STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO

24 May 1989

EXAMINER HEARING

IN THE MATTER OF:

Application of Texaco Producing, Inc. for pool reclassification, to rescind Division Order No. R-2439, as amended, and to amend Division Order No. R-5353, as amended, Lea County, New Mexico. CASE 9674

BEFORE: David R. Catanach, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division:

For Texaco Producing, Inc.: Scott Hall
Attorney at Law
CAMPBELL and BLACK, P. A.
P. O. Box 2208
Santa Fe, New Mexico 87501

I N D E X

E X H I B I T S

MR. CATANACH: At this time we'll call Case Number 9674, the application of Texaco, Producing, Inc., for pool reclassification and to rescind Division Order No. R-2439, as amended, and to amend Division Order No. R-5353, as amended, Lea County, New Mexico.

Are there appearances in this case?

MR. HALL: Mr. Examiner, Scott Hall from the Campbell & Black law firm of Santa Fe, on behalf of Texaco, with three witnesses this morning.

MR. CATANACH: Any other appearances?

Will the witnesses please stand and be sworn in.

(Witnesses sworn.)

DENNIS WEHMEYER,

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

DIRECT EXAMINATION

BY MR. HALL:

Q For the record, please state your name.

A My name is Dennis Wehmeyer.

Q Mr. Wehmeyer, for whom do you work, where, and in what capacity?

A I work for Texaco as the District Operations Engineer in Hobbs, New Mexico.

Q And you're subject with -- you're familiar with the subject application (unclear) are you not?

A Yes, I am.

Q You've previously testified before this examiner and has your credentials accepted?

A Yes, I have.

Q Briefly state what it is Texaco is seeking today.

A Texaco seeks an order rescinding Order R-2439, which established special pool rules for the West Jal Strawn Pool with 640-acre spacing and replacing them with the general rules for associated pools in southeast New Mexico under R -- under Order R-5353, which provides for 40-acre oil and 320-acre gas spacing and proration units.

Q All right, and I understand you prepared certain exhibits this morning.

Let's look at Exhibit One and if you would explain that to the examiner.

A Exhibit One is a plat showing the boundary of the pool, of the West Jal Strawn Pool. It's

highlighted in yellow.

There have been three wells that have produced from the pool. The top well in Section 8 is the C. E. Elliott Fed No. 1. That well is currently producing, as you can see to the side there, it gives the cumulative that he current rates of production.

The next well south in Section 17 is the West Jal B No. 1. That well is currently plugged and abandoned with the cums to the right there.

The well, southern well, in Section 20, is the West Jal Unit. Of course to the right there we have the cumulatives and it is also currently plugged and abandoned.

We might note, we have two proposed recompletions. Out of the three wells two are plugged, one's active. We also have two proposed recompletions, the West Jal B Deep No. 1, which is in Section 17. It is north and east of the West Jal B No. 1. We propose to recomplete that well to the Strawn.

And also we have another proposed recompletion, the West Jal A No. 1, which is located in Section 21, kind of south and east of the West Jal Unit.

Q All right, and the producing well, the Elliott, is that classified as an oil well?

A Yes, it is.

Q All right. Let's look at Exhibit Two, if you would explain that to the examiner.

A Exhibit Two are some drainage calculations and I worked up on the West Jal B and the West Jal Unit. I only did on those two wells since they have the highest cums.

The first one, the West Jal B, I calculated an approximate drainage area of 314 acres, while the West Jal Unit was calculated at approximately 180 acres. To me it indicates that the wells are not capable of draining 640 acres, the gas wells, that is, and they should be classified as one field draining 320.

Q All right. And that's the reason that you're recommending that associated rules be implemented for this pool?

A That is correct.

Q Do you recommend that the oil wells and gas well completions in this pool be defined on the basis of the GOR's --

A Yes.

Q -- as defined in Order R-5353?

A Yes.

