STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

EXAMINER HEARING

IN THE MATTER OF:

Continued and Dismissed Cases

Case No. 9961, Case No. 10029, Case No. 10030, Case No. 10039
Case No. 10031, Case No. 10036, Case No. 10037, Case No. 10040
Case No. 10038, Case No. 10017, Case No. 10019, Case No. 8350
Case No. 10020, Case No. 10021, Case No. 10022, Case No. 10024
Case No. 10025, Case No. 10008, Case No. 10043, Case No. 10044
Case No. 9997, Case No. 9995 Case No. 10045, Case No. 10046
Case No. 10047

TRANSCRIPT OF PROCEEDINGS

BEFORE: MICHAEL E. STOGNER, EXAMINER

STATE LAND OFFICE BUILDING

SANTA FE, NEW MEXICO

August 8, 1990

A P P E A R A N C E S

FOR THE DIVISION:	ROBERT G. STOVALL Attorney at Law Legal Counsel to the Division State Land Office Building Santa Fe, New Mexico 87501
FOR THE APPLICANT: Cases 10038, 9997, 10021	W. THOMAS KELLAHIN Kellahin, Kellahin & Aubrey Post Office Box 2265 Santa Fe, New Mexico 87504

P R O C E E D I N G S

HEARING EXAMINER: This hearing will come to order for Docket No. 2290. Today's date August 8, 1990. I am Michael E. Stogner, appointed hearing officer for today's cases. Before we get started today I'll go through the continued and dismissed cases.

Call first Case No. 9961.

MR. STOVALL: Application of Mewbourne Oil Company for compulsory pooling, Eddy County, New Mexico. Applicant requests this case be dismissed.

HEARING EXAMINER: Case No. 9961 will be dismissed.

* * * * *

HEARING EXAMINER: Call next case, No. 10029.

MR. STOVALL: Application of Giant Exploration and Production Company for compulsory pooling, San Juan County, New Mexico. Applicant requests this case be dismissed.

HEARING EXAMINER: Case No. 10029 will be dismissed.

* * * * *

HEARING EXAMINER: Call next case, No. 10030.

MR. STOVALL: Application Nearburg Producing Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant requests this case be dismissed.

HEARING EXAMINER: Call next case -- I am sorry, case No. 10030 will be dismissed.

* * * * *

HEARING EXAMINER: Call next case, No. 10031.

MR. STOVALL: Application of Nearburg Producing Company for a non-standard oil proration unit, Eddy County, New Mexico. Applicant requests this case be continued to August 22nd, 1990.

HEARING EXAMINER: Case No. 10031 will be continued to the examiner's hearing scheduled for August 22nd, 1990.

* * * * *

HEARING EXAMINER: Next page, call next case, No. 10036.

MR. STOVALL: Application of Texaco, Inc. for amendment of Division Order No. R-8170 to establish a minimum gas allowable for the Eumont Gas Pool, Lea County, New Mexico. Applicant requests this case be continued to September 5th, 1990.

HEARING EXAMINER: Case No. 10036 will be continued to examiner's hearing scheduled for September 5, 1990.

* * * * *

HEARING EXAMINER: Call next case, No. 10037.

MR. STOVALL: Application of BTA Oil Producers for salt water disposal Lea County, New Mexico. Applicant requests this case be dismissed.

HEARING EXAMINER: Case No. 10037 will be dismissed.

* * * * *

HEARING EXAMINER: Call next case, No. 10038.

MR. STOVALL: Application of Nassau Resources, Inc. for infill drilling in the Basin-Fruitland Coal Gas Pool on its Carracas Canyon Unit, Rio Arriba County, New Mexico. I believe Mr. Kellahin would like to enter an appearance.

HEARING EXAMINER: Mr. Kellahin.

MR. KELLAHIN: Mr. Examiner, I represent the applicant in this case. And on behalf of the applicant we'd request this case be continued to the hearing on August 22nd.

HEARING EXAMINER: Thank you, Mr. Kellahin. Case No. 10038 will be so continued to examiner's hearing scheduled for August 22nd, 1990.

* * * * *

HEARING EXAMINER: Call next case, No. 10017.

MR. STOVALL: Application of Meridian Oil, Inc. for unorthodox coal gas well location, San Juan County, New Mexico. Applicant requests this case be dismissed.

HEARING EXAMINER: Case No. 10017 will be dismissed.

* * * * *

HEARING EXAMINER: Call next case, No. 10019.

MR. STOVALL: Application of Meridian Oil, Inc. for an unorthodox coal gas well location, San Juan County, New Mexico. Applicants request this case be dismissed.

HEARING EXAMINER: Case number 10019 will be dismissed.

* * * * *

HEARING EXAMINER: Call next case, No. 10020.

MR. STOVALL: Application of Meridian Oil, Inc. for unorthodox coal gas well location, San Juan County, New Mexico. Applicants request this case be dismissed.

HEARING EXAMINER: Case No. 10020 will be dismissed.

* * * * *

HEARING EXAMINER: Call next case, No. 10021.

MR. STOVALL: Application of Meridian Oil, Inc. for unorthodox coal gas well location, San Juan County, New Mexico. This case is required to be readvertised and continued to August 22nd, 1990.

HEARING EXAMINER: Case No. 10021 will be continued and readvertised for the examiner's hearing scheduled for August 22nd, 1990.

* * * * *

HEARING EXAMINER: Call next case, No. 10022.

MR. STOVALL: Application of Meridian Oil, Inc. for an unorthodox coal gas well location, San Juan County, New Mexico. Applicant requests this case be dismissed.

HEARING EXAMINER: Case No. 10022 will be dismissed.

* * * * *

HEARING EXAMINER: I'll call next case, No. 10039.

MR. STOVALL: Application of Meridian Oil, Inc. for an unorthodox coal gas well location, Rio Arriba County, New Mexico. Applicant requests this case be continued to September

5, 1990.

HEARING EXAMINER: Case No. 10039 will be continued to the examiner's hearing scheduled for September 5th, 1990.

* * * * *

HEARING EXAMINER: Call next case, No. 10040.

MR. STOVALL: Application of Meridian Oil, Inc. for an unorthodox coal gas well location, Rio Arriba County, New Mexico. Applicants request this case be continued to September 5th, 1990.

HEARING EXAMINER: Case No. 10040 will be so continued.

* * * * *

HEARING EXAMINER: Call next case, which is reopen Case No. 8350.

MR. STOVALL: In the matter of Case 8350 being reopened pursuant to the provisions of Commission Order No. R-7745, which order promulgated temporary special rules and regulations for the Gavilan Greenhorn-Graneros-Dakota Oil Pool in Rio Arriba County, including a provision for 320-acre spacing units. This case is requested to be continued to August 22nd, 1990.

HEARING EXAMINER: Said Case No. 8350, which is reopened, will be continued to examiner's hearing scheduled for August 22nd, 1990.

* * * * *

HEARING EXAMINER: I'll call next cases, 10043 through 10047.

MR. STOVALL: 10043 -- each of these cases is an application of D. J. Simmons Company for compulsory pooling in San Juan County, New Mexico. And the applicant has requested that each of these cases be continued to August 22nd, 1990.

HEARING EXAMINER: Each of these cases will be continued to the examiner's hearing scheduled for August 22nd, 1990.

* * * * *

HEARING EXAMINER: On the fifth page, I'll call next case, No. 10024.

MR. STOVALL: Application of Meridian Oil, Inc. for unorthodox coal gas well location San Juan County, New Mexico. Applicant requests this case be dismissed.

HEARING EXAMINER: Case No. 10024 will be dismissed.

* * * * *

HEARING EXAMINER: Call next case, No. 10025.

MR. STOVALL: Application of McKenzie Methane Corporation for an unorthodox coal gas well location, San Juan County, New Mexico. Applicant requests this case be dismissed.

HEARING EXAMINER: Case No. 10025 will be dismissed.

* * * * *

HEARING EXAMINER: Call next case, No. 10008.

MR. STOVALL: Application of Doyle Hartman for a

non-standard gas proration unit, compulsory pooling, and an unorthodox gas well location, Lea County, New Mexico. Applicant requests this case be continued to September 5, 1990.

HEARING EXAMINER: Case No. 10008 will be so continued. The next thing we will --

MR. KELLAHIN: Mr. Examiner, I have one further case to continue.

HEARING EXAMINER: Yes, Mr. Kellahin.

MR. KELLAHIN: Turn back to page number two, it's the TXO case, 9997.

HEARING EXAMINER: Case No. 9997. Yes, sir.

MR. KELLAHIN: I represent the Applicant in that case. And on behalf of the Applicant we request it be continued to August 22nd.

HEARING EXAMINER: Thank you, Mr. Kellahin. Said Case No. 9997 be continued to the examiner's hearing scheduled for August 22nd, 1990.

* * * * *

MR. KELLAHIN: May I ask a point of clarification on one of the Meridian cases, the one that had to be readvertised?

HEARING EXAMINER: Yes, sir. What's that case number?

MR. KELLAHIN: Case 10021.

HEARING EXAMINER: 10021. Okay.

MR. KELLAHIN: I represent the Applicant in that

case. Mr. Bruce represented the opponent and has withdrawn his opposition. And we were proposing to have the case dismissed and returned to the examiner for administrative processing.

HEARING EXAMINER: Yes, Mr. Kellahin.

MR. KELLAHIN: Is that something we can accomplish without readvertising it for a hearing?

HEARING EXAMINER: Mr. Kellahin, I was in receipt, and you'll be getting a correspondence from me concerning that. I do not have it with me. Evidently it has not been typed today. I am referring back to a correspondence to you from me on July 20, 1990 in response to your letter of July 19, 1990, wishing it to be readvertised from the south half east half dedication. That was done pursuant to our correspondence yesterday. And in light of that you will be getting a correspondence from me requesting some additional information for the administrative application which it can still be done administratively. But because the administrative application was for the lay down south half south half and you wish to reorient the east half there was some additional notification that needed to be done for the administrative application.

MR. KELLAHIN: Is the intent then to readvertise it on this docket to satisfy the change for the proration unit in order to return it for administrative processing?

HEARING EXAMINER: No, sir, Mr. Kellahin. The process has already been done. Advertisements have been sent

out for the 22nd. It's already on the docket. But it's our intention to dismiss it at that time.

MR. KELLAHIN: Thank you.

HEARING EXAMINER: If there is no additional problems with the admitted administrative application which I requested from Meridian. You should be getting that letter today. In fact after -- at some recess we'll get with my secretary.

MR. KELLAHIN: That clarifies what was happening. I appreciate it. Thank you.

HEARING EXAMINER: I apologize for yesterday. By the time we got around to that it was a little late.

MR. KELLAHIN: That's all right.

* * * * *

HEARING EXAMINER: Okay. Call next case, No. 9995.

MR. STOVALL: Application of Sendero Petroleum, Inc. for compulsory pooling, Eddy County, New Mexico.

HEARING EXAMINER: At the Applicant's request, Mr. Stovall, this case is going to be continued to the examiner's hearing scheduled for August 22nd, 1990.

* * * * *

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 10036, heard by me on 8 August 1990.

Michael E. Stogner, Examiner
Oil Conservation Division

CERTIFICATE OF REPORTER

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

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

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

WITNESS MY HAND AND SEAL August 20, 1990.

Diane M. Winter

DIANE M. WINTER
CSR No. 414

My commission expires: December 21, 1993

OFFICIAL SEAL
DIANE M. WINTER
NOTARY PUBLIC — STATE OF NEW MEXICO
My Commission Expires

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

EXAMINER HEARING

IN THE MATTER OF:

Application of Texaco, Inc., for amendment of Division Order No. R-8170, as amended, to establish a minimum gas allowable for the Eumont Gas Pool, Lea County, New Mexico

Case 10036

TRANSCRIPT OF PROCEEDINGS

BEFORE: DAVID R. CATANACH, EXAMINER

STATE LAND OFFICE BUILDING

SANTA FE, NEW MEXICO

September 19, 1990

ORIGINAL

A P P E A R A N C E S

FOR THE DIVISION:	ROBERT G. STOVALL Attorney at Law Legal Counsel to the Divison State Land Office Building Santa Fe, New Mexico
FOR APPLICANT and CHEVRON USA, INC.:	CAMPBELL & BLACK, P.A. Attorneys at Law Post Office Box 2208 Santa Fe, New Mexico 87504 BY: WILLIAM F. CARR, ESQ.
FOR CONOCO, INC. and MARATHON OIL COMPANY:	KELLAHIN, KELLAHIN & AUBREY Attorneys at Law 117 N. Guadalupe Santa Fe, New Mexico 87504 BY: W. THOMAS KELLAHIN, ESQ.
FOR DOYLE HARTMAN:	THE GALLEGOS LAW FIRM Attorneys at Law 141 East Palace Avenue Santa Fe, New Mexico 87501 BY: JOANNE REUTER, ESQ.
FOR EL PASO NATURAL GAS COMPANY:	MONTGOMERY & ANDREWS, P.A. Attorneys at Law P.O. Box 2307 Santa Fe, New Mexico 87504-2307 BY: W. PERRY PEARCE, ESQ.
FOR GAS COMPANY OF NEW MEXICO:	PAUL MOLLO

I N D E X

	Page Number
Appearances	2
WITNESSES FOR APPLICANT:	
ROBERT E. HART	
Direct Examination by Mr. Carr	6
Cross-Examination by Ms. Reuter	31
Cross-Examination by Hearing Examiner	37
Cross-Examination by Mr. Stovall	41
Cross-Examination by Mr. Morrow	45
DOUGLAS A. DUKE	
Direct Examination by Mr. Carr	120
WITNESS FOR CONOCO, INC.:	
MICHAEL W. ZIMMERMAN	
Direct Examination by Mr. Kellahin	47
Cross-Examination by Mr. Stovall	68
Cross-Examination by Hearing Examiner	74
WITNESS FOR DOYLE HARTMAN:	
MICHAEL STEWART	
Direct Examination by Ms. Reuter	82
Cross-Examination by Mr. Morrow	118
Certificate of Reporter	129

HEARING EXAMINER: At this time we'll call Case 10036, Application of Texaco, Inc., for amendment of Division Order No. R-8170, as amended, to establish a minimum gas allowable for the Eumont Gas Pool, Lea County, New Mexico.

Appearances in this case?

MR. CARR: May it please the Examiner, my name is William F. Carr with the law firm of Campbell & Black P.A., of Santa Fe. We represent the Applicant, Texaco, Inc. We also enter our appearance for Chevron, USA, Inc.

HEARING EXAMINER: Other appearances?

MR. KELLAHIN: Mr. Examiner, I'm Tom Kellahin of the Santa Fe law firm of Kellahin, Kellahin & Aubrey, appearing on behalf of Conoco, Inc., and Marathon Oil Company, in support of the Applicant.

HEARING EXAMINER: Other appearances?

MR. MOLLO: I'm Paul Mollo, Gas Company of New Mexico, and I'd like to read a letter that was written by David Kirkland, our Manager of Production Control.

HEARING EXAMINER: I'm sorry, your name, sir?

MR. MOLLO: Paul Mollo.

MS. REUTER: Mr. Examiner, I'm Joanne Reuter of the Gallegos law firm of Santa Fe, New Mexico, and I represent Doyle Hartman who is in support of the application.

