NEW MEXICO OIL CONSERVATION COMMISSION

COMMISSION HEARING

SANTA FE, NEW MEXICO

Hearing Date AUGUST 19, 1993 Time: 9:00 A.M.

NAME	REPRESENTING	LOCATION
W. T. Kellahin	Kellahin & Kellahin	Santa Fe
Karen Aubrey	Law Office of Karen Aubrey	Santa Fe
Maurice Tremmel	Byram + Co.	SF
JB FRASER	Meridian Oil	Farmington
Arden Walker	"	"
GARY GREER	AMERADA HESS CORP.	MONUMENT, N.M.
Kirk Crain	Phillips Pet.	Farmington
Ron Folse	MARATHON OIL CO.	MIDLAND, TX.
William F. Carr	Campbell, Carr, Berge + Sheridan	Santa Fe
Alan W. Bolding	Chevron U.S.A.	Midland TX
Robert E. Green	Chevron U.S.A.	Midland, TX
Brian Wrotenbery	"	"
Reed Gilmore	"	"
LO VAN LYNN	OCD/EMNRD	SF
Rick Hall	OKUK Energy	Dallas
Tom Strickland	Amoco Production	Denver
Bill Hawkins	Gas Co of NM	Santa Fe
VICTOR T LYON		

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NAME	REPRESENTING	LOCATION
Bill Campbell	Marathon Oil Co	[illegible]
John Roberts	Kerr McGee Corp	OK
Lisa Cholston	Maralron Oil Co	Midland
C. Michael [illegible]	Navajo Oil Corp	Roswell

NEW MEXICO OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

CASE NO. 10799

IN THE MATTER OF:

Accepting Nominations and Other Evidence and Information to Assist the Commission in Determining the October 1993 through March 1994 Gas Allowables in Prorated Fields in New Mexico.

BEFORE:

CHAIRMAN WILLIAM LEMAY

COMMISSIONER BILL WEISS

COMMISSIONER JAMI BAILEY

FLORENE DAVIDSON, Staff Specialist

State Land Office

August 19, 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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ALSO APPEARING:

MR. VICTOR T. LYON

I N D E X

CHAIRMAN LEMAY: We'll now call case 10799. Case 10799, the Oil Conservation has called this case to accept nominations and other evidence and information to assist the Commission in determining the October 1993 through March 1994 gas allowables, in prorated fields in New Mexico.

I'll call for appearances in Case 10799.

MR. STOVALL: Mr. Chairman, Robert G. Stovall of Santa Fe, on behalf of the Division.

CHAIRMAN LEMAY: Additional appearances?

MS. AUBREY: Karen Aubrey, Santa Fe, on behalf of Kerr-McGee Corporation.

MR. CARR: May it please the Commission, William F. Carr with the Santa Fe Law Firm, Cambell, Carr, Berg and Sheridan. I would like to enter my appearance on behalf of Amoco Production Company and Chevron, USA.

CHAIRMAN LEMAY: Additional appearances? Mr. Kellahin?

MR. KELLAHIN: Mr. Chairman, I'm Tom Kellahin of the Santa Fe law firm of Kellahin & Kellahin, appearing today on behalf of Phillips

Petroleum Company, Meridian Oil, Inc., Marathon Oil Company, in association with Mr. Dow Campbell, and ORYX Energy Company.

CHAIRMAN LEMAY: Additional appearances?

MR. LYON: I'm Victor T. Lyon appearing for Gas Company of New Mexico. We're just here to listen.

CHAIRMAN LEMAY: No testimony, Mr. Lyon?

MR. LYON: No.

CHAIRMAN LEMAY: Additional appearances? Okay. As usual, we will take this in relationship to the fields, so those of you that have testimony for the different fields, come forth and give the testimony. You will be back and forth if you represent a client on more than one field.

We'll begin, Mr. Stovall, with the Division's witnesses.

MR. STOVALL: Mr. Chairman, I would ask that we swear the witnesses.

CHAIRMAN LEMAY: All those who will give testimony, please stand and raise your right hand.

[And the witnesses were duly sworn.]

MR. STOVALL: Before I present a technical witness, Mr. Chairman, as we have done in the past, I would like to ask Mr. Ron Merrett to come forward and give an overview of the New Mexico gas market situation.

CHAIRMAN LEMAY: Mr. Stovall, does that imply that Mr. Merrett is not a technical witness?

THE WITNESS: I'll address that.

RONALD H. MERRETT

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

EXAMINATION

BY MR. STOVALL:

Q. While you're getting organized, Mr. Merrett, would you please state your name and place of residence?

A. Yes. My name is Ron Merrett. I'm director of the Office of Interstate Natural Gas Markets. Today, I'll present a brief overview of the natural gas market as we perceive it from New Mexico.

Q. Please proceed, Mr. Merrett. You do have some slides to show the audience and the

Commission with respect to changes since the last hearing, is that correct?

A. That is correct. I can't recall now, I think it's probably eight slides, and that will constitute my testimony.

These slides are similar to the slides which I presented at the last hearing six months ago, and they're simply an update to include the months since the last hearing. Our latest month of information is, in fact, May of 1993.

As you see from this graph, New Mexico's production is as high, or perhaps a little higher, than the previous year, which was probably 1977. This is annual production by year.

The next slide is one you needn't dwell on, it simply shows the reserve to production ratio in New Mexico is still considerably higher than any other of the states in the U.S.

This slide simply shows the location of New Mexico's gas principally in the San Juan Basin. The reserves are more than three-fourths in the San Juan Basin.

This slide shows natural gas production by basin, and the only significance of this slide

is that production is roughly one-third in the Permian conventional gas, one-third in San Juan in conventional gas, and one-third in San Juan coal seam gas. That continues to be the proportion.

I think it's interesting to note that the Permian production continues to stay fairly level, just above 40 billion Mcf a month.

This simply shows the monthly gas production by year. The most significant thing here is the orange bars show the monthly production for 1993, and May of 1993 is the highest month we've had in quite a long time. Production continues to remain at a high level.

This is the production estimate by month. This is our own estimate. May is there, and it's actual production up to May. Our forecast is that the estimated production will continue with very little increase.

I think the most significant thing is, there's very little seasonal variation. No seasonal variation in the casinghead. Very little seasonal variation in the Permian conventional. There is some seasonal variation in the San Juan conventional, which seems to take

the swings, and the San Juan coal seam shows very little seasonal swing.

This slide attempts to project production. And I emphasize production and not demand. It projects production over the next year. And there is some seasonal variation shown. This is a projection, and my economist tells me that's not the same thing as a forecast, though I'm not quite sure why. This is our own projection, and there is a fairly wide band of uncertainty surrounding the projection. However, the significant thing is that the forecast production has continued to rise.

Final slide is our projection carried on into 1994. In 1992, we produced 1.248 Tcf in the state. We project 1.385 Tcf in the state in 1993, and that projection appears to be fairly in line with our forecast the way production is going.

If you extrapolate that to 1994, and we've no reason not to, the projection is nearly one and a half Tcf in 1994.

That concludes my series of slides, and my testimony.

Q. The information you've presented is

sort of, to assume an economist's view, a macro picture of the gas production and markets for New Mexico, is that correct?

A. Well, what it does, yes, that's correct, it says New Mexico is simply meeting part of the demand of the North American gas market. The demand is not in New Mexico, but it is in North America, and we meet part of that demand.

Q. Demand for New Mexico gas as opposed to New Mexico demand, yes.

And would it be correct to say, from the information and from your projections, that at least for the next six months, production and potentially demand for gas are going to remain steady or increase slightly overall?

A. There will be an increase, yes.

MR. STOVALL: I have nothing further.

CHAIRMAN LEMAY: Thank you, Mr. Stovall. Questions of Mr. Merrett? Any questions by Commissioner Weiss?

COMMISSIONER WEISS: Yes.

EXAMINATION

BY COMMISSIONER WEISS:

Q. On your forecast, how do you do it?

A. It's done under my direction, Mr. Weiss, and it's done partly on the basis of the Futures pricing market, it's done partly on the basis of our information we gather from federal government, and from trade publications, and from other forecasts of demand in the United States.

And also the California Gas Report, which gives demand for California, where probably 80 percent of New Mexico's gas still goes. It's done from a combination of demand forecasts, plus our own knowledge of wells connected and to be connected in the state.

So, it's a combination of data, and it's our own forecast, and it's nobody else's.

COMMISSIONER WEISS: Thank you.

CHAIRMAN LEMAY: Mr. Merrett, just one question.

EXAMINATION

BY CHAIRMAN LEMAY:

Q. In terms of the market in California, there's a projected overcapacity, I assume, at some point in time, maybe when the PGT expansion is completed. How does that relate to the next six months in our forecast for demand? Is ther any timing when that expansion would be in pla

to bring more Canadian gas into California?

A. My recollection is that the timing of that expansion will not be complete until after the proration period we're looking at. So, it would not affect it.

There is some service of pipeline capacity into California, however, so as far as I know, there's no, on an average basis, there's no reason to suppose any restriction of pipeline space into California. There will be spot shortages caused by plant outages or compressor stations being down, or whatever.

In principle, there's no reason why pipeline capacity would restrict supply or restrict demand from the state.

Q. Assuming that PGT remains, it's full, and I guess you can't get any more gas in it, the logical place to meet California's demand would be the Southwest supplies and possibly Rocky Mountain?

A. That's correct, Mr. Chairman.

CHAIRMAN LEMAY: Thank you, Mr. Merrett. Additional questions? If not, the witness may be excused.

You may call your next witness, Mr.

Stovall.

MR. STOVALL: Mr. Van Ryan.

LARRY VAN RYAN

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

EXAMINATION

BY MR. STOVALL:

Q. Would you please state your name and place of residence?

A. My name is Larry Van Ryan, and I live in Santa Fe, New Mexico.

Q. How are you employed, Mr. Van Ryan?

A. I'm employed by the Oil Conservation Division as a chief petroleum engineer.

Q. Mr. Van Ryan, among your duties as the chief petroleum engineer for the Division, are you responsible for the gas proration system and allowable determinations?

A. Yes.

Q. Would you explain briefly any changes in the technical process by which those determination schedules have been generated this time?

A. We're in the process of taking, the OCD, the State Land Office and the Taxation &

Revenue Department, into a combined computer data base called OnGuard.

We have accelerated one program in OnGuard, which is gas proration. We have used a combination of what we're able to get out of OnGuard, for verification of data with our existing systems. That's the only change that we've had.

But, I feel that we are progressing, and we have probably less errors in the new system than we've had in the old one.

Q. Again, this is primarily informational, but the exhibits that we are about to present, is it correct that they were generated on the OnGuard system?

A. Well they're a combination. They were a combination of OnGuard and hand calculations using our old system, to arrive at the actual production figures.

Q. And is it your opinion in reviewing that that the base of information that goes into this is more reliable than has been even in the past?

A. I think it is.

Q. And this will set the base for future

such schedules to be generated through OnGuard, which will start out with, again, more reliable information and a program that's understood to calculate correctly?

A. Right. Three of the last couple of proration periods we've made some changes, as most everybody is aware, and I feel that we have more accurate data than we've had for quite some time.

Q. Mr. Van Ryan, turning specifically, we have prepared exhibits in connection with this hearing, have we not?

A. Yes, we have.

Q. And just for information, Exhibit 1 has been denominated for the southeast New Mexico prorated gas pools, and Exhibit 2 has been denominated for the northwest prorated gas pools.

Mr. Van Ryan, have there been any changes, from Exhibits 1 and 2, from those schedules which were sent out with the notice of this hearing?

A. There are, essentially, no changes. There's one correction in Exhibit 1, for Southeast New Mexico. On line 4, under the

Eumont pool. We had made a correction on line 1 and it was not carried over to line 4. It should read 2,681,478. We had a typo there, which was 2,631,000. The figures below that are still correct. It was just a typo that occurred.

Q. And that correction has been made on Exhibit 1, which is distributed today?

A. It has.

Q. Let's turn first to the Northwest pools, and would you just briefly summarize the information that is contained on Exhibit 2, and explain how it's used and what the bottom line figure is, if you will?

A. Okay. The basis for the proration system in the State of New Mexico is to base our figures on the production for a six-month period, the previous, the year-ago six-month period, so that we're talking about equivalent times of year. This was based originally on the fact that we had hired a man in the wintertime in higher production, and we felt that the two periods reflected winter production and summer production.

So, for this period which we're talking about, which will be the October 93 to March 94

production, we have taken the average monthly sales for the period from October 92 through March of 93, and these are shown on line 1 on Exhibit 2.

Q. These are actual sales figures for the previous October through March period?

A. That's correct.

Q. We probably see this with a place in there for adjustments and nominations. However, we don't advise any at this time. This is what this hearing is for. Beyond that, we go through a series of calculations to determine what the allowable would be or what the F1 and F2 factors are.

Those will be shown on line 9, where we have the acreage factor, which we sometimes call the F1 factor, and on line 10, which is the acreage times deliverability factor. It's most normally referred to as the F2 factor.

All of these figures are historical figures, where we take the total average for the sales for the pool, we determine a number of non-marginal gas proration units, we deduct that production out of that figure, to come up with a monthly marginal pool allowable. We do not

prorate the marginal pools, marginal gas proration units. We only prorate the non-marginals.

The figures below line 6 are calculated with the non-marginal pool volumes. That's how we arrive at lines 9 and 10, which are the critical numbers here.

Q. So, in order to determine the allowable for any particular gas proration unit, an operator could use the appropriate mathematical formula, with lines 9 and 10, to determine what a specific gas proration unit would be allowed to produce?

A. That's correct.

Q. Are these specific recommendations of the Division for an allowable for these four pools in the Northwest?

A. These are what we would recommend just working off of historical data. I think the purpose of this hearing is to take adjustments, if there is some testimony that would prove that these should be changed.

Q. These are really a starting point?

A. Yes.

Q. Just for the purpose of the use of the

form, it really doesn't matter where you make adjustments, really? We could, for all practical purposes, eliminate line 2, called "nominations," is that not correct?

A. Normally, yes, that has kind of fallen out. That's a carry over from the time when the pipelines were the purchasers and they came in and nominated the amount of gas they expected to purchase. It's a carry over from the old system.

Q. Do you have anything further you wish to add with respect to the Northwest pools in Exhibit 2?

A. No. I believe everything in there is based on historical data, and lines 9 and 10 are what we calculate out of that.

Q. Now, would you turn to the Southeast, Exhibit 1. Is it essentially the same process to go through to gather the information and insert historical data into the exhibit?

