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

22 November 1988

EXAMINER HEARING

IN THE MATTER OF:

Application of Meridian Oil, Inc. for compulsory pooling, unorthodox gas well locations, and non-standard gas proration units, San Juan County, New New Mexico.

CASE 9535 Through 9547

BEFORE: Michael E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division:	Robert G. Stovall Attorney at Law Legal Counsel to the Division State Land Office Bldg. Santa Fe, New Mexico
For Meridian Oil, Inc:	W. Thomas Kellahin Attorney at Law KELLAHIN, KELLAHIN & AUBREY P. O. Box 2265 Santa Fe, New Mexico 87504
For Fina Oil & Chemical Company:	James Bruce Attorney at Law HINKLE LAW FIRM 500 Marquette N. W. Albuquerque, New Mexico 87102-2121

I N D E X

CASE 9535 EXHIBITS

CASE 9535 EXHIBITS Cont'd

CASE 9536 EXHIBITS

CASE 9537 EXHIBITS

CASE 9537 EXHIBITS Cont'd

CASE 9538 EXHIBITS

CASE 9539 EXHIBITS

CASE 9539 EXHIBITS Cont'd

CASE 9540 EXHIBITS

CASE 9541 EXHIBITS

CASE 9542 EXHIBITS

CASE 9545 EXHIBITS

CASE 9546 EXHIBITS

CASE 9547 EXHIBITS

MR. STOGNER: This hearing will come to order.

We will call Cases 9535 through 9547, inclusive. These are all the application of Meridian Oil, Incorporated, for compulsory pooling, San Juan County, New Mexico.

Case Number 9535 in particular also includes an unorthodox gas well location and a non-standard gas proration unit.

Also, Case Number 9545 includes a nonstandard gas proration application.

We'll call for appearances in any or all of these cases.

MR. KELLAHIN: Mr. Examiner, my name is Tom Kellahin. I'm an attorney with the Santa Fe law firm of Kellahin, Kellahin & Aubrey. I'm appearing on behalf of the applicant, Meridian Oil, Inc., in all of these cases.

MR. STOGNER: How many witnesses do you have, Mr. Kellahin?

MR. KELLAHIN: I have three witnesses, Mr. Examiner.

MR. STOGNER: Are there any other appearances?

MR. BRUCE: Mr. Examiner, my

name is Jim Bruce from the Hinkle Law Firm in Albuquerque, representing Fina Oil and Chemical Company. We are entering an appearance on Cases 9543 and 9544, and I may have three witnesses.

MR. STOGNER: Are there any other appearances?

I will hear testimony in Cases 9535 through 9542 and from 9545 to 9547 at this time, but I'm going to postpone Cases 9543 and 9544 to the end of the docket today, and consider those separately.

All right. Will all Meridian witnesses please stand and be sworn in at this time.

(Witnesses sworn.)

MR. STOGNER: Mr. Kellahin?

MR. KELLAHIN: Thank you, Mr. Stogner.

We'd call Mr. Bob Hopkins at this time.

CASE 9535

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 have you previously testified as a petroleum landman before the Oil Conservation Division?

A No, I have not.

Q Would you please take a minute and describe what has been your educational background?

A Yes. I graduated from Creighton University in Omaha, Nebraska, in 1977, with a Bachelor of Science in business administration.

I received a law degree from the same school in 1980 and began work for El Paso Exploration Company in August of 1980.

Q Describe for us what has been your employment experience as a petroleum landman.

A From 1980 to 1984 I was employed as a contracts and titles landman with El Paso Exploration Company.

I was transferred to Midland, Texas, in 1984 and worked as a landman in the field office, and in June of this year was transferred -- or April of this year was transferred to Farmington, New Mexico to work as a Senior Landman in the field office in Farmington.

Q Have you been involved on behalf of your company with efforts to consolidate on a voluntary basis the necessary acreage for the drilling of each of these 11 wells that are the subject of the hearing today?

A Yes, I have.

Q Would you describe generally how the Land Department for Meridian is organized in Farmington and to what particular landmen were delegated various functions and responsibilities for consolidating the acreage for drilling?

A Sure. We had four landmen on staff that were in charge of drilling interest wells and seeking the voluntary joinder in the wells that we had proposed this year.

In April we divided the wells up between the landmen so that we had a very similar work load fairly randomly in areas, not working one particular area or another, and the proceeded to approach or start in April of this year.

Q Would you identify the other landmen

that worked with you, Mr. Hopkins, in trying to consolidate the interests for these wells?

A Yes. We had David Pogue of our office, John Myrick of our office, and Tom Hawkins of our office.

Q Which particular wells were you the individual primarily responsible for consolidating that acreage?

A I worked specifically on the Brown No. 100 Well, EPNG Com "C" No. 100 Well, and the Atlantic "G" Com A-200 Well.

Q Was the method utilized by you to approach the working interest owners a method similarly utilized by the other landmen?

A Yes, we all used a fairly similar form-type letter, a guideline operating agreement that the company used to approach partners, and AFEs that were very similar from our engineering group.

We proposed the wells as a packet with a cover letter, an operating agreement, and an AFE.

Q Okay. How did you go about the task of determining who the various working interest owners were, what their percentage interest was, in each of the spacing units?

A The San Juan Basin is a very mature area so the first thing we did was to look for other wells on

the properties and tried to determine the ownership of those wells.

We then used title opinions that we had copies of in our files, phone calls to companies that we found their name associated with the well, we'd make phone inquiries, and we also had a contract landman who in September verified all the ownerships that we had made with the BLM records and the State Land Office records and the county records in San Juan County.

Q As of today's hearing, then, are you satisfied that Meridian has an accurate representation for each of the spacing units of the owners and the percentage interests involved in those spacing units?

A Yes, we do.

Q Let me ask you how you generally, and the other landmen working on this project, generally went through the process of getting other interest owners to voluntarily participate with you.

What was the initial first contact?

A A letter, a cover letter with the operating agreement and an AFE was submitted to the partners.

Q Approximately when did that occur?

A A great majority of them went out in late April of 1988. I believe we had 8 that went out in April and several -- one that went out in June and two of

them in August, and Conoco had sold part of its interest and we didn't determine that FMP Operating Company owned an interest until October.

Q The Commission did not issue a 320-acre spacing rules for the Fruitland Coalbed gas production until late summer this year, is that not true?

A Yes, it is.

Q But your efforts to consolidate this acreage on 320-acre spacing commenced considerably before the date of the order, did it not?

A Right.

Q What was the thinking in terms of Meridian's activities in trying to consolidate acreage for coal gas wells on spacing larger than existed at the time you began your efforts?

A Our engineers had determined much earlier that the wells that Amoco had drilled in the area and wells that we were drilling would drain a larger area than the existing statewide spacing in 160 acres. Our data was -- was such that we were fairly confident that the wells would indeed drain 320 acres. Had we gone out and drilled our wells on 160 acres and then had rules issued for 320, we would have had a large number of wells that we would have either had to gone to partners to include them in the old wells or would have caused a large number of

wells to be drilled on less acreage than they probably would drain.

So we made a conscious effort to voluntarily get -- get other parties to join in on the 320-acre spacing.

Q Was it perceived to be more difficult to bring in additional working interest owners into a producing well that had to be re-spaced?

A Yes, it was.

Q In the course of your activities from the inception of your involvement with this project to today, have you received any objection from any of the working interest owners as to the issue of spacing?

A No, sir.

Q There has been no agreement or discussions that 320-acre spacing for each of these 11 wells is anything other than appropriate.

A No, sir.

Q Describe for us generally, and I know it's not true of each individual case, but describe for us generally the types of companies or individuals that were being included in each of these wells.

Can you identify some of them for us?

A Yes. We had Chevron, ARCO, Tenneco, Conoco, Mesa Limited Partnership, Fina Oil and Chemical, T.

H. McIlvain Oil and Gas Properties, Grace Brown from El Paso, Texas, James Raymond from Kerrville, Texas.

Q You were dealing almost substantially with sophisticated oil and gas companies or individuals that regularly made a course of business of dealing in our industry?

A Yes, sir.

Q When the initial AFE's were prepared and given to you for circulation to the various working interest owners, did you cause that to happen?

A Yes, we did. The AFE's were signed out by our management and approved and delivered to the Land Department and at that point in time after ownership was determined we then sent the AFE's to the other partners in the proration unit.