MR. PEARCE: Mr. Examiner, I'm W. Perry Pearce of the Santa Fe office of the law firm of Montgomery & Andrews, appearing in this matter on behalf of El Paso Natural Gas Company.

HEARING EXAMINER: Anybody else? Witnesses? Mr. Carr, how many witnesses do you have?

MR. CARR: I have two witnesses.

HEARING EXAMINER: Ms. Reuter, how many witnesses do you have?

MS. REUTER: One witness.

HEARING EXAMINER: Mr. Kellahin?

MR. KELLAHIN: One, sir.

HEARING EXAMINER: Mr. Pearce, any witnesses?

MR. PEARCE: None, Mr. Examiner.

HEARING EXAMINER: Thank you. Could I get all the witnesses at this time to please stand?

(Witnesses sworn.)

MR. CARR: May it please the Examiner, there are copies of Texaco's exhibits here in the box if anybody is interested in having a copy.

ROBERT E. HART,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. CARR:

Q. Will your state your full name for the record, please.

A. My name is Robert E. Hart.

Q. Mr. Hart, where do you reside?

A. In Hobbs, New Mexico.

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

A. I'm employed by Texaco, Inc., as a production engineer.

Q. Have you previously testified before the New Mexico Oil Conservation Division?

A. Yes, sir, I have.

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

A. Yes, sir.

Q. Are you familiar with the application filed in this case on behalf of Texaco Inc.?

A. Yes, I am.

Q. Have you studied the production history of

the Eumont Gas Pool?

A. Yes.

Q. Are you familiar with the allowables for the Eumont Pool and recent changes in these allowables?

A. Yes, sir.

Q. Have you previously testified for Texaco at the monthly allowable hearings?

A. Yes, sir, I testified in November and December of 1989 and then again in April of 1990 at the monthly gas proration hearing where we were applying for increased allowables in the Eumont field.

MR. CARR: Mr. Catanach, are the witness's qualifications acceptable?

HEARING EXAMINER: They are.

Q. (BY MR. CARR) Mr. Hart, would you briefly state what Texaco seeks with this application?

A. Texaco seeks the establishment of a minimum allowable equivalent to 600 Mcf per day for an acreage factor of 1 in the Eumont Yates Seven Rivers Queen Gas Pool. We request that minimum allowable for a period of three years, at which time the Commission would reopen the case, evaluate it, and make any adjustments necessary.

Q. When was Eumont Pool created?

A. The pool was created February 17, 1953.

Q. Would you refer to page 1 in Exhibit No. 1, which is the three-ring binder with the Texaco logo, and identify what the first page is.

A. Yes, sir. This is a plat of the Eumont Gas Field, the shaded area being the Eumont Pool or what is defined as the Eumont Pool itself. It's approximately 179 square miles, located in Lea County, New Mexico, and that's the northernmost northeast boundary is approximately nine miles southwest of Hobbs.

Q. How many acreage factors are there in the pool at this time?

A. There's just a little over 400.

Q. What are the vertical limits of the pool?

A. The vertical limits of the pool extend from the top of the Yates formation to the bottom of the Queen formation, thereby entailing all of the Yates, Seven Rivers, and Queen formations.

Q. Let's go to page 2 in this exhibit, and I would ask you first to identify what this is.

A. Page 2 is a plot of field allowable and production for the Eumont Yates Seven Rivers Queen. What you can see from this plot is, number one, that current allowables are lower than historical

allowables have been. And by that I mean allowables in the early 1980's.

You can also see tremendous fluctuations in the allowable in this field, and that has destroyed operator confidence in committing funds to invest in this field.

Q. When we look at the exhibit, the period in and about 1980, approximately what was the allowable rate?

A. Approximately 600 Mcf per day for an acreage factor of 1.

Q. If we go to the 1990 portion of the graph, you can see that the allowable line runs above the production line. Can you explain the discrepancy in those two lines?

A. Yes, sir. When we asked for administrative adjustments, which were granted in January, February, and March of this year, allowable at that time was being assigned to wells that could not produce it, and that's why there's a very large gap between the allowable and production.

But I would note on this plot also that July production, as indicated by the last point on the blue curve, has in fact gone above allowable for that month and is on the rise.

Q. How does the July production figure compare with recent production from the pool? How does it compare to prior peak months in recent years?

A. If I could, I'd like to address that on a later.

Q. Let's go then to Exhibit 2, and I'd ask you to review that. I'm sorry, the next page, which is page 3 in Exhibit No. 1.

A. Page 3 is a plot of total field and nonmarginal acreage factors for the Eumont Yates Seven Rivers Queen. The red line indicates total field acreage factors, and, of course, the green line indicates nonmarginal acreage factors.

Q. What does this show?

A. If you'll look at the nonmarginal acreage factors, you can see that in mid-1983, there was a tremendous increase in those nonmarginal acreage factors, and that was as a direct result of decreased allowables in the field. And that trend continued until about 1988, where it started on the decline.

I would note that as a result of administrative adjustments, which resulted in the 600 a day increased allowable for five months out of this year, we've seen an acceleration in the decrease of nonmarginal wells in the field. And we're trending

back to a situation where allowable is again being assigned to those wells that can produce it.

Q. Okay, Mr. Hart, let's now go to page 4 of this exhibit. Identify this and review it for Mr. Catanach.

A. Page 4 is a graph of normalized nonmarginal production and allowable, and by that I mean that it is put on an acreage factor basis. This takes out any effects in the increase or decrease of the number of nonmarginal wells in the field.

Q. What you've done here is take the allowable and divide it by the number of acreage factors; is that correct?

A. By the number of nonmarginal acreage factors, yes.

Q. Would you review the exhibit?

A. Basically the same conclusions can be drawn or some of the same conclusions can be drawn from this page as the previous field page. Allowables are much lower now than they were in the early 1980's. A large fluctuation in allowables has again destroyed operator confidence.

And there is a few things that I would like to point out about the end production point on this, that being July production.

Number one, it in fact on a per-acreage-factor basis did exceed the allowable for that month. And not only did it exceed it, July production was in fact higher -- on a per-acreage basis, higher than it had been in four years, as you can see from the plot.

And I would add also that not only was this production higher, it occurred in a historically low production month.

In other words, July production on an acreage factor basis exceeded, say, January production, which is a typically high production month in both 1990 and 89, 88, and 87.

Q. Let's go now to page 5 of this exhibit.

A. Page 5 is a graph of nonmarginal and marginal production. And the conclusions or the trends that we can see here is that in the early 1980's, when allowables were high, marginal production was the majority production in the field. As allowables dropped, the number of nonmarginal acreage factors increased. And you see in 1986, that trend actually reversed to where nonmarginal production was a greater portion of the production in the field.

The significance of that is that, obviously, a typical Eumont well is not -- doesn't have the deliverability now that it did in the early

1980's, but as a result of the reclassifications to nonmarginal, that nonmarginal production became the majority of the production in the field.

But as a result of the administrative adjustments, in other words, the increase to 600 Mcf a day granted by the OCD in five months of this year, we have seen a number of reclassifications, and that trend has again reversed.

Q. Let's move on now. Let's go to page 6 of this exhibit. Would you identify this for the examiner.

A. Page 6 is a brief Eumont Yates Seven Rivers Queen pool history. We indicated before that the pool was created on February 17, 1953, and numerous amendments changing pool boundaries has occurred since that time. Again, the vertical limits extend from the top of the Yates to the bottom of the Queen formations.

Then in January 1 of 1954, proration became effective.

Q. When did Texaco first become concerned about the allowable rate in the Eumont Gas Pool?

A. We became concerned in approximately September or October of 1989.

Q. Could you, proceeding on with page 6 of

this exhibit, review for Mr. Catanach the events which have occurred since that date which result in today's hearing?

A. Yes, sir. As a result of concern about allowables, Texaco presented testimony at the November 15, 1989, gas proration hearing in which we were asking for increased allowables in the Eumont field. As a result of that testimony, no increase was granted at that time.

We again testified on December 13, 1989, and at that time we presented as exhibits ballots from 90 percent of the operators in the field supporting our proposal. As a result of that testimony and the submitted ballots, we did receive an allowable equivalent to 600 Mcf per day for the months of January, February, and March of 1990.

Then in April of 1990, allowables were decreased for nonmarginal acreage factor to a level approximately 240 Mcf per day. At that time Texaco, as well as several other operators, met with OCD officials here in Santa Fe, and it was determined at that meeting that the operators try to come up with a minimum allowable for the field.

Then on May 9, 1990, an operator meeting was held in Hobbs, and at that meeting it was

determined that Texaco should send out ballots to gather data supporting our application or supporting a minimum allowable proposal.

Then on July 12, 1990, we presented the findings of that survey to the OCD officials. And it was determined at that time that we should bring this application before an examiner hearing.

Q. That's why you're here today?

A. Yes, sir.

Q. Let's go to page 7 of the exhibit, and would you just identify what this shows?

A. Page 7 is an operator's ownership survey, and what this does is list all the operators in the Eumont field alphabetically. There's 41 of them. And it also lists the percent of acreage factors that they operate. And it's broken out by total field acreage factors and then also broken out by marginal and nonmarginal acreage factors.

Q. If we go to page 8, that's just a graphic presentation of the information on page 7?

A. Yes, sir, it is. It just makes it a little easier to identify who operates what. The red bar is the percent of total field. The blue bar is the percent of marginal acreage factors. And, of course, the green bar is the percent of nonmarginal acreage

factors.

Q. Mr. Hart, could you review for Mr. Catanach how the proposed 600 Mcf per day figure for a three year period of time was actually derived?

A. Yes, sir. That was derived from surveys sent out as determined at the May 9th operator meeting. We took the responses to that survey and averaged those values and came up with a 600 Mcf per day minimum allowable for a period of three years.

Q. If you could go to page 9 of this exhibit and identify what this is, please.

A. This is the operator's survey summary. Basically what this is is just listing in a tabular form the responses that we received back from operators.

The first column is the particular operators recommended minimum allowable. The second column represents drilling and completion costs. And the third column represents gas price.

And I would point out that the fifth response down, the $1.51, that was actually given in MMBtu, and, as well, the seventh response down, the $1.29, was also given in MMBtu, but the impact of that, it changes those particular answers about 10 percent, which translates to a two or three cent

increase in the gas price when averaged in.

Q. So the gas price, although it's reflected at the top as being in dollars per Mcf, it is distorted by those two numbers which would result in perhaps a two-cent change in the bottom figure?

A. Yes, sir.

Q. Would that in any way affect the conclusions which come from your work on the Eumont Pool?

A. No, it would not.

Q. If we go to risk factor, you've got a risk factor average of 68.5 and an asterisk after that?

A. Um-hm.

Q. Could you explain -- the asterisk indicates that the responses were corrected. Could you explain how that was done?

A. Yes, sir. These responses were corrected to a percent chance of success. If you'll look at, for example, the third response down, it says 15 to 20. We talked to Chevron, and they indicated that that actually meant an 80 to 85 percent chance of success for drilling a well.

Q. It's also got some 200 percent numbers. What do those actually indicate?

A. Those actually indicate a 50 percent chance

of success.

Q. At 200 percent risk or a 50 percent chance of success?

A. Yes, sir.

Q. So what you have done is corrected those to get your average figure of 68.5?

A. Yes, sir, that's right.

Q. So if we go through this exhibit, you've got a recommended minimum allowable average of 561. It was on that basis that you requested the 600 minimum allowable?

A. Yes. Actually, when the original proposal was written, we had not received a couple of these surveys back, and the actual recommended minimum allowable when the proposal was written was 583 Mcf per day.

Q. When we look at drilling and completion costs, we get an average of $264,700?

A. Yes, sir.

Q. We get a gas price of $1.30, subject to the two-cent adjustment?

A. Yes, sir.

Q. And a risk factor of 68.5 percent?

A. Yes, sir, that's right.

Q. Behind this operator's survey are copies of

the actual survey forms; is that right?

A. Yes, sir, they are.

Q. So you can look at the summary on page 9 and relate it to the following survey responses and identify who responded and what the actual numbers were?

A. That's correct.

Q. When you put your numbers in the risk factor column, you were simply taking the numbers that were reported and including them in the summary?

A. That's right.

Q. Mr. Hart, some of the answers to the survey questions are just numbers that have been included in the preceding page. There are, however, several other questions that I'd ask you to review with Mr. Catanach and provide him with a summary of the responses.

I think if you could focus on the first three questions and also question No. 6.

A. Okay. The first question is, "Are any of your wells capable of producing more than the average nonmarginal allowable?" As you can see by these included exhibits, all operators indicated yes, they did have those wells.

The second question asks the operators if they felt there was a market demand for gas produced

in excess of current allowables, and, again, all operators indicated yes.

The third question asks operator opinion of New Mexico gas being displaced by outside sources as a result of low allowables. And all of them said yes except for one which applied only to their interest. They said that it wasn't displaced as to their interest.

And then the sixth question asked what activities their individual company could engage in if a minimum allowable was in effect, and virtually all of the operators stated that they could engage in additional development drilling, recompletion works, and also stimulation work.

Q. Mr. Hart, I'd now like you to go back in the exhibit to page 20. Some of the books are not numbered. It is the 20th page, and it's entitled at the top "Economic Summary For 600 Mcf Per Day Minimum Allowable."

On that page, I'd like you first to go to the assumptions that are set out below the numbers and review each of those, please.

A. The first assumption there was economic parameters used to actually calculate the economics. The average drilling and completion cost, $265,000,

average gas price $1.30 per Mcf, and average risk factor, 31.5 percent, which is basically 100 percent minus the 68.5 that you saw on the previous page.

Q. If we take these, you've indicated they are average values. These are not Texaco numbers; is that correct?

A. Yes, sir, these are not any one company's numbers. These are average numbers based on operator responses to our survey that we sent out.

Q. Let's go to the second assumption set forth on this exhibit.

A. The second assumption is that there was already existing production of 160 Mcf per day for an acreage factor of 1, and that was obtained by drilling proposals that Texaco had out at the time or actual wells that were being drilled at the time.

Q. To be sure we understand this figure, 160 Mcf per day is what you are using as an average current production from each acreage factor in the Eumont Pool?

A. Yes, that we had drilling wells proposed on.

Q. And this takes into account that on most, if not all of these units, there is some existing production?

A. Yes, sir.

Q. When you look at a minimum allowable of 600 Mcf per day, this would apply to these acreage factors, and therefore you are taking this average figure of 160 Mcf per day and factoring that in to account for existing production on the units?

A. Yes, sir.

Q. The next line in this second assumption addresses an acreage factor of .5. Would you explain that?

A. Yes, sir. For an acreage factor of .5, we assumed no existing production was present, and again that was based on an actual Texaco well that was proposed to be drilled on an 80-acre tract.

Q. Let's go now to your decline rate. How was that obtained?

A. The exponential decline rate of 11 percent was obtained by taking typical Eumont wells that Texaco operated -- I think I took two or three of them, and averaged those decline rates, and 11 percent was what the value was.

Q. In your opinion, is this an appropriate decline rate to use as an average for the wells in the Eumont Pool?

A. Yes, sir, I think it is.

Q. Now let's go to the fourth assumption.

A. The fourth assumption is an operating cost of $6,000 per well, and that was obtained, number one, by response from Conoco. They indicated that's what they would use for operating cost per well, and that's also a very typical number that Texaco would use in economics.

