STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO

18 January 1989

EXAMINER HEARING

IN THE MATTER OF:

Application of Meridian Oil, Inc. for compulsory pooling, unorthodox gas well location, and non-standard gas proration unit, San Juan County, New Mexico, and — CASE 9535

Application of Meridian Oil, Inc. for compulsory pooling, and a non-standard gas proration unit, San Juan County, new Mexico. — CASE 9545

BEFORE: Victor T. Lyon, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division:

For Meridian Oil, Inc.: W. Thomas Kellahin
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I N D E X

E X H I B I T S

MR. LYON: Call next Case 9535. Application of Meridian Oil, Inc., for compulsory pooling, unorthodox gas well location, and nonstandard gas proration unit, San Juan County, New Mexico.

MR. KELLAHIN: Mr. Examiner, my name is Tom Kellahin of the Santa Fe law firm of Kellahin, Kellahin & Aubrey. I'm appearing on behalf of Meridian Oil, Inc., and I have two witnesses to be sworn in this case.

MR. LYON: Would you both stand and raise your right hands?

(Witnesses sworn.)

MR. LYON: Proceed, Mr. Kellahin.

MR. KELLAHIN: Thank you, Mr. Examiner.

In order to expedite the presentation today, we would like to request that you consolidate Case 9535 with Case 9545 and call it at this time so that we may make a similar presentation in that case with these witnesses.

MR. LYON: Case 9545. Application of Meridian Oil, Inc., for compulsory pooling, and a

nonstandard gas proration unit, San Juan County, New Mexico.

Will you be using additional witnesses?

MR. KELLAHIN: No, sir, I'd like the record to reflect that we have the same witnesses available for both cases.

MR. LYON: That will be fine.

MR. KELLAHIN: Mr. Examiner, these two cases, 9535 and 9545, were first heard by Examiner Stogner on, I believe, November 21st, at which point we presented the compulsory pooling portion of the presentation, which included a presentation by Mr. Hopkins, the landman. We had presentation by the geologist, the drilling engineer, and the reservoir engineer, with regards to the factors involved in the compulsory pooling.

We've come back today to complete the presentation of this case, to address the remaining portions of this case, which are to seek your approval of the two nonstandard proration units, as well as the two unorthodox -- I'm sorry, of the one unorthodox gas well location.

The two wells involve the Basin Fruitland Coal Gas Pool.

The two witnesses I have for

you today are Mr. Bob Hopkins, who is the petroleum landman that testified in the original case.

The second witness is Mr. Jimmy Smith, who is a reservoir engineer, and both gentlemen will talk about their reasons for seeking approval of the locations and the nonstandard proration unit.

We've marked for presentation the collective exhibits of both witnesses. They're marked Exhibits One through Five and they will apply to both cases.

ROBERT J. HOPKINS,

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

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

A Yes. I'm Robert Joseph Hopkins. I'm a Senior Landman in Meridian's Farmington Area Land Department.

Q Mr. Hopkins, on prior occasions have you testified as a petroleum landman before the Oil Conservation Division?

A Yes, I have.

Q In fact you provided expert land testimony with regards to both of these cases at the prior hearing back in November.

A Yes, sir, I did.

Q Have you made further and additional studies with regards to the land reasons or justifications to seek approval of the two unorthodox or nonstandard proration units for these two wells?

A Yes, sir, I have.

MR. KELLAHIN: At this time, Mr. Examiner, we tender Mr. Hopkins as an expert petroleum landman.

MR. LYON: Mr. Hopkins is qualified.

Q Mr. Hopkins, let me start, sir, by showing you Exhibit Number One and having you identify that exhibit.

A Exhibit Number One is a land plat of the Howell "C" Com 301 Well and the existing Mesaverde proration units in the surrounding area.

Q When we look at Exhibit Number One and the Com 301 Well, we're dealing with Case 9535, are we, sir?

A Yes, sir, we are.

Q And would you identify for the record what is the spacing unit you're proposing to utilize for the 301 Well for the Fruitland coal gas production?

A Yes. We would be proposing to use the southwest quarter of Section 7 and the west half of Section 18 in 30 North, 8 West, San Juan County, New Mexico.

Q Do you have that shown on a subsequent exhibit?

A Yes, I do.

Q That's Exhibit Number Two?

A Yes, sir, it is.

Q All right. What have you shown on Exhibit Number Two?

A On Exhibit Number Two we've taken the same land map and shown the proposed or existing Fruitland proration units.

