NEW MEXICO OIL CONSERVATION DIVISION

STATE LAND OFFICE BUILDING

STATE OF NEW MEXICO

CASE NOS. 10754 and 10745 (Consolidated)

IN THE MATTER OF:

(10754) The Application of Meridian Oil, Inc., for an Unorthodox Gas Well Location, Non-Standard Gas Proration Units, and Downhole Commingling, Rio Arriba County, New Mexico.

(10745) Application of Meridian Oil, Inc., for an Unorthodox Gas Well Location and Downhole Commingling, Rio Arriba County, New Mexico.

BEFORE:

MICHAEL E. STOGNER

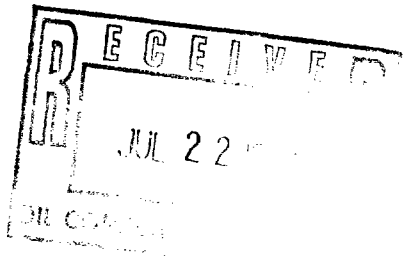
Hearing Examiner

State Land Office Building

Thursday, July 1, 1993

REPORTED BY:

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



ORIGINAL

A P P E A R A N C E S

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I N D E X

E X H I B I T S

EXAMINER STOGNER: Hearing will come to Order. Call next case, No. 10754.

MR. STOVALL: Application of Meridian, Oil, Inc., for an unorthodox gas well location, nonstandard gas proration units and downhole commingling, Rio Arriba County, New Mexico.

EXAMINER STOGNER: Call for appearances.

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

EXAMINER STOGNER: Any other appearances? There being none, will the witnesses please stand to be sworn.

[And the witnesses were duly sworn.]

MR. KELLAHIN: Mr. Examiner, we would like to try to consolidate the case you just called with the next case, 10745. The wells are within a mile of each other, I believe. They involve the same formations to be commingled. They're PC and Fruitland in each case, and we would like to expedite the presentation, if possible, by consolidating the two cases for hearing purposes.

EXAMINER STOGNER: With that, we'll call next case, No. 10745.

MR. STOVALL: Application of Meridian Oil, Inc., for an unorthodox gas well location and downhole commingling, Rio Arriba County, New Mexico.

EXAMINER STOGNER: Other than Meridian, are there any appearances in this matter? Cases 10754 and 10745 will be consolidated for purposes of testimony. And with that, we'll proceed.

Mr. Kellahin?

MR. KELLAHIN: Mr. Examiner, we would request that you take administrative notice of the case Meridian presented to you on the June 3rd docket, Case 10735. It was for the Huerfano Unit 549 well. The testimony that we're presenting today is substantially consistent with the testimony then.

The areas of concern in the June hearing were the allocation formula, how it was constructed, and then economic justifications.

The documents we're submitting to you today to support this case are consistent with the prior case that you have pending for your decision.

EXAMINER STOGNER: Administrative notice will be taken of Case 10735.

MR. KELLAHIN: We would like to, simply because that's the way we reviewed them, start with the Valdez cases first. It's 745. And then we'll go into the unit case, which is 754.

At this time I would like to call Mr. Alan Alexander.

ALAN ALEXANDER

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

EXAMINATION

BY MR. KELLAHIN:

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

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

Q. On prior occasions have you testified before the Division and had your qualifications as an expert petroleum landman accepted and made a matter of the record by the Division?

A. I have.

Q. Pursuant to your employment in that

capacity, have you made a study of the land title information with regards to both of these cases?

A. I have.

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

EXAMINER STOGNER: Mr. Alexander is so qualified.

Q. Mr. Alexander, before we look at the exhibit book for the Valdez #5 well, while it's not marked as an exhibit, we've attached to the hearing room wall a locator plat. Would you identify that plat for us and indicate to the Examiner the general location of the two wells that we're describing today?

A. Yes. The plat is a summary of Meridian's plans for 1993 to drill and complete or recomplete, through the commingling process, several wells in the basin. They're indicated on that map. Each type of well is indicated by a different symbol.

If you'll note, we've marked this morning on that map the two proposed locations with red arrows. They're located in 28 North, 4 West, of the San Juan Basin.

Q. For each of these cases, what does

Meridian propose to accomplish?

A. We propose to the Division that we develop these two locations by using the method of commingling both the Fruitland Coal and the Pictured Cliffs formation. We feel that's the only economically viable method of recovering the reserves for both of these formations.

Q. Let's start with the Valdez #5, which is the case book and exhibits for Case No. 10745. Tell us how the book is organized.

A. We have organized several displays and exhibits for the Division, which we hope illustrates our contention that, in fact, the only viable way to develop the reservoir in this area of the basin, both the Pictured Cliffs and the Fruitland Coal, is the commingling.

We have provided, in each exhibit book, basically the same types of exhibits. You'll note behind Exhibit 1 that we have included a copy of our application to the Division requesting authority to commingle the two reservoirs.

Behind Exhibit No. 2 we have provided an offset owner/operator plat for those parties that we have notified in each of the cases this

morning.

We've also included, behind Exhibit No. 3, a nine-section plat showing the lands and wells in question, along with a topographic plat for each well.

Behind Exhibit No. 4, we have provided a trend map for the Pictured Cliffs development in the area in question.

Behind Exhibit No. 5 you will find net isopach, sandstone isopach maps for the Upper Pictured Cliffs portion of the reservoir and the Fruitland Coal formation.

Behind Exhibit No. 6 we have included a structure map, to illustrate and depict the structure in this area.

Behind Exhibit No. 7 we are including a typical well log for the wells, the Pictured Cliffs wells in this area.

And behind Exhibit No. 8, we will present to you the allocation formula that we propose to use for each of the subject wells.

Q. In addition, Exhibit 8 also includes the economic illustrations of the decisions made by Meridian with regards to choices between downhole commingling, dual completion, and

stand-along, single completion?

A. Yes, that's correct.

Q. Let's look at the Valdez #5 well, specifically. In addition to the downhole commingling approval that you're seeking, is there any other remedy or solution you need in order to drill this well?

A. Yes. The Fruitland Coal formation, under the proposed wellbore you'll note, if you look behind Exhibit No. 3, is located in the northwest quarter of Section 16 of 28 North and 4 West, Rio Arriba County, New Mexico. That would be an off-pattern location for the Fruitland Coal formation.

