BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

March 29, 1962

EXAMINER HEARING

| | |
|---|---|
| IN THE MATTER OF: Application of Texaco, Inc. for an order pooling all mineral interests in the Basin-Dakota and Blanco-Mesaverde Pools in the W/2 of Section 12, Township 30 North, Range 12 West, San Juan County, New Mexico. Interested parties include Pan American Petroleum Corporation, Southwest Production Company and Tidewater Oil Company. | CASE NO. 2511 |

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: We will call Case No. 2511.

MR. WALKER: Application of Texaco, Inc. for an order pooling all mineral interests in the Basin-Dakota and Blanco-Mesaverde Pools in the West half of Section 12, Township 30 North, Range 12 West, San Juan County, New Mexico.

MR. WHITE: Charles White of Gilbert, White & Gilbert, Santa Fe, New Mexico, appearing on behalf of the Applicant. We have three witnesses to be sworn.

MR. BUELL: For Pan American Petroleum Corporation, Guy Buell.

MR. UTZ: Are there any other appearances?

C. R. BLACK,

called as a witness, having been previously duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. WHITE:

Q Will you state your name, Mr. Black?

A I am C. R. Black, employed by Texaco, Inc., as a Petroleum Engineer.

Q And have you previously qualified before the Commission?

A Yes, sir, I have.

Q Will you briefly state what Texaco's connection in the subject matter is?

A This is the application of Texaco for an order pooling all mineral interests in the Basin-Dakota and Blanco-Mesaverde for the West half of Section 12, Township 30 North, Range 12 West, San Juan County, New Mexico. Texaco also seeks a risk factor of 150 percent to be applied to the initial cost of drilling and completing the Texaco L. M. Barton Well No.1 located in the West half of Section 12.

(Applicant's Exhibit No. 1 marked for identification)

Q Will you refer to and explain Exhibit No. 1?

A Exhibit No. 1 is a plat showing the area immediately surrounding the Texaco L. M. Barton Well No. 1 and the Texaco interest in the West half of Section 12; the offset leaseholders and

their wells are shown. The Aztec Pictured Cliff wells in the area are shown by a green circle, the Blanco-Mesaverde wells shown by a blue circle and Basin-Dakota is circled in red. The Texaco acreage is bordered in yellow at a proposed standard of a 320-acre unit for both the Basin-Dakota and the Mesaverde shown bordered in red.

Q Will you state what interests you are requesting the Commission to pool and describe their acreage and location of casings?

A Well, Texaco owns 100 percent working interest and is the operator of 200 acres in the West half of Section 12. This acreage includes the 160-acre L. M. Barton lease, which is described as the Northwest quarter of the Northwest quarter, the South half of the Northwest quarter and the Northeast quarter of the Southeast quarter. Texaco also owns a U.S.A. Federal lease containing 40 acres, being described as the Northeast quarter of the Northwest quarter of Section 12.

It is our understanding that Pan American Petroleum Corporation is the owner and owns 100 percent working interest in 80 acres in this West half of the section, described as the Northwest quarter of the Southeast quarter and the Southeast quarter of the Southwest quarter. We further understand that the Northwest of the Southwest is a Federal lease and the Southeast of the Southwest is a fee lease.

The Southwest Production Company and Tidewater Oil

Company jointly own 100 percent working interest in 40 acres described as the Southwest of the Southwest of Section 12. We further understand that this is a fee lease and that Southwest Production Company owns a 70 percent working interest and Tidewater owns 30 percent working interest.

Q By the subject application, are you seeking to pool the interest of Pan American?

A Yes, we are.

Q Have Southwest Production Company and Tidewater voluntarily come into the unit?

A Yes, sir, they have voluntarily come into the unit.

(Applicant's Exhibits 2 and 3 marked for identification)

Q Would you explain what Exhibits 2 and 3 are?

A Exhibit 2 and Exhibit 3 are telegrams received from Southwest and Tidewater.

Exhibit No. 2 is a telegram received from Tidewater Oil Company:

"J. H. EUBANKS, TEXACO INC.
MIDLAND SAVINGS AND LOAN BLDG.
MIDLAND, TEXAS

TEXACO'S BARTON UNIT WEST HALF SECTION TWELVE TOWNSHIP 3 ON RANGE 12W SAN JUAN COUNTY NEW MEXICO TIDEWATER AGREES TO BE VOLUNTARILY POOLED ON THE BASIS OF 150 PERCENT PENALTY PROVISION FOR DRILLING AND COMPLETION COST AND 100 PERCENT ON OPERATING COST PROVIDED THE PRODUCTION IS TAKEN OUT OF OUR NET INTEREST.

TIDEWATER OIL CO.
PETER PAUL GROTH"

Exhibit 3 is a telegram from Southwest Production Company

"JOHN GUNTER, TEXACO INC.
MIDLAND, TEXAS

REFERENCE BARTON UNIT SOUTHWEST PRODUCTION CO. WILL VOLUNTARILY JOIN TEXACO'S BARTON UNIT, WEST HALF SECTION 12 30N-12W SAN JUAN COUNTY, NEW MEXICO, ON NON-CONSENT DRILLING BASIS WITH 150 PERCENT OF DRILLING AND COMPLETION COSTS AND ONE HUNDRED PERCENT OF OPERATING COSTS BEING RECOUPED BY TEXACO OUT OF SOUTHWEST'S NET WORKING INTEREST IN ITS LEASES IN THIS UNIT SUBJECT TO SOUTHWEST APPROVAL OF ACCEPTABLE COMMUNITIZATION AND JOINT OPERATING AGREEMENTS.

JOSEPH P. DRISCOLL"

Q That is Exhibit 3?

A Yes, sir.

Q Has Texaco been successful in working out agreements with Pan American?

A No, sir, we haven't.

Q Will you state where the location of the well is in reference to the plat in Exhibit 1?

A The location of the Texaco L. M. Barton Well No. 1 is located in Unit F, Section 12, Township 30 North, Range 12 West.

MR. UTZ: Do you have a foot location?

A Yes, sir, I do. That well is located 1850 feet from the North line and 1650 feet from the West line of Section 12.

MR. UTZ: Thank you.

Q (by Mr. White) Have there been any previous orders issued by the Commission in reference to this well?

A Yes, sir, Order R-2043, dated July 29, 1961, was issued as a result of the Hearing held on July 6, 1961.

Q What was the substance of that order?

A This proposed Texaco for unorthodox and tubingless completion in temporary non-standard and for a 160 proration for both the Basin-Dakota and the Blanco-Mesaverde pools.

Q When was the drilling actually commenced on this well?

A This was done June 23, 1961, and in September, 1961, the Mesaverde was completed and potentialled and on September 15, 1961, the Dakota formation was potentialled.

Q Will you state what the results of these tests were?

A The Mesaverde open hole at 5:00 p.m. September 8, 1961, calculated absolute open hole at 2013 MCF per day, 12 barrels. The seven day absolute in casing pressure was 1216.

The flowing tubing pressure was 100 PSI, the Dakota formation ending at 12:30 p.m. on September 15, 1961, the calculated absolute open hole was 2305 MCF per day plus 14 barrels condensate. The seven-day shut-in tubing pressure was 1700, 250 PSI and flowing tubing pressure was 188 PSI.

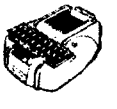
Q Are these on test with the Commission?

A Yes, sir.

Q What is the current status of the well?

A This well has been shut in since completion, however, at the current time we are negotiating a contract with El Paso Natural Gas Company and expect a connection in the very near future.





Q Was the well completed as originally planned?

