STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION COMMISSION

CASE NOS. 12,888 and 13,100; and

CONSOLIDATED CASES NOS. 12,816, 12,841, 12,859 and 12,860

(Closing of Session for Deliberation)

TRANSCRIPT OF PROCEEDINGS

BEFORE: LORI WROTENBERY, CHAIRMAN
JAMI BAILEY, COMMISSIONER
ROBERT LEE, COMMISSIONER

June 4th, 2003

Santa Fe, New Mexico

These matters came on for hearing before the Oil Conservation Commission, LORI WROTENBERY, Chairman, on Wednesday, June 4th, 2003, at the New Mexico Energy, Minerals and Natural Resources Department, 1220 South Saint Francis Drive, Room 102, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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I N D E X

June 4th, 2003
Commission Hearing
CASE NOS. 12,888 and 13,100; and CONSOLIDATED CASES NOS. 12,816, 12,841, 12,859 and 12,860
(Closing of Session for Deliberation)

* * *

A P P E A R A N C E S

FOR THE COMMISSION:

DAVID K. BROOKS, JR.
Attorney at Law
Energy, Minerals and Natural Resources Department
Assistant General Counsel
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

* * *

WHEREUPON, the following proceedings were had at 3:52 p.m.:

CHAIRMAN WROTENBERY: At this point I'm going to entertain a motion that the Commission move into closed executive session, in which we will deliberate in connection with any administrative adjudicatory proceeding pending before the Commission or consult with Commission counsel under the attorney-client privilege concerning threatened or pending litigation in which the Commission is or may become a participant.

COMMISSIONER BAILEY: I so move.

COMMISSIONER LEE: Second.

CHAIRMAN WROTENBERY: All in favor say aye.

COMMISSIONER BAILEY: Aye.

COMMISSIONER LEE: Aye.

CHAIRMAN WROTENBERY: Aye.

(Off the record at 3:52 p.m.)

(The following proceedings had at 4:43 p.m.:)

CHAIRMAN WROTENBERY: Okay, we've completed our deliberations. I will entertain a motion that we go back into open session.

COMMISSIONER BAILEY: I so move.

COMMISSIONER LEE: Second.

CHAIRMAN WROTENBERY: All in favor say aye.

COMMISSIONER BAILEY: Aye.

COMMISSIONER LEE: Aye.

CHAIRMAN WROTENBERY: Aye. And just for the record, I'll note that the only matters of business that we discussed during the closed executive session were the Cases 12,888 and 13,100, which we heard over the last two days, and in addition to that the consolidated Cases 12,816, 12,841, 12,859 and 12,860, which we heard back in March, I believe, when the hearing was held in that group of consolidated cases.

Are there any other items for this special meeting of the Oil Conservation Commission?

Hearing none, I'll entertain a motion to adjourn.

COMMISSIONER BAILEY: I move we adjourn.

COMMISSIONER LEE: Second.

CHAIRMAN WROTENBERY: All in favor say aye.

COMMISSIONER BAILEY: Aye.

COMMISSIONER LEE: Aye.

CHAIRMAN WROTENBERY: Aye. Thank you, everybody.

(Thereupon, these proceedings were concluded at 4:44 p.m.)

* * *

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 Commission was reported by me; that I transcribed my notes; and that the foregoing is a true and accurate record of the proceedings.

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

WITNESS MY HAND AND SEAL June 10th, 2003.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 16th, 2006

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION COMMISSION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION FOR THE PURPOSE OF CONSIDERING:	CASE NO. 13,100
APPLICATION OF THE FRUITLAND COALBED METHANE STUDY COMMITTEE TO AMEND RULES 4 AND 7 OF THE SPECIAL RULES AND REGULATIONS FOR THE BASIN-FRUITLAND COAL GAS POOL IN SECTIONS 17 AND 18, TOWNSHIP 30 NORTH, RANGE 14 WEST, AND THE SOUTH HALF OF SECTION 13, THE SOUTH HALF OF SECTION 14 AND SECTIONS 23, 24, 25, 26 AND 35, TOWNSHIP 30 NORTH, RANGE 15 WEST, NMPM, SAN JUAN COUNTY, NEW MEXICO	

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

COMMISSION HEARING

BEFORE: LORI WROTENBERY, CHAIRMAN
JAMI BAILEY, COMMISSIONER
ROBERT LEE, COMMISSIONER

June 4th, 2003

Santa Fe, New Mexico

This matter came on for hearing before the Oil Conservation Commission, LORI WROTENBERY, Chairman, on Wednesday, June 4th, 2003, at the New Mexico Energy, Minerals and Natural Resources Department, 1220 South Saint Francis Drive, Room 102, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

* * *

I N D E X

June 4th, 2003
Commission Hearing
CASE NO. 13,100

* * *

E X H I B I T S

Dugan	Identified	Admitted
Exhibit 1	13	25
Exhibit 2	16	25
Exhibit 3	20	25
Exhibit 4	40	44

* * *

San Juan	Identified	Admitted
Exhibit 1	63	65
Exhibit 45	56	-
Exhibit 46	59	-
Exhibit 47	60	-
Exhibit 50	61	-
Exhibit 53	61	-
Exhibit 55	61	-
Exhibit 56	62	-

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A P P E A R A N C E S

FOR THE COMMISSION:

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FOR DUGAN PRODUCTION CORPORATION:

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325 Paseo de Peralta
P.O. Box 2307
Santa Fe, New Mexico 87504-2307
By: EDMUND H. KENDRICK

FOR SAN JUAN COAL COMPANY:

JAMES G. BRUCE
Attorney at Law
P.O. Box 1056
Santa Fe, New Mexico 87504

* * *

WHEREUPON, the following proceedings were had at 1:43 p.m.:

CHAIRMAN WROTENBERY: That brings us to the portion of this case that has been bifurcated and given a new case number. We'll give everybody a minute to clear out.

(Off the record)

CHAIRMAN WROTENBERY: Okay, this is Case Number 13,100, has been styled the Application of the Fruitland Coalbed Methane Study Committee to amend Rules 4 and 7 of the Special Rules and Regulations for the Basin-Fruitland Coal Gas Pool in Sections 17 and 18, Township 30 North, Range 14 West, and the south half of Section 13, the south half of Section 14 and Sections 23, 24, 25, 26 and 35, Township 30 North, Range 15 West, NMPM, San Juan County, New Mexico.

I'll just note that we have in this Case Number 13,100 incorporated the record in Case Number 12,734, and we have also incorporated the record in Case Number 12,888 into the record of this case, specifically Case Number 13,100. So that's where we're starting, with the records of two prior cases already incorporated into the record of this case.

I'll call for appearances at this point.

MR. KENDRICK: Ned Kendrick with the Santa Fe law

firm of Montgomery and Andrews, representing Dugan Production.

MR. BRUCE: And Jim Bruce of Santa Fe representing San Juan Coal Company. Madame Chair, I do have one witness who wasn't present at the mass-swearing-in of the other case, so --

CHAIRMAN WROTENBERY: Okay.

MR. BRUCE: -- he will need to be sworn.

MR. KENDRICK: And I too have one witness who has not been sworn in.

CHAIRMAN WROTENBERY: Okay, and you're going to have two witnesses in this case?

MR. KENDRICK: Yes, I will.

CHAIRMAN WROTENBERY: Okay, in that case would the witnesses who -- Let's go ahead and swear in all three witnesses for this particular proceeding.

(Thereupon, the witnesses were sworn.)

CHAIRMAN WROTENBERY: Mr. Kendrick?

MR. KENDRICK: I have a brief opening statement before the two witnesses.

CHAIRMAN WROTENBERY: Okay, sounds good.

MR. KENDRICK: Okay. In this case San Juan Coal Company is attempting to carve out an eight-section island of 320-acre Fruitland Coal spacing from the San Juan Basin containing many 160-acre spacing units.

It makes no sense geologically that these eight sections should be treated differently, they are no different geologically from the rest of the low-pressure area.

The continued 320-acre spacing, or the future 320-acre spacing, in this 18-section island would violate Dugan Production's correlative rights. It is the Commission's duty to protect Dugan Production's correlative rights to produce Fruitland Coal gas. Those rights would be violated by not allowing Dugan to have the opportunity of producing all the gas within each 320-acre spacing unit. Gas could be lost to the producers in the 160-acre spacing units outside the eight-section island.

Now, the second point, San Juan Coal should not be allowed to present evidence in certain areas where I believe it has in many other cases. These areas include the following: tax and royalty revenues from coal production, alleged economic benefits from coal production compared to the alleged value of gas production, the alleged mine safety concerns and alleged waste of coal resources. All these issues are outside the Commission's statutory jurisdiction.

In contrast, the Commission is charged by the Oil and Gas Act to do certain specific things: one, conserve oil and gas; two, prevent the waste of oil and gas; and

three, protect correlative rights related to that oil and gas.

The creation of spacing units falls within that jurisdiction. The Commission is only authorized to consider testimony from San Juan Coal related to spacing to maximize the efficient recovery of oil and gas.

