there other operators of Basin Fruitland Coal Gas wells in the project area?

A. No, there are not.

Q. Are there other working interest owners or undrilled leases in the project area?

A. The only other working interest owner in the project area is in the east half of Section 16, and that is Koch, and we have been in discussions with them. We told them what we would like to do, and they did not want to participate.

We offered to buy their interest out; it's an undivided interest in the east half. Their mode of operation is never to sell anything, but they did indicate that they were willing to work a farmout with us, somewhere in the process of negotiating a farmout with them to secure their interest in that lease.

Q. Are there unleased mineral interest owners in the project area?

A. No, there are not.

Q. Are there other operators of Basin Fruitland Coal gas wells within two miles of the project area?

A. No, there are not.

Q. Would you identify what has been marked as Coleman Exhibit Number 4?

A. Number 3?

Q. Exhibit Number 3?

A. Exhibit Number 3 is an affidavit with attached notice letters confirming that notice of this Application was provided in accordance with Oil Conservation Division rules.

Q. If we go to the third page, it indicates that notice was provided to Koch Exploration Company, Dugan Production Corporation, and Robert L. Bayless. Why was notice provided to Dugan and to Bayless?

A. Well, Dugan operates -- They own a large acreage block immediately south of our acreage block, and to the southwest, and some to the southeast of the area. They've got most of the south half of the township, 24 North, 10 west. And we notified them because they've got other wells in the area, farther away, but they are an operator there. And we actually talked to them about doing a joint project together, their lands and our lands, and they were not interested in this area at this time. They had other places to drill that they thought would benefit their company better, and so they were not interested in doing a pilot project.

However, they did indicate that they thought it was a good idea, and they wished us luck, but they didn't want to participate at that time.

The reason we notified Bayless is, they are the working interest owner in the northwest of Section 10, 24 North, 10 West. We just did that as a courtesy, because we though that when commercial production is demonstrated and we start developing on a 320-acre pattern, we would be contacting them to participate in the drilling of a well, so we wanted to make them aware of our plans. And again, they had no reason to oppose our plans for this pilot project.

Q. In your opinion, has notice been provided to all interest owners required to receive notice by OCD rules, as well as other interest owners who could be affected by the Application?

A. Yes.

Q. Will Coleman call an additional witness to review the engineering portions of this case?

A. Yes.

Q. Were Exhibits 1 through 3 either prepared by you or compiled at your direction?

A. Yes, they were.

MR. CARR: At this time, Mr. Catanach, we move the admission into evidence of Coleman Exhibits 1 through

3.

EXAMINER CATANACH: Exhibits 1 through 3 will be admitted as evidence.

MR. CARR: That concludes my direct examination of Mr. Emmendorfer.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Emmendorfer, the Juniper 1 is existing --

A. Yes.

Q. -- and the other four wells are proposed to be drilled?

A. Yes, that's correct.

Q. Do you have locations on those wells yet?

A. We are in the process of staking them and submitting the applications, and I don't know the exact -- where we are in that process.

Q. But you're going to need exceptions -- Well, one of them, you said, was unorthodox?

A. That would be the northwest of Section 16.

Q. By virtue of being in the wrong quarter section?

A. Yes.

Q. Do you know if footagewise it's unorthodox?

A. It would be -- If it was located in the northeast and southwest, it would be within a legal location. I don't know the exact -- I think it's about 1000 feet in

both directions from the northwest corner.

Q. Okay. The wells in 17 and 9, are those both standard locations?

A. That is correct. And the dots are placed in there mainly to keep from hiding the other well symbols, more than being the exact location as to where they're being staked.

Q. Now, the project area is going to comprise all of Section 16, but you don't have it yet?

A. We have undivided 25-percent working interest in the east half of 16, and technically that's correct that we do not -- we have not made a signed deal with Koch. But they have indicated that they will farm out to us, and we are actively in the process of getting that effected.

Q. Do you have any doubts that that will occur?

A. No, I do not.

Q. Okay. Now, tell me what the plan is, as far as drilling and producing these wells. What are you going to do?

A. Well, we're going to -- We've got one drilled, the Juniper Number 1, and we plan on drilling the other four wells as soon as permits can be approved, and the approval of this pilot project. We plan on coring and doing desorption work in the northwest of 16 to give us better data as to the gas content of the coal.

And then we will complete the wells using hydraulic fracturing methods, similar to what we did with the Juniper Number 1 well, put them all on pump and try to dewater. And as you will see during the engineering testimony, the Juniper Number 1 is capable of making large amounts of water.