A No, sir, this well was originally planned as a conventional well and tubingless completion flowing a string of 2 7/8 and a string of 4½-inch tubing. The Dakota was to be in the 2 7/8 and the Blanco in the 4½ and the Mesaverde in the 2 7/8; however, due to the unusual circumstances encountered in drilling this well, the completion program was changed and we completed this well as a conventional dual.

Q Did Texaco encounter any unexpected difficulties?

A Yes, sir, we did. This well was drilled to a total depth of 6800 feet as planned and during logging operations a blowout occurred; therefore, we changed our completion program, and briefly we set in lieu of the 4½-inch casing and 2 7/8. We set a string of seven-inch casing to 4800 feet and brought cement back into the surface casing to a point 280 feet below the surface. We then cemented a 4½-inch line and cemented it in the hole and perforated the bottom formations and completed this as a conventional dual completion with two strings of 2 3/8-inch casing.

Q As a result of this blowout, were any additional expenses incurred?

A Yes, sir, there were considerable expenses incurred. The total estimated cost of the well was $99,700. At the present time the total actual cost of this well is $214,308.69.

Q Will another witness testify as to the details of the

blowout and the additional costs incurred?

A Yes.

Q Do you anticipate any additional costs to be put into the well before you put it on production?

A Yes, sir, before we put it on production there is certain surface equipment that must be installed and we estimate an additional $13,000 for this surface equipment.

Q Now that the well is completed, do you believe Texaco is entitled to any risk factor?

A Yes, sir, I do. There is no doubt in my mind that if we had drilled this well and it had been a dry hole, Texaco, burdened with 100 percent of wells, Texaco could advance and assume eventually voluntary pooling agreements to form a standard of 320 acres in the Basin-Dakota pool. This pooling agreement would be with each of the operators pooling 100 percent of the prorated share of well costs. If Pan American or the other operators had entered into the agreement prior to the drilling of this test, they would have shared in the well cost as well as the drilling. If these operators had a force pooling prior to the drilling of the well, they could have shared in the actual cost at the time and some risk factor, which would have been determined by the Commission.

Q Did Texaco make any offer to Pan American to join on the Basin-Dakota in 100 percent of the well cost?

A Yes, sir, this offer was made prior to the -- it was made after

the drilling of the well; this offer is open at the present time to Pan American today.

Q Do you feel that there is a risk involved during the producing life of the well?

A Yes, sir, even though a well has been drilled and proven to be productive, there are certainly hazards involved during the producing life of a well. There is the possibility that the well will never pay out. I believe it is only reasonable for Texaco to be granted a risk factor for this particular well.

Q And what is the risk factor that you are seeking?

A Texaco is seeking a risk factor of 150 percent to be provided for the total cost of drilling and equipping this well.

Q And Southwest and Tidewater have accepted this in accordance with Exhibits 2 and 3?

A Yes, sir, Exhibits 2 and 3.

Q In regard to the reasons necessary, has the Commission approved any similar agreement in the area?

A Well, the Gallegos and the Pan American operators have been approved by the Commission. There is a penalty, actually a risk, in this providing for non-consenting that the operator recover 150 of each non-consenting share of the total cost of the drilling of the well. This well, in this unit, is involved in the same reservoir and in the same general area as Texaco's L. M. Barton Well.

Q Have you prepared any payout calculations?

A Yes, sir, I have, and I would like to enter them as Exhibit 4.

(Applicant's Exhibit No. 4 marked for identification.)

Q Will you proceed and explain Exhibit 4?

A Exhibit No. 4 is the payout calculations for the L. H. Barton Well No. 1. As stated previously, this well has been shut in since completion and therefore there has been no deliverability test taken on this well, so the first thing we had to determine or had to come up with is some idea of what the deliverability of this well would be. To deal with this in the past, Texaco has developed a curve which is a relationship of deliverability to calculated absolute open flow. From this curve we took calculations on the absolute open flow and came up with a deliverability for the Dakota-Mesaverde formation which we believe is reasonable. The Dakota deliverability would be 530, the Mesaverde deliverability would be 460. From this deliverability, we went to the most recent datum and assumed that if this well had been producing during the month of March, 1962, assuming that on this well we calculated what our allowable would be for March of this year. We found a Dakota allowable of 8701 MCF and Mesaverde of 6296 MCF.

From this, we determined what our proportionate share of the two-pool allowable would be and applied this to last year's 1961 production. During 1961 Basin-Dakota produced a total of 60,822,617 MCF, Blanco-Mesaverde produced 160,828,706 MCF. From

this proportionate percentage we estimated our first year's production in the Basin-Dakota would be 63,900,000 cubic feet or 175 MCF per day and the Blanco-Mesaverde would be 66,500,000 cubic feet or 182 MCF per day. This gives you a total per well production of 130,400,000 cubic feet. Now, we had to make certain basic assumptions. We assume that the Basin-Dakota production will remain constant until payout. We assume the Blanco-Mesaverde will remain constant for a period of seven years and then commence at a 6 percent decline.

Q What is the basis for that assumption?

A In other words, in order to determine that, we took averages of the Mesaverde from 1956 to 1961. We declined these deliverabilities and found they were declining between five and six percent per year. Taking the current L. M. Barton deliverability, we declined at five or six percent parallel to the pool decline until a point where the deliverability was less than our current allowable of 182 MCF per day. At this point, we assumed the well then would go to a six percent decline. Another basic assumption that we assumed was that there was one-eighth royalty interest. The condensate equals ten barrels per million cubic feet. For the operating costs we used the total of $2,200 per year. For taxes we used six percent of the total gross sales. For the total well and equipment cost we used the actual cost of $227,308.69. As far as income from the well, we assumed an income on gas of 13¢ per MCF; condensate would be worth $2.50 per

barrel less 30¢ per barrel for trucking, or $2.20, and the weight average of the gas plus condensate would be $0.152 per MCF of gas produced. From this, we determine a payout calculation of 18.1 years. Now, to further clarify that point, I would like to enter Exhibit 5.

(Applicant's Exhibit No. 5 marked for identification)

Q Will you now explain Exhibit 5?

A Exhibit 5 is a graphic representation of the data I have just presented. The yellow line at the top is the total well production in MMCF. The green line is Mesaverde production and the blue line is the Dakota production. The red line is the cumulative net income from the well with the brown line at the bottom being the annual net income from the well. We took the total cost of $227,308.69, went across on the graph until it intersected the cumulative net income and read down in years and came out with a payout of 18.1 years.

Q Have you prepared any present-worth calculations?

A Yes, sir, I'd like to enter them as Exhibit No. 6.

(Applicant's Exhibit No. 6 marked for identification)

A (continuing) Exhibit 6 is tabulations of present worth calculations compounded on a semi-annual basis at six percent. Now the Pan American interest, the interest to be pooled is 25.0 percent. This is based on their total of 80 acres. Twenty-five percent of the total well cost is $56,827. Now, assuming this

eighteen-year payout which we have just calculated, and using the six percent interest compounded semi-annually, there is a present-worth factor of .630. Now, applying this present-worth factor to Pan American's net interest, the money that Texaco would have to recover over this eighteen-year period to be equivalent to Pan American's current twenty-five percent is $90,201, which equals 158.7 percent of their proportionate share of the total well cost. Therefore, if Texaco is granted a risk factor of 150 percent, it will still be impossible for us to recover or actually break even on our money.

Q And this risk factor of 150 percent would not reimburse entity interest of six percent over that period of time?

A No, sir, it would not.

Q Have you worked out any supervision charges?

A Texaco is requesting, as far as supervision charges, that the supervision charge be based on the actual operating expense attributable to this well plus a reasonable administrative overhead charge.