The issues mentioned above that San Juan Coal may bring up have already been brought to the attention of the Bureau of Land Management.

As we will discuss through Exhibit 4, San Juan Coal has followed that avenue concerning certain wells within this eight-section island, so they've had their day before a regulatory agency on precisely those issues that they have brought up here in the past and may bring up today.

Our testimony will provide a context for the eight-section island by laying a little bit of groundwork in the entire San Juan Basin, a little bit of background on Dugan Production's efforts to produce Fruitland Coal gas over the years, but that is merely to set a context for the eight-section issue here today.

Thank you.

CHAIRMAN WROTENBERY: Thank you, Mr. Kendrick.

Mr. Bruce, would you like to make an opening statement?

MR. BRUCE: Just very briefly, madame Chair.

Mr. Kendrick said it makes no sense geologically to segregate this area. We've been before you in a prior case, and so you know San Juan's position. We believe it does make sense to exclude the areas within the San Juan Mines from an engineering standpoint, because the wells for the most part are not economic, and second from the public-interest standpoint, in other words the value of the coal versus the value of the gas, not to mention the problems encountered by the mine when it has to mine through fractured areas.

I would just simply state that since the record is already incorporated from the prior cases, those materials are already before the Commission. We will not be re-presenting those today. Our only witness will be Mr. Smith, to talk about the engineering or the economics with respect to the Dugan acreage, which was not addressed in the prior Richardson matter. So that is all we will be presenting today.

Like I said, you know our position. We'd just like to move on.

CHAIRMAN WROTENBERY: Thank you, Mr. Bruce.

Mr. Kendrick, would you like to present your witnesses?

MR. KENDRICK: Yes, Mr. Alexander.

JOHN ALEXANDER,

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

DIRECT EXAMINATION

BY MR. KENDRICK:

Q. Mr. Alexander, please state your name and place of residence for the record.

A. My name is John Alexander, I live in Farmington, New Mexico.

Q. By whom are you employed and in what capacity?

A. I am employed by Dugan Production Corp. as vice president and chief operating officer.

Q. And what is your educational background?

A. I have a bachelor of science degree in petroleum engineering from the University of Texas at Austin.

Q. And could you give me any professional accreditations?

A. I'm a member of the Society of Petroleum Engineers.

Q. And how many years have you been in the oil and gas business?

A. Longer than I want to admit. Approximately 33 years, with 30 of those being in the San Juan Basin.

Q. And have you testified before the Oil Conservation Division before?

A. Yes, I have.

Q. Were your credentials found acceptable as an expert in petroleum engineering by the Division?

A. Yes, they were.

Q. Are you familiar with the Application before the Commission today in this Case 12,888?

A. Yes, I am.

MR. KENDRICK: Madame Chair, are the witness's qualifications as an expert witness in the field of petroleum engineering acceptable?

CHAIRMAN WROTENBERY: Any objection?

MR. BRUCE: No objection.

CHAIRMAN WROTENBERY: We accept Mr. Alexander's qualifications.

Q. (By Mr. Kendrick) Mr. Alexander, could you tell the Commission about Dugan Production's business in the San Juan Basin?

A. Yes, I can. Dugan Production Corp. is a family-run, privately held, independent oil and gas company. We have been in business for 44 years as a going concern from that time. Virtually all of our production has been in the San Juan Basin. We are currently ranked 38th in the State of New Mexico in gas production. That was for 2002.

And we probably well fit the definition of independent, and those of you who have ever dealt with Tom

Dugan probably understand that. We are fiercely independent. We are able to do numerous things that larger companies are not. We're totally internally cash funded, we have zero debt, we provide all of our own services. And as a result of that, we now operate 600 wells within the San Juan Basin. Approximately 132 of those are Fruitland Coal wells.

Q. So about 132 Fruitland Coal wells are -- in which area of the Basin? The high-pressure or low-pressure area?

A. All of our wells are within the low-pressure are. 132 is a total well count of just everything that we operate. Obviously we have interests in other wells, but these are only Dugan-operated wells. And that has been -- Fruitland Coal has been the bulk of our emphasis for some time.

Q. About how many years would you say you've focused on Fruitland Coal?

A. We actually drilled our first Fruitland Coal well in 1972. We were probably the first company to have done that. In saying that, if we had been that smart we'd probably own a lot more than we do right now, but we were probably one of the first people to actually complete a Fruitland Coal well in the San Juan Basin before we realized -- as much as we know about today.

Q. And since about when did you focus almost

exclusively in Fruitland Coal wells?

A. At least the last five years. We've been working with it for at least 10. A major part of our emphasis through the last five years has been in the Fruitland Coal. We're currently drilling -- Last year I drilled 30 wells. I'm on track for about that again this year, if not more. The bulk of all -- The bulk of those have been either Pictured Cliff or Fruitland Coal wells.

Q. And have you prepared certain exhibits for introduction in this case?

A. Yes, I have.

Q. Please refer to what has been marked as Exhibit 1. Do you have a copy of that?

A. Actually, I don't.

Q. You don't, okay. Hang on...

A. Excuse me. Okay, Exhibit 1 is a spreadsheet which has a list of wells on it. These are Basin Fruitland Coal wells, and you'll see the spreadsheet is arranged with a well name, it's numbered, the pool.

Now, I've got to admit there are 12 wells on this list which pop up here as sands. I'm sorry, I don't have a great explanation for that. They started out as coals, but the pool shows sand.

Their location, section, township, range and their exact location footagewise. And then the last one is

just the spud date, which is the date that these wells were drilled. You'll find a couple in there that show like 1956. Okay, they weren't drilled as a coal well. They were actually drilled as some other formation and later completed to the coal. So the earliest coal well you're going to find in here is 1972.

Q. Okay, so we should use 132 as a working number of Fruitland Coal wells --

A. That's correct.

Q. -- operated by Dugan?

A. That's correct.

Q. Now, on this list do you have any infill wells?

A. We have -- any well -- If you look down the list, any well number that ends with an S, with a capital S, is an infill well, so -- How many did we count?

MR. FAGRELIUS: We have six, more or less.

THE WITNESS: Yeah, we have 6 infill wells listed somewhere on this. Like I said, just a point of reference is that almost -- in our naming convention, most of our Fruitland Coal wells start with a 90 or above. Anything above a 90 is automatically assumed to be a Fruitland Coal well. You'll see a few that were lower, but those were outside that naming convention, just for your ease of looking at numbers.

Q. (By Mr. Kendrick) And tell me a little bit about

your experience with these infill wells.

A. We've been on an extremely steep learning curve, as have most people in the Fruitland Coal. I'm a firm believer that wells are like people, each one has a unique personality and they can be divided into personality types. The Fruitland Coal wells would be the paranoid schizophrenics.

We have learned a lot about drilling techniques, we have learned a lot about completion techniques, we have renovated several times numerous of our procedures, each time to try and improve our capability of producing these wells. These are different fracturing techniques, different ways of producing the actual production mechanisms, I've tried two or three different types of artificial lifts. The list is virtually endless, and virtually -- hardly a week goes by without -- we're reading something that someone else has done or trying something different to try and make our ability to produce these wells much more efficient and much easier, and of course much less expensive if it all possible.

Q. Okay. Could you now please refer to what has been marked as Exhibit 2?

A. Exhibit 2 is --

Q. Did you prepare Exhibit 2?

A. Yes, I did.

Q. Okay.

A. Yes, I did prepare Exhibit 2. This is a daily production graph, if you would, daily production rate versus time for all of the Fruitland Coal wells that Dugan operates within the San Juan Basin. This is from published data, this is not an internally generated graph from our own data, from published datas current through December of 2002.

If you look at the graph you'll see that the bright red line there obviously is gas in MCFD. Notice it's 7000 MCFD, for a total of -- The little black line down there is well count. It's up to 91, is actually what that number should be.

So there's a little bit of difference between 91 and 132, and that difference can be accounted for, one, in the timing in which those wells, the newer wells, are being brought onto production, plus the delays in simply reporting wells to PI *Dwight's* here.

The other line that's in there, which I believe is blue on yours, is the water production again. That's in barrels per day.

Q. Now, what does this production curve show about Dugan Production's recent history of producing Fruitland Coal wells?

A. If you can look starting there in the early 1990s

you'll see that this curve, number of wells, gas production and water production have all significantly increased. And were this current, all these numbers would be much higher than this.

Q. Okay, so it looks like you have -- this recent history -- Can you say what Dugan's intentions are regarding future Fruitland Coal development?

A. We're going to keep drilling. We feel that there's a great deal of potential within the Fruitland Coal. For a company like Dugan, this becomes almost an ideal target in so many respects. One, it's shallow. Right now I'm spending about -- last time I counted, around $120,000 or so to drill and complete one of these wells. So the bulk of these wells are between 900 to 1500 foot deep. They're simple to drill, few problems. The biggest operational cost here, of course, is water disposal. That's always a big problem for us. But that's just something that we're having to learn to handle.

But we're enthused about the Fruitland coal, and we intend to pursue it. I know right now we have probably 10 to 15, if not more, applications for permit to drill currently in before regulatory agencies to continue this operation, continue drilling.

