NEW MEXICO OIL CONSERVATION COMMISSION
EXAMINER HEARING
SANTA FE, NEW MEXICO
DECEMBER 17, 1992 -- 8:15 A.M.

NAME	REPRESENTING	LOCATION
Brent May	Yates Pet.	Artesia
Randall James	Campbell, Carr, Berge & Sheridan	Santa Fe
Bill Hardie	Conoco	Midland
Jerry Hoover	Conoco	Midland
W. Perry Pearce	Kellahin & Kellahin	Santa Fe
DAVE BONEAU	YATES PETROLEUM	ARTESIA
Joel Carson	C.W. Trainer (Chased Carson)	Artesia
Jack Ahlen	CW Trainer	Roswell
Bryce Stubbs	C.W. TRAINER	Roswell
Robert Bullock	Yates Pet.	Artesia
William F. Carr	Campbell, Carr, Berge & Sheridan	Santa Fe
[illegible]	[illegible]	[illegible]
DEXTER HARMEN	MEWBOURNE OIL	MIDLAND
Paul Haden	Mewbourne	"
John Rhodes	Yates Drilling Co.	Artesia

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NAME	REPRESENTING	LOCATION
Maurice Brimmer	Bryan Co	SF
Rick WYMER	BLM	SF
James Bruce	Hinkle Law Firm	SF
AL GREER	BENSON-MONTIN-GREER	FMN
Douglas W. Hubbard	Yates Drilling Co.	Artesia, NM
Ernie Busch	NMOCD	Aztec
Robert Bullock	Yates	Artesia
DARRELL ROBERTS	SANTA FE ENERGY RES.	MIDLAND, TEXAS
Gary Green	" " " "	" "
Gene Davis	" " " "	" "

NEW MEXICO OIL CONSERVATION DIVISION

STATE LAND OFFICE BUILDING

STATE OF NEW MEXICO

CASE NO. 10631

IN THE MATTER OF:

The Application of Meridian Oil Inc., for Unorthodox Coal Gas Well Location, San Juan County, New Mexico.

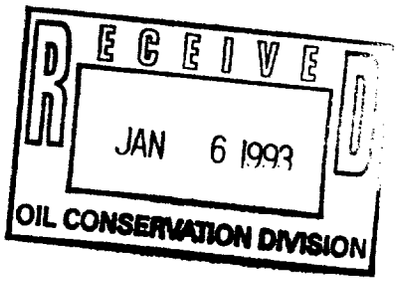
BEFORE:

MICHAEL E. STOGNER

Hearing Examiner

State Land Office Building

December 17, 1992



REPORTED BY:

CARLA DIANE RODRIGUEZ
Certified Court Reporter
for the State of New Mexico

ORIGINAL

A P P E A R A N C E S

FOR THE NEW MEXICO OIL CONSERVATION DIVISION:

ROBERT G. STOVALL, ESQ.
General Counsel
State Land Office Building
Santa Fe, New Mexico 87504

FOR THE APPLICANT:

KELLAHIN and KELLAHIN
Post Office Box 2265
Santa Fe, New Mexico 87504-2265
BY: **W. THOMAS KELLAHIN, ESQ.**

I N D E X

E X H I B I T S

EXAMINER STOGNER: I'll call the next case, No. 10631.

MR. STOVALL: Application of Meridian Oil, Inc., for an unorthodox oil well location, San Juan County, New Mexico.

EXAMINER STOGNER: Call for appearances.

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

EXAMINER STOGNER: Are there any other appearances in this matter?

Will the witnesses please stand to be sworn.

[The witnesses were duly sworn.]

EXAMINER STOGNER: You may proceed.

MR. KELLAHIN: I would like to call Alan Alexander at this time.

ALAN ALEXANDER

Having been first duly sworn upon his oath, was examined and testified as follows:

EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Alexander, for the record would you

please state your name and occupation?

A. Yes. My name is Alan Alexander. I'm currently employed with Meridian Oil, Inc., in their Farmington, New Mexico office, as a senior land advisor.