Q What do you figure this supervision charge to amount to in this particular case?

A Well, the administrative overhead charge that we feel is reasonable is $60 per month.

MR. UTZ: That is for dual completion?

A That is for dual completion.

Q (by Mr. White) What will your respective interests be

in the proposed standard 320 acres?

A If the Commission sees fit to enter a force pooling order for the West half of Section 12 and form a standard 320-acre proration unit for both pools, the working interest in the Texaco L. M. Barton well will be as follows: Texaco will be the operator with 200 acres, 62.5 percent; Pan American will have 80 acres or 25.0 percent. Southwest Production Company will have 28 acres or 8.75 percent and Tidewater, 12 acres or 3.75 percent.

Q In your opinion, Mr. Black, will the proposed force pooling be in the interest of conservation and protect correlative rights?

A Yes, sir, I feel it will.

MR. WHITE: At this time, we offer Exhibits 1 through 5.

MR. UTZ: Without objection, Exhibits 1 through 5 will be entered into the record.

(Whereupon Texaco's Exhibits 1 through 5 were admitted into evidence.)

Q (by Mr. White) Does that conclude your testimony?

A Yes, sir, it does.

MR. UTZ: Are there any questions of the witness?

MR. BUELL: Yes, sir, I have one or two.

CROSS EXAMINATION

BY MR. BUELL:

Q Mr. Black, could you briefly state for the record why

you are applying for this force pooling application some nine months after the well was spudded?

A Well, sir, we had a temporary non-standard proration unit for a period of six months. During this period, we felt we could work out a voluntary pooling agreement between all parties concerned. We have found that we have not been able to work out this agreement.

Q Actually, Mr. Black, prior to the spudding date of this well and around the time this well was spudded, Texaco was making efforts in that regard, were they not?

A Yes, sir, we were.

Q And actually that is the reason you went ahead and had a non-standard unit Hearing, because you were hopeful you could work it out voluntarily?

A Yes, sir, we have always had the intention of trying to work out voluntary agreements.

Q Actually, Pan American and Texaco were actively negotiating on exchange of acreage, were they not?

A Yes, sir, we have been negotiating to form this standard unit.

Q I am talking about the exchange of acreage back at the time you spudded your well.

MR. WHITE: We will have a land man, who can talk about that.

Q (by Mr. Buell) Mr. Black, I believe from your testimony

you originally estimated the cost of this well at $97,000, is that correct?

A I believe it was $99,700.

Q And your total cost will be, if my figures are correct, somewhere around $227,000?

A That's correct.

Q So, actually, this well cost about 100 percent more than you anticipated?

A Yes, sir, it did.

Q And according to the payout calculations, I believe, of approximately eighteen years, is that correct?

A Yes, sir, 18.1 years.

Q If the Commission grants your request for a fifty percent penalty, what will be the number of years involved before Pan American receives anything for its interest?

A Well, sir, we haven't worked that out. The eighteen years would be on 100 percent of the actual cost.

Q So it would be reasonable to assume, since your Mesa-verde production is declining, that the additional fifty percent would be somewhat greater than half of the eighteen-year period, but certainly it would be another nine years, which would be twenty-seven years all told?

A Yes, sir, I agree with that.

Q And actually, as you stated, with the well declining, it might be more than that but you know it would be at least nine?



A Yes, sir.

Q Would you be surprised if Pan American actually received a penny from this well for its acreage if the Commission grants your request?

A No, sir, I believe Pan American will receive their share; it will be in addition to the 150 percent and they will receive it from the income from this well.

Q Do I understand that it is your testimony that this well will be producing economically twenty-seven years from now?

A Based upon the current allowable situations and our estimated producing rates on a yearly basis, this well should have a life in excess of that period of time.

Q Would you care to predict how many years in excess of twenty-seven you think it will still be going and producing at an economic rate?

A Well, sir, that certainly depends on the allowable situation. If the market improves and we get increased allowables in the San Juan Basin area, certainly in this payout it could be altered and be much shorter and the total life of the well could be less than thirty years if the allowable was increased and our producing rate was increased.

MR. BUELL: Did I understand you, Mr. White, that you will have another witness who will discuss the blowout?

MR. WHITE: Yes, sir.

MR. BUELL: That is all I have of Mr. Black.



MR. UTZ: Mr. Morris.

CROSS EXAMINATION

BY MR. MORRIS:

Q Mr. Black, I believe you testified that six month temporary proration unit was approved for the 160 acres being your L. M. Barton lease, is that correct?

A That's correct.

Q And was that non-standard unit created by Order R-2043 dated July 28, 1961?

A Yes, sir, it was.

Q And when,under the terms of that order, would it have expired?

A January 28, 1962.

Q What has been the status of the well since the time that order has expired? Has it been producing?

A No, sir, this well has been shut in since completion. It has not produced.

Q You testified that monthly cost for supervising this well would be in the neighborhood of $60 per month?

A Mr. Morris, I believe that is administrative overhead charges.

Q Administrative overhead charges. Now, is that something different from operating costs or is something included within operating costs? On Exhibit 4 you show operating costs $2,200 per year.

A I may need to clarify this. I might not have been perfectly clear. We are asking for 100 percent of the operating costs attributable to this well. Now, this is your direct expenses that can be attributed to this well as expenses. Now, in administrative overhead charges, it is a charge based on per-well basic administrative overhead of various offices and what we feel is reasonable, $60 per month, in keeping with many of our operating agreements in San Juan Basin area. This is in addition to the direct charges against the well.

Q All right, then, in other words, the $2200 per year which you have shown as operating costs is something over and beyond the $60 a month which you have shown as administrative overhead?

A In this case, it is included in the $2200.

Q What else is included in that?

A Direct expenses charged to the well, such as pumping, gauging, and treating and your district and camp expense.

Q Does that include building up some sort of a reserve for work-overs?

A No, sir, this $2200 does not include work-overs.

Q Mr. Black, your Exhibits 2 and 3,which are the telegrams from Tidewater and Southwest Production Company, indicate their willingness to voluntarily come into the unit on the basis of paying 150 percent of their share out of production, is that correct?

A That's correct. They are not paying 150 cash. We have recouped 150 percent out of their share of the production.

Q What does the extra 50 percent represent? Does it represent interest and charges of supervision as well as risk factor? Just what factors would you say go to make up that extra 50 percent?

A This 50 percent is risk factor. It is in keeping with our operating agreements for non-consenting interest owners and in our operating agreements, it ranges from 150 to even 300 percent in some cases, so it is a risk factor.

Q Then, in the communitization agreement that you will ask Tidewater and Southwest to sign, will that also be in addition to the 50 percent and include charges that might be withheld from production for administrative overhead or other operating costs?

A Yes, sir, I believe the telegrams state they will pay one hundred percent of their share of the actual operating expenses attributable to this well.

Q What about interest?

A No, sir, interest would not be included.

Q But you say the extra 50 percent is just a risk factor, it does not include any charge for interest?

A In our application, we are seeking 100 percent. The force pooling statute does not provide for interest.

Q I am talking about the 50 percent that Southwest and

Tidewater agreed to here. What I am trying to arrive at is whether this 150 percent they have arrived at includes any charge for interest?

A No, sir, it doesn't. It is a risk factor.

Q But there is no other charge for interest that would be applied?

A No, sir.

MR. MORRIS: That is all the questions I have.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Black, how much gas did you estimate that these two completions would produce in your eighteen-year payout period?

A I don't have that exact calculation, Mr. Utz. Just one minute.

Q Well, do you have a percentage of the original reserves produced at the end of the payout?

