STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO

8 June 1983

COMMISSION HEARING

IN THE MATTER OF:

Application of El Paso Natural Gas Company for the reclassification of marginal gas wells in the prorated gas pools of southeast New Mexico.	CASE 7858
Application of Doyle Hartman for classification as marginal of all wells in the prorated gas pools of southeast New Mexico.	CASE 7905

BEFORE: Commissioner Joe Ramey, Chairman
Commissioner Ed Kelley

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: W. Perry Pearce, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant: John F. Nance, Esq.
El Paso Natural Gas Company
P. O. Box 1492
El Paso, Texas 79978

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO

8 June 1983

COMMISSION HEARING

IN THE MATTER OF:

Application of El Paso Natural Gas Company for the reclassification of marginal gas wells in the prorated gas pools of southeast New Mexico.	CASE 7858
Application of Doyle Hartman for classification as marginal of all wells in the prorated gas pools of southeast New Mexico.	CASE 7905

BEFORE: Commissioner Joe Ramey, Chairman
Commissioner Ed Kelley

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: W. Perry Pearce, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant: John F. Nance, Esq.
El Paso Natural Gas Company
P. O. Box 1492
El Paso, Texas 79978

A P P E A R A N C E S

For Doyle Hartman:	William F. Carr, Esq. CAMPBELL, BYRD, & BLACK P.A. Jefferson Place Santa Fe, New Mexico 87501
For Amoco Production Co.:	Clyde A. Mote, Esq. Amoco Production Company Post Office Box 3092 Houston, Texas 77253
For Marathon Oil Company:	Robert J. Pickens, Esq. Marathon Oil Company P. O. Box 3128 Houston, Texas 77001
For The Gulf Companies:	Anthony V. Sorrentino, Esq. The Gulf Companies P. O. Box 3725 Houston, Texas 77253
For Southern Union Exploration:	Andrew M. Ives, Jr., Esq. RODEY, DICKASON, SLOAN, AKIN, & ROBB, P.A. Marcy Plaza, Suite 101 P. O. Box 1357 Santa Fe, New Mexico 87504-1357
For Mesa Petroleum Co.:	Steven C. James, Esq. Mesa Petroleum Co. Vaughn Building, Suite 1000 Midland, Texas 79701

A P P E A R A N C E S

For Mesa Petroleum Co. and Bass Enterprises:

Owen M. Lopez, Esq.
HINKLE, COX, EATON, COFFIELD, & HENSLEY
Post Office Box 2068
Santa Fe, New Mexico 87501

For Belco, Lewis Burleson, Jack Huff, Bob & Dan Hannifin, Alpha Twenty-One, Geo-Energy Corp., and John Yuronka:

W. Thomas Kellahin, Esq.
KELLAHIN & KELLAHIN
P. O. Box 2265
Santa Fe, New Mexico 87501

For Moran Exploration, Inc.:

Ernest L. Padilla, Esq.
P. O. Box 2523
Santa Fe, New Mexico 87501

For N. M. State Land Office:

Jeff Taylor, Esq.
State Land Office
P. O. Box 1148
Santa Fe, New Mexico 87504-1148

I N D E X

I N D E X

E X H I B I T S

E X H I B I T S

E X H I B I T S

MR. RAMEY: The hearing will come to order.

We have two cases on the docket which I think will be consolidated for purposes of testimony and two orders.

So we' ll call first Case 7858.

MR. PEARCE: That case is on the application of El Paso Natural Gas Company for the reclassification of marginal gas wells in the prorated gas pools of southeast New Mexico, and for the suspension of certain proration rules.

MR. RAMEY: Next Call Case 7905.

MR. PEARCE: That case is on the application of Doyle Hartman for classification as marginal of all the wells in the prorated gas pools of southeast New Mexico.

MR. RAMEY: I ask for appearances at this time.

MR. NANCE: On behalf of El Paso Natural Gas Company, my name is John Nance.

We will have one witness, Mr. H. L. Kendrick.

MR. CARR: May it please the Commission, my name is William F. Carr, with the law firm Campbell, Byrd, and Black, P. A., appearing on behalf of Doyle

Hartman.

We will have two witnesses, Dan Nutter and Bill Aycock.

MR. RAMEY: I don't think it's necessary -- does anybody else have witnesses? Mr. Padilla?

MR. PADILLA: Mr. Examiner, or Mr. Chairman, Ernest L. Padilla of Santa Fe, New Mexico, on behalf of Moran Exploration, and I have one witness that I will call.

MR. RAMEY: And then we have a list of the rest of the people, if nobody else has any witnesses.

MR. KELLAHIN: Mr. Ramey, if you please, I'm Tom Kellahin. I have several clients to represent. I would like to reserve the right to call a witness. I don't have a specific witness at this moment.

MR. RAMEY: Okay, fine, Mr. Kellahin, we'll let you do that and anyone else we'll let do that.

I'll ask that all witnesses stand at this time and be sworn.

(Witnesses sworn.)

MR. RAMEY: All right, Mr. Nance, I think you're the first applicant so we'll let you -- let you start with your witness first.

MR. NANCE: Thank you, Mr. Chairman.

As a preliminary matter, I would like to submit a letter from the firm of Montgomery and Andrews, indicating that for the purposes of this hearing today I am associated with their firm.

MR. RAMEY: Okay, thank you.

MR. NANCE: El Paso has filed this application for reclassification of marginal wells in the prorated gas pools in southeast New Mexico. We have a number of exhibits that we would like to submit in this case, as we proceed with our direct testimony of Mr. Kendrick, and if it would be all right just to hand them to you as we -- as we introduce them in his question and answer testimony, I would like to introduce Mr. Kendrick and proceed with direct examination at this point.

MR. RAMEY: All right.

H. L. KENDRICK,

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

DIRECT EXAMINATION

BY MR. NANCE:

Q. Would you please state for the record, your name, by whom you are employed, and in what capacity?

A. H. L. Kendrick. Employed by El Paso Natural

Gas Company as a staff engineer.

Q. Have you previously testified before this Division or one of its examiners?

A. Yes, sir, I have.

Q. Were your qualifications found acceptable at that time?

A. Yes, sir, as a petroleum engineer.

MR. NANCE: Mr. Chairman, I would submit the witness' qualifications, or I would ask that they be considered acceptable.

MR. RAMEY: The Commission, I think, is familiar with Mr. Kendrick and he is qualified at this time.

Q. Mr. Kendrick, could you give us an introduction to what you feel is the problem facing El Paso as a pipeline and producer in southeast New Mexico?

A. During the years of the high sales, high takes of gas from the gas wells in southeast New Mexico it did not seem to be a problem in which wells need to be produced because most wells were being produced every day.

El Paso had enjoyed a very good market in our marketing area, until 1982, at which time the market declined in such a manner, and so rapidly, that there were no preparations available; the rules of operation in the pools of southeast New Mexico were not adequate to take care of a change to a low market demand in such a manner as would relieve

the situation of having all or nearly all of the wells as marginal wells and only a few wells nonmarginal. And in the process of producing gas through 1981 El Paso had a policy of trying to never shut-in marginal classified wells, and that, actually, is still El Paso's position, that we would like to have marginal wells produce every day.

But under the condition that we now have, we find that that is impossible. It was impossible in 1982. It is impossible this far in 1983. So with that, we are asking the Commission to automatically at one point, at one date, to start proration over again to the point that we reclassify as many of the marginal wells as is deemed necessary to nonmarginal, so that those wells can be used to swing on to produce those wells or shut in those wells during periods of high and low demand, so that those wells as nonmarginal will carry an under produced or over produced status and the marginal wells will therefor be permitted to produce 100 percent of the time, and our marginal wells would not have an over or under status, so that if you ever shut in a marginal well technically and theoretically you have lost allowable to that well that may or may not ever be produced.

So, with that, El Paso is asking for this one time start up of proration, reclassifying the wells to nonmarginal, and also to hold some of the present operating rules in abeyance, if you please, so that if we have wells that get six times over produced too quickly in this early period, that those wells not be asked to be shut in until we

have an opportunity to get this program lined out and get the proper wells then reclassified as marginal and the allowables going to wells that can produce the allowable for the time.

Q. The wells that El Paso is seeking to have reclassified as marginal to nonmarginal, what type of status as far as over or under produced would El Paso want applied to those wells at the effective date of an order?

A. Any marginal well that is reclassified as nonmarginal on that effective date would begin as a balanced well, neither under produced nor over produced, but according to the rules of the Commission, they would be considered coming into the proration period under produced.

This is done for the purpose so that they can be automatically reclassified as marginal if the case so requires.

Q. And what about the over or under produced status of existing nonmarginal wells?

A. For any nonmarginal well now producing it would carry over whatever its over or under produced status would be on the effective date of an order that we are seeking in this matter.

Q. In its application El Paso has suggested an effective date of June 1st, 1983. Do you feel that this date is critical?

A. No, sir. At the time we made the original application for this hearing we asked that the production for

June, July, August, and September, being a four month period instead of a quarterly year, be taken as the trial period, or starting period for this, because we had filed early enough that we could begin this in June, if the Commission so saw fit to grant an order in that manner.

Now that we're in the month of June, we say, well, we can drop the June from the issue and if an order is so written it could become effective the 1st of July, the Commission would not have to recalculate the allowables for June, and then everything could pick up on a July 1 start date.

Q. Do you feel that the July through September quarter, then, would allow sufficient basis for determining producing abilities of wells and allow appropriate wells at the end of September, then, to fall back into marginal category where production warranted that?

A. It would be a good starting period and three months is certainly the minimum amount of time you would want to look at before you let wells become reclassified back to marginal, and certainly at the end of that time we would want to look at the wells very cautiously and not let wells become reclassified that we really felt should stay nonmarginal for another three month period.

Q. El Paso has a compilation of data which we have designated Exhibit Number One. I'd like to present copies of this to the Commission.

MR. CARR: May it please the Commission, are there copies of that exhibit that we might have?

MR. NANCE: I'm sorry, I meant to. Now, we do not have -- I'm sorry, at this point we don't have enough copies to offer everyone in the room one at right this moment, but I do have twenty, or so, copies that we will hand out.

A. May we go off the record just a moment, please?

(There followed distribution of some exhibits.)

Q. Mr. Kendrick, if you would, please, could you describe El Paso's Exhibit Number One and with that in mind give an indication of the situation among the prorated gas pools of southeast New Mexico?

A. Okay. Exhibit One was made from information that was available from the southeast gas proration schedule as published by the Oil Conservation Division.

This is the last twelve months between June of 1982 through May of 1983, listing fifteen of the prorated pools in southeast New Mexico, and for each month from June '82 through May of '83, shows the number of marginal units and the number of nonmarginal units in each pool.

Then the last column on the righthand side shows the number of wells.

In southeast New Mexico some units are small and some large; some have more than one well on a unit. So

I thought, well, picking the number of wells that was in the May, 1983 gas proration schedule, and just showing for that one month the number of wells that corresponds to the number of proration units as marginal or nonmarginal for May, 1983, are the two adjacent columns. Such as, the first pool is the Atoka Penn Pool, and for May, 1983, there were 24.89 marginal proration units. There were 26 wells in those -- in that category as marginal wells in the 24.89 proration units. There was 1 unit nonmarginal and 1 well nonmarginal. We have 27 wells total, 25.89, the total proration units for the Atoka Penn Pool.

The same information is provided for the fifteen pools listed on the three pages in this report.

Q. From the identification of these wells as marginal or nonmarginal, what observations have you made comparing the number of marginal wells to the number of nonmarginal wells?

A. It seems to be that most wells are marginal wells. A very high percentage are marginal wells, and we feel that this is due to the fact that up to 1981 all the pipelines taking gas from these pools had a very good market and were able to take most of the gas available to them at that time.

So increases production from a pool causes more wells to become marginal but the period of production in 1982, as low as it was, was not adequate to cause marginal wells to be turned around and reclassified as nonmarginal.

Q. As the situation exists now, Mr. Kendrick, are marginal wells in southeast New Mexico being shut in?

A. Yes, they are.

Q. Can you tell me why that is?

A. In the El Paso system in southeast New Mexico we have tried to take gas ratably between wells and when our allowables are assigned to nonmarginal wells we tried to produce that allowable. All in all, we are trying to meet a market demand, whether it is high or low, and we will always try to meet market demand.

And if we have a cutback in our market demand, then we must cut back on the wells producing through our system. And if we cut off all of the nonmarginal wells and still have too much gas on, then we have to cut off marginal wells, and as I mentioned before, that's contrary to our thoughts of how a system should operate.

So we have shut off in the past marginal wells, and as we continue with a low demand for gas, we have tried to balance the shutting in of marginal wells to where that one operator or one well as a marginal well is not the only well that got shut in. We shut in any well that produced greater than 25 Mcf per day, and we have tried to shut in every well that produced greater than 25 Mcf a day at one time or another, until going through our records we can say that over a period of a year's time we would try to balance the amount of producing time or the amount of shut in time for every marginal well.

So we are still shutting in marginal wells in southeast New Mexico.

MR. NANCE: Mr. Chairman, next El Paso has a series of exhibits that we would like to submit. These contain data on individual pools in southeast New Mexico.

Each of these groups is just one exhibit, so if you would just circulate these. We do not have packages of the whole set grouped together at this point.

Q. Mr. Kendrick, could you describe, please, the information contained on Exhibit Number Two for the Atoka Pennsylvanian Gas Pool?

A. All the data found on the first page of Exhibit Two, if your first page is the data sheet, came from the proration schedule for the month indicated from southeast New Mexico in the Atoka Penn Pool.

The total allowable, from off the page from which the allowables are calculated, being the last figure for the pool where it adds the amount of allowable for marginal and the amount of allowable for nonmarginal wells. That total figure is the first -- is the second column, the first column being the month and year.

The third column is the marginal allowable. This came from the same page in the proration schedule. When you start to calculate allowable you start with nominations. You adjust the nominations. You get a figure that you're supposedly going to allocate to the wells in the pool, and

then you take away from that the marginal allocation of the amount of gas to be applying to marginal wells. That is the figure that is column three, called Marginal Allowable for the month indicated.

The third column is the total production from the pool. This does not distinguish between any pipelines in any pool. It takes the total production from the next page; all the pipelines are listed and at the bottom of that it has a total for the pool.

The second column in that system, the next particular issue, May 1983, has the March total production for that pool. That is what shows as total production in column four for the month indicated.

The marginal production is the next column on the same page, which is headed March production, marginal being the lefthand column and the righthand column is for non-marginal production.

The nonmarginal production, as shown on the data sheet, is what would be the fourth column on this page, and the total column for the pool.

Now, this is not any information that's new to anyone. It's just a matter of going to the trouble to tabulate it and show you what happened in the proration year that began April '82 and ended in March of '83.

Q. Mr. Kendrick, for clarification sake, can we distinguish the period of time that this exhibit covers as compared to the period of time that is covered in Exhibit Num-

ber One?

A. Yes. There is a difference, with Exhibit One covering a period of time, starting June of 1982, going through May of 1983, which is not actually a proration year, as such, but it is the latest 12-months I had available of this data to put on Exhibit One.

Exhibit Two is the latest available data I had, and it happened to fit the last actual proration year, because the production for the month of March was obtained from the May proration schedule for those figures.

Now, if you please, look at the second page as a chart. Some of them are colored. Those that are colored the second page of your chart, and those that are not colored, the first page of your chart, the second page is the data sheet. It's all the same data, and please forgive the coloring on these charts, but an amateur did it, except for the Commission -- for the El Paso attorney, who helped, and he's a better artist than most of us, the width of the line, the placing of the line does not have a bearing on it by the color of it. We used color to try to be an identifier, using red on all of these graphs to represent gas produced from marginal classified wells, and the green coloring is representing gas produced from nonmarginal classified wells.

If you'll look at the data on the front, go to the fourth column. It says Total Production. Total production is the uppermost black line for any one of the bar graphs for whatever month you're looking at.

If there is a line below that and the red line drawn across there, that is the total marginal production that is from the fifth column on the data sheet.

So it gives two columns of data along with the month to plot this. The idea is if you look at a sheet of data it may not tell you what you might see as a picture, so if I were to try to describe to you this picture that I have for the Atoka Pennsylvanian Gas Pool, I'd say that the marginal production for the first month on it, being April of '82, was at a certain level, but April's production was greater -- May's production was greater, and June production was greater than that. So marginal production is increasing in that pool.

Now if we look back at Exhibit One, we see -- we don't have April and May on it, but the number of wells stayed the same. So something happened to cause the production to increase. And you will notice in other places on the graph that the amount of marginal production decreased. So something else happened. And we attribute this to the fact that we have been shutting in marginal wells and then producing marginal wells at some time.

So that causes a fluctuation in the amount of marginal gas, the gas that you're supposedly allocating first in the pool, to be produced. We say that if you shut in marginal gas you've got too many wells, too much gas, classified marginal.

And when you look at the plot and see just a little, bitty green cap on top of each month as nonmarginal

production, you see there's not enough green caps to take the swings that are involved, and when you see the total production, the total marginal production in August of 1982 exceeded the total production for February of 1983, then there is too much marginal units.

And we have on the bottom of the data sheet, after the tabular data, we have a twelve month total of total production, marginal allowable, total production, marginal production, nonmarginal production, a twelve month average figure, just a plain arithmetic average, and then percent of total production, and the only numbers showing on that should be in the column of marginal production in the Atoka Pennsylvanian Gas Pool, such that the marginal gas was 81.6 percent of the total production of the pool.

We feel that number is quite high.

Below that, then, for March, 1983, it shows a total number of marginal units, still out of the proration schedule; the total nonmarginal units of 1, and the percent of marginal units is 96.1.

Now that's all that exhibit is trying to show you, is how the gas is produced.

If you will, please, go to Exhibit Three.

Q. If you could, go ahead and cover Exhibit Three and indicate the similarities and differences, if any, between the two exhibits.

A. Exhibit Three is made from the same data from the same sources, a data sheet and a graph, and I believe

that this graph more adequately shows the great fluctuation that has been occurring in marginal production to where that in the month of April the marginal production exceeded the total production for May, June, July, August, September, October, November, December, January, February, March. We say there's too much marginal gas in that pool.

The data sheet on the front says the marginal gas was 78.3 percent of the total production of the pool and we say the marginal units are 90.8 percent of all the units in the pool.

Q. Mr. Kendrick, this information doesn't appear on the exhibit itself in this form, but did you made a comparison of the highest amount of production and the lowest amount of production as far as total monthly production, marginal production, and nonmarginal production, and could you give us an idea of what those ratios are, for example, for the Atoka Penn Pool?

A. Yes, sir. On the Atoka Penn Pool, if you look at your data sheet, or look across the graph and pick out what month was the highest total production, I have identified it on my notes as August of '82, at 169,841 Mcf. The lowest month of production, that's total production, was February, 1983, at 131,594.

I divided the lowest month into the highest month and put that ratio as 1.29. The variation in the total amount of production from the high month to the low month, 1.29.

Doing the same thing for marginal production, I found the high month to be August at 139,365; the low month to be February, 102,186. Dividing the low month into the high month, I found a ratio of 1.36. The ratio of high production of marginal gas compared to low gas is 1.36 times.

Nonmarginal gas I see the high month in October, the low month in April. The high month was 32,753; low month 14,038; with a ratio of 2.33.

This is to get an idea of how much fluctuation there is between months, and total production between months, and total marginal production, and then total nonmarginal production.

Q. Where does El Paso feel that the swing, if you will, should appropriately lie?

A. We feel in producing wells that the marginal wells should be produced 100 percent of the time. If they're produced 100 percent of the time, then the ratio between the high months and the low months should be 1, or very nearly 1, and the big swings that are incurred by the fact that you have a high month of production and low month of production, then that ratio might be quite high. It could be to any limit, but if you have the proper number of wells classified marginal, that ratio will always be at or near 1.

Q. Would you care to briefly describe the information, then, on Exhibits Four through Ten?

A. Okay, Exhibits Four through Ten are for the pools named and the data, again, is exactly as was on Exhibits

Two and Three, just using different pools, to where that you can see the fluctuation in the produced values of marginal gas and total production.

I might stop at this point and make one statement that may not have occurred to you.

If you take the gas proration schedule for any month and go to the data sheet for the nominations for gas showing the previous month's production, it shows the total production; it shows marginal production, and it shows nonmarginal production. Theoretically, if you add up the marginal production with the nonmarginal production, you'll get total production. Don't be excited if it does not add up to the figure that is total production for these in the first -- in the second column, because there could be new connections in the pool; there could be wells that are not classified into it, so that that production shows in the total production, so when you add marginal production and nonmarginal, you may not get the exact figure that shows for total production.

That's a common, every month occurrence at the Oil Conservation Division. Many months they are the exactly the same.

Exhibit Four for the Buffalo Valley Pennsylvanian Gas Pool shows high fluctuation in marginal gas. We say it's too much marginal.

Exhibit Five for the Burton Flats Morrow, quite a variation. When we compare the high month of marginal gas for the Burton Flats Morrow to the low month of marginal

gas, we get a ratio of 2.34, but we say it should be near 1.

Exhibit Six is the South Carlsbad Morrow Gas Pool. The marginal gas production looks fairly well, but still at times you can see marginal production exceeding total production for other months. We still say there's too much marginal gas.

Exhibit Seven, Eumont Gas Pool, it's as cyclic as any of the others. We say too much marginal gas.

Exhibit Eight, Indian Basin Upper Pennsylvanian Gas Pool, the amount of marginal gas looks to be very small on this. Certainly I don't see any month of these twelve months in which the marginal gas production exeeded the total production for any other month, but we do see some variation in the amount of marginal gas produced, and, if my notes are correct, the Indian Basin Upper Penn, a comparison of the higher month marginal production against the lower month, I've got 4.41 as a ratio. As small as it looks, it still may be too much marginal gas.

Exhibit Nine, the Jalmat Gas Pool, wild and woolly as you please. That certainly shows the story to us that there's too much marginal gas.

And Exhibit Ten, the Tubb Oil and Gas Pool, may be wild, maybe not quite as wild as the Jalmat.

These were made to just demonstrate how that can work.

MR. NANCE: El Paso has an additional set of exhibits that identify gas pools where there is

no nonmarginal production, and I would like to distribute those now.

(Thereupon further exhibits were distributed by El Paso Natural Gas counsel.)

Q. Once again, Mr. Kendrick, could you describe what these exhibits show?

A. Exhibit Number Eleven, the Burton Flats Strawn Gas Pool, is data derived from the same publication for the same months for the Strawn -- for the Burton Flats Strawn, and in it you'll notice of the colored copies that there is no green. It's all marginal production.

The data sheet on the front shows zero nonmarginal production. Every well in the pool has been classified as marginal well and you can tell how the production has fluctuated between months; of the total production for that particular pool, the ratio between the high months and the low months is 8.71.

If every well in a pool is marginal and is not produced 100 percent of the time, I say you are not prorating the gas from that pool. I say we are not prorating gas in any manner from the Burton Flats Strawn Gas Pool.

And Exhibit Twelve for the Crosby Devonian shows the same thing, fluctuation each month in the total amount of gas produced; all wells marginal gas; no well carrying an

over or under status; from the high month to the low month a ratio of 4.77. We are not prorating gas in that pool.

Exhibit Thirteen, the Indian Basin Morrow, all wells are marginal wells. The ratio of production between the high month and low month is 2.82, and you might say, it ain't bad, but still you have that fluctuation. We're not prorating gas in that pool.

Exhibit Fourteen, the Justis Gas Pool, all marginal gas; a pretty good fluctuation; from the high month to the low month, 10.46 for a ratio. Gas is certainly not being prorated in that pool.

And Exhibit Fifteen, Monument McKee Ellenburger, all marginal production; no nonmarginal wells; a ratio of the high month to low month, 3.47. We are not prorating gas in that pool.

And when I say we're not prorating gas in that pool, we're not prorating it according to the rules and regulations of the pool as prescribed by the Commission, and we're not using the formula that's on the record as the means to prorate gas in each of those pools.

Q. We have one additional exhibit identifying the final pool in the group, Catclaw Draw Morrow Gas Pool. It's distinguished from -- we have identified it as Exhibit Number Sixteen. It's distinguished from the other pools in that it has some months in which there is both marginal and nonmarginal production and other months in which there is only marginal production.

Again, Mr. Kendrick, could you describe the information appearing on El Paso's Exhibit Sixteen?

A. Exhibit Sixteen is the same data from the same source for the Catclaw Draw Morrow Gas Pool, which would tabulate the data, and I've made it also into a bar graph.

Some months have a green cap on the top, which indicates nonmarginal production, and some months do not have a green cap, indicating no nonmarginal production.

If you look at the month of July, you see there is a very high amount of marginal gas.

If you look at the month of November, it's a very low amount of marginal gas, but November has a little bit of nonmarginal gas produced with it.

For this pool the total production ratio in May, being the high month, and November the low month, a ratio of 1.6, and for the marginal gas, high month in July, the low month in November, a ratio of 1.71.

For the nonmarginal we show a high of 16.454 and a low month of zero, so that ratio could be infinity. Infinity in a nonmarginal category is okay, provided when you shut all the nonmarginal wells in you did not have to shut in any of the marginal wells, too, to get down to the demand that you had from that pool.

This is the only one of the pools, of the fifteen that we've looked at, that had this condition existing.

There is still too much marginal gas.

Q. El Paso's final exhibit, Exhibit Seventeen, is being distributed now.

El Paso has titled Exhibit Seventeen Ideally Prorated Pool. Mr. Kendrick, could you explain what we would propose to show on this exhibit?

A. Exhibit Seventeen does not have any data from any proration schedule published by the State of New Mexico. You'll notice that the lefthand column, vertical axis, has no numbers on it to indicate produced volumes.

This is a representation of what could be done with proration in pools in New Mexico, provided you adequately classified the wells within pools so that the pipeline companies can meet their market demand however high or however small. They can take gas as they need it by producing the nonmarginal wells and cutting off nonmarginal wells however the demand occurs.

The marginal production on this graph, you will notice that the red line is almost constant from the left side, or the first month to the last month.

This might represent to you a pool that has been completely drilled up, no new wells being tied in. The marginal production is decreasing due to normal depletion of wells, and every marginal well produces every day, and that the lowest cutback that was experienced in this pool showed that you still had some nonmarginal gas producing and you never did cutback the marginal production.

Possibly some day we will have some wells like this that will have New Mexico nomenclature to them, but right now I don't know where they are, but we are asking that they be established to such a position that we can come up with pools with this type of graph for them. Possibly northwest New Mexico will show up fairly soon, we hope, this way.

Q. Mr. Kendrick, do you feel that if the order that El Paso is requesting is issued that the impact would be something similar to what El Paso has submitted here at this ideally prorated pool for the other pools in southeast New Mexico area?

A. Yes, sir, I do.

Q. What about the effect of such an order on the total takes of El Paso from southeast New Mexico area?

A. The order that El Paso is asking in this case would in no way affect the total amount of gas taken from these pools in southeast New Mexico. We do not expect it to improve the takes from the pool, nor do we expect it to decrease the takes in the pool to what we expect to take today.

It may change the manner in which we take it from well to well within the pool, but totally from the pool, it will not have any effect whatever.

Q. Going back to El Paso's application itself, the first part of the application indicates El Paso's desire to have a lot of wells reclassified as nonmarginal. El Paso has also suggested as an alternative that perhaps some wells

remain marginal and the remainder be reclassified as nonmarginal.

Mr. Kendrick, is there a level of production that you feel might be appropriate for using as the basis for retaining a marginal classification on some wells in southeast New Mexico if that is seen to be the best course by the Division?

A. Yes, sir. El Paso, in looking at our producing rates and expectations, believe that we can leave wells that produce a million a month, or less, as marginal wells. We know that under any type proration that we have, once you start assigning marginal classification to wells that will not make the calculated assigned allowable, that there will be a certain group of wells that should always be classified marginal, unless we run into a greater recession in marketability of gas than what we've had in '82 and '83, we may have to go back and look at a smaller group, but right now in all the wells tied to our system we feel that a million a month, any well that produces that much gas, or less, could be left as marginal without having us to shut off marginal wells during any of our daily cutbacks.

Q. Mr. Kendrick, in your opinion what would be the situation or the impact of leaving things as they are presently?

A. Presently, as we see it, all that is happening in the prorated pools in southeast New Mexico is pipelines are trying to take calculated allowables from wells

that are classified as nonmarginal wells, and they are shutting in or producing marginal wells as they find the necessity in establishing a flow rate to their system for whatever meets their market demand.

So, if you please, today we have pipeline proration, and we do not know what other pipeline companies criteria are in arriving at a figure of what their value might be at the lowest, or highest possible producing well, and still be classified as marginal.

So if another pipeline in a same pool with El Paso has a demand such that they need to cut back wells that produce only 20 Mcf a day instead of 33 Mcf a day, then we say that that figure, the lowest figure should be set as the breaking point between marginal and nonmarginal for all of that pool, so that all pipeline companies will operate under the same set of rules.

Q. As things stand right now, Mr. Kendrick, do you feel that correct allowables are being assigned to wells?

A. Not necessarily.

Q. Why is that?

A. Because we don't have enough allowables assigned to nonmarginal wells. We have too much allowable, too much of the total allowable of the pool going to marginal wells, and there's not enough of it left for nonmarginal to take the swing that is needed in day-to-day operations.

Q. As things stand now, when marginal wells are shut in, is there any opportunity for those marginal wells to make up that production?

A. No, sir, because they accrue no underage, so what they have produced is their allowable. They have nothing to make up.

Q. Do you feel that El Paso's proposal is one that would avoid this problem, would prevent waste, and protect correlative rights?

A. Yes, sir, I do.

Q. Do you have anything further, Mr. Kendrick?

MR. NANCE: Mr. Chairman, that concludes El Paso's direct case.

We would offer the exhibits that we have tendered into evidence, and ask that they be admitted.

MR. RAMEY: El Paso's Exhibits Numbers One through Seventeen will be admitted.

MR. NANCE: Thank you, sir. The witness is tendered for cross examination.

MR. RAMEY: Any questions of the witness? Mr. Carr.

CROSS EXAMINATION

BY MR. CARR:

Q. Mr. Kendrick, I believe you testified that your market for gas in southeast New Mexico has been off for

the last couple years, is that correct?

A. Yes, sir, it started in 1982 and thus far this year it has been down considerably from 1981.

Q. Do you have projections for volumes of gas for which you have demand on a per day basis for the months of 1983? Have you projected those for 1983?

A. No, sir.

Q. Now, when you did those for northwest New Mexico and testified to that at the prior hearing, you have not done that in southeastern New Mexico.

A. If I understand your question, projected a daily sales volume per day for northwest, I do not understand that as part of the issue.

MR. RAMEY: I think he stated that you did that for the north -- in the northwest case, but you haven't done it for the northeast -- southeast, excuse me.

MR. NANCE: Could we have a moment?

Q. Mr. Kendrick, the question was from Mr. Nance, and this was at the February 1 hearing, and Mr. Nance stated:

"Do you have figures that have been approved by our management in December and projections of anticipated takes from the San Juan Basin as an entire producing area for the months of 1983?

And Mr. Kendrick would be able to read those

twelve figures into the record, but we do not have anything in the way of a formal exhibit which we would be able to submit at this point."

QUESTION: And the figures that you have are total figures for the Basin?

ANSWER: Yes, sir.

QUESTION: Okay, do you have these written out or --

ANSWER: I have, with some other data. I'd be happy to read the twelve figures for the months of 1983.

And then the answer goes on, "Total volumes of gas on a per day basis for the month of January, and February, March, April, May, and so on.

Do you have similar figures for southeast New Mexico?

A. No, sir, and the confusion to me in your original question was, do I have a figure for each day's production.

No, the figures that we gave there were for average day for those months. I do not have those figures for southeast New Mexico for the remainder of 1983.

Q. Is there any reason you would not have them for southeast but would have those figures available for the northwest?

A. I did not check with our marketing people before I came to this hearing, but on a day-to-day expected sales volume, our variation has been terrific in the sense that they may give us one volume today that we will produce tomorrow, and we'd be off 20 percent. And they may give us a figure today for what we expect to produce next month as an average day, and that might be off as much as 20 or 30 percent.

So I did not gather figures from our people on that. It's really crystal ball gazing.

Q. Could you tell me how much your market is off, say, for the first quarter of this year, 1983, as opposed to the first quarter of 1982?

A. Just a minute and I'll have it.

What I have, Mr. Carr, the production from January, February, and March of 1982, compared to January, February, and March of 1983, total system sales, 1983, shows to be from this quick calculation, 45 percent of 1982 volume.

Remember that is total systems. I do not have it by state or by a portion of a state.

Q. In your opinion is the -- your market situation continuing to decline?

A. The information that I have been receiving from our fellow employees is that 1983 will be a less successful year in selling gas than 1982 was.

Q. Now, as I understand your answer to my ques-

tion about your figures for projection of this year, you're having difficulty in projecting where the gas market is going, is that not correct?