Q. Mr. Alexander, pursuant to your employment as a petroleum landman, are you familiar with the land title ownership arrangements that may affect this particular well?

A. Yes, sir, I am.

Q. Are you also familiar with the offsetting operators in this particular area?

A. Yes, sir.

MR. KELLAHIN: We tender Mr. Alexander as an expert petroleum landman.

EXAMINER STOGNER: Mr. Alexander is so qualified.

Q. Mr. Alexander, let me have you turn, sir, to Exhibit No. 1, and identify what's shown in the exhibit book at that point in the package.

A. Exhibit No. 1 consists of our application to the Division to drill our Johnston Federal #15R well, at an off-pattern location in the northeast quarter of Section 35 of 31 North,

9 West, and replace the existing Johnston Federal No. 15 well that is also located in that same quarter section.

Q. As part of your research, Mr. Alexander, have you found any Division approvals for the original well that was drilled in the off-pattern location in the northwest quarter of this section?

A. Yes, sir. We found an administrative order NSL-2643 that was granted to Union Texas Petroleum Corporation under a letter dated March 29, 1989.

Q. What is the current status of the Johnston Federal 15 well?

A. Currently, I believe that well is shut in.

Q. And Meridian seeks now to replace that well with another well to be attempted in the Basin Fruitland Coal gas pool?

A. Yes, sir, that's correct.

Q. And to be located in the same off-pattern, 160 acres of the spacing unit?

A. Yes, sir, that's correct.

Q. What is the proposed spacing unit for the well?

A. The proposed spacing unit for the well consists of the east half of Section 35, of 31 North, 9 West.

Q. It will be a stand-up west half spacing unit?

A. Yes, sir.

Q. Let's turn to the information behind Exhibit Tab 2 and identify that for us.

A. Behind Exhibit 2 we have an offset owner operator plat which shows the offset operators. That consists of Meridian Oil, Inc. and Amoco Production Company.

Q. Have you caused notification to be sent to Amoco Production Company pursuant to Division notice rules?

A. Yes, sir.

Q. Have you received any objection from Amoco with regards to this application?

A. No, sir, we have not.

Q. The proposed footage location for the Johnston Federal #15R is as indicated on this display?

A. Yes, sir, that's correct.

Q. What is that status of the approval of the use of the surface at this location for the

well?

A. We have an approved location for this well.

Q. The exhibit package includes a copy of the administrative NSL approval of the original well, does it not, Mr. Alexander?

A. Yes, sir, it does. It's with the application, the second page in the back of the application.

Q. Marked as Exhibit C?

A. Yes, sir.

MR. KELLAHIN: That concludes my examination of Mr. Alexander. We move the introduction of Exhibits 1 and 2.

EXAMINER STOGNER: Exhibits 1 and 2 will be admitted into evidence.

EXAMINATION

BY EXAMINER STOGNER:

Q. NSL-2643 that approved the Federal #15, did it also authorize the west half dedication that you're essentially seeking for the replacement well today?

A. Yes, sir, it did.

Q. Okay. When I look at your offset acreage plat and I show Amoco to the west and

Meridian back to the east, the Meridian acreage to the northeast and south, was that all acquired from Union Texas at the same time that this particular acreage was, or is that older Meridian?

A. No, sir, most of this acreage was acquired from Union Texas.

EXAMINER STOGNER: I have no other questions of Mr. Alexander. He may be excused.

Mr. Kellahin.

MR. KELLAHIN: Call at this time Mr. Jim Falconi.

JAMES D. FALCONI

Having been first duly sworn upon his oath, was examined and testified as follows:

EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Falconi, would you please state your name and occupation?

A. Yes. My name is Jim Falconi. I'm a senior reservoir engineer for Meridian Oil, Inc., in Farmington, New Mexico.

Q. On prior occasions have you testified as a petroleum engineer before the Division?

A. Yes, I have.

Q. Your last testimony was before Examiner Stogner back in November with regards to two off-pattern wells, the Johnston 270 and the Johnston 280?