A No, sir, we don't. We assumed, of course, that Dakota would remain 63,900,000 MCF per year and that the Mesaverde would continue at 66,500,000 MCF per year for seven years and then go on a six percent decline.

Q Producing from a 320-acre unit?

A Yes, sir, your Dakota would be.

Q What I am driving at here is how do you know there are that many reserves in the well to begin with?

A We have made reserve calculations and we feel that this number is less than our reserve, certainly less than our reserve calculations.

Q You don't rule what reserve calculations were?

A No, it hasn't been a policy of Texaco to present reserves before this Commission in the past.

Q I think we are in an argument as to whether it is a policy or not. You have been asked for reserve figures; if you know what they are, I would like to have them in the record. In other words, can you present figures here of what your production is going to be for eighteen years and then support it with testimony as to whether you have that many reserves in the ground? It doesn't seem to me like you are presenting too much.

MR. WHITE: I believe the testimony is presently that they have calculated the reserves, they are in excess of an eighteen-year period.

A Mr. Utz, I believe I could give you the reserves in excess of 200 percent of what we expect over the eighteen-year period.

Q (by Mr. Utz) In excess of 200 percent?

A Or rather, it would be 200 percent times the figures over the eighteen-year period for the Dakota formation.

Q And that is just for the Dakota only?

A Yes, sir, we estimated the life of the Mesaverde to be between twenty and thirty years.

Q How about the Mesaverde?

A As I said, we estimated the life of the Mesaverde to be between twenty and thirty years, so therefore the reserve until payout would probably be in the neighborhood of 75 to 80 percent of the total reserves.

Q Two hundred percent in the Dakota. Now, do you have any idea what pressures -- well, first let me ask what amount of pressure do you calculate here?

A 335 PSI.

Q Wellhead?

A Wellhead abandonment pressure -- excuse me, reservoir abandonment pressure.

MR. UTZ: I have no other questions. The witness may be excused.

MR. WHITE: I would like to call Mr. Robinson.

J. E. ROBINSON, JR.

called as a witness, having been first duly sworn on oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. WHITE:

Q Mr. Robinson, would you state your full name?

A J. E. Robinson, Jr.

Q And by whom are you employed and in what capacity?

A Texaco, Inc., as a Petroleum Engineer.

Q Are you familiar with the steps taken by the drilling contractor to assure that this well, the L. M. Barton Well No. 1, would be drilled in accordance with good and prudent practices

of the industry?

A Yes, sir, I am.

Q Will you give a complete history of the drilling of this well and the problems that were encountered?

A The well was spudded and surface casing, consisting of 10 3/4-inch, was set at 311 feet and cemented to the surface of the ground. The surface casing was tested according to the Commission's practices, which indicated that the blowout preventor and all surface equipment were in excellent working condition. After the surface casing was set, we drilled out from under the 10 3/4 inch with a 9 7/8-inch hole to 4800 feet. Then we reduced the hole size from 9 7/8 to a 7 7/8-inch hole to 6800 feet. During the drilling of the well, we encountered the Pictured Cliffs, a sour gas zone, at 2045 feet, the point lookout of the Mesaverde, which is a potential loss circulation zone at 4412 feet and the Dakota, which is the main gas pay at 6528 feet.

Q What type of mud program do you have?

A The mud program for this well was in accordance with normal mud programs for drilling of wells in this area. The mud program ranged in mud weight from 9.3 to 9.6 per gallon. We maintained the viscosity cost of 38 to 56 seconds per 1,000 cc's and a water loss of less than 12 cc's.

Q What precautionary measures were taken prior to drilling into the loss circulation zones?

A Prior to drilling into the point lookout, we added 115

sacks of loss circulation material as a precautionary measure.

Q Was there any loss of circulation encountered?

A There was a very flexible amount that occurred at 4441 feet.

Q What were the conditions of the mud when the well reached total depth and was being logged?

A The weight of the mud was 9.6 pounds per gallon and we had a viscosity of 38 to 56 seconds per 1000 cc's.

Q When the logging operations were going on during the logging of the well, what was the condition of the mud in the hole?

A Prior to coming out of the hole with the drill pipe, the driller kept the hole full at all times. When the logging was started and during periodic checks during the logging operation, the hole was full of mud.

Q Would you give the particular unforeseen events that occurred during the logging of the well?

A On July 16, at approximately 11:30 A.M., the well was being logged at 3700 feet when backflow of drilling mud was noticed and immediately the decision was made to stop the logging operation and remove the logging tool from the hole. The well started unloading and it was necessary to close the rams in the blowout preventor on the logging line. It is Texaco's belief that the loss circulation zone broke down during the logging operation. The logging too had passed this loss circulation zone



twice and after the loss circulation zone broke down, the well became in an unbalanced state. This loss of fluid allowed the hydrostatic head on the Pictured Cliffs at 2045 feet to be sufficiently reduced to allow this gas-oil to blow out. This further reduced the hydrostatic head on the Dakota gas zone and then it blew out. After the Pictured Cliffs blew out, there was not sufficient hydrostatic head then on the Dakota, and then consequently blew out after the Pictured Cliffs. After the blowout preventors were closed, a major gas flow occurred around the surface casing.

We were faced with an immediate decision of either leaving the well shut in and risk the possibility of losing the entire string of surface casing plus the possible loss of the drilling rig and life due to the hazards of a fire, or we had a decision to install vent lines as soon as possible and to remove the gas from the rig vent and hope that the well would bridge itself and kill itself. We elected to install lines and open the well up to relieve the gas pressure that was blowing around the surface pipe.

An unsuccessful attempt was then made to kill the well by pumping weighted mud into the well bore. A shaver rotating head was installed in the drillpipe and a 9 7/8-inch bit was stripped into the hole. The well was killed and full circulation was regained. The hole was then cleaned out; we drilled out numerous bridges all down through the hole to 4800 feet. Seven-inch O.D. casing was cemented in two stages back to the surface pipe.

It was necessary to change our casing program from the original plans to cement over the low circulation zone, and the Pictured Cliffs zone, and to tie in the cement on the seven inch, back into the surface pipe, assured adequate protection in view of the gas that was coming around the surface pipe. After the seven-inch pipe was set, we tested the pipe. We then cleaned it out to T. D. and we set a $4\frac{1}{2}$-inch liner to from 4685 to 6764 and cemented it with 450 sacks. The entire length of the liner was cemented. We then tested it with 3500 pounds. It tested all right. We then completed the well in a conventional manner by setting Baker Model D plug and running two strings of tubing to produce the well.

Q Have you prepared a tabulation showing the estimated cost of this well as against the actual costs that were incurred?

A Yes, sir, I have.

Q Is that Exhibit 7?

A Yes, I believe it is.

(Applicant's Exhibit No. 7 marked for identification)

Q Now, will you proceed, Mr. Robinson?

A Exhibit No. 7 is a comparison of the estimated costs versus the actual costs of the L. M. Barton Well No. 1. In explaining it -- I think some of them are self-explanatory, but I will show the reasons for the difference. It is broken down both into tangible and intangible costs. On the tangible costs, the

estimated Wellhead was $4,500; the actual cost is $5,710. This is because originally we had planned on setting a 4½- and a 2 7/8-inch string. We then set seven-inch and dual inside seven-inch.

Line pipes estimated cost was $200. We have no actual costs on the line pipe. The estimated Casing was $14,400; we actually spent $16,290. This is a difference in our casing design by running a seven-inch and 4½ liner. The tubing was estimated at $4,600; we actually spent $8,190. This is the result of an additional string of tubing to produce the Mesaverde. On tangible total $23,700, the actual was $30,190.