Q. What's the basis for having it drilled in the off-pattern quarter section?

A. The basis for that is, we had to consider both reservoirs in order to economically have a viable project. You'll note on that plat that there is a Pictured Cliffs well already located in the northeast quarter, and, as our expert witnesses will testify later on, we could not recomplete the coal in that well. And we also would like to complete the reserved for the Pictured Cliffs formation, so that left us with a

location in the northwest quarter to attempt this operation.

Q. Let's deal specifically with the issues of your expertise, and if you'll turn behind Exhibit Tab No. 2, identify for us the well location and how you have made your search to determine who the offset operators are?

A. If you will note on the exhibits behind Exhibit No. 2, we have included an offset operator and owner plat for the Valdez #5 well, which is located 1850 feet from the north line and 1820 feet from the west line.

We've included two plats; one plat will illustrate the Pictured Cliffs formation and the following plat illustrates the Fruitland Coal formation. Each plat depicts, numerically, the offset owners and operators that would be impacted or involved in this case. Those are the parties we've notified in this case.

We have also notified the royalty and the overriding royalty owners in this drill block. However, the ownership in this drill block is common between both reservoirs.

Q. So, the only purpose for the notification would be to provide notice to those

operators offsetting the coal gas spacing unit as to the off-pattern nature of that well?

A. That is correct.

MR. KELLAHIN: Mr. Examiner, I have marked as Exhibit No. 9 our certificate of mailing to all those parties shown within the tabulation of information behind Exhibit Tab No. 2.

Q. All right. Let's turn now, if you will, to Exhibit No. 3, and have you identify and describe that display.

A. Exhibit No. 3 is a nine-section land plat that shows the proposed spacing units for each of the reservoirs, the Pictured Cliffs reservoir being developed on 160 acres, and the Fruitland Coal reservoir being developed on 320 acres.

The Fruitland Coal is the north half of the section and, as I mentioned, the Pictured Cliffs is the northwest quarter of this section.

This plat also shows the existing wells in the area, and there is a legend at the bottom of the map that shows the type of well or the formation that well was completed in.

Q. What's the purpose of the topographic

display that's shown on the next exhibit behind the one you've just described?

A. We've included a topographic display for this well because it is located a little to the south, in the northwest quarter, and there are topographic reasons for doing that.

If you will look at that plat, you'll notice there's a pipeline that runs immediately to the north of the proposed location. In that same area as the proposed location, you'll note a heavy black contour line immediately north. That is a stand of fairly prime timber. This location is located in the Carson National Forest. They did not want us into that timber area, and so we moved south to avoid that timber area and the pipeline, and that's the reason the well is located where we've proposed it.

Q. Let's turn now, Mr. Alexander to the next exhibit book, if you will, for Case 754, and this is the one for the San Juan 28-4 Unit #225 well.

If you'll turn to Exhibit No. 3, let's use that map to have you illustrate for us the specific provisions of the relief you're seeking from the Division. You're asking for an

unorthodox gas well location, nonstandard gas proration units, and downhole commingling approval?

A. Yes, sir, that's correct. Behind Exhibit No. 3, we again have a nine-section land plat. The section that we're dealing with this morning is section 28 North, 4 West, for the San Juan 28-4 Unit #225 well.

You'll notice that that is an irregular governmental section. It's a short section. It only contains 229.88 acres. Therefore, we have chosen and proposed the remedy that was initially established when the 21 Mesaverde well was drilled. You'll see that well symbol in what is the southwest quarter of Section 7.

The spacing for that well was established back in the late 50s and early 60s by an administrative decision of the Aztec office of the NMOCD. We were not able to locate an NSL order on it, and we had the people at Aztec look through their records, and we have also checked the records here in Santa Fe. It appears that the wells in this area were developed separately, that the spacing units were developed for each of these old completions separately, but we think

it's a reasonable solution and we would like to follow the Mesaverde solution in this area.

Q. The downhole commingling covers what pools?

A. The downhole commingling covers the Pictured Cliffs formation and the Fruitland Coal formation.

Q. In what way is the well an unorthodox gas well location?

A. It's unorthodox because it would be on pattern in that what is left of the section is basically the south half of this section, and it would be located in the southwest quarter.

However, because of topographic reasons which we'll explore in just a minute, it's located a little bit too far to the south. The location that we have currently staked is 695 feet from the south line and 1375 feet from the west line.

The other reasons that it is a nonstandard proration unit is that the Mesaverde solution was to include all of the acreage in what is left in Section 7, as opposed to a governmental half-section as the Basin Fruitland Coal order provides for.

Also, the Pictured Cliffs formation is in what is left of the south half of the section, the southwest quarter, and that's slightly irregular for the Pictured Cliffs formation, also.

Q. Do you have the specific acreage for each of the pools within the section for purposes of allocation?

A. Yes. We would like to allocate to the Fruitland Coal, as I previously indicated, all of Section 7, and that contains 229.88 acres.

We would like to allocate, to the Pictured Cliffs formation, 114.60 acres, and the acreage that would be included in that number of acres is Lots 3, 4 and 5 in the southeast quarter of the southwest quarter of Section 7.

Q. That acreage and those descriptions are contained within the application which is shown within the package of documents under Exhibit No. 1?

A. Yes, sir, that's correct.

Q. Let's turn now to the topo map which is the next display behind Exhibit No. 3 and have you identify and describe that.

A. The topographic plat that we have

included behind the nine-section plat illustrates the current well location through the red dot. You'll notice there's a smaller black dot immediately to the north of that location. That's the location for the existing San Juan 28-4 Unit #21 Mesaverde well.

Again, we are in the Carson National Forest and we have worked with that group to develop this location.

You'll note that immediately to the north of this location and the older #21 well, there is a road that heads basically southwest, across the southwest quarter of Section 7. Along with that road, there is a pipeline that services the #21 well.

You'll also note there's a heavy contour line immediately to the north of the location that forms a ridge. It's actually the contour line that is marked 7400 feet. That is a ridge, and there are many archaeological sites all along that contour line and on top of that ridge. They did not want us to build in that area for that reason, along with, the forest is in that area. They asked us to build as close as we could to the existing No. 21 well. That's the

reason that the location is spotted where it is.

Q. As to both the Valdez 5 and this Unit Well 225, is the ownership common within the spacing unit for each of the pools to be commingled?

A. It is.

Q. When we look back at Exhibit No. 2, identify and describe for us your tabulation of the offset operators.

A. On Exhibit No. 2, you'll note that we have tabulated the offset owners and operators numerically, in the rectangular boxes, and each of those parties is represented below the plat, numerically.