A. The same rules apply, as far as how we set the average pool sales. And the allowables, then, are only based on acreage in the Southeast part of the state. So, instead of having an F1 and an F2 factor, we simply have an F1 factor, but we do everything else identical.

Q. Once again, in order to determine an allowable, the operator can take the information on line 8, multiply it times the number of acreage factors for a particular gas proration unit, and determine the monthly allowable?

A. That's correct.

Q. And again, this is based strictly on the historical data for the light production period for the previous year?

A. Yes.

Q. These are not specific recommendations, but rather a starting point for the Division, to which adjustments may be made based upon evidence taken at this hearing?

A. Yes.

Q. Do you have anything further which you wish to add to your testimony regarding these exhibits?

A. Well, I would like to point out on this Exhibit 1, that we have three pools in the Southeast part of this state, which have minimum allowables. They have the asterisks just above the pool.

The figures that we have for F1 factors are obviously below those. That doesn't mean

that's what we'll come up with. These would normally be adjusted by the Commission, to go ahead and give the minimum allowables. There's no change in those pools just because of this hearing, for the minimum allowables.

Q. In other words, even in those pools with the minimum, you've just taken the historical sales from the prior hearing?

A. Right.

Q. And, based upon the previous orders established in the allowable, there will be an adjustment entered on line 3 to raise those allowables to the minimum for the pool?

A. That's correct. We have two of the pools which are below the minumum, and one pool which is above, but we won't lower the one above, because that's how it calculates out. Minimum is, as I said, a minimum. That's just the floor.

Q. I notice also, on line 7, it lists the number of the non-marginal acreage factors in each pool, is that correct?

A. Yes.

Q. And I noticed that there are two pools, the Carlsbad Morrow and the Catclaw Draw Morrow which show no figures on line 7. Can you explain

that?

A. That's correct. When we did our calculations with the prior allowables that we had set, when we reclassified the wells and checked their over- and underproduction, we determined at this time there was not any non-marginal gas proration units in those two pools.

So we made a recommendation, on line 8, to establish some F1 factors that are above, in most cases here, above any of the wells that produce in the field, but it still allows us to do a calculation and a check. It would also, in the event of a new well or recompletion in one of these zones, it would give us the information or the ability to keep track of that well and be sure we're not allowing somebody to come in with a real barn burner and perhaps drain somebody else.

Q. Does that complete your testimony with respect to these exhibits?

A. Yes, it does.

MR. STOVALL: Mr. Chairman, I have no further questions. I would offer Exhibits 1 and 2 into the record, as the preliminary

recommendations of the Division.

CHAIRMAN LEMAY: Without objection, Exhibits 1 and 2 will be entered into the record. Questions of the witness?

Commissioner Bailey?

COMMISSIONER BAILEY: No.

CHAIRMAN LEMAY: Commissioner Weiss?

COMMISSIONER WEISS: Two things.

EXAMINATION

BY COMMISSIONER WEISS:

Q. Tell me which one is F1 and F2 again?

A. F1 would be line 9, which is the acreage factor alone on Exhibit 2, and F2 would be line 10 on Exhibit 2.

Q. And then on Exhibit 1, which are they?

A. Exhibit 1 only has an F1 factor and that's line 8.

Q. These exhibits, neither one allows for this projected forecast increase of Ron Merrett's?

A. No. These are all historical figures only.

COMMISSIONER WEISS: Thank you.

CHAIRMAN LEMAY: Additional questions? I have none.

The witness may be excused. Thank you. Do you have any preference whether we go Northwest first or Southeast?

MR. STOVALL: Mr. Chairman, we've gotten into a discussion about doing the Northwest first. There are fewer parties and fewer pools.

CHAIRMAN LEMAY: Sure, that's fine. We'll do the Northwest first, then.

CHAIRMAN LEMAY: The first field in the Northwest will be the Basin Dakota. Do you wish to call your witness, Mr. Kellahin.

MR. KELLAHIN: Thank you, Mr. Chairman. I have visited with Mr. Carr, and he and I have all the presentations in the Northwest. I believe the way the witnesses have organized their exhibits and presentations, they would deal better with both pools presented with each individual witness. And we're dealing with Basin Dakota and the Blanco Mesaverde. Is that all right?

CHAIRMAN LEMAY: Fine, whichever is easier for you all.

KIRK CZIRR

Having been first duly sworn upon his oath, was

examined and testified as follows:

EXAMINATION

BY MR. KELLAHIN:

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

A. Kirk Czirr, field development supervisor for Phillips Petroleum Company in Farmington.

Q. On prior occasions, have you testified as an expert in prorationing matters before the Oil Conservation Commission, concerning the prorated gas pools in Northwest New Mexico?

A. Yes, sir, I have.

Q. Pursuant to your duties and employment by your company, have you continued to be familiar with and informed on the prorated gas pools and your company's production and involvement in those pools?

A. I have.

MR. KELLAHIN: We tender Mr. Czirr as an expert witness.

CHAIRMAN LEMAY: His qualifications are acceptable.

Q. Let's look at Dakota first.

A. Okay.

Q. And before we talk about specific reasons, let's have you describe for the Commission any adjustment that you propose to make in that pool. And, if an adjustment is proposed, what that number is.

A. Okay. On my Exhibit No. 1, the left-hand column of numbers, which is for the Basin Dakota pool, Phillips Petroleum is recommending approximately a 68 million cubic feet per month adjustment. On paper it's 67593, in addition to the OCD-proposed non-marginal pool allowable of 182 million cubic feet per month.

This give us a total non-marginal pool allowable of 250 million cubic feet per month.

Q. To do the arithmetic and the calculation, you would simply take line 1, off of the Division spreadsheet for this pool, the 9.5 Bcf?

A. Yes.

Q. And then you would add in the 67,000-plus adjustment?

A. Yes, sir.

Q. And whatever that total is, then, becomes the monthly pool allowable?

A. Yes, sir.

Q. All right. Having understood the mechanics, describe for us the reason to make the adjustment, in your opinion.

A. First of all, with the proposed adjustment in place, it brings the overall gas proration unit allowables in line with those granted during the 1992-1993 winter period a year ago. So we're being consistent there.

We feel that that is the minimum level necessary to continue to encourage development of individual gas proration units. It would still, certainly, call for proration. For deliverabilities in excess of 700 Mcf a day, we would still be subject to curtailment.

Q. You're specifically addressing the non-marginal wells?

A. Yes.

Q. All right. Give us an indication, if you will, in a general way, for the non-marginal GPUs, I understand is subject to adjustment for deliverability, but on a daily basis, with this adjustment, what's the volume of gas we're dealing with?

A. I'm not sure I understand.

Q. Take a non-marginal GPU. On a daily

basis, what's the cap?

A. Okay. Again, for a 700 Mcf a day deliverability, with the adjustment, our allowable would be 98 percent of that deliverability. Without the adjustment, it would only be 72 percent of that deliverability.

Q. So, on average, you're dealing with a non-marginal GPU subject to adjustment for deliverability, that's making 700 Mcf a day or less?

A. Right.

Q. And the reason to have that number in place, then, is an incentive to do what, Mr. Czirr?

A. For continued development of gas proration units throughout the pool. Phillips recently spudded our first of nine Basin Dakota infill wells. These have very marginal economics, and we did it on the premise that we would be able to produce the wells with minimal adverse effects from curtailment.

Q. And this adjustment, then, will maintain the level of allowable for the non-marginal wells that you enjoyed for the last comparable period?

A. Yes, sir.

Q. Let's go now to the MesaVerde pool.

A. Okay.

Q. Give us the number. What is the proposed adjustment, if any, in the schedule?

A. The proposed adjustment is a positive 437 million cubic feet. Which, added to Line No. 1 in the OCD schedule, would give you an overall pool allowable of 17.15 Bcf a month.

Q. Having understood your method, what is the reason for the adjustment?

A. Again, this is consistent with the allowables granted in the previous winter period, 1992 to 1993. And again, these allowables provided sufficient incentive for additional development in the MesaVerde.

Q. You've summarized that information on Exhibit No. 1. I will not have you repeat it. Turn to Exhibit 2, and help us understand that display.

A. Okay. The main thing I'm trying to do with Exhibit No. 2 is point out that, really, in both pools, the Basin Dakota and the Blanco MesaVerde, we're dealing with an extremely small number of non-marginal wells, non-marginal GPUs.

You have approximately 3800 wells, not GPUs, but wells within each pool. What we've done is taken Dwights production data for the Blanco MesaVerde and the Basin Dakota pools for the year 1992, and sorted that data, to arrive at a production distribution, which is shown on Exhibit No. 2.

The bar graphs associated with this exhibit, they go along with the left vertical axis on this exhibit, showing the number of MesaVerde and Dakota wells which produced within a specific volume range during the year 1992, and that volume range went from 1 million cubic feet up to just over 250 million cubic feet for the year. Anything over 250 million cubic feet was lumped in at that point.

The line graphs associated with this exhibit, they go with the right vertical axis, and they show the cumulative number of MesaVerde and Dakota wells, with 1992 gas production less than or equal to a specific level. So, it's kind of a cumulative distribution.

The main point of the exhibit is that you'll note that out of the plus or minus 3800 wells in each pool, the vast, vast majority of

those wells were producing at very low levels during the year 1992. All we're really curtailing is the very few wells on the far right-hand side of the graph.

I believe that this is consistent with the number of non-marginal GPUs which the OCD has represented in their mailings to us. It becomes, when you're dealing with that small number of non-marginal wells, in Phillips Petroleum's opinion, the primary concern should be establishing allowables based on what effect it has to the individual GPU allowable.

When you're looking at an overall pool allowable, you can lose 68 million cubic feet adjustment, which was recommended for the Basin Dakota pool, you can lose that very easily, out of approximately 10 Bcf per month. But, since you're dealing with such a small number of non-marginal wells, it has a very large effect on those non-marginal wells and our ability to continue to develop the pool.

Q. That's not a criticism of the system, is it? It's simply a reaction of the function of the system?

A. Right. I think it's just, as we've

produced these pools, more and more wells have declined over the tens of years to the point where the production levels are moderately low; and we are, rightfully so, only prorating a few of the larger wells on the right-hand side of this exhibit.

Q. If the Commission approves the adjustment, is there market demand sufficient to accept the additional production that you're requesting from the pools?

A. Yes, sir, in our opinion there is.

Q. Do you see any pipeline restrictions or physical limitations on the ability of the system to handle that additional gas that you're proposing to be applied into these pools?

A. No, sir.

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

CHAIRMAN LEMAY: Exhibits 1 and 2 will be admitted into the record without objection.

Questions of the witness?

Commissioner Bailey? Commissioner Mr. Weiss?

EXAMINATION

BY COMMISSIONER WEISS:

Q. If I read this graph right, there's only a handful of wells--none of them make a million a day, huh?

A. I believe, in the Blanco MesaVerde, there are just a very few wells that might be over a million a day, probably less than half a dozen. And they were grouped into the final data range on that graph.

Q. Now, these infill wells you're going to drill, and therefore want the increased allowable based on your expected performance from these wells, is that right?

A. Yes. Well, the allowable that we're requesting again is consistent with what we had a year ago, and results in, for these average type of wells that we're drilling, only moderate curtailment. And that's what we can live with and still justify drilling the wells.

Q. Are these proposed wells, the ones you're drilling now, do they fall geographically around the wells that are in the X axis at 255, on your chart?

A. Typically, okay, the wells we're

drilling right now are infill wells. The existing parent wells on those 320-acre gas proration units, typically have current production in the 200 to 350 Mcf a day range.

Q. Which is how many a year? I have trouble there.

A. Approximately 60 to 100 million cubic feet a year.

COMMISSIONER WEISS: That's all the questions I have. Thank you.

EXAMINATION

BY CHAIRMAN LEMAY:

Q. Mr. Czirr, is it your testimony that you had this allowable a year ago, but given the production statistics of your drilling program, of your anticipated production, it hasn't measured up to, maybe, what you expected?

Because the statistics show that you're not producing what you're requesting. Is it really an incentive to drill additional wells, like Commissioner Weiss said, or is there some mechanism in there that understates the production?

Can you get into that a little bit more? I'm not quite clear why you want the

higher allowable, if the wells haven't produced in the past.

A. Well, included in this bar chart, the only recent wells, at least that Phillips has drilled, were in the Basin Dakota. Those were year-end 1991, so they would be included in this 1992 production. There were only three of those wells we drilled at that time. So, they hardly make an impact on this chart.

Two of those wells were very successful and they produced initially at rates of 5 million a day, and rapidly declined to approximately 700 Mcf a day, and the third well was essentially a dry hole.

Q. So you've had some indications of success, and in order to justify the additional drilling, you would need roughly a 10 million a month allowable to do that in the Basin Dakota? Is that what you're saying?

A. 10 million a month? I'm not sure I understand. A 68 million adjustment was what we were asking for.

Q. But on a non-marginal well, what would that be, in terms of an average monthly?

A. Well, we would be curtailing at 700 Mcf

a day for GPU. Any deliverabilities in excess of that would be subject to the calendar.

Q. You would anticipate deliverabilities in excess of 700 Mcf a day, then?

A. Combined GPU, yes, taking into account the existing parent wells that are producing at 300 Mcf a day, and initial deliverabilities in the, maybe, 1 million a day range and are rapidly declining, yes. So, we might have an overall GPU of 1300 or so for the first year.

Q. And this was in terms of an infill drilling program, so you're combining the two deliverabilities?

A. Yes, sir.

CHAIRMAN LEMAY: I have no further questions. Additional questions of the witness?

If not, he may be excused. Thank you, Mr. Czirr. Mr. Kellahin?

MR. CARR: May it please the Commission, at this time we would like to make a presentation for Amoco, and then Mr. Kellahin will follow with a presentation for Meridian.

CHAIRMAN LEMAY: That's fine, Mr. Carr. You may do so.

JAMES WILLIAM HAWKINS

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

EXAMINATION

BY MR. CARR:

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

A. James William Hawkins.

Q. Mr. Hawkins, where do you reside?

A. In Denver, Colorado.

Q. By whom are you employed?

A. Amoco Production Company.

Q. In what capacity?

A. As a petroleum engineer.

Q. Do your duties with Amoco require that you familiarize yourself with the New Mexico prorationing system?

A. Yes, they do.

Q. And have you done that?

A. Yes, I have.

Q. Are you familiar with the production levels and trends for the prorated pools in the San Juan Basin?

A. Yes, I am.

Q. Have you previously testified before

this Division and had your credentials as a petroleum engineer accepted and made a matter of record?