I feel that this area is very well cleated, based off of wireline logs of the deeper wells in the area, and that's one of the reasons why we picked up this acreage block. We thought thickness of the coal presumed gas content at the time and the well-cleated nature of the coal would make for commercial wells.

However, after drilling the Juniper Number 1, the high permeability of the coal is a good thing and a bad thing. And the bad thing is that there's a lot of water production. And based off of what Maralex has seen to the north on their 320, they can't get the water production to drop and can get the gas rates to come up. And we think that before we start drilling a large area on a 320, we need to see if the coal can be dewatered.

And so we want to have that fifth well to get the process going, and we think it will be an ongoing process after gas rates go up to a commercial rate.

Q. The Juniper Number 1 is not currently producing any gas?

A. That is correct. We've tested it off and on, and like I said, that's part of the engineering testimony that you will see next, to get bottomhole pressures, water rates, and gas to be produced, and right now it's shut in pending the outcome of this hearing.

Q. The only real thing out of the ordinary here is the drilling of the well in the northwest quarter of Section 16?

A. That's correct.

Q. And you propose to utilize that well strictly for dewatering?

A. Well, we want to try to see if we can get the dewatering process to occur, and then after commercial rates have been established, we will shut in one of the two wells in the west half of 16, based on discussions with Mr. Chavez.

Q. After commercial rates have been established?

A. Yes.

Q. What does that mean?

A. Well, not to pass the buck, but if you can wait till Mr. Thompson gives his testimony, I think it will become a little bit more obvious.

Q. Okay, so neither of those wells will be -- I mean, only one well will be produced in the west half of that section?

A. Once commercial production has been established, yes.

Q. Do you know what the status is -- Oh, I guess you did say something about the Maralex wells, they're having a hard time dewatering?

A. Yeah, they produce -- I don't have the exact rates, but they produce large amounts of water and minimal to no gas.

Q. Do you know where those are?

A. Let's see. There's two in Section 26, 25 and 11, the northeast and the southwest quarters, Section 26.

Q. 26, okay.

A. One in the northeast of 27, and one in the southwest of 22, and one in the southeast of Section 30 of 25 and 10. That well does not show up as a triangle; it's a gas well that was originally drilled as a Pictured Cliff well by Bayless, and they subsequently plugged the Pictured Cliff and turned the well over to Maralex, and they completed it in the Fruitland Coal.

Q. Okay. This is basically an area that's really not commercial in the Fruitland Coal yet; is that correct?

A. No, and you'll see that in the next testimony, some production rates. No, there's -- None of the wells have approached commercial production at all.

Q. How about the Dugan wells in the southern end of

this area here?

A. That again will be part of the engineering testimony, but they're minimal rates also.

EXAMINER CATANACH: Okay. I think that's all I have of this witness.

MR. CARR: That concludes our questions of this witness, and we now call Paul Thompson.

PAUL C. THOMPSON,

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

DIRECT EXAMINATION

BY MR. CARR:

Q. State your name for the record.

A. Paul Thompson.

Q. Where do you reside?

A. Farmington, New Mexico.

Q. By whom are you employed?

A. I'm the president of Walsh Engineering and Production Corporation.

Q. And what is the relationship of Walsh Engineering to Coleman Oil and Gas, Inc., in this matter?

A. I'm a consulting engineer for Coleman Oil and Gas.

Q. Have you previously testified before this Division and had your credentials as an expert in petroleum

engineering accepted and made a matter of record?

A. Yes.

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

A. Yes.

Q. Have you made an engineering study of the portion of the Basin Fruitland Coal Gas Pool which is involved in this case?

A. Yes.

Q. Are you prepared to share the results of your work with the Examiner?

A. Yes.

MR. CARR: Are the witness's qualifications acceptable?

EXAMINER CATANACH: They are.

Q. (By Mr. Carr) Mr. Thompson, initially I think it would be helpful for you to just summarize the purpose of your testimony, explain to us what you have been asked to look at, what you've been asked to do.

A. Well, as Mr. Emmendorfer said, Coleman hopes that by drilling four standard wells and one nonstandard well in a 160-acre fivespot pattern, they can accelerate the dewatering of the Fruitland Coal and establish commercial production.

The purpose of my testimony is to explain the

benefits of well interference on Fruitland Coal production and then to determine the peak production rate necessary to achieve commercial production.

Q. Have you prepared exhibits for presentation here today?

A. Yes, I have.

MR. CARR: Mr. Examiner, we have marked the first three exhibits, Coleman Exhibits 1 through 3. The exhibits that we received yesterday were already marked Exhibits 1 through 11, and so we indicated the engineering part of the case by referencing as Engineering Exhibit 1 through Engineering Exhibit 11. So that's why we'll have the overlap, 1, 2, 3.