Q. Using these numbers and assumptions, let's go to the top of this exhibit, and I'd ask you to come across each of the two columns, first going with a full acreage factor of 1.

A. Yes, sir. The first line on this economic summary is for an acreage factor of 1. You can see there that the production increase is 440 Mcf per day, and, again, that is obtained from taking the 600 Mcf per day minimum allowable and subtracting existing production of 160 Mcf per day. And you get on the rate of return there, 47 percent and a payout in 2.9 years, net present value $378,000.

Then on the second line, this would be the economic summary for an acreage factor of .5. You can see no existing production was assumed for an acreage factor of .5. Thus you get the full 300 Mcf a day, which translates to half of the 600, of course.

The rate of return there was 30 percent,

and payout would be 4.5 years, with $190,000 net present value, which are marginal economics.

Q. How do the economics for the .5 acreage factor compare to the economics for wells or tracts in the Eumont Pool or without the minimum allowable?

A. The line with the .5 acreage factor can actually be translated into economics at current allowables for an acreage factor of 1. By that I mean that current, September allowable for a nonmarginal acreage factor is 454 Mcf per day. If you subtract out that existing production of 160 Mcf per day, you get approximately 300 Mcf per day for your production increase.

And that translates into marginal economics at current allowables for an acreage factor of 1 and virtually knocks out any drilling on an 80-acre proration unit.

Q. So what you're saying is if you take the September allowable, and you deduct from that the average 160 Mcf per day figure that you are using to represent current Eumont production on the acreage factor, you come out with a production number of approximately 300 Mcf per day?

A. Yes, sir.

Q. And that is the same number that under the

minimum allowable you have for the .5 acreage factor?

A. Yes, sir, it is.

Q. If you go across, that again shows what your rate of return and your payout on investment would be, and those are marginal economics from your point of view?

A. Yes, sir.

Q. When you go forward under present economics with a proposal, are these the kinds of economics that are considered when you decide, when your company decides where it will invest funds?

A. Yes, sir, they do look at these generated numbers to decide where they want to invest their funds.

Q. Under current allowable rates, are these the kind of marginal economics which are precluding additional development of the Eumont Pool?

A. Yes, sir.

Q. Is this the reason that you need to have a minimum allowable rate of 600 Mcf per day?

A. Yes, sir, it is.

Q. In summary, what is the result of the lower allowable on economics as they relate to further development in the Eumont Pool?

A. Basically, it prohibits operators from

committing funds to do additional development drilling in the Eumont Pool.

Q. Let's go to the next page, page 21 of this exhibit, and I'd ask you to identify that and just explain why it's included in this information.

A. Yes, sir. That is an AFE for a drilling well in the Eumont Yates Seven Rivers Queen Gas Field that Texaco recommended. This well has actually been drilled. The purpose of this exhibit is just to show the bottom line cost of drilling a Eumont well and indicate that actual Texaco costs agree pretty closely with what average drilling costs were for other operators in the field.

Q. Let's go now to the next page of this exhibit, page 22, which is entitled "Expense Summary." Could you tell us what this exhibit shows?

A. Basically, this exhibit shows what kind of funds could be committed to the Eumont field if we had increased allowables. These costs or moneys actually represent money that has been spent by Texaco or will be spent by the end of the year. I would point out that the only way that we could afford to do this is because of the increased allowables that we enjoyed in five months out of this year.

Q. Could you just review the kind of projects

that have been undertaken by Texaco this year in this pool as a result of the higher allowables in the first three months of the year?

A. Yes, sir. The first line there shows completed workovers. To date, we've done 14 of these, for a total cost of $928,000.

The second line, pending workovers, is workovers where paperwork has been turned in and approved, but they have not been done yet, for $800,000.

We have an additional three potential workovers that have not been written up yet. We've drilled seven wells in the field since we enjoyed increased allowables in five months of this year, that being January, February, March, May and June.

And then we also have another potential drilling well where paper has not been turned in on, and $465,000 worth of equipment installations, most of them being pumping equipment installations on these Eumont wells, for a total investment in the Eumont field by Texaco or potential investment of a little over $4.5 million.

Q. Mr. Hart, in November of 1989 when you testified, you indicated that with higher allowables, Texaco could become more active in this pool; is that

not correct?

A. Yes, sir. We did indicate if allowables were higher, we could engage in additional drilling locations, we could go in and economically rework wells, and I think this exhibit clearly shows that we have done that based on the increase in allowables.

Q. In your opinion, does this exhibit indicate what all operators -- the kind of activity that all operators can undertake in the Eumont Pool if there are more favorable economics?

A. I think it is a good indication of that.

Q. Let's go to page 23, and I'd ask you next to identify what that is.

A. Page 23 is just a summary of ballots that we received from other operators in the field. Again, they're listed alphabetically by operator. And then the second column is actually the percent of total field acreage factors that they operate.

And you can see that we have ballots from 93.83 percent of the acreage factors in the field supporting this minimum allowable proposal, and those ballots are attached behind this exhibit.

Q. And did you receive any negative votes at all?

A. No, sir, we did not.

Q. Could you just, in summary, state what you believe the impact of low allowables are having on development of the Eumont Gas Pool?

A. I think the low allowables are preventing the production of reserves that otherwise could be recovered with a better economic opportunity.

Q. And in that regard, do you believe that setting a minimum allowable for a three-year period of time will have a positive impact on the correlative rights of interest owners in this pool?

A. Yes, sir, I do, and that is merely because it gives operators the opportunity to produce their reserves from tracts that they operate.

Q. What impact would approval of a 600 Mcf per day minimum allowable have on waste in this pool?

A. I think there would not be as much waste with a minimum allowable in effect because you could more economically produce reserves, and in addition to that, you could economically go in and produce reserves that would be otherwise unrecoverable because of development drilling, reworks, that sort of thing.

Q. In your opinion, would granting this application result in the recovery of gas that otherwise would not be produced?

A. Yes, sir, it would.

Q. Was notice of today's hearing provided as required by OCD rules?

A. Yes.

Q. Who was notified of this application?

A. All operators operating Eumont wells were notified. All operators within a mile radius of the pool boundaries were notified. Unleased mineral interest owners were notified. All transporters, pipelines, and purchasers were notified.

Q. Were lessees or mineral owners within the pool on tracts with no well located thereon also notified?

A. Yes, sir, they were.

Q. Were all of these sent by certified mail?

A. Yes, sir.

Q. Mr. Hart, in your opinion, will approval of this application be in the best interest of conservation, the prevention of waste, and the protection of correlative rates?

A. Yes, sir, I think it will.

Q. Was Chevron Exhibit No. 1 prepared by you?

A. Texaco Exhibit, yes.

Q. Texaco Exhibit No. 1 prepared by you?

A. Yes.

MR. CARR: At this time, Mr. Catanach, I

would move the admission of Texaco Exhibit No. 1.

HEARING EXAMINER: Exhibit No. 1 will be admitted as evidence.

MR. CARR: Mr. Catanach, I also have but it's in the file room, not with me at the moment, an affidavit confirming that notice has been given as reported by Mr. Hart, and with your permission, during the first break, I will bring that to you as well. We ask that it be included in the record.

HEARING EXAMINER: That will be fine.

MR. CARR: That concludes my direct examination of Texaco's witness, Mr. Hart.

HEARING EXAMINER: Any questions of this witness?

MS. REUTER: I have a few questions I'd like to ask.

CROSS-EXAMINATION

BY MS. REUTER:

Q. You stated earlier that your economic survey was based on an average or typical Eumont well; is that correct?

A. Yes. The economic summary was based on responses that we received back from other operators in the field on the surveys that we sent out. It is no one company's numbers.

Q. And you also stated that the decline rate of 11 percent that you were using was appropriate as an average decline rate for the Eumont Gas Pool?

A. Yes, ma'am.

Q. That's also correct?

A. Yes.

Q. Would you say that's a conservative figure?

A. No. I would say that that's a pretty accurate figure.

Q. In the example that you have on the economic summary, you're showing an incremental production increase of 440 Mcf per day based on an assumed current production of 160 Mcf per day for an acreage factor of 1; is that correct?

A. Yes. That was based on drilling proposals that Texaco either had in the works at that time or were in fact active in drilling.

Q. You haven't testified to what these projections show as to recoverable reserves. So I'd like to ask you, Mr. Hart, based on that scenario that we just discussed, with an 11 percent decline rate, assuming no escalation of gas prices or operating costs, wouldn't that yield an increased recovery of a total of 1.41 Bcf per acreage factor of 1?

A. I have not done any economic calculations

myself, but those are reasonable numbers, yes, or reserve calculations, excuse me.

Q. I'd like to take you to a hypothetical very closely related to the scenario you show here. If you assume an existing production of zero for an acreage factor of 1.0, do you believe your average or typical New Mexico infill well would be capable of producing the requested 600 Mcf per day allowable?

A. Yes, it would.

Q. In other words, there still would be prorationing in the Eumont with a minimum allowable of 600 Mcf per day; is that right?

A. Yes. As a matter of fact, there are numerous examples of tracts in the field that are capable and well in excess of 600 Mcf per day per acreage factor. Texaco has several of those as well as some other operators.

Q. Will any well that you contemplate drilling be allowable constrained at 600 Mcf per day? I mean would they be similar to that?

A. I'm not sure I understand.

Q. Based on your expert knowledge as an engineer, would any well that you contemplate drilling in the future in the Eumont Pool produce in excess of 600 Mcf per day?

A. Yes.

Q. And therefore they would be allowable constrained at 600 Mcf per day?

A. Yes, ma'am.

Q. Back to the scenario, the hypothetical scenario we had before, if you assume that you have an existing production rate of zero for an acreage factor of 1, an initial producing rate of 600 Mcf per day for an average new infill well, an 11 percent decline rate, same as before, no increases or changes in operating costs or pricing, it would appear based on normal calculations that your estimated recoverable reserves for an average new well would increase from 1.41 Bcf to 1.94 Bcf. Does that sound like a reasonable figure to you?

A. Well, the 440 Mcf per day, just because you have an incremental increase of 440 Mcf per day does not mean that that well won't produce more.

Q. Right.

A. So basically your decline rate is not going to be as great if you have that well cut back because of allowable restraints.

Q. Okay. I'm getting back to something I was discussing with you before. I'm looking at what the projected reserves were, just as we looked at 1.41 on

440. If you have production at 600 Mcf per day with a new infill well, wouldn't the recoverable reserves for such a well, assuming that it's going to produce 600 Mcf per day, be 1.94 Bcf?

A. Again, I haven't prepared any reserve calculations for this hearing, but I think, in my opinion, those are reasonable numbers.

Q. You seem to indicate that the reserves could be even greater than could be produced under the 600 Mcf per day cap. In other words, you said earlier that there would be wells and there are wells that could produce more than a 600 Mcf per day cap?

A. Yes.

Q. So the total reserves in the pool, based on the two scenarios that we discussed, could be even greater than 1.94 Bcf?

A. Again, I haven't done any reserve calculations, but I think that would probably be fair to say.

Q. Is that your opinion?

A. Yes.

Q. As an experienced engineer working in southeast New Mexico for a well-known major oil company, that's Texaco rather than Chevron, is it therefore your opinion that expected recoveries from

newly drilled infill wells could range between 1.41 and 1.94 Bcf per day?

A. I think that's reasonable, but, again, I have no numbers to back that up with.

Q. In your opinion, is the Eumont reservoir a high quality reservoir?

A. I think so, yes.

Q. In your opinion, would it be capable of doing that?

A. I think so.

Q. You wouldn't be asking for a 600 Mcf a day --

A. No.

Q. -- allowable otherwise and corresponding deliverability?

A. Right.

MS. REUTER: I have nothing further.

THE WITNESS: The bottom line is that there are acreage factors out there that are capable of producing well in excess of 600 Mcf per day.

MS. REUTER: Thank you.

HEARING EXAMINER: Are there other questions of this witness? Mr. Kellahin?

MR. KELLAHIN: No, sir.

CROSS-EXAMINATION

BY HEARING EXAMINER:

Q. Mr. Hart, what was the effect of the short-term increase in gas allowables that was in effect during 1990?

A. For Texaco, that is the only reason that we engaged in drilling wells and recompletion work, as we saw the amount of money that we have spent in the field on a later page. We did all of that work as a direct result of the OCD's response to increasing the allowables in the Eumont field for five months out of this year.

Q. That was a direct result? None of that work would have been done if the allowable would not have been increased?

A. There are very few -- I don't know exactly what projects would have been done, but there are very, very few of them that we could have afforded to do without that increased allowable. There's no way that we could have spent that much money without the confidence of increased allowables to meet our economics. And we did that work because we were convinced that the OCD would keep those allowables high because at our original testimony in the November and December of 89 gas proration hearings, we did ask for that administrative adjustment for a period of one

year. So we felt confident that after January, February, and March, that we were going to continue to get those increased allowables.

Q. If I recall correctly, one of the reasons that the allowable was bumped back down was because we didn't see a corresponding increase in production in the field? Is that your understanding?

A. Yes, that's my understanding. And if you'll look at page 4, I believe, it's the graph of normalized nonmarginal production and allowable, you can see that production did drop, but the reason for that is because many operators in the field didn't have the confidence that Texaco had in that allowables would stay high, and they didn't want to go into a high gas price area where they were overproduced.

And as a matter of fact, if you look in the gas proration schedules for the months of March, April, May, and June, you can see numerous examples of nonmarginal wells shut in because they didn't want to go into that high priced area overproduced.

But, on the other hand, you can see that last point, production is in fact responding to those increased allowables. And, again, I would point out that on a per acreage factor basis, July 1990 production was the highest it's been in four years,

and I think that's a direct result of the increased allowables.

Q. On Exhibit No. 5, that trend that you said reversed itself in 1990, was that a result of the higher allowables?

A. Yes, sir, because those higher allowables resulted in reclassification of wells from nonmarginal to marginal, and, in effect, you had less nonmarginal wells out there and again reversed itself to an historical trend in the early 1980's.

And adding to that, I think by reclassifying several nonmarginal acreage factors to marginal, you're again entering the trend where allowable is indeed being assigned to those tracts or acreage factors that are capable of producing it.

MR. MORROW: You're saying even with the current system then that would be the case?

THE WITNESS: Yes. The result of the increased allowables that we saw in five months out of this year, in my opinion was why this trend reversed itself.

MR. MORROW: Reclassified a lot of wells that couldn't make it and got the allowable for the wells that could make it?

THE WITNESS: Yes, sir.

MR. MORROW: And they produced it, and that increased the future allowables?

THE WITNESS: Yes. As a matter of fact, this September's allowable with no administrative adjustment added in is quite a bit higher than 89's September allowables. So I think the administrative adjustments that have occurred in the past have done a lot of good for the allowable situation, but we still need that minimum allowable to provide a system that the operators can rely on, and they can commit some money to the Eumont field.

Q. (BY HEARING EXAMINER) Would the administrative adjustment, given enough time to work, would it have the same effect of the minimum allowable?

A. In my opinion, it would, but, again, if you put a minimum allowable in effect, you have a system there that operators can rely on and sell their management, that indeed they can invest money into this particular field and have a chance of getting their payout.

Q. What's the three years' significance, Mr. Hart?

A. Again, that three years was derived strictly from average values based on surveys that we

received back.