A. Yes, I have.

Q. You've testified in prior allowable hearings, have you not?

A. Yes, I have.

Q. Are you familiar with the preliminary allowable figures for the prorated pools in Northwest New Mexico that have been proposed by the Oil Conservation Division?

A. Yes.

Q. And are you prepared to make recommendations to the Commission concerning adjustments to these preliminary figures?

A. Yes, I am.

MR. CARR: Are the witness' qualifications acceptable?

CHAIRMAN LEMAY: His qualifications are acceptable.

Q. Have you prepared certain exhibits for presentation here today?

A. Yes, I have.

Q. Would you refer to what has been marked as Amoco Exhibit No. 1, identify that exhibit,

and then review this for the Commission?

A. Yes. Amoco Exhibit No. 1 is a table showing the four prorated pools in the Northwest Basin, and it shows the NMOCD preliminary estimate which is based on the prior year's equivalent period production, or sales, I should say.

It also has a line for an Amoco-recommended adjustment for each of those pools, and then a resulting monthly pool allowable. We've looked at all four of the pools in the Northwest. The Basin Dakota, Blanco P.C. South and Tapacito. In our opinion, they all have a sufficient allowable to accommodate current production levels; insignificant differences from current production, in our opinion.

The Blanco MesaVerde allowable of 16.7 million cubic feet per month is probably--or I guess it's Bcf per month, is, in our opinion, a little bit below current pool production from that pool. We would recommend a 500 million a month correction to bring that monthly pool allowable up to 17.2 Bcf.

Q. Would you now go to Amoco Exhibit No.

2, identify and review that for the Commission?

A. Yes, Exhibit No. 2 is a production curve from the Blanco MesaVerde pool. It's shown in Bcf a month, and it's shown over the last two and a half years.

You can see that, if you look in 1993, the actual production figures--and I should point out, this comes from the monthly statistical report published by the NMOCD, has actual production figures for January, February, March and April, and May and June we have shown with triangles, estimates of pool production based on Amoco's internal production figures from our operated wells.

And we've grossed up, on a ratio of our internal production to total pool production, to what we think the total pool production probably is. Our production increased in May and June, and, based on that, would reflect an increase in total pool production, May being roughly 18 Bcf a month, and June, approximately 17 Bcf a month.

And just our overall reflection of this curve is that production from the Blanco MesaVerde is holding fairly steady, around the 17 Bcf a month range, maybe slightly higher in the

last couple of months' production that we have available.

So, it's on that basis that we would recommend the pool allowable be set at 17.2 Bcf, which is the current pool allowable for this period.

Q. Mr. Hawkins, if Amoco's recommendation is adopted, will that, in fact, bring the allowables more in line with the ability of this pool to produce?

A. I believe it will stay in line with the current production level, yes.

Q. Would these recommended allowables more accurately reflect the demand for natural gas from the pool?

A. Yes, I think they will.

Q. Do you have anything further to add to your testimony?

A. No. I do not.

Q. Were Exhibits 1 and 2 prepared by you?

A. Yes, they were.

MR. CARR: At this time, Mr. LeMay, we move the admission of Amoco Exhibits 1 and 2.

CHAIRMAN LEMAY: Without objection, Exhibits 1 and 2 will be admitted into the

record.

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

CHAIRMAN LEMAY: Questions of the witness?

EXAMINATION

BY COMMISSIONER BAILEY:

Q. Do you expect to be drilling more wells in the MesaVerde this year?

A. In fact we're going to be looking at a number of wells to be drilled in 93 and 94, and we'll be looking at all of the pools, primarily Dakota and MesaVerde. Some P.C. wells, also.

Q. Have you taken that into account in your recommendation here, or is that separate?

A. I think that the drilling that we're doing right now will have a very small amount of impact on the next six-month production period. As we get through our 94 drilling, we might see some impact on the total pool, but right now it's going to be a relatively small impact on the total pool production.

COMMISSIONER BAILEY: That's all I have.

CHAIRMAN LEMAY: Commissioner Weiss?

COMMISSIONER WEISS: Yes.

EXAMINATION

BY COMMISSIONER WEISS:

Q. Are you familiar with the location of the Phillips infill wells?

A. Yes, sir, I am.

Q. Will they result in drainage of Amoco's leases?

A. I don't think they will.

COMMISSIONER WEISS: Thank you.

CHAIRMAN LEMAY: I have no questions of the witness. You may be excused, Mr. Hawkins. Thank you.

JAMES B. FRASER

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

EXAMINATION

BY MR. KELLAHIN:

Q. Would you please state your name and occupation?

A. My name is James Fraser. I'm a production superintendent for Meridian Oil, Inc., located in Farmington, New Mexico.

Q. As the production superintendent for Meridian in Farmington, have you had past

experiences with the prorated gas pools in Northwestern New Mexico?

A. Yes sir, I have.

Q. And have you previously qualified and provided testimony as an expert witness before this Commission on that subject?

A. Yes, sir, I have.

Q. And you continue in that capacity today, with your expert testimony concerning your company's recommendations for these prorated pools?

A. Yes, sir.

MR. KELLAHIN: We tender Mr. Fraser as an expert witness.

CHAIRMAN LEMAY: His qualifications are acceptable.

Q. Let me have you turn, sir, to Exhibit No. 1. Summarize for us what, if any, recommendations you have for adjustments in the prorated pools in Northwestern New Mexico.

A. Exhibit No. 1 consists of the top line being the recommendation made by the Oil and Gas Commission on the prorated pools for the next six-month time frame; specially, the Basin Dakota, the Blanco MesaVerde, and the Blanco P.C.

South. Under the "Current" line is listed the OCD number, approximately 9.6 Bcf a month for the Dakota, approximately 16.7 Bcf for the MesaVerde, and approximately 1.4 Bcf per month on the Blanco P.C. South.

The second line there is a Meridian-recommended adjustment. Similar to Amoco's recommendation, we don't recommend any adjustments in either the Dakota or the Blanco P.C. South, and are recommending a 500,000 Mcf per month increase on the Blanco MesaVerde.

That would give a total monthly pool allowable for the respective pools of 9.6 Bcf per month, 17.2 Bcf per month, and 1.4 Bcf per month, respectively.

Q. Mr. Fraser, describe for us the basis upon which you make that conclusion concerning the adjustments or lack of adjustments.

A. If you turn to Exhibit 2, which is a two and a half year production plot of the Basin Dakota pool, there are several points I would like to make about this exhibit.

The first being that the solid squares on the right-hand side of the curve are Meridian's estimates of the pool's production for

the months of May and June of 1993.

The solid line that says "average equals 9.6" is the arithmetic average of the preceding 12 months' pool production for the Dakota. You can see that arithmetic average is 9.6 Bcf per month, which is essentially the same as the recommended allowable for the next six-month time frame.

The other significant point I would like to point out, and I've made this testimony several times, is that in March, April and May of 1992, there was a significant event in the San Juan Basin that allowed all of these conventional pools to increase production dramatically. And that was the expansions out of the basin of the two major pipelines that transport gas out of the basin.

As a result of those expansions, field gathering pressures have decreased in the basin, which have allowed these two conventional pools to increase fairly significantly over the last year. But, as regards the allowable for the next time frame, we believe that the Dakota value of 9.6, is sufficiently high to allow the production of this pool.

Q. And that would track the historical average of production out of that pool for this period of time shown on the display?

A. Yes, it's essentially the same number as the previous 12-month average.

Q. Explain the purpose of the dashed forecast, that has a peak in May of 93.

A. Once again, those are simply Meridian's estimate of the pool's production, based on our internal estimate of Meridian's operated production, grossed up by a factor of what has been our historic ratio in the pool's production. We historically average between 29 and 30 percent of the pool's production.

Q. How good are you at forecasting the future demand for production from the pool?

A. It's been fairly accurate the last couple of proration hearings. We've discussed this issue before, and we've been within a couple hundred thousand Bcf per month, for every month we've estimated; so, it's fairly accurate.

The next curve, Exhibit No. 3, is just further application on the points I previously made. This is a bar graph from the last eleven years of the Basin Dakota production on a Bcf per

month basis.

The far right-hand side has a scale of pressure on psi, from zero to 400 pounds. The significance of this, once again, is that the 1993 year-to-date Dakota production has been higher in the last seven years, I believe, since 1985. This is a direct relationship, I believe, in the decreasing pressures that have been designated as the triangles on the exhibit.

In 1991, there was a field gathering pressure of approximately 390 psi. In the last two years that pressure has dropped to 300 psi. Subsequently, the production in the Dakota has risen from slightly under 7 Bcf per month in 1991, to approaching 10 Bcf per month in 1993.

Q. Let's turn now to the Blanco MesaVerde, to Exhibit 4.

A. This is the same presentation on the MesaVerde as we've just gone through on the Dakota. Once again, this is monthly production of the Blanco MesaVerde pool on a Bcf per month basis, from January of 1991, or the last two and a half years.

Once again, I've estimated the May and June numbers, based on Meridian's internal

values, and grossed that up to the total pool production. I've estimated 18.2 Bcf per month in May, and 17.0 Bcf per month in June.

Using those two numbers, as well as the previous 10 months, the subsequent 12-month average for the MesaVerde is 16.8 Bcf a month.

Q. If you look at that average, that's pretty close to the Division's schedule without adjustment, the 16.7 Bcf?

A. That's correct.

Q. And yet, you're requesting half a Bcf adjustment. What's the purpose?

A. Several reasons for that, sir. The first being that even over that 12-month time frame, the MesaVerde has shown a consistent ability to produce above 17 Bcf per month. Six of those 12 months, in that last 12 months, have production over 17 Bcf. The two months that really kind of knocked the average down, if you will, are February and April of 1993.

I think there's two reasons for that. One is, especially in February, of course, it's a short month. There's only 28 days in the month. The other thing is, the spring of this year, both February and April, the San Juan Basin had a

tremendously wet winter, and it was incredibly hard to get to all the wells and maintain production in the conventional production. That's why I believe those two months had an adverse effect, due to the inclement weather conditions.

As I said, in the next six-month time frame, I think the production of the MesaVerde pool will increase to average in the 17.2 Bcf range. I think that's due to several reasons. Meridian is concentrating the bulk of our development activity, both in 1993 and 1994, towards the MesaVerde.

In addition, operators, as well as other pipeline companies, are looking for more efficient ways to utilize the asset in the MesaVerde pool, to exploit the existing production. One of those methods is increased compression facilities out on the fuel gathering systems.

Both Meridian, and I know several of the pipeline companies, are evaluating projects to increase production from existing MesaVerde wells with compression projects.

And I believe those two conditions will

allow the MesaVerde production to increase in the next six-month time frame. The MesaVerde is more applicable to compression projects than the Dakota, due to the nature of the reservoir rock. It's more highly permeable than the Dakota, and therefore it responds quicker and better to reduced gathering pressures.

For those reasons, I believe the MesaVerde production will increase above that arithmetic average that we've seen in the last 12 months.

Q. Do you have a display that shows the effect, if any, of adjustments in pipeline pressure on production?

A. Yes, sir, Exhibit No. 5 shows the same presentation as I've shown on the Dakota. Once again, this is a yearly bar graph of the production of the pool on a Bcf-per-month basis on the MesaVerde.

As you can see by the bar graph, I estimate 1993 will have the highest production in the MesaVerde pool since before 1982; so, with the last 11 years, 1993 will be the highest production year.

Once again, I believe part of that is

due to the decrease in fuel gathering pressures. As I previously testified, the 390 psi, in 1991, has dropped to 300 psi approximately in 1993, which has allowed the pool's production to increase. In 1991, the pool's production was less than 13 Bcf per month. Right now, I think the pool's deliverability is in the 17 Bcf per month range.

Q. Would you turn to your last exhibit, No. 6. Summarize it for us what you've shown.

A. This is a spreadsheet which details the last three proration periods; the summer of 1992, the winter of 1992-93, this current summer of 1993, and then the next winter period. What it summarizes is the allowable for those three pools I've discussed this morning, and the actual production for the same time frame.

The point on all three pools is that the actual production has equaled to or exceeded the allowable for those three time frames. Once again, I think this is a direct effect of the pipeline pressures in the basin that have allowed the basins to increase production and have been able to exceed or meet the allowable that has been granted in the last three proration periods.

Q. Is there market demand for pool production from these prorated pools, for this level of production?

A. Yes, sir, there is.

Q. Will this level of production exceed market demand?

A. No, sir, I don't believe it will.

Q. How about the capacity of the system to take these levels of production?

A. Yes. As the system currently exists, there's still excess capacity in the main-line take-away capacity out of the basin.

MR. KELLAHIN: That concludes my examination Mr. Fraser. We move the introduction of his Exhibits 1 through 6.

CHAIRMAN LEMAY: Without objection, Exhibits 1 through 6 will be admitted into the record.

Questions of Mr. Fraser? Commissioner Bailey?

MS. BAILEY: No.

CHAIRMAN LEMAY: Commissioner Weiss?

COMMISSIONER WEISS: Yes. I have the same question on the Basin Dakota.

EXAMINATION

BY COMMISSIONER WEISS:

Q. Are you familiar with the proposed location and the location of the Phillips infill wells?

A. No, sir, I'm specifically not.

COMMISSIONER WEISS: I have no other questions. Thank you.

CHAIRMAN LEMAY: Just a couple, Mr. Fraser.

EXAMINATION

BY CHAIRMAN LEMAY:

Q. Does Meridian plan to drill some infill wells in the Basin Dakota Field, as well as the MesaVerde?

A. We have a few planned, but it won't significantly impact the total pool allowable.

Q. Do you happen to know, on the projection of fuel gathering pressures, when the plans are to install additional compressors, and how much effect that will have on fuel gathering pressures in the field?

A. Specifically no, I think the projects are on the drawing board, sir, but I don't know exactly the time frame. I believe we're talking

the 1994 time frame, spring 1994.

Meridian is installing several projects right now on some of our conventional systems that we operate, and we're installing compression this month and next month to reduce those gathering pressures.

Q. So, if that time frame was adhered to, there would not be a reduction in pressures affecting the proration period we're talking about now?