Q. What proportion of the company's resources would you say you'd devote to Fruitland Coal development in the

future?

A. We -- Really, right now we're committing a large part of it. It's hard to quantify that, Ned, exactly what that would be. But other than just a few stray wells, we're probably committing at least 75, 80 percent of our resources to Fruitland Coal development.

Q. And generally what kind of infrastructure has Dugan Production installed to handle production from the Fruitland Coal wells?

A. That's been our biggest plus factor. Because Dugan -- Being in business so long, we've acquired large chunks, if you would, of leases in various places. We have spent a lot of time developing an infrastructure which consists of gas gathering, water gathering, gas compression of water disposal amid the areas where we work, we have an extensive system laying of water and gas lines separately, taking the water directly to an injection well, of which I now have seven different injection sites within the Basin, the bulk of those being used for Fruitland Coal well water disposal.

And then the same thing with our gathering systems, that it's far more simple to gather this gas at one place, use one compressor, far more efficient. And so we have spent a lot of time, effort and expense to efficiently produce this gas. There's a learning curve.

When we first started up, wellhead compression was just way too expensive. So this has been much better for us.

Q. Would you say that some of this infrastructure is in place for future Fruitland Coal development?

A. Some of this -- Of course, some of the infrastructure was existing before we started, but really the bulk of it probably was not because of the areas where we were working. Once we have taken the time and the expense to put in a backbone, if you would, a gathering system, if you -- and the issue before us today, shall we drill on 160s? Well, if you already have a well spaced on 320 and you have a gas line going to that, an offsetting well is much less expensive to tie into that system. It also further defrays the capitalization of anything that you've got. And once you have that structure in place -- Getting in place sometimes now, of course, requires a lot of effort. But once you have that, adding additional wells is less expensive on a per-well basis, if you would, than building the whole system from scratch.

Q. Okay. Now, are you familiar with the geographic area where San Juan Coal -- the eight sections that I referred to --

A. Yes, sir.

Q. -- which is the basis of San Juan Coal's request for hearing *de novo*?

A. Yes, I am.

Q. I'd like you to look at what has been marked as Exhibit 3.

A. Is that the map?

Q. Did you prepare this exhibit?

A. It was prepared under my direction.

Q. And could you please describe what the exhibit shows?

A. This exhibit shows a map in Townships 30 North and Range 14 and 15 west, San Juan County, New Mexico. This area is immediately west, if you would, of Farmington itself and -- if you put yourself on a map with this.

The map shows a number of things. There's a legend on the left corner of this, as you will see. Starting at the furthermost west edge of this map, if you would, you'll see the red line there is San Juan Coal's open-pit mine.

If you move in to the east two rows of sections you'll see a green line, which is what we call San Juan Coal's Deep Lease. This is their name for it, but it's the sections outlined in green there. And then the blue line that you see, San Juan Coal calls their Deep Lease Extension. And these were coal leases that -- The Deep Lease, Deep Lease Extension, are coal leases that San Juan Coal has purchased the coal -- I guess that's the right

term -- under those areas.

Q. And just to refresh everybody's memory, could you kind of walk us through the eight-section island that is the subject of this hearing?

A. The subject of this hearing -- if you look about in the center -- Oh, another point, right quick. Anything that's in yellow here is a Dugan lease. So you can see it extends outside the mine area some. We were actually using this for several purposes, but anything that's yellow belongs to Dugan Production, we hold the lease on that.

The eight sections that are in question here, if you look in the very top of the Deep Lease Extension, the blue area there, Sections 17 and 18 of 30 North and 14 West, you have those two sections.

And then if you would move over to your immediate left, in the outlined green area there, which is called the Deep Lease Extension, you'll see there are two half- --

Q. Excuse me, I'm not --

A. The Deep Lease -- I'm sorry. Sorry, I get -- You're right, forgive me. The Deep Lease -- If you look at the outline there, you'll see that there are two half-sections in there, Sections 13 and 14 of 30 North and 15 west, and if you just follow those down for the other six sections that are actually in there, 23, 24, 25, 26, 35 and 36 are the -- they're made up of the eight sections that

are involved in this.

Q. Are you sure 36 is --

A. I'm sorry, 36 is a state lease, forgive me. There are eight sections. Seven full sections and two half sections, correct.

Q. Okay, how many Fruitland Coal gas wells does Dugan currently operate on these eight sections?

A. Okay, currently in this section -- on the lease that we're talking about here now, we have -- Was it 12 -- ?

MR. FAGRELIUS: Uh-huh.

THE WITNESS: There are 12 Fruitland Coal wells that Dugan currently has operating within the section that you just described.

Q. (By Mr. Kendrick) Okay, those eight sections, two of which are in the Deep Lease Extension --

A. Correct.

Q. -- and six of which are in the Deep Lease?

A. Correct.

Q. Okay. And then how many of these Fruitland Coal gas wells are infill wells?

A. There are -- again -- I'm sorry, we just counted --

MR. FAGRELIUS: There's two -- We have the Turk's Toast 90S and the Turk's Toast 91-S-M.

THE WITNESS: Okay.

MR. FAGRELIUS: And we have a third, the Centennial --

THE WITNESS: I apologize, we counted these a little while ago because it's kind of a question that we had. We had infill wells -- If you'll look at the map here again, you see if you look up in Sections 17 and 18, any of the wells that you see marked with an F.C., which is a Fruitland Coal, and you'll find some of these have an S after them -- it may look like a .5, but that's actually an S. So we counted a total of -- How many total wells was it, Kurt?

MR. FAGRELIUS: Two right now.

THE WITNESS: Okay, two infill wells is what we have operating --

Q. (By Mr. Kendrick) Excuse me, could we go off the record just for a minute?

CHAIRMAN WROTENBERY: Certainly.

(Off the record)

CHAIRMAN WROTENBERY: Okay, we're ready to go again.

MR. KENDRICK: Let's go back on the record, please. We'll try to clarify what we're saying here.

Q. (By Mr. Kendrick) Again, Mr. Alexander, how many Fruitland Coal wells is Dugan Production producing in the

eight-section area?

A. Okay, there are 13 Fruitland Coal wells producing within these sections.

Q. Okay.

A. There are 10 Fruitland Coals and -- 10 stand-alone Fruitland Coals and three infill Fruitland Coals, for a total of 13.

Q. Okay.

A. I'm sorry, that included the whole group.

Q. Is there anything particularly that distinguishes these Fruitland Coal wells from other Fruitland Coal wells in the area outside this eight-section area?

A. None of which I'm aware.

Q. Is there any petroleum-engineering reason to treat these eight sections any differently from the rest of the low-pressure area for infill purposes?

A. No, there's not.

Q. Would any correlative-rights issue be triggered by carving this eight-section area out?

A. Of course there would. There are, as you're aware -- and we had the Richardson hearing, and we're offset by Richardson in several cases, who now has 160-acre -- permission to develop his on 160 acres, and there will be other cases where we will run across that possibility of stepping over the line to the mine and having the ability

to develop a 160 on one side, 320 on the other side of that line, with no difference that is discernible, at least to me, why those two should be treated any differently.

MR. KENDRICK: At this time I'd like to offer Exhibits 1, 2 and 3 into evidence, and I have no further questions of Mr. Alexander on direct.

CHAIRMAN WROTENBERY: Any objection to the admission of the exhibits?

MR. BRUCE: No objection, madame Chair.

CHAIRMAN WROTENBERY: Okay, Dugan Exhibits 1, 2 and 3 are admitted into evidence.

Mr. Bruce, do you have questions of Mr. Alexander?

MR. BRUCE: Yes, a few.

CROSS-EXAMINATION

BY MR. BRUCE:

Q. Mr. Alexander, is it Dugan Production Corp.'s practice to complete the wells in both the Fruitland Coal and the Pictured Cliffs?

A. It is not our common practice to do so. Are you talking about in the same wellbore?

Q. Yes, sir.

A. Not as a common type of practice --

Q. Okay.

A. -- it's not.

Q. Okay. Now, the most recent wells you've drilled -- and let's just concentrate on this eight-section area where we were today --

A. Okay.

Q. -- are they drilled deep enough to test the Pictured Cliffs, or do you just drill them to the Fruitland Coal?

A. We always penetrate the Pictured Cliffs.

Q. But it's not your practice to complete in both zones and downhole commingle?

A. If I might clarify there, it's not our normal practice but we have done that, we have commingled some wells just recently. As a matter of practice in the past, we have not done that. But yes, we do have some wells that are currently commingled, Fruitland Coal-PC.

Q. Okay. Do you know if any of the 13 wells in this eight section area are completed in both zones?

A. Which --

MR. FAGRELIUS: Two of the infill wells.

THE WITNESS: Yeah, two of the infill wells are, and those would be wells that we have called the Turk's Toast 90S and 91S. Those were the two wells. They'll show up on your big list over here too, but the Turk's Toast 90S and 91S, and those wells are located -- both of those wells are located in 17 of 30 North and 14 West.