CROSS-EXAMINATION

BY MR. STOVALL:

Q. In other words, there's no magic to the three year?

A. That was operator opinion.

Q. What would be your opinion as an engineer with Texaco if in fact a minimum allowable were established for the field with no time limit, that it could just be adjusted upon application and hearing, or OCD could initiate an action or operators could to adjust that or eliminate it?

A. I think the three-year time period has significance in that that system is there for a period of three years, and you can get your payout, for the most part, back in that period of time. So it gives operators some assurance that the minimum allowable is going to be there for three years and would in fact allow them to commit money to development, drilling, or whatever in the field.

Q. What I'm suggesting, maybe I didn't make myself clear, rather than put that three-year limit on it, what would be your opinion if the OCD said there will be a minimum allowable in this field, period, and then it wouldn't automatically terminate at the end of

any specified period, three years or otherwise, but it would continue unless an application were brought either by the Division or an operator at some future time to adjust it, either upward or downward?

A. In my opinion, that would be okay.

Q. I mean, two years down the road, you're going to be looking at one year left if you've got a three-year period on it, and you've still got to make the same management decisions, don't you?

A. Again, some of our economics show there was a payout of 2.9 years. Like I said before, I think the reason that operators suggested that period of time was to have a system intact where they could rely on those allowables to get their payout.

Q. I understand that, but that makes the assumption that the investment is made today, or the day the order is entered, and so you have to make all those investments and complete all that work at that time in order to have the full period.

What I'm suggesting that if we went the other way and didn't put a time limit on it, presumably this $4 million that Texaco is considering investing is going to be invested over a period of time rather than at one time; is that not correct? Do you understand what I'm saying? Am I clear?

A. I don't think I do.

Q. You base three years upon a 2.9-year payout for investment?

A. No. Actually the three years was based on survey results that we got from other operators. We just averaged what they thought a minimum period should be.

Q. I understand, but then you threw out the 2.9 year payout period as well?

A. Yes. And I think that may be the way that they obtained their minimum period of time.

Q. That's a reasonable payout period for an investment, is that not correct?

A. I think so.

Q. But what I've suggested, on page 22, you've indicated that you've completed roughly $1 million worth of workover, and you've got another 3-1/2 that you intend to spend if you're given the incentive to do so; is that correct, Texaco is?

A. No. We've actually spent more than a million-and-a-half.

Q. I'm sorry; you've got newly drilled wells down there too?

A. Right. That's $1.8 million just in newly drilled wells.

Q. Let's say the remaining 2 million roughly that Texaco is prepared to spend given the incentive? How long will that take you to complete the workovers and the new drilling and the other work? How long a time will it take to --

A. We intend to do that before the end of the year.

Q. I guess what I'm asking you, would you like it to be without a limit? Would you prefer to have a three-year limit or no limit at all?

A. I would prefer to have no limit at all. But like I said, I think that would be subject to review by the Commission after the three-year period of time, and the Commission could make the necessary adjustments based on what production we've seen for those three years versus allowable.

Q. Just a real quickie, on page -- I think it's 2 and 4, it appears that allowable has in fact exceeded production most of the time on those graphs, if I'm not mistaken. Do you attribute that to the fact that there's some, in effect, or what you're calling truly marginal wells have been assigned a nonmarginal allowable and haven't been able to meet it?

A. Yes, sir. I think that allowable was being

assigned to wells that, in fact, couldn't produce it, and that's why the gap.

Q. And created an excess pool allowable?

A. Right.

MR. STOVALL: That's all I have.

HEARING EXAMINER: Mr. Morrow?

CROSS-EXAMINATION

BY MR. MORROW:

Q. I have a question on page 3. Are the nonmarginal units as graphed here approximately 50?

A. Yes. For the September proration schedule, I think the number is -- it's in the 40's, but I couldn't tell you exactly what it is, but it's in that neighborhood.

Q. Do you have some information on how many of those are overproduced and how many of them are overproduced more than their six times?

A. I don't have any numbers, but I do know there are some wells that are more than six times overproduced, and I do know that there are several wells that are overproduced also.

Q. You indicated that there's several wells, currently completed wells that can make more than 600 per day?

A. Yes.

Q. Do you have a count on that? Do you know how many there are?

A. As far as total field or Texaco?

Q. Total field is what I'm --

A. No, I don't, but I do know that the workovers and the drilling that Texaco is engaged in has increased our production on several tracts to a level far in excess of 600 Mcf per day per acreage factor.

And going through the proration schedules, I know that there are -- I don't have any numbers, but I do know that there are several operators who do operate wells that are capable of in excess of 600 Mcf per day.

Q. One more question on page 20. The 160 you used as the basis, that's just what your well would make or your unit would produce, that has nothing to do with the allowables that could have been assigned to it, I'm assuming?

A. No. 160 Mcf per day was based on existing production from proration units that Texaco had drilling proposals on.

HEARING EXAMINER: Are there any other questions of this witness? If not, he may be excused.

MR. CARR: Mr. Catanach, I have an additional witness who may testify on some marketing questions. I think basically the marketing questions are better handled by Mr. Kellahin's witness, and we may or may not need to call our second witness. So at this time that concludes Texaco's presentation.

HEARING EXAMINER: We'll take a five-minute break.

(Thereupon, a recess was taken.)

HEARING EXAMINER: At this time we'll call the hearing back to order and turn it over to Mr. Kellahin.

MR. KELLAHIN: Thank you, Mr. Examiner. The Conoco exhibit books are in the box at the end of the table there in the white binders.

Mr. Examiner, my witness is Mike Zimmerman who is a gas distribution marketing specialist with Conoco whose primary responsibility is Conoco's gas production out of the Eumont Gas Pool. We would call him at this time as an expert witness.

MICHAEL W. ZIMMERMAN,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. For the record, Mr. Zimmerman, would you please state your name and occupation?

A. My name is Michael Wayne Zimmerman. I'm the gas distribution specialist for southeastern New Mexico with Conoco.

Q. Summarize for us your educational background, please.

A. I have a B.B.A. in finance, 1985, from Texas A&M University.

Q. Subsequent to graduation, summarize for us your professional experience in the area of gas marketing and gas distribution.

A. I worked for Conoco upon graduation, and I've worked in the gas distribution area for a little over the last two years.

Q. What are your primary areas of responsibility for that period of time?

A. My primary areas would be, as I mentioned, southeastern New Mexico. The largest pool would be the Eumont production.

Q. Within that pool, what is it that you do for your company?

A. I handle the day-to-day activities of the gas wells, both the confirmation and the managing of the allowables.

Q. In order to manage the gas production and withdrawals from the Conoco wells, are you familiar with the prorationing system as applied to that pool?

A. Yes, sir, I am.

Q. Have you also made yourself familiar with the market demand for gas production not only for your gas wells but other gas wells in that pool?

A. Yes, sir, I have.

Q. As a result of your experience, have you become familiar with how other operators handle their share of the market?

A. Yes, sir.

Q. Do you know and are you familiar with the other operators as well as the transporters and the plant facilities that take that gas production?

A. Yes, I am.

Q. Based upon that information, what were you asked to do by your company?

A. I was asked to evaluate the effect that the low allowables were having on our Eumont gas wells.

Q. Were you able to successfully reach expert opinions on that issue?

A. Yes, I was.

MR. KELLAHIN: We tender Mr. Zimmerman as an expert gas distribution specialist.

HEARING EXAMINER: He is so qualified.

Q. (BY MR. KELLAHIN) Summarize for us what you have concluded based upon your study. What are the major conclusions you've reached?

A. The major conclusion would be that the nonmarginal Eumont gas wells suffer significant allowable constraints and therefore are shut in for significant periods of the years while market demand does still exist during that time.

Q. Have you determined whether or not the market demand exists for gas production not only out of nonmarginal wells but for marginal wells?

A. Yes, sir. We have no problem moving or selling marginal or nonmarginal gas.

Q. Have you made a study to determine whether or not there's existing capacity for gas produced from the Eumont Gas Pool in order to transport the gas that's available in the event the Division Examiner approves the minimum allowable proposed by Texaco?

A. Yes, I have.

Q. What conclusion did you reach?

A. I've reached the conclusion that there is significant processing and pipeline capacity to handle additional Eumont production.

Q. Involved in your study, did you examine the

topic of the potential for nonratable take?

A. Yes, sir, we did, or I did, and nonratable takes are no longer a key issue as there's very little dedicated gas left. Most of it has been deregulated or is released through contract cancellations.

Q. If the Division Examiner should approve the 600 Mcf a day as the minimum allowable for all wells in the pool, do you anticipate that that would give the producers of the pool any kind of marketing difficulties?

A. No, sir, I do not.

Q. What has happened based upon your studies to the line pressures of the various gathering lines that take production out of the pool?

A. When Sid Richardson purchased the El Paso system, they have been working to lower the line pressure. And as a result of their lowering the line pressure, both the marginal and nonmarginal wells have seen an increase in production.

Conoco has recently contracted to have a low pressure gathering system installed, which is in the process of being built at this time, and we have seen a significant improvement in our Eumont production from both marginal and nonmarginal wells through the lowering of gathering system pressures.

Q. Based upon the lowering of the gathering line pressures, can you conclude as a distribution expert that the establishment of a minimum gas allowable for the pool will not be used against the marginal wells?

A. Yes.

Q. They are able to successfully compete then as they can to produce gas out of their spacing units?

A. Yes. In fact, the marginal wells have responded better than the nonmarginal wells to the lowering of the gathering pressure. In other words, they will actually benefit more.

Q. Let's turn to your exhibit book. On the first page of your exhibit book, you've summarized some of the key conclusions you reached in your study. Let's go back and visit the first one, the conclusion you reached concerning the additional processing capacity. What have you determined that capacity to be for the pool?

A. The processing capacity for the Eumont Pool is approximately 853 MMcf per day.

Q. What is the current gas production from the pool?

A. The current throughput is approximately 462 MMcf per day.

Q. What excess capacity then do the various plants have for production taken from the pool?

A. That would yield an excess capacity of 391 MMcf per day.

Q. What was the basis upon reaching those conclusions as to those numbers?

A. There was an annual gas plant survey that the numbers were taken from, The Oil and Gas Journal.

Q. Identify for us what plants you're talking about.

A. The plants that operate in the area are Phillips 66, Warren -- they have two plants, Warren does, Texaco, Northern Natural, and the Sid Richardson, the previous El Paso Jal system.

Q. Have you satisfied yourself that these plants then have the additional capacity available currently to producers that can consume and take the additional gas that would be produced under this minimum allowable?

A. Yes, beyond a doubt.

Q. Are you able to estimate the range of additional gas volume that might be generated by the minimum allowable?

A. My estimation would be approximately 20 to 30 MMcf per day in new additional drilling projects

and approximately the same 20 to 30 million a day in sustained production from the current existing primarily nonmarginal wells.

Q. Do you have any other factors or reasons to support your conclusion about the additional processing capacity?

A. Yes, sir. I contacted all of the plants, and in the back of the book is an exhibit where they have stated that they do have the additional capacity to process additional gas and are actively seeking that gas in the Permian Basin.

Q. In actively dealing in this market to get your gas production handled by the various plants, are you finding that the operators and producers are being treated in a generally favorable bargaining position when they deal with these plants?

A. Yes, sir. Because of the relatively low throughput or utilization factor of the gas plants, there's a very competitive nature to process producers' gas, and favorable contracts are being offered at this time to the producers by the gas plants.

Q. Let's turn to your conclusion about the fact that there is market demand for the additional gas that will be produced out of the Eumont Gas Pool

in the event that the examiner adopts the minimum allowable. You've reached that conclusion?

A. Yes, sir.

Q. What are the bases for that conclusion?

A. The bases for that conclusion would be that several new pipelines and expansions, of course, are planned to serve California which evidence additional demand. The tightening of the air quality control in California should contribute to additional demand.

Q. Do you see for your own market that you as the gas distribution specialist for your company for this gas production have a market for the gas?

A. Yes, sir.

Q. And you can produce your wells at rates that do not yet satisfy that market?

A. That would be correct.

Q. If there's a market demand for the gas and it's not being satisfied by the production of gas out of the Eumont, who's satisfying the demand?

A. When Eumont production is shut in to build up allowables, primarily Texas and Oklahoma gas comes in on El Paso's system and displaces Eumont gas.

Q. In your opinion, is the current system of assigning allowables to these wells in the Eumont Gas Pool one that accurately reflects market demand?

A. No, sir, it is not.

Q. You've summarized on page 2, I think, of your exhibit book your major reasons that justify your conclusion that marketing of the Eumont production is not a problem. Would you summarize for us your reasons?

A. Yes, sir. Basically, the larger operators market the smaller nonoperators' interest in the wells that they do operate. This alleviates gas imbalances and makes the transportation easier.

Most independents already have an established gas department. If they do not, there are always brokers available to help them buy and move their gas. I think it's important to note that there's even a small company in Hobbs who's set up to service and help smaller producers market production out of southeastern New Mexico.

Q. Let's talk about the impact of the low allowables on the spacing units that have marginal wells. All right? With the implementation of a minimum allowable of 600 a day, what will happen to spacing units that have marginal wells on them? What does that allow you to do?

A. The 600 Mcf a day minimum allowable would allow us to go in where potential exists to work on

those marginal units and hopefully make them into nonmarginal units to increase production out of the current wells.

Q. And you would have a market then for the additional production being produced from what is currently marginal spacing units?

A. Yes.

Q. Let's talk about the nonmarginal spacing units. What incentive or advantage from your expert perspective is there to establishing a minimum allowable that applies to the nonmarginal well spacing units?

A. The establishment of a 600 Mcf a day minimum allowable will allow the nonmarginal wells to produce more months of the year than they're currently allowed to produce now under the changing allowable situation.

Q. Let's turn to the management of the allowable in relation to the production, and let's skip your summary of who the specific transporters are in the pool, and go to that first display.

A. Okay.

Q. Before we talk about it, tell us specifically what this well is that you tabulated.

A. This is a Conoco-operated, nonmarginal

well.

Q. What did you plot?

A. I plotted the monthly allowable versus monthly production.

Q. Why?

A. Because a typical nonmarginal well is produced in the wintertime and shut in in the summertime because it is forced to build up allowable. In other words, this well and most nonmarginal wells can significantly exceed even the 600 Mcf a day minimum allowable.

Q. Is the allowable that's currently being assigned for wells, such as this Meyer A-1 No. 18, an allowable that accurately reflects the market demand available for gas production from this well?

A. No, sir, it is not. We could quite easily at reasonable wellhead netback prices sell this gas all 12 months of the year.

Q. Were you involved on behalf of your company to watch your production and manage that gas production during the period of time that the Division was making the administrative adjustments on a monthly basis to the allowable assigned to the pool?

A. Yes, sir, I was.

Q. And those were -- some of them occurred in

January and February and April, I think, of this year?

A. Um-hm.

Q. Did that provide a solution, in your opinion, to help satisfy the market demand?

A. That certainly helped to satisfy the market demand, but it was not a solution, as we saw when it was reduced, and we were forced to shut in again.

Q. Is there an advantage to establishing a minimum allowable on a reliable, regular basis for an extended period of time that is better than simply putting in a bonus allowable periodically into the pool?

A. Yes. It is very important to have a minimum allowable which would establish a comfort factor which would allow us to contribute capital funds and recover our investment in a reasonable period of time.