EXAMINER CATANACH: Okay.

Q. (By Mr. Carr) Mr. Thompson, let's go to what has been marked Coleman Engineering Exhibit Number 1. I'd ask you to identify it and explain what it shows.

A. Exhibit Number 1 is a pressure profile of a single well that's acting in a very large or infinite reservoir. It shows the pressure near the wellbore at different times, t equals zero being before it was drilled; t1 and t2 are just different times in the life of the well.

What happens when you have a single well in a large reservoir is that the pressure immediately adjacent to the wellbore will drop quickly, and then the wellbore

stabilizes rapidly. As the pressure in the coals adjacent to the wellbore stabilizes the gas in that area can desorb, and it will come into equilibrium at that reduced reservoir pressure.

As long as the well is not seeing any boundaries, the pressure profile will remain stabilized. That's indicated by time 2. Essentially the reservoir pressure adjacent to the wellbore is going to stay constant forever. Basically what that means is that water is moving into the wellbore as fast as we're removing it. If the reservoir pressure doesn't change, then there's no additional coal that we expose to the reduced pressure. Therefore, no additional gas will be desorbed.

Q. Let's go to Engineering Exhibit 2.

A. Exhibit Number 2 is a rate-time graph of what you'd expect the production to look like of a single well producing in a very large or infinite reservoir. Initially the gas rates will peak, reach a maximum quickly, and then begin a slow decline. The water production would decrease rapidly and remain relatively constant from then.

This situation is obviously not what you want, to get commercial production.

Q. All right. Now identify and review Exhibit Number 3, the pressure profile with a multi-well pattern.

A. Exhibit Number 3 is also a pressure profile

curve, like Exhibit 1. And if we can limit the size of the reservoir that each well sees by increasing the well density, then -- well, that's the purpose.

When the wells begin interfering with each other, no-flow boundaries are created between the wells, and the reservoir pressure is lower. The wells achieve a pseudo-steady-state flow where the pressure is declining everywhere as shown as time 2 on this graph.

A much larger volume of coal is therefore subjected to these reduced pressures and a larger amount of gas can be desorbed.

Q. What is Engineering Exhibit Number 4?

A. Exhibit Number 4 is a rate-time graph that shows the effects of this well interference. This is actual data from coal wells in the northwest quarter of the San Juan Basin, along the edge.

The first well, in blue, was drilled about three years prior to the offset wells. As you can see, initially it was responding like a single well in an infinite reservoir. As soon as its interference from the offset wells, the gas rate inclined and the water rate declined.

This is what we hope to expect to achieve in the pilot project.

Q. All right, are you ready to go to Exhibit 5?

A. Yes. Exhibit 5 is the production data from

Coleman's Juniper Number 1 well for this year. We produced the well intermittently and kept shooting fluid levels to see if we were making any progress in lowering the fluid level in the wellbore, and hence the bottomhole pressure.

As you can see from the production, it's two pages, starting in February through June of this year. The maximum production was only 6 MCF a day, and the water production was fairly stable, around 160 barrels of water a day. Obviously this well is noncommercial.

Q. And this well continues just to produce as if it's in an infinite reservoir?

A. Correct.

Q. Let's go to Exhibit Number 6. What is this?

A. Exhibit Number 6 is a plat showing the offset Fruitland wells as were listed in the *Dwight's Production Data*, in the subject area -- or actually in all of Township 24, 25 North, and also Ranges 10 and 11 West. I've indicated the Juniper well as located in the southwest quarter of Section 16 in 24 and 10.

The closest producing well is the Dugan Mary Lou Number 1 well, and it's only produced 5300 MCF.

The best Fruitland Coal producers in this four-township area are the wells in the northwest corner of Township 25 and 11, where also the well density is the greatest.

Q. And Exhibit Number 7 is a blow-up of that area where there's a greater concentration of Fruitland Coal wells?

A. That's correct. This is just the same well shown on the previous exhibit, just on a larger scale. The circles around the wells indicate the relative volume of the cumulative production and should not be inferred at all as a drainage radius. The cumulative production for each well is listed below the well. As you can see, some of these wells, the Buena Suertes, have produced approximately half a BCF.

Q. Have you attempted to determine the peak rate which would be required for a commercial Fruitland Coal well in the Coleman project area?

A. Yes, I have. Coleman's definition of a commercial production for an exploration project like this is a well that has a 30-percent before income tax rate of return.

Q. And what you've been doing and what you do is attempt to determine what producing rate would be required to achieve this rate of return?