Q Are there wells in the pool that will be at an unorthodox location as a result of the adoption of the proposed pool rules?

A No.

Q Mr. Wehmeyer, in your opinion will the granting of this application be in the best interest of conservation, the prevention of waste, and the protection of correlative rights?

A Yes, it will.

Q Let me have you look at Exhibit Seven. Is Exhibit Seven the notice that you've directed your counsel to send to all interested parties?

A Yes, it is.

Q And let me ask you, are there any current -- are there any operators currently operating wells within one mile of the pool boundaries?

A No, there are not.

Q All right. Were Exhibit One, Two and Seven prepared by you or at your direction?

A Yes, they were.

Q All right.

MR. HALL: At this time we'd move the admission of Exhibits One, Two and Seven and that concludes our direct of this witness.

MR. CATANACH: Exhibits One, Two and Seven will be admitted as evidence.

CROSS EXAMINATION

BY MR. CATANACH:

Q Mr. Wehmeyer, all the acreage in the subject pool at this time, is that all Texaco's acreage?

A Not all of it. There is some acreage in Section 17 to the west and in Section 20 that are not leased by Texaco.

Q Who operates that acreage?

A It is Yates, MYCO and there's one other operator, it's in my notes here, MYCO, Yates and Abo Petroleum, and there's some unleased acreage owned by Mr. Dinwiddie, also. They all were provided notice.

Q This pool's been in existence for a long time, hasn't it?

A Since 1965, '65, yes.

Q Was Texaco involved in the original case?

A Yes, Texaco-- well, Skelly, a predecessor was the one that filed originally for the 640 acres.

Q Do you know which was the discovery well for this pool?

A The discovery was the -- let's see, I can tell you in a second -- it was the -- it was the West Jal Unit or the West Jal B Unit. I'm trying to remember which one. It was the West Jal Unit No. 1 in Section 20

down there.

Q You just volumetrically calculated your reserves for the two wells, is that correct?

A Well, the reserves are the actual cumulative production that I was backing into a drainage radius, and then the acres that were drained. So I really backed into that using the actual cums produced from the wells.

Q Both of those wells have been plugged, right?

A Yes, both those two gas wells, 17 and 20 have been plugged.

Q Do you know what these wells are making at the time they were plugged?

A Yeah, we've got them on the next exhibits. They were making --

Q If it's in a later exhibit --

A We'll have a later exhibit, production decline curves showing the last rates, approximately 100 MCF, maybe a little bit better. We've got some water problems with them, also, though.

Q Is it -- is it your opinion, Mr. Wehmeyer, that all the reserves in Section 17 and 20 were not recovered by those two wells?

A Yes, it is.

Q And do you plan to continue developing -- developing those two sections?

A We plan to continue development of Section 17 by the recompletion of the West Jal Deep No. 1, which is that well over to the east side of the section in Section 20.

We have the well in Section 21 which we plan to recomplete that well and into the Strawn. So we don't have any present plans for Section 20 at the moment. We will be looking at that -- those sections upon evaluation of the recompletions on the other two wells.

Q Where is that West Jal B Deep No. 1 located?

A That is -- it's in the northeast quarter of Section 17. It's near the east line of the section there. It's marked 1-B. You can see it. You can barely see it there. I think it's 1980 from the north line and 660 from the east line.

Q What do you -- if you get 320-acre spacing, how do you propose to continue development in Section 8 (not clearly heard) --

A As far as Section 8 goes, the Elliott Well, the well is nearing depletion. We are currently evaluating the uphole potential on that well at this moment. A lot of it really depends on the recompletions

on these existing two wells. We are trying to utilize the current completions to test the Strawn that we have available. Upon favorable results we will consider drilling of additional wells in the pool. It's -- a lot of it depends on our proposed work that we have pending right now, though.

Q Was (unclear) -- if all that acreage in Section 8 was Texaco's or was that communitized sometime?

A That's -- as far as I know, it's all Texaco.