Q. Do you have a recommendation to the examiner as to a period or how he might construct a minimum period in which to leave the minimum allowable in place?

A. I would recommend that the minimum allowable be left in place for a period of three years. At the end of the three-year period, it should, of course, be looked at to see how the

production has responded to that minimum allowable.

Q. If the operators are using and taking advantage of the minimum allowable, then that could be reflected in the reports submitted to the Division. And based upon that, then that would be the predicate to extend the minimum allowable?

A. That is correct.

Q. Let's turn to the next display. What are you showing here?

A. This is simply the same Meyer A-1 No. 18 nonmarginal unit which shows cumulative allowable versus cumulative production.

Q. What's the conclusion?

A. I think it's very important to note that even with the substantial shut-in periods that we saw on the previous graph, the cumulative production has still exceeded the cumulative allowable for this well.

Q. What does that tell you?

A. That is simply a result of the fact that the well can produce substantially more than the allowable that is granted to it.

Q. This particular well then is allowable restricted?

A. Correct.

Q. And you have market demand for gas produced

from this well that exceeds the allowable assigned to that well?

A. Yes, sir.

Q. What's the next display?

A. The next display is five Conoco-operated nonmarginal wells that were chosen, and they simply exhibit the same characteristics as the Meyer A-1 No. 18.

Q. What did you do this for? Why did you want to do this?

A. To show that the first one was not simply chosen to illustrate a point. These charts show that this is a continual pattern that all nonmarginal Eumont wells are forced into by the low allowables.

Q. Approximately how many nonmarginal wells are there currently in the Eumont Gas Pool?

A. In the September proration schedule, there were 40 nonmarginal proration units.

Q. How many of those wells does Conoco have?

A. Conoco has ten nonmarginal proration units.

Q. Approximately how many marginal proration units do you have?

A. Forty-seven.

Q. What approximate percentage share do you have of gas produced out of the Eumont?

A. 15 to 20 percent.

Q. You've shown us the display that tabulates allowable versus production on the five nonmarginal wells. What's the next display?

A. The next display is simply the cumulative allowable versus cumulative production for those same five nonmarginal wells. And, once again, it shows that cumulative production exceeded cumulative allowable.

Q. Have you made a study to determine what the impact is if we establish a 600 Mcf a day minimum allowable, how that might influence or affect production from some of your wells?

A. The establishment of a 600 Mcf a day minimum allowable would help to smooth out some of the winter-summer cycles that we experience under the current low allowables.

Q. For example, let's take one of your typical nonmarginal wells, and for the last year, approximately how many months out of the year were you able to produce that well, and how many were you required to shut that well in?

A. A nonmarginal unit on average would be allowed to produce approximately seven months of the year and would be required to be shut in five months

of the year. That, of course, would depend upon its cumulative balance when it started the year, but for the most part it's seven and five.

Q. What happens to the seven and five ratio if you establish a minimum allowable of 600 Mcf a day?

A. As shown on this chart, and assuming that the well would make 800 Mcf a day --

Q. We're on the display that is captioned 800 Mcf A Day Eumont Well, and below that it says Allowable vs. Production? Is this the one you have?

A. Yes, sir.

Q. What have you plotted?

A. I've simply plotted the standard 600 Mcf a day minimum allowable versus production, assuming that the well could make 800 Mcf per day.

Q. Let me go back to my first question. In the absence then of a minimum allowable on this typical nonmarginal well, you get to produce it seven months, you're shut in five?

A. Right.

Q. If we establish the minimum allowable, what happens to the typical nonmarginal well? How many months can you produce it?

A. The well would then be allowed to produce nine months of the year and would only be required to

shut in three months of the year.

Q. Any other conclusions from the display?

A. Well, this simply reillustrates the fact that the 600 Mcf a day minimum allowable, there will still be nonmarginal units subject to allowable constraints.

Q. Will any of your nonmarginal wells be allowable restricted if the minimum is set at 600 Mcf a day?

A. Yes, sir.

Q. Turn to the next display. It says 1,000 Mcf a day. What are you showing here?

A. Just another example, as with the 800, 1,000 Mcf a day well would, under the 600 Mcf a day allowable, would be allowed to produce approximately seven months out of the year, would be required to be shut in five months of the year.

Q. Let's go to the next display and talk about the topic of the minimum allowable in terms of an economic analysis. Have you made such an analysis?

A. Yes, sir, I have.

Q. With the assistance of the personnel in your company, have provided a summary?

A. That is correct.

Q. Has your company independently examined

whether or not it can support a 600 Mcf a day minimum allowable?

A. Yes, we have. The economic summary page is based upon Conoco's results of five previous drilling wells in the Eumont Pool.

Q. Give us the economic parameters.

A. The economic parameters were $300,000 in total investment; that is to drill and complete; $6,000 per year in operating costs, and $1.25 per Mcf wellhead netback gas price.

Q. Did you apply any risk percentage to the analysis?

A. We have economic results for both unrisked and risked.

Q. Let's talk about the unrisked. What did you conclude?

A. On an unrisked basis, a 400 Mcf a day allowable would generate a 3.7 year discounted pay-back period.

Q. What does that tell you?

A. That is a pay-back period that would exceed the limit whereby we would drill new wells.

Q. And this is using an undiscounted or an unrisked economic evaluation?

A. That is correct. That is assuming 100

percent chances of success on all wells.

Q. If you keep all the parameters the same and change the minimum allowable from 400 to 600 a day, what does that do to the pay-back period?

A. That would reduce the pay-back period to 2.2 years on an unrisked basis.

Q. Does that begin to approach then on an unrisked basis the point at which you would spend funds or your company would spend funds and do workovers or new well programs in the Eumont Gas Pool?

A. That is correct.

Q. In your opinion, does 600 Mcf a day represent the minimum economics by which you can justify the drilling of new wells and the recompletion of old wells?

A. That would be correct, yes, sir.

Q. Individual wells might be less than that or more than that, but on average is this a reliable number to which you have confidence?

A. Yes, sir.

Q. Let me ask you to summarize for us what your major points are, and I think you've displayed them on the next page of the display, but tell us again. What are your major conclusions?

A. Major conclusions are that additional

processing and pipeline capacity exists to handle Eumont production, and demand also exists for additional Eumont production.

As I mentioned before, when the Eumont gas is shut in to build up allowables, Texas gas and Oklahoma gas primarily displaces the Eumont production.

The low Eumont allowables are restricting the number of drilling, recompletions, and even remedial projects that operators are able to undertake.

If the low allowables continue, Eumont wells will most likely not be drilled, thus creating waste in the long run.

And as we've shown on some of the exhibits, correlative rights -- wells will still be shut in due to allowable constraints, and correlative rights will still be protected via the spacing unit requirements and the overproduced limit.

Q. Were the displays and conclusions, as well as the documentation provided in Conoco Exhibit No. 1, compiled under your direction and supervision?

A. Yes, sir.

Q. Are the conclusions reached your own conclusions?

A. That is correct.

MR. KELLAHIN: We move the introduction of Conoco's Exhibit No. 1.

HEARING EXAMINER: Exhibit No. 1 will be admitted as evidence.

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

HEARING EXAMINER: Are there additional questions of this witness?

MR. STOVALL: Mr. Carr?

MR. CARR: No.

MR. STOVALL: Mr. Pearce?

MR. PEARCE: No.

MR. STOVALL: Who else is in this case? Miss Reuter?

MS. REUTER: No questions.

MR. STOVALL: Just a couple of quickies.

CROSS-EXAMINATION

BY MR. STOVALL:

Q. I probably should have asked Mr. Hart this, but if the 600 minimum is established, more wells will be moved into the marginal category; is that your opinion? Do you feel that you can comfortably address that question?

A. Yes, that is correct, more wells would

eventually be classified as marginal.

Q. Are you able to form an opinion as to whether in fact, as a result of that process and as a result of marketing additional gas from the Eumont Pool, that the field allowable, using the demand system that the OCD has used, could result in the allowable actually going higher than 600 Mcf a day for an acreage factor of 1?

A. That would be correct.

Q. Is that a feasible -- is that a likely prospect, do you think? Do you think it might happen?

A. I think that you will see the average allowable increase. I do not think that you will see it increase to significantly above 600 Mcf a day because, as shown on the previous exhibits, most of the nonmarginal Eumont wells produce 800 to 1,000, some even above 1,000 Mcf a day; so that there will still be substantial shut-in time periods.

Q. Let's go back. Let's take your 800, take a look at it. If in fact that well produces 800 over a period of nine months, are all of the currently nonmarginal wells capable of going up to 600, do you think, or a substantial -- how many nonmarginal wells are capable of producing 600? Do you have an opinion?

A. There are 40 nonmarginal wells all

together, and I can only speak for the Conoco-operated ones, but all of the nonmarginal wells that I have are capable of producing more than 600 a day.

Q. So if they do what your graph shows and produce 800 for nine months, are they not going to tend to increase the pool allowable?

A. For those nine months, the pool allowable will increase, and then as soon as I shut in, the pool allowable will decrease because the total pool production is decreased, and we're back into the ratcheting-down effect that has always killed us in the past.

MR. MORROW: There's a bottom on that ratchet though then, isn't there?

THE WITNESS: I'm sorry?

MR. MORROW: You would have a 600 base. It couldn't ratchet below 600, if I understood your proposal correctly?

THE WITNESS: Correct.

Q. (BY MR. STOVALL) I guess what I'm suggesting is that, in fact, if the 600 minimum is instituted, that the allowable could actually move up, and if most of those nonmarginal wells are capable of producing 800 to 1,000, and the wells that aren't capable of producing at least 600 are all now

marginal, in fact you could be operating at an allowable range of 700 to 800, realistically, which might mean you would only have to shut in one month out of the year, which would significantly reduce that effect; is that correct?

MR. MORROW: And increase it more.

MR. STOVALL: And on we go, spiraling upward.

Q. What is Conoco's opinion as to whether or not there should be a three-year time limit on the minimum allowable? Would you prefer that, a specified time period, or would you prefer that it just be 600 until further notice?

A. We would prefer a specified time period of at least three years.

Q. You're talking about a minimum rather than a maximum; is that what you're saying?

A. I would prefer to have a minimum 600 Mcf a day allowable for at least a three-year period so that we can commit the capital funds, drill Eumont wells, and recover our investment in a reasonable period of time.

Q. And is it safe to assume that you would prefer that at the end of that six years or three years -- excuse me -- that the minimum not

automatically go off but rather only go off after some demonstration that eliminating the minimum is appropriate?

A. That would be correct.

MR. STOVALL: Nothing further.

HEARING EXAMINER: Do you have anything else?

MR. MORROW: I think I got my question answered about the allowable going on up. If you had a minimum of six and no maximum -- I will ask this: Your economics and charts were based on an average allowable rather than a minimum allowable, if I understood them correctly?

THE WITNESS: The two charts on the 800 and 1000 are based on 600 Mcf a day minimum allowable.

MR. MORROW: Minimum and maximum? You didn't assume you'd ever get to produce any more than 600?

THE WITNESS: That is correct.

Q. (BY MR. STOVALL) Let me ask you one more question on the gathering. You've indicated right now there's sufficient gathering and transportation capacity in the pool to remove the gas. It could be produced at a 600 minimum; is that correct?

A. That's correct.

Q. I think I heard you say and Texaco said that if a 600 minimum is put in place, your companies are willing to invest additional funds and work over new wells, other activities which will raise the productive ability of wells in the pool, of nonmarginal wells in the pool; is that correct?

A. Yes, sir.

Q. Does that then threaten to push the capacity of the transportation systems to their limit as far as getting gas out of the field and being able to market it? Do you run into a marketing or transportation problem at that point?

A. No, sir, because as I testified before, my opinion would be 20 to 30 MMcf a day in additional new drilling projects, and approximately 20 to 30 MMcf per day in continued production that wouldn't be required to be shut in as many months as it currently is. So at maximum you have 60 MMcf per day in additional Eumont production. We have 391 MMcf per day in processing capability in the basin that's unutilized at this time.

Q. You don't have any concerns that there would be a need for additional capacity to meet the --

A. None whatsoever.

MR. MORROW: Was that 20 to 30 Conoco

increase or --

THE WITNESS: No, that would be for the total pool.

MR. MORROW: Or 20 and 30, I guess -- 20 drilling and 30 remedial; is that what you said?

THE WITNESS: Remedial and continued production that's now required to be shut in, yes, sir.

MR. STOVALL: I don't think I have any more questions.

CROSS-EXAMINATION

BY HEARING EXAMINER:

Q. Mr. Zimmerman, you mentioned something about the pipeline pressure being reduced by Richardson. Do all the operators of currently marginal wells have access to those lower pressure pipelines at this point?

A. If an operator's gas is released, as the very, very vast majority of it is, they would have access to any of the plants in the area. The gathering systems for all of the plants tie quite closely to each other, and they compete nearly on a one-for-one basis.

And the other plants are expanding their low pressure systems to hook up existing and new

proposed Eumont production.

Q. A second part to that, will the drilling of additional Eumont wells have an effect on that system in bringing up that line pressure again?

A. Of course, bringing on additional wells has the opportunity to increase the gathering system pressures, but those systems are operated under low pressure systems and are sized to handle a significant amount of increased production.

Q. So you don't think that it would have an adverse effect later on on the marginal wells?

A. That is correct. I think the line pressure would go up very little, if any. And if it did go up, you would most likely see plants install additional compression to bring the gathering system pressures back down.

HEARING EXAMINER: I have no further questions of the witness. Anything further of this witness? If not, he may be excused.

At this time I guess we'll allow Miss Reuter to prepare.

MS. REUTER: Mr. Carr is not going to call another witness?

MR. CARR: I have a marketing witness that is brief and can provide some very brief supplemental

testimony on marketing. It might be wise to let you go ahead and present your witness, and at the end, we can just wrap up with it. It won't take but just a few minutes, and if it's covered by you, we won't get into it.

MS. REUTER: I doubt that it will be.

We'll just need a minute to bring in Mr. Stewart.

HEARING EXAMINER: Let's take five minutes and let you get set up.

(Thereupon, a recess was taken.)

HEARING EXAMINER: Call the hearing back to order and turn it over to Miss Reuter.

MS. REUTER: Before I call my first witness, I would like to make a record on the prehearing conference that we had in this case yesterday.

Before I go ahead and do that, I would just like to state that Mr. Hartman wholeheartedly supports the establishment of the minimum allowable in the Eumont Gas Pool. He has filed an application to establish a minimum allowable in the Jalmat Gas Pool, which is presently scheduled for October 17. In both cases, he filed a motion to consolidate and to postpone the hearing on this case, along with the

hearing on the Jalmat case, until October 17. Those motions were denied by the Director of the OCD. And Mr. Hartman's position in this case was to request that the hearing examiner and the Commission delay a ruling on this case until he has presented the Jalmat case.

Very briefly, his position is that the Jalmat and Eumont Pools are, in effect, one pool, and therefore if a minimum allowable is established for the Eumont Pool, one should be established for the Jalmat Pool because, in limited circumstances and at limited times, it may create capacity constraints if there is a minimum allowable in the Eumont Pool and not the Jalmat Pool, and because it may affect the correlative rights of producers in the Jalmat Pool in that manner.