A. I believe January is actually when some of these will take effect, which would be half of the proration period we're discussing.

Q. Have you done any work at all to correlate additional reserves that could be produced, with pounds dropped in gathering pressure?

A. Just on an isolated basis, sir. On individual wells we have, yes, but not on a pool-wide basis.

CHAIRMAN LEMAY: I have no additional questions of the witness.

Any additional questions? If not, he may be excused. Thank you, Mr. Fraser.

MR. KELLAHIN: I think that completes

the presentation in the Northwest pools.

CHAIRMAN LEMAY: Mr. Carr, is there anything else in the Northwest?

MR. CARR: Nothing further on the Northwest pools.

CHAIRMAN LEMAY: Does anyone have any additional comments or statements concerning the Northwest?

Okay. Let's take about a 15-minute break, and then we'll take up the Southeast.

[A recess was taken.]

CHAIRMAN LEMAY: We shall continue, with the Eumont Field, Mr. Carr, in the Southeast.

MR. CARR: May it please the Commission, I would call, at this time, Robert E. Green.

ROBERT E. GREEN

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

EXAMINATION

BY MR. CARR:

Q. Would you state your full name for the record, please.

A. My name is Robert E. Green. I'm a

natural gas coordinator with Chevron, U.S.A., in Midland, Texas.

Q. Could you tell us, Mr. Green, what a natural gas coordinator actually does?

A. As such, I supervise processes, forecasting of gas available for sale, nominating and confirming that gas, and delivering it into the first transporter.

Additionally, I coordinate and negotiate gas sales, contracts, both on the short-term spot markets and on the longer term gathering and processing agreements.

Q. How long have you been in this position?

A. I have been in this current position for one year. However, I have been in the natural gas part of the company since 1981.

Q. Have you previously testified before this Commission at gas allowable hearings?

A. Yes, I have. As I said in the February 25th hearing before this Commission, Chevron is bullish on natural gas, and we still are today. Natural gas in the United States remains to be very bright.

Chevron has maintained its multiple

market position for New Mexico gas into the Midwest, Texas Gulf Coast, and east of the Mississippi, as well as the California markets.

Q. At the time of your prior testimony, were your credentials as an expert in the area of natural gas marketing matters accepted and made a matter of record?

A. Yes, they were.

Q. Are you familiar with the current demand for natural gas from New Mexico?

A. Yes, I am.

Q. Have you prepared exhibits which illustrate the current status of the natural gas industry and the market for natural gas?

A. Yes, I have.

MR. CARR: Are Mr. Green's credentials acceptable?

CHAIRMAN LEMAY: They're acceptable.

Q. Have you prepared certain exhibits for presentation here today?

A. Yes, I have prepared some exhibits here.

Q. Would you refer to what has been marked as Chevron Exhibit No. 1, identify this and review it for the Commission.

A. Yes. Chevron Exhibit No. 1 is the United States Rig Count as assembled by Baker-Hughes Corporation. On that, I would like to point out to the Commission the natural gas rig line there.

Chevron predicts that there is a need for up to 500 natural gas rigs running in the United States to maintain the reserve replacement that we need for the production in the United States.

Currently, we look to have about a 350-rig average for 1993.

Q. Let's move now to Chevron Exhibit 2. Would you identify that?

A. Chevron Exhibit 2 is the domestic industry exploration and development expenditures over the past few years. I would like to point out on this the effects of the extended decline, and the Domestic E & P budgets. And they're becoming more apparent as the natural gas deliverability levels continue to decline.

Given the two to five- year time period that it takes a major oil company to develop a project, it will take several years of continually increasing domestic budgets before we

can get major natural gas resources onto line.

This year's strength, however, in the natural gas prices, has provided for some incentive to producers, and while Chevron has not increased its domestic budget, we have shifted our budget to gas projects in the State of New Mexico.

Expenditures this year are up in our Indian Basin and Eumont pools, because of the opportunity that we're provided in those fields. A significant factor in those opportunities has been the favorable regulatory environment that we see in New Mexico.

Q. Let's now go to your reserve exhibit, Exhibit No. 3. Will you review that for the Commission?

A. Yes. Exhibit 3 is the reserve additions and production in the United States and the petroleum industry. As you'll notice, the reserve additions have not maintained pace with production in the United States over the past 11 years.

The American Gas Association further forecasts that in 1992, the reserve additions were only in the 12 to 14 Tcf range, and the 1993

reserve additions will follow the 1992 forecast. Therefore, we'll only replace 70 to 85 percent of the production in the United States in 1993.

Q. Mr. Green, let's now go to Exhibit No. 4. Referring to this exhibit, will you review for the Commission what you see to be the status of gas storage levels?

A. Yes. Exhibit 4 is the United States working gas storage levels and the inventories.

As you'll notice, and as we stated in the February hearing, gas storage levels were at a significant low. Right in the middle of the graph you'll see that in the February time, it was at a significant low, and it bottomed out in March, and some people in the industry seemed to think that we actually ran out of gas storage during the March time frame. This has caused a significant factor in maintaining the prices in the industry today.

The gas storage levels, as you'll note on the graph--and the updates are not on there through July, however--but you'll notice on the graph that significant amounts of natural gas were input into storage during the May and June, as well as July time frame, to come back into

line. However, they're only within about one percent of where they were at this time last year, which was at a four-year low.

Q. Let's go now to Exhibit No. 5. Would you identify that?

A. Exhibit 5 depicts the spot gas prices into the El Paso natural gas pipeline in the Permian Basin. We have two things on there. One, we have the historical prices since 1991, and then, following forward, September 1993 is the New York Mercantile Exchange prices, as they closed on Tuesday, August 17, 1993. They're adjusted for the Waha interchange.

As you can see, and as we forecast back in February of 1993, we saw the lowest price for natural gas this year. The forecast shows that it's going to be a very strong winter heating season, 1993-94. With this market strength, we want New Mexico natural gas reserves to participate in that opportunity and not to be displaced by other gas.

Chevron requests that the Commission consider these points when setting allowables, and to not restrict New Mexico production from the market.

Q. Mr. Green, were Exhibits 1 through 5 prepared by you?

A. These exhibits were prepared with the assistance of our natural gas planning group, at my request.

Q. Have you reviewed them?

A. Yes, I have.

Q. Are they accurate?

A. Yes, they are.

MR. CARR: At this time, Mr. LeMay, we move the admission of Chevron Exhibits 1 through 5.

CHAIRMAN LEMAY: Chevron Exhibits 1 through 5 will be admitted into the record without any conflict.

MR. CARR: That concludes my direct examination of Mr. Green.

EXAMINER STOGNER: Questions of Mr. Green? Commissioner Bailey?

EXAMINATION

BY COMMISSIONER BAILEY:

Q. On Exhibit No. 3, could you please explain the revisions and adjustments portion of each bar?

A. The revisions and adjustments portion

of the bar is the reservoir engineering part of that, where you're going into an established field or an established well, where you review the reserves in that well, for whatever reason.

You may have a lower gathering system pressure into the field at that time, or you may have worked over a well or perforated additional pay in that zone, and that would cause revision or adjustment to an existing reservoir.

MS. BAILEY: Okay. Thank you.

EXAMINER STOGNER: Commissioner Weiss?

COMMISSIONER WEISS: I have no questions.

EXAMINATION

BY CHAIRMAN LEMAY:

Q. Mr. Green, your Exhibit 4, I assume you have the bottom axis, August through July, but they're not in years. I assume your half of that is 1993, and half is 1992?

A. Yes, sir, that's correct. That is up through July of 1993.

Q. All right. Also on your Exhibit No. 5, did you make any adjustments for the NYMEX future prices? They're quoted at Henry Hub, are they, and spot prices are quoted from where?

A. The spot prices that are plotted on here are adjusted 22 cents down from the Henry Hub for Waha.

Q. So, you're subtracting 22 cents from the Permian Basin into El Paso at Waha, from the quoted prices that the NYMEX has at Henry Hub?

A. Correct. I'm taking the Henry Hub NYMEX, subtracting 22 cents from that, which gets you back to Waha.

Q. Gets you back in a back call, or is that just historically the difference between a Waha-quoted price or what actually is at Henry Hub?

A. The 22 cents is what it would cost you to get Waha gas to Henry Hub and to NYMEX.

Q. That's a transportation charge and not necessarily a differential, as you see it quoted in the Wall Street Journal of what's actually happening out there in Waha?

A. Well, it traditionally has been an accurate depiction of the differential.

Q. So, 22 cents is not only the transportation cost, but has been the actual differential between the gas at Henry Hub and the gas at Waha?

A. The 22 cents reflects the differential of the transportation.

Q. I guess what I'm getting at is, is there truly that much difference in actual deliveries at Waha and Henry Hub, according to spot prices? In other words, is the gas going to Henry Hub getting 22 cents more than our gas going to Waha?

A. Yes.

CHAIRMAN LEMAY: Thank you.

Additional questions of the witness? If not, he may be excused.

MR. CARR: At this time, we call Alan Bohling.

ALAN BOHLING

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

EXAMINATION

BY MR. CARR:

Q. Would you state your name and place of residence?

A. My name is Alan W. Bohling. I live in Midland, Texas.

Q. By whom are you employed?

A. I'm employed by Chevron, U.S.A.

Q. And what is your current position with Chevron?

A. I am a petroleum engineer.

Q. Mr. Bohling, have you previously testified before this Commission?

A. Yes, I have.

Q. And how were you qualified at that time? As a petroleum engineer?

A. Probably as a proration engineer.

Q. Are you familiar with the preliminary nomination figures for the allowable period from October 1993 to March 1994, that have been published by the Oil Conservation Division?

A. Yes, I am.

Q. Are you prepared to make certain recommendations to the Commission concerning adjustments to these preliminary figures?

A. Yes, I am.

Q. Is your testimony going to focus only on the Eumont gas pool?

A. It is, yes.

MR. CARR: Are the witness' qualifications acceptable?

CHAIRMAN LEMAY: His qualifications are acceptable.

Q. You've prepared exhibits for presentation today, have you not?

A. Yes, I have.

Q. Could you identify what has been marked as Chevron Exhibit 1(E) and review the information on that exhibit for the Commission?

A. Exhibit 1(E) is a graph used to illustrate the relative position of the principle gas producers in the Eumont gas pool. It can be evident from this production graph that Chevron, which is shown as a solid, red line, is a significant contributor to the total daily gas production of the Eumont gas pool.

I would like to point out that, for clarity purposes, the production for each operator is scaled on the left-hand side of the graph, while the Eumont Pool's total daily production utilizes the scale on the right-hand side of the graph.

Q. Basically, what does this tell us about production from the Eumont pool, as it relates to Chevron's activities?

A. As I'll later show, on a subsequent exhibit, this illustrates that inclines or increases in the total pool's production is

impacted by Chevron's increases in production as a result of our workover and drilling programs.

Q. Let's go now to Exhibit 2(E). Can you identify and review that?

A. This exhibit is a bar graph which shows, in red, the portion of the Eumont pool's total daily production that is attributable to Chevron. As can be seen from this graph, Chevron has maintained a full, steady production rate throughout each year.

Also, as a result of our workover and drilling program, we have managed to increase the production from approximately 14,000 to 22,500 Mcf a day. This 22,500 Mcf a day represents approximately 25 percent of the pool's total daily production, which is approximately 90,000 Mcf per day.

Q. Would you now refer to Exhibit 3(E) and, using this exhibit, refer to Chevron's recent workover drilling program?

A. Exhibit 3(E) illustrates what Chevron's activity in the Eumont gas pool has been for the years 1991 and 1992.

As a result of the Commission's approval of the 600 Mcf per day minimum allowable

in establishing a six-month allocation period for the Eumont gas pool Chevron has completed approximately 20 workovers and nine new drills in 1991. This resulted in an increase of daily production from 14,478 Mcf per day, to 21,780 Mcf per day.

The majority of this increase did not occur until the later part of 1991, due primarily to delays in the gas pipeline connections.

For the year 1992, Chevron has completed 10 workovers or recompletions, and three new drills in the Eumont gas pool. The response to this program is just now becoming evident, however, due to the delay in the program, with the majority of our completions occurring in the forth quarter of 1992. And actual pipeline connections actually not occurring until April of this year.

For 1993, Chevron has planned and budgeted for an additional 14 workovers or recompletions, and three new drills. We have already completed approximately five of these workovers, all since April of 93, and, in combination with the 1992 program wells, an additional 2,483 Mcf per day has been added since

1993. This will bring the pool's total to approximately 89,285 Mcf per day. This will be a little more evident in the next exhibit.

Q. Let's go to that exhibit now; and, by using this exhibit, would you not only tell us about actual production but your production forecast?

A. This exhibits is a bar graph. I would like to explain this bar graph and how it's set up here, first. It shows the daily production for Chevron in the Eumont pool for April of 1993. These are numbers as taken out of the New Mexico Engineering Committee books.

Again, the whole bar represents the Eumont pool's total daily production, while the bottom or the red portion of the bar shows Chevron's part of that total daily production.

If we keep April 1993's production constant and just add production as a result of Chevron's 92-93 workover and drilling programs, it results in the light-colored bars, from May of 93 to March of 94.

As I've just stated, approximately 2,483 Mcf per day has been added by Chevron since April of 93, bringing the pool total, in August

of 93, to approximately 89,285 Mcf per day. This is currently at the proposed allowable of the Commission, of 88,200 Mcf per day.

The proposed allowable's indicated on this bar graph by a line which projects through the bars at the top of the graph. This represents 697 Mcf per day per acreage factor of 1, in the Eumont gas pool.

The remaining 93 Chevron program of nine workovers and three new drills, is anticipated to increase the pool's average daily production to approximately 95,550 Mcf per day, which will be forecasted with the light blue bars at the far right, from the period of October of 93 to March of 94.

However, under the proposed allowable of 697 Mcf per day, we'll have to curtail already completed production by approximately 2,603 Mcf per day, and not do three of the nine remaining workovers nor two of our projected three new drills. This will be an additional loss of approximately 3,000 Mcf per day.

Q. Now, if we look at Exhibit 4(E), that is your production forecast, and on that you have indicated what the current OCD proposal is, is

that correct?

A. That is correct.

Q. How does that differ from the next exhibit, Exhibit 5(E)?

A. Okay. While we're on this exhibit, if I can, I would like to also state that Chevron currently operates 99 out of the 420 acreage factors in the Eumont gas pool. This represents approximately 24 percent.