A. Yes, sir, we're having difficulty in knowing what to expect to sell tomorrow.

Q. And is it possible that we're going to need a turnaround in the market and that it may take off and go up again?

A. I hope so. I sure do that.

Q. And in the market overall cycle we would have to -- if there would ever be another downturn you would have to come back and ask to restart prorating again at that time?

A. Not if we set all wells nonmarginal today, or if we set a breaking point between marginal and nonmarginal low enough, extremely low enough, we would not have to come back and ask the same question again.

Q. Aren't we just trying to correct this problem by reinstituting the same system that resulted in the problem?

A. Mr. Carr, for the features that are in the rules as provided in pool rules in Order 1670, which covers the proration over much of the State of New Mexico, that is simply built into it where as the market increased we could cause more and more wells to fall into their marginal category, but we did not have an equally simple system if the market decreased to cause the marginal wells to go nonmarginal.

It's all on a yearly basis and what happens if you shut the wells during that proration year, if you shut in marginal wells, you defeat the purpose and they will not automatically be reclassified nonmarginal.

Q. Mr. Kendrick, why couldn't you reclassify possibly four times a year, as you do now, taking them down now --

A. Repeat your question, please.

Q. Why couldn't you reclassify wells up four times a year --

A. Up from --

Q. -- from being marginal?

A. Up to what?

Q. Being nonmarginal.

A. Is there any need of carrying a well as a marginal well that's going to be a nonmarginal well? It's easier to go the other way. It's easier in the rules of Order 1670 because it says any well that will not make a calculated allowable for that period of time will be assigned a marginal status. Very simple.

Q. I'd like to -- I was interested in your Exhibit Two through Ten. They did not include any figures for April, May, or June of 1983, and I'm not challenging you, but my questions are, what does the gas market look like in April, May, and June of 1983? Where have your nominations been as opposed to prior months?

A. The nominations for July are greater than the nominations for June.

I'm going to look at Harold Garcia and see if he'll nod his head yes.

And the nominations for June were less than the nominations for May. So, if we say May was at one level, June was lower, and July has come back up some.

Q. Do you have the figures for your nominations for April, May, and June?

A. No, sir, not with me.

Q. Were most of the nominations for May substantially down compared to the prior months?

A. I do not know.

Q. Could you get those figures check those figures and have them for us tomorrow?

A. Yes, sir, I could check them in the Commission files here.

Q. And couldn't you check and see if the nominations for June, in fact, weren't down 56 percent below May of 1983?

A. June down 56 percent from May of 1983, yes, sir. I'll look at the files further.

Q. And also let us know what the nominations are for July?

A. Yes, sir, and to correct a statement I made. I'm not sure whether I'm speaking of northwest New Mexico or

southeast New Mexico or all of New Mexico when I said July was above June nominations. We could check that and make sure.

Q. Are your nominations for northwest New Mexico different than your nominations for southeast New Mexico?

A. Nominations are made on a pool basis, so possibly the percentages stay the same. If it's up 10 percent in one pool it may be up 10 percent in another pool. That's what we're trying to do.

Q. Between pools, you're talking about allocating between pools. Do you do that regularly?

A. We try to.

Q. How do you do that?

A. If you have a total amount of gas available to your system and you have a total market demand to meet, and it's less than the amount of gas available to your system, then you can divide the total demand by the total gas available and come up with a percentage of gas available that is necessary to meet your market demand.

Q. So between the pools you allocate on a percentage basis?

A. We try to allocate the same percent to all pools.

Q. Now, between the producing states that are connected to your system, do you also try and take ratably?

A. We have been trying to do that, over a year's time.

Q. Over a year's time?

A. Yes, sir.

Q. And how do you do that? Is that also on the same basis?

A. Same basis, yes, sir.

Q. Now, Mr. Kendrick, for wells in nonprorated pools, do they get cut back?

A. Yes.

Q. And how do you cut them back?

A. Pipeline proration.

Q. But I mean what is the basis for the cutback?

A. Using the same percentages that we're applying to prorated pools.

Q. So you would cut them back a percentage of what?

A. A percentage of market demand to total available gas.

Q. You mean the gas available from the well?

A. Total gas available to us in that pool compared to the total system gas available.

Q. My question is, say you were going to cut back a well, "X" well, by 10 percent, it is 10 percent of what? What do you look at, the well's production history -- that's what I'm trying to get, deliverability, what is it that you try to apply that percentage cutback --

A. Deliverability might have many connotations. We have in-house a method that we calculate as a daily producing ability. In some states they have other type

(inaudible), means to tell us what the producing ability of a well is.

For instance, Oklahoma says the AOF of the well. Parts of Texas say AGN tests. Parts of New Mexico say a C-122 deliverability test, but whatever is the method of determining the gas available from each pool, we use that as the available gas compared to market demand; total system availability to total system demand.

Q. Mr. Kendrick, if you have one undesignated Morrow gas well hooked up to your system in New Mexico and you're going to curtail its production to your market demand, would you curtail its production based on its deliverability?

A. There again, connotation of deliverability, whatever we have available as a producing ability for that well, if our demand now is 80 percent of gas available, we'd day we'd produce 80 percent of that well's capability, yes.

Q. Now, under your proposal you're going to set a low -- you would propose a low breaking point between marginal and nonmarginal wells. If I understand correctly, you will keep the marginal wells on all the time so that would leave the swings of your system out of the nonmarginal wells.

A. Yes, sir.

Q. Now, if we look at your Exhibit Number Seventeen and we get to the -- we look at all the marginal wells, and you, in fact, could meet your demand for production from those marginal wells, wouldn't that level actually be the producting rate for wells in the pool?

A. Exhibit Seventeen is the ideally prorated pool and if we could meet our demands for gas with just the marginal gas, then it would be an idealistic situation that it happened that that day we would cut off all the nonmarginal gas and made our market with marginal only from that pool.

Q. Now, isn't the effect of your proposal that the reduction in your demand will first come out of the nonmarginal wells?

A. Not always. Under the conditions that we're operating now -- is the question for now, what is now the condition, or after --

Q. If your proposal is granted.

A. -- if our proposal is granted?

Q. Yes.

A. The change in our daily requirements will come from all nonmarginal wells.

Q. And the marginal -- the production for the marginal wells will not be affected?

A. That is correct. They will be produced to our system 100 percent of the time.

Q. And so the marginal wells would not bear any of the decline or decrease in the demand for natural gas in the southeast?

A. That's true, because the reason its classified marginal, it will not make a calculated allowable for its capability and acreage.

Q. So you're not allocating or taking between wells on a percentage basis within the individual pool, is that correct?

You won't be cutting every well in the pool 10 percent. You'll only be cutting some of them.

A. Under what we advocate?

Q. Yes, with your proposal.

A. Wells that are assigned an allowable, we will try to produce that allowable. If we do not produce that allowable they will become underproduced. If we overproduce that allowable, they will become overproduced, and we will produce marginal wells 100 percent of the time and their production becomes their allowable.

Q. If I understand your answer, your answer is that some of the wells would be curtailed in the pool because of the fall off in demand and others would not.

A. Yes, sir.

Q. So that isn't a percentage reduction within the pool. All wells are not treated equally.

A. That's what the pool rules say.

Q. So when you talk about taking ratably, if I understand your testimony, between states you do it proportionately, and ratably between pools is proportionately, and ratably in nonprorated pools -- or in nonprorated wells is proportionately, so ratably under these rules would be something else.

A. No, sir, I don't believe that I -- that I have intended it that way because anywhere there are special pool rules, we abide by the special pool rules, as best of our ability, and if allowables are assigned in one manner in one pool and a different manner in the other pools, we try to take the allowable equally as well in one pool as the other.

Q. Now, are you doing it that way now?

A. Maybe not 100 percent, no.

Q. What you're saying is that when you get within the pool, start looking at individual wells, you're operating within the rules of that pool, is that right?

A. Right now? No, because we're shutting in wells that don't have a truly assigned allowable. We think that's bad.

Some wells in that pool have not been shut in at all because they are the lower producing wells, lower than 25 Mcf a day, or less. We have tried to leave them on 100 percent of the time during all of this shortage in demand of 1982 and thus far in 1983.

So that case is not a 100 percent case, no.

Q. Mr. Kendrick, the problem I'm having is you say you take ratably but ratably seems to mean one thing between states and pools; andnonprorated pools;it means something else in prorated pools, and you stated that that's not true because you operate within special pool rules in individual pools. Now, is that a correct summary of your testi-

mony?

A. If I can decipher that properly, decipher your question properly, we take, as best we can, according to the rules of each individual pool, the allowable assigned to the wells in that pool as best we can, however they are assigned.

Q. And when you came forward with this proposal did you consider whether your proposal as applied to individual pool situations under the special rules, whether or not this would impair the correlative rights of operators in those pools? Or did you just assume the pool rules were -- would remain in effect?

A. We assumed that the pool rules that exist today would remain in effect.

Q. You didn't consider what the status of the individual pools happened to be at the time those rules were promulgated and what their state would be -- might be today, and what the impact would be on the operators in those pools?

A. No, sir, we didn't have that choice to make.

Q. How could you not have that choice to make? Couldn't you consider that?

A. We did not wish to take this time to come in and review every pool's proration order to see if the formula is correct, absolutely accurate, or whatever is necessary in each individual pool.

We said under any type of proration rules if we have wells properly classified between marginal and nonmar-

ginal we can make proration work according to assigned allowables by the Commission, or by the Division.

Q. You can make proration work, but can you make it work in a way that you protect correlative rights if you don't review the implications of your proposal and the impact it will have on the individual operators?

A. Just a moment, please.

MR. RAMEY: Mr. Carr, are you at a place where you could properly stop for the evening?

MR. CARR: I guess I am.

MR. RAMEY: I think we might -- we'll let the witness try to answer that question and then we'll recess. Our reporter has been working since 8:00 o'clock this morning and would probably like a break.

Can you answer that question, Mr. Kendrick?

A. I'll try to answer that question.

In accordance with the rules and regulations promulgated by the Oil Conservation Division, allowables are assigned to gas wells across the State of New Mexico, and El Paso tries to abide by those rules and regulations, and the proposal we have presented today will work under those rules and regulations if the order is written as we see this -- as we have presented our story and the order that we ask to be written, and according to the rules of the State of New Mexico, the Oil Conservation Division is charged with protecting correlative rights, and if there is something in the pool rules

that do not protect correlative rights, then that is not the issue with us today. It's the issue that someone should take to the Commission to receive control of their correlative rights.

Q. And you didn't -- didn't consider that in bringing this application?

A. No, sir, we didn't. We didn't feel it was necessary in northwest New Mexico and we didn't feel it necessary on this one.

MR. RAMEY: Okay, the hearing is recessed until 9:00 a. m. tomorrow.

(Thereupon the evening recess was taken.)

(Thereafter, at the hour of 9:00 o'clock a. m. on the 9th day of June, 1983, the hearing was called to order and the following proceedings were had, to-wit:)

MR. RAMEY: Before we get started, I don't know that all of you are acquainted with my fellow Commissioner. This is Ed Kelley, our new Commissioner.

The hearing will come to order. Mr. Carr, I think you had the witness.

MR. CARR: Thank you, Mr. Ramey.

H. L. KENDRICK,

resuming the witness stand, testified as follows, to-wit:

CROSS EXAMINATION CONT'D

BY MR. CARR:

Q. Mr. Kendrick, yesterday I asked you if you could provide us today with nominations for April, May, June, and July of 1983.

Have you been able to find those figures?

A. Yes, sir, I got them from the Commission records this morning.

Q. Could you tell me what El Paso's nominations were for each of those months?

A. From which pool?

Q. Well, do you have a figure across the board? Total nominations, what they were for southeast New Mexico?

A. I have the figures by month by pool for the year of 1983.

Q. Could you give me the total figure, your nominations in southeast New Mexico for April, May, June, and July, 1983?

A. April, May, June, and July.

For April, 1983, the total for the pools in

southeast New Mexico from which we purchase gas, 2,473,100.

For the month of May our nominations were 2,170,600.

For the month of June, the total figure is 952,900.

And for the month of July, 1,692,900.

Q. Now, Mr. Kendrick, your nominations for the month of May were down approximately 50 percent from what you nominated in January, is that not correct?

A. Nominations for January, 1983, were 4,623,800. And for May at 2,170,600 would be approximately 50 percent or maybe a little more.

Q. And then we go from May to June and your nominations were down 56 percent again in that month, as to the month of June as compared to the previous month.

A. From 2+ million down to 952,000, yes, sir.

Q. And you would agree, subject to check, that's approximately 56 percent.

A. Whatever.

Q. These are what you believe in good faith your demand is during those months.

A. At the time these nominations were submitted to the Commission it was our best available figure of what El Paso would expect to take from southeast New Mexico.

Q. And when do you make these nominations?

A. The May nominations were submitted to the

Commission on a letter dated March 31st, 1983.

Q. When were the June nominations submitted?

A. June nominations were on a letter from El Paso dated April 29, 1983.

Q. The July nominations?

A. July nominations were submitted by letter dated May 26th, 1983.

Q. If I understood your testimony yesterday, the way El Paso is handling the decrease in demand for natural gas is by curtailing or shutting in certain marginal wells on a time basis, is that correct?

A. Certain of the marginal wells, yes, sir, are shut in so that each marginal well connected to our system may have the same amount of shut in time as other marginal wells.

Q. Is this what I've heard called the days-on/days-off sort of approach, or is that something else?

A. That would be pretty much the same procedure.

Q. And when you curtail this way is it -- correct me if this is wrong, it was my understanding that you cut them back based on time so that they were able to produce the same amount of time on an annual basis, balance this out annually, is that correct?

A. Yes, in that respect, in the marginal wells that do not have assigned allowables, when we have to curtail the production, we were in '82 very definitely cutting back

in that manner and started '83 in that same manner.

Q. And your objective was that each well would be able to produce or be cut back the same percent of the time.

A. Yes, sir.

Q. Now, is this the way you dealt with just marginal wells?

A. Yes, sir, because nonmarginal wells had a calculated allowable we were trying to produce at that time.

Q. And your computer monitors and tells you when to turn it on and when to turn it off and keeps track of it that way. Isn't that how you do that?

A. We have various systems that we can cause the computer to use, and at that particular time we were using that system for the group of marginal wells above 25 Mcf a day, to try and monitor those as being off the same amount of time.

Q. When did you start doing this?

A. During 1982.

Q. Has it been in effect for a year's time, this approach?

A. Approximately.

Q. Have you been able to pretty much balance it out so that everyone's being cut back the same amount of time?

A. Mr. Carr, I have not personally looked at that, nor have I heard a report from them, but it's a continuing effort within the company to try to maintain an equal

quality at the balancing system that the company uses.

Q. That's your company's objective, though, isn't it?

A. Yes, sir.

Q. Do you report this to the producing wells on any kind of a regular basis, how much time they're shut in? Do your monthly statements show how much time a well has been on or off, do you have any time figures on those monthly statements to the producer?

A. I don't know.

Q. Is there any way that you're aware of -- that you're aware of that a producer would know if he's been on stream or off or cut back the same amount of time as someone who was offset from him?

A. I do not believe that is available in any report that we send to a producer.

The C-115 report, or the Federal Report 9329 does have days produced on that, but that is filed by a producer for his own operated wells.

The C-111 I'm not sure has that on it, and it does not go to the producers, either.

Q. Well, when you curtail marginal wells, you're doing it proportionately, are you not, cutting back the time on a percentage basis?

A. Yes, we have been, yes, and possibly still are, to try to get -- balance out those that have been shut off.

Q. Now, the wells that have the -- the better wells with the best potential among similar wells would be able to produce actually more, would they not, than the poorer wells?

A. As marginal wells?

Q. Yes.

A. Yes.

Q. I mean they're all on the same amount of time but the better wells in that time would produce more than the poorer wells?

A. Yes.

Q. So what you have, actually, is some sort of a type of deliverability curtailment for marginal wells at this time, would you not?

A. Through the period of 1982 and up into '83, as they were trying to balance that, the answer is yes, and there's a possibility of us changing that system.

Q. Now I think you testified about what would happen if your application was not granted, and I missed that yesterday, did you not?

If your application wasn't granted, would El Paso continue the same policy that it's been using in 1982?

A. I do not believe so.

Q. Would you have to -- would you be able to do it -- have you considered what you would do?

A. It has been discussed and programming has been done within our computer department so that we can do it

in various ways

Q. Have you been able to evaluate what you might be able to do if your application is denied?

A. Yes, sir. I'm sorry, repeat the question, please.

Q. Are you able to tell us if your application isn't granted how you would handle the fall off in demand?

A. We have the option within the system of producing wells on a deliverability basis, whatever that deliverability might be or however determined, whether daily producing ability, year to date producing ability, a moving average daily producability, and we have the option of producing those wells on a per Mcf basis, which would be on a straight acreage type allocation.

This is the part that has been put into the computer system now and is available for us to use if we choose to go that way.

Q. So you could choose to go with a deliverability basis.

A. If that is the proper way to go, yes.

Q. Now you have been dealing with your marginal wells, curtailing wells on a days on/days off sort of an approach. Couldn't you do that with all wells on the system?

A. If we are directed to do that, yes, sir.

Q. Now I'm curious as to why you are proposing this change now. Have you received complaints from operators as to how you're handling the problem at this time?

A. We have received complaints from operators for all types of reasons and mainly the reasons are, why aren't you producing my well, or wells.

And, gentlemen, it's a sad story why we're not doing it, and if we can't get rid of the gas on the other end of the pipeline we don't want to put it in on this end, and that's the name of the game.

Q. Have these operators been complaining that you aren't fair?

A. Some of them, yes.

Q. Have you always received those kinds of complaints?

A. I suppose throughout history we've had complaints.

Q. So it's no different, then.

A. Sometimes it's -- the phone rings more often than other times.

Q. But the nature of the calls are generally the same.

A. I -- supposedly so. Sometimes they're just not quite as mad as they were the last time.

Q. Mr. Kendrick, I believe you state that it was the policy of El Paso not to shut in marginal wells.

A. Yes, sir.

Q. Is that a written policy of the company?

A. I don't know that I could place my hand on

any memorandum, but we're covering a long period of time from the early fifties when proration of gas was set up in San Juan Basin, and southeast New Mexico, and frankly, in the early fifties I was working in the San Juan Basin and grew up with proration there and can remember some of the things that happened. Southeast New Mexico was another world entirely, and I didn't keep up with it.

But having worked with the dispatching people and all that, I know we try to keep marginal wells producing all the time.

Q. Is that -- that's a company-wide policy.

A. Yes, sir.

Q. A policy of the prorating department.

A. Yes, sir.

Q. Is it a policy of the gas contracting department?

A. A policy of the gas contracting department?

Q. I don't know where gas contracting would come in because proration comes up with sets of figures as produced by the various states that we operate in, and in Texas it's a limited well because it will not make a calculated allowable; in Texas we try to keep those wells producing 100 percent of the time.

In New Mexico if a well will not make a calculated allowable it's assigned a marginal classification and we try to produce those 100 percent.

Q. Do you know who actually formulated this policy?

A. No, sir, but apparently it has met with management's approval through the years.

Q. You don't know if this policy originated in the prorationing department or some other company department.

A. No, sir, not for sure knowing personally.

Q. You don't know who -- would you know if this policy was based on your contractual requirements to keep marginal wells on stream?

A. No, sir.

Q. Would you know if it was based on a time when you might have had greater contractual requirements to take gas in demand?

A. No, sir.

Q. Would you know if the real purpose of the policy was to get relief under the contractual provisions that require you to take certain amounts of gas?

A. I do not feel that that is the issue in that, because when allowables are assigned, and we have nonmarginal wells to swing on, then marginal wells were arbitrarily left on, this was our position, and it was a system that was operating and that we could use marginal wells as sort of the base load of gas, along with casinghead gas and other uncontrolled resources, as we might call them, and then all prorated wells would add to that to make a total of daily demand.

Q. Do you know if this policy is based on contractual consideration?

A. No, sir, I don't know that it is nor is not.

Q. And just to be sure, now, are you saying that you're not qualified to testify to contractual questions?

A. That is true. I am not qualified to testify to contracts of the gas company.

Q. Then you don't know how this proposal -- or policy would affect take-or-pay provisions?

A. No, sir.

Q. Or any other contractual provisions?

A. No, sir.

Q. Now, you have a proposal before this Commission, who decided to -- who originally advanced this idea to come to the Commission and seek the relief you're seeking here today?

A. I actually do not know where the, maybe, main idea, or the light bulb turned on, actually occurred, but then it was within the proration department the discussions began, and said we've got to find some way to reduce your takes because we know we can't sell the gas on the other end, and we'd cut off all of our -- cut back on all of our nonmarginal wells and now we're down into the marginal category and some others in the department said,you can't cut off marginal wells, and said, don't tell us we can't, we already have.

So it grew from that that we must find some

way to reclassify wells so that we could keep marginals in a category and produce them all the time.

Q. What you're proposing is closer to the existing system than, say, going to a deliverability based system, is that correct?

A. What we're proposing is that we can take the rules that are now in effect and just by a stroke of the pen reclassify the wells from marginal to nonmarginal and have a workable proration formula.

Q. What you're proposing would be easier to put into effect than, say, going to an entirely deliverability based system, is not that correct?

A. Yes. It could be done in our house without any changes whatever except just marking the reclassification of wells, and I would presume that that might also happen in the Oil Conservation Division in their handling of it.

Q. Now, when you developed your proposal before you filed an application, you received in-house company approval for it, I assume.

A. Yes, sir.

Q. So the proposal was reviewed by other departments or divisions of your company.

A. I drew up the proposed letter that was submitted to the Commission for a hearing, and in that I did circulate that to see if -- is this what you want me to file, and my bosses came back and said file it, so where it was discus-

sed above my jurisdiction, I have no idea.

Q. And you don't know what other company departments actually reviewed this before you got your clearance to file it.

A. No, I don't, no, sir.

Q. If I understood your testimony yesterday, a marginal well's allowable is, in fact, what it can produce.

A. I do -- I believe that is not correct. I believe that a marginal well's allowable is what it did produce.

Q. And if I understood your testimony, you offered exhibits that showed that there were some pools where there were no nonmarginal wells, and stated that, in effect, those wells were not being prorated.

A. They are not being prorated by the allocation formula as set out by the Commission, because you cannot prorate a pool that does not have an exempt marginal well in it.

When demand is less than the total available gas from that pool.

Q. Mr. Kendrick, are any marginal wells actually subject to prorationing?

A. In a strict sense, every well in a prorated pool is subject to prorating.

Q. But in fact is a marginal well really affected by the prorationing scheme?

A. Yes, sir, because it can be reclassified as

nonmarginal if it produces more than a nonmarginal allowable for a well of the same size or same acreage, or whatever, yes, sir.

Q. But while it stays marginal is its rate of production affected by virtue of the fact that it's in a prorated pool?

A. It's rate of production may not be affected, except to the point that at the end of a year it is looked at for each month of production to see if it did exceed a calculated allowable and should therefor be reclassified as nonmarginal.

Q. Does the fact that it's in a prorated pool affect it in any way other than the fact that it might become nonmarginal at the end of a proration period?

A. If we use an elaboration of El Paso's system of operation, where we say we try to keep a marginal well producing 100 percent of the time, by being in a prorated pool we would try to keep that well producing 100 percent of the time. But a like well in a nonprorated pool might not be produced 100 percent of the time.

So, by prorating a pool, might really affect every well in the pool to some extent.

Q. Isn't it true that a marginal well in a prorated pool, assuming that you're not curtailing it, as you have been during the last year, isn't it fair to say that a marginal well is able to produce its deliverability?

A. Define deliverability, maybe I could answer the question.

Q. Its production rate would not be restricted by regulations.

A. Other than the fact that if it does produce too much and become reclassified.

Q. Okay. Now, if I -- as I look at your exhibits, it appears to me that there are probably five percent of the wells in southeastern New Mexico, and no more than that, that would fall into the nonmarginal category. Is that a correct statement?

A. That are presently classified nonmarginal?

Q. Yes, sir.

A. Without checking numbers, five percent may be a close figure.

Q. So at present, 95 percent of the wells in the prorated pools are really getting to produce their deliverability.

A. No, sir.

Q. Unless curtailed, as you're doing a few of the marginal wells now.

A. Possibly.

Q. So actually, only five percent of the wells in southeastern New Mexico are actually being -- are actually being prorated.

A. In the sense of having allowables assigned

to them and keeping an Over/under produced status on them, this may be one evaluation of it, yes, sir.

Q. Now, if a marginal well is permitted to -- if the allowable for a marginal well is what the well did produce, wouldn't classifying all wells as marginal meet the needs of El Paso?

A. No, sir.

Q. Wouldn't your allowable be what the well has produced?

A. When you say meet the needs of El Paso, you're bringing in other factors there that would be such that you would instill upon El Paso the ruling or the edict that El Paso must prorate the gas tied to its system and we are in pools with other pipelines taking gas, and we may be pipeline prorating in one manner when other people are pipeline prorating in another manner, and in some of these pools we are not only pipelining or purchasers of gas, we are also operators and produce that gas, so we wear two hats, and we have problems both ways.

Q. As I understood your proposal, you indicated that you felt your proposal would alleviate problems resulting from pipeline prorationing.

A. It would sure help a lot.

Q. Is it your testimony that your proposal would equalize takes between pipelines?

A. No, sir.

Q. It's true that if I have wells connected to a pipeline that has a low demand, and I'm offset by someone with wells connected to a pipeline with high demand, your proposal would not affect the actual gas that I sell since I'm connected -- being connected to the lower demand pipeline, would it?

A. If every well in the pool were classified nonmarginal and each pipeline company operating in that pool submitted their nominations, allowables were calculated, equal wells would have equal allowables, and a pipeline with high demand may take high from their wells and pipelines with low demands may take low from their wells. Their wells would become underproduced; the pipeline with high demand would cause their wells to become overproduced.

If you reach an imbalance between them, which six times overproduced causes the overproduced well to be shut in; the underproduced wells, if they continue to stay underproduced, cannot produce their allowable, and that allowable that is underproduced becomes cancelled and redistributed to the wells in the pool that can produce the allowable, and may change the classification of some wells from nonmarginal to marginal, an ongoing event.

Q. In the course of that ongoing event, because my wells were connected to the system with the low demand, I would still produce less gas because my purchaser wouldn't take more than its need.

A. Yes, sir. Proration does not tell a pipeline company how much gas he can take. It tells him from what wells he can take it.

Q. So your proposal would not equalize takes between pipelines.

A. No, sir. It is a guideline for them and in a way semi-regulates it, but eventually it winds up the gas goes to whoever needs it from the wells connected to their system if it's more than others, if it's more than other pipeline companies.

Q. I understood your testimony yesterday to be that you shut in nonmarginal wells first, curtail production from the nonmarginal wells first.

A. We try to take all of the swings of increased and decreased demands from nonmarginal wells.

Q. And have you been able to continue to do that before you start curtailing marginal wells?

A. If -- if the question is, when we are curtailing gas, are all of the nonmarginal wells shut off before we shut off marginal wells, no.

We shut off first the overproduced nonmarginal wells, and then the under produced nonmarginal wells, to a degree that they still have time to make their allowable.

But if we need more gas off, then we're back into the marginal wells, and start cutting those off.

Q. Let me maybe explain my question.

When I look at Exhibit Number Two, that's your figures for the Atoka Pennsylvanian Gas Pool, now, Mr. Kendrick, do you have that exhibit before you?

A. Yes, sir.

Q. If you would look at the table, which is the second page of that exhibit, it appears to me that the marginal production went down from June to July of '82, and at the same time, the nonmarginal production went up.

A. Yes, sir.

Q. And I'm having a hard time understanding how that happened based on what I understand your policy to be about curtailing the nonmarginal first.

A. If, through a period of a year, you are trying to balance production from all wells, if today you may shut off all of the Carr wells, tomorrow all of the Nutter wells, and excuse me for being specific, but --

Q. It would be easy to shut my wells.

A. But the opportunity is there for us to take a cut with one group of wells one time for a day, for a week, for several weeks, whatever the condition may be, and we say we have established a level of cutoff on those wells, now let those wells produce and we will cut some other wells off.

Now, we're talking about that in the category. At the same time in the nonmarginal category we have calculated the amount of allowable that we expect the wells to have, their producing ability, how long it would take them to

make that allowable, and we say, well, we have some wells that we know will only take a few days to make the calculated allowable, so we can shut those off.

We have some other wells that would take -- that are already overproduced; we shut those off.

But the condition, you just balance it on a day by day, or in our operation, a monthly operating schedule.

Q. Mr. Kendrick, then perhaps the explanation is that you can't view this on a month by month basis.

A. That is true.

Q. And in a long haul what your general principle is actually works.

A. Yes, sir.

Q. At least that's your goal, to make it work.

Now, if we go -- if your application is granted and we go into a three month test period, and the Carr wells entered the test period underproduced, it's possible that they could keep that underproduced status during that test period. You're not going to suspend the rules in that regard.

A. For your wells to go into that three month period underproduced we'd have to say they were nonmarginal wells as they came into the period. Correct?

Q. Correct.

A. They have a status. That status will continue through the proration period, which ends March of '84.

Q. And if my nominations -- if the nominations fall off, the allowables are down, I could make up the underproduced status very easily during this three month test period.

A. Yes, sir, or if it went on up to March of '84.

Q. I would be reclassified, however, at the end of September under your proposal, right?

A. Not necessarily, because --

Q. Well, what if I didn't make the allowable? Wouldn't I be reclassified then?

A. Let me say with reservations, you may or may not, and what I mean by with reservations, you had to begin the proration period underproduced, as a nonmarginal well with an underproduced status, to even be considered as going to a marginal well.

Also, within the rules of the Commission it says wells can be reclassified marginal or nonmarginal if you see that the classification you are assigning them is more appropriate than what automatically it looks like it should be.

So at the end of this first three months we might say, well, in that period of time it looked like your well may be a marginal well, but let's not let it go marginal at the end of that time, let's look at it through some more producing time before we let it become marginal; make it

really prove itself, that it should be a marginal well.

And it would maintain that underproduced status all the time or make it up.

Q. If I understand your testimony, it is that you believe a three month test period is adequate for you to evaluate the wells in the southeast, is that right?

A. No, sir. We're asking definitely that no wells be classified -- be reclassified back to marginal until the production for that first three month period has been reported and then we say reclassify wells with caution after that time.

Q. And it may be that a longer period of review or testing should actually be done.

A. Yes, sir.

Q. Upon what does El Paso base its nominations?

A. What we expect to sell at the other end of the pipeline.

Q. Do you adjust your nominations based on the overproduced or underproduced status of a pool?

A. No, sir.

Q. You don't take that into consideration when are nominating?

If I understand the problem as you stated it that El Paso is facing, is that you're having -- you have great swings in demand, even on sometimes a daily basis.

A. Yes, we do.

Q. And you are, with wells classified as they are now, having to meet this demand by curtailing and turning back on a number of wells, a large number of wells.

A. Yes, sir.

Q. And it would be easier to meet these swings by having a certain number of wells that are produced as marginal all the time and then being able to meet these swings out of the use of nonmarginal wells.

A. That's what we are proposing.

Q. Now, El Paso is the major gas producer in New Mexico -- major gas purchaser in New Mexico.

A. I understand it is.

Q. And thereby the nominations of your company would have the greatest impact on allowables of any company purchasing in this state.

A. Not necessarily. It would have an impact, it has an impact for each pool that it operates in. That impact is, say, proportional to our demand and other pipeline demand and total gas available to each of the pipelines in each of the pools.

Q. But you are the largest purchaser.

A. I think so.

Q. And as such, you would have the greatest impact on the nomination portion of the overall state allowable system.

A. The answer to that is, I believe, Mr. Carr,

that the amount of gas that El Paso takes to market affects the production of New Mexico greater than any other pipeline.

Q. That's what I said.

A. Apparently so.

Q. Was trying to say.

A. All right.

Q. And if you cut your nominations, that would also have the greatest impact on the -- on the production in the state, is that correct?

A. We would cut our nominations because our crystal ball, or whatever it is, tells us that we expect to sell less gas in that next period that we are nominating for than we did in the prior period.

Q. If your application is granted, it's my understanding that this will enable El Paso to more effectively curtail the purchases in New Mexico. Is that what you're saying?

A. No, sir.

Q. What relief would you get by the granting of the application?

A. We will get assigned allowables to wells in such a manner that we can produce the state assigned allowable from each of the wells in meeting our market demand, and if wells are declared marginal, we will try to produce those at 100 percent.

Q. Are you saying it will be easier to meet your

market demands under the new system, under your proposed system?

A. It would be easier for us to meet our market demands and abide by the rules and regulations that abide in each pool in the State of New Mexico.