Q Have you received back any objection from any of the parties to whom you have submitted the AFE's objecting to any of the items on the AFE?

A No, sir.

Q None of the parties to whom you sent AFE's, the Amoco's, Tenneco's, Conoco's, involved in these particular cases, no party has objected to the AFE?

A No, sir.

Q Have you circulated operating agreements to all these potential interest owners?

A Yes, sir, we have.

Q And for each, then, of the 11 cases, you and the other landmen have prepared and tabulated separate packages of exhibits?

A Yes, sir, we have.

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

MR. STOGNER: Mr. Hopkins is so qualified.

MR. KELLAHIN: Mr. Examiner, we have placed before you I hope in consecutive order the 11 separate exhibit packages that deal with the landmen's efforts to consolidate the acreage.

The first package of exhibits is -- deals with the very first case, 9535.

Q Mr. Hopkins, let's use the first package of exhibits for Case 9535 as an example by which we can look at the way you've organized the exhibits for each of the cases.

A Yes, sir.

Q In each instance for each of these cases, Mr. Hopkins, are the exhibits organized in a similar way?

A Yes, sir, identical.

Q And the information contained in here is to the best of your knowledge, information and belief, true and accurate?

A Yes, sir.

Q And the correspondence is either from Meridian Oil or received by Meridian Oil with regards to this project?

A Yes, sir.

Q Let me have you turn, sir, to what is Exhibit One, Case 9535, so that the Examiner can see how you've organized the case files.

What occurs as Exhibit Number One?

A We've put a copy of the application for compulsory pooling as Exhibit One.

Q When we turn to the attachment to the application, what is included at that point as Exhibit A?

A Exhibit A is -- is the Exhibit A to the operating agreement that was furnished to the partners, indicating the lands subject to the operating agreement, the restriction as to the Fruitland formation only, and then the addresses and percentage of interest of the parties to the agreement.

Q In each instance, then, the tabulation of parties and their interest, represents 100 percent working interest for that particular well based on 320-acre

spacing?

A Yes, sir, it does.

Q What then is the next attachment under Exhibit Number One?

A The next attachment will be a plat of the communitized area covering the approximately 320-acre proration unit.

Q And what will I see as we look at that attachment in terms of identifying parties and their interests and their acreage?

A We have -- we have shown each party's lease and indicated whether that was -- what type of lease it was, Federal, State, or fee.

And then an indication of the interests of the parties in the total unit; the interest that their lease bears to the whole.

Q In this particular case have you also shown us the proposed well location?

A Yes, we have.

Q And is that true of all the other cases involved?

A Yes, sir, it is.

Q And you have also shown the orientation of the spacing unit for each of the wells?

A Yes, sir.

Q As we turn to Exhibit Two, what do we find?

A We have a general plat, land plat of the area, attempting on a letter-sized page to center the proration unit for each of the wells.

Q All right, sir, and when we turn behind the first page of Exhibit Number Two what's the next page?

A We have a more formal plat of the communitized area, indicating again the lease name or serial number, the acreage in the lease, and the parties that own that lease along with a spot indicating -- a dot indicating the well location.

Q You've used the phrase "communitized". In each of these instances has this acreage actually been communitized?

A Not necessarily but it -- the communitization agreements will be prepared when necessary.

Q You've used it to indicate the spacing unit itself.

A Yes.

Q When we turn to page three, what do we find -- I'm sorry, Exhibit Three of this exhibit book, what do we find at Exhibit Three?

A We have covered our correspondence to the parties with a chronology of events that lists the

major events that occurred from the initial proposal letter with attachments to the parties, through current information that we've received on the wells.

Q And behind the chronological summary of events for this exhibit, what do we then find?

A Copies of all the correspondence from Meridian or to Meridian from the various parties regarding our proposal.

Q Does this exhibit book for Case 9535 represent the general way all these cases were handled?

A Yes, sir, it does.

Q Let's take a moment and have you describe for us the next page underneath the chronology. It's a letter?

A Yes, sir. It's the style of letter that we sent out to propose a well.

Q And this initial effort was April 20th of 1988?

A Yes, sir.

Q All right. Generally tell us what was intended to be conveyed by this letter.

A We sent what we felt was a current ownership of the spacing unit for the well. We told the parties that an operating agreement was enclosed for their review and that an AFE was also attached, the well cost

estimate, and then this specific letter indicated that a communitization agreement was attached for their approval.

Q If we go through the balance of the documents in Exhibit Number Three, will you describe for us what each of these is?

A The initial letter was to both parties in the Howell "C" Com 301 Well, Tenneco Oil Company and Conoco, Inc.

The second letter, dated June 1st, 1988, was a letter from Tenneco to Meridian indicating that they had executed the AFE.

The next letter under that was a copy of Tenneco's signature on our letter ballot and on the AFE that we had submitted.

The June 21st letter was from Dave Pogue of Meridian's Farmington office as a follow-up letter to Conoco indicating that we had sent out our first well and that we would like to drill the well as -- at the earliest possible date.

The July 22nd letter is a copy of an amendment that Tenneco had proposed to the operating agreement. That amendment was negotiated throughout the summer and finally on the November -- on November 7th was agreed to by the parties and Tenneco has a -- we have a copy of

their signature page to the operating agreement behind that letter along with the acknowledgements

On August 18th, prior to our November 7th signing off on the amendment letter, is a proposal that Meridian -- a counter proposal that Meridian had made to Tenneco, which was not accepted.

October 19th, 1988, we have a letter to Conoco, Inc., sending revised pages to the operating agreement. At that time we had discovered that FMP Operating Company owned an interest that had formerly been owned by Conoco and we had to revise Conoco's figures.

We also sent revised pages to Tenneco at that point in time.

On October 19th, 1988, FMP was also notified by a very similar letter to the initial letter we'd sent out to the other parties asking them to participate in a well and providing them a copy of the operating agreement and a well cost estimate.

On November 7th I had a cover letter on the Tenneco letter that we've spoke of previously, the amendment letter transmitting it back to them.

November 10th, 1988, Conoco had determined that it had been a fairly long time since we'd initially proposed the wells and they realized that our costs must have gone down. We transmitted revised well cost es-

timates to Conoco at that time indicating that the costs had indeed been lowered through our experience.

And that concludes our correspondence section on that well.

Q Separate and apart from the pooling applications, have you and the other landmen continued to negotiate on a good faith basis with all these working interest owners to get them committed to the well on a voluntary basis?

A Yes, sir, we have. We've had numerous telephone conversations with all of them.

Q Let me direct your attention to the information contained in Exhibit Number Four. What's contained behind this tab?

A In each of the files we've listed the division of interest in the well, we've down the interest owner, working interest that that owner has in the spacing unit, and whether or not that owner has executed an AFE and an operating agreement.

Q Are each of the exhibit files for each case organized so that Mr. Stogner can go directly to Exhibit Four for each case and find the interest owners, their working interest, and the status of the voluntary efforts?

A Yes, sir.

Q And when he finds under Tenneco that

they have as of the date of this hearing executed an AFE and a joint operating agreement, are there remaining any other commitments they must make in order to voluntarily participate in the well?

A No, sir, they've elected to participate and have signed a contract for operations.

Q So the Tenneco interest for this case is fully committed?

A Yes, sir.

Q All right, and they could be deleted from any pooling order.

A Yes, they could.

Q When we get to Conoco, for example, what is the status of your efforts with Conoco?

A At this point in time we have not received a signed AFE nor an operating agreement from Conoco.

Q And as to FMP Operating Company in Louisiana, what's the status of your efforts with them?

A We have had numerous telephone conversations with them and are awaiting AFE's and operating agreements should negotiations be successful.

Q Turn now, sir, to Exhibit Number Five and describe what's contained behind that tab.

A Exhibit Number Five is our most accurate AFE. Initially many of the wells had authority for expen-

ditures that in April reflected higher costs. During our experience with wells in the basin we were able to lower those costs and our engineers furnished to the Land Department revised costs that were sent out as appropriate to the owners.

Q In each case file will Mr. Stogner find the first attachment under Exhibit Five to be the most current AFE?

A Yes, sir, I believe so.

Q When we turn to tab Six, or Exhibit Six, what is shown at this section?