Under the present allowable of 952 Mcf per day, which is the period that we're in right now, Chevron has no non-marginal acreage factors. Under the proposed 697 Mcf per day, Chevron would be thrust into having 10 non-marginal acreage factors. This number would increase to 19 non-marginal acreage factors, if we were to continue our present 93 program as we anticipate the results to be.

Going on to the next exhibit--

Q. And now we're to Exhibit 5(E)?

A. 5(E), yes, sir. This is, essentially, the same exhibit as 4(E), except the line across the top represents an allowable of 813 Mcf per day per acreage factor, or 90,800 Mcf per day for the pool. This is the average production for the

period of October 92 through March of 93.

And as can be seen from this, we came pretty close to it in that period last year, meeting that proposed allowable. We're pretty close to it right now, in the summer months.

Under this allowable, Chevron would currently have four non-marginal acreage factors. If we continue our 93 program, as planned, this would increase us to 10 non-marginal acreage factors for the period of October 93 to March of 94.

Q. All right. If we go now to Exhibit 6(E)?

A. Exhibit 6(E) is, again, a similar graph. On this graph, however, the bar at the top represents what the current allowable is, of 952 Mcf per day for an acreage factor of one. And this is what Chevron would recommend that we continue to be at.

Under this particular allowable, again, Chevron currently would have no non-marginal acreage factors, but with our 93 program, for the period of October of 93 through March of 94, we would go to three non-marginal acreage factors.

Q. These increases in the non-marginal

acreage factors are a direct result of a continuation of Chevron's workover program, is that right?

A. That is correct.

Q. Okay. Let's go now to Exhibit No. 7(E). Would you identify and review that?

A. Exhibit 7(E) is what Chevron proposes or recommends as an adjustment to the proposed allowable for the period of October 93 through March of 94. We would like to see an adjustment of 173,874 Mcf per month, for line 3 on this table be added to line 1 in order to result in a monthly acreage allocation factor on line 8 of 28,928 Mcf per month, or 952 Mcf per day per acreage factor.

We feel the continuation of the current allowable of 952 Mcf per day per acreage factor would promote continued development within the Eumont gas pool.

Q. Mr. Bohling, if the recommendation is adopted, then, it would provide the incentive necessary to go forward with the currently ongoing workover and the additional development program that Chevron has underway in this field?

A. That is correct.

Q. And other operators in the field are also undertaking similar programs?

A. To my knowledge, they are.

Q. Were Exhibits 1(E) through 7(E) prepared by you?

A. Yes, they were.

MR. CARR: At this time, Mr. LeMay, we'd move the admission of Chevron Exhibits 1(E) through 7(E).

CHAIRMAN LEMAY: Without objection, Exhibits 1(E) through 7(E) will be admitted into the record.

MR. CARR: That concludes my direct examination of Mr. Bohling.

CHAIRMAN LEMAY: All right. Questions of the witness?

EXAMINATION

BY COMMISSIONER BAILEY:

Q. Is most of this Eumont production attributable to primary production on a lease basis, or is this primarily unit production?

A. We have several leases. Those leases can run anywhere from 80 acres to approximately 640 acres in size. There would be several wells that would be simultaneously dedicated to one of

these leases, or a proration unit. So one lease may have several wells on it.

Q. No, I was talking about a secondary recovery unit, a waterflood unit that is producing most of this gas.

A. These are strictly gas wells. They're not associated with waterflood at all.

COMMISSIONER BAILEY: Okay. That's all.

CHAIRMAN LEMAY: Commissioner Weiss?

EXAMINATION

BY COMMISSIONER WEISS:

Q. Are the new drills, are they replacement wells or edge wells, or where do you put them?

A. Primarily, we're trying to capture reserves that would not otherwise be captured, through infill drilling, in locations where we don't have wells that we can plug back, or utilize wellbores to plug back to the Eumont.

So, where we don't have a wellbore available that we can actually utilize through plug-back procedures, we'll look into it and evaluate it for a possible new drill.

COMMISSIONER WEISS: That was my only

question. Thank you.

CHAIRMAN LEMAY: I've only got a couple of questions.

EXAMINATION

BY CHAIRMAN LEMAY:

Q. Have you contacted other operators in the field regarding your recommendation for increased allowables?

A. Yes, I have.

Q. What kind of response have you had?

A. Primarily, they were in favor of an increase, or maintaining of the current allowable, primarily because they have just recently completed wells on their leases. The word that they told me was that they would be adversely affected if it went down to 697 Mcf a day.

Q. Now, an acreage factor of one pertains to what size unit in the Eumont field?

A. 160 acres.

Q. 160 acres. So, basically, you could, in the Eumont field, drill four wells on that 160-acre spacing and get the full allowable?

A. No. The standard proration unit in the Eumont gas pool would be 640 acres, which would

have an acreage factor of four. On that you could drill four wells.

Q. Can you get below 160-acre spacing per well?

A. Yes, you can.

Q. My point would be, then, you could drill four wells on 160 acres and share one allowable?

A. Yes, you could.

Q. So that if the allowable kept going up--I'm thinking of a waste issue, is what I'm thinking--if we get the allowable high enough, would there be an incentive to get in there and drill existing proration units so as to, basically, produce an economic amount of gas per well, but which could be drained by one well?

A. Well, we're seeing effects from our program where we don't feel that one well is actually accomplishing total drainage, even on a 160-acre acreage factor.

Q. Do you see where I'm getting that? If the incentive was too great on an allowable basis in there, there may be an incentive for operators to drill on 40 acres, an infill program, to maximize cash flow. But would one well be

adequate to drain 160 acres?

A. That could be, although our experience has been, in some cases, in certain portions of the field, an extra well is necessary to actually drain 160 acres. There are other portions of the pool where that would be true.

Q. Do you happen to know, on the three wells that you have scheduled, the three new wells, what the spacing unit--what acreage you're assigning to those three wells?

A. One of them is going to be assigned to a 320-acre proration unit, along with another well that we plan on doing a workover in. The other two will be drilled on a 640-acre proration unit.

Q. So, you plan to maximize the spacing units in there when you do your new drilling program?

A. Yes.

Q. Assign as much acreage as you possibly can to each well?

A. Yes.

CHAIRMAN LEMAY: That's all the questions I have. Any additional questions of the witness?

MR. CARR: Mr. LeMay, one of the companies we contacted in the Eumont pool is Arco Oil & Gas Company, and they have provided us with a brief statement they requested that we read into the record. It goes as follows.

"Arco has completed 22 workovers or recompletions in the Eumont and Jalmat fields so far this year, and is planning to complete another 18 by the end of 1993. Several of these will have to be canceled if allowables are lowered to the preliminary allowable estimate of 697 Mcf per day for the Eumont field, and 583 Mcf per day for the Jalmat field, since they would no longer be economically attractive.

"In addition, four of Arco's 16 Eumont proration units and two of Arco's 34 Jalmat proration units, would be capable of producing above the preliminary allowable estimate, due to recent workovers or recompletion activity that was justified by the higher April 1993 through September 1993 allowable."

And I have a copy of this statement.

CHAIRMAN LEMAY: That prompts one question, if you don't mind, Mr. Carr.

Q. (BY CHAIRMAN LEMAY) On your workovers,

are you basically perforating more sections of the Eumont bay? That's the predominant workover procedure?

A. That's correct. We're coming up to the Yates and Seven Rivers portions of the Eumont and perforating those and fracture acidizing those upper intervals of the Eumont pool.

Q. And getting higher deliverabilities, based on that workover procedure?

A. Yes, we are. Significantly higher.

CHAIRMAN LEMAY: That's all I have. Additional questions? Mr. Stovall?

EXAMINATION

BY MR. STOVALL:

Q. On the proration units that you're talking about drilling, in response to the Chairman's question, how many wells are on the existing, say, 320? How many wells already exist on that?

A. There is one well on it. There's three or four wells on one of the 640's, and the other 640 acre has two or three wells on it.

FURTHER EXAMINATION

BY CHAIRMAN LEMAY:

Q. So, there are more than one well? I

guess what I'm saying is, we're moving towards a number of wells on a proration unit?

A. Yes, sir.

Q. You're adding wells to existing wells in your proration units?

A. Correct.

CHAIRMAN LEMAY: Any more questions of the witness? If not, he may be excused. Thank you, Mr. Bohling.

MR. CARR: That's all we have on the Eumont pool. I would like to provide you copies of the Arco letter.

CHAIRMAN LEMAY: Fine. Thank you.

[Discussion off the record.]

MR. KELLAHIN: Can I have about 10 minutes on the Blinebry?

RONALD J. FOLTZ

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

EXAMINATION

BY MR. KELLAHIN:

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

A. My name is Ronald J. Foltz. I'm a senior reservoir engineer with Marathon Oil

Company in Midland, Texas.

Q. On prior occasions, Mr. Foltz, have you testified on prorationing matters on the Blinebry gas pool in Lea County, New Mexico?

A. Yes, I have.

Q. Have you continued to follow the production in that pool in terms of the proration system?

A. Yes, I have.

Q. Do you have recommendations for the Commission concerning the prorated allowables for that pool for the next period?

A. Yes, sir, I do.

MR. KELLAHIN: We tender Mr. Foltz an an expert proration engineer.

CHAIRMAN LEMAY: His qualifications are acceptable.

Q. What is your conclusion and recommendation concerning any adjustment to the temporary schedule of allowables that was presented by the Division this morning for the Blinebry gas pool?

A. My recommendation is to continue with the proposed allowable based on the Commission's recommendation.

Q. So, you're recommending neither a positive or a negative adjustment at this point?

A. That's correct.

Q. Show us how you reached that conclusion. And to illustrate your reasons, turn to Exhibit No. 1.

A. Exhibit No. 1 is the sales for the Blinebry gas pool, total sales, for the period April of 1991 through March of 1993. Based on this, also the red dashed line indicates the allowable for the pool.

As a result, especially toward the last year, the average pool production is right at the proposed number of 474, right at 500,000 million cubic feet per month.

Q. What was the non-marginal proration unit monthly allowable for the last proration period?

A. The monthly acreage allocation factor was 38,000, I do believe.

Q. Using this schedule, without further adjustment, it would be up to 45,000?

A. That's correct.

Q. Turn to Exhibit 2 and show us how the allowable is spread among the operators in the

pool.

A. Exhibit 2 has the percentage of average gas sales, by operator, for the Blinebry gas pool. As you can see, the Marathon share is right at 23.2 percent, indicated in red. The blue area is John Hendrix as the operator with 18.2 percent, average gas sales. The next largest is Chevron, with 15.3 percent, and so on.

Q. If the Commission adopts, as a final schedule, the preliminary schedule, will there be any non-marginal spacing units?

A. Yes, there will.

Q. Approximately how many for the pool?

A. At this time, it appears that there's one well that can exceed the current proposed allowable.

Q. The temporary schedule shows three, and that's why I asked the question.

A. That's right. The two other wells, I believe, are Marathon-operated wells that are producing right at the current allowable.

Q. Have you shown production graphs on the three wells that, in all probability, will be the non-marginal wells as we move through the proration system?

A. Yes, I do.

Q. Without specifically describing them, simply identify for us Exhibits 3, 4 and 5.

A. Exhibit 3 and Exhibit 4 are the two Marathon-operated wells, the Lou Worthan Nos. 9 and 12, and indicates their sales average, per month, over the period January of 89 through June of 1993. It also indicates the allowable for the well and the overproduction status.

The Exhibit 5 is what we believe to be the current highest producing well in the Blinebry pool. It's the Elliott Hinton No. 1, operated by John Hendrix, and has similar data as Exhibits 3 and 4, only it includes data through March of 1993.

Q. Is there a market for the gas produced at this level, if the Commission adopts the preliminary schedule?

A. Yes, there is.

Q. Are is there any kind of system constraints or gathering system limitations within the pool, or for taking that production to market?

A. There is not.

Q. What is your recommendation, then, for

the pool?

A. Marathon's recommendation is to continue with the monthly acreage allocation factor as proposed by the Commission.

MR. KELLAHIN: That concludes my examination of Mr. Foltz. We move the introduction of his Exhibits 1 through 5.

CHAIRMAN LEMAY: Without objection, Exhibits 1 through 5 will be admitted into the record.

Questions of the witness?

COMMISSIONER BAILEY: No questions.

COMMISSIONER WEISS: I have no questions.

CHAIRMAN LEMAY: I don't have any, either. Mr. Foltz, you may be excused.

Thank you very much. All right. Let's do the Indian Basin now.

JOHN ROEFFERS

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

EXAMINATION

BY MS. AUBREY:

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

A. Yes, John Roeffers.
Q. Where are you employed, Mr. Roeffers?
A. I'm employed by Kerr-McGee Corporation, in Oklahoma City, Oklahoma.
Q. What's your occupation?
A. I'm a reservoir engineer.
Q. Mr. Roeffers, are you familiar with Kerr-McGee's request for an increase in the allowable in the Indian Basin Morrow?
A. Yes, I am.
Q. Have you become familiar with the proration system in the State of New Mexico, as it relates to the Indian Basin Morrow pool?
A. Yes, I have.
Q. Have you reviewed and are you prepared to make recommendations for adjustments to the allowable schedule presented this morning by the New Mexico Oil Conservation Division?
A. Yes.
Q. Does the Indian Basin Morrow pool in New Mexico fall within your area of responsibility with Kerr-McGee Corporation?
A. Yes.
Q. Have you testified previously before the New Mexico Oil Conservation Commission?

A. No, I have not.

Q. Would you review your educational background and work experience for the Commission?

A. Yes. I have a bachelor of science degree in petroleum engineering from the University of Oklahoma. I was first employed as a petroleum engineer by Tenneco Oil Company in 1981, worked with Tenneco until December 1988, at which time I went to work for Kerr-McGee Corporation.

For that entire 12-year span, I have been employed as a reservoir engineer, and have taken part in the typical reservoir engineering activities, field studies, reserve studies, evaluations of well proposals, acquisitions, evaluations, so on.

MS. AUBREY: Are the witness's qualifications acceptable?

CHAIRMAN LEMAY: His qualifications are acceptable.

Q. Mr. Roeffers, would you refer to what has been marked as Kerr-McGee Exhibit No. 1?

A. Yes. Exhibit No. 1 is a plat showing the active Morrow wells in the Indian Basin

Morrow field. There are actually some more Morrow wells to the northwest, but they're all inactive at this time.