Basically that consists of just Meridian, Phillips Petroleum Company and Richmond Petroleum Company. Those are the parties that we did notify. We have attached a certificate of mailing showing that we did, in fact, notify those parties, and I've attached copies of the certified return receipt notices that were sent out to each of those parties.

Q. As to both cases, has Meridian received any objection from any of the parties notified?

A. No, sir, we have not.

MR. KELLAHIN: That concludes my examination of Mr. Alexander. I would move the introduction of Exhibits 1 through 3 in each of the exhibit books.

EXAMINER STOGNER: Exhibits 1 through 3, in both cases, will be admitted at this point.

EXAMINATION

BY EXAMINER STOGNER:

Q. Referring to 754, and looking at the map in Exhibit 3, I'm to assume that this is within the Carson National Forest area?

A. Yes, sir, that is correct.

Q. That really wasn't clear. I didn't know whether the east side was or the west side.

Now, is this proposed location on the existing well pad, or is there much of a well pad out there for that old #21 well?

A. It utilizes a portion of the southern part of the old 21 well. The old 21 is still a producing well, but we did utilize as much as we could of the existing well pad.

Q. Has this well location been approved, or what is the status of the APD with the Forest Service and the BLM at this time?

A. We have submitted the APD, and we're currently waiting on the approval of the Forest Service and the BLM with respect to, this is in the spotted owl habitat, and it has been hooted, and it will be cleared. We have been advised that they've found no spotted owls in this area.

It is also within a habitat that has recently been established, it's not an endangered species, but the Forest Service is currently doing surveys for the goshawk in this area. They will do that survey next week. That survey, even if they do find that species in the area, will not prohibit us from drilling the well. They'll simply note on the APD that we cannot drill the well during the incubation and hatching period of the young hawks. And we should be clear to drill that around September the 1st, if, in fact, they find the species in this area.

MR. STOVALL: Are there any sparrows up there?

THE WITNESS: With spotted owls and goshawks, I doubt there are any left.

MR. KELLAHIN: As a footnote, Mr. Stovall, the goshawk apparently likes to eat the spotted owl, and I don't know if we're going to

be responsible for that predatory event or not.

MR. STOVALL: Oh, gosh, Mr. Kellahin.

Q. You used the term, and I know I don't want to go into this, "hooted." Do you want to elaborate a little bit?

A. Yes. They actually hire a team of surveyors and they, through voice manipulation, can make a sound that attracks--it's a hooting sound that attracts the spotted owls. They actually go out in the field with white mice to attract the spotted owl and if they find one, if one comes to the call, they'll actually try to visually track that back to a nesting site and locate the nesting site.

They basically do the same thing with a goshawk, but they're using a recorded call for that event. And the goshawks, apparently, are very particular to--

MR. STOVALL: They don't call those goshers, do they?

THE WITNESS: Not that I'm aware of. But they actually make the sounds that will attract those two species, and try to call them in, and then track them back to the nesting site.

MR. STOVALL: I can see it now, the contest that Meridian sponsors, the San Juan Basin hooters contest.

Q. (BY EXAMINER STOGNER) I am going to get off this subject and take note that the APD is still pending the federal agency's approval?

A. Yes, sir.

MR. STOVALL: I have a question.

EXAMINER STOGNER: Mr. Stovall?

EXAMINATION

BY MR. STOVALL:

Q. Mr. Alexander, I think it was the case that we've taken notice of, one of the wells was actually a Southland Royalty-operated well. Is that the case in either of these situations? Are these both truly Meridian?

A. Both of these wells are Meridian Oil, Inc.-operated wells.

Q. As I understand, those are indeed still separate companies, although Meridian is the only one with personnel to actually do the physical operating, is that correct?

A. Yes, sir, you're correct.

EXAMINER STOGNER: Any other questions of Mr. Alexander? If not, he may be excused.

MR. KELLAHIN: I would like to call Mike Dawson. Mr. Dawson is a petroleum geologist.

MICHAEL K. DAWSON

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

EXAMINATION

BY MR. KELLAHIN:

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

A. I'm Mike Dawson, a petroleum geologist with Meridian in Farmington.

Q. On prior occasions, Mr. Dawson, have you qualified as an expert petroleum geologist and testified with regards to the downhole commingling of PC formation gas with Fruitland Coal gas?

A. Yes, I have.

Q. And have you made such a geologic investigation with regards to both of these cases now before the Examiner?

A. Yes.

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

EXAMINER STOGNER: Mr. Dawson is so

qualified.

Q. Before we talk about the specifics of the geology for each of the two cases, give us a general summary, from a geologic perspective, of what Meridian seeks to accomplish with this application, and why, in your opinion, is it necessary?

A. Meridian would like to further develop the Pictured Cliffs in this area. It's an area where the Pictured Cliffs is far from fully developed and there are extentional opportunities with relatively high risk, compared to other PC drilling in the basin.

The same goes for the Fruitland Coal. There are very few Fruitland completions in the area of these two applications, and none of them have proven to be economical.

Meridian would like to go ahead and literally explore the Fruitland Coal some more in this area and attempt to develop it.

Q. Why has not the Pictured Cliffs formation been developed in this particular area? Is there a geologic explanation to it?

A. Yes, sir, there is. The trends of viable reservoir are very thin--not thin, but not

very wide, so that there's relatively high risk. There are a few other extenuating circumstances. It's relatively deep. The Pictured Cliffs, for instance, is 4400 feet, so it's a little bit more expensive to develop. I think the combination of risk and expense have prevented full development in this area.

Q. When you talk about a Pictured Cliffs well that is a successful producer within this area, what's the general producing rate of a well that you would consider to be a success?

A. Around 150 Mcf per day would be a good, successful PC rate. An EUR that would be associated with that might be from, say, 400 million. And in a couple of anomalous wells, the EUR might exceed a Bcf. By and large, though, the estimated ultimate recovery is much less on the average than 1 Bcf, throughout this area.

Q. In mapping this portion of the Pictured Cliffs reservoir in the displays, do you find any areas where it may not be typical of the situation you just described so that you would have, from a geologic perspective, the ability to drill a well that was a stand-alone PC well?

A. At this point in time we can't identify

the reservoir quality well enough to drill a stand-alone well. We're limited by the risk and the uncertainty--the geologic uncertainty.

Q. Let's switch now to the coal gas exploration. What has been the status of that exploration in this area?

A. There have been very few tests. There are probably only three tests within a mile or two of the two applications. None of those wells are currently producing from the coal. They're noncommercial endeavors.

Q. Let's turn now to the specifics of the geology for the Valdez well. If you'll turn with me to the exhibit that commences with Exhibit 4?