A Exhibit Six is the operating agreement that was initially proposed to all the parties.

Q Okay, by referring back, then, to tab Number Four we can determine which of the parties have executed the operating agreement that's shown under Exhibit Six.

A Yes, sir, with the -- with the caveat that Tenneco has executed an amendment letter to the operating agreement and those -- those -- that amendment would be in the correspondence section of the files.

Q And the amendment letter with Tenneco was executed after the filing of the forced pooling cases?

A Yes, sir.

Q What do we find when we turn to the En-

formation behind Exhibit Seven in the exhibit book?

A In Exhibit Seven of the books we have put this certificate of mailing.

Q That was notice of hearing for today's hearing?

A Yes, sir.

MR. KELLAHIN: Mr. Stogner, you'll find in reviewing the eleven cases that there are three of the eleven for which I do not have completed certificates of mailing for hearing.

We would like to have you continue each of those three cases after the testimony today to the hearing for December 21st to let us issue supplemental notices to make certain that we have no defects in the notification for hearing.

Those cases are 9535, 9536 and 9545.

For all the other cases we have in the file the return receipt cards that show delivery of notice to all those parties shown under Exhibit Four of the exhibit book. With the single exception of a return receipt certificate that's attached to one of the case files and we have not yet received the return card, and I've forgotten which one that is. It will show in the certificate.

The three cases I've mentioned we've not been able to find the return receipt cards and I cannot tell you that notices were sent and we're going to send new notices to make sure we have no defect in our notices.

Q Let me have you go through each of the exhibit books, now, Mr. Hopkins, and we will turn to Exhibit Four of each of the exhibit books and have you summarize for Mr. Stogner it is -- what the current status of negotiations are for these parties.

We've completed discussion of 9535.

CASE 9536

Q Let's go to 9536. All right, let's turn to Exhibit Two and the attachment right after the land plat. That will be the attachment for this case that shows the Riddle "A" Com 261?

A Yes, sir.

Q Let's compared that now to the Exhibit Four and the summary of interests.

For this particular well, who are the working interest owners?

A For this particular well the owners would be El Paso Production Company. Their leasehold covers 280 of the 320 acres, giving them an 87-1/2 percent

interest in the well.

The remaining 40-acre lease is owned by Tenneco Oil Company, Conoco, Inc., and FMP Operating Company.

Tenneco Oil Company owns a 50 percent interest in that lease, giving them a 6.25 percent interest in the spacing unit.

Conoco and FMP Operating then own the remaining 6.25 percent and the percentage is shown on the exhibit.

Q If we turn to Exhibit Four can we find the status of the voluntary efforts to get those parties committed to the drilling of the well?

A Yes, sir we can. In that instance Tenneco has executed an AFE. They have not yet signed an operating agreement, but due to the fact that we have agreed on the terms of the amendment letter, we expect that shortly.

Q So you will continue with the voluntary negotiations notwithstanding the hearing process to get Tenneco, Conoco and FMP voluntarily committed if we can reach terms with these parties?

A Yes, sir, we will.

Q Again, for this case, and all other cases, initial efforts were began sometime in the spring or

early summer of this year to form 320-acre spaced units for these wells?

A Yes, sir.

Q All right.

A This well was actually August 29th of 1988.

Q This is one of the later ones, then, that was included in the package.

A Yes, sir, one of the two August wells that I referred to earlier.

Q As of today's hearing, Mr. Hopkins, have any of these parties included in the 11 cases requested additional time or continuance of the pooling cases?

A Not formally, I don't believe.

Q The original request for additional times by Conoco and Tenneco have been withdrawn as of today, have they not?

A Yes, sir.

Q So the only party you have had any discussions with are not included in the current 11.

A Yes, sir.

Q They have to do with Fina, do they not?

A Yes, sir.

Q All right, so let's go to the next exhibit book, which is 9537.

CASE 9537

Q Turn again, if you will, to the Exhibit Two of that book to the orientation of the spacing unit, and describe for us the interest owners involved and then continue with the Exhibit Four and show us the status of the commitment of those interests to the well.

A The Section 9 of 32 North, 10 West, is the location of this well. It's a very short section on the state line. The north half of the south half of the section is a Federal lease owned by Grace Brown, T. H. McIlvain Oil and Gas Properties, and James N. Raymond. The south half of the south half is a Federal lease, 155.61 acres owned by El Paso Production Company.

Given those acreage figures, El Paso Production Company would have approximately a 46-1/2 percent interest in the well.

Grace Brown would have a 26.7 percent interest in the well.

T. H. McIlvain Oil and Gas Properties has a 21.37 percent interest in the well.

And James Raymond has a 5.34 percent interest in the well.

Q As we turn to Exhibit Four describe the status of your efforts to get voluntary joinder.

A We have written to all the parties requesting joinder. As we left the office yesterday, we'd received a Federal Express package from Mr. McIlvain and Mr. Raymond indicating that they had indeed signed the AFE and we are working with Ms. Brown's attorneys, hopefully, securing her signed AFE, also.

Q At this point we don't have executed joint operating agreements for those parties?

A Not at this time.

Q And you continued to make efforts to accomplish that.

A Yes, sir.

CASE 9538

Q Turn to the exhibit book for Case 9538. If you'll turn again to Exhibit Two and describe for us the configuration of the unit and the interests involved.

A Yes, sir. This spacing unit is located in Section 9 of 30 North and 8 West in San Juan County, New Mexico.

The El Paso Production Company owns a Federal lease covering 240 acres of the unit.

Tenneco Oil, Conoco, Inc., and FMP Operating Company own an 80-acre Federal lease.

The ownership, then, would be 75 percent for El Paso Production Company and Tenneco Oil Company has a 12-1/2 percent interest. Conoco and FMP Operating Company then jointly own the remaining 12-1/2 percent interest, and that percentage is shown on the exhibit.

Q And when we turn to Exhibit Four what do we find as to the status of their commitment to this unit?

A Tenneco has signed both an AFE and an operating agreement in this well and we are continually working with Conoco and FMP Operating agreement to secure their joinder in such.

Q All right, sir, now let's turn to the exhibit book for Case 9539.

CASE 9539

Q If you'll turn to Exhibit Number Two, identify and describe the spacing unit for this well.

A The Pierce Com 251 Well is located in the east half of Section 8 of 30 North and 9 West. El Paso Production Company owns 100 percent working interest in a Federal lease covering the northeast quarter of that Section. They also own an 80-acre fee lease covering the north half of the southeast quarter, giving them a 75 percent interest in the well.

Amoco Production Company owns an 80-acre fee lease covering the south half of the southeast quarter of that.

Q And if you turn to Exhibit Four and describe for us the current status of efforts to get Amoco to voluntarily participate in the well.

A At this point in time we have not received a signed AFE nor an operating agreement from Amoco.

Q Have you provided Amoco with correspondence, documentation and information that they may have requested in order for them to make their decision?

A Yes, we have. This was one of the other August notification wells that we had a follow-up letter in September, plus numerous phone calls with Amoco.

Q What is the current status, then, of your efforts to get them committed to the well?

A We are currently negotiating with Amoco to go nonconsent under an operating agreement that would be negotiated between the parties.

Q Have they raised any objection to Meridian being the operator?

A No, sir.

Q To the AFE?

A No, sir.

Q Their concern evolves around one of the

technical aspects of the operating agreement and a method of crediting production?

A Yes, sir, it does.

Q Let's turn now to the case file for Case 9540.

CASE 9540

Q All right, sir, if you'll turn to Exhibit Number Two in Case 9540, again describe for us the spacing unit involved for that well.

A This well is located in the east half of Section 11 of 30 North, 9 West, in San Juan County, New Mexico.

Tenneco Oil Company, Conoco, Inc. and FMP Operating Company jointly own 160-acre Federal lease covering the northeast quarter of that section.

El Paso Production Company owns a 160-acre Federal lease covering the southeast quarter and that would give El Paso Production Company a 50 percent interest, Tenneco Oil Company has a 25 percent interest, Conoco and FMP jointly own the remaining 25 percent in the figures shown on the exhibit.

Q Turn to Exhibit Four and describe for us, Mr. Hopkins, what the current status is of your efforts

to obtain voluntary joinder for this well?

A We currently have a signed AFE and an operating Agreement from Tenneco Oil Company and are continuing to work with Conoco and FMP Operating Company for signatures.