A. That's correct.

Q. Okay. Let's go to Exhibit Number 8. Would you explain that, please?

A. Exhibit Number 8 is the rate-time curve for the

Buena Suerte 4L Com well, which, as you can see from the previous exhibit, is the best producing well in the lot. And I used this production curve as a model. It shows the typical Fruitland Coal type of -- kind of classic production characteristics. The first two and a half years of production is inclining. It looks like they must have had some start-up problems getting it going. And then it's fairly flat for approximately a year and then begins a fairly steady decline.

I thought this was a good example of the type of a production profile that we should expect in the pilot area.

Q. Let's go to the rate-time graph, Exhibit Number 9.

A. What I had to do in order to calculate a 30-percent pre-tax rate of return was arbitrarily adjust the numbers of this Buena Suerte well. And in order to get that 30-percent rate of return, I needed to multiply the production rates of the Buena Suerte by 42 percent.

And then along with the economic conditions I'll show you in the next exhibit that presented a cash flow with a 30-percent pre-tax rate of return.

The peak production rate, as shown on this exhibit, is about 125 MCF a day. Therefore, with Coleman's agreement with Mr. Chavez that as soon as commercial

production was determined -- and that now is determined as 125 MCF a day -- if any of the five wells in the pilot area reach the 125-MCF-a-day level on a stabilized basis, they'll shut in one of the wells in the west half of Section 16.

Q. And you will determine which well in consultation with Mr. Chavez?

A. That's correct.

Q. Let's go to Exhibit Number 10, the economic parameters.

A. These are just the factors that I put into calculating the cash flow forecast for the next exhibit. Briefly, I used the three-dollar gas price. That was held constant for 12 months and then escalated at 3 percent a year. BTU content is about one.

Lease operating expenses were assumed to be about $1000 a month. Those also were held constant for a year and then escalated at 3 percent. Gathering and processing fees were assumed to be 60 cents per MCF. Standard tax rates. Drilling and completion costs were estimated to be $150,000 per well. And then 100 percent Coleman working interest and 80 percent NRI.

Q. All right, let's go to Engineering Exhibit Number 11, the annual cash flow report. Would you review that?

A. Yes, Exhibit 11 is a cash flow forecast. Again,

this takes the production from the Buena Suerte 4L Com well, multiplied by 42 percent. So it's 42 percent of the actual production of the Buena Suerte.

As you can see from kind of the bottom middle of this spread sheet where it has Economics Information, the rate of return is 30.96 percent, which took me several iterations to get it that close, and I thought that was close enough.

The other thing I'd like to point out is that the cumulative gas production from this forecast is 590,000 MCF.

I went back and did some volumetrics based on the Juniper Number 1 log using coal density of 1.35 grams per cubic centimeter, a 21-foot thickness of the coal. We did some desorption from chip samples in this well. It calculated 83 standard cubic feet of gas per ton of coal. And that calculates at a gas in place in 320 acres of a little more than a BCF, 1.02 BCF.

In order to get 590,000 of produced reserves, that would mean a recovery factor of 57.8 percent, which appears to be reasonable.

Q. What conclusions can you reach from your engineering study of the area?

A. Well, while some factors of the Fruitland Coal in this area appear favorable, have obviously good

permeability and relatively thick single coal, the commercial viability of the area is still very much in question.

We feel that by developing a five-spot drilling program we can accelerate the well-to-well interference and prove whether or not commercial production is possible. If commercial rates can be achieved from any of the wells in the pilot project, which has been determined to be a stabilized rate of 125 MCF per day, then Coleman will shut in one of the wells drilled in the west half of Section 16 and then continue to develop the area on 320-acre spacing.

Q. In your opinion, will granting this Application be in the best interests of conservation, the prevention of waste and the protection of correlative rights?

A. I do.

Q. Were Engineering Exhibits 1 through 11 prepared by you or compiled at your direction?

A. Yes, they were.

MR. CARR: At this time, Mr. Catanach, we would move the admission into evidence of Coleman Engineering Exhibits 1 through 11.

EXAMINER CATANACH: Coleman Engineering Exhibits 1 through 11 --

MR. CARR: Yes, sir.

EXAMINER CATANACH: -- will be admitted as

evidence.

MR. CARR: And that concludes my direct examination of Mr. Thompson.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Thompson, the well proposed to be drilled in the northwest of 16, why is that additional well necessary? If you're able to drill three additional wells to increase the density, why is that fourth well important?

A. Well, we're not sure exactly because from the Exhibit 1 of Mr. Emmendorfer's, the coal appears to be relatively flat, and we're not sure which way the water will migrate.

What we're hoping to do is surround that well in the northwest of 16 by four other wells, and we anticipate that it's the well in the northwest of 16 that will see the effects of the interference first and should be the one that would be commercial earliest.