Q. (By Mr. Bruce) Okay. Of those 13 wells -- Well, take a step back. You mentioned water disposal. What are your water disposal costs, if you do have a -- per barrel of water, if you do have an injection well?

A. My estimate, it costs to dispose of water right now, is about 17 cents a barrel if I have an injection well.

Q. And if you don't have an injection well, what are the approximate --

A. It depends entirely on how far you're talking about.

Q. Okay. And if you had to truck it, say, five or 10 miles, somewhere in that range?

A. If you had to truck it that far, generally your water truck charges will run you about $70 per hour. You can figure -- these things don't move very fast, probably a couple of hours per load, perhaps, even at that. So a minimum of $140 to move a 160-barrel load of water.

Q. To move 160 barrels, is that what you said?

A. Correct.

Q. All right.

A. We pull bobtails.

Q. Thank you. Of these 13 wells in this eight-section area, do you have a figure for total gas production from those wells?

A. With -- No, I really don't have a good one for that. Many of these wells are really new. Several of these wells literally were just out there, like today, changing some pump configurations and things like that. All the wells currently are being tested or pumped. We have a few that are not. So to answer your question, no, I don't have a good feel --

Q. Okay.

A. -- for what they're doing.

Q. So from what you've told me, though, some of them right now may be producing close to zero, the newer ones anyway?

A. Well, we're producing something, as far as I know. How close to zero would you like to get?

Q. Well, I mean -- Well, let's take a step the other way. What is your best well of these 13 wells producing on a daily rate right now?

A. Best well would be the -- Just a second.

MR. FAGRELIUS: Riviera.

THE WITNESS: Is that in there? That would be the Riviera well, and it's producing about 120 MCF a day.

Q. (By Mr. Bruce) Is that in Section 17?

A. That well is in Section -- I'm sorry, Section 18.

Q. Okay. Well, you mentioned a well just coming on, you said a couple may have been just with the past couple

weeks. I mean, what do they normally start off at? Five, 10 MCF a day?

A. That's probably about correct.

Q. Okay. And what type of water production are you seeing from these wells?

A. Right now, most of those wells -- You could probably get a little bit of a feel from the overall production curve. It's not unusual to have some of these wells produce upwards of 150, 160 barrels of water a day up in this area.

Q. Do you know what that Riviera well, the one that you just mentioned, is producing?

A. I believe it's making about 160.

Q. Okay. In looking at our Exhibit 3 now --

A. Okay.

Q. -- Mr. Alexander, in just looking at this overall, it looks like to the east of the mine area on the Dugan acreage you've developed that quite a bit.

A. Yes, we have.

Q. I don't know if it's fully developed, but it looks like there's a couple of Fruitland Coal wells per section at this point.

A. That's correct.

Q. My question is, to the north of the mine area and to the south of the mine area it looks like it's not

developed as much --

A. That's correct.

Q. -- why is that?

A. The coal, as you get very much north -- and it may be a better question to ask our geologist --

Q. If you have an opinion -- I can always ask Mr. Fagrelius, but if you have an opinion --

A. Okay, I guess I would really prefer that -- He's much more familiar with the coal thicknesses.

Q. Okay. But if my eyes aren't playing an illusion on me here, it does appear to be less developed to the north and south --

A. That's correct.

Q. -- of the mine?

Have you or anyone at Dugan formed an opinion as to whether the coal is fully saturated in these eight sections of land?

A. We have formed an opinion.

Q. And what is that opinion, sir?

A. Our opinion is that it is saturated.

Q. Have you done any desorption tests?

A. Not yet, we have no -- that we have done. Well, I'll take that back, that we've completed yet. We obviously are working on it, so I don't want to mislead you. We don't have them done yet, but yes, we are working

on some.

Q. You are working on some now?

A. Yes, we are.

Q. But you haven't done any -- You don't have any completed data at this point?

A. That's correct.

MR. BRUCE: Okay. Thank you, Mr. Alexander.

THE WITNESS: You're welcome.

CHAIRMAN WROTENBERY: Any questions?

EXAMINATION

BY COMMISSIONER BAILEY:

Q. Could you please count up for us the total number of wellbores in these eight sections that --

A. Total number of wellbores in the eight sections?

Q. Right.

MR. FAGRELIUS: That would include the Dakotas and Gallup --

THE WITNESS: Now, the Dakotas --

MR. KENDRICK: If we can go off the record for a second, please?

CHAIRMAN WROTENBERY: We'll go off the record for just a second.

(Off the record)

CHAIRMAN WROTENBERY: Okay, are we ready to go back on the record, then?

MR. KENDRICK: Yes.

THE WITNESS: Okay, our best count is that there are 36 total wellbores within the eight-section area. There is the possibility, if all the Fruitland Coal were infilled, of adding an additional 19 wells.

Now, just to qualify that a bit, that has nothing about drilling any deeper horizons. In other words, we currently have some Dakota wells and Gallup wells within there now. That's not counting any -- If we should decide to drill a Dakota well, that's not -- we don't have a plan for that right now, but that count is not in there, if you're looking for a total count, so that's --

COMMISSIONER BAILEY: That's all I have, thank you.

CHAIRMAN WROTENBERY: Thank you.

MR. KENDRICK: Maybe I could ask a clarification question to follow up --

CHAIRMAN WROTENBERY: Okay.

MR. KENDRICK: -- please?

FURTHER EXAMINATION

BY MR. KENDRICK:

Q. The 36 wellbores, is that -- that includes any deeper, any --

A. Correct.

Q. So that's the universe of wellbores in these

eight sections?

A. That's correct.

MR. KENDRICK: Okay, thank you.

CHAIRMAN WROTENBERY: Commissioner Lee, did you have any questions?

COMMISSIONER LEE: (Shakes head.)

CHAIRMAN WROTENBERY: Okay. Do you have any further follow-up?

MR. KENDRICK: No.

CHAIRMAN WROTENBERY: Mr. Bruce, looks like you have another question.

MR. BRUCE: Just a couple, yeah.

FURTHER EXAMINATION

BY MR. BRUCE:

Q. There are 36 total wellbores, approximately, in this eight-section area, and 13 of those are Fruitland Coal?

A. That's correct.

Q. Okay. So of those other 23 which are to different zones, are any of those plugged and abandoned? And if so, how many?

A. Probably. Did you put the symbols on there?

MR. FAGRELIUS: I counted the plugged and abandoned.

THE WITNESS: Oh, okay, I'm sorry.

MR. FAGRELIUS: Seven. I'm sorry, seven.

THE WITNESS: Okay, seven of the 36 are currently plugged and abandoned.

MR. BRUCE: Thank you, Mr. Alexander.

THE WITNESS: You're welcome.

CHAIRMAN WROTENBERY: Anything further for Mr. Alexander?

COMMISSIONER BAILEY: No.

CHAIRMAN WROTENBERY: Thank you for your testimony, Mr. Alexander.

THE WITNESS: Thank you.

MR. KENDRICK: Okay, shall we go on to the next witness?

CHAIRMAN WROTENBERY: Please.

MR. KENDRICK: Okay, Mr. Fagrelius.

KURT FAGRELIUS,

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

DIRECT EXAMINATION

BY MR. KENDRICK:

Q. Please state your name and place of residence for the record.

A. My name is Kurt Fagrelius and I live in Farmington, New Mexico.

Q. By whom are you employed and in what capacity?

A. I am chief geologist for Dugan Production Corp.

Q. And how long have you been with Dugan Production?

A. I began my employment there in 1977.

Q. And what is your educational background?

A. In 1977 I received a bachelor of science in geology from Fort Lewis College in Durango, Colorado.

Q. And could you mention some of your professional --

A. In 1982 I received a master of science in geology from New Mexico Institute of Mining and Technology.

Q. And are you the author of any publications?

A. I've written a few papers on Pictured Cliff sandstone and Fruitland Sand pools in a couple of volumes that were published by the Four Corners Geologic Society, the titles of which were Oil and Gas Fields of the Four Corners Area. They were published -- I believe it was 1988, and one was earlier than that. The first edition -- I don't have that at my fingertips, so...

Q. So how many years in the oil and gas business does that make for you?

A. Well, since 1977. And in 1979 I left for two years to receive a master's degree, but a continuous employment. And you know, I worked summers and Christmas vacations. You know, I'm at 23 to -- 23 years, probably.

Q. And have you testified before the Oil

Conservation Division before?

A. Yes, I have.

Q. Were your credentials found acceptable as an expert in petroleum geology?

A. Yes, they were.

Q. Are you familiar with the Application before the Commission today in this Case 12,888?

A. Yes, I am.

MR. KENDRICK: Madame Chair, are --

COMMISSIONER LEE: Not 12,888.

CHAIRMAN WROTENBERY: Yeah, the number of the bifurcated --

MR. KENDRICK: I'm sorry.

CHAIRMAN WROTENBERY: -- 13,100.

MR. KENDRICK: I have to shift gears.

Q. (By Mr. Kendrick) Yeah, are you familiar with the Application before the Commission today in Case 13,100?

A. Yes, I am.

MR. KENDRICK: Madame Chair, are the witness's qualifications as an expert witness in the field of petroleum geology acceptable?