Intangible cost for the float equipment was $1,100. The actual was $1,320. The contract drilling, estimated at $30,200, actually cost $27,150. The rotary day work was estimated at $9,600; we actually spent $19,870. This was due to the fact that the rig was on a day-work basis when the blowout occurred and we kept the rig there until the well was under control. Swabbing we estimated at $4,800; we actually spent $9,750. This was due to a longer interval that we swabbed the well and swabbing mud back from the producing formation after we killed them.

Bits were estimated at $200; we actually spent $420. Mud was estimated at $5,000; the actual cost, $71,550. In the $71,500, it includes roustabout charges. We used roustabouts in mixing the mud to kill the well plus pump truck charges to kill the well and on stand-by basis.

Cement and services $3,500 estimated; actual cost $7,110. This is due to the fact that we estimated our casing from top to bottom. Well stimulation estimated at $9,000; we actually spent $7,280. Road construction and dirt work was estimated at $4,000; actual cost $3,510. Trucking $1,500 estimated; actual cost $9,930. The additional charge in trucking is the use of trucks hauling water to mix the mud when we were trying to kill the well. Welding $400 estimated; actual cost $140. Surveys is $1,800 estimated; actual cost $7,750. The reason here is that we purchased a logging tool, the tool rental we did not have any of on our estimated cost. The actual cost was $9,600. This included rental tools to clean the hole up, and set our liner and miscellaneous charges of $1,700; actual cost $4,450. The estimated cost of intangible was $76,000. We actually spent $184,120. The total of the original was $99,700. We actually spent $214,310.

Q The estimated total cost of the well is what?

A The total cost is $30,187.37. for tangible and for intangible $184,120.32; for tangible estimated $13,000 for additional equipment to be installed which will consist of a separator and heater unit, one for each side, plus a 400-barrel stock tank, for a total cost of $227,308.69.

Q In your opinion, are these cost expenses reasonable and were they incurred in accordance with prudent operations?

A Yes, sir, they were. We have sizes covering all costs.

Q Do you have any further testimony?

A No, sir, I do not.

MR. WHITE: We offer Exhibit 7 in evidence.

MR. UTZ: Without objection, Exhibit 7 will be entered into the record.

(Whereupon Texaco's Exhibit 7 was admitted in evidence)

MR. UTZ: Are there any questions of the witness?

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Robinson, how much surface casing is in this well?

A 311 feet.

Q What size?

A 10 3/4.

Q And how much cement?

A It was circulated back to the surface of the ground.

Q At the time the well blew out, did you have any other casing?

A No, sir, we did not.

Q Do you know what the top of the Pictured Cliffs is?

A 2045 feet.

Q 2045?

A Yes, sir.

Q And the top of the Mesaverde?

A The Point Lookout was 4412.

Q How about the Dakota?

A The top of the Dakota was 6528.

Q Do you know where your loss circulation zone was?

A Yes, sir, it is in this interval from 4412 to 4415 in the Point Lookout zone.

Q This is in the Point Lookout?

A Yes, sir.

Q You say the well actually blew out outside of 10 3/4's?

A Yes, sir.

Q What would cause it to do that?

A Well, we know that originally the cement circulated to the surface of the ground. We tested it and everything held. It was in perfect working condition and all of the cement tested satisfactorily. Sometimes during drilling operations, though, the drill pipe would kill a rotating inside the surface. There are no known instances where you have cement failures unless perhaps you had a small channel that existed in part of the string and later on you had a cement failure along the same lines of this channel.

Q What kind of pressure do you expect in the Pictured Cliffs in this area?

A Roughly 1200 to 1300 in the Mesaverde and in the Pictured Cliffs we had 700 pounds.

Q 1200 in the Mesaverde?

A Yes, sir, and roughly 2,250 to 2,300 in the Dakota.

Q What weight mud did you say you had in the hole?

A We had 9.6 mud, which is the equivalent of .502 pounds per foot.

Q You apparently had around 1,000 pounds on that 700 pound Pictured Cliffs?

A That is correct.

MR. UTZ: Are there any other questions of the witness? The witness may be excused.

(Witness excused.)

MR. WHITE: We will call our next witness, Mr. Beach.

FRED E. BEACH,

called as a witness, having been first duly sworn on oath, was examined and testified as follows:

CROSS EXAMINATION

BY MR. WHITE:

Q Mr. Beach, will you state your full name?

A Fred E. Beach.

Q And by whom are you employed and in what capacity?

A Landman, Texaco, Inc.

Q Have you previously testified before the Commission?

A No, I have not.

Q Will you briefly state your educational and professional background?

A I was graduated from T.W.C in June of '52. I was associated with Texaco in June of '56 in their Land Department.

I am currently District Landman in the Farmington district.

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

MR. UTZ: Yes, sir.

MR. BUELL: If he will state where T.W.C. is located?

A That is Ft. Worth, Texas Wesleyan College.

Q (by Mr. White) Will you state what the actions were, if any, Texaco took prior to the drilling of the subject well to negotiate a pooling agreement with Pan American?

A We advised them of our intent to drill the well in May of '61 and requested their joindry in the well.

Q Was that by letter?

A That was by letter dated May 23.

Q And is that letter marked Exhibit 8?

A Yes, it is.

(Applicant's Exhibit No. 8 marked for identification)

Q And what response or reply did you receive, if any, from Pan American?

A They replied that they would prefer an acreage exchange.

Q And did the two companies then consider exchanging acreage?

A Yes, there were numerous tracts considered by each company, none of which were acceptable.

Q In other words, those tracts offered by Pan American were not acceptable to Texaco and vice versa?

A That's right.

Q Then I take it negotiations were not successful?

A That's right.

Q Is it possible for Pan American to now come in and participate 100 percent by paying cash and by paying cash avoid the 150 percent penalty?

A Yes, we would have reasonably requested again that they do that.

Q In regards to the motion taken by Pan American at the Hearing in Case No. 2329 where we were granted a non-standard proration unit, I would like to read the following telegram into the record, which was sent by Pan American: "Pan American Petroleum Corporation would usually object to a 160-acre non-standard proration unit for their horizons; however, in Case 2329 we have been advised by Texaco that the necessity of an early approval of a non-standard unit pending final negotiation of a standard unit exists due to an expiring lease held by Texaco, and further that they intend to ask at the Hearing for only a temporary order which will permit them to drill and produce their well with a recommendation to the Commission that the order be left open so that ultimately a standard 320-acre proration unit can be formed in the West Half of Section 12, Township 30 North, Range 12 West. In view of this, together with the fact that Pan American is currently negotiating with Texaco regarding the formation of 320-acre, Pan American Petroleum Corporation, as operator of the leases within the West

half of Section 12, Township 30 North, Range 12 West, has no objection to the formation of the proposed non-standard unit for the Dakota and Mesaverde horizons on a temporary basis with the order to be left open to ultimately provide for a standard 320-acre unit in the West half of Section 12, Township 30 North, Range 12 West."

Q Does that conclude your testimony?

A Yes, it does.

MR. WHITE: That is all we have.

MR. UTZ: Are there any questions of the witness?

MR. BUELL: I have one.

CROSS EXAMINATION

BY MR. BUELL:

Q What do you landmen mean when you talk about acreage exchange?

A Trading one tract for another tract when each of the two tracts are considered to be of equal value.

Q In other words, in the active negotiation between Pan American and Texaco, we were trying to work out an exchange whereby you would receive our eighty acres in this proposed 320-acre unit and increase your working interest ownership in the acres within that unit?

A That's right.

Q At the time the wire was sent that Mr. White has read into the record, these negotiations were going on at that time, were they not?

A May I make it clear that we were considering an acreage exchange at Pan American's request and not Texaco's request and the negotiations were going on.