Q What I'm trying to get at is if you reduce the proration units to a 320 unit, who's going to be affected in Section 8?

A It would just be Texaco. We own all -- the whole section. The acreage still would be, let's see, as far as I know the whole section is still HBP, held by production by Texaco with the existing with the existing well.

Q And that's a Federal lease.

A That's correct, yes.

MR. CATANACH; That's all the questions I have of the witness at this time. He may be excused.

ANDREW COVER,

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

DIRECT EXAMINATION

BY MR. HALL:

Q For the record would you please state your name?

A Andrew Cover.

Q Mr. Cover, where do you live, by whom are you employed, and in what capacity?

A I live in Hobbs and I'm employed by Texaco as a production engineer.

Q All right. And you have not previously testified before the Division, have you?

A No.

Q If you would, please, give the Examiner a brief summary of your educational background and work experience.

A I received my BS degree in petroleum natural gas engineering from Penn State in 1982.

I worked for Getty in the Texas and Oklahoma panhandle for three years as a production engineer and I worked for Texaco in southeast Lea County for four years as a production engineer.

I'm currently a registered petroleum engineer in the State of New Mexico.

Q All right, and you're familiar with the application here today and the lands affected, are you not?

A Yes, I am.

MR. HALL: Are the witness' credentials acceptable?

MR. CATANACH: They are.

Q Mr. Cover, I understand that you've prepared certain exhibits in conjunction with your hearing. Would you refer to Exhibit Three and explain that to the examiner, please, sir?

A Exhibit Number Three are production curves on the three wells that have produced from the Strawn in this pool.

This first one is on the C Elliott Federal No. 1. It was completed in the Strawn in November of '65 and cumulative production was 81,000 barrels and 198 MMCF to date; it's still producing, marginal production.

The gravity of the oil on this well is 41 degrees API gravity.

The next curve is on the West Jal B No. 1. It was completed in the Strawn in June of 1964. It has made a cumulative of 5.1 BCF of gas and 73 MBO as of abandonment in March of '76. Abandonment on this well was due

to water influx, as can be seen by this curve. It made producing the well uneconomical.

The next curve is West Jal Unit No. 1. It was completed in the Strawn in January of '63. Cumulative production is 4.2 BCF and 82,000 barrels of oil at abandonment in 1972. The gravity of the oil in this well was 49 degrees API.

I'd like to go back, on the West Jal B No. 1 the gravity of the oil was 52 degrees API.

Q All right. Do you have anything further to add with respect to Exhibit Three?

A No, that would be it.

Q All right, let's look at Exhibit Four, if you would identify that and explain that, please.

A Okay. Exhibit Four are GOR plots for the same wells.

The first well is the C. E. Elliott Federal No. 1 showing that the GORs in this well have generally run around 5,000 MCF per barrel, 5000 and lower, depending on the (unclear).

The West Jal B shows a GOR of approximately 100,000 MCF per barrel.

The West Jal Unit has ranged from 50,000 to 250,000 MCF per barrel.

The point of these curves is that the

Elliott has made a significantly lower GOR than the other two wells in the field.

Q All right. What conclusions are you able to draw from the Exhibits Three and Four?

A That there is some discontinuity in the reservoir and that it could be difficult to drain 320 acres. I'd also like to note in the West Jal B Deep, which is one of the wells we plan to workover into the Strawn, it was drilled in December of 1975 at approximately abandonment date of both -- of all three wells -- well, of these two wells and the Elliott is still producing.

However, while we were drilling the Strawn pay in that well, it had a good show of gas while drilling with 11.4 pound mud. It had a gas flow go from 4 foot to 9 foot in that Strawn pay, also indicating that we hadn't drained 640 acres because this well, this B Deep is only 1400 foot from the West Jal Deep Well.

Q So the production characteristics and the widely varying GORs among the three wells indicated to you that there are significant discontinuities in the reservoir among the three wells, is that correct?