Q All right, sir, now let's go to Case 9541.

CASE 9541

Q Will you turn to Exhibit Two and identify for us the spacing unit and the interests involved for this well.

A The Riddle "E" Com No. 250 Well will be located in the east half of Section 4, 30 North, 9 West, in San Juan County, New Mexico.

El Paso Production Company owns 163.3-acre lease covering the northeast quarter of that section.

Tenneco Oil Company and Conoco own 160-acre lease covering the southeast quarter of that section.

That would give El Paso Production Company approximately -- an approximate 50.5 percent interest in the spacing unit. Tenneco Oil Company would have a 24.74 percent and Conoco would have an identical 24.74 percent.

Q And if we look to Exhibit Three in this book, we can see the chronology of major events in efforts to get voluntary joinder?

A Yes.

Q And then following that tab, on Exhibit Four what do you show?

A We show our division of interest and the status of the execution of our proposed AFE and operating agreement.

In that regard, Tenneco has signed an AFE and an operating agreement and we're currently working with Conoco to achieve that.

Q All right, sir, if you'll find the exhibit book for Case 9542.

CASE 9542

Q If you'll turn to Exhibit Number Two of that exhibit book, Mr. Hopkins, would you identify for us the spacing unit involved?

A Yes. The Turner "B" Com "A" Well No. 200 is located in the east half of Section 2, 30 North, 9 West, San Juan County, New Mexico.

El Paso Production Company owns a 163.16-acre lease, State lease, covering the northeast

quarter of that section. They also own a 40-acre State lease jointly with (unclear) Corporation, covering the northeast of the southeast quarter of the section.

Tenneco Oil, Conoco, Inc. and FMP Operating jointly own an 80-acre State of New Mexico lease covering the west half of the southeast quarter of that section. Southland Royalty Company owns a 40-acre lease, State lease, situated in the southeast quarter of the southeast quarter of that section.

Q When we turn to Exhibit Four, Mr. Hopkins, what do we find at that exhibit?

A On that exhibit we have shown that El Paso Production Company, Southland Royalty Company and Tenneco Oil Company are the only parties that have executed AFE's and an operating agreement.

(Unclear) Corporation has executed an AFE only, and Conoco and FMP have yet to execute an AFE or an operating agreement.

Q Would you go to Case 9545.

CASE 9545

Q Would you turn to Exhibit Number Two in that case book and describe for us the spacing unit and the interests involved?

A Yes. The spacing unit for the Howell "G" Com Well No. 300 is a nonstandard spacing unit covering the west half of Section 6 and the northwest quarter of Section 7.

El Paso Production Company owns the 219.7-acre Federal lease shown at the west half of Section 6. Tenneco Oil Company, Conoco, Inc. and FMP Operating Company jointly own the 111.3-acre Federal lease covering the northwest quarter of Section 7.

Q Have you had any objection by any of these working interest owners to the formation of a non-standard spacing unit for this well?

A No, sir, we have not.

Q I direct your attention, sir, to Exhibit Number Four in this case file and describe for us the status of Meridian's efforts to get voluntary joinder.

A At this point in time only Tenneco Oil Company has signed an AFE and an operating agreement on the well. We're still waiting on Conoco and FMP to do so.

Q All right, sir, if you'll take us to the case file for Case 9546.

MR. STOGNER: Excuse me, Mr. Kellahin, I'm going to take about a five minute recess.

(Thereupon a recess was taken.)

CASE 9546

Q Mr. Hopkins, would you continue with your discussion about the status of interest for the spacing unit in Case 9546, and we were looking at the information on Exhibit Number Two.

A Yes. The Sunray "G" 251 Well covers the west half of Section 21 of 31 North, 9 West.

El Paso Production Company owns a 237.01 acre Federal lease covering the northwest quarter and the east half of the southwest quarter.

Tenneco Oil Company and Conoco, Inc., jointly own an 80-acre fee lease covering the west half of the southwest quarter.

Q When we turn to Exhibit Four, would you identify for us the status of commitment of those working interest owners to the well?

A Yes. Tenneco has signed an AFE and an operating agreement. We are still waiting on Conoco to do so.

CASE 9547

Q And finally, if you'll turn to the ex-

hibit book for Case 9547, and within that exhibit Book find Exhibit Two and identify for us the spacing unit and the interests involved for that well.

A The Atlantic "D" Com No. 201 Well is located in the west half of Section 36, 31 North, 10 West, San Juan County, New Mexico.

Tenneco Oil Company, Conoco, Inc. and ARCO Oil & Gas Company jointly own an 89-acre State lease covering the north half of the northwest quarter.

Mesa Limited Partnership owns an 80-acre State lease covering the southwest of the northwest quarter and the northwest of the southwest quarter.

El Paso Production Company owns the remainder of the west half, 160-acre State of New Mexico lease.

Q If we look, then, at the tabulation of events behind Exhibit Three, the initial efforts for this well were April 29th of 1988?

A Yes, sir.

Q And did those initial efforts include Mesa Petroleum?

A Yes, they did, but we sent the letter to their Denver office. We were requested June 20th, 1988, to furnish the identical letter to their Amarillo, Texas of-

fice.

Q And after all the discussions and negotiations, what is the final status of commitment of working interest owners for this well as we look to the tabulation of information behind Exhibit Number Four?

A At this point in time we do have executed AFE's and operating agreements from Mesa Petroleum Company and Tenneco Oil Company.

We would still be negotiating with ARCO Oil & Gas and Conoco on AFE's and operating agreements.

Q With regards to these eleven cases, then, Mr. Hopkins, what generally remains to be done by your company and the various landmen to complete transactions with the various working interest owners?

A We simply need to reach agreements on the operating agreements that are outstanding.

Q Do you have a reason why you cannot either continue or delay the compulsory pooling process in order to further the time period in which you and others can negotiate on a voluntary basis?

A Well, we -- we had started the process in April of this year and with weather conditions in the San Juan Basin and budget constraints, and otherwise, we would like to drill these wells as soon as possible.

Q What is your understanding of the dril-

ling program to be implemented with these wells in terms of the first well to be drilled? When will that occur?

A I assume that these wells have approved APD's so that they could be drilled immediately.

Q So the question now is either on a voluntary basis complete the remaining commitment of those interest owners or have the Division issue a pooling order in order to commence the wells.

A Yes, sir.

Q Were the various exhibits contained in each of the case files that we have discussed this morning in Cases 9535 to 9547, exclusive of Cases 9543 and '44, were those prepared by you and the other petroleum landmen with Meridian in the normal course of your activities as petroleum landmen?

A Yes, they were.

Q To the best of your knowledge, the information in here is true and accurate?

A Yes, sir, it is.

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

We would move the introduction of his exhibit books in the particular cases.

MR. STOGNER: All of the exhibits in all of the cases except 9543 and 9544 will be ad-

mitted into evidence at this time.

Mr. Kellahin, before I work with this witness, of your other witnesses that you're going to have, what will they be -- what's their expertise?

MR. KELLAHIN: I have a geologist that is going to address his opinion about the risk factor.

I have in addition the reservoir engineer that's testified for the -- Meridian in the basin coal hearings to also talk about the risk factor in the coals.

I have not sworn as witnesses, but I have available the drilling engineer that prepared the various AFE's and I have the individual landmen that participated in certain of the cases and talked specifically with various of the working interest owners. They're all here.

MR. STOGNER: And who will be stating the overhead charges?

MR. KELLAHIN: I have two witnesses, a geologist and engineer.

MR. STOGNER: That will be coming later, as will the rest of it.

MR. KELLAHIN: Yes, sir.

MR. STOGNER: Okay.

CROSS EXAMINATION

BY MR. STOGNER:

Q Mr. Hopkins, are you familiar with Order No. R-8568?

A Not by number, sir.

Q Okay, are you familiar with the special rules and regulations for the Basin Fruitland Coal Gas Pool?

A Yes, sir, I am.

Q Okay, were you involved in the institution of that particular hearing that started that or the committee which was formed that wrote those rules?

A No, sir, I was not.

Q Okay. But you are familiar with the rules?

A Yes, I sir, I believe.

Q And in being so, you could satisfactorily answer any questions that may come along from any of the interest owners which you dealt with, if they had any questions concerning that, is that correct?