MR. BRUCE: No objection.

CHAIRMAN WROTENBERY: Yes, we find him qualified.

Q. (By Mr. Kendrick) Are you familiar with the work of the Fruitland Coalbed Methane Study Committee?

A. Yes, I am. Dugan Production became actively involved as a participant in the Fruitland Coalbed Methane Committee at the time of its inception in 1986, and we've been an active member ever since.

Q. And when was the first order that came out based on the Committee's work?

A. There was temporary rules that were adopted in 1988 and again in 1990. Those temporary rules were -- they were finalized. For the 1988 hearing, Dugan Production Corp. and several independents grouped together and proposed a demarcation line across the San Juan Basin, separating the high-pressure area from the low-pressure area. And we had proposed 160-acre spacing for the coal south of that line and 320-acre spacing north of the line. And we took that to hearing and we were -- the Commission ruled against our proposal.

And again, then, in 1990 when the rules were finalized, we took our proposal before the Commission, and again they ruled against us. Both times they cited a lack of technical data to support our position.

Q. And now, looking at the Committee's current recommendation in this case, are you in agreement with what the Committee has recommended?

A. Oh, yes, most definitely. In fact, it's really rather nice for us. We have been working the Pictured

Cliffs and the Fruitland Coal for all of my career, and our theory has always been that 160-acre spacing was appropriate. So the last two days and also the hearing in July have been very nice to see the experts and their studies that they did and their presentation of the technology that, in fact, supports 160-acre spacing in the underpressured area.

Q. So it sounds like you agree with the testimony offered by Richardson Operating Company before the OCD and the Commission in Case 12,734?

A. Yes, I was present for that hearing, and I support and agree with all of their testimony.

Q. And it sounds like you agree with the testimony offered by the other oil and gas companies in Case 12,888, both before the Examiner and before the Commission, concerning infill development of the low-pressure area?

A. Yes, I do.

Q. Now, has Dugan Production developed any of the kinds of studies presented by the other oil and gas companies in Case 12,888?

A. No, we haven't. We are what my boss terms as a poor-boy oil company. We do not have the staff nor, had we done the studies ourselves, we don't have the knowledge to interpret the way these experts have the last couple of days. You're seeing experts in the field present, and we

don't have that ability.

What we excel at is to take the testimony from these experts and what we read in the literature and apply it to our underpressured area, keep the economics at a low level and make gas. So we take everybody else's studies and try and apply them to our own areas.

Q. Now, what is -- I think we know, but I want you to state it -- what is your opinion about the proper spacing of Fruitland Coal wells?

A. Well, we believe 160-acre spacing is appropriate. And some of our reasoning behind that is, we have some coal wells that we are unable to dewater on 320-acre spacing. We do not see our water levels decline.

And then we also have some areas where there is considerable variation in the production characteristics of the coal. One well will produce high gas, low water. The next well might make low water, low gas, and the well right next to it would be straight water. We see a considerable amount of variation on a local scale.

And sitting here through the last hearing, the lateral and vertical variations or discontinuities, if you will, that all these experts in geology described, explain to me why our production characteristics are that way, and 160-acre spacing would enable us to produce and develop gas that otherwise would not be recovered on 320-acre spacing.

Q. So you're saying 160-acre spacing wouldn't merely accelerate the gas production?

A. No, we believe that there will be incremental reserves gained.

And I'd like to add one more point to why we believe 160-acre spacing is appropriate. In the past hearing you heard testimony that wells that produce 2 million cubic feet a day are not draining 320 acres, that the 160-acre spacing is appropriate for that.

Common rates of production for our part of the Basin range from 50 to 100, 150 MCF a day. There are a few instances where production gets up to 300 or 400 MCF a day, but nothing that compares to 2 million, 4 million or 6 million cubic feet a day. We're dealing with relatively low-rate wells.

Q. And you're saying that the reasons why 160 spacing is compelling in the high-pressured area makes it even more compelling in the low-pressure area?

A. Yes.

Q. Okay, let's now turn to what we've marked as Exhibit 4. Could you tell us what it is?

A. Okay, this Exhibit 4 is an order from the State Director of the United States Department of the Interior, Bureau of Land Management, and I would like to build up to how this order came to be, if you will, if I can step back.

Q. Certainly.

A. Back in I believe -- I'm going to wing it on dates, I don't have those in front of me. Back in the end of 1999, by directive of the BLM, with the encouragement of San Juan Coal, Dugan Production was told to get out in the mine area and develop oil and gas from the Fruitland Coal as quickly as possible. Under that directive, Dugan -- the BLM's intent was to maximize recovery of the coalbed methane gas prior to mining of the coal by San Juan Coal. Dugan immediately staked 13 wells and started the permitting of those wells.

Q. Now, where were those wells located?

A. Those wells were all located inside of the mine area.

Q. And do we know whether they were in the eight-section area at issue today?

A. Yes, they were. After we got them staked and started the permitting process, San Juan Coal object to eight of those wells, stating on the basis that they interfered with their underground mine plans. Eight of those wells were located too close to headgate, tailgate -- those are entryways of the mine -- and they preferred to have them moved into the center of longwall panels.

San Juan Coal agreed to pay the costs associated with moving those wells, and the BLM required us to move

those.

We restaked the eight and then permitting began, and then San Juan Coal objected to five of the eight. This time they cited mine-safety issues, ventilation concerns, things that I'm not really an expert at.

So then the Farmington Field Office, after a considerable amount of time and study, approved the five wells that were objected to by San Juan Coal, at which time San Juan Coal then appealed their approval to the State Director of the BLM.

And this letter -- Did you call it Exhibit 4?

Q. Yes.

A. -- is the State Director's response to their appeal.

Q. Could you walk through the five wells that were the subject of this decision by the BLM State Director? Can you just tell us where the wells are and what kind of wells they are?

A. Okay, the Riviera Com 90 is in Section 18, 30 North, 14 West. It is a Fruitland Coal well.

The Centennial Com 91 is in Section 24, 30 North, 15 West. It is a Fruitland Coal well.

The Turk's Toast 7 was initially permitted as a Fruitland Sand-Pictured Cliff Pool well, and by a sundry it was converted to a Fruitland Coal commingled with the

Fruitland Sand-Pictured Cliff well, and the name was changed to the Turk's Toast 90-S-M. That is located in Section 17 of 30 North, 14 West.

Centennial Com 90 is in Section 24, 30 North, 15 West. It's a Fruitland Coal well.

And the Turk's Toast Number 8 is -- like the Turk's Toast Number 7, was originally permitted as a Fruitland Sand-Pictured Cliff well, and we submitted sundry to commingle and convert the well to a Fruitland Coal well, and also the name on that was changed to the Turk's Toast Number 91-S-M.

Q. Now, are any of these wells infill wells?

A. The Turk's Toast 91-S-M is an infill to the Turk's Toast Number 91, and the Turk's Toast 90-S-M is an infill well to the Turk's Toast Number 90.

Q. And by "infill", you mean it's a 160-acre-spacing well?

A. Both of those represent a second well on a 320-acre proration unit.

Q. Okay. Are there any other points you'd like to make on this exhibit?

A. Well, at this time 11 of the initial 13 wells that we had staked at the directive of the BLM, 11 of those have been drilled and completed, and two of the -- I think that would be sufficient there. Two of them are infills,

and we already spoke on that.

MR. KENDRICK: Okay, I have no further questions. I'd like to move admission of Exhibit 4.

CHAIRMAN WROTENBERY: Objection?

MR. BRUCE: No objection.

CHAIRMAN WROTENBERY: Dugan Exhibit 4 is admitted into evidence.

Mr. Bruce, do you have questions for Mr. Fagrelius?

CROSS-EXAMINATION

BY MR. BRUCE:

Q. Going back to Exhibit 4, Mr. Fagrelius, I want to make sure -- On page 2 of the exhibit, the Turk's Toast Number 7 and Number 8, those are the two infill wells, right?

A. Correct.

Q. And they were both permitted as Fruitland Sand-Pictured Cliffs wells, but they are Fruitland Coal wells?

A. They were permitted as Fruitland Sand-Pictured Cliff wells, and we submitted sundries to complete in the Fruitland Coal as well.

Q. And so those would be the two wells that Mr. Alexander testified about that are the Fruitland Coal/Pictured Cliffs completions?

A. Correct.

Q. Okay. Is this decision on appeal, the Exhibit 4 decision on appeal?

A. My understanding is yes, they've taken this decision up to the IBLA now.

Q. You mentioned some wells that Dugan can't dewater. Are you talking the wells in this are, or are you just talking generally in the San Juan Basin?

A. In this area, I don't have enough time to say that, production time. There are other wells in other parts of the Basin, operated by both Dugan and other operators, where on 320-acre spacing water production rates have not begun to decrease.

Q. Okay, so for now you're just talking about wells outside of the mine area?

A. Well, like I say, I don't have enough history. We have significant production rates of water within the mine area right now. 160-acre spacing will certainly enhance our ability to drop the hydrostatic pressure in those wellbores.