We had prepared testimony and exhibits basically in three areas, which were the subject of the prehearing conference that we had yesterday. The first area of testimony and exhibits are those that directly support establishment of a minimum allowable in the Eumont Pool and relate basically only to the Eumont Pool.

The second area are those which support the Eumont establishment of a minimum allowable by analogy

to facts and circumstances in the Jalmat Pool, simply because it is an analogous pool and producing similar reserves. And because Mr. Hartman has much more experience in the Jalmat Pool, we felt we could provide better evidence using some Jalmat examples and information.

The third area was testimony and exhibits which would have supported the request for delay in this case and a concurrent establishment of a minimum allowable in both pools. We had the prehearing conference yesterday on that subject, and there were objections by Mr. Kellahin and Mr. Carr, which I will leave to them to make, and I will leave to the examiner to go ahead and rule upon.

What I propose to do is at this point have Mr. Kellahin and Mr. Carr object as they did yesterday at the prehearing conference, briefly state what they stated, and then have the examiner go ahead and issue his rulings. I feel we can probably more expeditiously present our testimony in this case.

What I would plan to do is go ahead and present the evidence and testimony directly supporting the Eumont and relating only to the Eumont, and those which support it by analogy without being unduly cumulative. And at the prehearing conference

yesterday, the examiner ruled that he did not want to admit exhibits that related to the request to delay the decision on the Eumont allowable until the Jalmat case was heard. And I would propose to simply at the end of our regular presentation make a very quick offer of proof and put in the record that Mr. Stewart, our witness, has an opinion on that.

HEARING EXAMINER: Am I clear in understanding that you do intend to put some of this in evidence, or you want a ruling at this time on that, on whether or not you can put that evidence in?

MS. REUTER: As to which evidence, which of the three categories?

HEARING EXAMINER: The evidence concerning the delay in the decision until the Jalmat case is heard.

MS. REUTER: It was my understanding -- I'm not going to actually go ahead and put it in and waste our time with individual objections as to that matter, if you want to go ahead and rule right now. If you'd rather delay the ruling until that point, that's fine. I just thought it might be simpler to discuss it now and put it on the record rather than going through and having objections as we go along, exhibit by exhibit, because you had indicated yesterday that

you did not want to do that.

HEARING EXAMINER: Do Mr. Carr and Mr. Kellahin wish to respond to this at this time?

MR. KELLAHIN: It's hard to object in the abstract. Is there a tabulation of specific exhibits that fit into each category so we can make a record as to what you have offered on what particular topic?

MS. REUTER: Actually, we can't really tabulate that. Basically what happens is the testimony is limited. That's why I'm bringing it up right now. The testimony is limited as to the exhibits.

MR. KELLAHIN: I would like to expedite this as well as anyone, and if the examiner is willing to deal with it in this framework, I will object to categories two and three. Category one, I think, is relevant. It's material to the Eumont Gas Pool. Categories two and three are not. We deal with prorationing in New Mexico on a pool-by-pool basis. There is no pool balancing between pools. Correlative rights are treated on a pool-by-pool basis. You can treat them entirely separately with confidence that you're doing so appropriately within the confines of your statutory restrictions.

I have no disagreement with category one.

Two and three we think are irrelevant.

HEARING EXAMINER: Anything further, Mr. Carr?

MR. CARR: May it please the examiner, yesterday at the prehearing conference we took the position that we were prepared to go forward with the case, seeking an order establishing minimum Eumont allowables. We expressed at that time our concern that we confine the case just to that.

Not to just repeat what Mr. Kellahin has said, but we did note that we prorated individual pools, that these pools were defined, and there was nothing before the Commission to merge or change the pool boundaries, not only prorationing on a pool-by-pool basis, but correlative rights are viewed in that context, and that we hoped that the testimony would be confined to the Eumont.

I didn't understand there to be a ruling. I understood that counsel got a shotgun order to try and plane down their case and do this efficiently, and that's what we tried to do. I'm not here to try and slow this down or drag anything out. My understanding is we have all tried to streamline the presentation, and instead of wasting ten minutes on this, we ought to get on with it.

MS. REUTER: If I might add, Mr. Examiner, we had pointed out, and I'll just take a second, it's just as if you had a secondary recovery application before you. You would look at an analogous situation to consider the secondary recovery.

Rather than go on, perhaps the best thing to do is just go on with the exhibits then.

HEARING EXAMINER: If we come to a problem, I think we should address them at that point. Let's do that.

MS. REUTER: Thank you.

At this point I'll call my first witness, Mr. Michael Stewart.

MICHAEL STEWART,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MS. REUTER:

Q. For the record, would you state your name and place of residence?

A. Michael Stewart, Midland, Texas.

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

A. Employed by Doyle Hartman as an engineer.

Q. Have you previously testified before the

Oil Conservation Division or other regulatory bodies and had your credentials as that of an expert in the field?

A. Yes, I have testified, and they have been accepted.

Q. Are you familiar with the application for minimum Eumont allowables filed in this case?

A. Yes, I am.

Q. Are you familiar with the production history, projections, economic and engineering of the Eumont and Jalmat Gas Pools?

A. Yes, I am.

Q. Are you familiar with the allowables for the Eumont and Jalmat Gas Pools and recent changes in these allowables?

A. Yes, I am.

Q. At this point I would like you to look at Exhibit No. 1 and please review for Mr. Catanach the significance of this exhibit.

A. Exhibit No. 1 was taken from an excerpt in the book entitled North American Gas Fields. The significance of this exhibit is to show the Eumont-Monument-Jalmat trend which they define by B.W. Beebe and B.F. Curtis to include the --

MR. STOVALL: Let's stop for a moment. Who

does not have exhibits here today?

MS. REUTER: Oh, I'm sorry.

(Thereupon, a discussion was held off the record.)

THE WITNESS: I'll continue and say that the significance of this exhibit is to show that the Monument-Eunice-Jalmat trend, defined as the Jal, Mattix, Eunice, Monument and other smaller combined fields, which is now primarily the Eumont and the Jalmat fields, is the third largest ranked field based on initial recoverable reserves.

This estimate of 9.8 or almost 10 trillion cubic feet of initial recoverable reserves in place was made in 1965. We feel like that estimate may be a little bit pessimistic because they may have been looking at higher line pressures. And as Mr. Zimmerman has testified, lower line pressures can lead to additional recovery of reserves.

I think that one of the other significant facts of that exhibit is that, being that this field is so large, and you'll notice that New Mexico is fortunate enough to have two of the three largest gas fields in the lower 48, it's an invaluable resource to the state and must be a lot of time and consideration given in the development of this field. And that the

field should be developed based on the operator's economic parameters, especially as we are right now in a market-driven pricing scenario insofar as gas, and it probably should not be -- the development of the field should not be governed by government constraints, excessive government constraints.

Q. Would you look at Exhibit 2 and please review that for the examiner.

A. Exhibit No. 2 is an old map of the trend from the 1938 Lea County Operators Committee. It shows the evolution of this trend began with small pools, the Eunice Pool discovered in 1928 and the Rhodes Pool discovered in January of 1929.

This is just to show that the entire trend which has evolved into the Eumont and Jalmat began out of a number of small fields.

Q. Would you go to Exhibit No. 3 and review the significance of that for the examiner, please.

A. Exhibit No. 3 is a map produced by Midland County Map Company of southeast New Mexico. On the map we superimposed the pool boundaries of the Eumont and Jalmat and Rhodes Pools.

We show the two main pipelines that access and are common to both pools, the Sid Richardson or formerly El Paso line, the Northern Natural Gas

pipeline. Conoco's witness had testimony to the fact that there are several other gatherers out there, that being Phillips, Warren, Texaco. Those are smaller gathering systems. These are primarily the two interstate pipelines that service the pool.

And it's interesting to note that the trend of the pipelines follows the trend of the pool. They develop the pipelines along the pool as it was discovered.

Q. Looking at Exhibit No. 4, would you review the significance of that for the examiner.

A. Exhibit 4 is a map that illustrates Doyle Hartman's Jalmat and Eumont activity in 1989 and 1990. It shows we've been an active operator in the field. Illustrates that we've drilled four Eumont wells in the past year, we've drilled four Jalmat wells, and I'll get into discussing some of those results at a later time which will substantiate the 500 to 600 Mcf a day minimum allowable range that we're all here requesting. Again, it shows the pool boundaries.

Q. Could you --

A. Let me make a note that also in the pool we show a cross-section A-A' that we'll be bringing up. The main reason for showing this cross-section is just

to show the massive effect, the hugeness and the largeness of this gas pool, being the third largest gas pool in the lower 48. It is drawn and correlated on one of the continuous producing zones through the trend.

Q. Turning to Exhibit No. 5, could you review the significance of that for the examiner, please.

A. Exhibit 5 is just a 3-D block diagram of the producing horizons in the Eumont Pool, the similar producing horizons in the Jalmat, Langlie-Mattix and Eunice South Pool. All of these pools are defined and make up the third largest gas field in the lower 48.

Q. Turning now to Exhibit No. 6, would you explain the significance of this cross-section?

A. Exhibit No. 6 is a cross-section that's depicted on the land map, Exhibit No. 4, A-A'. It's primarily a north-south trending cross-section beginning in the Eumont Pool with A' and continuing on through the Yates or the nonprorated Rhodes-Yates Field at A'.

It shows one of the continuous pay zones in the trend, that being the lower Yates zone as being continuous, having similar reservoir qualities and parameters, net thickness, things of that nature.

One of the reasons I wanted to show this

map was because, as Joanne mentioned earlier, we had a lot of past activity in the Jalmat Pool. That's where a lot of our expertise or a lot of our examples that we'll be bringing forth to the Commission to show what infill drilling can do in the Eumont Pool. We present this cross-section to show that the Jalmat Pool is an analogous pool, similar -- some will make the argument it's the same pool, but we show that it's a similar pool, and that we can expect results in the Eumont Pool similar to what happened in the Jalmat Pool.

Q. Turning to the next group of exhibits, you have Exhibits 7-A, B, and C.

A. Exhibits 7-A, 7-B, and 7-C are just rough estimates of the remaining gas in place today along this huge gas field in the trend.

Exhibit 7-A takes the data that was presented in Exhibit 1 from the rankings. They estimate initial recoverable reserves of 9.8 Tcf, or as I've listed there, 9,800 Bcf. We subtracted to the best of our knowledge the cumulative production from all the pools and show the remaining recoverable reserves along this trend to be approximately 739 Bcf.

I'll make a note here that there's probably only been two or maybe three or four fields since 1955

that have been discovered that have more than a Tcf of initial recoverable reserves. Two of them are in Texas, Gomez and Coyanosa. It just kind of puts this field in perspective as to how much gas was there, how much gas remains.

Down further there, I make a little calculation that based on an extensive study that we undertook that involved 32 wells in the Eumont and Jalmat field or 32 prospects, we anticipated an average recovery of 1.612 Bcf per well. We've estimated out of that 739 Bcf of remaining recoverable reserves, only 301 Bcf will be recovered by the existing wells in the field right now. That leaves approximately 438 or almost half a Bcf of remaining reserves that we feel like will only be accessible due to infill drilling.

Here again, a calculation has been made of taking the 438 Bcf of recoverable reserves, divided by what we feel is an average recovery per well, multiply it times our cost per well, we see a potential investment into the Lea County area to recover these reserves of $171 million.

Exhibit 7-B is simply a material balance P/Z plot of the Eumont Gas Pool as a whole. You can see by extrapolating the P/Z data that the estimated

remaining reserves in the Eumont Gas Pool could be .89 Tcf or 890 Tcf.

If you'll look at Exhibit 7-C, to keep consistent with the first Exhibit A estimate of recoverable reserves or remaining reserves is 739 Bcf. We'll add the Jalmat reserves estimated by P/Z at.49 Tcf. If you add .49 Tcf to .89, you get about 1.3 Tcf or 1,380 Bcf of remaining reserves along this trend.

Those culmination of exhibits basically go to show that there's a lot of gas there.

Q. Looking at Exhibit No. 8, would you please review the significance and discuss what this exhibit demonstrates for the examiner?

A. As I mentioned earlier, we undertook a 32-well study. We studied in great detail 32 prospects. From those we evaluated them for total recovery, rates, reserves, and we calculated an average recovery per well. That average recovery per well is approximately 1.612 Bcf, which we feel confident in our numbers, and they also coincide with the numbers that Mr. Hart presented in his presentation using exponential decline and a 440 Mcf per day initial rate. This is a graph utilizing that 32 well average results versus the allowable rates.

What we did was we varied allowable rates and ran economics on our average well and then plotted the results of those economics versus the allowable rate. We feel like or it's interesting to note that on your return on investment, your discounted return on investment, you reach an acidotic rate of between 500 and 600 Mcf a day, which is in agreement with what Texaco and the other operators are here asking for.

I know the examiner asked earlier where the 600 a day came from, and Mr. Hart replied that it was from an average of the Eumont operators. It's encouraging to know that when you undertake an economic study and vary the allowable rate, that it looks like that 600 Mcf a day is an optimum.

Also plotted on the chart are the before tax payout in years versus the allowable and the discounted payout time in years versus the allowable.

You can see at the present, 1989 allowable level of approximately 300 Mcf a day in the Eumont, you're looking at a discounted payout of in excess of four years. You're looking at an undiscounted payout of approximately three-and-a-half years.

A lot of major companies or Conoco has presented testimony and so has Texaco that those kind of payouts will not allow them to compete for funds

and budgetary moneys to develop this field.

If you look at the 600 a day allowable rate, you'll notice a payout both discounted and undiscounted of approximately two years. We feel like that this will allow or it's apparent and with the support of other companies that this will -- that this kind of allowable level will allow for budget expenditures to develop this large amount of gas left.

If that does not happen, these reserves are not developed, we feel like that's a waste for the State of New Mexico.

Q. There's a second page to this exhibit, Mr. Stewart. Could you tell us what that second page shows?

A. The second page is primarily just a tabulation of the data presented in graphical form.

Q. Turning now to Exhibit No. 9, would you please identify that and review the significance and the information thereon for the examiner.

A. Exhibit No. 9 is what we call our gas prospect evaluation sheet. As I spoke earlier, we undertook a 32-prospect study. Basically what we did is we filled out one of these sheets for every prospect.

This particular sheet just shows the average results of all of those 32 summed together. We'll note that the average acreage factor that we had was 1.091. That's just the way that our acreage accumulated.

You'll note that initial wellhead pressure, 142 pounds. Some people that don't know this field will make the argument that the field's depleted, that that's a low pressure reservoir. We realize that it is a low pressure reservoir. That's why we feel modern infill drilling and using modern completion techniques will allow you to efficiently drain the amount of gas that's out there.

They may say that that field is 90 percent depleted. If it is 90 percent depleted, there's still 10 percent left, but 10 percent of 10 Tcf is 1 Tcf, and that's a lot of gas. We feel it's imperative to have some infill drilling with new modern completions to recover this gas. But, also, it's advantageous to have higher allowables to increase the activity to develop this field.

On down the work sheet, we show our -- we ran this based on 100 percent working interest, our average net revenue. We assumed or had some information concerning gas pricing.

I'll note in a later exhibit that when we calculated our economics, we escalated our gas pricing, which we're optimistic towards the future. We think escalation of gas pricing is a valid assumption. Even with that escalation, it appears that an allowable rate of 600 Mcf a day is going to be necessary to develop this field to its potential.