A I think I could, sir.

Q Okay. Now most of the parties involved, there's Conoco and Tenneco, those are the two major ones,

right?

A They were involved in the most wells.

Q Okay. Were they involved also in the formation of the special pool rules?

A I believe they -- I can't say.

Q Okay. Did they at any time during your conversation with them in any of these cases, was that ever a concern with them and which proration units were not as of yet formed for this particular pool, and at such time you were trying to force pool only -- I'm sorry, let me rephrase that -- reach voluntary agreement on a proration unit that wasn't even talked about?

A In my conversations with the landman, Tenneco did not seem to have those concerns.

Conoco, the main problems seem to be economics of the wells and getting management approval to -- to go forth with a program like that.

Q So they were -- they understood the situation about seeking 320-acre proration units in that particular pool, apparently.

A I'm not sure that I know what they understood at that point in time.

Q Did they ever ask you or has that ever entered into the conversations?

A I don't recall being asked that ques-

tion, no, sir.

Q Did they ever ask you why you were trying to form a 320-acre proration unit when none existed out there? Why were you trying to get --

A Well --

Q -- voluntary agreement on a 320-acre unit when that wasn't even in existence?

A Well, because the engineers had provided us with enough information that they were firmly convinced that these wells drain more than 160 acres, and I think that, I don't know, but I assume that most of the companies realize that to protect themselves that voluntary pooling was probably the way to go, even though statewide rules were 160.

Q Are you familiar with the statutes of forced pooling?

A Yes, sir.

Q Okay, what is the criteria for forced pooling?

A That you would have an order in existence, I assume.

Q Thank you. Was one in existence?

A October 10th, I believe, was the date that the order was issued.

Q Well, when did you start contacting

these people?

A In April of this year.

Q So there was not one in existence.

A No, but we were not -- we were contacting people to --

Q There was not one in existence --

A No, sir.

Q -- is that correct? Thank you.

Did Tenneco or Conoco ever ask about that particular situation?

A No, sir, I don't recall them asking.

Q Okay, how about FMP or some of the smaller ones, like Mesa, FMP and McIlvain?

A I think that those parties in our telephone conversations were fully aware that it was a voluntary spacing that we were concerned with at that time and based on the information we had and that they had privy to through the Amoco production over the years, people realized that those wells drain more acreage.

Q Well, what you're telling me, if the acreage can drain 400 acres, then you're going to seek a 400 acre proration unit, is that correct? Now is that right or is that feasible for a pool?

A It would make pretty good sense that -- that owners that had an interest in that 400 acres would

want their interest protected.

Q How would you form a 400-acre proration unit?

A A working interest type unit with an operating agreement, voluntary.

Q Metes and bounds, is that what you're telling me -- what are you telling me?

A By description, if -- if that was the case.

Q Sounds like to me you couldn't answer their questions if they had one.

A I don't think --

Q You do not understand why -- how a proration unit is formed in this state, do you?

Why do we have 40, 80, 160, 640, 320 acre spacing rules?

Why not 62 or 120 or 340?

MR. STOGNER: I have no further questions of Mr. Hopkins, Mr. Kellahin.

LYON C. MEIBOS,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

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

A My name is Lynn Meibos. I'm a Senior Geologist with Meridian Oil in Farmington, New Mexico.

Q Mr. Meibos, have you previously testified as a geologist before the Oil Conservation Division?

A I have not.

Q Would you take a moment and describe what has been your educational background as a geologist?

A I graduated from Brigham Young University in 1979 with a Bachelor's degree and in 1982 with a Master's degree.

Q Summarize for us what has been your employment experience as a geologist.

A I started work with Meridian, or with El Paso, which was the -- the old El Paso in 1982, January of 1982, and have worked with El Paso, Meridian, until this date.

Q Describe specifically what has been your involvement with the location and drilling of the Fruitland coal gasbed wells that have been undertaken by your company.

A I've been assigned tasks of mapping

Fruitland coal; coring Fruitland coal wells. I've been assigned tasks of gathering wireline data with regard to the Fruitland coal wells and several other different aspects of taking care of the current drilling program that we have going right now.

Q Have you participated with other Meridian geologist in reviewing and assimilating data by which exhibits were prepared for the cases before the Division on the Fruitland Coalbed Gas rules?

A I did not participate in any of the preparation for the pool rules.

Q Have you utilized that information by which then to pick locations for wells drilled pursuant to those rules?

A Yes, we have.

Q What has been your particular involvement with regards to studying the issue of what Meridian recommends for a risk factor penalty to be assessed in each of these pooling cases?

A Would you state -- say it again?

Q Yes, sir. What efforts have you made as a geologist to to study the issue to see if you could have an opinion or formulate an answer on the question of the risk factor penalty to be assessed against nonconsenting owner with regards to these pooling cases?

A We've looked at the coal as a rock to determine how the coal was fractured and in order for the coal to flow gas out of the wellbore it's necessary for the coal to be fractured and typically, in most fractured reservoirs it's difficult to predict where those fractures are going to be; therefore, our assessment of risk would be based on the difficulty of the geologist or reservoir engineer to predict where we could encounter natural fractures which would enable a Fruitland coal well to produce.

Q In making that assessment have you plotted and shown on an exhibit the location of each of the wells that is the subject of this -- these pooling cases today?

A Yes.

Q Let me have you describe for us before we talk in detail of what specifically have you shown Mr. Stogner on each of the two displays that are on the hearing room wall.

A Mr. Stogner, the exhibit to the -- well, the first exhibit with the big Meridian Oil on the left is an exhibit that was prepared for I'm not sure of the case number but for the horizontal well case that we had a month or so ago, and I've spotted on that map, which is an isopach of the Fruitland coal the locations generally of the wells that we've brought before you today.

MR. KELLAHIN: At this time, Mr. Stogner, we tender Mr. Meibos as an expert petroleum geologist.

MR. STOGNER: Mr. Meibos is so qualified.

As I understand it, I'm looking at the large exhibit on the wall on the lefthand side, is that correct?

A That's right.

MR. STOGNER: And the blue dots are representative of wells that we're talking about today?

A Yes, that's correct.

MR. KELLAHIN: We're going to mark that, Mr. Stogner, as Exhibit Number Eight to each of the hearings, and the second display he referred to will be Exhibit Number Nine, in which he has more specifically shown you the location of each of the 11 wells.

MR. STOGNER: And those are marked --

A Marked in blue, as well.

MR. STOGNER: The dark blue circles?

A Yes. Those in red are wells operated by other -- other operators.

MR. STOGNER: Okay.

A I didn't put the other operator wells or the Cedar Hill Pool boundary on -- on the copy you have in front of you.

MR. KELLAHIN; Let me try this one.

Q Mr. Meibos, let me have you go to what is marked as Exhibit Number Eight, if you'll just go on up to the display, let me ask you, sir, to to generally describe for us what we're seeing in this montage.

A This montage illustrates an isopach of the Fruitland -- net Fruitland coal generated by Kelso, et al, in a publication, A Geological Assessment of Natural Gas in the Fruitland Formation, San Juan Basin. This exhibit was prepared by Dana Craney, Bill Hobby (sic), and myself, using their information to show the location of the San Juan 30-6 Unit, the Cedar Hill Pool, and four wells that show the tight section of coal in areas of the Cedar Hill Pool, the San Juan 30-6 Unit where we drilled the horizontal well, and two other locations that we have currently received approval for drilling horizontal wells in the pool.

Q How have you identified the approximate location for each of the wells that are subjects of the pooling cases here?

With blue dots. The blue dots overshadow the exact area and are general locations of where more specifically dotted wells are shown on the map you have in front of you, Mr. Stogner.

Q Let's go to Exhibit Nine, which is the more specific location and have you first of all, before we describe the details of your conclusions, identify and orient us as to the information contained on that display.

A Okay. The blue wells are the wells that we're discussing at this point in the hearing. The triangles here are wells that Meridian has drilled to -- to date.

The red dots represent wells operated by others in the Cedar Hill Area.

The numbers shown at the side of the triangled wells are field flow test information, producing rate information, and after frac (unclear) information to demonstrate the variability of production from one spacing unit to the next.

Q Have you examined each of the proposed locations for the wells involved in the pooling cases to determine whether you had a separate opinion about the risk involved for each of those wells?