Q. If your proposal is granted, won't it actually result in lower allowables?

A. I don't know why it should because it will not affect the amount of gas that we will take from the state.

Q. What other states do you purchase gas from?

A. We purchase gas in Texas, Oklahoma, Kansas, Colorado, and New Mexico.

Q. Are you applying for similar relief in other states?

A. I know of no other application for this type of restart of proration in any states we are in; however, I do know in two states that are supposedly major gas producing states, there are committees working to find out what's happened to their proration scheme, that they must do something to alleviate their problems; those being Texas and Oklahoma.

Q. And those states are taking committee approaches to try and solve this problem.

A. Texas, I believe, their committee has just about flanged up and has their report ready to turn in and Oklahoma -- does anyone know where Oklahoma is?

Oklahoma has a problem that is common to all

other states, there is more gas available than the market requires.

Q. Mr. Kendrick, do you know of any other state where this problem is being dealt with by individuals coming in to a sort of adversary type situation, like we're doing here, instead of having a committee approach to solving the problem?

A. Oklahoma very definitely had some cases going that way, yes, sir.

Q. What was the results of those?

A. Oh, mercy, a legal lawyer's paradise. Excuse me. Would you answer that, John Nance?

MR. NANCE: An application had been filed in Oklahoma by Oklahoma Natural Gas Company to establish proration rules in Oklahoma.

That proceeding went through a number of weeks at the prehearing conferences. It got into a hearing on the merits and then after three full days, the proceeding essentially grounded to a halt because of a number of conflicts which existed among the parties and the issues that were being raised.

The commission, the Oklahoma Corporation Commission, which was hearing the case, decided it would be in everyone's best interest at that point to dismiss the proceeding, at least in the form of ONG's application, and to restart the proceeding as a general commission-oriented rule

making proceeding.

The Commission has now requested that all interested parties submit their proposals for proration rules in Oklahoma and today, that is the requested filing date for those proration rules.

An informal meeting is scheduled to be conducted next week with all the parties getting together and talking about each other's proposals for rules, and at some point after that, then, it would be anticipated that the formal hearing procedure again would resume.

And this is still simultaneous with the committee work that's being done in Oklahoma.

So there are, essentially, two -- two means of approaching the problem that are going on at the same time.

Q. Now, is the approach where you have various parties advancing their own proposals actually broken down at this point in Oklahoma?

MR. NANCE: No, I wouldn't say that it has. It --

Q. Didn't that procedure result in the Oklahoma Corporation Commission, actually their proceeding grinding to a halt?

MR. NANCE: No, the one that ground to a halt was where only Oklahoma Natural Gas Company had propsed actual rules, and what is going on now is this restart with everyone being invited to submit their own proposals.

MR. RAMEY: Are you proposing that we try to do it like they do in Oklahoma, Mr. Carr?

MR. CARR: I'm not proposing that we try to do it any other way.

MR. RAMEY: Thank you, Mr. Carr.

Q. Mr. Kendrick, if your application is granted, couldn't you reduce El Paso's purchase requirements --

A. I don't know.

Q. -- by reducing your nominations?

A. I don't know.

Q. You don't know?

A. No, I do not.

Q. You don't know if that's possible or not.

A. No, sir, I don't.

Q. You don't know if by reducing nominations it might have a direct impact on your purchase requirements?

A. No, sir, I do not.

Q. If you reduced your nominations it would bring down your allowable, would it not?

A. It depends on the nominations of other pipelines in the same pool.

Q. But it would also depend on what you did with your nominations, wouldn't it?

A. They are all added together and an allowable assigned by the total nominations and the adjustment to nominations versus production requirement.

Q. Mr. Kendrick, if you reduced your nominations, wouldn't it work out in the terms of reduced allowable?

A. Not if our takes stayed the same. We could reduce the nominations to zero and keep producing gas, and you would wind up getting the allowable for the amount of gas you're taking.

Q. I have a hard time seeing what purpose is accomplished by having nominations, then, if that's the way it is.

A. As I understand the operation in the State of New Mexico, the rules of the Commission state that each purchasing pipeline will submit to the Commission so many days prior to the month in which the proration allowables are to be calculated their nominations for the total takes from each pool that they purchase gas.

So then that all of the nominations from all purchasers in the pool are totaled and the allowable for that pool is calculated -- an allowable is calculated prior to the month in which the production occurs.

Nominations are required to make that initial calculation of allowables for the coming month.

Q. And if you nominate zero, you would still be able to produce what you would be able to produce if you nominated in good faith.

A. Yes.

Q. As I understood your proposal, you felt that

a cutoff point of 33 Mcf per day would be a reasonable point to cut off. Wells below that, wells producing 33 Mcf per day or less would be exempted from your proposal.

Q. That is a number that we have presented and said that if the Commission desires not to change all wells to nonmarginal, then how about changing all of them except those that produce less than 33 a day.

Q. When you looked at that 33 a day figure, what time frame did you use in determining those wells lower than that? Do you have any recommendation on that?

A. If a well keeps producing and only makes less than a million a month you see that that is totally the well's full capability to produce, then leave that well as a marginal well.

Q. Do you want to use a June production or do you want to make that determination -- what would you use as a basis for that, that's what my question is?

A. I could be used as the latest twelve months production. It could be used, maybe, as the last three months production.

Q. Are you making any recommendation?

A. I think the last twelve months production would be the more appropriate.

Q. And this is based on, really the historical

production from these wells.

A. Yes, sir.

Q. How closely, in your opinion, would historical production actually correlate with the well's ability to produce?

A. It depends on whether it has been shut in during that time or not shut in, or whether there is some reason that it had not been produced at capacity while it was producing. All sorts of elements could enter into that.

Q. And would any of those factors be considered in handling this 33 Mcf a day --

A. If you knew those factors existed for any one well or for many wells, certainly they could be considered; however, if you did not consider anything except the actual production showing in the past twelve months, and no month exceeded a million, or 1000 Mcf for that total month production, you could leave it as a marginal well and then later find out, well, hey, that well is capable of producing three times that. It could still later be reclassified as exempt marginal.

But by just this first adjustment of classification of wells, we haven't drawn a hard and fast line that says nevermore can anything be changed. And we consider it a changing thing every month; these wells could be changed in

and out of marginal or exempt, or nonmarginal classification.

Q. Well, it is true, isn't it, that historical production history on these wells in certain instances wouldn't necessarily reflect the ability of a well to produce?

A. Yes, sir, that's true.

Q. It would really depend on what they were able to purchase -- or produce and sell?

A. Yes, sir, there are a lot of factors involved.

Q. When you used this 33 -- or talk about this 33 Mcf figure, you're not making any distinction as to the depth of the wells, it would be an across the board 33 Mcf?

A. Yes, sir. I've made no proposal of depth in that figure at all in the southeast New Mexico area. The 33 we have picked out is a figure that we said, if we looked at every well connected to our system, all casinghead gas, all gas that's noncontrolled, and every well that produces 33 a day or less, we would load the system to a certain degree, and I don't know whether that number is 8 percent or 18 percent or 28 percent, but there would be a certain base load of gas that you'd say, okay, that's noncontrolled, we're going to produce at 100 percent of the time.

Then we can take all the swing on wells that have calculated allowables above that point.

Q. Mr. Kendrick, is it your opinion that El

Paso's proposal will protect the correlative rights of interest owners in the pools in southeast New Mexico?

A. If the rules and regulations existing for each of the pools that we purchase gas in New Mexico are established to protect correlative rights, what we're doing today will just further help to protect correlative rights.

Q. Okay, and I think we went through this about the rules yesterday. I don't want to drag this out on that point.

You understand the term correlative rights, do you not?

A. I'd say I think I do.

Q. What do you understand it to be, so we're sure you do?

A. As wells are drilled and completed in the producing horizons in the State of New Mexico, and are connected to gathering facilities, each well is afforded to produce the gas that is attributable to the acreage that underlies that well that the well produces from.

Q. Is it fair to say that, as you understand that term, it means that the operator of each property is afforded the opportunity to produce his just and fair share of the reserves under that property?

A. The recoverable reserves under that property,

Q. Now, when we talk about correlative rights, each owner would have correlative rights, isn't that correct?

A. I would think that whoever had the mineral ownership, yes, sir.

Q. And he'd have those rights under each tract, would he not?

A. Whatever he owned, it should be, yes, sir.

Q. To be able to have the opportunity to produce his just and fair share of gas, doesn't he have to have an access to the marketplace?

A. Time out.

Would you repeat your question again?

Q. Mr. Kendrick, can a producer be -- can his correlative -- let me see if I can re-ask the question.

Does a producer have an opportunity to produce his just and fair share of the reserves under his tract if he is denied equal access to the marketplace?

A. I don't know what you mean by denied equal access to the marketplace.

Q. If the Carr wells are permitted to produce at a restricted rate, just for the argument say 50 percent, and the Nutter wells are permitted to produce all they can produce, not restricted because they're marginal, how can I protect my correlative rights if I don't have a market, or a

way to sell my gas?

A. If each of you are connected to pipelines gathering gas and each of your wells are completed in the same horizon, same pool, each of you are afforded the opportunity to produce your fair share.

If for some reason you do not produce yours, and become underproduced, and the other operator -- is this an allocated pool -- prorated pool?

Q. In a prorated pool.

A. In a prorated pool. If you are underproduced then you accumulate certain underage, and the other wells are overproduced, they are asked to be cut back while you continue to produce to make up your underage. They are trying to shut back and make up their overage, according to the pool rules that assigned the pool allowables to those wells.

Q. Let's assume that Mr. Nutter's wells are marginal wells and my wells are more recently drilled, they're nonmarginal. We offset one another.

Under your proposal Mr. Nutter's wells, being marginal, would not be curtailed.

A. If they're in this new category that we're prescribing, his would not be curtailed.

Q. My wells, being nonmarginal, would be.

A. Yes, sir. They would --

Q. So Mr. Nutter would have the opportunity to produce all the gas he can produce.

A. That is true, if they remain marginally classified.

Q. And mine do not have the opportunity to produce all the gas I can produce.

A. You are supposedly permitted to produce your allowable.

Q. And that is less than what I can produce from my wells.

A. I would have to be to have a pool prorated.

Q. So I don't have equal access to the marketplace that Mr. Nutter has.

MR. NANCE: Could we take a moment, please?

A. Mr. Carr, under the conditions that you have prescribed, as Mr. Nutter's wells were classified as marginal wells and were permitted to produce all the time, and your wells were classified nonmarginal wells, and were not being permitted to produce all of the time, is certainly the reason that proration was established, because it says that you are -- you have the equal opportunity to take the gas that you own under your tract, and because someone is producing too much gas and someone else is not producing enough, is the reason

pried to align allowables between wells to say, this is your proportionate share of the reservoir, being that that you own.

Mr. Nutter's wells, as marginal classification, would never produce as much gas as your well did because yours was classified nonmarginal. So you were producing more gas in less time than Mr. Nutter was.

And these are the rules that are established in each of the pools, and marginal/nonmarginal classification exists, or is available to exist, in each of the pools, and a marginal well cannot produce more gas than a nonmarginal.

Q. You say that Mr. Nutter's well would never produce -- could never produce as much as mine?

A. Not and remain marginal.

Q. Why should his well be entitled to produce any amount other than what his proportionate share of the deliverability is?

A. Deliverability may not be an issue of how much he is permitted to produce. He's permitted to produce gas -- he is permitted to have the opportunity to produce the gas that he owns.

Q. And is he afforded that opportunity by being able to produce all the time?

A. We think so, if in a prorated pool he is

classified -- his wells are classified as marginal wells.

Q. Wouldn't I be afforded the opportunity to produce my just and fair share of the reserves if I were permitted to produce my nonmarginal wells all the time?

A. You might be producing your nonmarginal wells all the time and produce more gas than you own.

Q. Because I have better wells.

A. Because you may be draining acreage adjacent to you. You may be taking gas from Mr. Nutter.

Q. Or because I may have more reserves under my tract.

A. It all depends.

Q. Yes, but when you deny me, if you assume the reservoir conditions are similar, you deny me the opportunity to produce full time and you let the offsetting property produce all the time, do I have equal access to the market?

A. I'd say it depends upon the rules in the pool, how those were established, as to how the division was made as to what is yours and what is Mr. Nutter's.

Q. Absentthe pool rules, if my offsetting operator produces 100 percent of the time, and I am permitted to sell 50 percent of the time, do I have equal access to the market?

A. Absent pool rules we don't have proration

and the New Mexico Oil Conservation Division is available for you to make a filing to ask for proration.

Q. So the only way that this works is if there are pool rules, is what you're saying.

A. That's what they were established for.

Q. Now, if Mr. Nutter's wells and my wells are both curtailed twenty percent because the demand has gone down, would we not both have equal access to the marketplace?

A. Not necessarily.

Q. You wouldn't consider cutting us back equally, giving us equal access?

A. Not necessarily.

Q. Okay, thank you.

Now you have a similar proposal pending in northwest New Mexico, do you not?

A. We had a hearing for the four prorated pools in northwest New Mexico asking for a restart of proration there, yes, sir.

Q. And in the northwest there are deliverability factors in a proration formula in each of those four pools, are there not?

A. Yes, sir.

Q. And there are no deliverability factors in southeast New Mexico.

A. That is correct.

Q. A deliverability factor in a proration formula under your proposal would assure that better wells, in fact, are able to produce more than the poorer wells, is that not true?

A. According to the deliverability calculation per well, yes, sir.

Q. But in southeastern New Mexico with no deliverability factor a poor well on 160 would be able to produce the same amount as an offsetting good well on 160 acres?

A. In southeast New Mexico where allocations are made on 100 percent acreage basis, that is correct.

Q. To be sure I understand your testimony today, you're proposing this -- going back to step one, or zero, and starting over the prorationing system, and you have not reviewed how this proposal would affect the correlative rights of the interest owners in the pool, other than just assuming that the special pool rules must take care of that.

A. What we're saying is, that with this one stroke of the pen adjustment, if you please, we'll move wells from a marginal classification to a nonmarginal classification. Then we, as El Paso Natural Gas, as a pipeline company, can operate in those pools under assigned allowables to nonmarginal wells and produce marginal wells 100 percent

of the time, and continue taking the demand as we have demand for gas from the pools in southeast New Mexico.

Q. Mr. Kendrick, do you believe that a prorationing system should protect correlative rights, do you not?

A. It is my understanding that the reason that we have the rules in the prorated pools were established to protect correlative rights and prevent waste.

Q. And you actually believe that the formula to -- the proration formula should protect correlative rights. Is that your answer?

A. Yes, sir.

Q. And you believe that your proposal before the Commission today does that?

A. Our proposal today does not have any correlation to whether or not the pool rules in existence are protecting correlative rights.

We're saying if you have these pool rules and the establishment of allowables are from these pool rules, let's get the wells classified in such a manner that it will operate in accordance with the pool rules.

Q. Is it your testimony that your proposal would protect correlative rights?

A. In accordance with the pool rules of the existing pools in southeast New Mexico, yes.

Q. Without that qualification, is it your testimony that your proposal will protect correlative rights?

A. It would have to be.

Q. The answer is yes?

A. Yes, sir.

MR. CARR: I have no further questions.

MR. RAMEY: Let's take about a ten minute recess.

(Thereupon a recess was taken.)

MR. RAMEY: The hearing will come to order.

Are there any other questions of Mr. Kendrick? Mr. Kellahin.

CROSS EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Kendrick, in answering questions from Mr. Carr, you were discussing the proposition of a committee approval approach to solving the proration problems as opposed to what Mr. Carr classified as an advocacy approach,

and you characterized the advocacy approach as a haven for illegal lawyers.

I wonder if you could tell me what a legal lawyer is.

Mr. Kendrick, the advertisement by El Paso for the docketing of the case talks about the reclassification of wells in prorated gas pools in southeastern New Mexico. During your testimony you have addressed fifteen prorated gas pools.

Am I clear in understanding that you intend to exclude any other prorated gas pools except those fifteen that you specifically addressed today?

A. Yes, sir. The reason that those fifteen were addressed in our application was because El Paso Natural Gas had a definite interest in all of those pools, either as purchaser, operator, working interest owner, in some manner we have an interest in those pools.

Q. So you're not concerned, then, or do you propose to change the rules that apply to those few retrograde condensate reservoirs for which there are fixed allowables?

A. No, sir, we're not prepared to do that in this hearing at all.

Q. Mr. Kendrick, are you familiar with the Director's memorandum of February 18th, 1983, in which he

set forth the system of categories, one through six, in which he established priorities for the curtailment of production from wells within certain categories. Are you familiar with that?

A. Yes, sir.

Q. All right, sir. I have a copy here and you're welcome to look at it if necessary, Mr. Kendrick, but in terms of that memorandum, what is El Paso's practice concerning the curtailment of wells?

Q. The first wells that El Paso curtails in its normal operation in cutting back production into our system are the most overproduced wells that are connected to our system.

We continue from that on down until we get, as much as we can, all of the overproduced wells turned off.

Our intent -- let me go with that a little bit more.

Being overproduced wells, naturally, we're having to speak of wells in prorated pools. We, as a company, try to classify wells in nonprorated pools as overproduced or underproduced, or we affix a pipeline allowable, if you please, and we try to keep those wells in a category of underproduced, overproduced, or marginal.

So we're cutting back in prorated and nonpro-

rated pools from the most overproduced wells, continuing back to where we're maybe having to shut off underproduced wells for awhile.

We did not want to shut in marginal wells. We don't want to shut in casinghead gas wells. And then we get to wells along with casinghead gas that we might incorporate with that, problem wells, wells that we do not have control over in any way.

I like to look at the picture in the opposite direction, how do we make up our load of gas, rather than cutting back. Any gas that's noncontrolled, problem wells, casinghead gas, comes into our system first. We try to produce that 100 percent of the time.

We have the marginal wells in prorated pools and wells that we think they should be marginal wells, according to our computation in nonprorated pools.

Then we're going to the underproduced wells and then we finish up our load with the wells which are balanced and overproduced.

Q. Let me direct your attention to the category six wells in the memorandum, which might be characterized as problem gas wells. When I talk about a problem gas well I mean those with -- would be particularly deep gas wells that are very sensitive to restrictions, they load up with water

or fluids, and when you return them to full production, they don't return to the same production capacity, it's those kinds of wells I want to ask you about.

What is your understanding of the current rules, proration rules, with regard to how those problem wells are handled between you, the operator, and the Commission?

A. When an operator has a well he considers a problem well, generally they will write to El Paso, or call us, or someway communicate, and tell us, don't shut in this well. Then the discussion begins with that and we say, well, can we cut the well back. Can you produce it at half the rate it's producing? Can you produce it at a fourth of the rate it's producing?

We want to know what is the minimum amount that you could produce that well without doing further damage to it.

Q. Under the current system, if you and the operator do not agree upon a method to produce that well, what, if any, recourse does the operator have?

A. We feel that the operator should go to the Oil Conservation Division.

Q. And we would obtain an order either granting or denying his request and you're affected by that order and

abide by it, I understand?

A. Asking for some relief by them, because that may cause us, if it were a large well and producing an unduly large amount of gas, we're going to have to shut off smaller wells or different wells to make up for what that well produces.

We feel that that may cause an inequity in taking gas from the pool, from wells in a pool, and that we want the Commission to know that if this exists, then El Paso must have some type of relief to relieve us from non-ratable take.

Q. My point is, the current procedure provides for a method after notice and hearing to address problem wells situations, and nothing you propose here will change that procedure.

A. Not at all.

Q. Let me ask you some questions about how -- some of the factors that go into the concept of restarting proration. I think that's a phrase that you used earlier.

As I understand it, one of the factors is to, under some timetable, to cancel the underproduction from marginal wells.

A. No, sir.

Q. Is that not one of the results of your pro-

posal?

A. No, sir, because marginal wells do not have underproduction at this time. Marginal wells do not carry underproduction nor overproduction.

But what we propose is that every marginal well be reclassified as nonmarginal and begin the next month in a balances status, no underage, no overage; let it have assigned to it that says, this well officially came into this period underproduced and that underproduced amount is zero. But that is only so that it can be subjected to being reclassified as marginal, if it proves out it needs to be classified as marginal.

Q. Currently our marginal wells are those wells which don't produce their allowable, obviously. Are those wells developing or accruing a credit for the underproduction?

A. No, sir.

Q. They do not.

A. There is no status carried on a marginal well.

Q. With regards to the nonmarginal wells, then, those wells do carry an overproduction factor on them, do they not?

A. Yes, sir, overproduced or underproduced, yes, sir.

Q. And currently, when a well is six times overproduced, then it's subject to being shut in.

A. Yes, sir.

Q. Under your proposal, do they have any method or procedure in which you propose to cancel the overproduction on nonmarginal wells? In other words, restart those wells?

A. No, sir, at the restart, when the marginal wells are reclassified as nonmarginal, those nonmarginal wells that exist at this date of restart, would continue to be nonmarginal and would continue forward with the balanced status of underproduced or overproduced that they had accrued up to that date.

So if it's an underproduced well, on that date it would carry that underage forward; if it were overproduced, it would carry that overage forward, and continue to build on that record.

Q. Why wouldn't you restart the nonmarginal wells at zero?

A. We don't feel that that would be the proper way to do it; that they have that status in existence and there's no reason to destroy it just because we're bringing marginal wells into the category of nonmarginal.

Q. You have proposed a production level at 35 Mcf a day for all the gas wells in the prorated pools in

southeastern New Mexico. That is the production level you suggested.

A. 33 Mcf a day.

Q. Yes, sir, 33 Mcf. Do you have an objection to the concept of establishing a depth bracket allowable for wells in southeast New Mexico, where shallow depth wells to some particular depth are assigned some daily level of production and deeper gas wells are assigned some other level of production?

A. No, sir. As a company, we have no objection to a level being set for any formation, any depth, or whatever, provided that whatever level is picked for each pool or for all pools, that that level is low enough in its total producing rate for all wells below that level, that any pipeline company cutting back on the demand requirements would never shut in marginal wells, or would never have to shut in any of those marginal wells. That's our objective at that level.

Q. Mr. Kendrick, let me ask you whether or not you have an opinion with regards to Mr. Hartman's proposal as at least advertised on the docket, to reclassify all wells within the named pools as marginal until further order of the Commission. Do you have an opinion about that proposal?

A. It would just complicate the situation that

has been built up, and we are at a point where we're seeking relief now from the total number of marginal wells we already have.

Q. Would you explain to me what reasons you have for believing that it complicates the system?

A. Because El Paso, as one pipeline company, to do pipeline proration without guidelines by the State that has the authority to prorate the wells, and it causes us, as a pipeline company, to assign those allowables.

We don't feel that that's our duty nor our obligation, nor anywhere within our bailiwick, if you please.

Q. Do you have any opinion as to whether or not, Mr. Kendrick, a system proposed by Mr. Hartman would result in waste or the violation of correlative rights?

A. If you have all wells producing from the -- a pool classified as marginal and the demand for gas from that pool is less than the total gas available from that pool, that pool is not being prorated according to the rules of the Commission, and it again falls right back and says, well, the pipeline companies can do as they please, and there are many different ideas with many different pipeline companies of how they would make up their load requirements from the system.

Q. I'd like to direct your attention to the question of the adviseability, in your opinion, of using a

deliverability factor in prorationing southeastern New Mexico as opposed to the acreage factor that's in place now. In other words, in northeast -- northwestern New Mexico there is a proration formula that has a deliverability factor and acreage factor put together.

We don't have that arrangement in southeastern New Mexico. Do you have an opinion as to whether or not a deliverability factor on a uniform basis for all the prorated gas pools in southeast New Mexico is a reasonable concept?

A. I don't have an answer to that, and I don't know that it would be in the scope of this hearing.

Q. In response to Mr. Carr's questions in that regard, am I correct in understanding that you thought that was a problem that ought to be addressed in a specific hearing called to address special pool rules for a given pool?

A. I think that would be more appropriate, yes.

Q. And if for a particular pool the engineering and reservoir characteristics were such that a deliverability factor could be applied for that pool in some reasonable, fair, equitable method, then you would have no objection to handling that problem that way.

A. That is correct.

MR. KELLAHIN: Thank you, Mr. Chairman, I have no further questions.

MR. RAMEY: Any other questions of Mr. Kendrick? Mr. Padilla.

CROSS EXAMINATION

BY MR. PADILLA:

Q. Mr. Kendrick, let me direct your attention to Exhibit Number Eight and also to your Exhibit Number Seventeen.

Have you explain to me the difference between your Exhibit Number Eight and your Exhibit Number Seventeen, as far as the bar graph is concerned.

As I see your bar graphs, you have what you call an ideal situation, and with regard to that exhibit, did you base that on a computer model?

A. If you consider the human brain a computer model, I guess so. That's where it came from. I just said that looks like the way proration could more ably serve its purpose.

Q. In real life would you consider the Indian Basin Upper Pennsylvanian Pool as an ideally prorated pool?

A. Of the fifteen pools that I've made these bar graphs on, when I drew this one on the Indian Basin, I said, my gosh, here is the model right here. I thought, well, that's time to quit; you've now found it.

The only problem that I had with this was the month of May -- month of June, I'm sorry, reading upside down -- month of June, showed quite a small amount of marginal production compared to the other months across the year.

As I envision producing a pool when you classify wells as marginal, and if it's a fully developed pool, then the total amount of gas to be produced from those wells would slowly decline according to the decline of each well and the total.

This is as close to that, I believe, as a guy could find. The month of June may be fully explainable that, no, this did not happen because we shut wells in intentionally due to low demand. There might have been a problem with a pipeline. It could have been many things that caused that to happen the way it did, and, actually, the whole pool would be operating in very good fashion.

Q. Isn't the -- isn't the percentage between the marginal gas and the nonmarginal gas for June almost the same for every month? Have you compared June with every month on that bar graph? Just from a -- just eyeballing your graph?

A. I would think that your statement is fairly reasonable, yes.

Q. Does El Paso take for purchase gas from the

Indian Basin Upper Pennsylvanian Gas Pool?

A. No, sir.

Q. Are they a producer in this pool?

A. Yes, sir, we have interests in this pool.

Q. Your application --

A. Let me clarify that. In the family of El Paso Companies we have interest in the pool.

Q. Your application here today is as a pipeline company, isn't that correct?

A. Not necessarily, because we're a producer, too, in many of the pools.

Q. Well, aren't you specifically here today to in fact lower the takes for your requirements for taking gas in southeast New Mexico as a pipeline company?

A. No, sir.

Q. What, in fact, does being a producer, or one of El Paso's subsidiaries, have with respect to the application here today?

A. We want to see that our gas is treated equitably with other gas wells in the same pools.

Q. Would you agree that your primary purpose here today is to seek relief as a pipeline company, though?

A. We want to seek relief in having us to assign allowables to wells that are now marginal wells.

Q. Doesn't that affect your gas purchase requirements as a pipeline company primarily?

A. I don't know.

Q. What is El Paso's pipeline company's market area for the fifteen pools in southeast New Mexico?

A. Generally it is diverted towards the west coast, winding up with sales across New Mexico, Arizona, and California; some into Nevada.

Q. In fact you could say it's New Mexico and west of New Mexico, is that correct?

A. Yes, sir.

Q. Is that a fair statement?

Going back to the bar graph, can you tell us as to Exhibit Number Eight, would you say that the Indian Basin Upper Pennsylvanian Gas Pool would -- that the nominations in that pool are fairly correct?

A. I made no comparison of nominations to takes in any of these exhibits that I have prepared, as far as to look at them, to examine them, let's say.

Q. Wouldn't the method of making nominations in that pool, if they are done correctly, result in the type of graph that you have computed for Exhibit Number Eight? Between the marginal and nonmarginal wells?

A. Will you please ask the question again?

Q. Well, is it a fair statement to say that looking at Exhibit Number Eight, the bar graph that you have prepared, that nominations that have been made by the purchasers in that pool would have resulted in an ideally, or close to ideally prorated gas pool?

A. The nominations are not a factor in this bar graph as it is drawn; not nominations.

This is drawn from total production and from marginal production.

Q. Let me direct your attention to the front side of that Exhibit Number Eight now, and you have on the fifth column under the marginal production, at the bottom, towards the bottom of the page, you have a line there that states "percentage of total production, 15.9 percent".

Yesterday you testified that the problem was that too many of the wells in southeast New Mexico are classified as marginal. Would you consider 15.9 percent as too much production coming from marginal wells? As far as the Indian Basin Upper Penn Pool is concerned?

A. I would have to answer that in the light of same. That if the total amount of marginal production available from that pool any one day does not exceed the lowest takes of the pipeline serving that pool on any day they are cut back to the bare minimum, then the amount of marginal gas

is not too much (inaudible).

Q. Well, what would you say the cutoff between marginal and nonmarginal on a percentage basis should be for the pools in southeast New Mexico?

A. I don't know any number.

Q. Well, let's just say you go, you have your three months, the three-month period is what you want to do, then you want to reclassify, as I understand your proposal, is to classify all wells to nonmarginal, then at a later time reclassify certain wells back to marginal, is that correct?

A. Yes, sir, they will be -- would be done that way.

Q. Based upon the Exhibits Number Two through Sixteen, where you give production for fifteen prorated gas pools, what, in your opinion, should be the percentage between the marginal and nonmarginal production after your test period?

A. I know of no number to pick, because if a pipeline is serving that pool and knows it can keep every well on 98 percent of the time, then 97 percent of the gas could be marginal gas.

Q. Let's go --

A. But if it's the other way, where the lowest day they're cut back they could only take 3 percent of the

gas in the pool, then you've got to say 2 percent of the gas could be marginal gas.

Q. But if, in that event, isn't a pool like the Indian Basin Upper Pennsylvanian really suffering compared to other pools as far as new marginal production is concerned?

A. I know of no way it's suffering.

Q. Well, at some point in the future, if your proposal is granted, would you say, take any of the other pools, I think maybe the Indian Basin Upper Pennsylvanian Pool is misleading, but just say, take the one -- one of the ones that has 100 percent marginal production, what percentage would you like to see that would be nonmarginal after your 90 day period?

A. Still I cannot give you an answer in percentage of the gas. If --

Q. But isn't that important inasmuch as you have given us total production without any qualification as to reservoir quality or deliverability of the wells within each particular pool, isn't it necessary, taking it right across the board, isn't it necessary for you to come up with some idealistic future, futuristic, or beyond the 90-day period, some percentage between marginal and nonmarginal production?

A. No, sir.

Q. Isn't that your goal?

A. Percent means nothing to me in this case. What means something to me is marginal wells are produced 100 percent of the time and we of El Paso, if we're producing today at a rate of 2.5 billion, serving our total market, and tomorrow they tell us to cut to 1.5 billion, I will not have to shut off a marginal well to go to that low demand.

Whatever that makes the percentage be in each pool, I don't know, and I have no way to calculate, because the next day we cut to 1.4 billion, and when we do that, well, did we have to cut off a marginal well. We hope we don't.

That's the idea that we're working on.

Q. Then you really, you never can get away from pipeline prorationing, is that what you're saying?

A. No, sir.

Q. I mean if tomorrow you have to cut back, it's pipeline proration, isn't it? You're going to shut down so many wells.

A. We hope that any time any pipeline cuts back, they will be cutting back on wells that are classified nonmarginal, so that if the wells do not produce their allowable, they will be given credit of being underproduced, and then we hope for a day that they will be produced more

than their allowable and make up that underproduction.

Q. Assuming for the sake of argument, that tomorrow you decide you have -- can only take so much gas and you're going to cut off all the marginal wells, the nonmarginal wells, you have to shut them all in, and you also have to cut the percentage of the marginal wells, how will you decide which wells you're going to -- which wells -- which marginal wells you're going to cut?

A. El Paso arbitrarily in 1982 drew a line and said we're going to cut wells as marginal wells that produced over 100 Mcf a day. That was the first time we dipped down into marginal classified wells and shut them off.

We did that for awhile and finally our cuts and demands got greater, and we said we have cut off every well as a marginal well that produces greater than 100, we ought to look at some other group of wells now and cut them off some, so we picked the point of 25 Mcf a day, and said any well that produces less than 25, we're going to try to leave it on; any well that produces greater than 25, we're going to try to give it some shut-in time along with other marginal wells.

Q. Given my assumption, then, where we'd shut off all the marginal -- all the nonmarginal wells and some of the marginal wells, using your arbitrary cutoff, whatever

that may be, then at that point the production from the Indian Basin Pool is going to be much lower than, say, any other pool in the system, isn't that correct?

A. No, not necessarily.

Q. On a pro rata basis across -- taking all the production on a weighted average basis across the fifteen prorated pools.

A. I do not recall any time in our cutbacks where we've had marginal wells off that we have actually had every nonmarginal well off also. So there should be nonmarginal wells still being produced from, and some marginal wells being off, also, but under the system we're proposing, we're going to the point where we say we can make all of the swings in our market demand by switching on and off only nonmarginal wells.

Q. How did you come up with -- in your alternate proposal with 33 Mcf per day?

A. 33 Mcf per day may be reflected as a figure of one million a month. That is part of it.

We took --

Q. Is that an arbitrary figure?

A. Yes, sir, and it began with our hearing in northwest New Mexico on the four prorated pools there. In some the pool rules for the shallow completed wells, the

rules already existed that said any well that produces less than a million a month will be classified as exempt from deliverability testing and would be an exempt marginal well.