Another thing that we show there is our costs. I've got an exhibit later on that illustrates our actual costs that we incurred in drilling eight wells in the past year. You'll note they're a lot higher than what's been furnished to you so far. One of the reasons they're higher is we feel like we get a little better results when we spend more money.

Another thing that you'll note is we've got $92,000 in there per well for gathering and compression costs. We feel like the other folks didn't have that in there, but you'll notice that their netback wellhead price is lower than ours. We feel like by us building our gathering system, we can increase our net wellhead back price.

But regardless of all these input parameters, we still come to the same conclusions independent that Texaco and Conoco has shown, and that is a 600 Mcf a day allowable seems economically

justifiable.

I'll go on and talk a little bit about Exhibit 9-A, which is attached to 9. We view things a little bit different out here. As other expert witnesses have testified, there's a lot of wells out there that have got deliverability in excess of the current allowables, and they foresee those wells to have deliverability in excess of a 600 minimum a day allowable.

We calculate C factors, which is a reservoir and engineering parameter -- we calculate C factors to estimate the deliverability of our wells based on pressures and offset wells. We incorporate that C factor into our economics, and we calculate how long the well will remain a nonmarginal, or we call it a noncapacity or a nonmarginal well producing and limited by allowables. We calculate how long that well will be at that rate based on reservoir parameters. And then once the parameters we put into it dictate such, then the well starts to decline.

Exhibit 9-A is just an example of that calculation. That calculation also shows when we feel like compression will have to be added to the well.

I guess one of the biggest things that I'd like to get across by these two exhibits is to show

you that we went to a lot of work to come up with these average reserves, evaluated a lot of wells and a lot of prospects out there, and feel confident in them.

Q. If you're ready to move on to Exhibit No. 10, would you please identify and review it for us.

A. Exhibit 10 is just a summary of our actual drilling and completion costs. I noted previous that other operators' expenditures are less than ours. We do things a little bit different because we feel like by spending more money, we'll maximize the long term recovery of the gas in the reservoir. And this just details that, and it's part of the input into our economic calculations.

There again, you'll notice the $39,000 for gathering and compression costs. That's primarily just gathering costs. We've added compressions costs in later. But that's primarily due to the new way we have to go about marketing our gas. A lot of gas gatherers, if you drill a new infill well, a lot of folks, you have the option now to market the gas yourself. And that entails sometimes installing gathering facilities, measurement facilities to get the gas to the existing pipelines existing facilities, and we've taken that procedure and approach. We lay

two existing pipelines. We feel like in the long run, it will maximize our profits.

Q. Looking at Exhibit No. 11, would you tell us what that is?

A. Exhibit No. 11 is just a plot of our spot pricing scenario. It shows that we assumed $1.90 for the year 1990 rather than the shown price of approximately $2.25 based on what we observed earlier in this year, but it shows that we escalate prices and have an optimistic outlook for gas prices in the future.

Q. Are these the prices that you used in compiling the previous exhibits?

A. That's correct, these are the prices we used.

Q. Moving on to Exhibit No. 12, would you identify that and review what that shows for the examiner.

A. Exhibit No. 12 is a similar graph to the typical modern Eumont/Jalmat well graph that was presented before except this is kind of the proof in the pudding. We've drilled a well, a Eumont well, infill Eumont well. We've produced it. We've tested it. And now we've come back, and we've run economics on it, and we've run those economics varying the

allowable rates. We've used actual costs. We've used actual working interest, net revenue interest.

And, here again, you can see a real good correlation to the optimum allowable, being about 600 Mcf a day, which Texaco and the rest of the operators we believe are supporting in this case.

Q. What does page 2 of that exhibit represent?

A. Page 2 is again the tabulation of the graphical data.

Q. Looking at Exhibit No. 13, would you identify that and review that for the examiner, please.

A. Exhibit No. 13 are the economic input parameters that I spoke of earlier except they're specific to an actual well that's been drilled, that's been produced, that's been tested. These are just the input parameters that went into calculating based on varying the allowables, the previous graph, Exhibit No. 12.

Q. So this exhibit addresses the Turner State No. 3 as well?

A. That's correct.

Q. And the previous exhibit addressed the Turner State No. 3?

A. Right, and was specific as to an actual

Eumont well.

Q. Turning to Exhibit 13-A, could you tell me what that exhibit shows, attached to Exhibit 13, I believe.

A. That's correct. Exhibit 13-A is just an example of how we computate our reserves. We observe slopes in offset wells based on P/Z data, and we take the inverse of that or the reciprocal of that slope, and we get a recovery in Mcf per psi.

We then estimate the pressure that we'll encounter in the reservoir. And simple math will get you to our ultimate reserves. In this instance for the Turner State, 1.56 Bcf.

Q. Looking at Exhibit 13-B, would you please review that for the examiner.

A. Exhibit 13-B is again what we call well deliverability versus market ratable take calculations. It assumes an allowable, and based on the reservoir characteristics and well parameters, it calculates or leads you to a calculation of when the well will require compression, which is in the case of the Turner State, it calculates that the well will require compression in approximately 2.26 years. And that compression is based on the existing line pressure today.

And then it goes on to calculate the time at which the well will become a marginal well or a capacity well, producing at capacity, not being choked or pinched back. That, in this case, is 3.98 years.

Q. Looking at Exhibit No. 14, could you please identify that and review for the examiner what it shows.

A. Exhibit 14 is a plot of Eumont and Jalmat nonmarginal allowables for an acreage factor of 1 versus time.

The thing that I just want to touch on that's already been talked about by Mr. Hart with Texaco is the early 80-81 -- the early time period depicted in this graph, that being 1980, 81, and 82 when the allowable rates were predictable and stable. You can see since that time, they've deteriorated greatly. We feel like for the optimum recovery of the field, which is a major resource to the State of New Mexico, we've got to get back to some kind of predictable and stable allowable rates to allow for the development of this resource.

Q. Turning to Exhibit No. 15, please review that.

A. Exhibit No. 15 probably is improperly titled. That should be called Pool Infill Drilling

Results. As I stated earlier, we feel like the Jalmat is an analogous pool to the Eumont, and the results we've obtained in the Jalmat can be utilized in projecting what can happen to the Eumont Pool.

This shows total pool production in the Jalmat Pool, being the upper one, and on the blow-up it's in the orange. Then it shows Doyle Hartman's gross Jalmat production.

If you're familiar with Hartman and his operations and past practices, he drilled several infill wells in the Jalmat field. That's where the bulk of his activity was. You can see he started out in 1976 with very little gas production. And you can see when he ended up just after selling all of his production to Meridian in the early part of 1990, that his gross share of production accounted for approximately 35 percent of the entire pool's production. That 35 percent is solely attributable to infill drilling.

Q. Looking at Exhibit No. 15-A, would you please review that for the examiner.

A. 15-A is just a blow-up of the time period for Hartman's production from December of 1988 through mid-February of 1989.

If you'll go back and look at Exhibit 15,

you'll notice that spike during that time period, late 88, early 89, there again, that's approximately probably a little bit more than 35 percent of the pool production, Hartman's share -- his Jalmat gross production is approximately 35 percent of the entire pool's production.

What we've done, this is just a blow-up. Exhibit 15-A is a blow-up of his production, both net and gross, on a daily basis based on our pumper's field estimates.

What's interesting to note here is in late December of 1988, the OCD issued a moratorium letter. You can see an immediate increase in production from 15 MMcf per day to over 25 MMcf per day, or an incremental production of 10 MMcf per day just from Hartman's wells. That 10 MMcf per day primarily came out of 25 or so nonmarginal wells that were pinched back drastically.

Q. Mr. Stewart, can I interrupt you a minute? What did the NM OCD moratorium letter do?

A. That allows operators because of the shortages of gas and the need for gas throughout the country to produce their wells that are currently being restricted by allowables at capacity. That 10 MMcf per day additional increase out of 25 wells is

approximately 400 incremental Mcf per day per well.

We're here to ask for a minimum allowable of 600 per day. These wells were producing, pinched back, to approximately 200 Mcf a day. When the moratorium letter came out, they were opened up, and we got an incremental 400 Mcf a day, making a total of approximately 600 Mcf a day out of these wells.

So what we're asking for the OCD to do in establishing a minimum allowable of 600 Mcf a day is not unrealistic, that the wells can produce at those rates.

Q. Looking at Exhibit No. 16, would you please identify and describe what it shows for the examiner.

A. Exhibit No. 16 is a stack plot on the blow-up, and it might help if you take Exhibit -- they are both the same exhibit numbers, and lay them one on top of the other, with the Late Thomas 1, 2, and 3 production versus allowable on top, and then the Late Thomas 1, 2 and 3 times over and underproduced below.

I'll refer to the production versus allowable plot first. This was an old Jalmat lease that's also shown in our cross-section, an example of infill drilling in the Jalmat field which we feel is analogous to the Eumont field, and we expect similar results in the Eumont field. But you can see the

production in the early 80's is very marginal, less than 100 Mcf per day. That was an old well, the Late Thomas No. 1. That well has accumulated approximately 4 Bcf over its life.

Hartman acquired the lease, came in and drilled two infill wells. That accounts for the drastic increase in production. Those wells were, as you can see, classified as nonmarginal. They were restricted from the allowable when they came on.

The coincidence of the plots being similar, the allowable plot versus the production plot, and in some cases, the production plot being in excess of the allowable plot. Specifically, middle 1987 shows that these wells had deliverability in excess of the allowables and were being constrained by allowables.

The plot down below or the times over and under, which is on the blow-up, the plot below, shows how we tabulate. Of course, the prorationing rules that govern the Jalmat Pool are similar to the Eumont in that you cannot be allowed -- you cannot allow your well to become six times overproduced. And this is one of the ways that we monitor that.

What's interesting to me, again, is in early 87, the well was -- the lease -- this is a 320-acre proration unit with two infill wells on it

and one old well, but in early 87, you can see that the lease was approximately three times underproduced. And in three months' time period, the lease went from being -- the proration unit went from being three times underproduced to being almost six times overproduced. That's an illustration of deliverability of these wells and how they're being constrained.

If you'll look at the time period from mid-87 all through 1988, you can see that we're up against our six times overproduced limit.

If you'll refer back to the production plot, you'll see our production is just slowly coming down. Some people might argue that that's a decline. It's not. Those wells aren't declining. That's evidenced by the production increase in 1990. That's simply a function of the allowables and our conforming to the allowable rule that you can't allow your lease to be produced six times over.

Q. Turning to Exhibit No. 17, would you please review what that exhibit shows for the examiner.

A. Exhibit 17 is again a summary or an example of the same Late Thomas-Jalmat lease. This Exhibit 17 shows the old well, the No. 1 well producing through 1981 with a cumulative production of approximately 4

Bcf.

It shows drilling the No. 2 and the No. 3 wells, their effects on the production. It shows in March of 1990 that 97 percent of the lease production came out of the infill well. And it shows a cumulative production due to infill drilling, just due to infill drilling, and that's just cumulative production, that's not estimated ultimate recovery, was approximately 1.6 Bcf. And the wells are still producing, or the lease still has the producing capability of making over 1 million standard cubic feet per day.

Q. Can you tell me what Exhibits 17-A and B demonstrate?

A. 17-A and B are just the two wells, the Late Thomas 2 and 3, broken out on an individual basis rather than a summary basis.

Q. Turning to Exhibit No. 18, would you please review what that exhibit shows.

A. Exhibit 18 is two plots, shut-in pressure versus cumulative production and commonly referred to as material balance.

The plot on the left, Late Thomas No. 1 and 2, shows old well and new well. Late Thomas No. 1, you can see the drastic and steeply declining slope

associated with that. As I testified earlier, it had a cumulative production of approximately 4.5 Bcf. Its producing capabilities are very low.

Hartman goes in and drills the Late Thomas No. 2, an infill well, and based on the shut-in pressures versus cumulative production for that lease, it shows that that well will recover an incremental -- estimated incremental 2.2 Bcf of reserves.

If you go over to the Late Thomas No. 3, which is on the right side of the blow-up and of your exhibit, that's a plot of shut-in pressure versus cumulative production for the No. 3 well, extrapolating the pressures to an abandonment pressure of approximately 23 psia. That shows projected ultimate recovery due to infill drilling of 1.76 Bcf.

The projected recoveries, the infill drilling of the No. 2 and No. 3, that being 1.76 Bcf plus 2.2 Bcf, you get almost 4 Bcf of additional reserves that infill drilling are responsible for here.

Q. Turning to Exhibit No. 19, would you please review what that exhibit shows for the examiner.

A. Exhibit 19 again is a result of an infill drilling. This is specific to the Eumont Pool. It's a recently drilled well, that being the State "E" Com

lease located in Section 16.

It had an old well, the No. 2 well on it. Hartman acquire the lease, went in, drilled the well. It came on in January of 1990, had test rates in excess of 2 million a day, produced in excess of 2 million a day during the month of January.

We've since pinched the well back, basically due to low gas prices. And that's one thing that I was going to talk a little bit about that Mike showed in his plot, the shutting in of wells and bringing them back on based on allowables, the deliverability of the wells, and the allowables that they are allowed to produce. We feel like, and the examiner had some questions about if a 600 a day minimum allowable is established, are we going to see allowables in excess of 600 a day.

We don't think so because we're in a market-driven time right now. From January of 1990 to February of 1990, gas prices decreased approximately fifty cents per MMBtu. The operator is going to make a decision at that point in time whether he wants to market his gas at those clearing levels.

With that in mind, with a minimum allowable in mind, and him knowing his deliverability of his well, it will allow him to maximize his return by

selling his gas at peak times. For that reason and based upon the past historical evidence of the 1980, 1981, and 1982 allowable levels, we don't think you'll see allowables in great excess of 600 Mcf a day.

But, here again, I've shown on this plot our projected production for this lease, the orange or the upper one being projected production at 600 Mcf a day minimum allowable, and then the blue or the lower one being the 1989 approximate allowable level of 300 Mcf per day.

You can see that this lease is a pretty good lease and will be constrained by allowables, even 600 a day, for quite some time.

The other data depicted at the bottom of the Exhibit 19 is just supplemental. It shows annual shut-in pressures, and it shows production history from the well on a daily basis up through fairly recent time, middle August.

Q. Turning to Exhibit No. 20, would you please review what this exhibit shows for the examiner.

A. Exhibit No. 20 is again -- I make reference back to the economics that we ran specific to the Turner State No. 3 Well. This is a result of an infill drilling program in the Eumont. It shows the old Eumont, being the Turner State No. 2, ceased to

produce in approximately 1981. It shows the time period when there was no development on the lease, primarily due to low allowables, that the lease did not generate any revenue for the state in the form of royalties. This is a state lease.

When Hartman acquired the lease, he was allowed to drill it. It's had test rates and production in excess of the proposed 600 minimum a day allowable. And, again, I show our projections based on the -- corresponding to those specific economics that we presented earlier, the upper projection being 600 Mcf a day minimum allowable, the lower one being the current 1989 average of 300 Mcf a day.

You can see at 300 Mcf a day, the well is constrained by allowables for approximately eight years. At 600 Mcf a day, the well will be constrained by allowables for approximately three years, a little bit over three years. I believe it was four years.

Q. Mr. Stewart, were Exhibits No. 1 through 20 prepared by you or at your direction?

A. Yes, they were.

MS. REUTER: At this time I move the admission of Exhibits 1 through 20.