A Yes.

Q And in assessing the risk have you uti-

lized the Commission method of setting risk factors in relationship to the maximum statutory penalty of allowing an operator to recover out of cost of production -- to recover out of production that party's cost plus two more times?

A That's correct.

Q And that's the framework in which you have defined your task?

A Yes.

Q For each of these wells, Mr. Meibos, do you have a recommendation as to a risk factor penalty?

A Yeah. I would recommend that the risk factor penalty be 200 percent above the cost of the well.

Q For each well?

A For each well.

Q Let's take the well involved in Case 9535, which is the Howell "C" Com Well No. 301. I think it's in Section 7, and --

A 301?

Q -- to be included in a portion of Section 18 and 7?

A Okay.

Q Do you find it?

A Yes, okay.

Q When we look at that specific well, what

is identified by the green triangle in the section adjoining to it?

A In Section 13 of -- the northeast quarter of Section 13, 39, there's a well symbol that shows a gauge that was too small to measure after -- after the well was completed.

Q Each of the green triangles represent completed Fruitland Coal gas wells?

A That's correct.

Q And were the wells completed by Meridian?

A Yes.

Q Because of the proximity of that well to the Howell "C" Com 301 Well, does that change your assessment of the risk involved in that well?

A It doesn't.

Q Why not?

A It's proximity shows that the -- the well here that had a gauge of too small to measure, shows that the coal has a high risk of producing any gas at all and therefore a risk penalty ought to be relatively high initially because of the same high risk of producing gas.

Q When we go to the well for Case 9536, which is the Riddle "A" Com Well 10 -- 160, do you find that well?

A 160?

Q I'm sorry, this must be 260.

A Yes, thank you.

Q Do you have that one?

A Yes.

Q What is your assessment of risk for that well?

A The risk would need to be the maximum for this well because of the distance that it is from any currently drilled Fruitland coal well, as well as the -- the same parameters that we've talked about for the Fruitland coal play in general, and that is that it's impossible to predict where fractures are; therefore, the risk ought to be high because of the general nature of a fractured reservoir.

Q When we look at Case 9537, find the Brown Well No. 100 for us.

A The Brown Well, I'm color blind.

Q I'm sorry, it's --

MR. STOGNER: It's up at the very top.

Q Yeah, it's going to be in Section 9, up at the very top of your display.

A Oh, that one, okay.

Q What's your assessment of the risk in-

volved for that well?

A The risk for that one would be similar because of the sand parameters we're talked about, the fractured nature of the Fruitland coal. It's impossible to predict how well the well would produce and therefore it's impossible to say whether it would produce as well as those, some of the wells in the Cedar Hill Area or as well as -- or not at all.

Q When we look at the information, some of the information next to a green triangle shows some numbers in red letters and it says "FT"?

A That's a flow test; that the well has been tested on a 3-hour flow test after the well had been completed.

Q That flow test is in MCF of gas?

A Yes.

Q And what's the number below the flow test number?

A The number below the flow test number is a production rate that the well has; it has been tied into the pipeline and its initial production rate is recorded as that number, and has probably been recorded with the State.

Q When we look at Case 9538 and the Wood River Com Well 300, have you found that one?

A Yes.

Q What's your assessment of the risk involved in that well?

A The risk would be similar to those as described in the whole pool, based on the fact that we're not sure whether we would encounter fractures or not, even though it offsets a well to the north that had a flow test of 2.9-million.

If you notice, the well in Section, the southwest of Section 3, 30, and the flow test of the well there was 4.3-million but only produced 22, 5 (unclear) down the line. It was 25 MCF a day compared to 4300 MCF a day; a production rate much decreased from the flow test record.

Q When we look to the section to the south and west of the Wood River Well, there -- yes, sir, right there -- there is a green triangle. What is shown for that well?

A That's a flow test shown of 150 MCF a day.

Q But what does that tell you as a geologist when you have a Wood River Well proposed to be located approximately between those two wells?

A It means we might have a flow test of between 150 MCF a day to 2900 MCF a day, but maybe not even that all. It may test to small to measure as -- as did a

well a mile to the -- to the east in Section 7 -- a mile to the west in Section 7.

Q Is there any way that you as a geologist can accurately forecast the productivity of the well by locating it at a point in the Basin coal area where you have the greatest coal thickness shown on your isopachs?

A Coal thickness doesn't appear to make a difference with regard to how well the wells will produce. Our experience has shown that in this area the coal thickness is relatively thick. In fact, in the 30 and 10 area, this -- this well is not far from -- from where -- where we currently propose. This is the well that's on this type log as the Southwest (unclear) 30 and 10 two miles south of 31. It shows that there's a lot of coal and I didn't write down the net feet of coal but there's greater than 30 feet of coal, yet some of the wells that we've completed in this area have relatively low, in fact too small to measure, production rates.

Q When we go to the well for Case 9539, which is the Pierce Com Well what's the risk on that well?

A The risk on that would be the maximum of 200 percent above the cost of the well based on the same parameters, the fractured nature of the Fruitland Coal play and as evidenced by the erratic production information and several wells that have gauged as too small to measure.

Q When you go to the well for Case 9540, which is the Lindsay Com 250, is your opinion still the same?

A Yes, it is.

Q In Case 9541 we're looking at the Riddle "E" Com Well 250. It's in Section 4 of 30 North, 9 West?

A Okay.

Q Did you find that well?

A Yes.

Q All right, what's your assessment of the risk there for that well?

A It would be the same.

Q Case 9542, we're looking at the Turner "B" Com "A" Well 200. It's in Section 2 of 30 North, 9 West? Do you find that one?

A Yes.

Q Again what is your opinion and why?

A It would be the same for the same reasons.

Q The well involved for Case 9545 is the Howell "G" Com Well 300. Do you find that well?

A Yes, sir.

Q All right. Is the specific environment geologically surrounding that well any different than any of the other wells, so that you can assess a different risk

factor penalty?

A It is not any different and therefore, i would not assess a different risk penalty.

Q When we look at Case 9546, that's the Sunray "G" Well 251 in Section 21. Do you have that well?

A In Section 21 of which --

Q 31 North, 9 West.

A Okay.

Q What is your assessment of the risk for that well?

A The risk for that well would be as the others for the same reasons.

Q And then finally 9547 is the Atlantic "D" Well 201 and what's your assessment of the risk for that well?

A The risk for that well would be the same, 200 percent over the cost for the same reasons.

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

We move the introduction of Exhibits Eight and Nine.

MR. STOGNER: Exhibits Eight and Nine will be admitted into evidence.

Now are those marked up there, Mr. Kellahin?

MR. KELLAHIN: No. sir, I'll do that, though.

MR. STOGNER: So you'll be utilizing those for the next two cases --

MR. KELLAHIN: Yes, sir.

MR. STOGNER: -- the ones we have at the end of the docket, won't you?

MR. KELLAHIN: Yes, sir.

CROSS EXAMINATION

BY MR. STOGNER:

Q Mr. Meibos, are you --

A Meibos.

Q Oh, I'm sorry.

A It's like "my bus" rolling down the road.

Q Are you familiar with the coal gas rules?

A No, sir, I'm not.

Q Were you a party of that committee or did you present testimony at that hearing?

A No, sir, I didn't.

Q Are you familiar with the order?

A I know of its existence and know that it --

Q Are you familiar with Finding Number Eight in that order?

A No, sir, I'm not.

MR. STOGNER: For the record, the evidence at this time further indicates that the coal seams within the Fruitland formation are potentially productive of natural gas in substantial quantities.

Is your -- are your wells within that pool?

A Yes, sir, they are.

Q Now, a pool is usually formed in what manner, do you know?

A It's usually formed where there is -- where there is a reservoir that's known to produce hydrocarbon.

Q That's right, but yet you're still wanting 200 percent. This is inside of a pool that's in existence, that is formed, and you're still seeking 200 percent?

A Yes, sir, I am.

Q Doesn't that run contrary to how the findings and how the pool was formed?

A I don't think --

Q You're saying it's risky today but then it wasn't risky. What -- what's -- I'm confused.

A I don't think that establishment of the pool generates the definition of the risk.

Q What other risk should be take into account on assessing a risk penalty on a well?

A I think in the case of the Fruitland Coal the risk regarding the ability of a well to encounter natural fractures should be one of the primary concerns that's taken into account.