A Yes, it did.

Q All right, in your view can this pool be efficiently and effectively drained by wells drilled on 640 acre spacing?

A No.

Q All right. Do you have anything further you wish to add?

A No, that would be it.

Q All right, were Exhibits Three and Four prepared by you or at your direction?

A They were prepared by me.

MR. HALL: At this time we'd move the admission of Exhibits Three and Four.

That concludes our direct of this witness.

MR. CATANACH: Exhibits Three and Four will be admitted as evidence in this case.

CROSS EXAMINATION

BY MR. CATANACH:

Q Mr. Cover, why was the West Jal Unit Well abandoned?

A The West Jal Unit Well was abandoned due to poor economics. It was only -- at the time it was only making about 70 MCF a day and approximately a barrel and a half of condensate.

PRESSLY H. McCANCE,

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

DIRECT EXAMINATION

BY MR. HALL:

Q For the record please state your name.

A Pressly H. McCance.

Q Mr. McCance, where do you live, by whom are you employed and in what capacity?

A I live in Midland, Texas. I'm employed by Texaco Producing, Incorporated, where I'm development geologist.

Q And you've previously testified before the examiner and had your credentials accepted, have you not?

A Yes, I have.

Q Are you familiar with the subject application and the lands involved?

A Yes, I am.

Q All right, Mr. McCance, I understand you've prepared certain exhibits. Let's look at Exhibit Five, if you would explain that to the examiner, please.

A All right. Exhibit Five is a structure map contoured on the top of the Strawn. It's based on

fusulinid data.

It shows the current Strawn producing wells and those that have been plugged, as well as other production in the area. The West Jal Unit outline is indicated in green. The significant features of the map are some -- some faults, a reverse fault and normal fault which define the eastern boundary of the field and the position of the West Jal B Deep, which is located in -- in unit letter H of Section 17, which is the proposed work-over, shows that it's roughly 100 feet up dip from the West Jal B No. 1, which is plugged.

I might add that the West Jal Federal No. 1, located down in Section 21 is also being looked at for a proposed workover in the Upper Strawn that's -- there's a reverse fault that cuts that well and there are two fault blocks. The Lower Strawn or the Second -- Second Strawn was perforated and they had plans to work over the Upper Strawn at a future date.

Let's see, the faults were picked from -- from Paleo data and the significant well is the well in Section 21 where you can actually see the fault cuts in the Strawn.

I guess that's about all.

Q The location of the faults running north and south through Sections 9, 16 and 21 would seem to pre-

clude drainage across anything more than 320 acres, is that not correct?

A I believe so.

Q All right, let's look at Exhibit Six, if you would explain that, please.

A Exhibit Six is a structural cross section that runs north/south through the West Jal Unit. The proposed re-entry is the second well from the left, as indicated.

The color coding is the fusulinid data that I used to pick my formation tops. The pink color is -- is -- represents Strawn fusulinids. The proposed locations are indicated for the proposed workover, as well as the other perforations in the wells. The significant features on the cross section are the faults on the south part of the cross section, or the righthand side, that actually cuts the -- cuts the Strawn; the farthermost (sic) fault is a reverse fault and the one just to the left of that is a normal fault, and that -- those faults were placed using Paleo data.

Now there are some -- there are discontinuities suggested by the cross section. There's some -- some of the porosity correlates and some of the porosity doesn't correlate. Most significantly is right above the dashed correlation line there's some perforations in the

West Jal B No. 1 with porosity indicated on the sonic log. Corresponding porosity in the West Jal B Deep is -- doesn't appear to be present, suggesting that there are discontinuities in the reservoir. I might add that the Elliott Federal, given the different gravity of oil, might suggest that it is fault separated from the other Strawn production in the area. Based on well control I wasn't able to place a fault between the wells but there is a good possibility that it is fault separated further adding to the discontinuities in the reservoir.