A. Yes, sir.

Q. Identify and describe that display.

A. This is a map that I've included for the purposes of providing an index or a reference to show you where this project is, relative to the Pictured Cliffs development.

All the well symbols here represent Pictured Cliffs completions. In 28-4 I've identified the Choza Mesa Field. To the north, in 29-5, I've identified the Gobernador field.

The Valdez #5 will attempt to extend

production from the Choza Mesa field to the northwest, toward the Gobernador trend.

Shaded in north on this map are the trend of wells with cum production greater than 300 million. I think that production trend is significant, and I've attempted to relate it to the geology.

Q. This display, while we're on it, also shows the 28-4 Unit 225 well?

A. Yes, sir.

Q. Why don't we talk about both of those now in terms of this display, and show us why you have proposed locating them as you do for Pictured Cliffs exploration.

A. The Valdez #5 is an attempt to stay on the production trend that I feel connects the Choza Mesa and Gobernador fields. It could be regarded as a developmental extension well. The San Juan 28-4 Unit #225, in contrast, is not on a production trend. It represents what I would term an exploratory extension.

I have mapped a reservoir trend through Section 7, 28 North, 4 West, that I feel is prospective, but the oil truly is more than an exploratory extension, in contrast to the Valdez

#5, which would represent a developmental extension.

Q. Let's turn now to Exhibit 5. Would you identify and describe the first display?

A. Yes, sir. This is a net sandstone isopach of the Upper Pictured Cliffs formation. In this area, we have an Upper Pictured Cliffs and a Lower Pictured Cliffs interval, which I'll show you on our type log in just a moment.

The Upper Pictured Cliffs trend corresponds to the production trend that I had shaded in orange, on the previous exhibit. It's a little difficult to make a one-to-one correlation between log characteristics and production in this area in the Pictured Cliffs, but I feel that this trend of net sandstone in the Upper Pictured Cliffs interval, does explain why the better wells are good wells and they are commercial.

Q. Let's talk about the opportunity for exploration in this section. First of all, why is the well located between the 10- and the 15-foot contour lines, as opposed to locating it in a thicker portion of the map, as you've shown it?

A. For the topographic and environmental reasons, that Mr. Alexander referred to, we've had to limit ourselves to the south half of the northwest quarter of that section. It would have been slightly preferable to be nearer the axis of the trend, and perhaps get 18 feet of net pay, but I feel that we still have a good chance for success or an acceptable chance of success at the location we've chosen here.

Q. Why not take the Valdez No. 2, over in the northeast quarter of that section, and reenter that well and use it for commingling in the PC and the Fruitland Coal?

A. That well was drilled as a sling hole, and, given the very small casing size, it's impossible to go in and do a pay and commingle type of operation.

Q. Has it depleted any portion of the PC reservoir underlying that portion of the spacing unit? Was it productive?

A. Yes, sir, it was. It was marginally productive, and we don't feel that there has been any substantial drainage into the northwest quarter.

Q. But you've explored the opportunity to

reenter that well, and it's not a viable choice?

A. Yes, sir.

Q. Let's go now to the next display behind Exhibit Tab No. 5, and have you identify and describe that.

A. This is a net coal map for the Fruitland Coal. The Valdez 5 is represented by the red star. We feel that we'll have upwards of 40 feet of net coal in the well.

This coal thickness, plus our estimate of gas content of between 200 and 350 standard cubic feet per ton, makes us believe that there is a substantial amount of gas in the Fruitland Coal here, and a substantial amount of potential. But, at this point, it's very high risk. We don't know how to predict permeability. So far there have been no commercial coal completions in this vicinity.

We would like to further test the coal. We think there's a substantial resource there in terms of gas in place, and we're hoping to be able to complete the coal and produce a significant amount of that gas.

Q. Turn to Exhibit 6, and identify and describe the structure map.

A. This is a structure map, using, as our datum, the base of the Fruitland Coal. It shows a rather consistent southwest dip of about 60 feet per mile through the area. There's no significant faulting, folding, or basically any kind of significant deformation.

Q. Does structure play an essential element in your selection of well locations?

A. No, sir. Structure is irrelevant.

Q. As to this well in this spacing unit?

A. Yes, sir.

Q. All right. Let's turn to the type log behind Exhibit 7 and have you describe that for us.

A. This shows the type log, and it shows the Upper Pictured Cliffs unit that I referred to earlier and also a Lower Pictured Cliffs unit.

Basically, all wells in the area will have some amount of pay in the Lower Pictured Cliffs, but it's much lower resistivity, much finer-grained sandstone. In general, you can complete it and make gas, but not in commercial quantities.

In contrast, the Upper Pictured Cliffs sandstone represents sands deposited more in a

beach or upper shore face environment, in contrast to the lower, which is a lower shore face deposition in a shore line system, but in much deeper water, much finer grain size, and less perspective speculative.

For those reasons, I feel we do see the correspondence between the production trend and the trend of net sand in this Upper Pictured Cliffs. Lying directly on top of the Upper Pictured Cliffs, with virtually no reservoir boundary, is a package of coal with about 46 feet net coal.

Q. What, if any, participation did you have with the engineering group of Meridian, and Mr. Shipley, in determining the reservoir parameters that were used in any estimated ultimate gas recovery and a calculation of volumetrics to determine the gas in place for the Pictured Cliffs?

A. I provided Mr. Shipley with calculated water saturations, net thicknesses, and average density porosity.

Q. In your opinion, were those values reasonable and accurate, to the best of your knowledge and information?

A. Yes, sir.

Q. Let me ask you, what's the purpose of the two displays here? You've brought us two samples. What are these?

A. Those are cores from the gas buggy project that El Paso drilled many years ago. It so happens that we're only about five miles to the southwest of that well. They represent an interesting contrast between the Upper PC reservoir type and the Lower PC reservoir type. One is obviously much finer grained than the other. The porosities are actually similar, but the permeabilities are quite dissimilar.

The coarser grained Upper PC sandstone, in general, based on core analyses through the basin, would have, say, 20 to 25 times the permeability as the lower. That explains why, when we look at this section, we see something like a hundred feet of gross sandstone but relatively little of the sandstone section is effective sandstone; in other words, having enough matrix permeability for commercial production.

Q. Let's turn now, Mr. Dawson, to the display book for the Unit 225 well, and it's the

case book 10754. If you'll turn with me now to Exhibit 4, again this is the same illustration that we've discussed in the other exhibit book, talking about where you have selected your well location based upon the Pictured Cliffs development?