HEARING EXAMINER: Exhibits 1 through 20 will be admitted as evidence.

Q. (BY MS. REUTER) Mr. Stewart, based on the evidence introduced and your expertise, do you have an opinion as to whether a minimum allowable of 600 Mcf per day will promote conservation, prevent waste, and protect correlative rights in the Eumont Pool?

A. I do have an opinion on that.

Q. What is that opinion?

A. I feel that this is a large field with large existing remaining reserves, and it's an invaluable resource to the State of New Mexico. And it needs to be developed. It needs to be developed based on operators' economic parameters and the decisions made by them, primarily. They're the ones that are out there risking the money. They're the ones that need to be involved and need to have economic benefits available to them so that this field can compete for moneys that could be attributable to other budgets that they've got.

I think if we don't go about changing some of this, that some of the pipeline facilities in the field, if the field is not developed or not infill drilled or is not allowed to be developed, some of the pipeline facilities are going to go away. They're not going to be there. Mainly because if there's no gas there, if there's no activity there, they're going to

leave. There's no benefit for them. They can't make money. They make money by transporting gas. If there's no gas there, they won't be able to make money.

I think that we need to take a lot of care in evaluating the development of this field because our skilled labor force is already leaving this area. We work real closely with the folks in this area in Jal and in Eunice and in Hobbs, and due to the minimal activity out there in the past four or five years, there's a lot of people that are going out of business. There's lot of folks in Jal that are going out of business.

You're having a lot of trouble finding skilled labor folks to drill wells, roughnecks, things of that nature. They're all running off to the Chalk trend, to drill in the boom down there because it's economical for them. They can't make a living out in this area.

We feel like the operators need to be the ones who have the majority of the input in how this field gets developed. If it's left up to a lot of governmental constraints, then we may lose a valuable resource.

I believe that by establishing that the

Jalmat is similar and an analogous pool to the Eumont, that the results that we have seen in the Jalmat can be applied to the Eumont, and that infill drilling will be successful in the Eumont. For that reason, with the estimated large amount of gas remaining in the field, we need to proceed. And the thing that will allow a lot of operators to proceed out there is a minimum allowable.

Q. Mr. Stewart, have you formed any opinion as to whether minimum allowables should be set in the Jalmat Pool if one is set in the Eumont Pool?

A. Yes, I have. I stated before that I believe they're similar. And I will go on record as it's my belief that they are the same pools produced from the same horizons. And establishment of a Eumont minimum allowable will cause the -- it will limit the Jalmat development and may cause the correlative rights not to be protected by operators in the Jalmat Pool.

Withdrawals in the Eumont Pool could be greater than those in the Eumont Pool. That is high quality reservoir with high permeability. Specifically, leases along the pool boundary, Jalmat leases that are only allowed to withdraw at rates specific to their imposed allowable have to compete

with Eumont wells that can get to draw if the minimum allowable is found at 600 Mcf a day. And gas will migrate across that boundary, and correlative rights could be impaired.

The other thing that we've got a short-term concern about is gas pipeline and access to markets. One of the pipelines out there has got a transportation policy, "first on, last off," and it's mainly the pipeline that we deal with. That means for interruptible supplies, when you nominate your gas into the marketplace, the folks that nominate the gas first, their gas flows 100 percent. Then you go on down the road. If I'm No. 6 in line, and I make my nominations, and they have capacity constraints, which we don't think will be long-term capacity constraints, they may just be short-term capacity constraints, because if there's more gas produced out there, then the pipelines are going to make an investment and increase their compression facilities, increase their treating facilities. But in the short-term we may be denied some market access because the Eumont in effect has first shot at excess capacity by giving them a minimum allowable without one being granted for the Jalmat.

So in that regard, we'd like for the

Commission to wait on the ruling of the Eumont until we have presented our Jalmat case, the 17th of October.

Q. What exhibits do you have to support that opinion?

A. Insofar as protection of correlative rights, I've got one exhibit that shows annual shut-in pressures along the pool boundary versus time. This exhibit shows that --

Q. Shall we turn to that exhibit? It's Exhibit No. 21.

A. Yes, we could. Exhibit No. 21 shows that these are wells that are highlighted on the cross-section that are at approximate three-mile area trending along the cross-section, four of them being in the Eumont Pool, four of them being in the Jalmat Pool.

You can see the similarity of the decline of the shut-in wellhead pressure, which is essentially the reservoir pressure, with some correction versus time. These all wells decline similarly and have similar pressures. We feel like that shows there's excellent communication between these wells, drainage and counterdrainage occurs. With Eumont wells along the boundary being allowed to withdraw at rates higher

than Jalmat wells, it will give the Eumont wells an unfair advantage.

Q. Was this exhibit prepared by you or under your direction?

A. Yes, it was.

MS. REUTER: At this point, I'd move into evidence Exhibit No. 21.

HEARING EXAMINER: Exhibit No. 21 will be admitted as evidence.

Q. (BY MS. REUTER) Mr. Stewart, do any of the previous exhibits that you discussed support your position?

A. I believe all the previous exhibits I discussed support our position for a Eumont and a Jalmat minimum allowable.

Q. Do you have anything that you would add to your testimony at this time?

A. I find it kind of interesting -- I was down and picked up a copy of the docket, and a memorandum dated September 6 of 1990 issued by Mr. LeMay is asking for input on regulatory incentives to increase New Mexico's oil production.

I think that we're headed in the right direction here today, that maybe that title should be expanded to oil and gas production because gas is a

fossil fuel and replaces oil. As Mr. Zimmerman with Texaco -- excuse me -- with Conoco testified earlier, a lot of the EPA restraints out in California are really heading towards gas being a major fuel in the United States. A lot of C and G projects, compressed natural gas vehicles, things like that are headed our way.

I feel like this pool being such a large pool has to get its fair share of that marketplace. Right now that gas that's moving into California is coming from Canada, which is very highly subsidized by the government, their exploration programs and a lot of incentives, and that's the kind of gas we're competing with. With that competition in mind, I don't think that we need to be placing a lot of other constraints upon us.

Q. Mr. Stewart, you're not advocating that gas in the Eumont Pool or the Jalmat Pool be nonprorated?

A. No, not at all. We feel like there's a definite need for prorationing, and we feel that the six times over rule and the acreage size factors, size of proration units take that into account.

MS. REUTER: I have nothing further.

HEARING EXAMINER: Are there any questions of this witness?

MR. CARR: No, Mr. Examiner.

MR. STOVALL: I just want to ask you one question I've asked all the other witnesses, give you a chance. Do you think there should be a limit on it timewise?

THE WITNESS: No, I think it should be indefinite. I believe that, as a couple of our exhibits show, you're looking at almost a three-year payout based on a 600 Mcf a day minimum allowable.

MR. STOVALL: That answers my question.

MR. MORROW: I have one.

HEARING EXAMINER: Go ahead.

CROSS-EXAMINATION

BY MR. MORROW:

Q. How would you, in making this proposal, how would you visualize that the proration system would work? How would that minimum be incorporated into the current system, or are you proposing that it be incorporated or just used as an average or a fixed allowable or just how would you? Explain how you would like to see it work.

A. Well, I believe that that's going to be the subject of a discussion on this coming Monday, hopefully, and I don't know that I'm prepared to -- I haven't studied up on it enough according to the

proposed rule-making changes and things like that that provide for the establishment of a minimum allowable in the prorationing rules.

I think that a minimum allowable of 600 a day will allow the operators to develop the field, and that they will seek economic returns that will continue the development of the field. If we cut the minimum allowable to one year or two years or three years, we're not all prepared, and it's a continual process to develop this field. There's leases right now that produce gas and produce gas at economic rates, but in two or three years from now, those leases may not produce gas at economic rates. The wells could be abandoned prematurely.

And so without the establishment of a minimum, we might have a flurry of drilling today, and folks get their payout, but then we're again looking at three years from now, the field not being developed and activity being way down.

I don't know if I answered your question, but I hope that maybe we can address that some at the allowable hearing.

Q. In your mind, this proposal would be incorporated in with whatever is developed in regard to the recommendations coming before the Commissioners

on Monday; is that what you said?

A. That's correct.

HEARING EXAMINER: Any further questions of the witness? If not, he may be excused.

Is there a need for closing statements in this case?

MR. CARR: May it please the Examiner, we realize the hour is late. I do have the one marketing witness. We will confine his testimony only to Texaco's marketing effort in the area and can do this in just a matter of a couple of minutes, I believe, with your indulgence.

HEARING EXAMINER: You may proceed.

DOUGLAS A. DUKE,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. CARR:

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

A. My name is Douglas A. Duke.

Q. Mr. Duke, by whom are you employed and in what capacity?

A. I'm employed by Texaco, Inc., as a gas sales manager.

Q. Have you previously testified before the Oil Conservation Division?

A. I have not.

Q. Could you briefly review your educational background and summarize your work experience.

A. I graduated from New Mexico State University in 1976 with a Bachelor of Business Administration Degree. I began working for Texaco as a gas sales representative after that. In 1979, I went to work for Northwest Pipeline as a gas purchase representative. In 1981, I returned to Texaco as a gas sales supervisor. And I became a gas sales manager in 1985, which I am now.

Q. What does that position with Texaco involve?

A. I'm responsible for gas marketing in the State of Texas and southeast New Mexico.

Q. Are you familiar with Texaco's marketing efforts in the Eumont Gas Pool?

A. Yes, I am.

Q. Are you the person responsible for marketing Texaco's production from the Eumont Pool?

A. Yes, I am.

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

HEARING EXAMINER: They are.

Q. (BY MR. CARR) Mr. Duke, what roles does Texaco play in the gas market as it relates to production from the Eumont Pool?

A. Texaco is unique in that we represent the marketplace as a producer of gas, as a buyer of gas, we transport gas from the various pipelines, and we consume gas in California.

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

A. Yes, sir.

Q. How does that market demand compare today to the market demand as it existed in the early 1980's?

A. It's comparable. We have ample offers to purchase our gas. We have ample need for gas in California for our own facilities, and there is essentially no curtailment of gas in southeast New Mexico.

Q. When we talk about Texaco's marketing efforts in the Eumont Pool, are we talking about only the purchasing of Texaco-produced gas?

A. No, sir. Our purchasing efforts extend beyond that.

Q. And you're taking gases produced by others

from the Eumont Pool?

A. That's correct.

Q. Where is this gas that's coming from the Eumont currently being sold?

A. It's being sold in southern California.

Q. If an allowable system reduces the production of gas from the Eumont Pool, where do you make up that gas, from what sources?

A. Our additional gas is obtained by transporting gas from West Texas, primarily.

Q. Then that gas is transported to California?

A. That's correct.

Q. If allowables were increased and production increased from southeastern New Mexico, what would happen to the Texas gas that you are now moving to California?

A. We have the flexibility with that gas to redirect it to Texas markets.

Q. You've been present for the hearing today, and you've heard the kinds of volumes of gas that we're talking about as potential incremental production from the Eumont Pool. If this gas comes into the system, do you see any overall impact on the gas marketing system in the western United States?

A. No, I don't. The market, in my opinion, is

large enough to amply absorb this volume of gas.

Q. Have you had experience with other pools in Texas where you've made changes in purchasing practices that have involved greater volumes of gas than what we're talking about in the Eumont Pool?

A. Yes. There's a field called the Headly Field. It's a cycling project just outside of Odessa. The combined volume available for sale at any particular time is 150 million cubic feet a day. 50 million of that is Texaco's. That is what we term a discretionary source of gas. We sell it when prices are attractive, and we shut it in or cycle the gas when prices are not attractive. We have found when prices are attractive, and we add this 150 million a day of supply to the market, it does not have an impact upon the prices.

Q. In your opinion, is there market demand for all of the gas that can be produced from the Eumont Gas Pool under the proposed higher allowables?

A. Yes, there is.

Q. Is Texaco one of those purchasers who is prepared to purchase and transport that gas?

A. Yes, sir, Texaco would want to purchase as much of that as possible.

MR. CARR: That's all I have.

HEARING EXAMINER: Are there any additional questions of this witness? If not, he may be excused.

MR. CARR: There's only one other thing, may it please the Commission, I have a letter from Chevron USA, Inc., who I also do represent here today. It is a letter in support of the application.

It notes that Chevron is the largest operator in the pool, and basically the letter says that the application, if granted, they believe will result in a more stable economic base to enable operators to evaluate and develop the gas properties in the Eumont. They believe that the improved economics will both protect correlative rights and result in greater ultimate recovery of gas.

HEARING EXAMINER: Mr. Mollo, would you like to give your statement at this time?

THE WITNESS: Yes, I would. I have a letter which I mentioned earlier was written by David Kirkland, who is Gas Company of New Mexico's production control manager, and I'll just go ahead and read it.

MR. STOVALL: How long is the letter?

MR. MOLLO: It's very short. It will only take about three minutes.

"Gas Company of New Mexico especially requests that the following be considered in the decision for establishing a minimum gas allowable for the Eumont Gas Pool, Lea County, New Mexico. The assignment of minimum allowables is a departure from setting allowables based on market demand. This reflects economic forces rather than market forces. The setting of minimum allowable limits the opportunity for all producers to equally share in the market based on the well's ability to produce, thereby creating a disparity between producers and between producing elements. The reclassification of wells in response to production activities under the current rules minimizes allowables with help from market by nonproducing nonmarginal wells. Gas Company of New Mexico does not have contractual obligations with Texaco in the Eumont Pool. However, the impact of the proposed minimum allowable precedents applied statewide would be increased cancel allowables for wells unable to find a market for the increased production requirements associated with the high minimum allowables. This would add adverse economic impacts for natural gas consumers in New Mexico. The existing proration rules have provided adequate allowables in the Eumont Pool. Currently, there is

only one well shut in for overproduction in the Eumont Pool. Producing these wells would result in higher allowables assuming that there is a demand for this increased supply. If allowables are assigned based on minimum amount and not on market demands, the assigned allowable could be higher than required by the market. With no market for this potential supplies, higher allowables as set by the minimums are artificial and do not accurately reflect the market."

We believe that the current --

MR. STOVALL: There's a problem here with the fact that you are not -- do you wish to be sworn and make a statement?

MR. MOLLO: No, I don't think I should.

MR. STOVALL: There's a problem with making a nonsworn statement in a case of this nature as such. Reading the letter I think is the limit of what I'm recommending we allow in this case.

HEARING EXAMINER: Thank you, Mr. Mollo.

MR. MOLLO: Thank you.

HEARING EXAMINER: Do we need closing statements or would counsel like to make brief closing statements?

MR. KELLAHIN: I suggest we go home.

MR. CARR: I'll make one closing

statement. We would request that you go forward and consider our application on the merits and not further delay consideration of the minimum allowables for the Eumont.

HEARING EXAMINER: Is there anything further?

MS. REUTER: I don't believe we need to make a closing statement.

HEARING EXAMINER: In that case, Case 10036 will be taken under advisement, and this hearing is adjourned.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. _____, heard by me on _____ 19____.

_____, Examiner
Oil Conservation Division

CERTIFICATE OF REPORTER

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

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

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

WITNESS MY HAND AND SEAL September 20, 1989.

Deborah O'Bine

DEBORAH O'BINE
CSR No. 127

My commission expires: August 10, 1994