Q. What effect would that have on the further development of this acreage? Would that throw off the pattern in the surrounding sections?

A. Well, we haven't really determined which well we would shut in. You know, there's a chance that even if the well in the northwest quarter of 16 turned out to be the first one that achieved 125 MCF a day, that still might be

the one that gets shut in, and then you can develop the things on 320s.

Q. Why would that be the one to be shut in, if it would achieve commercial rates?

A. The purpose of the pilot project is just to determine if commercial production is possible in this area, since none of the wells in this whole township have ever shown rates as high as 125 a day.

I think once Coleman can prove to themselves that that's possible, they're going to continue development on 320, and then it's just a matter of time before you get the well interference.

Q. Okay, so during this process, before you reach commercial status, both wells in the west half of Section 16 will be produced?

A. That's correct.

Q. And the Juniper Number 1 is not producing very much at this point? Less than 10 MCF a day?

A. Yes, it's currently shut in, but the best we've seen is 6 MCF a day. It's about enough to run the pumpjack.

Q. Do you anticipate the well in the northwest of 16 to exhibit similar characteristics?

A. Initially. You know, we hope that by drilling these wells in this proximity that we can accelerate that

well interference, and that instead of being several years down the road before that no-flow boundary is hit, that we can achieve that in a matter of months.

Q. Do you -- Are you able to forecast a time when that might occur?

A. I haven't done any reservoir modeling, no.

Q. But you're thinking several months?

A. Well, I'm thinking a year.

Q. By virtue of producing two wells, at least initially, in the west half of 16, you're not really gaining any advantage over any other operators, since these wells are producing at such low rates; is that your opinion?

A. That's correct. And Coleman is the only operator in the area. They've selected this pilot project to be in the center of the area, where they wouldn't really be impacting anyone else.

Q. On your Exhibit Number 4, this is an instance where the interference effects have helped. Was this on the standard 320-acre spacing that this occurred?

A. Yes, it was. This was near the outcrop on the western side of the Basin in La Plata County. Essentially, it's the same effect, though. The recharge was higher than the water removal until the offset wells were drilled.

Q. And this was in a -- How many wells did this

involve?

A. Four.

Q. So even this showed that four wells could be adequate, you're choosing to add the additional well?

A. In that case, they were up against the edge of the reservoir, you know, the coal outcrop immediately to the west, and so there wasn't any need for a protective well on that side. They knew which way the water was draining.

In this area we're relatively flat, and it needs to look more like a waterflood project. We hope to radially affect the area.

Q. And you said when any of these wells reach a sustained rate of 125 a day. How are you going to determine that?

A. Probably, you know, a monthly rate.

Q. Just whenever the first average monthly rate is over 125? At that point you've determined it to be commercial?

A. That would be good, yeah.

Q. What do you foresee happening with the gas prices? Is that going to affect your economics?

A. It certainly would affect the economics. I guess we're looking to get these wells drilled as soon as possible.

Forecasts of three-dollar gas seem to hold for the next 24 months, so yes, it could certainly affect the economics.

Q. So if the gas price went up considerably or significantly, that would maybe reduce your rate which you could produce a well at commercially?

A. That's correct.

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

MR. CARR: That concludes our presentation in this case.

THE WITNESS: If I could answer your question to Mr. Emmendorfer, the other four wells have just recently been staked.

All of them have the proper setbacks except, you know -- However, the well in the northwest quarter is still going to be nonstandard because of its location. But as far as setbacks from the lines, they all would be legal locations.

Q. (By Examiner Catanach) Has that well been staked, the one in 16?

A. In the northwest? Just recently.

Q. Can you guys --

A. I don't have the footages, but I can get those to you.

Q. Okay, can you provide that to me?

A. Sure.

EXAMINER CATANACH: Okay.

MR. CARR: That's all we have.

EXAMINER CATANACH: All right, there being nothing further in this case, Case 12,485 will be taken under advisement.

(Thereupon, these proceedings were concluded at 11:22 a.m.)

* * *

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 12485, heard by me on October 7 2006.

David K. Catanach, Examiner
Oil Conservation Division

CERTIFICATE OF REPORTER

STATE OF NEW MEXICO)
) ss.
COUNTY OF SANTA FE)

I, Steven T. Brenner, Certified Court Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Division was reported by me; that I transcribed my notes; and that the foregoing is a true and accurate record of the proceedings.

I FURTHER CERTIFY that I am not a relative or employee of any of the parties or attorneys involved in this matter and that I have no personal interest in the final disposition of this matter.

WITNESS MY HAND AND SEAL September 13th, 2000.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 2002