The red circles are the Indian Basin Morrow wells. Actually, there are two wells on this plat which are inactive now. Those are the Kerr-McGee Martha Creek well in the southwest of Section 30, and the Lowe State No. 1 well in the northwest of Section 36, which is operated by ORYX, I believe, and not BHP.

The other six wells are active. And, of those wells, there are two non-marginal wells or two non-marginal proration units, and those are Section 30, once again, where the Kerr-McGee Martha Creek No. 2 produces, and Section 36 where the ORYX Lowe State No. 2 produces.

Q. Mr. Roeffers, what is the present status of the Kerr-McGee Martha Creek No. 1 in Section 30?

A. The No. 1 is shut in. It's been inactive since 1985. And the No. 2 well was drilled as a replacement well for the No. 1.

Q. On Exhibit 1, you also show cumulative production in Bcf for all the wells that you've indicated by the red circles, is that correct?

A. Yes.

Q. You also show the average monthly production from each well, is that correct?

A. It's the average daily production in the lower left-hand corner of the key, and that's based on data from Dwights production for the first two or three months of this year, depending on how much was reported by Dwights.

I might point out, and we'll look at the production curve in a minute, for the Martha Creek No. 2 well in Section 30, it's showing a rate of 1.5 million a day and at this time we're experiencing fluid loading problems and we're actually producing about 650 Mcf a day.

Q. Would you rather refer to your production curve to talk about your production?

A. Yes.

Q. Let me have you look at Exhibit No. 2, then.

A. Okay. If I could ask one more thing on Exhibit 1, the reason we are seeking the increased allowable is for the proposed location of the Martha Creek No. 3 in the northwest of Section 30. We have notified the offset operators and we've received no objections for

that request for increased allowable, and we have actually received support from Penroc, who operates the well to the north, and is aware of the fact that we would like to drill another well.

They've supported us in our request for increased allowable, and it's my understanding that Marathon, who operates the section to the west of us, is also supporting our request.

Q. Any other comments you would like to make about Exhibit 1?

A. No. Thank you.

Q. Let me refer you to Exhibit No. 2. The first page of that exhibit shows the production from the Martha Creek No. 1, is that correct?

A. Yes, it is.

Q. Could you review what that production history is, for the Commission?

A. Yes. The Martha Creek No. 1 was actually completed in 1965, which isn't included on this graph. This production was taken from Dwights data, which doesn't have production back that far. The well, you could see through the early 70s, was about a two-million-a-day producer. It might have had some higher rates

before that time.

In 1985, the well experienced mechanical problems, and at that time the Martha Creek No. 2 was drilled as a replacement well.

There is some production reported in 86 and 88, when attempts were made to work-over this well and get the production back. I can't testify as to the validity of those rates because these are pulled from Dwights data, but I do know they were unable to get sustained production from the Martha Creek No. 1.

At the time that it went inactive in 1985, it had produced just under 8 Bcf of gas.

Q. Let me have you look at page 2 of Exhibit 2.

A. Page 2 shows the production curve for the Martha Creek No. 2, the replacement well. It came on in 1985. It was basically about a two-million-a-day producer. To date it has made approximately 4 Bcf.

You can see, at the very end of the curve there, where the production drops off steeply, at that time and in late 1991, we experienced some down time; and, as a result of that down time, in both instances, we had trouble

getting the well back on to production.

In late 91, we actually had to go back in and reperforate the well to get it back to that roughly million-and-a-half per day. Right now we're working with the well, and we've got it back up to roughly 650 Mcf a day. We've got some more work we're going to do on it. We're going to try to get it back to, roughly, 1.2 million a day, which is what it was producing before we had to shut the well in.

Q. Why was the well shut in in 93?

A. The well was shut in, I believe, to do maintenance on the gas processing plant, I believe. But this is another reason for our request for increased allowable. We don't want to run into this situation again, where the well is shut in and loads up on us.

As the proposed schedule is set forth right now, a non-marginal proration unit has a rate of approximately 900 Mcf a day. At 900 Mcf a day, if we get this thing back up to 1.2 million, we're looking at a situation where we're either going to have to curtail production or produce it at the full rate and shut it in, and we want to avoid that situation also.

Q. If you produce it at the full rate and then are required to shut it in, do you have an opinion as to whether or not you'll have any difficulties in bringing the well back on line?

A. Yes, I think it's very likely that we would, at least at that full rate.

Q. Let me have you look at page 3 now, which is a P over Z curve, is that correct?

A. This is a P over Z curve for the Martha Creek No. 2, and it shows that, assuming we get the well back up to its full rate, we believe that, and an abandonment pressure of about 600 pounds, which is the operating line pressure in the area, that we'll recover 6 Bcf from that well.

Q. Now the last page of Exhibit 2, please review that.

A. The last page of the graph is bottom hole pressure versus time, and shows the bottom hole pressure history of both the Martha Creek No. 1 and Martha Creek No. 2.

I think this is the exhibit that really drives home the point that the existing wells aren't recovering all the gas underlying the unit. The Martha Creek No. 1 produced for, right

at, I guess, 20 years, until 1985, when the well was lost for mechanical reasons.

There are two points after that. There was no protection before those two points. We had bottom hole pressure of about 1,500 pounds at that time. The reasoning for drilling the Martha Creek No. 2 was that we've made 8 Bcf, going from 4,700 to 1,500. We'll put a replacement well in there and get the rest of the gas, but the Martha Creek No. 2 came in 2,000 pounds higher, so there was significant pressure left in the section.

In addition to that, in the two years following 1985, where pressures were measured for the Martha Creek No. 1, you can see that the pressure has continued to increase on that well, very slowly building. In my opinion, it's an indication that that well, because it is building so slowly, probably wouldn't have recovered, if it had stayed active, all the gas underneath that unit, just due to low permeability.

Q. Do you have any pressure tests on the No. 1 after 1987?

A. No, I don't.

Q. Any other comments you would like to make about that?

A. No.

Q. Let me have you look at Exhibit No. 3. Which is your gas in place calculation. Can you review that for the Commission?

A. Yes. The key part of this exhibit is the bottom half, where the actual gas in place calculation is. The top half of this exhibit shows the calculation of the formation volume factor, which is a conversion factor for reservoir cubic feet to standard cubic feet.

That formation and volume factor goes into the gas in place equation, which is about mid-way down on the exhibit, as well as these other parameters.

The table right below that equation, you can see that the first column is the Morrow sand. There are five different distinct loaves, if you will, of Morrow sand, that underlie this section. All five intervals are seen in both the Martha Creek No. 1 and the No. 2 and our geologists have mapped all five intervals across the section.

The acre-feet are volumes of reservoir that underline the section for each of those sands. The porosity and water saturation values

are provided from our geologist, from log calculations.

These numbers, as well as the formation volume factor, are inserted into the gas in place equation, to calculate the last column, which shows the gas in place in each of those intervals underlying the unit.

You can see, at the bottom, that there's a total of 22.5 Bcf original gas in place underlying the unit.

Q. That would be underlying Section 30, is that correct?

A. Right. Uh-huh.

Q. Let me have you look at Exhibit 4. You've calculated the remaining gas after the production that you've experienced from the No. 1 and the No. 2, is that correct?

A. Yes. Starting from the top, the original gas in place, once again, was 22.5 Bcf. The recovery factor is based on the difference between the initial pressure and the abandonment pressure at system operating pressure of 87 percent, which gives you recoverable gas underlying the unit of 19.6 Bcf.

The Martha Creek No. 1 made 8 Bcf. The

Martha Creek No. 2 will, if we get production reestablished, will make 6 Bcf, for a total of 14 Bcf, which means there's 5.6 Bcf of recoverable gas underlying the unit.

Q. In your opinion, is it necessary to drill another well in Section 30 in order to recover those remaining reserves?

A. Yes, it is.

Q. Have you made any calculations or estimates of the number of acres that each of these wells in Section 30 has or will drain?

A. Yes. The drainage area for the Martha Creek No. 1 was, I believe, 276 acres. The Martha Creek No. 2, at 6 Bcf, will drain 189 acres. We're projecting 3 Bcf for the new location, which would drain 99 acres.

Q. Let me have you look now at Exhibit No. 5. This exhibit contains your request for allowable to the Commission, is that correct?

A. Yes.

Q. Would you review that, please?

A. The allowable request for Martha Creek No. 2 is 36,750,000 a month. That's based on a daily rate of 1.225 million cubic feet per day, which was the rate in the Martha Creek No. 2

before we experienced our fluid loading problems, or actually, we had to shut the well in for the plant maintenance.

The allowable requested for the Martha Creek No. 3 is 60,000,000 cubic feet per month, and that's based on an initial rate of two million a day for that proposed drilling location. That gives you a total Martha Creek unit allowable request of about 97 million cubic feet a month.

The total pool acreage factor for the Indian Basin Morrow field is 2.08; the Martha Creek acreage factor is 1.08. So, going down here to the Indian Basin pool, the non-marginal allowable that would be required to provide the unit allowable that we're requesting, would be that allowable that we're requesting divided by our 52 percent share of the non-marginal gas production, or, in other words, the 97,750,000 divided by .51923, which is a total of 186,000,000 cubic feet a month.

In other words, if there's 186,000,000 cubic feet a month assigned to non-marginal wells, and you multiply it times our percentage of the total pool, that will provide our 96

billion a month. We had to back into that number.

According to the proposed schedule, there will be 41,468,000 cubic feet a month assigned to marginal wells, so the total pool allowable that we're requesting is the sum of the two, or 227,000,000 cubic feet a month.

Q. Let me have you look now at Exhibit 6, which is a gas marketing projection. Did you receive this from your gas marketing department at Kerr-McGee?

A. Yes, I did.

Q. What's your understanding of whether there will be any market constraints or curtailments of the production from the Martha Creek unit?

A. My understanding of this document prepared by our gas sales department is that we will be able to market any gas that we develop by drilling that well.

Q. Is it your opinion, Mr. Roeffers, that you will be able to sell production at the levels of the allowable that you're requesting?

A. Yes.

Q. Mr. Roeffers, were Exhibits 1 through 6

prepared by you or under your direction and supervision?

A. Yes, they were.

MS. AUBREY: I offer Exhibits 1 through 6.

CHAIRMAN LEMAY: Without objection, Exhibits 1 through 6 will be admitted into the record.

MS. AUBREY: That concludes my direct examination.

CHAIRMAN LEMAY: Thank you. Additional questions of the witness? Commissioner Bailey.

EXAMINATION

BY COMMISSIONER BAILEY:

Q. When do you expect the Martha Creek No. 2 to be able to prove out whether or not it's going to be able to return to the original production levels?

A. I don't know. We're working on it right now. We're having to drop soap sticks into the well daily just to keep it producing at 650 Mcf a day. We have an AFE for management to install a dip tube to drop down from our packer into the perforations, to try to give us increased velocity to lift that fluid. Our

operations people feel that that will probably reestablish the production, hopefully, within a month.

Q. Is it perforated in all the zones that are listed in Exhibit No. 3?

A. The Martha Creek No. 1 is perforated in all five of those intervals. The Martha Creek No. 2 is perforated in all but the Upper Morrow.

COMMISSIONER BAILEY: That's all for right now.

CHAIRMAN LEMAY: Commissioner Weiss?

EXAMINATION

BY COMMISSIONER WEISS:

Q. What is the fluid that loads up in there?

A. Water. Probably some small amount of condensate production, also.

Q. Is it water drive, do you think?

A. No. I do believe that there is some mobile water. I've heard people theorize that there may be some edge water drive. I don't really think there's enough data on the pool to tell. It certainly isn't the classic water-drive reservoir that you have in the Indian Basin Penn.

Q. You mentioned you thought the No. 2

drained 225 acres, is that right?

A. No. No. 2 was 189.

Q. And No. 1 was 225?

A. Was 276.

Q. Yet the pressure went up in No. 1?

A. Yes. Just sitting there shut in, very slowly the pressure kept bleeding in toward that location. I thick it's a pretty good indication that that well, because it built so slowly, probably wouldn't have recovered all those reserves, had it been on line to keep producing.

Q. You think you would see some interference, and you certainly don't. That's a mystery, in my mind?

A. I think it shows you need more wells to drain the section. The gas is there. There's no doubt it's there. The pressure is there.

COMMISSIONER WEISS: I agree. That's all the questions I have. Thank you.

EXAMINATION

BY CHAIRMAN LEMAY:

Q. The spacing in there is 320, is it?

A. It's 640.

Q. 640?

A. Yes, sir.

Q. Doesn't sound like they'll drain 640, does it?

A. Not in this particular case, no.

Q. What do you know about that well in Section 36, which I take it is the other non-marginal well, the Lowe State No. 2?

A. It's a fairly new well, as you can see from the completion date, 1/92. I don't know if it's open in all of the intervals. Section 30 happens to sit right on top of the structure here, and that's why all five of the intervals are gas-bearing in Section 30, and why we have so much gas under place. You rapidly go off-structure when you go down from Section 30.

Q. I guess my question revolves more around, do you happen to know if that well is curtailed because it's an unorthodox location and the Commission penalized the allowable on that?

A. I don't believe that it is. The reason I say that is, just looking at the production decline curve on it, it's got a fairly--.

MR. STOVALL: Mr. Chairman, I'm not sure that that is the other non-marginal proration unit, from looking at the proration schedule, just for your information.

If I may ask, is this the entire pool?

THE WITNESS: There are some other wells up to the northwest, but they're all shut in. These are all the active wells. If you look at the rate on that well in the southwest corner of 36, it's 500 Mcf a day in the first three months of the year. There's no other well in here that approaches that.

Q. (BY CHAIRMAN LEMAY) My concern, and maybe this is where we're trying to get at, is that rate could be a curtailed production rate based on an allowable assigned to the pool and, therefore, wouldn't fluctuate with the allowable because it is unorthodox?

A. And, once again, this is just my opinion, looking at that decline it looks like it's on a fairly natural and not like a well that's been curtailed at a particular rate.

Q. I think we could probably investigate that. The reason why I brought it up, have you looked into trying to get a hardship classification for your wells? I take it your shut in has been strictly related to the plant and not because you exceeded your allowable?

A. Right, and we have considered that. We

decided at this time just to ask for a particular allowable that would guarantee that if we drill this well, that we'll be able to sell our gas.