Q. Okay. In the eight-section area we're here about today, how many of those are stand-alone Pictured Cliffs wells?

A. I believe there's three.

Q. Three. And then the two additional that are dual -- or downhole commingled, the two recent wells that are

Fruitland Coal and Pictured Cliffs completions, so that would make five Pictured Cliffs wells in this area, total?

A. I believe so. Yes.

Q. Okay. Has Dugan made a reserve calculation for Pictured Cliffs production in this eight-section area?

A. No, sir.

Q. Does Dugan at this time have any more plans to drill single-completion Pictured Cliffs wells in this are?

A. At this time, no.

Q. Has Dugan done a study to calculate gas in place in the Fruitland Coal in this eight-section area?

A. No, we have not.

Q. So you don't have any reserve numbers that you could give me today, you or Mr. Alexander?

A. No, it's much too early in the life of the wells. We can draw analogies with our development areas to the east and south, and we see good numbers, good production, we're making money, and our early production history in this area encourages us that this area will react much like the areas to the south and east.

Q. Do you have an estimate as to the life of a typical well in this area?

A. The life of a well will be the life of the casing. What seems to give out before the reservoirs, for Dugan Production -- We're able to produce wells at very,

very low rates, and what has been the history is, we get 20 to 25 years out of a casing string and we may lose a well. But if that well was still producing well enough, we would probably redrill. And we have done that in some cases.

Q. Okay. Now you say Dugan's ability to produce these wells at low rates, and that is because of what Mr. Alexander referred to, your low overhead?

A. Yeah, and I'd like to elaborate a little on our low overhead. Dugan Production owns its own completion rigs and we own our own water trucks. And these areas we put in our own gathering system for both water and gas. Everything is centralized. We'll have one compressor for, commonly, up to 15 or 20 wells. We do not put a compressor on every well site. We have one injection well with one water pump for 15 or 20 wells.

So once we get all of our infrastructure in place, we're able to operate economically at very low rates of production.

Q. Just a couple more questions, Mr. Fagrelius. If you'd look at your map, or Mr. Alexander's map, there is down in Section 35 of 30 North, 15 West, the southernmost part of this area, there is one Fruitland Coal well on that lease, is there not?

A. Uh-huh.

Q. What is the status of that well?

A. That well was early on drilled in our development foray into this area. Every area that we operate in the coal acts differently, so we have to come up with different completion practices for every area -- There's no one completion practice that works in all cases.

This well in particular, our thinking was to mimic the completion techniques that were going on in the Powder River Basin at that time. And so we drilled down to just above the coal and set out casing. Then we drilled out with air, to try an open-hole completion of the coal without a fracture treatment. Thus far, the results have been discouraging on that. We realize that you've got to put a frac on these wells to make them economic. Our coal is much older than the Powder River Basin, it's conceivably buried much deeper and much thinner.

There's a lot of -- We learn from each well. This well, if I was able to drill it now, I would drill in and perforate and frac the well, much like we're doing on the wells to the north.

Q. Has Dugan filed any Fruitland Coal APDs in that Section 35?

A. Well, San Juan Coal is mining there right now. San Juan Coal is clear into the east -- or the west half of the section. It would not be economically prudent for us to put a well there.

Q. Okay. Let me finish with just a question I asked Mr. Alexander. As I said, the area to the north of the San Juan Coal leases and to the south where Dugan has acreage appear to be less developed than other portions of its lease holdings. Could you comment on that?

A. Sure. What this map also has is a pipeline map on it that -- if you see, it snakes up through -- across 15 West into 14 West. We do not have infrastructure in the north halves of 7, 8 or 6, and the coal thins up there. The coal thins down to less than 10 feet, 4 to 5 feet in thickness. And what we've found is, we need 10 feet of coal, plus or minus, to make a good well. The coal pinches out on the north side.

If we come down to the south, I don't see a lot of -- There's a west half of Section 1, and I'm not sure if that's not already committed to a Richardson location. I'd have to check on that. There is some areas where the coal thins, and those aren't my primary targets at this time.

Q. You mentioned the infrastructure. In the northern part of San Juan's coal leases, was the infrastructure originally put in there to service Dugan Production's Dakota and other deeper wells?

A. Yes, that pipeline was originally laid to connect the Dakota wells and a Gallup oil well that we have up there.

Q. Okay. Does Dugan have -- Are there any plans at this time for Dugan Production Corporation to drill any wells below the Pictured Cliffs in this eight-section are?

A. In the southwest southwest quarter of Section 18 there's a well called the Turk's Toast Number 6, and it is a Gallup oil well that we drilled -- I believe it's been two or three years now. That's a fractured Gallup well in flat-lying sediments.

It's a -- what I call a geologic success and an engineering failure. We hit a fracture trend, and I believe that the Gallup may have been damaged by fluids. There is definitely a fracture trend in the Gallup through that area that we've mapped through lost circulation encountered during the drilling of the Dakota wells. And we've also been allowed to review a seismic survey that was done on this area by the USGS, suggesting faulting and fracturing exists throughout.

So the Gallup horizon, yes, there is some more potential there. Celsius or Wexbro, Mountain Fuel Supply, drilled the deep test to the Pennsylvanian, down in -- I believe it was Section 29. They had a gas flow on a drill stem test that was seen in Farmington with approximately 150 to 200 feet of topographic relief between Farmington and this well. People in town could see the flare on it. So there's potential for that also.

Q. What zone was that?

A. The Pennsylvanian.

Q. Pennsylvanian. But the question is, does Dugan have any plans at this time to drill additional wells to test those deeper zones?

A. I do not have any APDs currently in the system, but I have plans in my head, ideas that, you know, given the ability and the time, may come to fruition.

Q. If Mr. Alexander doesn't screw it up?

A. That's possible. I do have to answer to a higher authority.

MR. ALEXANDER: I heard that, I heard that.

(Laughter)

MR. BRUCE: I don't mean that to Mr. Alexander --

THE WITNESS: But you'll strike that word from the record.

Q. (By Mr. Bruce) The higher authority is Mr. Dugan?

A. Yes, sir.

MR. BRUCE: That's all I have, madame Chair.

CHAIRMAN WROTENBERY: Commissioner Bailey?

EXAMINATION

BY COMMISSIONER BAILEY:

Q. Earlier today we heard Burlington say that 72 MCF per day was their economic limit.

A. Okay.

Q. Can you give us a relative figure for your --

A. Well, first off, I wish they'd give me all their wells that are making 72 MCF a day, because we have many more that are producing less than us.

We can drill and complete a Fruitland Coal well for -- I believe John said $120,000 to $130,000. Burlington has much higher overhead. They have a staff in Houston of VPs that are on big incomes. They're able to hire research, which is a good thing, but larger companies operate at a much higher operating expense, and an AFE for a Burlington Fruitland Coal well at these depths would run at least three times what it costs us to drill one. And then their monthly maintenance fees are much higher also.

Q. So, do you have a number that you can give me for --

A. A lowball number?

Q. Yes, for --

A. Well, I've always figured I've got a guy in the field, and if he's going by a well it doesn't cost him a whole lot to turn in and drop a stick of soap and keep a well that's making 4 or 5 MCF a day going, and that's the philosophy of my -- of the owner of our company too. He has done quite well taking properties and wells that no one else could make money with. And we don't have a cutoff.

If we can't get gas out of it, then we cut it off.

COMMISSIONER BAILEY: Thank you.

THE WITNESS: Okay.

CHAIRMAN WROTENBERY: Commissioner Lee?

COMMISSIONER LEE: No.

CHAIRMAN WROTENBERY: I should ask if you have any follow-up questions, Mr. Kendrick?

MR. KENDRICK: I do not.

CHAIRMAN WROTENBERY: Okay, thank you very much for your testimony --

THE WITNESS: Well, thank you --

CHAIRMAN WROTENBERY: -- Mr. Fagrelius.

THE WITNESS: -- for the opportunity.

MR. BRUCE: I've got one witness. Do you want to just go through them, madame Chair, or take a short break?

CHAIRMAN WROTENBERY: We might take a short break, just five minutes or so.

(Thereupon, a recess was taken at 3:02 p.m.)

(The following proceedings had at 3:23 p.m.)

CHAIRMAN WROTENBERY: Okay, Mr. Bruce?

MR. BRUCE: I'm just going to call Mr. Smith to the stand, madame Chair, and I'm going to hand you -- these are exhibits that were presented to the Commission last time, and really just for a quick reference for a few overviews that Mr. Smith is going to make.

DAN PAUL SMITH,

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

DIRECT EXAMINATION

BY MR. BRUCE:

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

A. Dan Paul Smith.

Q. Where do you reside?

A. Dallas, Texas.

Q. Who do you work for?

A. I work for Netherland, Sewell and Associates.

Q. And what is their relationship to San Juan Coal Company in this matter?

A. They're an international oil and gas consulting firm that was hired last year to estimate the proven, probable and possible gas reserves for the Deep Lease and the Deep Lease Extension.