We said that figure would be okay. We think that with that figure 33 set for those, we can produce and not cut below that point.

And that was the figure that we threw out then. We had nothing necessarily to defend it any other way, but had we gone smaller than that, we would have had to take deliverability tests on some wells that had been exempt from testing for years, so it just worked out up there that that was a good place for it.

We hope, we think, and if the market every comes back, as everyone in this room hopes it does, that that number is going to continually rise as a breaking point between where marginal wells then break into nonmarginal wells.

Q. Now you've talked and stated that the special pool rules of each of the pools under consideration here should be followed, and that El Paso attempts to follow those rules, but in protecting correlative rights, wouldn't you also have to consider the capability of the well to produce, and what might happen in classifying wells from marginal to nonmarginal, as it affects each individual well?

A. El Paso's opinion on that is that we believe

that that was written into the pool rules that exist in each of those prorated pools. That was the reason for it.

Q. Now you're changing the ground rules, aren't you?

A. No, sir.

Q. You are in effect amending, aren't you, in effect amending Order R-1670 as far as the prorationing rules for southeast New Mexico are concerned?

A. We are not amending. We are asking that certain portions of those rules be held in abeyance, such as Order -- or part of Rule 15-B for a well that becomes six times overproduced does not have to be shut in until we reach more of a leveling off period.

We're asking that that rule be, say, waived or held off for awhile.

We're asking for this reclassification to be a one time deal. We need to do it today or with this hearing, effective the first of July.

Given the start date we push the wells out of the marginal category into nonmarginal, we can start operating under all the rules that exist, then establish the new category of marginal as through time a producer can show that wells truly are marginal and need to be classified that way, and the rest of them are nonmarginal.

Q. Who will be the arbiter as to whether a well is marginal or nonmarginal under your proposal? Would it be El Paso?

A. I think we have the opportunity, according to the rules that exist in Order 1670 for the Division Director when the operator, pipeline company, or any interested party, to show cause why a well should not be so classified as it is classified, and get the classification changed.

Q. That would require me to come over here and have another hearing. Within -- I mean how would -- what mechanism have you considered for deciding -- I don't know how many wells we're talking about in each of the fifteen prorated pools, and I'm sure that the Division Director does not want to come to hearing on each one of those wells and decide which one is marginal or nonmarginal; initially what mechanism, or who is going to decide which well is going to be classified marginal after your test period?

A. I think that should be left open to where any operator, any pipeline company, the Commission itself, the Division itself, could look at the data available, and say, well, let's draw the line at this point for this month, go ahead and operate with that, make whatever reclassifications are necessary, and if anyone gets a well reclassified against his will, he can come right back by the telephone or

letter or any way he wants to and say, hey, you have done me wrong, and I should have this well reclassified the way it was.

And certainly a reasonable answer can be worked out.

The reclassification, to me, is not that important over a short period of time, and the reason I say this is what was produced last month is still in the records and we know what that was, and if we declare the well marginal today, and we say, well, we've lost its status of under or over produced, and we say, well, wait, that well should not have been made marginal, it should be back to nonmarginal, we can go back and get last month's production and bring it into the status.

So a month to month flip-flop really hasn't hurt anything when in the end you have come up with a proper classification between marginal and nonmarginal.

Q. Mr. Kendrick, let me go back to your Exhibits Two through Seventeen, and I think they speak for themselves but I just wanted to re-emphasis that the percentage for the Indian Basin Upper Pennsylvanian Pool, compared to all the other pools, its percentage of marginal production is close to five times lower than any other pool in the fifteen prorated pools. Is that a fair statement?

letter or any way he wants to and say, hey, you have done me wrong, and I should have this well reclassified the way it was.

And certainly a reasonable answer can be worked out.

The reclassification, to me, is not that important over a short period of time, and the reason I say this is what was produced last month is still in the records and we know what that was, and if we declare the well marginal today, and we say, well, we've lost its status of under or over produced, and we say, well, wait, that well should not have been made marginal, it should be back to nonmarginal, we can go back and get last month's production and bring it into the status.

So a month to month flip-flop really hasn't hurt anything when in the end you have come up with a proper classification between marginal and nonmarginal.

Q. Mr. Kendrick, let me go back to your Exhibits Two through Seventeen, and I think they speak for themselves but I just wanted to re-emphasis that the percentage for the Indian Basin Upper Pennsylvanian Pool, compared to all the other pools, its percentage of marginal production is close to five times lower than any other pool in the fifteen prorated pools. Is that a fair statement?

A. Yes, sir.

May I elaborate on that a little?

Q. You may.

A. If I looked at the Exhibits of Two through Sixteen, I would say that the Indian Basin Upper Pennsylvanian Gas Pool, as Exhibit Number Eight, shows the less need for what we're asking for of any one of the pools exhibits; that if anything is happening, this is being operated more nearly as a pool should be of any other one in the group.

Q. You wouldn't be involved in that pool really from the standpoint of being a purchaser, is that correct?

A. That is correct. We are a seller.

MR. PADILLA: I have no further questions.

MR. PICKENS: I have some questions.

MR. RAMEY: Would you identify yourself, please?

MR. PICKENS: I'm Bob Pickens of Marathon Oil Company.

CROSS EXAMINATION

BY MR. PICKENS:

Q. Mr. Kendrick, just to clarify a couple of points for me.

Under your proposal, if all wells were re-classified as nonmarginal, some ex-marginal wells, being ones that were previously classified marginal, probably will not make their assigned allowable over the next three months, is that not correct?

A. That is correct.

Q. And they will become underproduced.

A. That is correct.

Q. Certain other wells will become overproduced to in fact make the pool's allowable, is that correct?

A. That is correct.

Q. And in following up on what Mr. Kellahin started on, a well that was nonmarginal at the beginning of this three-month period, even though it may not have been overproduced, because of the redistribution of the allowable among marginal, or ex-marginal wells and nonmarginal wells, became more overproduced, this would be in abeyance until the end of December, is that correct under your proposal?

A. I believe that's the date in our letter.

Q. Then what would happen to that overproduced well under El Paso's proposal?

A. If at the end of the time period that we have asked for, or at the end of a time period that may be written into the order, or into an order that the Division may see fit

to write, if El Paso sees that there are too many wells still six times overproduced that need relief, El Paso has no qualms whatever of coming back asking the Commission to extend that period of time to make up this point of being six times overproduced.

Q. Well, I think you just stated that El Paso is not a purchaser in the Indian Basin Upper Penn or the Indian Basin Morrow, is that correct?

A. Yes, sir.

Q. And do you know, as a representative of El Paso what the demand situation of the pipeline purchasers in those two pools is?

A. No, sir.

Q. You do not, and El Paso demands will have no impact on that pool, is that correct?

A. That is correct.

Q. And so looking also at your Exhibit Number One, and with the Indian Basin Upper Penn Pool, you show that 38 wells are currently classified as marginal and 18 wells are classified as nonmarginal, is that correct?

A. Yes, sir.

Q. Then if you look over to Exhibit Number Eight, under the Columns Five and Six, which are marginal production and nonmarginal production, if you divided those

equally between, let's say, 56 wells, wouldn't you have those 18 wells probably being a highly overproduced situation during this period?

A. Yes, sir.

Q. And what you're telling me is they will probably all be shut in January the 1st in the middle of the winter heating season under El Paso's proposal, is that correct?

A. No, sir. We would try to do whatever we could that is necessary to keep that from happening.

Q. Well, you told me that you had no control over that as a pipeline purchaser in that pool.

A. If we're talking about -- only because we're not a pipeline purchaser in the pool, then we cannot affect the rules of the pool. If that is the case, then we would be barred from doing anything; however, if it were pools that we did have any say-so or control of whatsoever, and let me turn this the other way and say we have an interest in those pools, so I think we would have a right to come in if one of our wells were six times overproduced, and ask that that rule be waived until a later date so that we'd have longer to make up that overproduction, we would be here to do it.

Q. All right, but if I can just in one sentence paraphrase what you've been talking about for several hours

yesterday and this morning, in your opinion the problem really is that marginal wells are not reclassified as non-marginal wells in New Mexico in a timely manner when the market demand for gas is low. Is that a fair summary? I won't say that is exact.

A. That is pretty close to exactly what has happened.

Q. All right, and you are familiar with the special rules for prorated gas pools in southeast New Mexico, Order 1670, I believe it is?

A. I'm fairly well acquainted.

Q. All right, sir, and does not Rule 16-B of those rules provide a means to reclassify wells at any time from marginal to nonmarginal?

A. Let me look at that rule, please.

As I read Rule 16-B of Order R-1670, as amended, it says the Director may reclassify marginal or non-marginal well at any time the well's production data, deliver-ability data, or other evidence as to the well's producing ability justifies such reclassification.

Q. All right, and in your opinion, do you believe that a marginal well that is capable of producing more than the allowable assigned to a nonmarginal well in the same pool should probably be classified as a nonmarginal well?

A. Yes, sir.

Q. And in the monthly production report which you referred to, can this information be determined from those records furnished to the Conservation Commission?

A. Yes, sir, and I believe that is done annually by the Commission staff.

Q. It is -- it is available on a monthly basis, is that correct, and then they do it on an annual basis at this time?

A. That is my understanding. All the data is accumulated but only once a year do they look at the reclassification, I think that's correct.

Q. In fact I think you made a statement in response to Mr. Carr on cross examination that wells could be changed every month from marginal to nonmarginal, or vice versa, is that correct; could be, not that they are.

A. Could be. I think there is opportunity for that to take place, yes, sir.

Q. All right. And the only other question that I have, would El Paso in its application have any problem with a proviso or provision being included in any order the Commission might issue on this application that would reserve the right to a producer to come in and request exception or relief, either by amendment of the pool rules or some other

under the special rules for prorated gas pools or some other method provided?

A. To come in to hearing?

Q. To come into notice and hearing and request exception from the order that might be issued as a result of your application?

A. I think that door is always open.

Q. All right, and you have no problem with it being specifically included in such an order to be issued.

MR. PICKENS: No further questions.

MR. SORRENTINO: I'm Tony Sorrentino with Gulf Oil.

CROSS EXAMINATION

BY MR. SORRENTINO:

Q. I just wanted to go back to that 1000 Mcf a month figure, sir. Would you explain that for me one more time, how that was arrived at?

A. My early speculation of 1000 a month began in the San Juan Basin, and some of the operators had wells that produced very small amounts of gas and we were required to run deliverability tests on every well in the basin.

Some of the operators got the idea, and said, look, Commission, we have certain wells that we are re-

quired to test and the test value, the data that we obtain from running the test, has no real value in assigning an allowable to the well.

So through hearing, discussions and hearing, it was reached, as it says, if a Pictured Cliff, or more shallow completed well produces less than one million a month, it does not require a deliverability test in the San Juan Basin.

And then for deeper wells that figure was set at two million a month.

And that was where I began it.

Q. Well, so at the northwestern hearing there was a two-tier system set up, though, wasn't there? I mean it was 1000 Mcf and then it was a 2000 Mcf for those wells that were deeper, right?

A. That is correct.

Q. At the previous hearing. Has El Paso given any thought to establishing a similar two-tier system for wells in these fifteen pools?

A. I have not made any consideration for a different figure.

Q. Would it be fair to say that the production from, the average production from the wells in these fifteen pools more closely approximates the production from the wells

in the previous pools that received the two million Mcf a month figure?

A. I don't know. I have not made that type of comparison.

Q. So El Paso has not made any calculations of average production, and so forth, in these fifteen pools in southeastern New Mexico?

A. No, sir, not on that basis.

Q. Thank you.

MR. RAMEY: Any other questions of Mr. Kendrick?

MR. PEARCE: I have a couple, if I may, Mr. Chairman.

MR. RAMEY: Mr. Pearce.

CROSS EXAMINATION

BY MR. PEARCE:

Q. Mr. Kendrick, a softball, Mr. Carr was questioning you earlier about correlative rights. Do you know if the State of New Mexico in its statutes has defined correlative rights?

A. To say that I know that might be misleading, but I thought I had read it. I'm not sure that I have.

Q. If they have so defined correlative rights,

did you have that definition in front of you when you were responding to Mr. Carr's questions?

A. No, sir, I did not.

Q. Now, I would like to return to one other thing that Mr. Carr questioned about, questioned you about, not having to do with that.

I need you to try to explain to me again your exchange with Mr. Carr about the relationship between diminishing nominations by purchasers in a pool, the allowables which result from those diminishing nominations, and the amount of production allowed from wells in the pool.

I understood you to say that a decrease in nominated quantities would not affect the amount of gas that a well could produce in a prorated pool.

Do you recall that, sir?

A. Yes, sir.

Q. Would you explain to me how the allowable for a nonmarginal well in a prorated pool is established again?

A. If we work only with one pool in mind, to try to answer this, each of the pipeline companies are required to submit nominations for the next month's production. A best estimate -- let me back up a little.

They are required once a year to file nomin-

ations for the next twelve months of production, as their best estimate of what they expect to produce by month from that pool.

Then, on a monthly basis, as you continue through the producing year, each pipeline company may submit supplemental nominations, which could change your original nominations given back in the early part of the year.

The total nominations for all purchasers from that pool are added up and you subtract from that number the amount of gas that was produced two months ago by the marginal wells in that pool.

The remainder of that gas is allocated to nonmarginal wells; however, there are some other factors that enter into that, such as, if this month you nominate zero, if every pipeline company nominated zero for this month, but every company produced gas, you'ld say, well, the well -- the pool has been overproduced according to its nominations. The allowables assigned by those nominations would have been zero, if this were the first month in that pool.

Next month we learn by the pipeline companies reporting the produced gas from the wells in the pool to the Commission, the Commission learns it. Hey, these guys nominated zero but they took gas. Next month we're going to add the gas that they took that's different from what their zero

nominations were to the allowable that we assign to the third month. And in so doing, the pipeline companies have decided this month we are going to be allowed to sell to our customers some gas; they want some gas now, and this is how much we think will meet our market requirements.

Those nominations are totaled and we add to that that difference acquired two months ago between allowable assigned and actual production to that as an arithmetical number, addition, algebraic addition, and that would increase the allowable for that month to a figure greater than what the pipeline companies said they could sell, estimated they could sell, or were told by their purchasers that they would take.

So you have increased the allowables now for that third month enough to make up for the overproduction that they produced in the first month when they got zero allowable.

And this is a continuing grasshopper effect month to month through the proration period.

Q. Then how does a well ever become six times overproduced?

A. If we were to take every well in a pool, any one of these, except Exhibit Eight, for instance, but picking out Exhibit Eleven, because there are no nonmarginal

wells in that. If we said, automatically, with the stroke of a pen, declared every well in that pool nonmarginal, now we take the nominations from the pipeline companies, add them up, and calculate an allowable per well, and then that -- the allowable is assigned the same for every well that has the same size acreage factor because that's prorated on 100 percent acreage allocation.

Suppose that number came out to be 73. Every well is entitled to produce 73. Let's say ten of the wells will only produce five, so the difference between five and 73 for each of those wells would become underproduction.

The pipeline company still needs the gas that they nominated for to meet their market demand. They are going to take that gas from some place. They're going to take it from the wells that will produce that gas, that being wells producing more than 73, and if you do that enough times, enough months, leaving these wells that will only produce five Mcf a day classified as nonmarginal, they will keep accruing an underage, and that difference between the five Mcf a day and the 73 allowable, or the actual amount produced, becomes overproduction that's going against the wells that are left on to make that allowable or to make the gas needed to meet the market demand. These wells stay underproduced so long, never making the allowable, they are

subject then as the wells that should be classified marginal, but these other wells, having made up that gas that these poorer wells didn't make, have produced so much of the time, they are overproduced, six times overproduced.

So once we get the proper alighment between marginal and nonmarginal, and the rate of takes from the pool, then that reaches a level automatically, and you can continue as long as there's no real abrupt change in a decreasing market demand, in accordance with the rules and regulations in existence today.

Q. All right. One final subject matter, if I may.

Turning to Exhibit Number Seventeen, your ideal situation, is it fair to say that in a period of decreasing market demand on a particular pool, that that ideal cannot be arrived at because there will always be wells falling from nonmarginal into the marginal category increasing the amount of marginal production allowable, however you want to phrase that?

A. Not in a decreasing market situation, no, sir. Wells could become marginal most of the time because of an increasing market situation.

In other words, once you reach a level that you have continued even production every month from the pool,

you could just absolutely draw a line and say below that line is marginal, above it is nonmarginal, but when the market demand starts increasing and you take more and more gas from that pool, then there's going to be a well that's just above that breaking point between marginal and nonmarginal that now cannot make the newly assigned allowable, so it will become marginal, and as that demand continues to increase, more and more wells become marginal.

That's what we're saying has happened across the State of New Mexico.

When you have a decrease and a sudden decrease, the wells should be driven out of marginal category -- or the level of the marginal category should be reduced, so that all that's left can be turned on or off, or should be turned on or off, are still nonmarginal wells.

But it won't work that way automatically if you shut in the marginal wells.

MR. PEARCE: That's all, Mr. Chairman, thank you, sir.

CROSS EXAMINATION

BY MR. RAMEY:

Q. Mr. Kendrick, I've got a couple of questions. I think you are now prorating essentially all wells in New

Mexico on producing days, is that not right?

A. Yes. No. Where we have assigned allowables for a well, we are producing those wells according to their allowables as best we can.

If we have wells that we have to produce without allowables and produce them less than full time, we produce those more or less on an equal time basis.

Q. So you're actually producing these wells on some kind of a deliverability bit.

A. It might be said that way, right, wrong, or indifferent, that's the way started doing it in 1982, and carried over the first of the year 1983 in that same manner, trying to continually take the total time of production and no production to keep that balanced in that -- in all of the wells become affected in not having a calculated allowable assigned, and giving it a certain amount of on time or off time.

Q. Okay, we have -- we have deliverability in the proration formula in northwest New Mexico.

A. Yes, sir.

Q. We have acreage in the proration formula in southeast New Mexico.

A. Yes, sir.

Q. Shouldn't these wells be more prorated on

acreage than on deliverability?

A. Yes, sir.

Q. Would your -- what you're proposing yesterday and today more nearly, in your opinion, prorate these wells on acreage rather than deliverability?

A. Yes, sir.

Q. Thank you.

MR. RAMEY: Any other questions of Mr. Kendrick?

MR. NANCE: Mr. Chairman, I have one additional point that I discovered we had not covered yesterday in our direct testimony and I need to ask Mr. Kendrick for the record.

REDIRECT EXAMINATION

BY MR. NANCE:

Q. Were Exhibits One through Seventeen prepared either by you or under your direction?

A. Yes, sir, they were.

Q. Thank you.

MR. RAMEY: Do you want to offer those exhibits? Or did you do that?

MR. NANCE: I believe we did.

MR. RAMEY: All right, fine.

Any other questions for Mr. Kendrick? He may be excused, and we'll recess till 1:00 o'clock.

(Thereupon the noon recess was taken.)

MR. RAMEY: The hearing will come to order.

Mr. Carr, do you have any witnesses you want to put on?

MR. CARR: At this time, Mr. Chairman, we would call Dan Nutter.

DANIEL S. NUTTER,

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

DIRECT EXAMINATION

BY MR. CARR:

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

A. Daniel S. Nutter.

Q. Mr. Nutter, what do you do for a living?

A. I'm a consulting engineer.

Q. By whom are you employed in this case?

A. Doyle Hartman.

Q. Mr. Nutter, would you summarize for the Commission your educational background?

A. Yes. I graduated --

MR. RAMEY: Mr. Carr, excuse me, the Commission is familiar with Mr. Nutter and probably would consider him qualified. I don't think you need to --

MR. CARR: Mr. -- may it please the Commission, we would like to record to reflect what Mr. Nutter's credentials are for the purpose of him drawing certain conclusions at the last of his testimony.

MR. RAMEY: All right, that's fine. Proceed, then.

Q. Would you summarize your educational background?

A. Yes. I graduated from New Mexico School of Mines in January of 1952 with a Bachelor of Science in petroleum engineering degree.

Q. And would you review your employment history?

A. After graduation I was employed by Phillips Petroleum Company. I stayed with them until August of 1954, at which time I came to the New Mexico Oil Conservation Commission. I started employment here on September 1st, 1954.

I retired from the New Mexico Oil Conservation Division, the successor to the Oil Conservation Commission, on December 31st, 1982.

Q. While employed by the Commission did you serve as a Hearing Examiner?

A. Yes, sir.

Q. Were you involved with prorationing during your employment by the Oil Conservation Commission?

A. Yes, I was.

Q. What did you do in regard to prorationing?

A. I had an active part in the formulation of rules and regulations and the implementation of those rules and regulations regarding oil prorationing as well as gas prorationing.

MR. CARR: May it please the Commission, at this time we would tender Mr. Nutter as an expert witness in petroleum engineering and prorationing matters, and also in regulatory matters.

MR. RAMEY: He is so qualified, Mr. Carr.

Q. Mr. Nutter, are you familiar with the application filed in these consolidated cases by Mr. Hartman?

A. Yes, I am.

Q. Are you also familiar with the application

filed by El Paso Natural Gas Company?

A. I am.

Q. Could you initially briefly summarize the history of prorationing in southeastern New Mexico?

A. Prorationing in southeast New Mexico, this is of gas, commenced in 1954, at which time the Blinebry, Eumont, Jalmat, Justis, and Tubb Pools were put on prorationing.

In 1957 Crosby Devonian Pool was prorated.

In 1961 the Atoka Penn and the Monument McKee Pools were prorated.

In 1965 the Indian Basin Morrow and the Indian Basin Upper Pennsylvanian Pools were prorated.

In 1969 the Buffalo Valley Penn was added to the list.

In 1972 the South Carlsbad Morrow Pool was added to the list.

And in 1974 the last three pools to be prorated in southeast New Mexico were added, being Burton Flats Morrow, Burton Flats Strawn, and Catclaw Draw Morrow.

Q. So no pools have been added to the list of prorated pools since 1974?

A. That is correct.

Q. Has production from those fifteen prorated pools remained relatively stable during the years that pro-

rationing has been in effect in each?

A. Not necessarily. There have been many variations in market demand as well as the supply of gas available. We've had periods of over supply as well as periods of under supply during that period of time.

Q. Have the pools experienced a general trend in increased production or in decreased production during this period of time?

A. Well, we'll refer to Exhibit One in the packet, which is a family of bar graphs for each of the prorated -- the fifteen prorated pools in southeast New Mexico.

The first one is the Atoka Pennsylvanian. It's producing at the rate of approximately 2-billion feet a year in 1982, which is 17 percent of its high in 1976.

The Blinebry Gas Pool is the next page in the exhibit. Now this is the first time I've ever seen a graph of the Blinebry Pool like this before. I'm sure they have been prepared but I had never seen one. In 1974 the Blinebry Gas Pool and the Blinebry Oil Pool were combined to make the Blinebry Oil and Gas Pool, and subsequent to that date all production that's reported in the statistical reports is shown to be casinghead gas from the combined pools, and the black lines from 1974 through '82, plus the cross hachured lines, represent that reported volume of gas from

the Blinebry Oil and Gas Pool.

Then I went and dug out the production from the gas wells only, and the black bars from 1974 through '82 represent the production from the gas wells only in the Blinebry Pool.

So the Blinebry Gas Pool has declined to where it was producing slightly more than 10-billion cubic feet in 1974, which is 32.7 percent of the high reached by the Blinebry Pool, gas wells only, in 1974.

The next one is the Buffalo Valley Pennsylvanian Pool. It has not declined nearly so much. The present rate of production was slightly more than 4-billion feet in '82 and that's 74.8 percent of the maximum rate in 1972.

The Burton Flats Morrow, the next sheet, has declined a little more than 6-billion. That's only 22.7 percent of the high of over 30-billion reached in 1977.

The Burton Flats Strawn has only produced -- in 1982 produced only 4.3 percent of its maximum production reached in 1974.

I might add, I think I failed to do so, that these bar graphs reflect production from these pools only after prorationing was instituted. Some of these pools have produced a couple of years before that; some of them were old pools and had produced for many years before that, but

these bar graphs represent prorated years only.

Back to the South Carlsbad Morrow, in 1982 it produced 21 percent of its maximum in 1973.

Catclaw Draw Morrow produced 23.5 percent of the maximum of 1974.

The next one, the Crosby Devonian has declined to where it's only producing 2.2 percent of its maximum in 1957.

The Eumont Pool in 1982 produced 47.8 percent of the maximum production achieved in 1973.

Indian Basin Morrow Pool produced 14.3 percent of its production in 1975, the high year.

Indian Basin Upper Pennsylvanian Pool, one of the better pools left in New Mexico, in 1982 produced 55 percent of 1970's production. It produced over 40 -- a little over 40-billion cubic feet in 1982.

The Jalmat Pool in 1982 produced a little over 10-billion cubic feet, which is 12 percent of its maximum reached in 1956.

The Justis Glorieta Pool produced 24.4 percent of its 1964 production and made less than a billion cubic feet.

Monument McKee Ellenburger in 1982 produced 20.1 percent of 1974 high.

And the Tubb Gas Pool, likewise to the Blinebry Oil and Gas Pool, was combined; however, that combination did not take place until 1979. Again the cross hachured area is the casinghead gas that had to be deleted in order to show a true decline curve for the gas wells.

The gas wells in 1982 produced about 6-billion cubic feet, which is 25.2 percent of the maximum from those gas wells in 1973.

So you can see, looking at all of these decline curves, with possibly two exceptions being the Buffalo Valley Pennsylvanian and the Indian Basin Upper Pennsylvanian Pools, that these pools have all decline very substantially in their volumes of production since prorationing was instituted in those pools. Some of them are at a very late depleted state of their life.

Q. Now, Mr. Nutter, a few minutes ago you talked about, or mentioned that there have been periods of over supply as well as periods of under supply.

How has the prorationing system worked during these periods?

A. Well, as Mr. Kendrick testified this morning, the proration system works providing there aren't extreme fluctuations in market conditions.

In these extremes the formula has a very

difficult time adapting itself. The mechanism itself is so designed that these extreme fluctuations can lead to an excess of overproduction or underproduction building up and having an adverse effect on what you're trying to do.

For example, in the fall of 1973, about the time of the oil embargo, there was a sudden extreme demand for gas. The pool balancing formulas broke down but there was a memo attached to the front cover of the proration schedules for November of 1973 advising producers and pipelines that the Commission was suspending pool balancing because it was causing the pool allowables to go down in a period when it was necessary for the allowables to go up.

We also called a meeting of the gas purchasers on November the 8th, 1973 at which time we outlined our methods of trying to bring the situation back into focus, and even suggested permanent elimination of pool balance from the gas proration procedure.

This was all at a time shortly after Elvis Utz, the Commission's gas engineer for many years, had retired and I was place in general supervision of gas prorationing and worked out a procedure whereby purchasers nominations would be inspected each month and adjusted if necessary prior to being put into the pool balancing formula, in order to assure a smooth flow of gas allowables and gas production

despite what the pool balancing formula called for. At that time Jim Keptaina was the engineer doing the gas prorationing, Herman Bauer was actually running the mechanics of it through the computer.

After their retirement Harold Garcia and I worked on this for a number of years. It's in Harold's lap now, as far as I know.

Q. Mr. Nutter, what was the effect of these adjustments to nominations?

A. Well, it worked for us surprisingly well. Some months no adjustments to those nominations are necessary at all before employing the pool balancing formula; other months substantial adjustments are necessary.

Q. What specifically were you trying to avoid by making these adjustments?

A. Well, either one of two things: Either ridiculously high allowables or ridiculously low allowables, even negative allowables.

Q. What are negative allowables?

A. Negative allowables are what come out of the pool's allowable pot when there's too much formula-derived underproduction applied against the current month's nominations. It reduces the pool allowable to a negative number. The nonmarginal wells then receive a negative allowable. In

effect you might say that the wells should be putting gas into the ground instead of taking it out, and a brand new well that has just been drilled owes the pool gas even though it's never extracted one Mcf from the pool.

Q. Does the Oil Conservation Division ever assign a negative allowable?

A. They used to but they haven't assigned any negative allowables since November of 1973, or the fall of '73, I should say. To avoid negative allowables we use that nomination adjustment.

Q. What is the actual procedure used for determining allowables? Perhaps you want to turn to Exhibit Number Two and refer to this in answering the question.

A. Okay. Exhibit Number Two are copies of the actual worksheets that Harold Garcia used in feeding the formulas, or feeding the data into the computers in deriving the allowables for the month of June, 1983.

We'll skip the upper portion of this exhibit at this time and drop down to the portion in the lower half beneath the row of stars, where it says "adjustment by using pool balancing formula".

Now, Babe Kendrick went through this this morning, but he didn't have -- he didn't have a graphic demonstration of how this thing works in front of him; maybe

you can follow it a little bit better.

All right, the first thing we look at up here at the top, though, in the upper righthand side, you'll see Harold has made a 31-30. This is going to be important because we're going from a 31 day month to a 30 day month and sometimes a pool balancing disregards -- it disregards the number of days in the month, and when you're looking at nominations and whether you're going to have to adjust nominations, you want to know whether you're going from a 30 to a 31 day month or vice versa, even -- or 28-30, you'd go from January to February and have a loss of three days that would have a drastic impact on your -- on your nominations if the computer doesn't recognize how many days are in the month.

Okay, so we're down here below that row of stars and we see that the first row there is the current month's nominations. Now, Harold was working the allowable for the month of June. He performed these calculations on May the 19th, as indicated at the top of the page. The nominations for this pool, which is the Atoka Penn on the first page, were 167,120 Mcf.

All right, then we come to his beginning over -- beginning month over/under status. This thing goes back two months from the time he was working it and this was the status of the pool at the end of March of 1983. The

figure is 11,388. Since it doesn't have a symbol beside it, that means that the pool was underproduced by 11,388 Mcf.

Then he adds the production month nonmarginal allowable. The production month was the month of April. So the nonmarginal allowable assigned in that pool during April was 42,163.

So he took the under production, he took the allowable that was assigned, he adds those two together, and he comes up with a beginning net status here. This beginning net status is the status at the beginning of April the 1st. So the pool had underproduction assigned to it; it had nonmarginal allowable assigned to it, and the nonmarginal wells now had 53,551 Mcf to work against.

He reports the current nonmarginal production, which is the April production, less deferred production. We can skip that deferred production for the time being, that's supplemental production that wasn't covered by allowables, and he subtracts the nonmarginal production. That would be during April, because we're assigning allowables for June, so we had the allowable, the underproduction in March, we added the allowable that was added for April, now we're going to substract the production in April and come up with a net status.

So we had an ending month over/under cum

status of 10,685. Now this is chargeable against the allowable, so we're going to take that away from those nominations for that month, so that's put over in this column as a minus figure.

That's our first adjustment to nominations, a -10,685.

Then we go to the interim month nominations, which were the nominations for May. We take the interim month nominations and the interim month total allocation. We have a positive figure there, that the nominations exceeded the allocation by 4,584. That means nominations exceeded allowable so we under-allocated.

So we're going to put that back in the pot and that goes over in this adjustment column as a positive figure.

Then these are added algebraicly, the 167,000 minus the 10,685, plus the 4584, gives us 161,019.

Now we had marginal production reported to us during the month of March, or April, I beg your pardon, so that marginal production is deducted from the total allocation for the month of June, and we have 36,740 remaining.

There is one nonmarginal well in the pool, so the one nonmarginal well divided -- it has an acreage factor of one, divided into that 36,740, gives it a pool acreage

allocation factor down at the bottom of 36,740. They've got all of the nonmarginal allowables, and that's the way it works.

He's also got a column there on dailies. He figures all of this stuff on a daily basis so that he can tell whether he's going to have to make an adjustment because of the number of days in the month or not.

Now, if we'll turn to the next pool, which is the Blinebry, we'll see that the nominations were 544,000. Here we had an underproduced status at the end of March of 772,000. We assigned -- or they assigned nonmarginal allowable of 136,000, so those two total up to 908,000.

Now, he didn't have any deferred production again, so he subtracts the nonmarginal production, and you find you have a cumulative over/under status of 696,000. That means that the pool is short on production against allowable assigned of 696,000. So it's already had that assigned to it but it didn't produce it, but that allowable has been assigned, so that allowable should be taken off of the nominations that are filed now because it's allowable still in the pool balance that hasn't been consumed yet.

So that's deducted from those nominations, and here the underproduction is greater than the nominations were. So you come up and you subtract that one.

Then you have the second adjustment to the nominations -- the nominations. Again the nominations exceeded the allocation, so you have a positive figure which adds on. Well, you take the nominations minus the underproduction plus the excess that was -- you take the nominations minus the first adjustment plus the second adjustment and you come out with a negative 92,503, for a negative allowable for the pool.

There are 725 -- or 7.25 nonmarginal proration factors in that pool, divided into that 92,503 negative allowable, gives each well a negative allowable of 3,132. Each one of those wells has to put in 3-million cubic feet a day to break even with the pool.