Q Is the proposed Fruitland gas proration unit identical to the existing Mesaverde proration unit for this unit?

A Yes, it is.

Q Turn to Exhibit Number 3 now, Mr. Hopkins, and let's turn to the Com 300 Well, which is Case 9545.

What have you shown on Exhibit Number Three?

A Exhibit Number Three is a land map showing the Howell "G" Com 300 with a well spot and showing the existing Mesaverde proration units surrounding the well.

Q Turn now, sir, to Exhibit Number Four. What have you shown on that display?

A Exhibit Number Four is an identical copy of the land map for the Howell "G" Com No. 300 with the well spot, showing the proposed or existing Fruitland proration units surrounding the well.

Q Are you proposing the same configuration for the Basin Fruitland Coal Gas well, the 300 No. -- the Com 300 Well as exists for the Mesaverde well shown on Exhibit Three?

A Yes, sir.

Q Let's talk about the nature of the problem that's created this type of solution, Mr. Hopkins. What is occurring on this particular township line that cause all these nonstandard units?

A The United State Geological Survey has corrected townships to correct their normal surveys for the curvature of the earth. They try to do so on the westerly and northerly sides of townships, where possible. This is an example of a westerly correction.

The six sections on the west side of

this township are 100 acres, more or less, short of being a normal section. The correction is then made in only the west half of each of those sections. The east half is as closely as possible to 320 acres. The west half is in the nature of 220 acres on each of these six sections.

Q How have oil and gas operators such as Meridian dealt with the western portion of this township 30 North, Range 8 West, in forming spacing units for the Mesa-verde production?

A They have formed four proration units on the west side of the township, taking 220 acres of full west half and then a quarter section from either the north or south section to form 330, more or less, acre proration units.

The reasoning was that this was the least disruptive solution to their problem.

They had several alternatives. They could have formed normal 320-acre proration units by simply taking acreage from western offset sections and using a domino principle, we would have a number of orthodox sections to the west all the way out.

There are some -- some more finite solutions. One would be to take the six westerly sections and laydown the proration units forming 270-acre proration units. You would have a disruption. You would have 12

proration units that would be 270 acres in size.

The next alternative is to simply leave the west half of each of those six sections as a nonstandard in size with 220 acres. That would six be disruptive locations.

Back when they were trying to get the Mesaverde proration units outlined, there was another plan and that was to make four disruptive locations, each approximately 330 acres in size. That would maximize the problem. They would be able to take very close to 320 acres in size and only have 4 disruptive proration units.

Q What solution was chosen for the Mesaverde proration units, then?

A The Oil Conservation Division decided at that time to go with the 4 disruptive units and establish the Mesaverde proration units as shown in the blue color, Exhibit One and Exhibit Three.

Q When we deal with the proposed nonstandare proration unit for the drilling of the Howell "C" Com 301 Well, Case 9535.

A Yes, sir.

Q We're dealing with 334.94 acres?

A Yes, sir.

Q What is your recommendation to the Examiner about using that existing Mesaverde spacing unit

as the spacing unit, then, for this well?

A I would recommend that the former Mesaverde unit be adopted for the Fruitland Coal.

Q What are your reasons for that recommendation, Mr. Hopkins?

A The reason would relate to the fact that this is a very odd situation. We do have a strange land situation in that you have -- cross section lines. The owners in the Mesaverde wells in these proration units are fully accustomed to this. There are operating agreements in place, title opinions performed, Division orders issued, royalty owners, override owners, production payments, have all been made on these nonstandard units and people are very accustomed to it.

By switching to a different proration unit for the Fruitland and trying another solution at this point in time, we would cause a great deal of confusion for both royalties, any of the payments we're making and contractual.

Q Does Meridian operate the two proration units we're dealing with for the Mesaverde wells?

A Yes, they do.

Q When we deal with the other proration unit in Case 9545, for the Howell Com 300 Well, that's a proration unit that has a size of 331 acres, more or less.

A Yes, sir, it does.

Q Are your opinions and reasons that you expressed for the No. 301 Well the same for the No. 300 Well?

A Yes, sir, they are.

Q From a landman's perspective, Mr. Hopkins, do you see any other solution that is less disruptive, if you will, than the one you're proposing here today?

A No, sir, I sought to find the least disruptive solution.

Q Have you had any objection from any interest owners with regards to the continuation of the Mesaverde solution and having that apply to the Basin Fruitland coal gas wells to be drilled on these two spacing units?