A. Yes.

Q. All right. Let's turn now to Exhibit 5. Would you identify and describe this display?

A. Yes, sir. Again, this is a net sandstone isopach of the Upper Pictured Cliffs. Notable is that there is no production along the axis of this trend, yet the trend is mappable. Our object here is to produce from that trend and find commercial production.

Q. Can we use this display to help the Examiner find the coal gas wells that have been attempted without success in this area?

A. Yes, sir. Just to the northeast, there have been two attempts by Schaulk Production in Section 32, just to the northeast. That's Section 32 of 29 North, 4 West. And, just due south, about a mile, Meridian has attempted, in the San Juan 28-4 Unit, No. 202, a coal completion; again, unsuccessful. None of these

three wells are currently producing.

Q. Let's turn now to the next display behind Exhibit 5. Identify and describe that display.

A. This is another Fruitland formation net coal isopach, demonstrating the thickness of the coal. Again, although we have not seen any commercial successes in here, we still think there's a substantial recourse and we want to try to develop that.

Q. Let's now go to Exhibit 6. Identify and describe the structure map.

A. Another structure map on the base of the Fruitland Coal, showing a gentle dip to the southwest. Structure does not play any part in our pursuit of the coal in either the Fruitland or the Pictured Cliffs in the proposed well.

Q. Okay. Exhibit 7.

A. This is a type log, and this is the well that would be with the #225. It's the same Mesaverde well that Mr. Alexander referred to earlier in testimony.

It shows a similar pattern, an upper and a lower Pictured Cliffs package. It shows a thick basal coal sitting nearly on top of the

Upper Pictured Cliffs.

One contrast here is that there is a thin coal between the Upper and the Lower Pictured Cliffs sandstones. This represents a classic Pictured Cliffs/Fruitland innertongue situation, so that this upper Pictured Cliffs sandstone represents a temporary transgression back to the southwest by the Pictured Cliffs shoreline system.

MR. KELLAHIN: That concludes my examination of Mr. Dawson. We move the introduction of his Exhibits 4 through 7 in each of the two cases.

EXAMINER STOGNER: Exhibits 4 through 7 will be admitted into evidence at this time.

MR. STOVALL: And will be held in place by the core samples.

EXAMINATION

BY EXAMINER STOGNER:

Q. In preparing your Exhibits 5, and when I look at them, you're just showing the PC wells, is that correct?

A. No, sir.

Q. Are there other wells shown?

A. Yes, sir, there are.

Q. Those are deeper Dakota and Basin Dakotas?

A. And Mesaverdes. The #225 map, the circular symbol represents Mesaverde wells. The triangular symbols, although there are very few, represent Fruitland wells. The traditional or standard gas well symbols, represent Pictured Cliffs wells.

Q. So, in your 28-4 #225 well, will this be the first test, hopefully, within the main--I don't want to call it main channel, but the main pay thickness of this little Upper Pictured Cliffs string?

A. Yes, sir, that's correct.

Q. What's the status on that 226 well down to the south and east?

A. That's another well that we've proposed to management and that would be a similar Pictured Cliffs/Fruitland Coal commingle, and it would be a second well in this same trend. Hopefully, between the two wells, we could define the productivity of this specific trend.

Q. And that's proposed?

A. Yes, sir. And, if I may, that well is also shown on the index map on the wall just to

the south. Each of the starred wells is a proposed Pictured Cliffs/Fruitland Coal commingle.

MR. STOVALL: That's the one between your two locations, is that right? Between the two ones marked with the orange arrows?

THE WITNESS: Yes, sir. It's the one that the Examiner referred to as just to the south of the two arrows.

Q. Who will be completing these wells? Does that fall under your supervision?

A. No, sir, it doesn't. The next witness, Mr. Shipley, will be in charge of the completion.

Q. I was thinking more on line of fracturing. That would still be under his--

A. Yes, sir.

EXAMINER STOGNER: Okay. Any other questions of this witness? You may be excused.

Mr. Kellahin?

MR. KELLAHIN: I would like to call Mr. Kurt Shipley.

KURT A. SHIPLEY

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

EXAMINATION

BY MR. KELLAHIN:

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

A. Kurt Shipley, Meridian Oil, production engineer.

Q. And where do you reside, sir?

A. Farmington, New Mexico.

Q. Would you summarize for us when and where you obtained your degree in petroleum engineering?

A. Texas Tech University in the spring of 1991.

Q. Subsequent to graduation, have you been employed as a petroleum engineer?

A. Yes.

Q. And with what company?

A. Meridian Oil.

Q. Summarize for us the kinds of duties that you have performed as a petroleum engineer that apply to the cases that are before the Examiner today.

A. Mainly, well economics associated with projects, reserve calculations, and flow rates.

Q. As part of your duties, have you

reviewed, with Mr. Scott Daves, Meridian Oil's petroleum engineer that testified in Case 10735, the allocation formulas that he has presented to the Examiner?

A. Yes, I have talked with Scott Daves.

Q. In addition, have you reviewed the economic analysis to determine, for Meridian, what is the most appropriate means to complete this well, whether it's a stand-alone PC, or a dual completion with the Fruitland Coal, or whether it's downhole commingled with the Fruitland Coal production?

A. Yes, I have considered all three methods and I've talked extensively with Scott Daves.

Q. At this point, do you have recommendations to the Examiner with regards to an allocation formula to allocate production between the two pools?

A. Yes, I do.

Q. In addition, do you have recommendations for the Examiner with regard to the economics involved that justify the downhole commingling of these two wells?

A. Yes, I do.

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

EXAMINER STOGNER: Mr. Shipley is so qualified.

Q. Before we look at the displays themselves, Mr. Shipley, describe for us, in a general way, the method for allocation between the two pools.

A. We'll note and consider a commingled well, knowing that the total production will be allocated by the total production of the Fruitland Coal and the Pictured Cliffs together.

Taking that, we have a very good understanding of how Pictured Cliffs reservoirs operate out in the field, and I came up with a way to determine Pictured Cliffs production here, and everything above and beyond Pictured Cliffs production, when considering the total sales rate of gas, would be considered Fruitland Coal gas in this situation.

Q. Are you and Mr. Daves in agreement with regards to not only the allocation method, but the actual procedures, formulas and calculations that would be utilized by the Examiner, or anyone else, in making the allocations between the two

pools?

A. Yes, sir, we are.

Q. Are you confident that you had sufficient reservoir information to make reliable calculations of the Pictured Cliffs estimated ultimate gas recoveries for these wells?