Well, Harold didn't want to assign those negative allowables, so he went to an adjustment. He took those nominations up there. He added in to those nominations 768,000, you don't see this, he added in 768,221 to those nominations. Then he took that 696,000 off as the pool balancing formula called for. He added the 59,851 on, and he came up with a figure that's shown there in writing of 675,718.

Now Harold takes some short steps in through there, but that 131,418 down at the bottom of the page is actually the net amount that he added to those nominations to come up with a positive allowable. He came up with a pos-

itive allowable, instead of being 3000 negative, he had a positive allowable for each one of those proration units of 11,992 for the month, or 399.73 Mcf per day in the Blinebry Pool for that month.

You can go on through these and they all work pretty much the same. You'll see that in the next one, which was the Buffalo Valley Penn, he worked it with the -- he worked it with the normal pool balancing and he came up with a horrendous allowable of 15,000,924 a day, which he knows is not an applicable allowable for that pool.

So he used his alternate method up here, which is based on straight nominations without all of these adjustments. Some of those adjustments are in there. He came up with 719 Mcf per day daily allowable to be assigned to the wells in the Buffalo Valley.

The next pool, Burton Flats Morrow, came up with an allowable of 404,763; he adjusted it and the allowable turned out to be 743.

The next pool is all marginal, no calculation necessary.

South Carlsbad Morrow came -- calculated a negative allowable of 7-million a day, so he adjusted that and came up with a positive allowable of 1070 Mcf per day.

The next one is marginal; the next one is

marginal.

Eumont came up with a negative allowable of 2500 per day. He adjusted and came up with a positive allowable of 314 per day.

Indian Basin Morrow is all marginal. Indian Basin Upper Penn had almost a 7-million a day calculated allowable, but in accordance with the fluctuation in the nominations from the previous month on a daily basis, he found that they were down 9.8 percent, indicated over at the right-hand side of the page, so he brought those allowables down 9.8 percent to 1430 per day.

The Jalmat came up with a negative allowable of 1357 Mcf per day, so he adjusted that, came up with -- nominations in that pool were down 47-1/2 percent for June, so he gave it a positive allowable of 115, which is that 47 percent off the previous month's allowable on a daily basis.

The next one is marginal. The next one is marginal.

And finally, the Tubb Pool had a negative allowable of 3,484,000. He came up with a positive allowable after adjustments of 220,000 a day.

Q. What are the last four sheets on this exhibit?

A. The last four sheets are the pool balancing

sheets for northwest New Mexico, where we have the scheme in effect that El Paso is asking for now at the present time for southeast New Mexico.

We see that the Basin Dakota, a prorated gas pool up there, comes out with a positive allowable of 96.28 for the acreage factors and .2247 Mcf per each one point you've got in your deliverability. So together they'll add up and give you an allowable based on acreage and deliverability, but the 96 is the acreage allowable, the .22 would be your deliverability allowable, per point of delierability, per one Mcf of deliverability.

The Blanco Mesaverde comes up with negative allowables. He didn't use it. He went up to the top of the page and used straight nominations here without all the adjustments to avoid the negative allowable.

South Blanco PC comes up with a negative allowable. He didn't use it. He went to the top of the page and used his allocation based on straight nominations with minor adjustments.

The Tapacito Pictured Cliffs, negative allowables. He didn't want to do that so he went to the top of the page.

Some of the wells in those pools also are working on minimum allowables at this time. The allowables

are so low that the minimum allowables apply.

But that's the pool -- those are the pools where we already have this system in effect.

Q. Mr. Nutter, when they make these adjustments, they adjust both up and down, is that right?

A. Yes, those adjustments can go up or down.

Q. What's the general trend, however, of the allowables over the last few years?

A. The general trend of allowables has been downward.

Q. Is that also true of the allowable acreage factors in southeast New Mexico?

A. Yes, it is.

Q. Could you now turn to Exhibit Number Three and identify this and explain what it shows?

A. Okay, Exhibit Number Three shows what the average nonmarginal acreage allocation factors have been in these fifteen prorated pools in southeast New Mexico from 1980 through 1982 to 1983, January through May, and also June by itself.

We see here that the Atoka Penn has gone from a high -- this is per well, nonmarginal per well -- gone from a high of 65,000 down to 47,000 in 1982, 45,000 the first few months of '83, 36,000 in the month of June of '83.

Blinebry nonmarginal acreage factors have gone down from 44,800 in '80, 36,600 in '81, 33,400 in '82, 25.1 in the first five months of '83, and only 12,000 in 19 -- in June of '83.

Buffalo Valley Penn has gone from 59 to 61,9. That was one of the pools that I mentioned was one of our newer pools and hasn't experienced this drastic decline.

Burton Flats Morrow, the allowables have gone from 48,000, to 39, to 39, to 39, to 22.

Burton Flats Strawn is all marginal.

South Carlsbad Morrow has gone from 48, to 35, to 54, it's fluctuated, 49, 32.

Catclaw Draw Morrow was nonmarginal for three years, it's all marginal now. Those allowables were so how, no wonder they went marginal.

Crosby Devonian has been marginal for years.

Eumont has declined from a 23,000 allowable for a 160-acre unit down to 14,000 in the first five months of 1983, and only 9,000 for the month of June of '83.

Indian Basin Morrow is all marginal.

Indian Basin Upper Penn is the other good pool. It's experienced some real drastic changes over the years. In 1983, June, it's only 43,000, however.

Jalmat has gone down from 13 to 12, to 12,

to 9, to 3.

Justis was 12, it went down to 2. It then became all marginal. There aren't any acreage factors calculated after that.

Monument is all marginal.

And Tubb has gone from 24,6, to 21, to 18, to 14, to 6.

So they have gone down.

Q. Do you see any solution in sight to this problem?

A. No. I think that there's no positive solution in sight at all. I was reading the Oil and Gas Journal a couple of days ago about this gas bubble, as they call it, they don't expect it to be really -- for us to really be out of it until 1985, but at that time they're predicting that there will be another shortage of gas because of the conditions the way they are.

We need two things to get back in balance here in New Mexico. We need to improve the market so the existing wells can produce more, and we also need that market to improve so the incentive is there to cause new wells to be drilled to replace those old wells that are giving out.

So it's a double-barreled thing that would result if we would get an increase in our market.

Q. What can be done to ease the present burden on the gas producers in New Mexico?

A. Reduce takes ratably.

Q. And how can this be accomplished?

A. Not by the El Paso method.

Q. Why not?

A. Well, the El Paso method eliminates reduction of any takes from wells to a certain level. They establish what would be a nonmarginal well and anything below that doesn't experience any of the reduction.

This is a serious thing, this depressed market we've got these days, and it's something that everyone should share in, share alike, until we can work our way out of it.

But El Paso wants to establish a level, depress everything down to that level, and not touch anything below that. Now, Babe said that if we started at 33 Mcf as the marginal classification, that it would gradually work itself back up, but I don't know if it will or not, but anything that's classified as marginal under his proration scheme would be exempt from curtailment completely. Anything that would be classified as nonmarginal would be subject to curtailment, and the curtailed market demand is not being shared equally, then.

Q. Would you refer back to EXhibit Number One and explain the previous answer as it relates to what is depicted on that exhibit?

A. Well, Exhibit One was the bar graphs and they show that many of these wells have decreased in their productivity. Some of them are in a very late state of depletion. They're almost dead pools, you might say, and to be going in there and saying all these wells are nonmarginal is kind of ludicrous, in my opinion.

Q. What effect would this have on correlative rights?

A. Well, the impact on correlative rights is what I was mentioning awhile ago, that you're going to be curtailing wells that produce very little gas and next door neighbors that produce just a little bit less gas won't be curtailed, when you've got low marginal wells that would be classified as nonmarginal.

Q. Mr. Nutter, will you now refer to Hartman Exhibit Four, identify this, and explain what it shows?

A. Okay. Hartman Exhibit Number Four is the status of the proration units in May, 1982 proration schedule.

As we go through here, something similar to one that Mr. Kendrick had, we see that in 1982 in May the Atoka Penn had a total of 25.9 acreage factors. 24.89 of

those, or 96.14 percent, were marginal. One of them, or 3.86, was nonmarginal.

Blinebry had 92.73 factors, 81.73 were marginal, or 88 percent. 11 were nonmarginal, or 11.8 percent?

Buffalo Valley Penn had 32.11 factors, 30.11 were marginal, or 93.7 percent of the pool was classified marginal. There were 2 nonmarginal factors, representing 6 percent of the pool.

Burton Flats Morrow, 71.59 factors, 66.59, or 93.02 percent, were marginal. 5 factors, or 6.98 percent were nonmarginal.

Burton Flats Strawn had 7. It was 100 percent marginal.

South Carlsbad Morrow had 76.56 factors. 75.56 of those were marginal, or 98.69 percent. One well in there was nonmarginal, representing 1.31 percent of the pool.

Catclaw Draw Morrow had 15.21 factors, 12.84 of them were marginal, representing 84 percent. Two factors were nonmarginal, representing 15 percent.

Crosby Devonian had two that were 100 percent marginal.

Eumont had 439.66 factors. Of those 402.66, or 91.58 percent were marginal. 37 factors were nonmarginal. They represent 8 percent.

Indian Basin Morrow had 8.5 factors. They were 100 percent marginal.

Indian Basin Upper Penn had 54.60 factors, 22.78 of them were marginal, representing 41.7 percent. 31.8 factors were nonmarginal, representing 58 percent. So there is a pool where more -- in 1982, in May, more than half of them were nonmarginal, the only one on here.

Jalmat had 358 factors. Of these 337 were marginal, being 94.2 percent. 20.75 were nonmarginal, representing 5.79 percent.

Justis was 100 percent marginal.

Monument McKee was 100 percent marginal.

Tubb had 109.66 factors. 106 of these were marginal, representing 97 percent. 3.25 were nonmarginal, representing less than 3 percent.

Of the total there was 1324.95 prorated acreage factors in southeast New Mexico. 12.09 of these -- 1209 of these were marginal, representing 91 percent of the production, 91 percent of the units. 115 were nonmarginal, representing 8.69 percent.

Q. Mr. Nutter, will you now proceed to Exhibit Number Five and review this?

A. This is also in contradiction to a remark that Mr. Kendrick made. He said as the allowables go lower

more wells would become nonmarginal.

Here we have, the allowables have gone lower in 1983 than they were -- in May of 1983 than they were in May of 1982, so I'm going to show you that you have more marginal factors.

Okay, that's because the pools are declining. The pools are declining faster than the allowables are going down, really, is what it amounts to.

Atoka Penn, again is the same figures we had before, 24 out of 25.

Blinebry is now up to 92 percent marginal. Last year they were 88.

Buffalo Valley is 96.79 percent marginal. Last year they were 93.

Burton Flats Morrow is 92. Last year they were 93 marginal, so that one did take a change in the other direction.

Burton Flats Strawn was 100 percent marginal then. It is now.

South Carlsbad Morrow, the figures are exactly the same.

Catclaw Draw Morrow went from 84 percent marginal in 1982 to 100 percent marginal in 1983.

Crosby Devonian was marginal then. It is now.

Eumont went from 91.58 marginal to 94.92 marginal this year.

Indian Basin Upper Penn still the same. Now, here's our good pool, the Indian Basin Morrow, where last year we had 41.72 percent of the wells were marginal, and 58 percent were nonmarginal. It's reversed itself this year. We have 66.76 percent, or two out of the three wells would be marginal this year, and 33.24 percent are nonmarginal.

Jalmat went from 94 percent marginal to 98 percent marginal this year.

Justis and Monument McKee were 100 percent then; they are now.

And Tubb went from 97.04 percent marginal to 98.86 percent marginal, so there was slight change in the positive direction there.

However, last year we had 91.31 percent of our wells marginal. This year we have 95.03 percent of the proration units in southeast New Mexico are marginal in the May, 1983 schedule.

Q. And was your testimony that this is a result of the decline that the pools are experiencing?

A. It's a result of the decline in the pools, I think, as much as anything else.

Q. Okay, this decline affects the way the rules

actually work.

A. Right.

Q. And the rules may not work as they were originally intended to.

A. That's correct. They -- these pool rules were designed and put into operation when these were flush pools. 1954 is almost thirty years ago when these pool rules were adopted, and the pools have changed with the exception of a couple or three of these newer pools, and the formulas just don't work as well now as they once did.

Q. Mr. Nutter, will you now refer to what's been marked for identification as Exhibit Six and identify this and explain what it shows?

A. Okay, Exhibit -- Exhibit Six is a graphic depiction of what we had on Exhibit Five. We showed what the status of the proration units was as of May 1983 on Exhibit Five. Now here we've drawn a picture of what it is.

The heavy black line running horizontally across the middle of the page with a zero on it divides the marginal and the nonmarginal. Nonmarginal are on the top; marginal are on the bottom. So you can see that all of the pools there are below the 10 percent nonmarginal line, with the exception of the Indian Basin Upper Penn, and that got 33 percent nonmarginal wells in it.

Six of the pools, the black line stretches down to the 100 percent marginal line. The rest of them are reaching for it but haven't quite got there yet, but they're reaching for it.

Q. Will you now refer to Exhibit Number Seven?

A. Exhibit Number Seven is a comparison of the previous exhibit with El Paso's proposal. El Paso proposes to reclassify everything as nonmarginal. They would be making the change depicted by the heavy black lines on the top part of the exhibit.

Q. Will you now refer to Exhibit Number Eight?

A. Exhibit Number Eight is what Mr. Hartman is proposing, the reclassification of the wells as marginal.

The black lines on that exhibit indicate the changes that would be imposed by Mr. Hartman's proposal. We'd be changing five percent of the wells; El Paso would be changing 95 percent of the wells.

Q. What is Mr. Hartman seeking here today?

A. Doyle Hartman is seeking to establish that all of these wells in these prorated pools would be classified as marginal, rather than the nonmarginal that El Paso seeks.

To classify all wells as nonmarginal will enable the pipeline to establish by its nominations an allowable level so low that the bulk of the wells would remain non-

marginal. Although the application provides that provisions of Rule 16-A, which is the reclassification as marginal, would be reinstated after the September production is in, there would be two ways to prevent this from happening. One, keep the allowable so low that any well can make it, and two, ask for extension of time for suspension of the rules.

To me it's pretty obvious that case number one is what they have in mind, to keep the allowables extremely low, because they are also asking for suspension of the six times over produced shut-in rule, quote, to accommodate those wells which would be subject to shut-in as the result of lower than normal allowables. Unquote.

The reclassification of all wells as nonmarginal during times of depressed market demand imposes an unfair burden on all but the most mediocre wells. Rather than all the production sharing in the reduced takes, all wells are brought down to the lowest common denominator. I'll give you an example.

We'll take a 5-well pool. We'll say that current demand allowables and production are equal to 1000 Mcf per day. We've got five wells in that pool. Number one is nonmarginal. It makes 450 Mcf a day.

Number Two is marginal. It makes 250 Mcf per day.

Number Three is marginal with 140 Mcf per day.

Number Four is marginal with 128 Mcf per day.

And Number Five is marginal with 32 Mcf per day.

They all total up to 1000 Mcf per day. Assume El Paso's proposal is adopted and everything is classified as nonmarginal except that one well that wouldn't make 33 Mcf a day. Let's also assume that the market drops off to 50 percent, to 500 Mcf a day.

All right, numbers one, two, three, and four wells are all going to be nonmarginal now and they're all going to get an allowable of 117.

Number one well that used to make 450, takes a cut from 450 down to 117.

Number two, that used to make 250 cuts down to 117.

Number three, that used to make 140, cuts down to 117.

Number four, that used to make 128, cuts down to 117.

And number five, that made 32, still makes 32.

Number one lost 333 Mcf, or 74 percent of

its production.

Number two lost 133 Mcf, or 53 percent of its production.

Number three lost 23 Mcf, or 16 percent of its production.

Number four lost 11 Mcf, or 8.5 percent of its production.

Number five lost nothing. It stayed the same.

This reduction in takes is not ratable. Ratable means proportional and a proportional reduction in takes would have had each well sharing that 50 percent reduction in the market demand.

Under an across the board curtailment the good wells would have still lost the most gas, but it would not have lost more percentagewise than the other wells.

Also, these gas reservoirs are dynamic fluid bodies in a constant state of flux. The disproportionate reduction in takes from one well as compared to another can cause drainage and loss of reserves. A reservoir engineer will go into this in greater detail later.

It's for these reasons, in response to your last question, that Mr. Hartman is opposed to the El Paso application and proposes that all wells instead be classified

as marginal.

Q. Mr. Nutter, if Mr. Hartman's application was granted, in your opinion what impact would that have on correlative rights?

A. I think it would tend to protect correlative rights if it's implemented in the way we're going to suggest.

Q. And if his application is granted, would that afford equal access to the marketplace?

A. Yes, it would.

Q. Would you please refer to Exhibit Number Nine and explain what this is and what it shows?

A. All right. This shows -- here's a graphic depiction of what nominations have been doing. Nominations just haven't been going down in 1982. Look at Atoka Penn. Nominations, average monthly nominations from '77 through '82 have gone down quite a lot on an average annual basis, and in the first six months of 1983 are also plotted there.

Nominations in Blinebry have gone down.

Nominations in Buffalo Valley have not gone down. They've gone up and gone down again, but overall, they're fairly uniform.

Nominations in Burton Flats Morrow have gone down.

Nominations in Burton Flats Strawn have

gone down, except last year, for some reason, they seem to have gone up.

Nominations in South Carlsbad Morrow have gone down.

Nominations in Catclaw Draw have fluctuated up and down.

Nominations have gone down steadily in Crosby Devonian.

Nominations have gone down in Eumont.

Nominations have declined in Indian Basin Morrow.

Nominations in Indian Basin Upper Penn just fluctuate up and down.

And nominations have gone down in Jalmat.

They've gone down in Justis.

They've gone down in Monument McKee.

And they've gone down in Tubb.

And proration -- as -- while our nominations have been going down our numbers of marginal wells been going up. Now that's contrary to the way the proration is supposed to work. So there's obviously something wrong with it somewhere.

Q. Will you please now turn to Exhibit Number Ten and explain what this is and what it shows?

A. Okay. Exhibit Number Ten is a tabulation of El Paso nominations for the months of January through July of 1983. Mr. Kendrick had those available to us this morning. I would point out the percent changes, however. From January to February went down 10.79 percent; February to March, that's a -36.2 percent; March to April was -5.9 percent; and from April to May was a -12.3 percent; and then in June it was a whopping 56.14 percent decrease.

Q. And, Mr. Nutter, when are these nominations required to be filed?

A. Those nominations are required to be filed by the first day of the month preceding the month for which the nominations are being submitted.

For example, July nominations are due by June the 1st, and those June nominations would have been due by May the 1st.

Q. Will you now refer to Exhibit Number Eleven and explain what this is and what it shows?

A. Yes, Exhibit Eleven is a tabulation of some of the OCD staff's nominations -- the OCD staff's tabulation of nominations as they come in, and it just shows what the nominations were. If we look at the last page there, trying to summarize the nominations, total for all southeast gas pools for April was 8-billion cubic feet; for May it was 7-

billion; for June it was 6-billion.

From May -- from April to May that was a decline of 878,895 Mcf, or 10.7 percent for all pools.

For June they went down 1,323,572 Mcf, or 18.04 percent.

Now if we take El Paso only, they went down from 24 -- from 2.4-million in April to 2.170-million in May, a decline of 302,000, or 12.23 percent. They went down 1,218,186, or 56.14 percent from May to June.

Now if we look at everybody else except El Paso in southeast New Mexico, we'll see that they went down by 576,000 in April to May, or 10.04 percent, and from May to June everybody else went down 104,000, or 2.2 percent -- or 2.0 percent compared to El Paso's 56 percent.

So El Paso obviously has more of a problem than the other pipelines, if their nominations are going down by 56 percent compared to 2 percent.

Q. Will you now refer to Exhibit Number Twelve and review this?

A. Yes. Exhibit Number Twelve is an analysis when I had the June nominations available. I decided to go through and see what effect the El Paso proposal would have on the pool allowables. So, first of all, I decided what they're going to give a well as a marginal well as 33 Mcf a

day.

So I went through the proration schedule and got my December, November, and January production by well and I wrote down the acreage factor for each well that made 1023 Mcf or less than 1023 Mcf. Now, that's not quite right under Babe's conditions. He said a million a month, which he broke down to 33, but I multiplied 33 by 31 days and I got 1023 Mcf.

So I put down wells on here that wouldn't make 1023 in the month of December. This is where I started because December waa an almost normal month. Production jumped up unexpectedly high in the month of December, and I figured that would be a good starting point because if a well didn't produce in December it had a chance to, and I wondered why.

But anyway, I tabulated all the wells and their acreage factors that did not produce 1023 Mcf in December, and I said, well, okay, so it didn't make it in December, I wondered if it made it in November.

So I went back and looked up the November production for those same wells and I tabulated that.

Then I went to January's production and I tabulated the production the wells had in January, and I decided what their best month was.

Now, if I found a well,which we'll come to on some other sheets, that had zero production in December, November, and January, I said, well, maybe for some reason it was shut in those three months, but we'll give it two more months. So I went to the February and the March schedules of production, also, looking for wells that had been listed as zeros for those first three months and I picked them up and I put them in the list if they had made gas.

What I'm trying to do is find all the marginal wells that can produce under El Paso's proposal, and on the Atoka Penn I found that there were 5.75 marginal acreage factors. Their best month's production of the three months added up to 2908.

So I had 24.89 marginal acreage factors, one nonmarginal acreage factor, for a total of 25.89. I subtracted any wells that didn't make any production at all from the proration schedule for the five month period, November through March. I found one in there. So that left me with 24.89 active wells in the pool. I subtracted those marginal acreage factors derived from above, 5.75, and I came out with 19.14 nonmarginal factors.

Then I took the June nominations and I took the raw nominations without adjustment whatsoever. I reserved the 2908 Mcf for those marginal wells at the top of the page,

and I came up with a total of 164 -- took the 2908 off the nominations, and I came up with a total of 164,212 nonmarginal allocations, which I divided by those 19.14 factors and I came up with 8,579 Mcf for the month, divided by 30 days in June, and each well in Atoka Penn under June's nominations with El Paso's scheme in effect is going to get an allowable of 285.98 Mcf per day.

What are those, 10,000-foot wells, 9,000-foot?

Okay, then I went to Blinebry, did the same thing. We had 12.74 acreage factors that couldn't make the allowable. They had a total best month production of 8757. There were 84.98 factors, take off those nonmarginal acreage factors of 7.25, you get units here of -- or add on -- add them on, you get a total units of 92.23; take off the marginal units that had zero production for the five month period, we've got 88 active wells, less the marginal factors at 12.74, we have 75.74 remaining factors.

Taking the nominations for June, substracting the marginal allowable reserves, we have 535,000 Mcf for the nonmarginal wells, divided by the acreage factors, give those wells 7000 a month for 235 Mcf per day.

We go to Buffalo Valley, same thing happens. Going through the whole procedure you find out those Buffalo

Valley Pennsylvanian wells would get 397 Mcf per day.

Burton Flats Morrow wells would get 242 Mcf per day.

Burton Flats Strawn wells would get 308 Mcf per day.

South Carlsbad Morrow wells would drop to 204 Mcf per day.

Catclaw Draw Morrow wells really get an allowable, 945 Mcf per day.

Crosby Devonian, 78.

Eumont would get 103 Mcf per day, and it takes a lot of wells to tabulate all those, but right there on page -- sheet two of Exhibit Twelve-9 there, you'll see up there about ten wells down from the top, there's a well that had zero production in December, November, and January. It had 203 either in February or March, so I did assign it an allowable. It can produce.

Then we go on to Indian Basin Morrow, those wells would get a million a day.

Indian Basin Upper Penn, they'll get 1500 a day.

Jalmat wells, acreage factor of 1, is going to get 38 Mcf a day.

Justis Glorieta will get 38 Mcf a day.

Monument McKee, 340.

The Tubb will come up with 91.5 Mcf per day.

Q. Mr. Nutter, what are nominations actually supposed to reflect?

A. The rule says that the purchaser each month shall nominate the amount of gas that he anticipates actually expecting to produce or purchase in the following month. It is a good faith effort on the part of the purchaser to nominate what he expects to be using, but not -- it shouldn't be taking into account any juggling the balancing formula might do with his nominations, although I have known of this to happen.

Q. Now the term marginal allowable has come up. What does this term mean?

A. Order No. 1670 defines marginal allowable, and says, a well's production last month is going to be its allowable for production next month. Actually, marginal allowable is a misnomer. Allowable is not assigned to marginal wells.

For example, if you have a well that didn't produce anything last month, it goes in with a zero production and a zero allowable for next month. But that doesn't mean it has to produce zero. It can produce.

So marginal allowable is a misnomer. It's

a reservation of total pool allocation, and I think that ought to be clarified and if any order is entered favorable to this application, I think that it should be made clear that marginal allowable is not marginal allowable. It's a reservation of production from the total pool.

Q. And how would this relate to take or pay --

A. Well, the reason I'm trying to make this clear is because there has been some contention that take-or-pay contracts are nullified if a producer -- if a purchaser takes the allowable, because you're calling for marginal production to be the allowable.

You can see where if he took -- if he had 100 this month allowable, but he only took 90, and then next month he had an allowable based on that 90 of production this month, but he only took 80, the next month he had an allowable of 80 based on this month's production, and then 70, you can see where pretty soon your allowable would get down to zero, and he has not failed to take the allowable, then; never failed to take the allowable.

Q. So for this reason --

A. And your take-or-pay would go out of the window.

Q. So you think that this is the reason for

the definition requirement?

A. I think so. I think you need to specify that marginal production shown in that book is not allowable, per se.

Q. Now, will the proposal, or any proposal, before this body equalize the takes between pipelines?

A. No. No. This proposal, El Paso's proposal, no proposal that I know of, can equalize takes between pipelines. Pipelines have their demands; they have to take the gas they need to fill their lines and supply their customers, and the only way that takes between pipelines can be equalized is by interchange of gas between pipelines and that's beyond the jurisdiction of this Commission to interchange gas between pipelines.

Q. Now were Exhibits One through Twelve prepared by you or under your direction and supervision?

A. With the exception of Exhibit Number Eleven, which is the Commission's tabulation of nominations. That was not prepared by me, but those little calculations on the bottom of page three were prepared by me.

The computer printouts, which are Exhibit Number Two, I believe, were not prepared by me.

Otherwise they were.

Q. Can you testify to their accuracy?

A. Yes, I believe they're accurate.

MR. CARR: Mr. Chairman, at this time we would offer Hartman Exhibits One through Twelve into evidence.

MR. RAMEY: Exhibits One through Twelve will be admitted.

MR. CARR: Mr. Ramey, we've attempted at this time to present testimony concerning what the problem is and how the problem affects producers in the prorated pools in southeast New Mexico.

With your permission at this time, I would interrupt my examination of Mr. Nutter and call Mr. Aycock, who can testiy as to how this would impact on individual producers, and then reserve the right to call -- recall Mr. Nutter later for just a very brief closing testimony.

I'm perfectly willing to tender him for cross examination at this time.

What I'm saying, I guess, is I'd like to reserve the right to recall him.

MR. RAMEY: Mr. Nance, Mr. Kellahin, what is your opinion of that request?

MR. NANCE: That's fine with El Paso.

MR. KELLAHIN: I have no objection

at this point.

MR. CARR: At this time I would pass the witness for cross examination.

MR. RAMEY: Any questions? Mr. Nance? Would you like to wait awhile, Mr. Nance?

MR. NANCE: If we could.

MR. RAMEY: Okay, Mr. Lopez?

MR. LOPEZ: Mr. Chairman, my name is Owen Lopez with the Hinkle Law Firm, appearing on behalf of Mesa Petroleum and Bass Enterprises.

CROSS EXAMINATION

BY MR. LOPEZ:

Q. Mr. Nutter, would you explain, or do you have any explanation as to why the Indian Basin Upper Penn Pool seems to be out of sync with the other prorated pools in southeast New Mexico?

A. Well, for one thing, El Paso is not a purchaser in that pool. I can name you the pools that appear to be out of sync, and make remarks.

Buffalo Valley is a pool that has gone up and down. I believe El Paso does buy in that. Let me check my exhibits here.

El Paso -- Buffalo Valley is out of sync.

El Paso buys in there. They buy about 8 percent of the gas, that's bought.

Catclaw Draw is another pool that has its ups and downs with its fluctuating allowables. El Paso buys in that pool. They buy 4 percent.

Indian Basin Upper Penn fluctuates. They don't buy in there at all.

Those are the only ones that really fluctuate and appear to be out of sync. So I guess what you could say is the pools that El Paso is a major purchaser in are -- are constant, but they're constantly declining.

Q. Is the reason that the out of balance of marginal versus nonmarginal wells due to the fact that their nominations are not being low enough?

A. Well, the nominations are going lower all the time. I think the pools are declining and maybe the nominations are not declining as fast as the pools are declining is what the problem is.

Q. Do you have any knowledge of the comparison of production in southeast New Mexico from nonprorated pools as opposed to prorated pools?

A. No, I don't have a comparison of production. I'll give you a comparison of wells, is all.

In December of 1982 there were 1259 prorated

gas wells listed in the Commission's fiscal report, and there were 1980 nonprorated gas wells. 1259 compared to 1980.

But I don't have the production from those wells, I'm sorry.

Q. Do you know how El Paso takes from non-prorated pools, on what basis?

A. No, I sure don't. I would imagine it would be under contract provisions. Usually contract provisions say you'll take some percentage of reserves, or based on reserves, or -- I don't know. I really don't know.

MR. LOPEZ: I have no further questions.

MR. RAMEY: Mr. Kellahin.

CROSS EXAMINATION

BY MR. KELLAHIN:

Q. Thank you, Mr. Chairman.

Mr. Nutter, let's turn to Mr. Hartman's Exhibit Number Twelve, if you please.

A. Sure.

Q. I'm not sure I've understood what you've done here, Mr. Nutter. Is Exhibit Twelve your attempt to demonstrate what will happen to an individual well's allowable if El Paso's proposal is adopted?

A. It's what would happen to a top unit allowable, or a nonmarginal factor of one.

Q. The bottom line on each of the pages for the well pools will show the allowable on a daily basis for a nonmarginal well.

A. For a nonmarginal factor of one, right.

Q. I see. What happens if -- to the allowables for the nonmarginal wells if Mr. Hartman's proposal would be granted?

A. There wouldn't be any nonmarginal wells.

Q. All right, sir, what is the allowable then for those wells? How do I get that?

A. Well, we're going to cover that in my subsequent testimony, Mr. Kellahin, the way this marginal reclassification scheme would be implemented.

Q. Have you run through a similar set of tabulations to show what would happen under Mr. Hartman's proposal, so I can compare it directly with what happens under the El Paso proposal?

A. No, because I don't know what -- what it will depend on is the percent cut each month.

What we're proposing to do is arrive at a base line for production, and that base line would be used in the future as a ceiling rate for production. I don't want

to get into it now, but it would be used as a ceiling and any decrease in nominations would be applied to that base line and the base line would be lowered; if nominations went back up, the base line would come up with the nominations.

So you'd have a ceiling there above which wells should not produce.

Q. Is Mr. Hartman's proposal the limiting the acreage factor that's shown on Exhibit Number --

A. No, the acreage factor is going to be applicable in the implementation.

Q. You have some way to implement the --

A. It will be applicable, it will apply to those ceilings, yes, sir.

Q. Is the effect of Mr. Hartman's proposal such that we would be basing the allowable strictly on some type of deliverability factor?

A. It's going -- no. No. It's going to be based -- it's going -- it's going to be based on that ceiling and the pipelines will have to produce under that ceiling. They have to produce within that ceiling, I should say.

Q. Will deliverability become a factor under the Hartman formula?

A. Deliverability would be a factor to this extent, Mr. Kellahin; that if the -- we'll say we got the

base line as production levels and the pipeline nominations indicate that the new base line should be 80 percent of that; then theoretically every well should be cut 80 percent, or 20 percent, to bring it to that 80 percent level.

Q. You're going to tell us later, I assume, 80 percent of what and how --

A. It's 80 percent of the base line.

Q. The factors are all set out in a tabulation we can look at, I assume.

A. Yes, sir.

Q. Is this different than what's happened in the northwest part of New Mexico in prorationing there where there's a combination of an acreage factor and deliverability factor?

A. It would be different to that extent. It would require -- you're not -- you're not classifying wells as nonmarginal, like they did up there. They've got wells that can make 30 Mcf, or 35 Mcf classified as nonmarginal up there, and these would all be marginal. 95 percent of the prorated wells in New Mexico -- southeast New Mexico right now are nonmarginal and you're not changing the status but of only five percent of the wells, and right now marginal allowables are on, as you said, a deliverability basis, marginal wells are, and so they would continue to be on a deliver-

ability basis to that extent; however, this ceiling that I'm talking about relates to a base line, which would be established on prior production and allowables and it would fluctuate, the ceiling would fluctuate with nominations, and then actually what it would be, it would be based on nominations, nominations as a preliminary ceiling each month, and then there would be a retroactive production ceiling that would be adjusted for production.