A No, sir.

MR. KELLAHIN: That concludes my examination of Mr. Hopkins, Mr. Lyon.

We'd move the introduction of his Exhibits One through Four.

MR. LYON: Is there objection? Exhibits One through Four will be admitted.

Mr. Kellahin, will this witness testify as to the location of the wells and so forth or will the other witness?

MR. KELLAHIN: Mr. Smith, the reservoir engineer, is going to speak as to the locations.

MR. LYON: I have no questions of this witness.

JAMES A. SMITH,

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

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

A James A. Smith. I'm a reservoir engineer.

Q Mr. Smith, have you previously testified before the Division as a reservoir engineer?

A No, sir.

Q Would you describe for Mr. Lyon when and where you obtained your degree in engineering?

A I obtained by petroleum engineering degree from the University of Wyoming in 1980.

Q This is a Bachelor of Science degree in petroleum engineering?

A Bachelors' degree, yes, sir.

Q And subsequent to graduation, Mr. Smith, would you outline for us what has been employment experience as a reservoir engineer?

A I went to work for El Paso Exploration, which is now Meridian Oil, in Elk City, Oklahoma, January, 1981. At that four years I spent there as a drilling engineer and production engineer.

In September of 1985 I transferred to Amarillo, Texas, where I worked as a drilling engineer.

In July of 1986 I transferred to Farmington, New Mexico, where I am currently working.

From March. 1988, to the present I have been in the Reservoir Engineering Department.

Q Let me talk to you generally, Mr. Smith, about the kinds of duties you perform as a reservoir engineer since March of '88 to the present insofar as it concerns Meridian's exploration and development of the Basin Fruitland coal gas wells. Describe generally what it is that you do for your company concerning the Fruitland coal gas wells.

A I determine where wells should be drilled. I run economics and recommend if a well should be drilled based on economics

Q When we look at the unique situation in the western portion of Township 30 North and 8 West, there

exist a certain number of Mesaverde nonstandard proration units. Are you familiar with those nonstandard proration units?

A Yes, sir.

Q Have you reviewed the engineering and geology that apply to the proposed nonstandard spacing units for the Howell Com 300 and the Howell Com 301 Well?

A Yes, sir.

Q And have you caused to be prepared an exhibit that illustrates some of that information?

A Yes, sir.

Q Let me turn, sir, to Exhibit Number Five and ask you if that is your exhibit.

A Yes, sir.

Q Let's take a moment and have you summarize for us the information that's on the display.

A This Exhibit Number Five is a net coal, Fruitland coal thickness map. It shows in green the wells we're dealing with today, the two wells.

The pink dots show surrounding wells that are either drilled or proposed to be drilled.

Q The wells highlighted in the pink and the green are Fruitland coal gas wells.

A Yes, sir.

Q When we look at the proration unit for

the Howell Com 300 Well, the Division has adopted some special rules and regulations for the Basin Fruitland coal gas wells and they require those wells within a given section to be located in a particular quarter section, do they not?

A Yes, sir.

Q Where are the wells required to be drilled to be on pattern and in compliance with that rule?

A The northeast quarter and/or the southwest quarter of each section.

Q Do either one of these wells satisfy that pattern arrangement for the Basin Fruitland coal gas wells?

A No, sir.

Q In addition, they have a further rule with regards to the footage location of the wells, do they not?

A Yes, sir.

Q And what is the footage location requirement?

A 790 feet from each lease line and 130 feet from the interior quarter section line.

Q Do either one or both of these wells satisfy that footage requirement of the rule?

A Yes, sir.

Q Which one satisfies the footage requirement?

A The Howell "G" Com No. 300 Well.

Q As a reservoir engineer, Mr. Smith, would you describe for us the kind of factors, parameters, or the criteria that you apply in helping decide where you recommend that the -- your company locate the Basin Fruitland coal wells?

A I examined the thicknesses, limits, fractures, cleating, over-pressured areas, kicks, to determine these locations.

Q One of the basic requirements of the special rules for the Basin Fruitland Coal was to maintain where possible patterns where wells were drilled approximately on 320-acre spacing.

Are you familiar with that requirement?

A Yes, sir.

Q In what ways do either or both of these wells help satisfy that condition of maintaining widely spaced wells on approximately 320-acre spacing patterns?

A They follow the uniform pattern of 320 acres as shown on our Exhibit Five.