A. That's correct.

Q. Pursuant to your employment by Meridian as a petroleum engineer, have you made a study of the engineering information upon which a decision was made to replace the Johnston Federal 15 well?

A. That is correct.

Q. Have you participated in the decision that has picked a location for the replacement well?

A. Yes, I was involved.

MR. KELLAHIN: We tender Mr. Falconi as an expert petroleum engineer.

EXAMINER STOGNER: Mr. Falconi is so qualified.

Q. Let me have you turn, Mr. Falconi, to the first display shown after Exhibit tab No. 3. Take a moment, sir, and help us understand the display and give us some information about the kinds of wells that are located in this area?

A. Okay. The exhibit shown as Exhibit 3 is a nine-section plat showing the wells in the

nine section, all wells, Mesaverde, Pictured Cliffs, Dakota and Basin Fruitland Coal wells.

This area was developed in the Basin Fruitland Coal in the late 80s and early 90s. Most of the wells in the area were developed either open hole or cased hole. The wells that were developed cased hole, many of those wells have been redrilled or sidetracked to an open hole type completion.

The Johnston Federal #15R well that we're proposing to drill in the northwest, is located in the northwest quarter of Section 35, Township 31 North, Range 9 West.

Q. Is this display current so that it shows all the wells that are being drilled or completed in the Fruitland Coal Pool?

A. Yes, it is.

Q. And that symbol is a triangle with a gas symbol in it?

A. Yes, that's correct.

Q. Let's turn to Exhibit 4 at this time and have you identify the display shown behind that exhibit tab.

A. Okay. What Exhibit 4 shows is all the wells in the Basin Fruitland Coal pool. There's

a line on there marked A - A'. That's a cross-section line that will be talked about by our geologist.

The numbers underneath the well symbols indicate gas in place in Bcf and the current producing rates of the wells in the nine section in Mcf per day.

Q. Each of the coal gas symbols, the first number is the original gas in place and below that is the current rate?

A. That is correct.

Q. Let's use this display to discuss the conclusions you have reached about the replacement well and its location. Give us an overview and understanding, Mr. Falconi, of the reasons that have caused you and Meridian to come to the conclusion that you want to, first of all, replace the #15 well.

A. Okay. Meridian acquired this acreage from Union Texas Petroleum, and we undertook a study to look at the production rates from all the Basin Fruitland Coal wells in the area. It was obvious that the two wells in that section, both the #15 located in the northwest of Section 35, and the #23, located in the southeast of

Section 35, were producing way below the offsetting rates.

The reason we determined for that was both these wells were cased and fracture stimulated. We elected to do something to the wells to increase their productivity. The #23 well, we were able to go in in December of this year and sidetrack that well and bypass the cased and fracture-stimulated area, go back into the Fruitland Coal and complete the well open hole.

Q. The numbers below the 23 well, do those represent the current rate of the well after it was recompleted?

A. That is correct. That's marked as a Pito gauge, 2.2 million a day.

Q. What does that mean?

A. That Pito gauge is indicative of the production capability of the well. Normally, what we find is that the wells, when we turn them on and produce them down the line, will produce at about 40 or 50 percent of the Pito rate. So we would expect this well to produce in the neighborhood of 1,000 to 1,100 Mcf per day.

Q. Let's go back to the original 15 well. You don't have rates on that. Tell me about that

well.

A. The #15 well, like I indicated, was originally a Pictured Cliffs well. Union Texas plugged the well back to the Fruitland Coal and completed the Fruitland Coal interval using cased and fracture-stimulated techniques. The production of the well has been extremely low. We've elected to shut the well in pending--

Q. What kinds of rates?

A. The current rate is zero. We have the well shut in. Peak rates on the well were in the neighborhood of 100 to 150 a day with large volumes of water.

We reviewed the well and we elected to redrill the well simply because the mechanical configuration of the well hole will not allow us to sidetrack.