Secondarily to that would be mechanical risks that I would not have expertise to talk about.

Q And then you talked about -- so these two factors are the only -- or are there any others that we should take into account?

A Those are -- those are the primary factors. The other -- a third one would be the fact that the Fruitland Coal is not everywhere present in the San Juan Basin and it -- the fact that it thickens and thins and in some places pinches out entirely would be another risk that should be taken into account, the -- the fact that the reservoir might not be there at all, due to the fact that a Fruitland sandstone may have eroded it away or that it was simply not deposited.

That would -- that would be the third risk.

Q These areas where the Fruitland pinches

out, or there is no Fruitland Coal, I should say, those shouldn't even be in the pool, should they? But the pool is already established, is that correct?

A If -- yes, the pool is already established and it would be very, very hard to tell where those areas were and it would be -- I'm looking for the word -- inefficient to try and show where those -- those pinchouts were in every portion of the pool. Oftentimes they're -- the pinchout areas are not very big and sometimes they're a little bit bigger and to show where all those were would be -- would -- you wouldn't be able to do it very easily.

Q But the pool is there.

MR. STOGNER: Mr. Kellahin, I'm going to take all the testimony entered in Case 9420, that was the establishment of the pool rules. I'm going to take administrative notice of that particular case in this -- in these cases today.

Mr. Kellahin, we have a couple of nonstandard -- I'm sorry, we have one nonstandard location and two nonstandard proration units. Who will be giving testimony on those today?

MR. KELLAHIN: Let me ask Mr. Caldwell to do that for me. I think he is -- my recollection is he's informed on those matters and we'll attempt to do that with his testimony.

MR. STOGNER: Okay. Thank you, Mr. Kellahin.

This witness may be excused unless there is other questions of him.

MR. KELLAHIN: No, sir.

MR. STOGNER: Mr. Kellahin.

JOHN W. CALDWELL,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you please state your name and occupation?

A John W. Caldwell, III. I'm a Regional Reservoir Engineer for Meridian Oil, Inc. in Farmington, New Mexico.

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

A Yes, sir, I have.

Q Would you describe with regards to this -- these particular pooling cases what other cases you've testified for your company that involve the Fruitland Coal Gas beds?

A I didn't specifically testify in the Cedar Hill Basin or the Cedar Hill vertical extension of the limits but an individual that worked for me did. I reviewed his work. I did personally testify in the basin-wide Fruitland Coal hearings.

Q Summarize for us has been your experience in developing the engineering and the reservoir studies for the Fruitland coal gas production that Meridian's undertaking to accomplish.

A It's my job, really, as the Reservoir Engineering Supervisor, I supervise a staff of seven engineers and several technicians, to define the economic opportunity for Meridian Oil to develop the Fruitland coal as it underlies our acreage within the San Juan Basin.

Some of the things that we've done is we've tried the science, to put a little science into what's actually gone on out in the basin and to that end our group has been responsible for generating reserve estimates, doing production scenarios, running economics on individual well projects, recommending cores, transient pressure tests, sidewall cores, that type of technical data.

I've been involved in the, like I say, the Cedar Hill vertical extension of the pool and the basin-wide -- some input, I think, to your office to help in writing that particular order.

I testified at that July 6th hearing with the intent of trying to establish some basis for leveraging Amoco's reasonably sophisticated, well documented pressure transient work on 320-acre spacing, and that -- that type of effort.

Q Have you and engineers that work for you studied the proposed locations and do you have an opinion of the risk involved in drilling each of those wells insofar as it relates to nonconsenting parties?

A Yes, sir, I do.

Q Are you generally familiar with the outer boundaries for the Basin Fruitland Coal Pool?

A Yes, sir, I am.

Q Contained within that pool area are there Fruitland coal wells that have a significant range of difference between their productivities?

A Most definitely.

Q Do we find that you can drill a well in the Basin and drill an economic, marginal coal gas well in the Basin pool area?

A We've been able to drill some geologic successes and economic failures.

Q And have you conversely been able to drill some highly successful Fruitland Coal wells?

A I think that Meridian has been able to

Q In assessing the risk involved for each of these eleven wells that are the subject of the hearing, have you been able to determine a relationship between the thickness of the coal and the location of the well so that you can minimize the risk?

A We typically use three or four factors in optimizing our locations and thickness is one of them. Thickness doesn't typically determine the rate of the well. I think it may, in fact, have some direct bearing on recoverable reserves but we're not convinced of that due to the number of wells we have not tied in.

Q What are some of the other factors that go into that assessment?

A We look for over pressuring; some indications when some of the 10,000 control points in the Basin were drilled through the Fruitland Coal; what kind of mud weight that they used to drill the section through the Fruitland; did it kick on; what kind of regional lineaments and fracturing can we deduce from the surface, the landsat photography, try to migrate those to depth, sometimes unsuccessfully, sometimes successfully. We try to get a handle on what it is that determined production in the Fruitland Coal based on what we've done to this point. It involves a variety of factors.

Q Do you have an opinion as to -- first of

all, do you understand the limitation within the definition of risk factor that the Commission uses by statute in assessing a penalty against nonconsenting owners in a compulsory pooling situation?

A In other words, do I understand 300 percent nonconsent is a maximum?

Q Yes, sir.

A Yes, I do.

Q And when you use that term, you're using it to mean to recover out of production the cost of that nonconsenting interest owner's share plus two more times?

A Yes, sir, I understand that.

Q Within that context and framework, do you have an opinion as a reservoir engineer what the percentage factor assessment ought to be for each of these wells against nonconsenting parties?

A Yes, sir. I believe that we'd be justified in asking for the maximum out here.

Q The maximum 200 percent?

A 200 percent over the cost.

Q Describe for us in a general way the reasons that lead you to that opinion, Mr. Caldwell.

A We've done some sensitivities and admittedly they're not perfect, but if you look at the relative economic parameters of every working interest owner con-

senting in a well and then carrying those partners for one payout or two payouts or three payouts, in other words, 100, 200, 300 percent, at the point we feel -- I've got some exhibits here if we want to talk about them -- that we break even or come close to breaking even, really, is a 300 percent case, or the two times in addition to the original capital exposure (sic).

At that point we start achieving to our mind an acceptable after tax rate of return, an acceptable payout, and justify drilling the well.

We've gotten into some pretty onerous situations where we have only one payout before the parties come back in. We tried to purchase their interest in some specific instances and in some cases we have 150 percent, 200 percent type penalties and they're right at the edge, and we postpone those particular wells with the intent of trying to go back and renegotiate those particular agreements to where we can justify drilling an economic well.

Q In assessing the risk involved for this particular issue, is there an inherent risk involved mechanically in drilling wells that will produce out of the Fruitland Coal beds?

A Yeah, there is, and I think Pat Bent, our drilling engineer, can talk about the drilling piece of it, but there's -- there's been a pretty steep learning

curve for Meridian Oil in the San Juan Basin as to how to complete these wells successfully.

The first 4-well pilot program, I believe, we averaged over a $1,000,000 per well.

The next 16 I think we got our numbers down to $600-650,000 per well.

Now we're currently (unclear) wells of the $400-500,000 range. We had to factor in some CO_2 processing charges and laying a pretty sophisticated gathering system in the Basin. We've had to figure out some reasonably sophisticated SWD's, salt water disposal concerns.

Q Well, apart from figuring out those things and using that learning to further reduce your risk of future wells, does that risk a mechanical -- mechanical risk continue on future wells, even for Meridian?

A I think so. It's not as high, perhaps, as the first four pilot wells. We didn't know what we were doing then, but there's still some definite risk.

Q Do you have a percentage that you would assess among the total 200 percent maximum you'd recommend that represents some ratio as to the mechanical risk?

A Based on my experience of the geology in the area and the mechanical problems that we've encountered, I would think that probably a third of the risk would be mechanical and maybe two-thirds geologic/reservoir.

Q All right. Let's talk about the geologic/reservoir portion of the risk.

First of all, the geologic risk, and that is the risk of picking a location, drilling it, finding the reservoir either absent of production, a dry hole, or missing the reservoir entirely at geologic risk of a dry hole.

What is your assessment about that as being a factor in assessing risk for these wells?