A. Yes. For the Pictured Cliffs reservoir, we do have a good understanding of that.

Q. Okay. With regards to the economics, did you take into consideration the cost of the wells, the rate of production, and the estimated ultimate gas recovery for each of the wells, in analyzing what was the best way to complete those wells?

A. Yes. At Meridian Oil, every time we run economics on a project, we consider three variables. The three parameters are, the flow rate, the reserves associated with the project, and the investment of the project.

Q. At the request of the Division Examiner, have you made illustrations utilizing those three variables and displayed it in terms of rate of return on your investment?

A. Yes, I have.

Q. Based upon those calculations and that information, what did you ultimately conclude concerning the choices between a single, stand-alone PC well, versus a dual with the Fruitland Coal, versus commingling both pools?

A. The determination that I made was that the well would be uneconomic as a Pictured Cliffs stand-alone well, a dual completed well with the Fruitland Coal, and the only economical way that we can go after these reserves is with a Pictured Cliffs/Fruitland Coal commingling.

Q. Are your conclusions consistent with those reached by Mr. Scott Daves, when he undertook that same economic analysis for the Huerfano Unit 549 well involved in Case 10735?

A. Yes, they're very similar.

Q. Let's turn now to the displays, and let's start with the Valdez #5, which is Case 10745. Turn to Exhibit No. 8. Let's don't have you read all this stuff, Mr. Shipley, but let's go through it and have you summarize it in such a way that the Examiner will see your objective, and then, at his convenience, he can go through the actual calculations.

So, starting with page 1, what are we

looking at?

A. This is a summary of the theory behind economics for the project at Meridian Oil. We associate reserves with the reservoir. Then we determine how quickly we can recover those reserves, with the flow rate involved, and then we consider the investment costs for drilling and completing the well and then operating the well.

Q. Is this conventional petroleum engineer economic analysis that Meridian routinely runs on all its projects, regardless of whether it's applicable to this type of case or other cases?

A. Yes. We use this on every project that we submit to management.

Q. So there's nothing especially unique about the circumstances of these two particular applications before the Division, when it comes to setting up an economic analysis?

A. No, there's not.

Q. Let's turn now to the next page which is captioned, "Valdez #5," and it says, "Monthly Gas Production Allocation Formula." What does this show?

A. This shows the general equation for the commingled Fruitland Coal/Pictured Cliffs well.

This is an accepted formula.

Q. Accepted within Meridian?

A. This has been accepted by the state previously.

Q. All right. And it's the same formula pending before Examiner Stogner with regards to the prior case?

A. Yes, it is. It explains that you have a total production from the well, which is broken out into the--allocated to the Fruitland Coal and the Pictured Cliffs. We feel that we can have a good understanding of what the flow rate will be out of the Pictured Cliffs, and it explains that everything above and beyond that would be allocated to the Fruitland Coal.

Q. Let's turn now to the next display and have you give me a quick summary of how Meridian determines the flow rate for the well that's attributable to the Pictured Cliffs production.

A. At the time of completion of the well, we will establish a flow test of the Pictured Cliffs formation. Then we will set a bridge plug above the Pictured Cliffs and complete the Fruitland Coal.

We will then test the Fruitland Coal,

and we'll have established flow test rates for each formation. This is then put into a ratio, allocating a ratio of gas production to the Pictured Cliffs formation only.

It should be noted that that is just a test rate and that does not apply to what is put down the sales line against the pipeline pressure that would be associated with this well.

Q. Okay. Let's go to the calculation on the next page, then, that shows your best engineering judgment of the estimated ultimate gas recovery attributable in this well, to the Pictured Cliffs formation. What is that number?

A. 608.9 million cubic feet of gas.

Q. It's about a third of the way down and it's highlighted and underlined?

A. Yes.

Q. How do you get that number?

A. We use offset analogy in the area, but the way we came up with the actual number for this well was using the volumetric method and the parameters supplied to me by Mr. Mike Dawson.

Q. Okay. When we turn to the next page, what are we seeing on that page?

A. The first section there is a list of

the parameters supplied to me by Mike Dawson, just displayed with the parameters and their actual values.

Q. What's the rest of that?

A. Well, section one there tells us the total, the hydrocarbon pore volume down in the reservoir of 9.894 million reservoir cubic feet of gas.

Q. Okay.

A. The second section there is a formation volume factor, which takes the natural gas that is down in the reservoir at a certain amount of reservoir pressure, and transfers that, recalculates it for gas that would be--the volume that would be associated on the surface under atmospheric pressure or 15 pounds of pressure.

And then the third section there explains how we determine the EUR for the reservoir. The only fact that's left out of there is the actual reservoir pressure of the Pictured Cliffs, which we will determine at the time of the completion of the well.

Q. Mr. Alexander has testified that the ownership's common between the two pools, but in determining an accurate allocation of production

between those two pools, are you satisfied that this formula, if adopted by Examiner Stogner, is going to attribute the appropriate amount of recoverable gas to each of the two pools?

A. Yes, I do.

Q. Let's turn now to the economics. There's a summary, it says, "Valdez #5," and then it says, "B. Pictured Cliffs Drilling/Completion Cost Summary." Are you with me?

A. Yes.

Q. Okay. In making these estimates that are shown on this sheet, are we looking only at that portion of the total well costs that would be attributable to the costs for the Pictured Cliffs formations in each of the examples?

A. Yes. The costs here are only the costs associated with the Pictured Cliffs formation.

Q. When you make this initial calculation after looking at the costs, are you also dealing only with the estimated ultimate gas recovery attributable to the Pictured Cliffs formation?

A. Yes. When determining the economics for the Pictured Cliffs, we only consider the reserves for the Pictured Cliffs formation.

Q. PC cost versus PC reserves, in each of

the examples?

A. And PC flow rate.

Q. The reserves are as you've calculated, using your volumetrics for the Valdez #5 and, later on, for the Unit 225 well?

A. Yes, sir.

Q. Let's go down the sheet and have you tell us what the conclusions are of the cost portion of the analysis.

A. We determined that a stand-alone, Pictured Cliffs, new drill completion, total tangible and intangible costs would be around $324,000.

The Pictured Cliffs portion of a dual PC/Fruitland completion, tangible and intangible costs, totals around approximately $271,000.

And then the third case is a commingle completion of the two formations, and the Pictured Cliffs portion of those costs are stated there as a total cost for the Pictured Cliffs, of $200,000.