But it's not like the one in northwest New Mexico because it has deliverability and this does not have deliverability in the formula; the market would enable the pipeline to take a percent of the base line allowable.

Q. All right. What did -- what are the prorated pools in southeastern New Mexico in which Mr. Hartman has an interest?

A. I don't know what pools he's got an interest in. I know he's got interest in Eumont and Jalmat. He may have interest in others, I do not know.

MR. KELLAHIN: I have nothing further then.

MR. RAMEY: Mr. Nance?

MR. NANCE: Thank you, Mr. Chairman.

CROSS EXAMINATION

BY MR. NANCE:

Q. Mr. Nutter, would you explain again why you feel that the allowable for nonmarginal wells have decreased between 1980 and 1983?

A. The allowables for nonmarginal wells?

Well, I believe one of the factors is the nominations have gone down, and the allowables have gone down, the producing capabilities of the wells have gone down, everything has been on a downward slope in southeast New Mexico with very few exceptions.

Q. I think you said, close to the end of your testimony, you said -- indicated that you felt a more proper designation of the term marginal allowable would be a reservation for total pool production.

A. Or the total allocation, or something, yes.

Q. Okay. That reflects, of course, the idea that marginal well production is a deduction from the nomination figure in determining an allowable for the pool, is that correct?

A. It could just be called production without calling it an allowable. I don't know how you would phrase it. Semantics are unimportant; they can be worked out. It's the scheme that's difficult.

Q. The point I'm trying to make here is that the fact that marginal productio, marginal well production is deducted in determining pool allowables --

A. It's deducted in determining what's left of pool allowable today to be reserved to nonmarginal wells.

Q. Is it therefor possible that the reduction in pool allowable for nonmarginal wells has occurred because there is a constantly increasing number of marginal wells in a pool?

A. Yes. If nominations are constant and marginal production is going up, marginal production is using a larger portion of the nonmarginal allowable and the nonmarginal top allowable will go down; however, I also showed that nominations have gone down.

Exhibit Nine shows that nominations have gone down. So it's not just -- it's not just what you're alluding to, it's also a decrease in nominations.

Q. The allowable itself, though, is it not ultimately calculated on the basis of actual production because it is ultimately adjusted on the basis of previous month's production?

A. It is --

Q. Rather than being strictly on the basis of

nominations?

A. It is if you don't mess with the nominations; however, we have had to mess with the nominations for the last -- I say "we" -- we used to and he does now.

But the nominations -- let's put it this way. The nominations have been messed with to avoid negative allowables and avoid telling a producer he owes the pool gas when he drills a new well. That was embarrassing.

Q. Because the marginal production isn't adjusting to determination of allowables, and would it not stand to reason that if all wells were classified as nonmarginal there would be no deduction for marginal well production, and that perhaps a more accurate allowable for all the wells in a pool could be determined?

Q. Well, I don't know what you mean by more accurate allowable for all wells. It would be a uniformly low number across the pool, if that's what you're calling an accurate -- more accurate allowable. It would be a uniformly low number straight across the pool and every well would have that number beside it.

But don't forget, when you're making them all nonmarginal you're dividing up the pot among all those nonmarginal units, and that's what Exhibit Twelve did. It deducted a handful of marginal wells that didn't make 33, and

then it divided the pot among all the remaining nonmarginal units, and that's where you came up with allowables of 38 and 101, and things like that, per day.

Q. And those were average allowables, then, for the remaining nonmarginal wells.

A. Those are average allowables.

Q. Now if, in general terms, if a pool is capable of producing more gas than there is demand for that gas, should the wells in that pool be prorated?

A. They should be curtailed because we shouldn't produce gas which can't be sold. So they should be curtailed and, actually, what we're proposing is these wells would be classified as marginal. It would put the monkey on the pipeline's back where it belongs, because this proration is obviously not working right, and the pipeline has been ratably reducing its takes across the board for the last twelve or thirteen months, according to Mr. Kendrick.

And we feel that the pipeline should continue to do that to make its honest effort to reduce those takes ratably among all wells, and if the market goes down 10 percent one month, to reduce all the production 10 percent. If the market goes down 20 percent, to reduce all the wells 20 percent. And we feel that the pipeline has the information to do this. They have the facilities to do it, and for the

Commission to assign one number, a uniformly low number across the pool and say this is the maximum, is not a ratable reduction in the takes from normal times, normal market demand conditions. It's not a ratable reduction, and we're looking for a means to apply a ratable reduction that will be equitable to all the parties. That's all we're trying to do.

Q. If you're proposing a means of a more ratable reduction and the means of accomplishing that more ratable reduction is in effect changing the classification of only five percent of the wells in the field, is it not possible that the problem will simply be compounded because of the -- of the lack of substantial changes in the (inaudible)?

A. We're not making as substantial a change as you're making, Mr. Nance. You're changing 95 percent of the wells; we're changing 5 percent.

Q. Is that because we perhaps see it as a bigger problem than you do?

A. You're making a bigger problem than I'm making.

Q. I don't mean to be argumentative at all. What I'm -- what I'm suggesting is that if this is a problem, is it not more reasonable to have a solution that is a significant change in the way things would be done?

A. Well, I think it's apparent that some signi-

ficant change has to be made, one way or the other.

Q. With respect to your exhibit -- oh, I'm sorry, you did not submit an exhibit -- you were giving an example of cutbacks where a total of five wells had varying levels of production --

A. Right.

Q. -- and nominations are a total, say, of 1000 --

A. Yes, that was a situation where demand, allowables, and production all equalled 1000 a day, and then the market dropped to 50, 50 percent, down to 500 a day. Do you want those numbers back?

Q. No, sir, I believe we have those numbers available, but what my question is suggesting is that the wells that were the best producing wells were the ones which were going to suffer not only the most cutback in terms of absolute volume of cutback, but also the biggest percentage of cutback.

A. That's correct.

Q. Is that correct?

A. That's correct.

Q. Are you familiar with the ratable take rules for oil wells in the State of New Mexico?

A. Yes, I am.

Q. Would it not apply exactly as your example suggested?

A. No, the statutes are different for gas wells and oil wells.

Q. Is proration different?

A. It's similar. There's -- there's quite a lot of difference in the proration, yes. Yeah, quite a lot of difference.

Q. On that specific example, do you know if the biggest oil well in the pool would be cut back to the top -- top allowable in the pool?

A. I don't know if we have any big oil wells any more, but there -- there are differences now. We're almost in a situation right now that amounts to pipeline proration. As I mentioned, the nominations for the month of June where everybody else in southeast New Mexico went down by two percent, El Paso's went down by 56 percent. This sounds like a pipeline problem, and when we used to have pipeline prorationing back in the old days, you're talking about oil now, when we had pipeline prorationing and one of the oil purchasers suddenly, because of a refinery fire, or because it brought in 49 tankerfuls of oil that month and unloaded on the Gulf Coast or the east coast, and said we can't buy your oil out in New Mexico this month, we're going to have to reduce it,

and we told them at that time, all right, your market is off 30 percent, you reduce all your takes 30 percent across the board.

And that's pipeline prorationing of oil, and that's what we've almost gotten into right here right now, I think. And so I think it's up to that pipeline to reduce its takes.

Q. And Mr. Hartman's proposal, then, is one that will make pipeline proration a complete reality, is that correct?

A. It will be as complete a reality as we've got right now, because there's no way we can enforce ratable takes between pipelines, but it would be a ratable, equitable reduction of takes from all the wells connected to that pipeline, just like the old pipeline prorationings were.

You want to reduce the takes ratably among the wells that are connected to that pipeline, and hope that there's not a whole lot of disparity between the takes in that pipeline and some other pipeline.

But under the regular system we've got right now what happens, you give the blessing to the unratable takes. The well that gets overproduced from the pipeline with the high demand accumulates a lot of overproduction, as Mr. Kendrick pointed out. The well that's connected to the

low demand pipeline has its production build up, its under-production, it eventually gets cancelled, it's taken away from it and given to the other pipeline. You've not only hurt him, you've added insult to the injury, by giving his gas to the other guy.

It's always been a problem. We've always felt like gas prorationing was a problem that had certain inequities built right into it, but there's nothing you can do, because you can't produce the stuff and store it. That's the main problem with gas.

Q. I just have one final question on a comment that you had made, about the impact on take-or-pay provisions in purchase contracts, and the question is whether you feel that the Commission has jurisdiction to address those types of provisions in purchase contracts?

A. I don't think he asked me that. He asked me if we had jurisdiction over pipeline exchanges, but no, they don't have any jurisdiction over take-or-pay contracts, no.

MR. NANCE: Thank you, that's all.

A. But they do provide this. The Commission has been used sometimes as a shield between the pipeline and producers, to protect the pipeline from any attack by a gas producer on take-or-pay. They've used the Commission's allow-

able "skirt" to hide behind.

Q. Mr. Nutter, I appreciate your answers. That's all the questions we have, thank you.

MR. RAMEY: Are there any other questions of Mr. Nutter?

He may be excused at this time. And we're going to take about a ten minute recess.

(Thereupon a recess was taken.)

MR. RAMEY: The hearing will come to order. Please proceed, Mr. Carr.

WILLIAM P. AYCOCK,

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

DIRECT EXAMINATION

BY MR. CARR:

Q. Will you please state your full name?

A. William P. Aycock.

Q. By whom are you employed?

A. Doyle Hartman.

Q. In what capacity?

A. As a consulting engineer.

Q. Have you previously appeared before this Commission and had your credentials as a reservoir engineer accepted and made a matter of record?

A. For approximately thirteen years, Mr. Carr, yes, sir.

Q. And in your career as a reservoir engineer have you participated in any professional schools on reservoir engineering?

A. Yes, in numerous schools.

Q. Have you taught any of those?

A. Yes.

Q. Are you familiar with the application filed today on behalf of El Paso Natural Gas Company?

A. I am.

Q. Are you familiar with the application filed on behalf of Mr. Hartman?

A. I am.

MR. CARR: We tender Mr. Aycock as an expert witness for reservoir engineering.

MR. RAMEY: So qualified.

Q. Would you please refer, Mr. Aycock, to what has been marked for identification as Hartman Exhibit Thirteen,

identify this, and explain what it is and what it shows?

A. Hartman Exhibit Thirteen is a west/east cross section across a portion of Section 6, Township 25 South, Range 37 East, in the Jalmat Pool in Lea County, New Mexico.

In attempting to answer the technical questions that arrive from the application of El Paso proposal to the Jalmat Pool in which Mr. Hartman is the single largest operator of wells with above average capacity, and is the single largest owner of the proration units which have a top allowable at this time, I was forced to seek an example which would illustrate it.

I do not necessarily claim that this example, or any other, is typical of anything except itself. It is an example and it will serve to illustrate points that are consequential, both with regards to the application of El Paso and the application of Mr. Hartman.

This west/east cross section includes three Jalmat producting wells. On the west side at the lefthand side is the Doyle Hartman Federal Jalmat Communitized No. 1 Well, which is located 590 feet from the north line and 660 feet from the west line in Unit D of Section 6.

As you will notice, this well was spudded on the 14th of February, 1980, and completed on the 22nd of

March, 1980, with a TD of 3300 feet and a plugged back TD of 3285. It has 5-1/2 inch casing set at 3300 feet with 550 sacks, and has the Yates-Seven Rivers interval perforated from 2778 to 3267 feet with 18 shots that are shown in red on the portion of the log that is at the lefthand portion of the cross-section.

The cumulative production, as indicated at the bottom of this well, as of February, 1983, is 338.8 MMCF, and the 1982 average production was 326 Mcf per day.

As you will notice, if you will refer to the index map, this well is on a 120-acre proration unit.

The second well to the left is the Getty Oil Company J. W. Sherrell No. 10 Well, which is located 660 feet from the north and 2000 feet from the west line in Unit C. This well was spudded on the 9th of March, 1980, and completed on the 21st of March, 1980, with a TD of 3170 and a plugged back TD of 3119 feet. It has 5-1/2 inch casing set at 3140 feet, cemented with 800 sacks, and it is perforated from 2786 to 2979 feet with 27 shots in the Yates portion of the Jalmat Pool, as is shown in red on the log insert.

The production for March of 1983 was 88 MMCF and as of March of 1983 it produced 10 Mcf per day.

The well on the righthand -- by the way, you will notice that -- that that well is on a 160-acre pro-

ration unit, which is comprised of two eighties that are arranged in an "L" shape configuration.

The righthand well on A-A' is the ARCO Oil and Gas Company Wells "WN" No. 1, which is located 1980 feet from the north and 1980 from the east line of Section 6 in Unit G. This well was spudded on the 19th of June, 1939, and completed on the 19th of October, 1939. It is -- it has 7-inch casing set at 3381 feet with 300 sacks and is perforated from 2830 feet to 3150 feet with 177 shots in both the Yates and Seven Rivers portion of the Jalmat Pool.

As of March of 1983 this well had a cumulative production of 10,551.1 MMCF, and in August of 1980 -- I mean, pardon me, average production for March, 1983, was 253 Mcf per day.

Q. Mr. Aycock, what does this exhibit show?

A. The exhibit shows that all of the wells are completed in essentially comparable portions of the Jalmat Pool interval, and by the way, I failed to mention that the ARCO "WN" No. 1 has a 160-acre normal proration unit, and although the proration units assigned are 120, 160, and 160, if you'll look at the index map you'll see that the two lefthand wells are essentially on 40-acre spacing, and the two righthand wells are essentially on 80-acre spacing, as

far as the inner well distance is concerned.

Q. Will you now refer to Hartman Exhibit Number Fourteen?

A. Hartman Exhibit Number Fourteen is a northwest/southeast cross section through -- thatincludes wells located on the proration units that currently include the active wells on the previous exhibit, Number Thirteen, that are now plugged and abandoned for purposes of further illustration and information, and tie into the ARCO "WN" No. 1, so that there can be no question that the -- once again, that they're completed in roughly comparable portions of the Jalmat Pool interval.

The well on the far left was originally drilled by Texaco and was called the Fristoe No. 2. It is now operated by Union Texas and is the Langlie Jal Unit No. 301.

During the time that this well was -- it was completed in the Jalmat, it was spudded on the 27th of May, 1948, and completed on the 21st of November of 1948, with 7-inch casing set at 3505 feet and cemented with 800 sacks. It was perforated from 2760 to 2960 feet with 600 shots in the Yates portion of the Jalmat Pool interval only.

It has -- I will document this further in a subsequent exhibit, but it has cumulative production of appro-

ximately 2.3-billion cubic feet at the time that the Jalmat was plugged and abandoned.

The second well is the Getty Oil Company, which was originally Skelly Oil Company, of course, Sherrell No. 5, located 990 from the south and 2172 from the west line in Unit N of Section 31, 24 South, 37 East.

It was spudded on the 15th of August, 1949, and completed on the 9th of September, 1949, with a TD of 3350 and a plugged back TD of 3350, with 7-inch casing set at 2720 feet and cemented with 300 sacks.

It has open hole from 2720 feet to 3350 feet that includes all of the Yates and Seven Rivers interval.

The final Jalmat cumulative at the time the Jalmat interval was plugged and abandoned was slightly over 4-billion cubic feet.

The third well from the left is the -- now the Union Texas Petroleum Langlie Jal Unit No. 33. It was originally the Skelly Oil Company Sherrell No. 3. It is located 330 feet from the north and 1650 feet from the east lines of Section 6. It was spudded on the 24th of January, 1940, completed on 6th of March, 1940, with a TD of 3490 and a plugged back TD of 3490, with 7-inch casing set at 3401 feet with 250 sacks.

It had an open hole from 3401 to 3490 in the

Seven Rivers-Queen, originally, and the final Jalmat cumulative for this well was just slightly over 1.8 Bcf at the time it was plugged and abandoned.

It is now a water injection well in the Langlie Jal Unit.

The remaining well is the ARCO "WN" No. 1, which I previously reviewed in detail on Exhibit Number Thirteen, which is included here to tie the whole business together for reasons that will shortly become apparent.

Q. Both of these cross sections are in an area where there is extensive development.

A. Extensive development, stretching over a period of over forty years, yes, sir.

Q. Will you now refer to Exhibit Number Fifteen?

A. Hartman Exhibit Number Fifteen is a graph of shut-in wellhead pressure as a function of time for all of the wells that are located on the three prorations units that include the three wells which were reviewed in detail on Hartman Exhibit Number Thirteen; that is, the ARCO "WN" No. 1, the Hartman Federal Jalmat No. 1, and the Getty Sherrell No. 10.

This is the raw data derived from the New Mexico Engineering Committee's reports. We took it back to 1960 in an effort to show -- they're indicated, each well is

indicated there. The upper curve is the Getty Sherrell No. 5. The next curve down is the Getty Sherrell No. 3. The third curve from the top is the Texaco Fristoe No. 2, and the bottom curve near the lefthand side of the graph is the ARCO "WN" No. 1; if you will move over towards the righthand side of the curve you'll notice that there are two points of pressure for the Doyle Hartman Federal Jalmat No. 1 and for the Getty Sherrell No. 10.

The purpose in showing this information is to establish the fact that is inter-well drainage for this example.

As you will note, if you will look at the level of pressures on the curves, all of the wells had a final indicated shut-in pressure in the 1971-72 interval of from 200 to 300 psi, except the Texaco Fristoe No. 2. It is my opinion that the pressure point reported for the Texaco Fristoe No. 2 for the years of 1967, 1968, 1969, and 1970 are probably unrealistically low and '71 would be unrealistically low as well, probably because there was fluid standing in the hole at the time pressures were observed, so the pressures are extraordinarily low.

Of course, the well could also not have been shut in long enough to reach any approximation of its stabilized wellhead pressure so that the low pressure might be ex-

plained in that manner.

In any event, you can see that there is -- that there was a substantial pressure -- the pressure difference was about 100 psi at the surface at that period of time, and that during 1973 through 1979 there was no production from this area, and when the Hartman Federal Jalmat No. 1 and the Getty Sherrell No. 10 Wells were completed, the pressures that were indicated by those wells and reported to the New Mexico Engineering Committee were within approximately 30 psi of the pressures reported by ARCO during that same period of time for their "WN" No. 1, which had continued to produce from what is ostensibly a common source of supply, for seven years without any immediate competition in the area.

The data -- you will notice that the slope of the pressure/time curve for the ARCO well is rather steep near the lefthand side. It flatten progressively as you approach the seventies and maintains approximately a constant but much lower slope of decline as a function of time from about 1972 on.

The data from which this graph was derived is documented on the next portion, the next page of Exhibit Fifteen, where all of these pressures by years, their psia, and the month and day of -- they were observed and reported to the Commission -- the New Mexico Engineering Committee are

so indicated.

If you'll check them you'll see that it's just a tabular presentation of the same data that's on the graph.

Further attached are tabulations of average monthly production for the years 1980 through '82, with some monthly production for the three wells that still occupy the proration unit; that is, the Getty Sherrell 10, the Hartman Federal Jalmat 1, and the ARCO "WN" No. 1.

And you can notice the extreme dropoff in productive rate of the Getty Sherrell No. 10. You will see that there's a P/z curve attached, which shows -- which apparently is somewhat anomalous. It shows very little drop; however, with a low capacity, presumably, very low permeability well of this type, that's not too unexpected.

The next one is the Hartman Federal Jalmat No. 1 where you can see there's been relatively insignificant fluctuation in production since it came on the line. In fact, if you will study the history of the well, you will find that those fluctuations are caused by balancing the allowable that the well has on its 120-acre proration unit.

Behind that is a P -- no, there is not P/z curve, I beg your pardon, not here for this one because there are only two points on it.

so indicated.

If you'll check them you'll see that it's just a tabular presentation of the same data that's on the graph.

Further attached are tabulations of average monthly production for the years 1980 through '82, with some monthly production for the three wells that still occupy the proration unit; that is, the Getty Sherrell 10, the Hartman Federal Jalmat 1, and the ARCO "WN" No. 1.

And you can notice the extreme dropoff in productive rate of the Getty Sherrell No. 10. You will see that there's a P/z curve attached, which shows -- which apparently is somewhat anomalous. It shows very little drop; however, with a low capacity, presumably, very low permeability well of this type, that's not too unexpected.

The next one is the Hartman Federal Jalmat No. 1 where you can see there's been relatively insignificant fluctuation in production since it came on the line. In fact, if you will study the history of the well, you will find that those fluctuations are caused by balancing the allowable that the well has on its 120-acre proration unit.

Behind that is a P -- no, there is not P/z curve, I beg your pardon, not here for this one because there are only two points on it.

Behind that is the ARCO Wells "WN" No. 1 with a tabulation of production and you will notice that up until -- through 1980 it was proceeding, the production was declining at a very low and quite regular rate of decline. 1981 was down somewhat and it was shut in during part of the year of 1982, and then the first three months of 1983 the production was back up on this well.

If you will look at the attached P/z curve, you will notice that the flattening of the wellhead pressure as a function of time curve, that is the first portion of this exhibit, occurs in about 1977, and in 1971 or '72 was when the other wells produced at the last -- their last time.

So '71 is actually the pivot point here, you'll notice on this curve. The P/z curve took a decided change in slope after the time that the Fristoe and the Sherrell 3 and the Sherrell 5 were abandoned. This, while there is obviously in reservoir engineering, as those of you who have practiced it are concerned, there is no way to ever offer any conclusive proof of anything, it always has to be inferential proof. That's about as good a case as I've ever seen of documenting that there is efficient drainage; that coupled with the near proximity of the wells and the fact that we documented that they are all completed in the same interval is as good a documentation as I think is possible

to get that the wells are all producing from the -- effectively from a common source of supply.

Q. Now, Mr. Aycock, to be sure I understand, Exhibits Thirteen and Fourteen showed an area in which there was development, extensive development, and Exhibit Number Fifteen is offered for the purpose of showing that there is drainage between wells in this area.

A. It is my opinion that there has been and there is now effective inter-well drainage within this area in the -- in the vertical interval of the Jalmat Pool.

Q. If El Paso Natural Gas' application is granted and demand remains down, what do you anticipate would happen in this area?

A. The likelihood is that reserves would be taken from the Hartman well and reallocated either to the two surrounding wells or to the two nearby wells and other nearby wells. I have made no effort to try to determine how large this area of common supply could extend and how many other wells that it would include. To me it was quite sufficient to see all of these wells that have been completed at different times in this limited area, indicating -- inferring strongly that they were producing efficiently from a common source of supply.

The effect of the El Paso application would

be to severely restrict the Hartman well, even below -- recognizing that it is on the 120-acre unit, not on a 160, restricting it so severely that there is a potential of a very large reserve loss. At the minimum there is the potential for an extension of well life of -- a substantial extension of the well life, even if there were no reallocation of reserves. It is impossible for me to see, with the documentation that was provided on this graph and the attached P/z curves, how it is very likely that there would not be a reallocation of reserves, when the pressure came down from the 300 to 400 pound range; at the time that the other -- that the Fristoe, the Sherrell 3 and the Sherrell 5 were abandoned, the ARCO well continued to produce, and at the time that the Hartman well and Sherrell 10 were completed, the pressure was within 20 to 30 pounds of that indicated for the ARCO well; it is impossible for me to believe that the inter-well drainage efficiency is not so great that by unduly restricting the Hartman well reserves would be taken from it and reallocated to other wells.

Q. And these reserves exist under the Hartman tract while the present prorationing system has been in effect.

A. Yes.

Q. What would it do to Mr. Hartman's correlative rights?

A. Well, destroy them.

Q. What impact would El Paso's proposal have in the area of waste?

A. It could well -- it could well result in actual physical waste, as well as violation of correlative rights, for the following reasons: If the reserves are re-allocated from a well with an efficient completion, such as the Hartman well, as evidenced by its capable level of production and continuing level of production, to a well with a less efficient completion, such as, perhaps, the Sherrell No. 10, then the Sherrell No. 10 will likely not get anything like the efficiency of recovery from the common reservoir that the Hartman well will, so if you force the Hartman well not to recover the share of reserves that it would get under the acreage allocation under historical market situation, and force it back to, I believe we said, what was it, 30 -- Mr. Nutter said 37 Mcf per day per 160, and this is a 120, which would be 3/4 of that, so we've gone from an allowable of 3/4 of 403 Mcf per day in 1982 down to 3/4 of 37. So if you restrict it to that -- if you restrict it to that degree, then the likelihood is you're going to reallocate its reserves somewhere else to another well, probably who will not be able to produce as efficiently, and they will either be left in the ground, period, or they will be produced from

some other well at some period of time that is so far in the future that the -- the gas plant availability will have been changed in this area, and the operating expenses vis-a-vis income will have been changed by the necessity for having a field compression rather than being able to avail yourself of the gas plant, that you may not be able to operate them to the same economic limit that you would be able to in the time frame that was -- would have been projected from the historical market and acreage allocation formula that was in effect until all this took place.

Q. Would this problem result if wells in the area -- if these wells were produced ratably in accordance with what Mr. Hartman is proposing?

A. No, sir, I don't believe they would.

Q. Will you now refer to Exhibit Number Sixteen and review this for the Commission?

A. EXhibit Number Sixteen is a tabulation, what I call a tabulation of consequential well parameters for the three wells that were included on Exhibit Thirteen; that is the Doyle Hartman Federal Jalmat Communitized No. 1, the Getty Oil Company "JW" Sherrell No. 10, and the ARCO Oil and Gas Company Wells "WN" No. 1.

The well locations are listed. I've already read those into the record in the review of Exhibit Thirteen

with spud dates and completion dates.

The assigned acreage is 120 acres for the Hartman well and 160 for the other two.

The cumulative gas production at 3-31-83 for the indicated well only, that is the currently active well, is 349.281 MMCF for the Hartman well; 88.066 for the Getty Sherrell 10; and 10,555.121 MMCF for the ARCO Wells "WN" No. 1.

Prior production from each of the proration units on which the Hartman Federal Jalmat Communitized No. 1 and the Getty Sherrell 10 are indicated to be 2,300.340 MMCF, on the Hartman Federal Jalmat NO. 1, and 5,885.080 MMCF for the Getty Sherrell 10, and none for the ARCO Oil and Gas Company Wells "WN" No. 1.

You will notice there is a single and a double asterisk by the prior production from the proration unit for the Hartman Federal Jalmat Communitized No. 1, and for the Getty Sherrell No. 10, and then you will notice at the bottom of the page that those prior productions are documented, all of this material is easily available and found in the records of the New Mexico Engineering Committee.

The total cumulative production, then, as of 3-31-83 from the proration units that currently include these wells, these currently active wells in the Jalmat Pool, are

2,649.621 MMCF for the Hartman Federal Jalmat Communitized No. 1, 5,973.146 MMCF for the Getty Oil Company "JW" Sherrell No. 10, and 10,555.121 MMCF for the ARCO Wells "WN" No. 1.

By reviewing the performance of all of these wells, using the best information available, which admittedly is better for the Hartman Federal Jalmat Communitized No. 1, because I had access to Mr. Hartman's proprietary data that he gathers on a regular and detailed basis as to the capability of the wells and as to the producing pressures, and using the decline curve analysis for the -- in combination with the P/z curves which have previously been placed into the record, for the Getty Sherrell 10 and for the ARCO Wells "WN" No. 1, I have an estimated future recovery in MMCF from 3-31-83, of 1,182.719 for the Hartman Federal Jalmat No. 1; 39.948 for the Getty Sherrell No. 10; and 688.879 for the ARCO Wells "WN". As is indicated at the bottom of this page, those figures anticipate no reallocation of reserves from either the current time on-time off schedule that El Paso is following, or from the operation, the reallocation of reserves from any change in the allocation formula as proposed by El Paso.

So that those numbers are very -- are uncertain to the degree that they will be influenced by any further changes, either in the allocation formula or the -- or the --

whether we go on -- whether we continue to produce as El Paso has for the past year on the time on-time off allocating to all wells, or whether we adopt their proposal and confiscate reserves from this well and reallocate them to others.

The estimated ultimate gas recovery, then, in MMCF, from March 31st, 1983, can be tabulated for all of these wells, for the indicated well only.

For the Hartman Federal Jalmat Communitized No. 1, 1,532 MMCF.

For the Getty Oil Company "JW" Sherrell No. 10, 128.014 MMCF.

For the ARCO Wells "WN" No. 1, 11,244 MMCF.

For the proration unit, including the indicated prior production, which has been previously reviewed then, it will be for the Hartman Federal Jalmat Communitized No. 1, 3,832.340 MMCF.

For the Getty Oil Company "JW" Sherrell No. 10, 6,013.094 MMCF.

And for the ARCO Oil and Gas Wells "WN" NO. 1, 11,244 MMCF.

If we normalize these volumes of recovery to a per acre basis in order to see how fair their proration has -- has allowed the reserves to be recovered in the past, we come up with the following: If we take the cumulative

production as of 3-31-83 for the indicated well only on each of these proration units, there's 2.91 MMCF per acre recovered from the Hartman Federal Jalmat No. 1; .55 MMCF per acre for the Getty Oil Company Sherrell No. 10; and 65.97 MMCF per acre for the ARCO WEll "WN" No. 1.

If we look at the cumulative at 3-31-83, prior production only, and normalize that on a per acre basis, for the Hartman Federal Jalmat Communitized No. 1 proration unit we get 19.17 MMCF per acre; for the Getty Oil Company "JW" Sherrell No. 10 we get 36.78 MMCF per acre; and for the ARCO OIl and Gas Company Wells "WN" No. 1, we get none.

If we take the total of gas production from the proration unit, including the cumulative from this well only and the cumulative from prior production, the entire proration unit, then we come up with the following numbers:

For the Hartman Federal Jalmat Communitized No. 1, 22.08 MMCF per acre.

For the Getty Oil Company "JW" Sherrell No. 10, 37.33 MMCF per acre.

And for the ARCO Oil and Gas Company Wells "WN" No. 1, 65.97 MMCF per acre.

If we look at the estimated future gas recovery on a per acre basis for the well only:

For the Hartman Federal Jalmat Communitized

No. 1 it's 9.86 MMCF per acre.

For the Getty Oil Company "JW" Sherrell No. 10 it's .25 MMCF per acre.

And for the ARCO Oil and Gas Company Wells "WN" No. 1 it's 4.31 MMCF per acre.

If we then continue on down the page and look at the estimated ultimate gas recovery for each of these three proration units, first from the existing producing well only, for the Hartman Federal Jalmat Communitized No. 1 it's 12.77 MMCF per acre.

For the Getty Oil Company "JW" Sherrell No. 10 it's .80 MMCF per acre.

And for the ARCO Oil and GAs Company WEls "WN" No. 1 it's 70.28 MMCF per acre.

If we add the prior production as was -- and cumulative in MMCF per acre that we previously developed to that to get to the ultimate recovery for the entire proration unit, on the Hartman Federal Jalmat No. 1 we add the 19.17 MMCF per acre that we previously developed above, and we come up with 31.94 MMCF per acre.

On the Getty Oil Company Sherrell No. 10 we add 36.78 MMCF per acre and we come up with 37.58 MMCF per acre.

And if we add none to the ARCO Oil and Gas

Company Wells "WN" No. 1 we still come up with 70.28 MMCF per acre.

So we're comparing bottom line numbers and estimating ultimate recovery, gas recovery, from two 160-acre and one 120-acre proration units as the following, rounded off to the nearest full number: 32 MMCF for the Hartman well; 38 MMCF per acre fo the Getty Sherrell; and 70 MMCF per acre for the ARCO Wells "WN" No. 1.

So the best well with the greatest remaining recovery and the best deliverability in 3/4 of a proration unit is going to have the poorest normalized recovery, has the poorest normalized recovery now and will have the poorest normalized recovery of anticipated abandonment if no reallocation of reserves occurs.

If reallocation of reserves occurs, they'll be even worse than this.

So while -- while Texaco and Mr. Hartman are not the same, the mineral owners are the same, and they suffer -- they will have suffered a further deterioration in their correlative position.

So I think it's apparent from this that because of the competitive aspects of the reservoir, when the wells were developed, what quality of wells were developed, as well as the allowables that were assigned because of various

amounts of acreage that there's a vast difference in the -- in the current recoveries, in anticipated future recoveries when we look at them on a total basis or on an MMCF basis in a very small portion of a very large pool that is one of the pools that will be -- for which a small number of wells will be drastically affected under the EL Paso proposal.

If we go ahead and finish looking at the information that I've included on this Exhibit Sixteen, so that the Commissioners can understand the reason that we're objecting to El Paso's proposal, the 1982 mean allowables for these proration units are indicated to be 9194 Mcf per month for the Hartman Federal Jalmat No. 1; and 12,258.7 for both the Getty Oil Company Sherrell NO. 10 and the ARCO Wells "WN" No. 1, because both the Sherrell and the ARCO Wells are on 160-acre proration units and the Hartman well is on a 120-acre proration unit.