A My concept of risk, I guess, geologic/-reservoir, is three components, trap, hydrocarbon, and reservoir; trap being, I think, probably proven in this basin. We've got hydrocarbons trapped within the coal seam. Hydrocarbon, I think, is definitely there. We can -- we can drill wells and encounter 5 to 65 feet of pay probably almost anywhere in the basin.

The main risk, really, of those three is reservoir.

Q All right, before we talk about the reservoir portion of the risk, let's talk about the geologic risk.

A Okay.

Q Is there a relationship between the risk factor penalties we're talking about and the fact that we have got a continuous coalbed reservoir that can be mapped

over miles and miles and forms a basis by which we're created a pool?

A Is there a correlation between that?

Q The risk factor of drilling in that kind of reservoir and the fact that you've got wide spacing in a continuous coalbed gas formation?

A There's a -- there's a correlation in that. I think you'd probably penetrate a coal virtually everywhere that you drill within the confines of the basin, but there's a definite geologic, and I'm calling a major reservoir risk, you could call it geologic risk, as to how that rock, how that coal actually will produce in a given area, and we've found cases where an 80-acre or 160-acre offset, equivalent effective 160-acre offset, you lost your producability, and whether you call that geologic fracturing risk or whether you call it reservoir producability and deliverability type risk, I think that's the key component that we're trying to focus on here.

Q When we find, then, we can drill a well in the basin and find the reservoir, the reservoir is there. The question, then, is whether or not it's going to produce.

A That's the key question, I think.

Q Have you made a tabulation of at least some of the information in trying to draw a relationship

between a flow test and the actual producing rates of the wells?

A Yes, sir, I have.

Q Let me direct your attention to Exhibit Number Ten, if you will, Mr. Caldwell, and first of all explain what you were trying to understand with this analysis and then finally what you conclude from making the analysis.

A In essence what we're trying to show here is some correlation, really, between pretty exciting results out on the rig floor and not so exciting results when we get to tying the wells into the line.

We've drilled a large number of wells, I believe over a hundred at this point, in our drilling program this year. We have an awful lot of flow test data, but we only have, as you can see, eight wells that we've currently tied in in this nine township area.

What we've tried to do on this Exhibit Ten, it correlates to the wells on this map with the red, which you have a field flow test number and a producing rate number.

We've tried to give you some idea of the variability of the numbers that -- that have been bandied about in the coffee shop, 4-or-5-million a day numbers and the 25 MCF a day numbers that we've been kind of getting

in some of these wells.

This isn't a perfect correlation because I think these wells are going to increase rate with time and maybe this 25 MCF a day well is quite a bit better than that, but we don't know at this point.

If you look at Exhibit Ten in the far righthand column we have what I've labeled the test/production ratio, and that in essence is the flow test number divided by the production rate number and in some cases we tested a well, Howell "K" 300, over a million a day on the rig floor and then we tied into the line and it hasn't been able to produce.

I think that gives you some feel that the gas is there. It may be, you know, a 3-foot lazy flare at the end of the blue line, or whatever, but the gas is there. It's a question of commercial quantities and how we're going to get it out and what do we need to do with our technology to be able to optimize that, and that's what we're wrestling with right now.

Q In minimizing the risk and therefore reducing the potential penalty on nonconsenting owners below the 200 percent factor, is it of use to you in attempting to locate subsequent wells closer to existing wells?

Is there a closeology theory that you can implement to minimize your risk in this reservoir?

A We originally believed that and in the 30 and 6 Unit area we were lucky in that, I think, the regional fracturing trends were such that the whole area was a rubble zone and we could get successful wells in essence stepping out from each other similar, very similar to a uniformly consistent matrix driven reservoir.

When we've found since that time is there are very definite fracture trends that we haven't been able to figure out, and what that does is provide an increased element of risk that we visited with our management about, believe me, in great length, about how can you use closeology, and we've come to the conclusion that you really can't. In some particular areas of the basin we're drilling 3 or 4 wells at a time to try to figure out what's going on and then going back and trying to infill, and we've found gaps; we've found good wells right next to bad wells; there are some on this map.

The Atlantic "D" Com 201 on Exhibit Nine, which is located in Section 36 of 31 and 10, is surrounded by four wells of which I believe we fractured all four, three or four of them, and we've gotten in the rates of 3-to-400 MCF a day. Well, all of those wells were TSTM prior to that treatment, and the three wells down here in the northwest quarter of 30 and 9 and the northeast quarter of 30 and 10 are TSTM; some of those with frac treatments,

some of those without.

So what we've found is there are very definite areas of the basin that we're going to have to come up with something different to try to get acceptable rates.

Q Are you able to quantify any of the 11 pooling cases that are the subject of our current discussion in such a way that you can take certain ones of those and say they're less risky than others, so that you could recommend a reduction from the maximum 200 percent penalty?

A No, I think there's some minor differences in perhaps the components of the risk associated with the (unclear) but in each area, for example, in 32-10, you've got some pretty good production around the Cedar Hill Area. There are some significant problems in completing those wells due to high, high water rates, and we're not convinced yet we've got commercial wells up there. We originally targeted these wells way back in April as being pretty prospective because of the thickness and also because of the closeness of Cedar Hill, but I think Amoco has experienced problems in recovering wells out there and we're not convinced of the best way to complete them to achieve an economic well.

So again we'd have a geologic success but maybe an economic failure.

Q Have any of the parties to be pooled had engineers or other individuals contact you to complain about the risk factor penalty that was being proposed?

A No.

Q The Commission establishes spacing on ordinary governmental divisions when it can, 40's, 80's, 160's, 320's, 640's.

A That's right.

Q And your personally, and your company, has been an advocate for some time of 320-acre spacing for the basin-wide Fruitland Coal, is that not true?

A Yes, sir, that's correct.

Q Is that position you have taken personally, and your company taken, on the issue of spacing inconsistent with or contrary to your position on the risk factor for these wells?

A No, I don't believe so. I think if you could drill a successful well, you may have a low rate well with a 50-year life; you may have to go back in and drill a second well on the 320 to, you know, to optimize getting the recoverable reserves out, but I think from the work that I have done and the work that I have been exposed to in the reservoir group at Meridian, I'm convinced that 320-acre spacing is the best place to start for developing this pool.

MR. STOGNER: Are there any other questions of this witness?

MR. KELLAHIN: No, sir.

MR. STOGNER: He may be excused.

MR. KELLAHIN: That concludes our presentation on these cases, Mr. Stogner.

MR. STOGNER: Are there any other questions of any of these witnesses?

Is there anything more to consider in any of these cases?

In that case, Case Number 9535, 9536, 9537, 9538, 9539, 9540, 9541, 9542 -- strike that.

Case 9535 will be continued to the Examiner's hearing scheduled for December 21st, 1988, and at that time we'll consider additional testimony on a nonstandard location and any other -- and the notification --

MR. KELLAHIN: Yes, sir.

MR. STOGNER: -- is that right, Mr. Kellahin?

MR. KELLAHIN: Yes, sir.

MR. STOGNER: Case Number 9536 will also be continued to the Examiner's hearing scheduled

for December 21st, 1988.

At this time Case Number 9537, 9538, 9539, 9540, 9541 and 9542 will be take under advisement. Case Number 9545 will be continued to the Examiner's hearing scheduled for December 21st, 1988, at which time we will consider any additional notice, is that correct?

MR. KELLAHIN: Yes, sir.

MR. STOGNER: Okay, Case Number 9546 and 9547 will be taken under advisement. Does that -- did I get everything clear, Mr. Kellahin?

MR. KELLAHIN: You did.

MR. STOGNER: Okay.

(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 & 9547 heard by me on 22 November 1955.

Examiner
Oil Conservation Division

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

21 December 1988

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. CASE 9535

BEFORE: Michael E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division: Robert G. Stovall
Attorney at Law
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico

For the Applicant:

MR. STOGNER: Call next Case Number 9535.

MR. STOVALL: Application of Meridian Oil, Inc., for compulsory pooling, unorthodox oil well location, and nonstandard gas proration unit, San Juan County, New Mexico.

Applicant requests this case be continued to January 18th, 1989.

MR. STOGNER: Case Number 9535 will be continued to the Examiner's hearing scheduled for January 18th, 1989.

(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, heard by me on 21 Dec. 1988.

Examiner
Oil Conservation Division