Q. You can't do to the 15 what you were able to successfully accomplish with the 23?

A. That's correct.

Q. Why have you chosen to move to the south and west of the 15 for the replacement well, as opposed to somewhere else in the spacing unit?

A. Say the question again.

Q. Sure. You've moved slightly to the south and west of the 15 for the replacement well?

A. That's correct.

Q. Why have you chosen that location within the west half spacing unit for the replacement well?

A. We looked where we could stake the well up in the northwest quarter offsetting the #15 well. The #15 well is offset by an existing Mesaverde well. This was the most reasonable topographic location up in the northwest quarter of the section.

Q. Were there reservoir elements or criteria that helped you determine the optimum location for the replacement well?

A. No. The geologist will talk about the cross-section that he ran through there. There are no geologic or reservoir parameters as such that would make us choose that particular location up in the northwest.

Q. Comparing the northwest to the southwest, then, why have you chosen to stay in the northwest quarter as opposed to now putting it back in an on-pattern situation?

A. We elected to stay in the northwest because the off-pattern drilling of the wells in both Sections 35, Section 2 to the south and Section 3 to the south, are already established off-pattern. Most of those wells were drilled prior to the 1988 Basin Fruitland Coal pool rules.

Q. I know this display doesn't show it, but if you go back to the exhibit behind Exhibit tab No. 3, there's a Mesaverde Well #6 located in the southwest quarter of 35. Is there any information from that well that caused you to conclude that the replacement well should not be in close proximity to the #6 Mesaverde well?

A. I reviewed the Mesaverde wells in Section 35. The #6 well was drilled in 1952, a Mesaverde well. When they were drilling that well through the Fruitland Coal interval it blew out on them and they were not able to control it. They continued to drill the well to an intermediate casing point about 500 or 600 feet below the Fruitland Coal interval.

TD'd the well with the well still blowing out, and attempted to kill the well with mud. They spent about 24 hours attempting to

kill the well with mud and were unsuccessful in doing that. So they elected to kill the well by cementing the intermediate casing string in that well in the hole.

They pumped their cement job while the well was flowing and successfully cemented the bottom of the casing. However, cement that was circulating up the back side may have gone into the Fruitland Coal interval with bridging on the back side while the well was flowing. The drilling records and the information in the file from 1952 are hard to interpret and conclusively say that that happened, but there are indications that cement damage may have occurred to the Fruitland Coal interval.

Q. Give us a summary of how you have made the calculations of the original gas in place that applied to each of the spacing units for the coal gas wells.

A. Okay. On Exhibit No. 4, the top number is the gas in place in Bcf, and that was calculated from desorption and thickness data.

Q. Have you used the same parameters in making the calculations for each of the spacing units for the original gas in place?

A. Yes, we have.

Q. What have you determined to be the original gas in place for the west half of 35?

A. For the west half of 35 we have 16.4 Bcf.

Q. In order to afford the owners of that spacing unit the opportunity to have their share of the recoverable gas in the pool, what is your conclusion about the optimum place to place the replacement well?

A. Our conclusion is that we need to redrill the #15 well because of mechanical conditions of the #15, and also complete, using an open hole technique, to recover the reserves in the west half of the section.

Q. In the prior cases in November, the Examiner may remember that the criteria used for certain of the off-pattern wells was an effort to get into a location that had better permeability based upon a number of methods of analysis of that particular area. Is that the type of case we're seeing here with the #15R?

A. It is, to a certain degree. However, all the offsetting wells have had kicks in the Fruitland Coal interval and are all producing at

extremly high rates, and we feel it's prudent to protect our drill block and protect our correlative rights by redrilling the #15.

MR. KELLAHIN: That concludes my examination of Mr. Falconi. We would move the introduction of his Exhibits 3 and 4.

EXAMINER STOGNER: Exhibits 3 and 4 will be admitted had into evidence. I have no questions of Mr. Falconi at this time.

Mr. Stovall?

MR. STOVALL: No questions.