Q Did the negotiations suddenly cease shortly after July 16, 1961?

A I have no knowledge of any negotiations concerning an acreage exchange later than June 30.

MR. BUELL: Thank you, that is all I have.

MR. UTZ: Are there any other questions of the witness? The witness may be excused.

(Witness excused.)

MR. WHITE: That concludes our case.

MR. BUELL: We have one witness to be sworn.

(Witness sworn.)

MR. BUELL: We have one witness for some very short testimony.

GEORGE W. EATON,

called as a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. BUELL:

Q Mr. Eaton, would you state your name, by whom you are employed, in what capacity and in what location?

A George W. Eaton, Jr., Senior Petroleum Engineer for Pan American Petroleum Corporation in Farmington, New Mexico.

Q Mr. Eaton, you have testified at prior Commission hearings and your qualifications as a Petroleum Engineer are a matter of public record, are they not?

A Yes, sir, they are.

Q I wish you would briefly state, for the record, how many years you have had active experience with both Dakota gas wells and Mesaverde gas wells?

A I have had active experience with the Mesaverde gas wells since 1954. I have had some experience, limited experience, with the Dakota gas wells since that same time, since the Dakota horizon has just more recently than that undergone extensive development. From our experience, the Dakota formation would have to be limited to the past two or three years as to detailed experience.

Q With respect to the Texaco L. M. Barton well, what was the reservoir engineering section recommendation with respect to that well when it was first considered?

A It was our recommendation that since Texaco had to drill this well, that acreage did not meet standards of development for Pan American; therefore, we recommended an acreage exchange.

Q To your knowledge, did our Land Department actively negotiate with Texaco in an effort to effect this acreage exchange?

MR. WHITE: May I ask, Mr. Buell, what the purpose of this testimony is?

MR. BUELL: Yes, the purpose of this testimony, Mr. White, I will be happy to state. Actually, if I answer that, I am almost making my closing statement, but I will try to be as brief as I can. The purpose of this line of questioning is to let the record show that at the time the Texaco L. M. Barton Well No. 1 was spudded, Texaco and Pan American were actively engaged in negotiations in an attempt to effect an acreage exchange whereby Pan American would have no interest in what would be the standard unit for the Barton No. 1, but that immediately the blowout occurred, the negotiations ceased, and I think the record should reflect that, and that is the entire purpose.

MR. WHITE: If the Examiner please, I believe under our force pooling statute, all we have to show is that negotiations were attempted to be made to work out an agreement and as to the substance of the agreement or as to the reasonableness of the offer of one party as against the other, is outside the scope of the Hearing. The question is whether or not they have gotten together, sat down and even tried to work out agreements and been unsuccessful in accomplishing it.

MR. BUELL: May I make a short statement? Pan American is not opposing the force pooling, we are not opposing the actual well cost, although in excess it is 100 percent greater than originally estimated. We are simply opposing and protesting the assessment or including of a penalty in the force pooling order. We are not opposing force pooling.

MR. UTZ: This testimony that you are bringing out here is to oppose the penalty?

MR. BUELL: Yes, sir, I think this testimony is certainly necessary and pertinent and germaine in that regard. The point I am trying to make, without actually having to say it, is that Texaco was interested in our acreage while they thought that it was a normal-cost well, but immediately the blowout occurred -- of course, anyone in the business knows that tremendously increased the cost - - they lost all interest in our acres.

MR. WHITE: Do you have any testimony to the effect? I think that is all conclusion on your part, Mr. Buell. Our exhibit there, I believe it is in Exhibit No. 8, shows what our offer was when we first contacted Pan American.

MR. UTZ: Exhibit No. 8?

MR. WHITE: Eight.

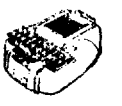
MR. BUELL: Also, Mr. White, the testimony of your landman was to the effect you were interested in an acreage exchange.

MR. WHITE: I believe his testimony was that Pan American approached them on an acreage basis. We were not interested in the acreage you offered us and we offered you - -

MR. BUELL: And that active negotiations in an attempt to effect an acreage exchange had taken place. I would like to have the record to show I have no further questions on that.

MR. WHITE: If that is the only purpose of the testimony, I have no objection.





MR. BUELL: We are not objecting to the force pooling.

MR. UTZ: Does that terminate your questions?

MR. BUELL: Along that line.

Q (by Mr. Buell) Mr. Eaton, let me ask you this: You heard Mr. Black's testimony, did you not --

A Yes, sir, I did.

Q -- where he agreed that if the Commission should include a 50 percent penalty in the force pooling order that it would take a minimum of twenty-seven years production to pay out Pan American's cost? In other words, it would be, I believe he said it would be twenty-seven to thirty years before we'd receive any money?

A Yes, sir.

Q In your opinion, Mr. Eaton, based on your experience with the Mesaverde and Dakota wells and based on your analysis of the characteristics of this well as reflected by the evidence submitted here, is it your opinion that this well will still be with us, will still be producing as an economic well after the expiration of twenty-seven or thirty years?

A Let me preface my statement with this remark: Pan American is operator of something like ninety wells in the Blanco-Mesaverde pools. Pan American is a working interest owner in approximately that same number that are operated by others in the Basin-Dakota pool. Pan American is the operator of approximately fifty-five wells and has a working interest in something approach-

ing that number that are operated by others. I wanted to preface my remarks by that statement to indicate that we have quite a variety of wells on which to base an opinion.

It would be my opinion, based on what I know of the average characteristics of the Blanco-Mesaverde pool, Basin-Dakota pool and L. M. Barton No. 1, that the wells will not be producing twenty-seven years from now.

Q Mr. Eaton, in your opinion, and based on the same experience you have just related, do you feel that this well will ever even pay out 100 percent of its cost?

A The reservoir engineering section, Farmington, which I head, had serious doubt that it would ever pay out the 100 percent of the drilling cost.

Q So, in your opinion, if the Commission should accede to the request of the Applicant and grant a 50 percent penalty, Pan American would never receive one penny for it's interest in the eighty acres in this 320-acre unit?

A Yes, sir.

MR. BUELL: That is all we have, Mr. Examiner.

CROSS EXAMINATION

BY MR. UTZ:

Q Was your estimate of your engineering section based on estimated cost or actual cost?

A Actual cost.

Q 214 to 227?

A Yes, sir.

Q Based on the $99,700, you believe it would have paid out?

A Yes, sir, the reason they didn't meet Pan American's standards for demand, anticipated load deliverability; I tnink that is borne out by the testimony of Mr. Black, too, that he also expects the well to have extremely low deliverability in both the Mesaverde and Dakota formations.

MR. UTZ: Are there any otner questions?

CROSS EXAMINATION

BY MR. WHITE:

Q Mr. Eaton, you heard Mr. Black's testimony tnat the Texaco Company had calculated reserves in this proposed unit that far exceeded payout in investment. Do you dispute his testimony?

A Yes, sir, I think he is being very generous with the well, yes, sir.

Q Do you dispute his testimony?

A Yes, sir.

Q Do you have any reserve calculations per acre as to this particular unit?

A Not with me, no, sir.

MR. WHITE: That is all I have.

CROSS EXAMINATION

BY MR. MORRIS:

Q Mr. Eaton, Pan American, as I understand, opposes the

assessment of 50 percent penalty or charge for risk to be assessed. Do you feel any charge for risk -- now we are talking about a charge for a risk, not a penalty or in terms of payout -- but do you feel that a charge for risk is proper under the circumstances?

A No, sir, I believe the risk has already been taken. It is included in the well cost.