Q. And that would include the area that's at issue today in this case?

A. That's correct.

Q. In the prior Richardson matter in which you were involved, you did not testify as such as to the Dugan acreage that we're here for today, did you?

A. No, I did not.

Q. And that is your purpose in coming here today, is

to testify specifically about those eight sections?

A. That's correct.

Q. And have you previously testified before the Commission?

A. Yes, I have.

Q. And were your credentials as an expert petroleum engineer accepted as a matter of record?

A. Yes, they were.

Q. And are you familiar with the engineering matters related to this case?

A. Yes, I am.

MR. BRUCE: Madame Chair, I'd tender Mr. Smith as an expert petroleum engineer.

CHAIRMAN WROTENBERY: Any objection?

MR. KENDRICK: No objection.

CHAIRMAN WROTENBERY: He is so qualified.

Q. (By Mr. Bruce) Mr. Smith, I'm going to ask you to run through the handout I just made with respect to the scope and how you made your calculations, but before we begin I'd like to reiterate one thing we asked in the prior hearings. Your company was employed by San Juan Coal Company; is that correct?

A. That is correct.

Q. And when you were employed, were you asked to do a conservative study or a liberal study with respect to

reserve analysis?

A. We were, of course, asked to seek the truth and get the right answer as much as possible, but certainly we were urged to not come up with a low-side reserve report.

Q. Okay, you were asked to do what you would normally do for your company clients?

A. That's correct.

Q. Whether they were a coal company or an oil and gas company?

A. Yes.

Q. Let's run through these exhibits -- and these are Exhibits 45 through 47, 50, 53, 55 and 56 -- from the prior Commission Hearing in Case -- I think it's 12,734. Let's try to finish this up pretty quickly, Mr. Smith, but could you run through these exhibits, explain to the Commission what the scope of your analysis was, and then briefly discuss the results?

A. Yes, and I will make it quite a brief version, rather than belabor lots of points that we went over before.

But as I mentioned, we estimated the proved, probable and possible gas reserves for the Deep Lease and the Deep Lease Extension. These reserves were estimated based on Society of Petroleum Engineers and World Petroleum Congress rules, which is what we normally use when we do

reserve-analysis work.

I'll state up front that our work did support 160-acre drilling spacing for wells --

COMMISSIONER LEE: Society of Petroleum Engineering have rules?

THE WITNESS: Yes, the SPE, Society of Petroleum Engineers, and the WPC, the World Petroleum Congress, have jointly published reserve definitions that are adhered to by most of the world for proven, probable and possible reserves.

COMMISSIONER LEE: Okay.

Q. (By Mr. Bruce) Go ahead, Mr. Smith.

A. So I will go through this briefly, I'll jump to the Fruitland Coal analysis process. The quick analysis is that we prepared structure and isopach maps of the Fruitland Coal, we used the core data that was available from some 42 core samples to estimate ash content, moisture content and the density of the coal.

All of our work was done, eventually, on the basis of 160 acres per well. In other words, all of our reserve calculations eventually make it to every 160-acre block in the coal and in the Pictured Cliffs.

We did rely on the desorption data that was obtained for gas content, and I'll talk about that a little bit more since it is, we think, one of the controlling

issues in reserve analysis here.

We estimated the pressures for every 160-acre block across the Deep Lease and Deep Lease Extension using a potentiometric surface of 5100 feet, and that water level, that effective water level, helped us to define the pressure at each point.

Using all this information, we then calculated the original gas in place for each 160-acre block, and then we calculated the reserves down to an abandonment pressure of 10 p.s.i.

For wells that have already been drilled, that were on performance, that kind of revealed themselves, we estimated the proved developed producing reserves, just based on pure decline curve analysis. For some wells that were on an incline and had not reached their peak, in our analysis we projected these wells to continue their peak up to a rate of, in some cases, 100 to 150 MCF a day until they actually produced the volumetric reserves that we calculate for that unit.

The work that we did previously, that we testified on, was based on production history through, I believe, October, 2002, at the time. In preparation for this hearing we have pulled the production up through December, 2002. So anything that's happened after that point in time I won't have available to me because it was

not available in public records.

The Pictured Cliffs analysis process, at the bottom of the page, is very similar in that we prepared structure and isopach maps and we calculated the reserves for the Pictured Cliffs down to an abandonment pressure of 25 p.s.i.

Q. And then why don't you move through your subsequent charts and show what they tell -- explain to the Commission what they show?

A. Yes, the next exhibit, Number 46, is an indication of the gas content in standard cubic feet per ton across the Deep Lease and the Deep Lease Extension, based on 18 wells that were cored and gas-content analysis analyzed from the BHP San Juan Coal Company core wells. These 18 wells have some 95 samples that were sent to a lab and analyzed for gas content, and we used this data without alteration.

This data, as you can see, is somewhat low on the southwest side and then, as you move to the northeast, tends to increase. That is also the direction of dip for the structure. The coal obviously outcrops on the east -- on, excuse me, the west side, where the coal mining operations have been occurring, from a surface standpoint, for a number of years, and it dips down deeper as you move to the east. So you would expect normally that as you get

deeper and get more pressure, that you would experience higher gas contents.

Q. Now, if you took those numbers from Exhibit 46 and placed them on the next one, Exhibit 47, the absorption isotherm, what would they indicate?

A. Yes, this Exhibit 47, backing up a bit, shows the amount of theoretical gas that the coal in the Deep Lease and Deep Lease Extension area could hold if the coal were fully saturated. If I were to take those 18 points from the prior exhibit and plot them on this graph, I would see that those points would all fall below the 100 line that you see on the Y axis, 100 standard cubic feet per ton, and with about half of those below 50 cubic feet per ton. So they would be clustered very low on that graph.

In other words, the actual measurement of the amount of gas in the coal turns out to be quite a bit less than what the coal could, in theory, hold if it were fully saturated. And this is an indication to us that the coal is undersaturated, and we're of the opinion that the degree of undersaturation is a direct result of the proximity to the outcrop and that the outcrop is where the gas likely has gone and that there is a transition from west to east of more saturated as you move to the east and less saturated as you move to the west.

Q. What does Exhibit 50 then show?

A. Exhibit 50 is the 160-acre spacing unit calculation of the gas content for each one of those units, expressed in standard cubic feet per ton. And as you can see on the southwest side, close to the coal mining operations, you get gas contents as low as 35, 40 cubic feet per ton, whereas you move across the Deep Lease and into the northeast corner of the Deep Lease Extension, up towards Section 17, you get gas contents as high as 80 and 85 standard cubic feet per ton.

Q. Did you then take all this data and calculate the coal seam gas reserves?

A. Yes, I did, and that's indicated on Exhibit Number 53.

Q. And that, again, just shows you reserve calculations on a quarter-section basis?

A. That's correct.

Q. Okay. What does Exhibit 55 show?

A. Exhibit 55 is the results of our calculations of recoverable reserves for the Pictured Cliffs, 160-acre units. And as you can see, based on our work and our geology, the majority of the Pictured Cliffs potential, we believe, is confined to the southeast portion of the Deep Lease Extension, Sections 29, 30, 31 and 32.

Q. Okay. In the area we're talking about today, Sections 17 and 18 in the Deep Lease Extension and in the

Deep Lease itself, is it your opinion that there are no Pictured Cliffs reserves?

A. Based on our analysis, the Pictured Cliffs would be present, but the reserves would be marginal.

Q. And then what does Exhibit 56 show?

A. Exhibit 56 simply adds the two previous exhibits to indicate the amount of reserves from the coal and the Pictured Cliffs combined.

Q. When you're looking at economics, are there certain areas of the eight sections we're here for today that you calculate to be economic?

A. Yes. Based on our analysis, we believe that wells would become uncommercial to drill somewhere in the 100-million-cubic-feet to 200-million-cubic-feet range. That would depend on the operator, their drilling cost, their operating cost, gas price, all sorts of things. But probably somewhere down in that range will be breakover where many operators would not drill.

And so as you can see, Sections 18, 17 and 24, down into the east half of 25, have reserves that certainly would appear to be commercial to drill.

Q. Okay. Now having said that, that is a calculated number?

A. That's correct, those are based on the volumetric calculation process I've just described.

Q. And you can't really tell if they are actually commercial until -- unless you have producing characteristics from wells drilled on those acreages?

A. That's correct.

Q. But as to the rest of the acreage that you're looking at in this six-section area, it would appear to you to be uneconomic?

A. Yes, we would believe that Sections 35, 26, 23 and 14, or what would be west row of sections in the Deep Lease, would be barely commercial to noncommercial to drill.

Q. Okay. And operators don't drill wells merely to recover their costs, do they?

A. No, not normally.

Q. They look for an additional return, a multiple return on their investment?

A. Typically.

Q. Okay. Just one final thing, or a couple final things, Mr. Smith. Previously we submitted to the Commission San Juan Coal Company Exhibit 1. Does this -- What does this exhibit contain?

A. Exhibit 1 is some of the production graphs that we were able to pull from public data sources where Dugan was shown to be the operator.