It's possible that, in the future, because of this loading problem, that we would want to try to get some type of minimum allowable.

Q. There again, pursuing this, if, in fact, there is a curtailed allowable because of the Lowe State No. 1, by increasing the allowable we would be, in essence, maybe lifting the restriction on that well, the curtailed allowable, because it would apply to all wells in the field?

A. Yes. And I believe right now, if I understand your question right, at 900 Mcf a day, which is the proposed proration unit non-marginal well, and this well doesn't make that much anyway, so there's already room for it.

Q. I don't think you understand my question. It may make that because that's all we allow it to make. We may have restricted it to 50 percent of the allowable in the pool. That may be the reason why it doesn't show up, but it is capable of producing more.

A. Yeah.

Q. And I don't know that. I'm just saying that, if we take your recommendation, it will affect more than just your development in Section 30, and you have to look at that?

A. Right.

Q. And, if it would affect other wells, one other alternative would be to encourage you to apply for a hardship classification because of the water, and then you would have no restriction, basically?

A. Certainly, if that's the case, Kerr McGee would want to come back to you and ask for that situation.

CHAIRMAN LEMAY: Sure. I was just bringing that up. You have to look at all other wells. Commissioner Weiss?

EXAMINATION

BY COMMISSIONER WEISS:

Q. When you were reviewing the production curves, that well in Section 20, No. 6, did it show any effect when drilling No. 2?

A. Actually, that well in Section 20 came in at a very high pressure, an extremely high pressure. And it was drilled fairly late, in

1988. It didn't show depletion, if you will, from offset wells. I think it might be more of an indication of the quality of the reservoir rock there. I do know that they're not opening all the sections, too, because, once again, they've come off-structure.

Q. So that was drilled, looking at your pressure chart, your exhibit where you have pressure versus time in Exhibit 2?

A. Right, and that was drilled in 1988.

Q. And, after that, the pressure declined less rapidly in 92?

A. Yes.

COMMISSIONER WEISS: That's all the questions I have.

CHAIRMAN LEMAY: Additional questions of the witness? If not, he may be excused.

MS. AUBREY: That concludes my presentation.

CHAIRMAN LEMAY: What are we left with? The Indian Basin Upper? Is there anything else besides the Indian Basin Upper?

MR. CARR: At this time, we call Brian Huzzey.

BRIAN HUZZEY

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

EXAMINATION

BY MR. CARR:

Q. Would you state your name for the record?

A. Brian Huzzey.

Q. Where do you reside?

A. Midland, Texas.

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

A. Chevron, U.S.A., as a petroleum engineer, over several fields in Eddy County, New Mexico.

Q. In your current position with Chevron, are you required to become familiar with the prorationing system for Southeastern New Mexico?

A. Yes, I am.

Q. Have you testified in previous allowable hearings?

A. Yes, I have.

Q. At the time of that testimony, were your credentials as a petroleum engineer accepted and made a matter of record?

A. Yes, they were.

Q. Are you familiar with Chevron's efforts in the Indian Basin Upper Penn pool in the last few years to improve the capabilities of that field?

A. Yes, I am.

Q. Are you familiar with the OCD's preliminary nominations for this pool?

A. Yes, I am.

MR. CARR: Are the witness's qualifications acceptable?

CHAIRMAN LEMAY: His qualifications are acceptable.

Q. Are you prepared to make certain recommendations today concerning adjustments to the preliminary nominations?

A. Yes, I would.

Q. In that regard, could you explain to the Commission, what is Chevron's purpose in the hearing here, with regard to this particular field?

A. Chevron would like to take this opportunity to inform the Commission of its activities in the Indian Basin field. Our activities and this information we hope will aid the Commission in determining an acceptable and

appropriate allowable for the October through March 1994 period.

Q. You've indicated Chevron will make a recommendation concerning the allowable. Basically, what is it?

A. Chevron's recommendation is that the Commission leave in place its current allowable of 196,500 Mcf per month.

Exhibit 1 is a representation of the OCD's allowable format, spanning the Southeast gas proration schedule. If you'll look at this exhibit, in column 3 you'll see Chevron's proposed adjustments to the preliminarily allowable as set out by the OCD.

We're recommending an adjustment 176,697 Mcf to the average monthly pool sales.

Continuing down through the table, this basically runs out to be 196,500 Mcf per month allocation factor, which Chevron supports and which is currently in place.

This number is based on production from March, April, May and July of this year. We excluded June, due to seven and a half days of plant down time, plus additional down time that operators chose to take to gather more

information on the field, and to take advantage of the plant down time.

Q. So, when you make the basic adjustments, what you come down to is a monthly acreage allocation factor of 196,500 for October of 93 through March of 94?

A. Correct.

Q. What facts are you utilizing an a basis for this recommendation?

A. Okay. Current production in this field has increased dramatically since last October, due to the continuing efforts of both Chevron and other operators in this field, both on equipment and well workovers.

If you'll look at Exhibit No. 2, it represents the production history from March, April and May of 1993 for the Indian Basin Upper Penn gas pool. This is from the OCD committee books, as well as the May production is from the C-115s from the plant--correction, from the residue gas plant statements from the Indian Basin gas plant.

One thing I would like to point out initially, the shaded wells are all or will all be non-marginal wells under the preliminary

allowable.

Basically, five of Chevron's 10 wells will be non-marginal, two of Marathon's wells will be non-marginal, four of ORYX's five wells will be non-marginal, so we'll have 11 of 34 wells in the field which would be non-marginal under the preliminary as proposed by the OCD.

And Chevron has continuing efforts or plans for our wells in this field, which we could get up to eight or nine of our wells being non-marginal by the end of this year.

Q. What is Chevron's position in this field?

A. Okay. If you'll look at Exhibit No. 3, it shows the production since August of 1992 in the Indian Basin Upper Penn gas pool. One thing, if you'll notice, there's a notation in the middle of the graph showing Chevron's well work, and it also, the black line indicates the total pool production, red is Chevron's, blue is Marathon, ORYX is represented in sort of a purple shape, and MW is the only other somewhat major producer in this pool.

The emphasis on this graph, Chevron currently produces 39 to 40 percent of the pool

production. Also, if you look at the time frame from November through February, there's a big dip in December, where we took a lot of our wells down and did additional well work.

The time from November through February, there's a big dip in December, where we took a lot of our wells and were having to do additional well work, and we had a tremendous number of well days that our wells were down while we were working on them.

So, if you use the October of 92 through March of 93 production, it's not representative because we had a lot of wells down for workovers. So, basically the number that the OCD had from pool sales is skewed to the low side, due to well work.

Q. Mr. Huzzey, could you now review for the Commission the workover and equipment modification program that Chevron has implemented in this field?

A. Okay. If you'll look at Exhibit No. 4, you'll see this is the Federal 33 Gas Com #1. This is the daily wellhead production.

If you'll look in September of 1992, this well is making approximately 3,700 Mcf a

day. We made some very quick. Very simple modifications in surface facilities, and substantial increase in production.

Then, in December, we changed out our tubing stringer, primarily, saw a very significant increase in production. And then in January of this year we did some additional work, added perforations and stimulated the well. And, as you can see, there's a red line that is the current allowable and shows the historical allowable for this field. After our work in January, this well exceeded the current allowable in the field.

The other line, if you'll notice, it has the notation flow "OCD preliminary allowable," about 5,700 Mcf per day. This well is well in excess of that number and has been since January of this year.

Q. You have similar exhibits for the other wells in the pool?

A. Yes. These exhibits have been prepared to show that at 5,700 Mcf per day, half of Chevron's wells historically have been over that limit. And recent work we've done in July made at least one more well over. As I stated, we

could have eight or nine of our ten wells being non-marginal.

Q. The subsequent exhibits each have a line across them that indicates the OCD's preliminary allowable figure?

A. Yes.

Q. Let's go to the Helbing Federal Gas Com #1, your Exhibit No. 5. Could you review this?

A. Okay. Exhibit No. 5 shows this well is making 5,300 to 5,400 Mcf per day right now. What I mentioned earlier, while the Indian Basin gas plant was down, we did some additional testing, and with that testing and nodal analysis, we've determined that this well can produce well in excess of this amount.

AFE's that have recently been submitted and approved by Parkers, should get this well to exceed the preliminary allowable substantially, and it should be done within the next 15 to 20 days.

Q. All right. Let's go to Exhibit No. 6.

A. This is the Bogle Flats Unit No. 1. This is one of the wells which we worked over in July. We worked over two of them to try to get their production up to what we felt was an

adequate volume. If you'll notice right now, on the very far right-hand side of the graph, it has exceeded the OCD's preliminary allowable, and this well is still cleaning up and is currently making 5,800, 5,900 Mcf per day and we expect it to go up some more.

Q. Now the Bogle flats No. 2, Exhibit 7.

A. Exhibit 7 indicates a little bit of a problem we had with the new treatment, which we tried. It was unsuccessful. Production was actually decreased in the February/March period.

We tried several things over the subsequent months, and until July of this year we were unable to get this well's production back up to previous levels. However, right now, again, since our work in July, the production is up and it's still inclining, so we're hoping it will be 5,700, 5,800 Mcf per day in the near future.

Q. Let's go now to Exhibit No. 8, Bogle Flats Unit #3?

A. Exhibit 8 is one of our two most productive wells in this field. Again, we basically did the same type of well work which we did on the Federal 33 No. 1, surface equipment works, tubing, changeouts, well workovers.

It's consistently produced well in excess of 7 million a day, so at this time it's in an overproduced status and we'll have to curtail its production sometime later this year or in the next proration period due to the productivity of this well.

Q. Let's go now to the exhibit on the Bogle Flats Unit #4, Exhibit 9. Would you review that for the Commission?

A. This, again, is just to emphasize the fact that we have several wells that are well in excess of 7 million a day, which means that even at the current or recommended allowable, which Chevron recommends, 196,500, we will have to curtail production in this well as well.

Q. What about Exhibit 10?

A. This well, if the Commission's preliminary number is accepted, this will exceed and accrue overproduction and will have to be curtailed. This shows the number of wells that Chevron has that will have to be curtailed under the 5,700 preliminary allowable.

Q. The final exhibit, Bogle Flats Unit #8?

A. Again, this shows consistent overproduction at the Commission's preliminary

allowable.

Q. Mr. Huzzey, if the allowable adjustment that Chevron is making is, in fact, adopted, will that result in allowables that more accurately reflect the ability of the wells in this pool to produce?

A. Yes. From talking with other operators, they've had very successful programs, too, and I'm sure the testimony will be presented subsequent to mine, that there are quite a few wells out here that can produce well in excess of the current allowable, 6,460 Mcf per day.

And, as stated previously, if the Commission's preliminary allowable is accepted, we would have probably 11 to 13 wells which would exceed that preliminary level, and be non-marginal and their production would have to be curtailed. So, over 30 percent of the field would be curtailed at a 5,700 Mcf per day allowable.

So, we feel that we need a higher allowable to allow adequate production from all operators.

Q. Do you have any further information you wish to share with the Commission?

A. No.

Q. Were Exhibits 1 through 11 prepared by you?

A. Yes.

MR. CARR: At this time, we offer Chevron Exhibits 1 through 11.

CHAIRMAN LEMAY: The exhibits will be admitted in the record without objection.

MR. CARR: Thank you. That concludes my direct examination of this witness.

CHAIRMAN LEMAY: Questions of the witness? Commissioner Bailey?

COMMISSIONER BAILEY: Nothing.

CHAIRMAN LEMAY: Commissioner Weiss?

COMMISSIONER WEISS: Yes.

EXAMINATION

BY COMMISSIONER WEISS:

Q. What kind of treatment did you use on Bogle Flats No. 2, Exhibit 7, that didn't work out so well?

A. Actually, the No. 1 and No. 2 we modified the treatment, trying to get more effective diversion into the different zones that perforated. Unfortunately, we were successful; however, the diverter we used, we were unable to

get that to come back, as it were.

Q. Is it a gel or something?

A. No. Actually, it's a modification in the procedure we used on the other wells. We just added more stages of the diversion. We were successful. We did divert into more zones; however, it didn't clean up as well as it had previously, so we had to go back in and reperforated the wells and restimulated, and isolated the zones and got the wells back up.

COMMISSIONER WEISS: Thank you.

CHAIRMAN LEMAY: No questions.

MR. CARR: Mr. LeMay, the only thing else I have to present for Chevron is a letter that we received from MW Petroleum supporting an increase in the allowables for this field, in line with what has been recommended by Chevron.

CHAIRMAN LEMAY: We'll just enter that in the record.

Mr. Kellahin.

RICK HALL

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

EXAMINATION

BY MR. KELLAHIN:

Q. Would you please state your name?
A. My name is Rick Hall.
Q. By whom are you employed and in what capacity?
A. I'm employed by Oryx Energy Company, and I'm the operations engineer for the Hobbs area, which includes the Indian Basin.
Q. Have you testified at prior Commission hearings on prorationing allowable schedules for the Indian Basin Upper Penn pool?
A. Yes, I have.
Q. In your capacity aspirations engineer for your company, are you directly involved with production of the wells in the Indian Basin, Upper Pennsylvanian gas pool?
A. Yes, sir, I am.
Q. Based upon that personal involvement, do you have recommendations for the Commission concerning the allowables for this next proration period?
A. Yes, sir.
MR. KELLAHIN: We tender Mr. Hall as an expert witness.
CHAIRMAN LEMAY: His qualifications are acceptable.

Q. Before we look at the specifics of your package of documents, tell us the bottom line. What, if any, adjustment do you recommend to the Commission that they make for this pool?

A. We recommend basically the same number as Chevron has recommended, the 196,500, which is currently the allowable that the Commission granted us in the last period and also the previous period.

We feel like this will allow for production stability in the field. This would put us for about a year and a half at the same volume. Also, if we go back to the Commission's proposed volume, it may not meet the seasonal demand of the production of the field.

Q. If we look at this level of allowable, should the Commission adopt the adjustment, have you or others on your behalf, or Oryx, determined if there is market demand for gas at that rate?

A. Yes, I have, and we have plenty of market demand, and we have a person that I'll let speak for that.

Q. Are you aware of any limitations within the pool, or in the gathering of production from the pool, to take this volume of gas to market?

A. No.

Q. Describe for us the status of your wells.

A. Let's turn to Exhibit 2. Exhibit 2 lists each of our wells that we operate. This is for the summer period. On the right-hand column is the volume that we predict that the wells will make for the summer period.