If we look at 1982 average production in Mcf per month, on the Hartman well it's 9891; for the Getty Sherrell No. 10 it's 1,052; and for the ARCO well. Now remember that on the rate/time curve that I previously reviewed for you on the ARCO well, it was shut in for some period of time during 1982, so this 1982 average production is deceptively low for the ARCO Wells "WN" No. 1.

In any event, the 1982 production can be com-

pared to the 1982 allowable with the results that are indicated on the next line.

The Hartman well made 108 percent of its allowable.

The Getty Sherrell 10 made 8.6 percent of its allowable.

And the ARCO Wells made 26-1/2 of its allowable.

The estimated original gas in place for the present well only is 1747 MMCF for the Hartman FEderal Jalmat; 1478 MMCF for the Getty Sherrell No. 10; and 13,150 MMCF for the ARCO Wells "WN" No. 1. This means, when comparing that number with the estimated ultimate recovery, which we've already discussed, previously, we come up with indicated recovery factors of percent of original gas in place of 87.7 percent for the Hartman Federal Jalmat Communitized No. 1; 8.6 percent for the Getty Oil Company "JW" Sherrell No. 10; and 85.5 percent for the ARCO Wells "WN" No. 1.

I think it's important to recognize that the Hartman well was drilled, 39 to 80, what's that, 41 years after the ARCO Wells "WN" No. 1 was, and yet even though its original gas in place has remained -- has been greatly reduced by prior production, it's going to get an indicated gas recovery factor on the same order of magnitude as the

ARCO Wells, while the Getty Sherrell 10 is only get an indicated 8.6 percent of the original gas in place.

If you reallocate the reserves by imposing an El Paso formula on these three wells,two of which are on 40-acre spacing and two of which are on 80-acre spacing, insofar as the distance between wells, it is my opinion that the probability is that substantial less reserves will be reallocated from the Hartman well to one or both of these other wells.

In that case the correlative rights of the United States government and Mr. Hartman and his joint working interest owners will be violated in favor of the working interest owners on the other tracts, and the mineral owners on the other tracts.

Future well life I ran out so that you could see, at 1982 allowables, I ran out so that you could see, if there were no changes in reserves, what the minimum impact would be at a 50 percent reduction below the 1982 allowable for 1983 and into the indefinite future.

There's a 22.2 year life for the Hartman well as is, and it would go up to 28.3 years if you go to a 50 percent allowable with no reallocation of reserves, so at the minimum it will take Hartman 6.1 years longer to get his reserves than it would have.

There will be no impact on the Getty Sherrell No. 10. It's at capacity now and will be so. There's an indicated .2 of a year increase in life for the ARCO Wells "WN" No. 1 in reducing to the 50 percent of 1982 allowable for 1983 and beyond.

Q. Mr. Aycock, when you extend the well life by 6.1 years, what effect does it have on the cost of producing the gas?

A. Well, at the very least it's going to mean that there's an extra financial burden imposed on the working interest owners of that tract, because they're going to have to pay operating expenses for six years longer to get the same amount of gas as they would have gotten in 6.1 years less.

Q. And is that economic waste?

A. It's economic waste.

Q. Would you now refer to what has been marked as Exhibit Number Seventeen and review this for the Commission?

A. Do you want to put one of these up, Bill, so the audience can see? Do you have another one of these so I can talk from this one?

Q. Will you please refer now to Exhibit Number Seventeen?

A. Exhibit Number Seventeen is an attempt on my part to provide the Commission and other interested parties with my best estimate graphically of what the numbers that I've just reviewed with you mean.

If you will look on the top row across, each of the same wells are in the same order as they appeared on the cross sections; that is, the Hartman well, the Getty Sherrell 10, and the ARCO Oil and Gas Company's Wells "WN" No. 1.

On the top row are conventional semilog graphs, log rate as a function of linear time for all three wells.

On the bottom row are conventional rate/cum curves on a linear scale and I want you -- I want everyone to be certain to realize that the scales are all the same, the vertical and horizontal scales are the same, because I want you to be able to visually compare the area between curves in order to get a feel for what the burden is on the various wells as -- by reason of applying a formula that acts in this way.

You will see also indicated are the 1982 mean allowables for, in the case of these two wells, that is, the Getty Oil Company Sherrell 10 and the ARCO well, a 160-acre allowable is indicated by a horizontal bar on all graphs,

as well as the 50 percent of 1982 allowable for a 120-acre and 160-acre tracts, respectively.

So I want to make it very plain that we have taken acreage into account, Mr. Kellahin.

You will see that on the 1982 allowable, as I pointed out to you, the Hartman well produced 107 percent of its allowable in 1982, so extending that allowable out is a continuation of a trend that is already there.

When you drop it down to 50 percent, recognizing that this is a semilogrithmic scale, you come up with two to clock two projections (sic), one of which would be if you continued at the 1982 rate and the other one would be that if you restricted to 50 percent and come here.

The pink is colored as the area between the curves on the Hartman well and on the ARCO well, showing the impact of the application of a formula of this type on those two wells.

And there is no impact on the Getty Sherrell 10 because the production is below -- it's a low marginal well so it's below any of the allowables.

I call your attention to the fact that there is a very small pink area for the ARCO well, no pink area for the Getty well, and an extremely large pink area for the Hartman well.

I have labeled these potentially lost reserves because, as I indicated previously, I cannot prove to you that the reserves will be reallocated, but with the documentation that has been provided of effective inter-well drainage, it is reasonable to expect that if you restrict the allowable, that the reserves will be reallocated among the wells.

Now, Mr. Aycock, tell me again, the pink area is designed to show what?

A. The burden to each of these wells -- would carry as a result of the operation of a formula similar to the one El Paso has proposed.

Q. And it shows the amount to which reserves could be taken away at various wells.

A. Recognizing that whatever happens, it will likely be to the detriment of this well. There's no foreseeable way under what's been proposed that this well could be held. There's -- everything that could happen will impact it negatively.

I will admit I do not -- I cannot tell you -- the Commission conscientiously how much of those reserves could be lost. I have made an estimate of a maximum number, which I will talk to you about in a minute, but in any event, I want you to understand that there -- if there is any impact anywhere

it occurs in here, there can't be any impact here.

Q. When you say here, you mean --

A. As a result of restrictions and the loss, either as a function of time only or actual physical reallocation to some other well and considerable loss of reserves.

Q. You're saying the impact will fall in the Hartman well.

A. It will fall disproportionately on this well as compared to either of the other two.

Q. As to either Getty or the ARCO wells?

Mr. Aycock, what is the alternative to the curve depicted on Exhibit Number Seventeen?

A. You mean in terms of management of the reservoir or in terms of -- well, it's the proposal Mr. Hartman has made and which Mr. Nutter will subsequently detail, which involves ratable restriction of the acreage allowables, so that all the wells maintain their relative same position as they did have, vis-a-vis the restricted allowable.

Q. If ratable taking took place, what would -- how would it affect the pink areas depicted on Exhibit Seventeen?

A. Well, the pink areas would occur but they would not represent potentially lost reserves because everybody would be restricted the same. There would be -- well,

everybody would have a pink area.

It would not be a huge pink area on one well and a small one on one, and nothing on the other; everybody would have some pink.

Q. Would reallocation of reserves occur under the Hartman proposal?

A. If it did, it would be infinitesimally smaller than would likely occur under the formula proposed by El Paso.

Q. Will you now refer to Hartman Exhibit Eighteen and identify this and explain what it shows?

A. Hartman Exhibit Number Eighteen is an attempt on my part to quantify what appears to be the maximum loss in reserves that could take place.

Let me approach the previous exhibit again so that you can understand what I've done on this.

On the right cum curves, I've shown sums to explain economic limits by different points, there would be no loss in reserves. So what I've done is to take the area between the rate/time curves and say that that is a measure of maximum reserve loss that could take place at each well. That is where the two rate/time curves cross the 50 percent restriction and then say 1982 allowable. Okay?

So what we're talking about is the pink area

on the top line.

This is a tabulation of the amount of potentially lost reserves, at the very least delayed reserves, for the three wells that have been previously indicated on all of our exhibits; that is, the Hartman Federal Jalmat Communitized No. 1, the Getty Sherrell No. 10, and the ARCO Wells "WN" No. 1. Indicated are years from 1983, which represents nine months, this is effective March 31st, as you'll notice, through 1992, which is the last year in which there is any indicated potential reserve loss by virtue of the assumption that's illustrated on the rate/time curves.

There is an amount of gas yearly and a cumulative amount of gas at year end.

I call your attention to the fact that on the Hartman well there's a total indicated potential reserve loss of 438-million cubic feet of gas that occurs over the period 1983 through a portion of 1992.

There is no potential reserve loss from the Getty Sherrell No. 10. In other words, anything that happens should help it rather than hurt it.

And there's a total reserve -- potential reserve loss from the Hartman -- I mean, beg your pardon, from the ARCO Wells "WN" No. 1, of 22,324 MMCF, which occurs only during 1983 and 1984.

So in total, of the total amount of potentially lost reserves of 437 - 438 plus 22, which is what, 460-million cubic feet of gas, 438 MMCF of that are Doyle Hartman, which shows once again, whether these reserves are lost or whether it causes an extension of life, it is the furthest point to illustrate the unfair burden that's imposed on the Hartman well as compared to these two nearby and offsetting wells by an operation of a formula of this type.

Q. Will the formula proposed by El Paso act to impair Mr. Hartman's correlative rights?

A. It is my opinion that it definitely will in the case of this well.

Q. Will you please refer to Exhibit Number Nineteen, identify this, and explain what it shows?

A. The discussions which have occurred in the past with regard to competition and common source of supply, one of the answers to the operators of the more capable wells has always been, oh, well, don't worry about it, you'll get an underproduced status and you'll get it back some day.

Well, this is intended to show that at least for the Jalmat Pool, in which these three wells are completed, some day is already here. These points are the --assuming that the 1-1-70 cumulative production was correct, apparently the New Mexico Engineering Committee drops the cumulative for

wells as they are plugged and abandoned, so it is not -- you're not able to make any sense out of it without going all the way back to the beginning, so we went back to 1970 to get an approximation.

We added the yearly production coming forward. We computed the average rate during the year and we plotted it at the cumulative equivalent to the midpoint of the year.

You'll notice from 1972 through 1981 they made what appears to be a very nice straight line correlation. We recognize that from 1982 and the available information in '83 would not, because of the market restrictions that El Paso has discussed at some length today, so we did not include those.

If you extrapolate this curve to zero rate, now we've already said that there are, actually, there are about 400 wells in this pool. The indicated economic limit of production is between 300 and 500 Mcf per month, based on what operators have done in the past.

So if you took 400 and multiplied that, you'd be looking at somewhere around 200,000 Mcf a month, but if you took it to zero, it would be 1815 Bcf of gas. The cumulative recovery from the pool, derived by the assumption I've already described to you, is 1694 Bcf as of April 1st, 1983, which said 93.3 percent of ultimate recovery has already

been produced, and there's only 6.7 percent left.

If you reallocate reserves from Mr. Hartman or from any of the other fortunate few that have the more capable wells, to the less capable wells, number one, the gas may not be there no matter what their accumulated underproduction might be. And in addition, at the low pressures that are operative almost invariably throughout the pool, I'm not aware of any that are above some 250 to 300 pounds; there may be a few that are, because I've made no effort to comprehensively study the entire Jalmat Pool. I have looked at a lot of wells in over the past four years, but I don't have -- haven't studied anywhere near all of them.

In those cases, as any of you who are reservoir engineers recognize, deliverability declines by a factor that is conservatively two to three times the rate at which reserves decline, because one of them is a dynamic function and the other is a static function.

So if you -- even though viscosity of the gas is low and we know that it probably is able to migrate over a long distance, if you wait until the pressure is down to 50 pounds to try to let the people who are underproduced catch up, there is no way that there's enough reservoir energy left to migrate the gas to their wellbores to let them produce it, so they don't produce it, and if they don't, a sub-

stantial portion of it could be wasted.

At the least their correlative rights will be substantially violated.

Q. Doesn't this exhibit also show that we have a different set of conditions today then when the rules we operate under were written?

A. The rules were operative, as I believe Mr. Nutter testified, and I'm not positive what Mr. Kendrick said about them, but I believe he said the same thing, they started out when all these pools were in flush stages of production, and what you were talking about was really sharing the market because all the wells, most of the wells, the vast majority of them, I'm not going to put an exact number because I haven't looked to see that far back, but there was greatly excess producing capacity, and there was flush production.

Now you have a highly depleted reservoir in which you have an extreme spectrum of well capability and the only way you can make a formula such as that proposed by El Paso work is to restrict the wells, not just for their acreage, but restrict the good wells down to what the sorriest one will make in order to make a formula like this work.

Mr. Hartman is not asking that he be given favor status or that the acreage allocation system is being violated, he's simply asking that the relative position that

everybody had when the market demand situation occurred, be preserved and carried forward into the future in a way that is effective and fair to everyone.

Q. Is Mr. Hartman agreeable to bearing his proportional share of the decrease in demand?

A. Certainly he is, which would be more gas because he has a better well, but it would be a proportionate decrease for everybody that's the same.

Q. Mr. Aycock, will you refer to Exhibit Number Twenty and review this for the Commission?

A. Exhibit Number Twenty is intended to further illustrate the nonlinear operation of a formula of the type proposed by El Paso on wells of better than average deliverability, in that it shows you, if you took a percentage cut from -- from 1982 production as a function of adjusted allowable levels, if you have a 50, a 100, a 200, a 300, or a 400 Mcf per day well, the reason for going to the 400, as you may recall, I mentioned previously that in 1982 a 160-acre proration unit was allowed to produce 403+ Mcf per day on an average throughout the year.

So if you had a top allowable well with an acreage factor of one in 1982, you would have produced slightly over 400 Mcf per day.

Okay, obviously, at zero, there's no --

there's no cuts.

At 50 there's no cut.

At 100, if you had 100 Mcf per day well and it was cut to 50, cut 50 percent, in other words the 50 percent reduction that we've been talking about.

If you have a 150 Mcf per day well, if it's cut to 100 Mcf per day, it's cut a third, and if it's cut to 50 it's cut 66.7, and I think we have just heard, if my memory serves me correctly, Mr. Nutter says that the allowable for June under the El Paso proposal for the Jalmat Pool is either 37 or 38 Mcf per day.

So I think you see we're -- where we are with regard to the information, and so on down the line.

If you have a 200 Mcf per day well in 1982 and you cut it to 200 you don't get anything, but if you cut it to 100, it's 50. If you cut it down to 50, you've cut it 75 percent.

If you get down to the bottom line in the lefthand column, which would be a top allowable well on a 160-acre proration unit, you cut it 87-1/2 percent to get back to a 50 Mcf per day allowable.

If you take the June allowables that Mr. Nutter has testified to, that's going to amount to over a 90 percent cut for a well on 160-acres that had top allowable

in the Jalmat Pool in 1982.

Attached to it is the graphic presentation of the same information, which serves to -- just to reenforce the idea that it's a very nonlinear function; the better your well, the harder you get cut under this type of proposal.

It's not proportional to anything. It's inversely proportional. The best wells get hit the hardest, not just proportionately but they get hit proportionally harder the better they are. The better they are the greater the chance is that the correlative -- that there will be either a violation of correlative rights and/or actual physical waste that will occur as a result of an operational formula of this type.

Q. If El Paso's application is approved, what impact will it have on Mr. Hartman?

A. Disastrous.

Q. How many nonmarginal factors are there in the Jalmat Pool?

A. I believe that there are 6-1/4 nonmarginal factors in the Jalmat Pool at the present time. One of those is the ARCO Shipley No. 5, I believe, which is a relative -- all of these wells, by the way, were drilled as a result of the Natural Gas Policy Act of 1978. They're all relatively new wells.

Q. And how many of these nonmarginal factors does Mr. Hartman either operate or have an interest in?

A. All but the ARCO Shipley.

Q. So he would have 5.25.

A. He operates 4.25 of those 5.25.

Q. You said all these were drilled since NGPA?

A. Yes, sir.

Q. How do the prices for the new wells after NGPA compare generally to the prices before?

A. Substantially in excess of the price that was allowed for the wells that were drilled prior to the passing of NGPA, as we all know.

Q. Do these nonmarginal factors receive a higher average price for their gas than the gas in the rest of the Jalmat Pool?

A. Yes.

Q. And what will be cut first under El Paso's proposal?

A. By El Paso's -- by Mr. Kendrick's testimony under their formula I believe he said that your -- that the first wells cut were the last brought on and they were your nonmarginal wells.

Q. Did you hear Mr. Kendrick testify as to what effect their proposal would have on the total volume of gas

taken from them?

A. I believe he indicated he didn't think it would have any effect upon them.

Q. So, in essence, what they are doing is cutting the high priced wells.

A. That's the effect of it. I'm sure they don't probably intend it to be that way, but that's the effect of it.

Q. And what does this do to the average price for the gas that they take from those wells?

A. It reduces it.

Q. And what effect does that have on royalty interest owners?

A. Reduces the income of the royalty, the working interest owners. It reduces the amount of severence taxes paid to the State of New Mexico. It reduces the Federal government's royalty. It reduces the State's royalty. It reduces the amount of income that flows into the State of New Mexico, to which income taxes will be applicable.

Q. Mr. Aycock, do you advise Mr. Hartman on many aspects of his business?

A. Yes, sir, I have for about four years.

Q. In doing this, have you seen the contracts for sale of gas to El Paso?

A. I've seen several of them. I have not reviewed every one of them in absolute detail, but I've made a sampling of them, yes, sir.

Q. What do these contracts that you have reviewed provide in terms of the amounts that El Paso will take from the Hartman wells?

A. El Paso is obligated to take the allowable.

Q. If El Paso's application is granted, what will it do to the allowable?

A. Will reduce it to 38 Mcf per day for the Jalmat Pool for June, by Mr. Nutter's testimony.

Q. What will it do to their --

A. It will be less than that for this well because he has less than a full proration unit, but for a full proration unit it would reduce it, yes, it would reduce it from -- to 38 from 403 in the year of '83.

Q. So it would reduce their obligation to take from this well.

A. Yes.

Q. Were Exhibits Thirteen through Twenty prepared by you or under your direction?

A. Yes, sir, they were.

MR. CARR: At this time, Mr. Ramey, we would offer into evidence Hartman Exhibits Thirteen through

Twenty.

MR. RAMEY: Hartman's Exhibits Thirteen through Twenty will be admitted.

MR. CARR: And I tender this witness for cross examination.

MR. RAMEY: Any questions of the witness? Mr. Kellahin?

CROSS EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Aycock, your testimony this afternoon has been addressing a portion of the Jalmat Gas Pool.

Have you made a similar study or comparison with any other of the prorated gas pools in the southeast --

A. I have not, for lack of time, Mr. Kellahin.

Q. And due to the fact that because of Mr. Hartman's unusual position in the Jalmat Pool it was of the greatest importance to him.

Q. You've indicated for us what the marginal-- I'm sorry, the nonmarginal units were that Mr. Hartman had in the Jalmat. Could you tell us in terms of numbers of wells, commencing with the total number of marginal and nonmarginal wells in the Jalmat? What approximately is that number?

A. I don't have any idea without looking it up. Mr. Nutter might have that information handy.

I didn't, Mr. Kellahin, I did not in preparing for this presentation, we had to divide the work up in order to get it done, and I did not get into the statistical aspects of it.

Mr. Nutter, due to his well known experience and familiarity with them, took that obligation and I took the obligation of trying to analyze where we were and be able to illustrate where I thought we are.

Q. El Paso's Exhibit Number One shows a tabulation of the Jalmat, the last column of which shows marginal units of 294 and nonmarginal units of 11.

You've talked to us about a total nonmarginal units in the Jalmat of I believe 6-1/4, was it?

A. These are -- these are -- these are those that were indicated on Mr. Nutter's exhibit, I believe.

Q. Do you know approximately how many wells Mr. Hartman operates in the Jalmat Pool?

A. Approximately, I'm going to say, about 60, without counting.

Q. And of those approximately 60, Mr. Aycock, how many of those are classified nonmarginal?

A. If you'll wait just a minute, we'll look

them up in the -- in the June schedule, okay?

Okay, there, in the June schedule on acreage factors there are 6.25 nonmarginal and 308.44 that are marginal.

Q. If I understood your testimony, the Jalmat Pool was originally set up for spacing on 640 acres but subsequently has been developed on significantly less acreage.

A. I didn't testify to that, but that is the fact. The pool rules call for 640 acres, but an acreage factor of one for allocation purposes is 160 acres.

Q. My only point was to make sure what the acreage factor was. That's 160 acres and not 640.

A. Correct.

Q. In applying the proration formulas to the Jalmat Pool, as I understand it, they use a 100 percent acreage factor in coming up with the allowable.

A. Correct.

Q. And you've given us an argument here this afternoon why that straight acreage, or 100 percent acreage formula is not going to be a fair and appropriate method to apportion production in the Jalmat, so far as Mr. Hartman is concerned.

A. It cannot if we're attempting to prevent violation of correlative rights, in my opinion, no, not at this stage in the life of the reservoir.

Q. You wouldn't have any argument with the concept of prorationing as a reasonable and fair conservation method as outlined in Order No. 1670, do you, sir?

A. Mr. Kellahin, if we were talking about a pool in the flush stages of production I would not, but we are not talking about that type of situation here.

I have no problem with the concept of prorationing, or any other attempt to maintain fairness and equity among the parties that are competing in any business situation similar to this, no.

Q. Inasmuch as you have not studied any of the other prorated gas pools and certainly a portion of the Jalmat Gas Pool, wouldn't you think that your arguments this afternoon are more applicable to an application for special rules applicable to the Jalmat Gas Pool that would more adequately allocate the production among the different operators?

A. Well, certainly that could be done, Mr. Kellahin, but El Paso brought this application forward that would be disastrous to my client. We did not.

They chose to approach the Commission and try to effect a -- essentially effect a change in the way of operation, a change of the pool rules by asking for a change in the operational rules themselves, so that amounts to amending the pool rules as far as its effect on my client is

concerned.

I agree with you that a better way to approach it would be to look at each of the prorated pools and see what the rules are now, how they might be better modified to suit the current stages of depletion and production, and if they -- if they -- if any system could be derived that would more nearly allocate the remaining reserves on a fair basis to everyone -- as I recall, Mr. Ramey made it very, very apparent to all of us that were at the meeting in Hobbs that concerned this matter, that the Commission did not have a staff to get into this type of effort, and he didn't anticipate that the Legistlature was his budget sufficient that he would have the staff to get into it.

I do agree that if the industry were willing to commit the manpower and the resources to it and make that information available to the Commission, it would be an excellent idea.

MR. KELLAHIN: Bases upon Mr. Aycock's testimony at this time, Mr. Ramey, I would move to dismiss Hartman's application.

I believe that as he stated, a more appropriate solution for this particular problem is to address the special pool rules in the Jalmat pool and what he has done here today constitutes a collateral attack of Order No.

1670.

For that purpose we would move to dismiss his application.

MR. CARR: May it please the Commission I would like to respond to that.

El Paso came forward with a broad application that covers all the pools in southeastern New Mexico.

Mr. Hartman came into this hearing today and appeared before you not trying to just stand before you and scream about the particular problem in the Jalmat, but to come forward and propose something which is a reasonable alternative, which is something you can consider as an alternative to the application of El Paso Natural Gas.

Maybe in Mr. Kellahin's opinion there is a more appropriate solution to the problem. Maybe there are other ways that should be looked at, but just because there are other ways it could be looked at are not grounds for dismissing an application which stands properly before you and in which you have jurisdiction not only to entertain but to enter an order on.

We submit there is no reason to dismiss the case at this point in time and to do so would prejudice the efforts of a lot of people to try and come

forward to deal with you in a straightforward, good faith fashion, not only to tell you what's wrong with the other side, but to come forward and tell you how perhaps this problem could be dealt with.

MR. RAMEY: Mr. Kellahin, your motion is denied.

Q. Mr. Aycock, are you going to deal directly with the information and calculations that went in to determining the effect of your proposal upon the marginal and non-marginal wells, particularly in the Jalmat Pool, or is that something that Mr. Nutter is going to address?

A. You mean as far as the proposal that we're going to make, Mr. Kellahin?

Q. Yes, sir, how is that actually going to be --

A. Mr. -- Mr. Nutter is going to make that presentation and in detail, Mr. Kellahin. You'll be completely informed when he gets a chance to get back on the witness stand.

MR. KELLAHIN: I have nothing further, Mr. RAmey, thank you.

MR. RAMEY: Any other questions of Mr. Aycock?

CROSS EXAMINATION

BY MR. RAMEY:

Q. Mr. Aycock, your pink -- your pink area depends on what decline -- what decline you put on the well.

A. No, sir.

Q. No, sir?

A. No, sir. Mr. Ramey, what I did on the Hartman well, I made a deliverability analysis of the well and I computed from the standpoint of the rates that the 1982 allowable and at 50 percent of it, at what point it would not be able to make that allowable at the prevailing pressures that Mr. Hartman's well produces into the El Paso system.

The decline was a secondary effect; it was not the primary.

On the ARCO well and on the Sherrell well I had to rely on decline curves analysis because I do not have the body of proprietary information with regards to periodic observations of producing pressure and rate that Mr. Hartman keeps as an integral part of his operation.

Am I making myself clear? Am I answering your question?

Q. Well, you really do not have the information on the ARCO well that you have on the Hartman well?

A. No, sir, as I said in my regular direct

testimony, I do not, and I had to rely on what was available to make my determinations, that's correct.

Q. If you had that information would it in turn increase the pink area on the ARCO well, perhaps?

A. I doubt that it would, Mr. Ramey, and I base that on the fact that, as I showed you on the rate/time curve, it appears that the well did not produce even in the months in which it was on production in the year 1982, it did not produce anywhere near the allowable that it would have -- it has for a 160-acre proration unit, and the production after the shut-in bounced way back up in the first three months of 1983, and what I did was to take that prior production and the first three months of '83 and assume that those represent -- prior to the shut-ins in '82 -- and assume that those represent capacity because of the producing performance during '82, and I made a decline curve, a rate/cum decline curve out of that and computed what the performance would be from that.

But, yes, I, you know, I'm not trying to -- to kid anybody, I don't have the same type of information. I would much prefer to have the type of information that I have for Hartman's well.

It might increase it. It might decrease it. I do not know what might happen.

Q. Well, it looks to me your lines depend, you're taking off from present production.

A. Well, sir --

Q. Production rate.

A. Well, I am on the Hartman well, because, of course, it was top allowable during 1982. It produced 107 percent of its allowable, so I am on it.

On the others I am not because they were not top allowable during that 1982. I'm assuming their capacity.

Q. And you're projecting Hartman's well to produce, or it could produce at '82 production --

A. Until --

Q. rate --

A. Yes, sir, until --

Q. -- for several more years.--

A. Until the deliverability --

Q. Please let me finish my question, would you, Mr. Aycock? And so therefor, if production rates started declining tomorrow, that upper line would change, would it not?

A. Yes, sir.

Q. Thank you. That's all I have.

MR. RAMEY: Yes, Mr. Nance.

MR. NANCE: Mr. Chairman, Mr. Aycock, I have three brief questions.

CROSS EXAMINATION

BY MR. NANCE:

Q. At the time that the Hartman well was drilled, which you indicated here was in your exhibit, were proration rules in effect in the Jalmat Pool?

A. They were. Mr. Hartman has never been allowed to produce more than a 120-acre allowable, and he does not desire to produce more than a 120-acre allowable.

Q. Did those rules include gas prorationing according to acreage allocation?

A. They did.

Q. And do you know if gas prorationing was in effect being conducted at the time this well was drilled?

A. If it was, it was not to the degree that it is now, and we would -- we have no problem with, you know, with being penalized because we have shorter acreage. We recognize that that's -- that is the obligation that was undertaken when the well was drilled.

We are not asking, we have not applied for and are not asking to produce the well at capacity. We are asking to produce it at a relative allowable for its acreage that is compatible with the other wells in the pool. That

is all.

Q. Thank you. I'm sorry, those rules did exist, did they not --

A. They did exist at the time the well was drilled; however, as Mr. Kendrick is aware, you're probably aware, and many of the audience is aware, effectively until 1982 it was almost an unprorated pool.

As Mr. Kendrick himself told me one time, the production is what the -- the capacity is the production for most of the pool. I believe those were his words.

Q. Okay, thank you.

MR. NANCE: Thank you, Mr. Chairman.

RECROSS EXAMINATION

BY MR. RAMEY:

Q. Mr. Aycock, you've given us information on the Jalmat Pool, do you think this would apply to other pools?

A. I suspect it would, Mr. Ramey, but I can't give you a conscientious yes to that because I really don't know.

MR. RAMEY: Any other questions for Mr. Aycock? Mr. Carr.

MR. CARR: One further question.

REDIRECT EXAMINATION

BY MR. CARR:

Q. Mr. Hartman's well is on 120 in your example, the other two are on 160. Why was Hartman's well drilled on 120 instead of 160?

A. Because he could not get the -- he could not get voluntary unitization from the offsetting party in order to make a full proration unit, and he was willing to do so.

MR. CARR: That's the only question I have.

A. In other words, the short proration unit is not of his choice. It was the best he could do.

That's what I'm trying to get across.

MR. CARR: That's all the questions I have.

MR. RAMEY: The witness may be excused. Do you want to recall Mr. Nutter?

MR. CARR: Yes, at this time I would recall Mr. Nutter.

DANIEL S. NUTTER,

being recalled as a witness and remaining still under oath, testified as follows, to-wit:

REDIRECT EXAMINATION

BY MR. CARR:

Q. Mr. Nutter, would you explain to the Commission how Mr. Hartman's proposal could be implemented?

A. Okay. What we're proposing, of course, is that every well would be classified as a marginal well, and that any curtailment of production due to fluctuations in market demand, or increase in production due to fluctuations upwards in market demand, would be orchestrated by the pipelines and not by the Division.

What we're going to do is base this fluctuation on a base line. The base line would be a combination of two factors from 1982. It would be the adjusted -- the average adjusted nominations for each of the prorated gas pools in southeast New Mexico, which would be an average of the monthly adjusted nominations for the entire year of 1982.

It would also take into account the top unit allowable for -- that was calculated for each of the months in accordance with those adjusted nominations for each one of those pools.

Exhibit Number Twenty-one is a tabulation of nominations and adjusted nomination factors for each of the pools.

Now the first sheet goes through June. The second sheet goes July through December, and the annual average of nominations and acreage allocation factors for a factor of one are shown for each of the pools.

For example, the Atoka Penn Pool, now all of these nominations you have to add three zeros after the decimal point, so the Atoka Penn there was 188,000 Mcf nominated.

The acreage factors, you don't add any zeros to those. Those are the actual acreage factors, so the average acreage factor --

Q. Mr. Nutter, which exhibit are you talking about?

A. I'm talking about Exhibit Twenty-one.

Q. And which one is that?

A. That's the one headed by the word "1982".

Q. All right.

A. That's not the neat one. You're looking at the neat one there now.

Q. Is this the one you're talking about?

A. No, I'm not talking about the neat one now.

Q. All right, would you go back, then, and start again.

A. Okay, so in other words, the Atoka Penn average nominations for the month of -- the year of 1982 were

188,400 Mcf, or beg your pardon, we add three zeros -- yeah, it's 188,000.

The average acreage allocation factors were 47,205 per month, or a little over 1500 Mcf per day.

Now, we would take these average adjusted nomination factors -- the average adjusted nominations, and these average factors, and we would turn to Exhibit Number Two, then. We've got the average adjusted nominations on here for 1982, the average adjusted factors. Now any month, assuming this thing was in effect in the month of June, we would take the June nominations for that month, we would derive a June ceiling, which would be in direct proportion to the June nominations that the average factors were to the adjusted nominations in 1982.

So our June ceiling would simply be in the same ratio to 167.2 nominations that 47205 was to the adjusted nominations of 188.4.

It's a simple ceiling. This ceiling would be applicable to any unit that had an acreage factor of one. This ceiling would fluctuate each month and be adjusted by nominations. I think the appropriate thing to do in the proration schedule each month, would be to come out with a preliminary ceiling, and that would be based on the nominations, and then as soon as production for that month was in, you'd --

three months later in the proration schedule you would have an adjusted, or a final ceiling which was applicable to the wells.

Now, any well that had an acreage factor of less than one, any well that had a penalty factor, would have that penalty factor applied against those ceilings that are marked on there. These are monthly ceilings. You'd divide that by 30 to obtain what the production ceiling would be for a -- on a daily basis.

That's all there is to it, really.

Now, it's going to take some policing. Who is going to do the policing?

As you indicated, Mr. Ramey, at Hobbs, the Commission wasn't in the position to do the policing of ratable takes for all the nonprorated wells in the southeast, or for the curtailed production in the southeast.

So I think it's going to be a combination of two police actions that are going to be necessary.