Q That would also be true, would it not, Mr. Eaton, the well costs are always going to reflect any difficulties that an operator runs into in the course of drilling a well? The only risk that would not appear in the well cost would be the risk of a dry hole?

A Yes, sir, there would be no point in having any risk penalty on a well that would not produce.

Q Do you feel that there was any risk of the dry hole that existed as of the date that the well was spudded?

A Yes, sir.

Q Do you feel that the Commission, in this case or in any case where the pooling application is brought after the well has been drilled, should look back and assess costs as of the date the well was spudded?

A Only in unusual circumstances.

MR. MORRIS: I have no further questions.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Eaton, had this acreage been, I will say, approved

by your engineering division as a good risk, would you have joined the unit on a voluntary basis?

A Normally, due to the demand situation for gas in the San Juan Basin, unless we have a compelling reason to do so, our first reaction is to exchange acreage. We have joined a number of wells where there was a compelling reason. We have joined a number of wells where there wasn't necessarily a compelling reason. It would be a factor in making the decision. The quality of acreage would be a factor in making the decision.

Q But you don't really need any more gas?

A No, sir, we certainly don't.

Q Where Pan American is involved in a unit, in asking other people to join a unit, where they are the minority working interest, does Pan American ask those people for a risk factor?

A Do you mean in the normal communitization of operating agreements?

Q Yes, sir.

A The normal operating agreement provides for a recovery of something in excess of normally 150 percent for those people who elect to pay their share of the cost out of production. All of these recent agreements have been written providing for 200 percent, but there is a factor in every one of them that provides for recovery in excess of actual cost and includes the risk and all these other things that Mr. Morris has been talking about.

MR. MORRIS: That would include interest, Mr. Eaton?

A Yes, sir, all things, risk, interest.

Q (by Mr. Utz) In other words, this flat rate includes carrying charges, risk, and everything else you can think of?

A Yes, sir, it is not specified normally in these agreements just exactly what it does cover, so it has to be inferred that it just covers everything.

MR. UTZ: Are there any other questions?

If there are no further questions, the witness may be excused.

(Witness excused.)

Are there any statements in this case?

MR. WHITE: If the Examiner please, we would like to put one witness on in rebuttal, but first may we have a recess?

MR. UTZ: Yes, we will have a recess.

(Recess taken.)

MR. UTZ: The Hearing will come to order. You may proceed with your other witness, Mr. White.

J. E. ROBINSON, JR.

recalled as a witness, having been previously duly sworn on oath, was examined and testified further as follows:

DIRECT EXAMINATION

BY MR. WHITE:

Q Mr. Robinson, are you the same Mr. Robinson that previously testified in this case?

A Yes, sir.

Q Since Mr. Eaton's testimony, have you made certain calculations as to reserves on the proposed unit?

A Yes, sir, I have.

Q And the factors that you have used with Pan American in general are in accord with these factors?

A Yes, sir, the factors that I am using here on my calculations, Mr. Eaton was in accord with those factors.

Q Now, what is the report and result of your studies?

A Well, I would like to make a preliminary statement. It has never been the policy of Texaco before any regulatory body to give out its reserves. This would be a precedent-setting matter and regardless of the importance of the case, we never give out our reserves, even though we have a very important hearing and an order that is very desirable for Texaco; but we are changing to a certain extent here in our policy by using factors that have been given by Pan American, in rebuttal to Mr. Eaton's testimony that this well will never pay out.

Previously, Mr. Black showed calculations where he projected on graph how much this well would produce at the time it is paid out. I am limiting my testimony to the Dakota. Mr. Black projected the Dakota production at the end of eighteen years to be 1,150 MMCF of gas. Now, there were several factors that he took into consideration: Number one, the per-well allowable or the acreage allowable which will remain constant; Number two, the factor in this field includes acreage times deliverability.

This well has a much lower deliverability than other wells in the field and we cut our production accordingly. We took its relation to the deliverability of all wells in the field and reduced our allowable accordingly. Number three, as the deliverability in the field decreases, the deliverability of this well will also decrease proportionately. We have not taken that into consideration. We believe that this well will improve in deliverability as we get rid of our skin effect that was caused by mud damage when the well was drilled, but we are in accord with Pan American engineering data in that they give water saturation to be 35 percent, porosity at 8 percent, and they are using a bottomhole pressure of 2450 pounds.

I have a nomograph here that is based upon abandonment pressure of 200 pounds on our calculations. We actually use 350 pounds, but it is possible, just as easily, to consider that the abandonment of this field will be at 200 pounds rather than 350 pounds. This is a figure anyone could pick out. It could be at 250 or possibly 275, but the figure that I have used is 200 pounds ISI abandonment, because my nomograph is based on that.

MR. UTZ: That is the bottomhole abandonment?

A Yes, sir. Now, your recoverable cubic footage of gas, comparing a cubic foot of gas in the reservoir bringing it to the surface and expanding it, is 254 cubic feet. That means that one cubic foot in the reservoir when brought to the surface will occupy 254 cubic feet atmospheric pressure. From our induction log there

is thirty feet of net pay in this well in the Dakota. This gives us a recovery of approximately 560 MCF per acre foot. We have 320 acres and 9600 acre feet in this normal unit. The reserves in the West half of Section 12, using the Dakota, the data applied by Pan American, is 5,350 MMCF. At the payout of this well, this well will have only produced what I previously stated of being 1,150 MMCF. This recovery factor is based upon the decrease in allowable that we get due to the poor deliverability of this well.

There is no doubt in my mind that when this well has produced only 1,150 MMCF that there is a great life left in the well, yet when the reserves are at 5,350 MMCF roughly, we haven't even produced a quarter of the reserves at the payout. As long as this well deliverability is down, it will not recover the reserves that lie in place, but it will certainly produce enough reserves to pay out for this well and pay it out several times. Any time you take a gas well that has as much reserves as this gas well does with no more allowable that we can produce because there are many gas wells, it has forty, fifty, sixty, and one hundred years life. This does not even include the Mesaverde. We have enough gas just from the Dakota to pay for this well two and a half to three times.

MR. WHITE: That is all we have.

CROSS EXAMINATION

BY MR. UTZ:

Q This 5,350 MMCF, 320-acre tract is Dakota?

A Yes.

Q That was using thirty feet net pay?

A Yes, sir, and also I am using a compressability factor of .57. I believe that is the only other data that I didn't give you. The gravity of the gas is .9258.

Q .9258?

A Yes, sir.

Q Is that an average gravity?

A That is taken from a shielding bottle.

Q Would that include the distillate in that composite gravity, .9258 is pretty high for gas?

A Yes, I am sure it does, because we didn't have separating equipment out there, so evidently it does.

MR. UTZ: Are there any questions of the witness?

MR. BUELL: Mr. Examiner, I would like to state, at this time, prior to questioning Mr. Robinson, that with Mr. White's concurrence I let Mr. Eaton leave. He desperately needed to get to Farmington to go to Denver. I want to apologize for not clearing it with the Commission. I hope it is all right, because he is gone.

MR. UTZ: That is okay.

CROSS EXAMINATION

BY MR. BUELL:

Q Mr. Robinson, don't you feel, since Mr. Eaton is gone,

we should let the record reflect that these reserve factors, he gave them to you from memory?

A Yes, he gave me the 35 percent water saturation and the porosity of 8 percent, which we were all in agreement with.

Q I have enough confidence in him, and I am sure those are right, that he got them exactly right, but I think the record should reflect he just more or less gave them to you from memory?

A That is correct, but those are the factors that we also have.