Q. Okay. Are these the wells in the eight-section

area that we're concerned with?

A. These are actually wells in the Deep Lease and Deep Lease Extension area, which would also include wells down in Sections 31 and 32.

Q. And it's just to back up your prior data?

A. That's correct.

Q. Okay. Was Exhibit 1 prepared by you or under your supervision?

A. Yes, it was.

Q. One final question. You sat through part of the prior case that this case was bifurcated from, did you not, Mr. Smith?

A. Yes, I did.

Q. And you've already stated that in many areas of the Basin, under your analysis, there should be one well per 160 acres?

A. That's right.

Q. What the other case was talking about, is that different from what we're dealing with here today?

A. Well, certainly it's a different world in that the reserve levels that we were hearing about the past two days were, you know, 1 to 15 BCF. They're quite large reserves that we've been hearing about. So that is an extremely high-quality area.

And the thing that makes the Deep Lease and Deep

Lease Extension unique from those is that it is close to the outcrop, and it is subject to being undersaturated and subject to some gas perhaps having leaked out of the outcrop.

Q. Okay. And certainly, with respect to areas where the wells will not be economic, there is no loss incurred to a party because if the wells are uneconomic their correlative rights are not adversely affected; is that correct?

A. I guess to the extent that you wouldn't drill a well that was noncommercial, there would be no loss.

MR. BRUCE: Madame Chair, I would move the admission of San Juan's Exhibit 1.

CHAIRMAN WROTENBERY: Any objection? Hearing no objection, San Juan Exhibit Number 1 is admitted into evidence.

MR. BRUCE: And I would pass the witness.

CHAIRMAN WROTENBERY: Mr. Kendrick?

CROSS-EXAMINATION

BY MR. KENDRICK:

Q. You're saying that the calculations of gas reserves, both in the prior case, the 12,888 -- I'm sorry, it's the Richardson case, it's the Richardson case. And that is a calculated reserve?

A. That's correct. The exhibits that I've included

here today are only the volumetrically determined reserves. They do not necessarily correspond to the proved developed producing reserves where wells are actually performing.

Q. So they would not preclude an operator from going out there and deciding that is economically feasible to develop a well in these areas and go ahead and do it and make money at it?

A. Of course an operator is free to drill --

Q. Right.

A. -- any well they want to, certainly.

MR. KENDRICK: Excuse me a second.

(Off the record)

Q. (By Mr. Kendrick) What was the date that your reserve study was completed?

A. The effective date was January 1, 2002.

Q. How would you expect your reserve analysis to change as the wells in the study area increase production rates?

A. The proved developing producing reserves for wells that were drilled would be altered in direct response to any changes in the production characteristics of the wells. So to the extent that wells were brought on production and increased or decreased, then our proved developed producing reserves would be modified as a result of that.

Q. Would you agree that these coal gas wells, new coal gas wells, tend to increase in gas production in the early years?

A. Some have and some haven't.

Q. How much gas is currently being vented from the mine, and have you done a mass-balance calculation to determine the volume of gas in place?

A. No, we're consultants and we only work when somebody hires us to, and nobody's hired us to do that study.

Q. So you haven't studied the volume of gas being vented from the mine?

A. No.

Q. Could you follow up on your point about correlative rights, that somehow that is not an applicable concept in the eight sections at issue?

A. If I understood the point there, it's that to the extent that a well is noncommercial and was not to be drilled by an operator, then there'd be no loss of value because there'd be no value, because the well wouldn't be drilled.

Q. So if an area is worthless, correlative rights don't apply? If no one's willing to drill, what difference does it make --

A. Precisely.

Q. -- if someone drills next door?

A. Yes.

Q. And that's true even if there are two wells in the neighboring section to your one well?

A. That's correct.

MR. KENDRICK: Okay, that's all we have.

CHAIRMAN WROTENBERY: Commissioner Bailey?

COMMISSIONER BAILEY: (Shakes head)

CHAIRMAN WROTENBERY: Commissioner Lee?

COMMISSIONER LEE: (Shakes head)

CHAIRMAN WROTENBERY: Any follow-up, Mr. Bruce?

MR. BRUCE: No.

CHAIRMAN WROTENBERY: Okay, thank you for your testimony, Mr. Smith.

MR. BRUCE: And that's the end of my case, madame Chair.

CHAIRMAN WROTENBERY: Okay. Anything further, Mr. Kendrick?

MR. KENDRICK: One quick question -- or just one moment.

COMMISSIONER LEE: Take your time.

MR. KENDRICK: Okay, we have no further questions of Mr. Smith, but we'd like to make -- bring a rebuttal witness up. Is that possible in this proceeding?

CHAIRMAN WROTENBERY: Any objection, Mr. Bruce?

MR. BRUCE: No objection.

MR. KENDRICK: You're very kind.

KURT FAGRELIUS (Recalled),

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

DIRECT EXAMINATION

BY MR. KENDRICK:

Q. Mr. Smith testified about the lack of evidence of saturation, gas saturation in the coal, or at least that there's very little gas saturation in the coal in the eight-section area. Would you comment on the level of saturation that you see when you produce a well in the eight-section area?

A. We feel that the coal is fully saturated, and our evidence supporting that comes in several forms, the first of which is, when we drill and complete a coal well, we see gas production immediately before any dewatering has even occurred. Literature indicates that that is -- Literature tells that us that that is an indicator of full saturation of the coal.

Also, San Juan Coal drilled many boreholes to the coal to core, and also for water or pressure maintenance, and those wells -- none of them have been dewatered, and they've got one that vents gas as we speak. So without even putting a pump in, they're venting gas on a well

there.

And from a third source, an employee with the USGS that drilled many coreholes in this area back in the 1970s, prior to the lease sale of the coal, they went out there and cored the coal to determine thicknesses, and they made gas -- they had a gas flare come out of one of those early wells, again, that had never been dewatered. So to us that's good evidence that our Coal is fully saturated.

Q. Any further comments to make on the saturation issue?

A. It's an important issue, because it dictates the amount of gas in place that this man comes up with using his analyses. And I'm not sure I heard how saturated he felt it was. That may have come out in the earlier hearing with Richardson. But San Juan Coal thinks the coal is undersaturated, and that gives them a much lower number than if they considered it as a fully saturated coal.

Q. Any final comment on the economics of Dugan Production operating in the eight-section area, operating Fruitland Coal wells?

A. I think I stated earlier, but wells that appear uneconomic at the time of this reserve study are economic now. For instance, we have a well that initially came on -- I believe it was 5 or 10 MCF a day. It's up to 40 a day, and it's been four to five months' period of time.

A second well in this eight-section area initially started out again at around 10 to 15 MCF a day, and over a period of about eight months is up to 140 MCF a day, and it's still going up.

As we get more wells to dewater, as we get our pipeline in to transport that water to our injection well and we're able to keep these wells on line for longer periods of time, our wells will increase in production, and the reserves that they've come up with in their study are still frozen in time to January of 2002.

I think that's -- covers all I have.

MR. KENDRICK: Okay, thank you very much.

CHAIRMAN WROTENBERY: Mr. Bruce?

CROSS-EXAMINATION

BY MR. BRUCE:

Q. Again, Mr. Fagrelius, you don't have any reserve calculations at all, do you?

A. No.

Q. And all of your wells are drilled down sufficient to be in the Pictured Cliffs, are they not? Even your Fruitland Coal --

A. One of them is not, the well that we talked about in Section 35 of 30-and-15 did not penetrate the Pictured Cliffs.

Q. All the others have?

A. They've gone at least to the Pictured Cliffs or deeper, to Dakota or Gallup.

Q. When you say there's immediate production, could there be Pictured Cliffs gas that comes up, that shows up in the immediate production?

A. Oh, certainly. However, let me qualify that. The well that San Juan Coal drilled to core the coal bottomed at the base of the coal, and I believe the USGS wells -- I'm not sure if they were going through the coal, I can't speak on those two wells.

Q. Or if the coal was tight when you drill the well, there's an immediate drop in pressure, and that could lead to some gas production right around the wellbore, right before there's dewatering; isn't that correct?

A. If the coal is tight and you drill into it, that you would see immediate gas production? Possibly in the absence of water. In the presence of water, no.

MR. BRUCE: That's all I have, madame Chair.

CHAIRMAN WROTENBERY: Any further questions for Mr. Fagrelius?

Thank you for your testimony.

THE WITNESS: Thank you.

CHAIRMAN WROTENBERY: Anything further, gentlemen?

MR. BRUCE: I have nothing further.

CHAIRMAN WROTENBERY: In that case, we'll do the same thing here in Case Number 13,100 that we did in Case Number 12,888 and that is ask for closing statements and any proposed findings of fact and conclusions of law in writing, to be submitted by June the 16th.

And unless there are any further questions, we'll take this case under advisement.

(Thereupon, these proceedings were concluded at 3:52 p.m.)

* * *

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 Commission was reported by me; that I transcribed my notes; and that the foregoing is a true and accurate record of the proceedings.

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

WITNESS MY HAND AND SEAL June 10th, 2003.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 16th, 2006