It's going to be necessary for the producer of a well, if the pipeline nominations are down 20 percent in a given month from this base ceiling, if the pipeline nominations are down 20 percent, he's going to have to watch his takes that the pipeline is taking from his wells, and if they're taking more than -- if they're reducing him more

than 25 percent he's going to have to get on the ball and call the pipeline and tell them, you're taking -- you're knocking me down too much.

If he sees a neighbor that's overproducing, he's going to have to police his neighbors, also. I think that this thing should have a balancing period of about once a year, and the proration schedule should show wells that have excess production, and I think it's going to be up to the operators to bring pressure on the pipeline or that if the pipeline is taking too much gas from offsetting wells, they're going to have to bring the pressure on the pipeline.

It's going to take some police action. It's going to take some action on the part of the operators, but it's better than having underproduction build-ups cancelled.

It's not a panacea by any means to the problem, but I think it can be worked out ratably if operators will watch the production from their wells and watch the production from the offsetting wells.

Police your neighbor's production and police the pipeline to see that he's taking your production. Production figures would be reported in the proration schedule each month so you would be able to tell what the other guy was doing.

Q. Now, Mr. Nutter, Mr. Hartman is only pro-

proposing this on a temporary basis, is that not correct?

A. Well, until further order of the Commission. I would hope that some day things would work out where -- I don't know, if -- I think some pools, I think for some pools this may be extreme right now for some of these pools.

Q. But that could be rescinded at any time.

A. This could be rescinded at any time, and if somebody comes up with something better, and a smoother way to handle it, besides knocking everything down to the level of the most mediocre well in the pool, why, that would be fine.

Q. Mr. Nutter, were Exhibits Twenty-one and Twenty-two prepared by you?

A. Yes, they were.

MR. CARR: At this time we would offer into evidence Hartman Exhibits Twenty-one and Twenty-two.

A. I'd like to apologize for the condition of Exhibit Number Twenty-two, also. I had to hurry with that.

MR. RAMEY: Exhibits Twenty-one and Twenty-two will be admitted.

Q. Mr. Nutter, do you have anything further to add to your testimony?

A. No, I don't.

MR. CARR: At this time we would tender Mr. Nutter for cross examination.

RECROSS EXAMINATION

BY MR. RAMEY:

Q. Well, Mr. Nutter, it sounds like a good answer to unemployment, and outside of that, I don't understand it.

I have to apologize but maybe my brain is as numb as my rear end is at this point, but would you go over this again, please?

A. Okay. We've got the nominations for 1982. These are averages. We've got the average nominations for each of the pools for 1982. We have the average top allowable acreage allocation factor, the amount of gas that the top well can -- in the pool would get.

The average nominations in the Atoka Pennsylvanian were 188,000 for the average monthly nomination.

Q. Okay, that's the nominations.

A. That's the nominations.

The average factors in that pool for the year 1982 were 47,205 per month. That's the average top allowable for the year.

Now, we'll say this proposal was in effect

in June. You want to determine a ratio of nominations in June of '83 to a ceiling in June of '83, which is "X" and nominations in '82 to a ceiling in June.

So you simply say 188.4 is to 37,205 equals 167.2 over "X". Multiply 167.2 times 47,205, divide by 188.4 and you get 41,893, and that would be the ceiling top allowable for June of 1983, if this system were in effect.

This would be the ceiling. The pipelines would take marginal production but they would not exceed this ceiling. If they did exceed it, this figure would be published in the proration schedule, and theoretically you'd have to have some sort of a period in which you could overproduce, and I'd say it would be on an annual basis, that all of these producing figures should not exceed the cumulated ceilings at the end of the year.

The pipelines wouldn't be bound by it on a monthly basis but they would on -- at the end of the year. It should smooth out.

And if their takes -- if their nominations go down to 100 in the month of July, then you'd take 188.4 over 47205, or 100 times 47,205, and divide it by 188, and you'd get a figure maybe 35,000 would be the ceiling for July.

And then any acreage factors that are in

there would be applicable also.

Q. So each well would be allowed to produce 41,895 in June in the Atoka Penn?

A. That would be the ceiling. That's correct, because it's the nominations compared to nominations in '82, compared to the -- the allowable factors in '82 compared to a new ceiling in '83.

That's something like 12 or 1300 a day. Now, if you'll give me -- well, I'll get it.

Q. Now, Mr. Nutter, where did you -- how did you derive your 47205? That was the average top allowable for 1982?

A. That was the average top acreage allocation factor for 1982.

Q. And is that taking away marginal allocation?

A. No, that's top allowable.

You want to find out what a ceiling should be for a well. What we're really trying to do is determine what a ceiling should be for a well and have a figure that you can apply short acreage factors and penalized allowables against. So when you come to that -- let's take the Jalmat there, on Exhibit Twenty-two.

The calculated allowable for June, the calculated ceiling would be 3922; divide that by 30 and you have

130.7 Mcf per day.

Okay, that's for 160-acre unit. If you have a unit that has 80 acres in it it would be exactly half of that would be the ceiling.

If you had a unit that had 40 acres in it it would be 1/4 of this, and so forth.

One of those big units down there with three or four would get three or four times that 3922, providing it could make it.

This would all be marginal production. It could produce up to this amount. Anything over that would be shown in the proration schedule by being overproduced, and the Commission wouldn't shut the wells in, but I think if someone came in, just like we had a case a few months back, you'll recall, where we had a well that had received a penalized allowable, and one of the operators, the operator of the well had exceeded the -- produced the penalized allowable for that well, and the offset operator blew the whistle and they had a hearing to see if that well should be curtailed, and I think that's the way this would operate, if you saw someone that was getting way more than his share of the production in the pool, he had a penalized allowable and they were taking more than what they should, he would be exceeding his ceiling and someone should bring a case against him, to show cause

why the well should not be reduced or shut in.

Q. Okay, to arrive at the -- in the Jalmat, you arrived at 3922. You took the 334.2, 334,000 Mcf, I assume, and divided by the number of wells in the pool to get --

A. No, to get the 3922?

Q. Yes.

A. No, what I did, I took -- I said 1044.6 is to 12,259 as 334.2 is to "x", and "x" came out to be 3922.

Q. Okay, then where did you get the 12,259?

A. The 12,259 was the average allowable in 1982 for a 160-acre unit, the average top allowable.

Q. The average top allowable.

A. Right. Because again, we're looking for a ceiling and we want a ceiling related to the ceilings in 1982. This -- this preserves the positions that people had relative to their -- their status in 1982. If they -- if they had acreage factors that brought this kind of an allowable, then they get an acreage factor in proportion to the nominations this year for that type of an acreage factor. They get a ceiling.

All this 1982 figure is for is to establish a base line against which to compare future nominations and determine future ceilings.

Now, we're putting a lot of faith in the

pipelines when you go into a system like this. If they have a depressed market they say that they are taking their cuts ratably, that they're doing it on a time share basis, or a time on basis, days-on/days-off basis, and we would assume that if they had this ceiling that they would take their -- they would take their production on a time shared basis, based on previous production, and would not exceed the ceiling.

This is a system of faith.

Q. Do you think a time share basis -- time shared basis in proration of pools that have an acreage allocation is taking ratably?

A. Well, now what they're -- yeah, I do. I do. Because if you're -- if your market goes down 20 percent, all of the wells should share the 20 percent, so 20 percent of 30 days is 6 days and each well would take a 6-day cut in production.

If they're reduced 15 days, or 50 percent, then each well would take a 15-day cut in production, and the time on and time off would be equal for all wells, and I think this is in the interest of protection of correlative rights.

Q. I'll let somebody else ask a question of Mr. Nutter.

MR. RAMEY: Mr. Nance.

RECROSS EXAMINATION

BY MR. NANCE:

Q. Mr. Chairman, Mr. Nutter, a point of clarification. The figure that you would be coming up with as an average or excuse me, the figure that you would be coming up with as a top allowable for each of these pools would be the allowable -- the allowable for all wells in the pool with an acreage factor of one.

A. That's the ceiling. It's not really the allowable. It would be a ceiling that they should not exceed.

And --

Q. What then are you using as the basis for determining an allowable for each of the wells in the pool?

A. They would be reduced, either -- you'd establish this preliminarily on nominations at some point, whenever this thing went into effect, and you'd take your -- your previous base, your 1982 average nominations and average factors, and the nominations for whatever month that was as they relate to that ratio of nominations to allowables in 1982 would be the starting point, and then if nominations went down the following month, you'd reclaculate that back to this 1982 ratio again.

You'd always be working from the 1982 base

line.

If allowables went down by 10 percent, the base line would drop 10 percent, and presumably the pipeline would reduce its takes by 10 percent.

The next month, allowables go up 20 percent so the base line would go up 20 percent, and presumably the pipeline would increase its takes by 20 percent.

Q. I'm still not sure I understand where the calculation of allowables themselves comes from.

A. Well, it would be the latest available production, and you'd -- you'd make your adjustments on those, and the pipeline would report the days on and the days off to the operator. The operator would look and see if he's getting the 20 percent, the 30 percent, or whatever the number of days on or off is supposed to be, to see if they're taking his -- the fair share of gas from him.

Q. What basis, then, do you envision as the guideline for the pipeline to use in either producing or shutting in wells in order to meet his demand?

A. Whatever basis they decide their market demand was down.

Q. No, I'm assuming market demand is down.

A. They know the percentage the market demand is down and they would apply that to the production from the

well, the historic production from the well.

Q. Which wells do they shut in?

A. They shut in all the wells a certain amount of time. It depends on the decrease in market demand, the percent decline in market demand, or the percent increase in market demand. If you get to -- if you get to 100 percent market demand, then you can turn on every well and produce at capacity, and it doesn't exceed these ceilings, fine. If it does exceed these ceilings, then I guess,and some wells are not being produced at full capacity, other wells are being produced at full capacity and excess, then I think that they are overproducing some wells, and underproducing others, and I think that's a case between the pipeline and the producer, then.

Q. All in all, is not what you're proposing here a rather radical departure from the existing rules?

A. It's really not much different than what you're doing right now with the marginal wells. You're reducing the takes ratably for marginal wells, I understand, on a percentage basis as your market declines.

The only thing this is affecting, really, is five percent of the wells in southeast New Mexico in imposing a ceiling on them rather than a top unit allowable. All the other marginal wells are going to operate the same way you're

operating them right now, as I understand your operation.

This is -- we're changing the procedure for five percent of the wells instead of changing the procedure for 95 percent of the wells.

Q. Are you sure that you trust the pipelines to implement something like that?

A. Oh, I have all the faith in the world in you and Babe.

Q. Well, from the pipeline's point of view, to me right now, it looks like this would be an enormous nightmare for us, to try to --

A. Well, I think this is probably the crux of the case here today. I think that you have found it inconvenient to reduce the takes to marginal wells proportionately and you want to establish a top allowable that the Commission will put some numbers in a book and tell you what to do.

I think that a lot of this is for pipeline convenience that wants you to reclassify all these wells as nonmarginal, and I'm sure that it might make some additional work on you. I agree with you 100 percent there, Mr. Nance.

Q. With this burden placed on the pipelines, what function then does the Commission have in protecting correlative rights and preventing waste?

A. The Commission would have no more influence

in protecting correlative rights than it has right now with 95 percent of the wells being classified as marginal. They are not doing anything with those 95 percent that are marginal.

Now, on the other five percent, if you had a real good well in the pool that got way over its allocated ceiling and it wasn't back in line within a year -- now remember we're only talking about five percent of the wells at the maximum -- but if you had a well that got -- overproduced its ceiling and was not reasonably in line at the end of the year, I think that the Commission would play a part in that an offset operator that felt he was being drained by that well that was producing too much could come in to the Commission and ask for a hearing for that operator to show cause why -- or that pipeline, or maybe the operator and the pipeline, show cause why production from that well should not be curtailed in the interest of protection of correlative rights.

That's where the Commission would come in. The Commission wouldn't be just putting numbers in a book every month and forgetting it. That's what they're doing right now on marginal wells, which constitutes 95 percent of the wells. They're putting the numbers in the book and forgetting it. That's the production, and that's the next month's allowable, the book says. And until the computer says that

well is going back up to nonmarginal, that's exactly where it stays, marginal, and nobody ever looks at the numbers.

The Commission might have a little more active part in the future on the five percent of wells that are real good if they start overproducing some as against others. They might have some hearings on a few them.

It would be an incentive for a pipeline to keep them in line to avoid having those hearings.

Q. Mr. Nutter, I'm going to ask one more question, a hypothetical question.

If three wells with similar ability are connected to three different pipelines and the demand of those is sufficiently different that one of the wells is overproduced and one of them is produced at its allowable, and the other is underproduced, what effect can you see if that happens on the correlative rights of the relative -- or of the respective interests in these wells?

A. Well, I would imagine, if that were the case, the one that was overproduced would belong to the pipeline that had the biggest demand, but there would be some place along the line that that operator would be brought in, and that pipeline would be brought in to show why that well should not be curtailed.

You probably wouldn't have a situation where

you'd take the underproduction from the underproduced wells, and as I said before, add insult to injury by taking his underproduction away and giving it to the guy across the street that's overproduced.

This is a travesty when this happens, I think. It helps pipelines keep in balance but it doesn't protect correlative rights, and this system, where you're just going to curtail without giving some allowable to him to help him so he doesn't have to curtail so much, may be more in the interest of protection of correlative rights than cancellation and redistribution of allowable.

MR. NANCE: No further questions.

MR. RAMEY: Mr. Kellahin.

RECROSS EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Nutter, the handwritten exhibit, that's Twenty-three, is it?

A. That's Twenty-two.

Q. Exhibit Twenty-two? When did you prepare this?

A. During the recess. I had -- I had a substitute and it had errors on it so I couldn't introduce it and I had to recalculate some things and bring this one in, and

I just prepared it during our last recess.

MR. KELLAHIN: Mr. Ramey, I have a great deal of respect for Mr. Nutter's ability.

I'm distressed with the fact that I got this exhibit very late in the hearing process, and he put a lot of work and effort into this, obviously, and I'm not in a position and surrounded by some very competent engineers to have digested and analyzed this in a matter of ten minutes.

And I'm concerned as to what the pleasure of the Commission is with regards to how to thoroughly address Mr. Nutter's proposal. I don't think there's any way to read the advertisement or the application Mr. Hartman has filed in this case and be prepared to address the contents of this exhibit.

And I also realize that Mr. Padilla has a witness to put on, and with the number of people that are here for various reasons and it's the end of the day.

My question is, what the pleasure of the Commission is with regards to either taking some time to sit and discuss this in a recess; whether you want to try to crank through the case and finish it up this evening or now; or whether we're going to have the time to do fair justice to Mr. Nutter's proposal.

There are several things that come

to mind. We can either continue the case, I don't know what effect that has on all the parties, and come back at some other time, or maybe it can be agreed upon that written comments within ten days, or something, might address questions raised of the potential solution Mr. Nutter has come up with.

I am very uncomfortable in the last hour of the day to address what I understand Mr. Nutter in good faith has proposed as a solution for a very serious problem, and I think we need some direction from the Commission at this time as to how you want to finish up this case.

MR. RAMEY: Well, right offhand, I'm trying to bull my way through and finish this evening.

There are previous commitments I have until well into July.

MR. CARR: Mr. Ramey?

MR. RAMEY: May it please the Commission, I understand Mr. Kellahin's problem. I didn't see the exhibit until just a few minutes ago myself.

I do appreciate your concern for getting the hearing through. I think that -- I recognize that you have the power to reopen the matter and if you deem that adviseable, it may be in the best interest of reaching a fair decision and we would certainly not oppose a commentary following the hearing. We would like to, if possible, wrap

the hearing up today. Then after you see the comments you think it merits reopening, then of course, we would follow your decision.

I think it would be helpful to go ahead and wrap the hearing up, if possible, and then have a comment period as suggested.

MR. RAMEY: Would you go along with something like that, Mr. Kellahin?

MR. KELLAHIN: I wondered if we might have a stand in place recess for just a few minutes and let me confer with some of the others here and see what they think about it?

MR. RAMEY: I think that would be a good idea.

We'll have a five minute recess.

(Thereupon a five minute recess was taken.)

MR. RAMEY: The hearing will come to order. Mr. Kellahin, any comment?

MR. KELLAHIN: Yes, Mr. Chairman. I would move at this time to strike Mr. Hartman's Exhibits Number Twenty-one and Twenty-two as being outside the call of

this hearing. We have not had a fair and reasonable opportunity to address this radical departure and I think it would undercut the concept of prorationing and we would oppose the introduction of the exhibits as being outside of the scope of this application.

MR. CARR: May it please the Commission, I'm sorry Mr. Kellahin can't take an exhibit and understand it, but we have filed an application. The application is to classify as marginal all gas wells in the prorated pools in southeast New Mexico.

With the application we don't file every exhibit and every detail. This is part of the method for implementing a program whereby all wells are classified as marginal. They are relevant to the case. They've been admitted into evidence. Striking them would tend to do nothing but confuse the matter that is before you and leave the case before you where we are permitted to advance our proposal but not entitled to show you how it works.

We submit that the exhibits have been admitted and should remain part of the record in this case.

MR. KELLAHIN: May we hear from other counsel on that question before you rule, Mr. Chairman?

MR. RAMEY: Any other comments?

MR. NANCE: John Nance for El Paso.

All I can do is support what Mr. Kellahin has said, that I believe what is proposed here is such a radical departure from the existing procedure and is so far beyond the scope of what has been asked for in the application by Hartman, that it should not be admitted. If it has been admitted, it should be struck.

MR. CARR: Our application proposed a departure from existing procedures. The exhibits are to merely to show you how we propose to implement what we are proposing; showing how we are going to implement our application.

MR. LOPEZ: Owen Lopez. We believe the two exhibits should remain a part of the exhibits and we see no more radical departure than the request of El Paso to reclassify 95 percent of the wells in these pools.

These exhibits shed light and should remain part of the exhibits.

MR. PICKENS: I agree with Mr. Lopez that they are part of the record. We've had them discussed. I see no reason why they should be removed at this time.

I would like to follow up on Mr. Kellahin and say that certainly I would like to see an opportunity for written comments after everyone has had a chance to analyze it.

MR. RAMEY: Mr. Kellahin, I've already accepted the exhibits and I think I'll stand with that.

What I am concerned with is do you think you can adequately represent your clients with written comments?

MR. KELLAHIN: I have serious reservations about that, Mr. Ramey. We've examined the application of Mr. Hartman prior to the hearing and this is a total surprise for us as to what he proposes.

With this exhibit I don't feel comfortable with trying to master this exhibit in twenty minutes, even with the aid of a couple engineers that are sitting around me who are still having trouble understanding what--whether this is a fair and reasonable approach, and with the situation I'm in now, I'm forced to say that I'm not prepared to cross examine this witness without some more time, and I would so request on behalf of my clients that this case be continued and reset for an appropriate time.

MR. RAMEY: Do you have any comments, Mr. Carr?

MR. CARR: No, I'm not going to take unfair advantage of Mr. Kellahin. It is a complicated subject and I recognize that.

I do think that it's unfair to say

that we've taken -- or to imply that we've taken unfair advantage of anybody. This is merely how we believe our proposal can be fairly implemented.

I can't tell you -- speak for whether or not Mr. Kellahin can cross examine at this point, if he says he cannot, then that's something that you'll have to rule on.

MR. MOTE: Mr. Ramey, Clyde Mote from Amoco. I was trying to keep quiet but I'd like to say a few words before you make a ruling on that.

We don't know in the short period of time we've had whether or not this helps or hurts us. We don't know how it would affect Amoco. We haven't really had enough time to consider it.

I think I would like to join Mr. Kellahin in saying we don't feel we can represent our client in the short time this afternoon without having some period of time to look at it and why don't we come back to cross examine on it.

MR. RAMEY: Mr. Ives.

MR. IVES: Mr. Ramey, Andrew Ives from Southern Union Exploration.

We also have not had the full opportunity to assess the impact of this aspect of the case, and

the impact this aspect of the case might have on Southern Union Exploration.

I do believe that it might be appropriate for the Commission to grant leave to Mr. Carr to amend the application of Mr. Hartman to give us an opportunity to review in writing,each of us, the proposal suggested by the testimony here at the end of the day, and perhaps after that, allow a period of time before the Commission for that.

MR. LOPEZ: Mr. Chairman, we have no objection to the case being continued to a further date for the cross examination and all.

It's the position of our clients that it is indeed unfortunate that there is a need to meet in adversarial setting rather than with communication and negotiation between parties. We do feel that the proposal of Mr. Hartman deserves serious consideration and perhaps over the period of time the hearing is extended there would be a meeting of parties among themselves.

MR. NANCE: With any extension of the proceeding, we would request that the Commission consider the time critical nature of this proceeding. The fact that the problem has gone on for some period of time and should be solved as quickly as possible.

El Paso has proposed an implementation

date of July 1st for an order based on its application, and we feel that any continuation should be within such a time frame as to allow that July 1st date still to be kept in mind; if we are to continue, a full hearing, cross examination of Mr. Nutter, or presentation of any other evidence, we would hope that that would be done within the relatively near future.

If there is to be a period of time set aside for written comments, similarly we would hope that that would be done within such a time frame as to allow a decision to be made with a 1st of July implementation date still in mind.

MR. RAMEY: I can assure you, Mr. Nance, if this isn't settled today, your July 1st is out the window.

I think we're going to continue these two cases till probably some time in the second week of July. It's impossible now and Mr. Kelley would have to check with his office and find a date, and so we can't -- we can't set a definite date at this time, but if we could get those interested parties to give us a name and address, we will pick out that time and so notify everybody.

We cannot set a date today.

Mr. Padilla?

MR. PADILLA: Mr. Chairman, if I understand the chairman's last statement, that you're going

to now continue the case --

MR. RAMEY: Yes.

MR. PADILLA: I have a witness that I would like to put on now and get that over with, if I could, so that in the event that he has conflict in July, then he doesn't have to be here necessarily.

At the same time I was prepared to move today to exclude the Indian Basin Pool -- Upper Penn Pool from the application of El Paso, on the basis that -- that has been presented no compelling evidence by any of the parties here that that pool should be -- should change or anything to it amended or done to it from what it -- how it's being treated now.

El Paso certainly is not purchasing any gas from there. They are the -- they do have a working interest there, in some of the wells there, but on that basis they can come in just like anyone else and ask to be under the current rules.

MR. RAMEY: We will certainly, you know, allow you to raise the question of the Indian Basin at the hearing in July, at the beginning of the hearing in July.

I have no objection to you putting on your witness now.

MR. PADILLA: Well, let me confer

with him.

MR. RAMEY: Provided he's short.

MR. NANCE: El Paso has no objection at all to the witness being presented now, for purposes of testimony.

MR. PADILLA: Mr. Chairman, I don't think that we'd take very long for testimony today.

MR. RAMEY: All right, Mr. Nutter is excused, and Mr. Padilla, would you call your witness.

LESLIE D. SORENSEN,

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

DIRECT EXAMINATION

BY MR. PADILLA:

Q. Mr. Sorensen, for the record would you please state your name and where you reside?

A. My name is Leslie D. Sorensen. I'm from Midland, Texas, and I work for Moran Exploration, Incorporated.

Q. What is it that you do for Moran Exploration, Incorporated?

A. I'm Division Production Manager, Permian

Basin Division, which is located in Midland, Texas.

Q. Mr. Sorensen, could you tell us what your educational background is?

A. Yes, sir. I graduated from New Mexico STate in 1970 with a Bachelor of Science degree in civil engineering, at which time I went to work for Texaco, Incorporated, in Midland, Texas, and have spent the last thirteen years of my life working for Texaco and others in the petroleum engineering end of the business.

Q. Can you tell us what your work experience in the oil and gas industry as a petroleum engineer is?

A. Well, I've been through production, reservoir, operations, all of the aspects of petroleum engineering, I feel.

Q. Are you familiar with the Indian Basin Upper Penn Pool in southeast New Mexico?

A. Yes, sir.

MR. PADILLA: Mr. Chairman, are the witness' credentials acceptable?

MR. RAMEY: Yes, they are, Mr. Padilla.

Q. Mr. Sorensen, can you generally tell us why you are here today?

A. Moran Exploration, Incorporated, objects to

the case brought before the Commission by El Paso, based on the premise that number one, El Paso does not purchase gas from the Indian Basin Upper Pennsylvanian Pool; and number two, we are influenced by an order which might be written by the Commission here that's favorable to El Paso. We feel like we could be adversely curtailed and might possibly lose reserves.

In other words, we feel that maybe our correlative rights may be violated.

Q. Can you tell us what well or wells you operate in the -- within the Indian Basin Upper Penn Pool?

A. We operate one well, the Mershon Com Gas Unit.

Q. Let me refer you to what we have been -- what we have marked as Exhibit Number One-A and have you identify that for the Commission, please.

A. Exhibit One-A is a P/z versus cum production curve for our particular well.

Q. What does that -- what does that show us about the current status of your well?

A. The current status of our well is in fact marginal, and in the past year it has suffered quite a decrease in bottom hole pressure as can be seen on this Exhibit One-A, which is a P/z versus cum curve.

Q. Let me refer you now to what we have marked as Exhibit Number One-B and have you compare Exhibit One-B with the contents of Exhibit One-A.

A. Exhibit One-B is a series of P/z versus cum curves on surrounding wells in the Indian Basin Upper Penn Unit that directly offset us.

And I think it reflects a marketability of those wells to produce and produce very, very proliferous. They are all, with no exception, all five of these P/z curves show that these five wells are producing in an orderly, probably an efficient manner. They have a very gentle slope and have gentle decline slope to the P/z curves, and they also will point out that the, probably the ultimate recoveries will be in fact recovered by these wells.

Q. Mr. Sorensen, who is the purchaser of the -- also the purchaser of natural gas in the Indian Basin Upper Penn Pool?

A. The only producer that I am aware of is Natural Gas Pipeline.

Q. To your knowledge has Natural Gas Pipeline Company communicated with you as to takes of gas other than through nominations that they have made to the Oil Conservation Commission?

A. No, sir.

Q. Can you tell us something about the reservoir qualities, the kind of reservoir that the Upper Penn Pool is?

A. Well, as has been previously stated during this hearing, it's one of the best reservoirs remaining in the southeastern portion of the State of New Mexico.

It's a very competitive depletion type reservoir with very, very good permeability.

Q. What kind of permeabilities do you have in that pool?

A. Our well, based on drill stem tests done while the well was being drilled, support 4 to 4-1/2 millidarcy permeabilities.

Q. What would happen to -- to your well if it was shut in for a period of time?

A. I think based on our P/z curve, and an exhibit that we will place before the Commission next, --

Q. Are you referring to what we have marked as Exhibit Number Two?

A. Yes, sir.

Q. Can you identify what Exhibit Number Two is and tell us what it is?

A. Exhibit Number Two is a rate/time history, production history of the well since the well was drilled, oil and gas, the upper line being gas, the lower line being oil.

Q. Does that -- does that production history reflect the production of your well?

A. Yes, sir.

Q. Does it show that your well has been shut in at some time?

A. Yes, sir, during the period of June through December, I believe it was, of 1980, our well was shut in due to overproduction. Apparently at that time we were in a non-marginal status.

When we were allowed to come back on line, our production never achieved the level at which it was producing prior to the shut in order.

Q. Would you attribute that to actual decline in the well's reserves?

A. No, I would not.

Q. Why not?

A. I believe that it's possibly a function of reservoir, in that by being shut in for a period of six months, in the quality of reservoir that we are in and the competitiveness of the reservoir that we are in, I believe that it's possible that we suffered by that shut in period of time. By that I mean we suffered a decrease in bottom hole pressure and possibly a loss in reserves. It could be surmised that possibly some of our reserves may be going across our

lines and that's the reason that I would say it's reasonable to assume that our correlative rights may have been violated at that point in time.

Q. Well, how would the proposal of El Paso Natural Gas affect your production from your well?

A. I believe with the short period of time that I have had to look at this situation, by reclassifying our well as a nonmarginal well in a pool of that calibre, would definitely hurt our ability to produce.

An underage situation accrual probably would not make any difference to us because our well would not be capable of making up that underage. We are essentially producing at the rate that we can produce at today, so any -- any accrual of underage would not help us in any way, I would say.

So I would -- I would also say that we would in fact lose those reserves.

Q. Does Exhibit Number Eight submitted by El Paso here support the conclusions that you draw as to what could occur in your well should El Paso's proposal be granted?

A. Well, I'm not sure that -- well, it would, yes, yes, if we were reclassified to nonmarginal, it would definitely hurt us, based on -- on P/z versus Q and a begin-

ning decline rate that we are suffering now.

Q. Let me -- let me show you El Paso's Exhibit Number Eight, and have you tell us what the production marginal versus nonmarginal on that exhibit shows?

A. Well, as previously has been stated, the Indian Basin Upper Penn Gas Pool is as near to a well prorated gas pool as there is in the State of New Mexico, or at least in the southeast portion, if you compare it to El Paso's Exhibit Number Seventeen, which was their ideal prorated pool, and I think Mr. Nutter alluded to that in his testimony.

Q. Does that -- does that show -- does that exhibit indicate that there are some terribly good wells in that Indian Basin Pool that could a considerable amount of gas from the pool wells if the pooled wells were classified nonmarginal?

A. I think it definitely does. I think if you will look at the number of wells in the pool and the number of wells that are classified marginal and the number of wells that are classified nonmarginal, I believe the El Paso exhibit states 15.9 percent, roughly, is what is being taken from marginal wells. The remainder of production is taken from nonmarginal wells, and if you say that there is roughly a 50/50 break in marginal versus nonmarginal, that has to tell you that there are some awfully good wells in there and there

are some that are not so good.

Q. Going back to Exhibits One-A and One-B, and especially One-A, can you tell us what kind of effect on ultimate recoverable reserves El Paso's proposal could have on your well?

A. Well, it's really difficult to put it into numbers, but if you'll look at the decline on bottom hole pressure, we stand to lose probably 30, as a number off the top of my head, maybe 30 percent of our reserves if -- if we're curtailed and shut in, simply by the very nature of the wells that are around us.

Q. Mr. Sorensen, do you have anything further to add to your testimony today?

A. No, sir.

MR. PADILLA: Mr. Chairman, we tender Exhibits One-A, One-B, and Two.

MR. RAMEY: Exhibits One-A, One-B, and Two will be admitted.

Are there any questions of this witness?

MR. PICKENS: I have just a few questions.

MR. RAMEY: Mr. Pickens.

CROSS EXAMINATION

BY MR. PICKENS:

Q. Mr. Sorensen, I don't have any real opposition or anything. I'm Bob Pickens with Marathon and , of course, we operate extensively in the Indian Basin Morrow and the Upper Pennsylvanian reservoirs.

I would say I concur with your analysis that probably the Indian Basin Upper Pennsylvanian Pool should not be within the call of this hearing, because I would think it doesn't concern El Paso Natural Gas.

It may concern Mr. Nutter's proposal, but I would like to see it excluded also if the Commission, and the Chairman concur with us.

For the record, in looking at the June proration schedule, what is the acreage factor attributable to the Moran Exploration Mershon No. 1?

A. I believe it is .58. It's on a 360-acre unit. It's a substandard unit.

Q. Rather than 640?

A. That's right.

Q. Do you know what the April production that was reported to that well is?

A. No, sir, not off the top of my head.

Q. Would you accept if I read you a number of 55,814 for the month of April?

A. I would take your word for that.

Q. Like I say, I'm relying on the correctness of the statistical record here.

And the June allocation for your well is likewise 55,418.

Do you know what the allocation for June for nonmarginal wells is in the Indian Basin Pool?

A. No, I don't; not off the top of my head.

Q. Would you accept, and I think it will show on Mr. Nutter's exhibits or perhaps on the El Paso Exhibits, the number of 42,904 for nonmarginal wells for that month?

A. I'll accept that unless it's proven wrong.

Q. Okay, what I am saying, in other words, in fact for the month of June your well will be producing more than the prorated wells, the wells in a marginal status, is that correct?

A. If that number is correct, that sounds correct.

Q. And Marathon operates many marginal wells in that field and some of them will be producing more than the prorated wells, and I did want the record to reflect that we are in a situation where possibly the method of determining

when a well is marginal and nonmarginal needs to be looked at.

MR. PICKENS: And this is without going to the merits, but we feel the Indian Basin Field should not be part of this hearing.

No further questions of the witness.

CROSS EXAMINATION

BY MR. RAMEY:

Q. Mr. Sorensen, your objections to El Paso's application pertains only to the Indian Basin Upper Penn?

A. Yes, sir.

Q. You don't object to the other pools?

A. I have no comment on that.

Q. Okay, thank you.

MR. RAMEY: Any other questions of the witness? He may be excused.

And these cases will be continued until July the 7th and if we have any problem with that date, we will continue them after that. That's the date as of now.

The hearing will be adjourned.

(Hearing concluded.)

C E R T I F I C A T E

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

Sally W. Boyd CSR

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409