MR. BUELL: We are also willing, Mr. Examiner, to stipulate, for the record, that probably Mr. Eaton's calculations of reserves would not be too far off from Mr. Robinson's, assuming Mr. Robinson hasn't made a mistake, and I don't say that facetiously. He made a quick calculation. I feel that it was accurate. Actually, Mr. Robinson, the difference in your opinion and Mr. Eaton's is primarily based not on gas in place but on gas this well will recover?

A That is correct, that is where our difference is.

Q And actually carrying your reserves on out to show that in your opinion -- and I realize it is a sincere one-- that this well will pay out. You assume that the deliverability relationship that exists for this well now will never change, but that relationship will stay the same with respect to the Dakota pool or Mesaverde, as the case may be?

A That is correct, probably. In all probability, the

deliverability of this well will increase and more closely approach the average deliverability from the field as we get rid of skin effect around the well bore.

Q Of course you know, and we know, that that relationship will probably change. You just testified there that you thought it would change in an upward direction?

A Yes, sir, that is the only way it could go.

Q The Dakota is not completely developed at this time, is it, Mr. Robinson?

A No, sir, it is not.

Q Would you be able to -- I realize that may not be a fair question -- would you be able to state, in your opinion, what percentage of the Dakota gas reservoir is developed?

A Mr. Buell, I don't know what percentage of the Dakota is produced. It is developed, but as additional wells are drilled then it defines additional reserves. Now, if we assume that no additional wells will be drilled, well then as the reserves under this 320 acres are depleted, then additional reserves from undefined areas will migrate under the tract and they will be produced.

Q Currently the Dakota is being developed, is it not?

A Yes, sir, it is.

Q And each one of these new wells that are completed can affect the deliverability relationship that you are assuming will remain constant?

A Not to a great extent, Mr. Buell, it could go either way as you move out to the edge of the reservoir. Well, normally you would assume that your deliverability would go down, which would make the relationship much better in our favor.

Q And as other wells are drilled that have a higher deliverability than your well, it is going to effect the relationship adversely?

A That is correct.

Q And I believe that we can sum up that your testimony is, it could be affected either beneficially or adversely?

A Yes.

MR. BUELL: That is all I have.

MR. UTZ: Are there any other questions of the witness? The witness may be excused.

(Witness excused.)

MR. UTZ: Do you have anything further, Mr. White?

MR. WHITE: I would like to make one brief closing statement, if I may.

MR. BUELL: I would like to make one, too.

May it please the Examiner, for Pan American Petroleum Corporation I feel I probably made my closing statement already several times, but I would like to briefly again state our position. It is this: We are not opposing being force pooled by Texaco. We are not opposing or challenging in any way the cost of their well, even though it was some 100 percent greater than

was originally estimated.

We are opposing the inclusion of any penalty provision in the force pooling order. I think the record is clear that even if you assumed the prediction that Texaco is all right and that eventually some twenty-seven to thirty years from now, Pan American starts to receive some money, or if you accept the opinion of Mr. Eaton who says that, in his opinion, actually the well will never even pay off 100 percent of the cost of developing it, let alone 150 percent, that if the Commission does include a penalty provision, of any magnitude from one to 50 percent, it is going to amount to confiscation of Pan American's eighty acres in this proposed unit.

If the Commission grants a 50 percent penalty, the Commission is in effect saying, "Texaco, here it is, Pan American's acreage; we are taking it from them and giving it to you." If that isn't confiscation, I never learned the proper definition of the word, and for that reason, we urge that no penalty be included.

MR. UTZ: Would your definition of penalty be synonymous with risk?

MR. BUELL: Yes, sir.

MR. WHITE: If the Examiner please, Mr. Buell, during his interrogation, made the statement that Texaco and Pan American were negotiating the swapping of acreage up until the well blew out and then Texaco backed off. There is nothing in the record to

that effect, and I would like to direct the Examiner's attention to the fact that the well was spudded on July 2, and our witness, Mr. Beach, testified that negotiations to the swapping of acreage ceased as of June 30. The well, of course, blew out after it was spudded even though Mr. Buell's statement as to penalty factor or my statement I would like to have in reply to that would be a quotation of Mr. Buell's statement in the Southwest Production Hearing of February 14, 1962, and I will quote verbatim:

"Now, our appearance here before the Commission is simply to give you the benefit of what we think is fair and we believe is reasonable, not only to Pan American but for all the owners of interests and oil or gas land operators, no matter how small or big they be. One of the general basic issues that I have realized is the proper application of the risk penalty provision. That has been discussed very thoroughly here, generally, with respect to a well that has been drilled and completed prior to the initiation of any force pooling application.

"Pan American feels that in that event no risk penalty should be implied unless the interests who are being force pooled have been given a reasonable amount of notice that the well would be drilled. We make this recommendation because we have been in the position where we thought we had a complete voluntary agreement for a proration unit and a normal operating agreement. I have never seen any that provide for other than 200 percent penalty if any voluntary parties refuse to pay in cash for his share of

expenses. We have had it happen to us that one of the people who advised us that they were going to voluntarily pool and we had started it based on that assumption, and they would find they did not have the financial reserve such as they were not in a position to pay their costs. In that kind of event, they simply pay the penalty. We certainly want to get away from the 200 percent penalty, provided we are not going to sign a worse force pool.

"Certainly, in that event, we feel that a penalty provision is justified and the Commission should insert one in any force pooling order. I think the issue has also been brought up to bring additional or cost related to non-productive risk, whereas Pan American has expressed to the Commission before that actual charges make a non-productive risk probably one of the most minor risks that the driller of a well assumes. We feel that even if the unit being force pooled is completely surrounded by producing wells from the objective arrival, that the inherent risk in drilling still warrants and justifies and urges the Commission to insert a penalty provision in the force pooling order."

We do not feel Pan American's acreage is being confiscated. I think it is evidenced by the fact that Tidewater and Southwest have voluntarily come in, and also that that is indicative that our request is reasonable.

MR. BUELL: Mr. Examiner, I think since Mr. White brought up new matters, I should briefly answer the new matter.

MR. WHITE: No objection.

MR. BUELL: May it please the Examiner, I see nothing inconsistent with our policy statement which Mr. White was reading from the transcript of the Southwest case and the position we have taken here. If he had wanted he could have searched the records and he could have shown where they were staging actions and where they force pooled. He said he had no actual knowledge that the well was being drilled, but he could see it from his front porch and showed up to see us two days after the well was completed. I see nothing in the strategic case inconsistent with the policy recognized in Southwest's cases. The thing to me which distinguishes this case is that we never had any intention of enjoining this well. The negotiations with Texaco were for an acreage exchange when they advised that they were drilling the well. We did have notice of that. We immediately started negotiatios to exchange acreage. Unfortunately, I did not bring any of the land people here. I wish now that I had, but negotiations to exchange acreage did not cease until after the blowout occurred, and of course then Texaco, realizing the increased costs of the well, they were not interested in swapping some of their acreage for ours. I see nothing in our position here that is inconsistent, in any way, with our position in the Southwest case.

MR. UTZ: Are there any other statements?

The case will be taken under advisement. The Hearing will be concluded. (Whereupon the Hearing was concluded at 4:15 P.M.)

INDEX

STATE OF NEW MEXICO )
) ss.
COUNTY OF BERNALILLO)

I, KATHERINE PETERSON, NOTARY PUBLIC in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached transcript of proceedings was reported by me in stenotype and that the same was reduced to typewritten transcript under my personal supervision and contains a true and correct record of said proceedings, to the best of my knowledge, skill and ability.

Katherine Peterson
NOTARY PUBLIC

My Commission Expires:
2/17/64

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2511, heard by me on 3-29-62, 19....

....., Examiner
New Mexico Oil Conservation Commission