As you can see, looking down the right-hand column, we will have three wells that will exceed the current Commission allowable of 172.012, and would fall within the proposed 196,500. We would only have one well at the current level.

Q. Do you have a table that shows us the impact on your wells for what we'll characterize as the winter period?

A. Yes.

Q. Let's turn to that.

A. The next exhibit is a history of the winter period gas proration schedule for 92 through March of 93. Then, the actual protection for 92 to March of 93, and then our current estimate for our wells for the upcoming period.

With this slide, we see that four of

our wells would exceed the Commission's proposed 172, and you'll also note that three of the wells would also exceed the Oryx-proposed 196,500.

Q. Let me have you turn now to Exhibit 4. Identify and describe that.

A. Okay. Exhibit 4 is just a production curve, gas Mcf per day versus time, for the Oryx Energy Company-operated wells. Basically, as Chevron's indicated, we've also done workovers. You can see the upper trend in the production, and we're asking that the allowable at least be held flat. If we bring the allowable back down, then we're going to be overproducing.

Q. Give us a summary of the chronology of the recent activity in Indian Basin Upper Penn. Initially, I believe, Marathon was the operator that undertook the workover project to increase production from certain of its wells and then, I believe, Oryx was next in line?

A. That's correct. Marathon started in 91, basically. Oryx started their work in January or February of 92, and Chevron has followed and has done their work. Basically, at this point, when Chevron finishes their work, we'll have all worked our wells over and

increased the volumes.

Q. All right. Of the wells that you worked over, how many total wells did you have in the pool?

A. We have five wells that we worked over.

Q. Does that represent all the wells that you have in the pool?

A. We have six, but one of them is TA'd.

Q. So you've completed all that workover activity for your wells?

A. Yes, we have.

Q. In summary, then, what is the reason for your recommendation of the 196,500 adjustment?

A. Our reason for the 196,500 is just to prevent overproduction of the wells that we currently operate. And, at the Commission's level, it would be even more overproduction.

Q. Using the 196,500 adjustment, that, at least, makes consistent producing allowables that you've utilized in the pool for the last two periods?

A. Exactly.

MR. KELLAHIN: That concludes my examination of Mr. Hall. We move the

introduction of his Exhibits 1 through 4. The last exhibit is the next witness's exhibit.

CHAIRMAN LEMAY: Exhibits 1 through 4 will be admitted into the record.

Questions of the witness?

COMMISSIONER BAILEY: No questions.

COMMISSIONER WEISS: No questions.

CHAIRMAN LEMAY: Nor do I. Thank you very much.

THE WITNESS: Thank you.

TOM STRICKLAND

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

EXAMINATION

BY MR. KELLAHIN:

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

A. My name is Tom Strickland. I'm currently employed with Oryx Energy Company as a gas supply representative in the gas marketing group.

Q. As part of your duties as a gas supply representative, are you involved in a personal way with the production that your company has in the Indian Basin Upper Penn gas pool?

A. Yes, sir, I am.

Q. What is it that you specifically do with that production?

A. My job in the marketing department is dealing with the forecasting of the gas supply that is going to be available, and dealing with any term contracts, sales contracts, long-term sales contracts, and providing numbers for the spot supply, our spot sales volumes, to be sold on the spot market.

Q. When your operations engineer, Mr. Hall, described your having contacted someone in Oryx to determine market demand for production from this pool, are you the individual that he discusses that issue with?

A. Yes, sir, I am.

Q. What have you determined to be the market demand for production from your wells within this source of supply?

A. Based on historical market demand for our supply here, we have had no problem selling all the gas that we have produced from the Indian Basin plant, which is the sales point that we sell the gas at. We sell all the gas that is available at the plant.

Some of the things that makes this available to us to sell are innerconnects with other pipelines. We have the ability to take the gas to the West Coast, we have the ability to take the gas to the Midwest, to the Gulf Coast, and to markets within Texas.

To the West Coast would be El Paso, Transwestern. To the Gulf Coast would be the Valero pipeline. To inner Texas would be Lone Star. And we can leave it on NGPL and take it up to Midwest markets. Markets, based on historical and based on the ability to meet the supply in various markets, meet the demand in various markets, we feel confident that we'll still be able to sell all the gas.

Q. Is the market demand, that you try to satisfy for your company's share of the gas, greater than the volume of gas being produced by your wells in this pool?

A. Yes, sir. We see that we can sell every Mcf or MMBTU of gas that is produced.

Q. What do you do, then, to satisfy the excess market demand that you can't achieve or satisfy with current production levels out of the pool?

A. That gas would come from either other fields or other states or other production elsewhere.

Q. Do you see any limitation within the system of gathering gas from the field and taking it to market that restricts the volumes of gas that can be produced from your wells?

A. No, sir.

MR. KELLAHIN: That concludes my examination of Mr. Strickland. We would move the introduction of his letter, which is Exhibit No. 5.

CHAIRMAN LEMAY: Thank you, Mr. Kellahin. Questions of the witness? Commissioner Bailey?

COMMISSIONER BAILEY: No.

CHAIRMAN LEMAY: Commissioner Weiss?

COMMISSIONER WEISS: Yes.

EXAMINATION

BY COMMISSIONER WEISS:

Q. How many Mcf is 27 billion BTU?

A. The BTU factor, I believe, is approximately 1.5 Mcf equals 1 MMBTU. So, the conversion that we use to convert Mcf to BTU would be at the plant tailgate, after the gas is

processed, would be 1.5. So, you take 1.5 times 1 Mcf, and that gives you 1 MMBTU.

Q. This number here is 27 million, roughly, cubic feet per day?

A. Yes.

MR. HALL: Excuse me. It's 1.05.

A. Excuse me, yes. 1.05.

UNIDENTIFIED SPEAKER: Calculating tailgate BTU is 1.005. So, essentially, 1 million BTU is really, essentially, 1 Mcf.

COMMISSIONER WEISS: Very good. Thank you very much.

CHAIRMAN LEMAY: That was my question, too. I have no questions. You may be excused.

MR. KELLAHIN: I would like to recall Ron Foltz.

RONALD J. FOLTZ

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

EXAMINATION

BY MR. KELLAHIN:

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

A. My name is Ronald J. Foltz, and I'm a senior reservoir engineer.

Q. You've previously testified about the Blinebry pool. Do you also continue with your prior duties as a proration engineer for production from your company's wells in the Indian Basin Upper Pennsylvanian gas pool?

A. Yes, sir, I do.

Q. Based upon the production from that pool, and your wells, do you have a recommendation to the Commission concerning what, if any, adjustments to make for the upcoming winter proration period?

A. Yes, sir, I do.

MR. KELLAHIN: We tender Mr. Foltz as an expert proration engineer.

CHAIRMAN LEMAY: His qualifications are acceptable.

Q. What are your recommendations, Mr. Foltz?

A. At this time, Marathon recommends that an adjustment on line 3, to the proration schedule, of 168,607, be made to increase the total pool volume, and with subsequent calculations result in 196,500 monthly acreage allocate factor, or F1 factor.

Q. You have a table among your exhibits

that shows how to make the adjustment and calculation, but the bottom line is that you and the other principal operators in this pool, at least for this next proration periods, have agreed to continue the levels of production for the non-marginal units?

A. Yes, sir, that's correct.

Q. It will be at the same rate that they're currently enjoying?

A. That's correct, yes.

Q. Let's turn to the first display and have you identify that for us?

A. Exhibit A is the Indian Basin field area, or acreage map, indicating the operators for different sections. The red, small red square or rectangle in Section 23 is the location for Indian Basin gas plant. The marginal wells are indicated within the colored area as the productive acreage. The green circles are what we consider to be the current non-marginal wells in the pool.

Q. Let's turn now to Exhibit B.

A. Exhibit B is the Indian Basin field total Upper Penn pool production, as obtained from C-111 data information. The history

information is from January 1992 through July of 1993, with a projection or forecast of total pool production for August 1993 through March of 1994. The allowable for the total pool is also indicated by the dashed line.

Q. What's the significance of this display to you?

A. The significance of this display is that the total pool production, during any given period, generally exceeds the allowable for the pool.

Q. Let's turn now to Exhibit C, and look at the calculation of how you propose to make the adjustment.

A. Exhibit C indicates that Marathon's proposing an adjustment of 168,607 Mcf, for a total of 3,889,514 Mcf per month. This was obtained by looking at a four-month average of production for March 1993, April and May, excluding June, and looking at July 1993's number. That four-month average resulted in right at 3.9 Bcf per month.

Continuing from there, depending on the acreage factor you see use in the calculations, we were able to come up with an average of, for

marginal pool allowable, of 2.9 Bcf, which results in 954,990, Mcf for the monthly non-marginal pool allowable. And then, using the non-marginal acreage factor of 4.86, results in the 196,500 F1 factor.

Q. It's been almost two years, if not more, since Marathon initiated an effort in prior proration hearings to increase the allowables in the pool, and we've gone through a number of rather contested hearings before this Commission for this same reservoir.

What is the current status of development and production in the pool that has caused this accommodation among the operators that, at least for this next period, there is some consensus on what to do for producing levels?

A. I believe primarily is the remedial work that has taken place over the last two years, where Marathon, then Oryx, then Chevron, and i'm including Apache, have been able to see the benefits of doing remedial work and increasing deliverabilities from the wells.

Q. One of the hopes and expectations early on was that this reservoir was a likely target

for unitization, and we had prior discussions about Marathon initiating unitization discussions among the operators for this pool. What has happened to that?

A. The unitization discussions continued through June of 1992, when we had a working interest owner meeting, and it was decided, or it was found, that we could not pursue unitization at that time due to lack of unanimous support by all the operators.

Q. You could not get at least enough agreement for a 75-percent consensus on how to formulate the unit and come up with participation parameters and a participation formula?

A. I believe, in this particular instance, being a gas reservoir, it would take 100 percent, or unanimous participation.

Q. There would have been no secondary efforts initiating pressure maintenance or for waterflooding any of the reservoir?

A. Not at this time.

Q. So you were stuck with 100 percent?

A. Right.

Q. What do you forecast as the likelihood that you will be able to unitize this pool in the

foreseeable future?

A. There are still some discussions going on. We have yet to research a position where we feel we need to go ahead with those discussions. Marathon is looking at other alternatives to working toward maximizing recovery from the reservoir, and yet still protect correlative rights.

Q. We have had prior discussions about bringing this reservoir back to the Commission, or the Division, to reinvestigate special pool rules by which we can make adjustments to protect correlative rights and maximize ultimate recovery. Is that still a consideration?

A. Yes, it is.

Q. Does your company have any concerns about the proration system, as it now affects production in the pool?

A. The major concern from Marathon would be that as reservoir pressures decline, due to the higher withdrawal rates at some point, drainage or deliverabilities from some wells may not actually be representative of their production underlying those leases.

Q. At least for this next winter proration

period, are you satisfied that if the Commission adopts this adjustment, that within a reasonable range we can protect correlative rights and prevent drainage among spacing units?

A. Yes, I do, during this period.

MR. KELLAHIN: That concludes my examination of Mr. Foltz. We move the introduction of his Exhibits A, B, and C.

CHAIRMAN LEMAY: Exhibits A, B, and C will be admitted into the record without objection. Questions of the witness?

COMMISSIONER BAILEY: Nothing.

COMMISSIONER WEISS: Just a comment. I would hope that you would pursue unitization. As I recall, this was an edge water drive?

THE WITNESS: That's correct.

COMMISSIONER WEISS: Because somebody's wells are going to get wet some day, and they'll want to say this or that. Maybe now is the time to address those problems, while there's still production.

THE WITNESS: Okay.

CHAIRMAN LEMAY: One quick one.

EXAMINATION

BY CHAIRMAN LEMAY:

Q. On your Exhibit C, the difference in your marginal pool allowables between the OCD figures and those proposed by you, account for the difference in your adjustment, versus previous witnesses? In other words, you're asking the same thing as previous witnesses, it's only that the different that you came up with in the marginal well production that accounts for your difference in adjustment, is that right?

A. That's correct. Yes, sir.

CHAIRMAN LEMAY: I have no further questions. Thank you. Congratulations on prevailing with the other operators in the field. All of you are to be congratulated on the degree of cooperation you're finally showing.

MR. KELLAHIN: He just had a brief statement he wanted to make.

CHAIRMAN LEMAY: He's welcome to make that now, as a sworn witness, if he likes.

MR. KELLAHIN: Why don't you go ahead, then.

MR. FOLTZ: Marathon is one of several operators in the Indian Basin field. Production from Indian Basin is primarily from the Upper Penn reservoir.

Since first production begain in the mid-60s, approximately 30 percent of the original productive acreage has been lost due to aquifer influx. Over the years, fuel production had declined to less than a hundred million cubic feet a day by 1990.

As a result of numerous well remedial programs by field operators, current rates average approximately 130 million cubic feet a day. At this time, Marathon Oil Company does support maintaining allowables, for non-marginal wells, at the current level of 196,500 Mcf per month, for an acreage factor of one.

However, future allowables proposed by Marathon may be reduced as a result of projected reservoir pressure decline and potential correlative rights issues. Marathon is concerned as to whether the current gas proration system for Indian Basin is structured to allow for maximum recovery of hydrocarbons and protection of correlative rights from the Upper Penn gas pool.

Prior attempts at unitization were frustrated by limited or no support from other operators. Marathon is evaluating other

alternatives to maximize recovery and to protect correlative rights for all leases, and will seek assistance from the New Mexico Oil Conservation Division in implementing future modifications. Thank you for your attention.

MR. KELLAHIN: That's all we have, Mr. Chairman..

CHAIRMAN LEMAY: Thank you, Mr. Foltz, appreciate it. Anything more? Statements in the proration hearing into the record?

Because we do want to get this wrapped up fairly quickly, what we'll do is we'll keep the record open for one week for additional statements.

MR. STOVALL: Mr. Chairman, I don't see any reason to keep it open for even a week. If there was some indication that we would have one, I would say fine. I think you can take it under advisement and proceed to act.

CHAIRMAN LEMAY: We won't delay that, then, if there's no one that needs to supplement the record. We'll take the case under advisement. Thank you very much.

(And the proceedings concluded.)

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 Commission 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 September 20, 1993.

CARLA DIANE RODRIGUEZ, RPR
CCR No. 4