Q Okay. When we look at Exhibit Five, all of the pink dots to the east of the two well locations, are those Meridian wells, either drilled or proposed to be

drilled?

A Yes, sir.

Q And with the exclusion of the well dot in Section 13, just to the west of the Com 301, forget that for a moment, all right, sir?

A Okay.

Q When we look at all the rest of the wells, do we see a general well spacing pattern in relation to these two wells that maintain for you that 320-acre pattern?

A Yes, sir.

Q When we look at Section 13, is that also a Meridian well?

A Yes, sir.

Q In the northeast quarter?

A Yes, sir.

Q In applying the different factors you utilize, Mr. Smith, in finding well locations, let me concentrate first of all on the spacing unit for the 300 Well, in applying all those factors to the 300 well, have you found a location within that spacing unit that gives you a higher value, if you will, for all those parameters than the proposed unorthodox location?

A No, sir.

Q When we look at the Com 301 Well and we

apply all those factors or parameters, is there an alternative location for that well that gives you a higher value for picking well locations than the proposed unorthodox location?

A No, sir.

Q Describe for us the specific footage locations. Do you have the information --

A Yes, sir.

Q -- that will give us the exact location for each of these wells?

A Yes, sir.

Q Let's start with the 300 Well, what's the exact footage?

A It is located in Section 6, 30 North, 8 West, 1430 feet from the north line, 1090 feet from the west line.

Q Okay, and the 301 Well?

A Located in Section 18, 30 North, 8 West, 1660 from the north line, 1320 from the west line.

Q Let me look again at Exhibit Number Five with you, Mr. Smith, I understand that one of the values you use is coal thickness in helping you pick locations.

A Yes, sir.

Q In looking at the spacing unit for the No. 300 Well, give us an estimate of the range of coal

thickness within that spacing unit.

A 40 to 50 feet.

Q And at the proposed unorthodox location, approximately what is the coal thickness at that location?

A 44 Feet.

Q And what are the coal thicknesses ranging for the spacing unit for the 301 Well?

A 39 to 41 feet.

Q And at the proposed location what is your estimate of the approximate coal thickness at that location?

A 40 feet.

Q In making your study, Mr. Smith, of the various items that go into making your choices on well locations, do you find any factors available to you based upon your present knowledge, that cause you to recommend that either of these locations not be drilled at these points?

A No.

Q Have you reviewed the information shown on Exhibit Number One -- Number Five and satisfied yourself that it's true and accurate to the best of your knowledge, information and belief?

A Yes, sir.

MR. KELLAHIN: That concludes

my examination of Mr. Smith, Mr. Lyon. We move the introduction of his Exhibit Number Five.

MR. LYON: If I didn't --

MR. KELLAHIN: I think we did One through Four.

MR. LYON: Did we do One through Four or One through Five? I couldn't remember.

Is there objection?

Exhibit Five will be admitted.

CROSS EXAMINATION

BY MR. LYON:

Q Mr. Smith, as I interpret Exhibit Five, the pink dots, pink circles, represent existing coal gas wells?

A They represent existing or planned wells, existing being already drilled; planned being permitted, ready to be drilled.

Q Right. Now, the west half of Sections 6, 7, and 18 are irregular and were the reason that we had to have a nonstandard unit, is that correct?

A That's correct.

Q The east half of each of those sections is regular, is that right?

A Yes, sir.

Q Now, the coal gas rules specify locations in the northeast quarter or the southwest quarter.

If you drill a well in the northwest quarter of Section 6, you're going to have a row of wells across there which will disturb the uniformity of spacing. Do you agree with that?

A If a well is drilled, yes.

Q And also in the northwest quarter of Section 18 the regular location would be in the northeast quarter, which would result in a row of three wells right across the northeast of 13, northwest of 18, and northeast of (unclear).

A Yes, sir.

Q And your exhibit shows all -- all of the wells that presently exist in the coal gas within the area shown, is that right, either -- either wells existing or planned wells.

A At this point in time, yes, sir.

Q There are no existing wells that are not indicated on here.

A That's correct.

MR. LYON: That's all my questions.

Anything else?

MR. KELLAHIN: I believe

that's all, Mr. Examiner.

MR. LYON: The witness may be excused and we'll take the case under advisement.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C. S. R. DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division (Commission) was reported by me; that the said transcript is a full, true and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9535/9545 heard by me on Jan. 18 1987.

W. Lyon, Examiner
Oil Conservation Division