EXAMINER STOGNER: You may be excused.

Mr. Kellahin.

MR. KELLAHIN: Call Mr. Jennings.

GREGORY L. JENNINGS

Having been first duly sworn upon his oath, was examined and testified as follows:

EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Jennings, would you please state your name and occupation?

A. My name is Gregory L. Jennings. I'm a senior geologist with Meridian Oil Inc., located in Farmington, New Mexico.

Q. Mr. Jennings, on prior occasions have

you testified and been qualified as an expert petroleum geologist before the Division?

A. Yes, I have.

Q. And you last testified before Examiner Stogner back in November, with regards to Meridian's application in the Johnston 270 and the 280 wells?

A. That's correct.

Q. Pursuant to your employment, have you continued to make geologic studies and, in conjunction with Mr. Falconi's engineering work, made recommendations to manegment about where to drill replacement wells with regards to Fruitland Coal gas wells?

A. Yes, I have.

Q. Have you made that recommendation with regards to the Johnston Federal #15R well?

A. Yes.

MR. KELLAHIN: We tender Mr. Jennings as an expert petroleum geologist.

EXAMINER STOGNER: Mr. Jennings is so qualified.

Q. What is your recommendation with regards to your geologic interpretations, Mr. Jennings, about the replacement of the Johnston

15 well with another well in that spacing unit?

A. Our recommendation is to redrill the well in the northwest quarter of Section 35, complete an open hole in the Fruitland Coal interval, and allow us to recover our share of the reserves in the west half of the spacing unit.

Q. Let me ask you, sir, if you have prepared an isopach of this particular area that will show the coal reservoir?

A. Yes, I have. That would be Exhibit No. 5.

Q. Identify and describe that display for us.

A. Exhibit No. 5 is an isopach of the total thickness for the Fruitland Coal. It actually shows both wells--both cases that we're here today for, but in the northwest part of the map you see the Johnston Federal #15R located with a star.

Essentially, thicknesses range from 40 feet up to 60 feet in the area of the drill site; however, as we've discussed in some previous hearings, the minor variations in thickness are not correlating to any of the variations in

production.

Q. When you're looking at coal thickness in the west half of 35, is the replacement location, the 15R location, the optimum location within that spacing unit?

A. Yes, it is.

Q. You are located at least within close proximity to the, is it, 45-foot contour line?

A. That's correct.

Q. Between 40 and 45 feet of thickness?

A. Right.

Q. In determining the optimum location geologically within the spacing unit for a coal gas well, have you also looked at structure?

A. Yes, I have.

Q. Let's turn to Exhibit No. 6, and I would ask you to identify and describe the structure.

A. Exhibit No. 6 is a structure map on the base of the Fruitland Coal, contour interval of 20 feet. It essentially shows a regional dip to the northeast. No large structural anomalies that would enhance fracturing or permeability. Very typical for all of these Fruitland Coal cases. The structural picture shows no faulting

or anticlinal flexures that are significant and would affect the geology.

Q. When you look at the geology around the original well, the Johnston Federal 15, do you see any geologic reason that that well was such a poor producer?

A. No. In fact, we think if they would have drilled that well open hole, they would have made a similar producer as the offsetting wells.

Q. Let's turn to the cross-section and have you briefly identify and describe the cross-section, which is Exhibit No. 7?

A. Right. The cross-section A to A', which you have in front of you, is pretty straightforward. It's a four-well cross-section running north/south. Starting from the south we've got an open hole completion in the Fruitland Coal producing approximately 1.1 million a day. That's in Section 2.

Then you run up through Section 35, where we have the two Johnston Federal wells that Meridian acquired from Union Texas. It is interesting to point out, the Johnston Federal #23 in the southeast quarter is the well that we discussed earlier that originally was a very poor

producer due to it's cased hole completion, and we promised you that we would give you data as we got it. And we just sidetracked this well, what, about a week ago? and had a successful result with a Pito gauge to the atmosphere of 2.2 million.