Q. With those costs, what do you do then, in terms of running case studies as to flow rates, from which you can then make an economic analysis of the viability of the projects? What

were the three cases at flow rates that you ran?

A. I ran economic sensitivities, is what we call them, for reserves, using a flow rate of 100 Mcf a day, 200 Mcf a day, and 300 Mcf a day.

Q. So we're not confused about definitions, define for me the kind of flow rate that went into the analysis. What's the flow rate you're talking about when you say "flow rate"?

A. The flow rate is an established first-month production down the sales line, against pipeline pressure.

Q. This is a stabilized flow rate?

A. A stabilized flow rate down the pipeline.

Q. And when you plot that flow rate, that is a number you can use in your economic analysis?

A. Yes. Exactly.

Q. Before we look at the case studies for the Valdez #5 well, tell us what your best engineering judgment is about what that flow rate will be for the Valdez #5 well?

A. The Valdez well should have a flow rate of around 150 Mcf a day.

Q. And, using your calculations of estimated ultimate gas recovery, what is your best engineering judgment about the probable gas reserves to be recovered from that well?

A. 608.9 million cubic feet of gas.

Q. All right. Let's now look at the next portion of the display. What's shown on the next page?

A. This is a page showing the expected reservoir pressures for the Pictured Cliffs and Fruitland Coal formations. The Pictured Cliffs, the offset average, initial shut-in pressures is around 986 psi. Fruitland Coal, we anticipate 1,078 psi, which is within the pressure requirements for commingling.

Q. Okay. When we talk about the flow rate and the EUR that you've just described, now those numbers are PC numbers?

A. Yes.

Q. They don't include Fruitland numbers, either on EUR or cost?

A. Yes.

Q. Yes, they do not?

A. They do not include Fruitland Coal numbers.

Q. Let's go now to the first example, and it's the illustration, the chart?

A. Yes.

Q. This is the rate at 100 Mcf a day?

A. This is an economic sensitivity of the rate of return of the project based on a flow rate of 100 Mcf a day.

Q. What's the vertical scale?

A. The vertical scale is rate of return.

Q. And the horizontal scale?

A. The horizontal scale is Pictured Cliffs EUR and MMCF.

Q. All right. And the three curves that start on the horizontal scale and move up to the northeast, let's start with the lowest curve. Mine is a black-and-white display and the others may be colored, but what is the lowest, straight line? It's the thin, straight line.

A. That is the economic sensitivity for a Pictured Cliffs single completion.

Q. All right. It starts on the horizontal line, about halfway between 300 and 400 MMCF?

A. Yes, sir.

Q. The darker, solid line, the beginning point of which is about 300 MMCF--

A. Yes, sir.

Q. --what does that line represent?

A. That represents the economics of the Pictured Cliffs formation when considered with a Pictured Cliffs/Fruitland Coal dual completion.

Q. All right. And the line that commences at the horizontal line, about 200 MMCF, it's the dashed line, what is that?

A. This is also the economic sensitivity for the Pictured Cliffs reserves. But the costs associated with it are the Pictured Cliffs, Fruitland Coal commingle.

Q. What's the explanation as to why each of those lines has a different starting point on the horizontal axis?

A. Starting to the far right, the reason for the shift along the X axis is the initial cost investment. It's lower for the Pictured Cliffs on the commingle, and it incrementally goes up as you add the dual and then the PC single completion.

Q. All right. If we're making a judgment based upon rate of return, if you look at the Y axis, give me the baseline point in terms of percentage rate of return at which to peg the

economic viability of the project?

A. We accept a 15 percent rate of return as our threshold of economic production.

Q. Okay. For the Valdez #5 well, let's look at the X axis, come over to the appropriate amount of estimated ultimate gas recovery attributable to the well, and that's just slightly over 600 MMCF?

A. Yes, sir.

Q. Okay. Let's go to the point where the X and the Y merge.

A. Yes.

Q. All right. What does that tell you?

A. That tells us that, with the costs associated with the Pictured Cliffs single completion, we would only receive around a three percent rate of return with the flow rate of a hundred Mcf a day, and the reserves associated with the Pictured Cliffs of 600 million.

Q. How about a dual? What's the rate of return there?

A. It's approximately a seven percent rate of return.

Q. It doesn't meet your economic threshold?

A. Those two cases do not meet Meridian's threshold of production.

Q. All right, and neither does the downhole commingling at this flow rate of 100 Mcf a day?

A. It doesn't get to the 15 percent rate of return, no.

Q. It's what, about 11?

A. Yes, approximately.

Q. You've estimated for us, in your best engineering judgment, the flow rate on this well will be about 150 Mcf a day?

A. Yes, sir.

Q. Let's go to the 200 Mcf a day flow rate, which is the next exhibit. Are you with me?

A. Yes, sir.

Q. Let's find 15 percent rate of return on the Y axis. If you go over and circle 600 MMCF for your reserve recovery on the X axis, find the point where those two merge, what does that show you about the threshold economics as to the three types of wells?

A. It tells me still that the Pictured Cliffs single completion and the dual completion

for the Pictured Cliffs side would still not be economic in this case of 200 Mcf a day. And if we were able to reduce the costs associated with the Pictured Cliffs' side of the commingling, we would have an economic rate of return of around 17 percent.

Q. And, if you go to the last illustration, that's at a flow rate of 300 Mcf a day?

A. Yes. And we don't expect that out of the Pictured Cliffs here. It's not in the range of any of the wells around there, and it's not anticipated in this well.

Q. What's your conclusion about the economics of the Valdez #5 in terms of what option you exercise to go get these reserves?

A. Based on the reserves associated and the flow rate anticipated and the costs associated, the only economic way to complete this well is with a Fruitland Coal/Pictured Cliffs commingling.

Q. Let me understand the methodology. Had the illustration of the PC analysis been such that the dual completion curve, let's say a rate of 200 Mcf a day, let's speculate that that dark

line had been substantially higher and had arced in such a way that it would have been above 15 percent rate of return with 600 MMCF of reserves recovered, okay? Assume that.

A. Yes.

Q. What, then, do you do to analyze the Fruitland portion of the analysis?

A. Assuming that the Pictured Cliffs side of a Fruitland Coal/PC dual was economic, we would then have to associate those similar costs to the Pictured Cliffs over to the Fruitland Coal formation, and it would be a stand-alone economic project and it would have to meet these criteria in the same way that the Pictured Cliffs has.

Q. And, if that is justified for PC and Fruitland Coal, then you can make an affirmative choice on a single or dual completion?