And that's essentially what we're trying to do with the #15, except we'll have to redrill it because of mechanical reasons.

As you can see, we have five basic coal packages that are present in all four of these wells. The very good correlations in the coal zones continue right up to the north to the well in Section 26 that is producing approximately 3.3 million a day. Very similar situation to some of these previous cases that we've looked at.

The coal zones are continuous, very correlatable. Nothing on wire line logs that helps us to determine where a particular location is more permeable than another. In fact, we feel that this whole area is fairly commercial. You do see production increasing to the north and, in fact, we're offset by some pretty big producing wells.

The west half of Section 35 is offset

by some pretty big producing wells, but you can't see any changes in the wire line logs or in the mud logs. Essentially it's a permeability issue, and it's just like all the cases that we've looked at in recent weeks.

Q. Why wouldn't you drill the southwest quarter and put the well back on pattern then?

A. Well, two primary reasons. One, the location that is staked and that we're proposing here today is actually better, consistent with the existing pattern that is in the area. I think the section to the north and the south and the three immediate sections offsetting Section 35 are off-pattern.

Secondly, because we do see an apparent permeability increase to the north and increasing production, therefore increasing drainage of the west half of Section 35, we feel that the location of the northwest of 35 is better positioned to protect the correlative rights of that spacing unit and to establish commercial production.

MR. KELLAHIN: That concludes my examination of Mr. Jennings. We move the introduction of Exhibits 1 through 8.

Exhibit 8, Mr. Examiner, is our certificate of mailing to Amoco, as the only offsetting operator.

EXAMINER STOGNER: The remainder of the exhibits will be admitted into evidence at this time.

EXAMINATION

BY EXAMINER STOGNER:

Q. Mr. Jennings, when I look at your cross-section and the well to the north, the open hole completion--

A. Right.

Q. --have you made a determination or do a spinner survey or other means of which particular coal seam in particular in this area may be attributing the majority of the coal gas production, or are they equal, or do you have any opinion?

A. That's a good question. My boss asks me that all the time. I would say from regional experience, the basal coal is the primary zone. However, it doesn't appear to be the case on this well.

One way that you can tell when you look at these mud logs, if the mud logger recorded

where the well kicked and what the flare was during the individual zones, then that will give you a good, solid clue. Unfortunately, these things encounter so much gas that they saturate the gas detection units as soon as they drill into even a minor producer. And so you look at the gas curve and it really isn't that helpful.

And I don't believe they've reported kicks or flares on this one, but I will say this. If you looked on the Johnston Federal No. 15 on the cross-section, there's a little note that says "kick" with a couple of little Xs. Right below that, in the middle of the coal package, that indicates that the upper coal kicked as they drilled that well, and so my interpretation would be that all of the coals in here have productive potential, but based on regional experience the basal coal would still be the big producer.

EXAMINER STOGNER: Any other questions of Mr. Jennings?

MR. STOVALL: Just one.

EXAMINATION

BY MR. STOVALL:

Q. This is not like your other off-pattern

cases that you've had here where it's due to that transitional zone, is that correct?

A. That's correct. We feel that this area is all productive. There is a permeability variation to the north and there is better production to the north, so there's a little bit of that element in here as well. Basically we're simply redrilling a well that was cased and frac'd and not stimulated properly.

EXAMINER STOGNER: Any other questions?

MR. STOVALL: No.

EXAMINER STOGNER: Mr. Jennings may be excused.

Mr. Kellahin, anything further?

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

EXAMINER STOGNER: Does anyone else have anything further in Case 10631? If not, this case will be taken under advisement.

(And the proceedings concluded.)

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 10631 heard by me on [illegible] 1992.

[signature], Examiner
Oil Conservation Division

CERTIFICATE OF REPORTER

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

I, Carla Diane Rodriguez, 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 caused my notes to be transcribed under my personal supervision; 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 December 23, 1992.

Carla Diane Rodriguez

CARLA DIANE RODRIGUEZ, RPR
CCR No. 4