A. Yes. If both formations on a single or a dual completion were economic, then we could make that assumption that we could go out and economically complete both formations without the commingling.

Q. On the Valdez 5 example, we can't get by the economics on the PC on any other basis than a dual, so you don't complete the rest of

the analysis?

A. We didn't even continue it for the Fruitland Coal because it did not meet the criteria for either the single or the dual completion.

Q. Okay. Let's jump over to the Unit 225 example. If you'll move to that exhibit book for me, and let's turn now to the Exhibit 8 information in that exhibit book.

Is the allocation formula and the description of those formulas, as well as the reserves attributable to the PC for that well, done in the same way as were done for the Valdez #5?

A. Yes, they were both determined using the volumetric method.

Q. Okay. If you'll turn with me, then, and go to page 4 of that information, what was your best engineering judgment of the recoverable gas reserves attributable to the PC in the Unit 225 well?

A. 946.1 million standard cubic feet of gas.

Q. Okay. We turn to the next page, you have your summary of parameters for Mr. Dawson

and the rest of your engineering calculations?

A. Yes, sir.

Q. Turn to the next page, the economic costs. Are those the same numbers that we've just described?

A. The costs here would be similar to the Valdez #5.

Q. You ran the same economic case studies using the different rates that we described before?

A. Yes. I ran the sensitivities similar to the cost sensitivities run in the Valdez #5.

Q. The next page, the summary of reservoir pressures, include compatibility?

A. Yes, sir.

Q. Let's turn now to the first of the economic illustrations of the case study run at 100 Mcf a day rate on the 225 well. This is, in fact, the same illustration that we just talked about in the Valdez 5, isn't it?

A. Yes. The costs associated with the projects are similar, and the sensitivities that I've supplied here provide a range of initial flow rate and reserves that could be applied to both cases.

Q. All right. Let's take this, now, and apply your rate of return percentage. That was 15 percent. Does that still work in this well?

A. Yes, sir, it does.

Q. That's what you're using for all the wells, is it not?

A. Yes. That's our cutoff.

Q. If you find on the Y axis 15 percent, and read horizontally over, let's find the right X axis volume of recoverable gas that's attributable to the Unit 225 well. It's about 900?

A. 946. Approximately 900.

Q. All right, 946. Now, if we take that and go up to the 15 percent rate of return, what does that show you about the three options for drilling this well?

A. That we do not have an economic case for the single completion or the dual completion, and we're almost marginal for the 15 percent rate of return for the commingled portion.

Q. So, in each example for these two cases, the economic conclusion is that downhole commingling is the only viable economic choice in order to go get reserves that might otherwise be

wasted?

A. That's exactly right. We would never complete the Fruitland Coal in this area without a commingle in this situation.

MR. KELLAHIN: That concludes my examination of Mr. Shipley. We move Exhibits 8 be introduced at this time in both cases.

EXAMINER STOGNER: Exhibit 8, in both cases, will be admitted at this time.

EXAMINATION

BY EXAMINER STOGNER:

Q. Mr. Shipley, the witness prior to you made a statement that these are deeper Pictured Cliffs productions than normal. Were those economics taken into account? It seems like the same figures or assumptions were utilized in these particular cases as was in the Huerfano area and the several previous ones prior to that.

A. Could you explain your question again? Are you looking at the costs associated with drilling a deeper well or--

Q. I guess you're not, so...

MR. KELLAHIN: No, I think he misunderstood the question.

FURTHER EXAMINATION

BY MR. KELLAHIN:

Q. What he wants to know, has the cost or the analysis been risk-adjusted with regard to depth? because some of these wells are deeper than others. Is there any risk factor applied to the analysis.

A. The Huerfano #549 costs you saw were associated with a shallow well. That was also going to be put on compression. These are deeper wells, higher drilling costs, but we don't have the operating costs associated with compression based on the higher pressures that we plan on seeing in these wells.

Q. So, does this analysis include those additional components, or has it left those aside?

A. Let me have the question again.

Q. I guess I'm confusing you, Kurt. Scott Daves' presentation was based upon an economic analysis which we have used for the two cases before Examiner Stogner today?

A. Exactly.

Q. All right, we have not yet adjusted, as I understand it, and correct me if I'm wrong, the

additional components of having these wells be deeper than Scott's well. Have those factors been calculated into the risk involved in the well, or the economics?

A. Oh, yes, they've been considered when running the economics for the Valdez #5 and the #225.

Q. All right. So we have factored in those for these two specific cases, so that Examiner Stogner is working with your best judgment as to what those actual costs will be for this well?

A. Yes. These costs and reserves are specific to the Valdez #5 and the 225 here.

Q. And Scott has taken the same methodology, then, and tuned it for his well?

A. Yes. The methodology for Scott's was similar to the methodology used in my economic analysis.

MR. KELLAHIN: All right.

FURTHER EXAMINATION

BY EXAMINER STOGNER:

Q. What is Meridian's goal on treating and completing these particular wells? Will they be fracture stimulated, and at what point will they

be fractured? Will they be fractured together, or separately?

A. They will be fractured individually and tested individually. The way we intend to do this is drill a well, move a completion rig on, and complete the Pictured Cliffs formation first with a fracture stimulation.

We will then test the well, receive a bottom hole pressure survey on the Pictured Cliffs formation, we'll set a bridge plug, isolate the Pictured Cliffs, and then fracture-stimulate and complete the Fruitland Coal, test the production, and obtain a bottom hole pressure survey for the Pictured Cliffs formation.

When we deem that all of these--that we have an accurate test on both formations, then we'll provide with the commingling.

EXAMINER STOGNER: Okay. I have no other questions of Mr. Shipley.

MR. KELLAHIN: That concludes our presentation, Mr. Stogner.

EXAMINER STOGNER: Anything further?

MR. KELLAHIN: No, sir.

EXAMINER STOGNER: Does anybody else have anything further in either Case 10745 or

10754?

If not, both of these cases will be taken under advisement.

Let's take a 15-minute recess.

(And the proceedings concluded.)

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case Nos. 10754 & 10745 heard by me on 1993.

, Examiner
Oil Conservation Division

CERTIFICATE OF REPORTER

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

I, Carla Diane Rodriguez, Certified Court Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Division was reported by me; that I caused my notes to be transcribed under my personal supervision; and that the foregoing is a true and accurate record of the proceedings.

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

WITNESS MY HAND AND SEAL July 19, 1993.

Carla Diane Rodriguez

CARLA DIANE RODRIGUEZ, RPR
CCR No. 4