I guess that's about all.

Q Mr. McCance, is it your view that the discontinuous nature of the reservoir would preclude efficient and economic recovery of hydrocarbons by wells drilled on 640-acre spacing --

A Yes.

Q -- as opposed to 320?

A Yes, I think 320 would be necessary to drain the reserves.

Q All right. Were Exhibits Five and Six prepared by you?

A Yes, they were.

MR. HALL: We'd move the admission of Exhibits Five and Six, and that concludes our direct of this witness.

MR. CATANACH: Exhibits Five and Six will be admitted as evidence.

I have no questions of the witness.

DENNIS WEHMEYER,

being recalled as a witness and remaining under oath, testified as follows, to-wit:

RECROSS EXAMINATION

BY MR. CATANACH:

Q Just a couple more questions, Mr. Wehmeyer.

A Uh-huh.

Q How would -- what gas/oil ratio would be -- or would the separation between the gas and oil wells be 100,000-to-1 or is that what you propose? Is that how you propose it?

A We're proposing the standard rules in associated pools. It's -- of course, the limiting gas/oil ratio would be 2000-to-1. The -- according to standard rules, associated pools it's 30,000.

Q 30,000?

A Yes, that's what we're proposing, is standard.

Q Would that put the Elliott as -- would it remain as a gas well?

A The Elliott would still remain as an oil well.

Q An oil well.

A Yes.

Q I guess in that (unclear) you would dedicate 40 acres to that well.

A Yes, 40 acres would be dedicated to the Elliott proposed recompletion. For the West Jal B Deep the east half of 17 would be dedicated, and the West Jal A in Section 21, I'm assuming the west half of 21. I'll have to check on that exactly, though, since we're just looking at it. We haven't done the work yet.

Q So you're anticipating that the well, the two recompletions are going to be gas?

A We anticipate, we're processing the paper work on the well in 17, Section 17. We anticipate it to be a gas well. Preliminary look at the well in Section 21, we're estimating it to be a gas well, also, at this time.

Q Were these the only three wells drilled in the pool, to your knowledge?

A Those are the only three wells that were completed in the pool. Now one thing that you might note,

the well in Section 21, the proposed recompletion of the West Jal A No. 1, it was perforated in that second Strawn. There's a couple Strawns in the well due to that fault. The second Strawn was perforated and tested and subsequently shut in. When we came back, opened the well up, it wasn't there any more. We couldn't produce it or it would produce at a very low rate. It tested at first around 5-600 MCF a day. When we came back to open the well up down a sales line, it was producing less than 100, more like 50 MCF a day. We abandoned it, abandoned the Second Strawn right then; couldn't afford to produce it.

So it was perforated in the Second Strawn but it never really produced from the pool.

And now we have that First Strawn that we want to come up, come up the hole and test.

Q Do you have any estimates on what kind of additional reserves you could produce from the 17 -- from Section 17 and from Section 21?

A The work that we've looked at on Section 17, we're estimating approximately half a BCF gas, due to partial drainage; 3000 barrels of condensate; I said 3-to-5000 barrels, 3-to-5000 barrels.

The well in Section 21, we're looking at some similar type reservoir reserves, maybe even less than the well in Section 17. It's more indeterminate for the

West Jal A in Section 21.

Q Are you proposing these 320 rules being a permanent part of R-5353?

A Yes, we are.

MR. CATANACH: That's all the questions I have. He may be excused.

MR. HALL: We have nothing further.

MR. CATANACH: Being nothing further in this case it will be taken under advisement.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C. S. R. DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division (Commission) was reported by me; that the said transcript is a full, true and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9624, heard by me on May 24, 1978.

David R. Catanach, Examiner
Oil Conservation Division

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICO

Hearing Date MAY 24, 1989 Time: 8:15 A.M.

NAME	REPRESENTING	LOCATION
Scott Tanberg	Robert Landreth	Midland TX
Susan Courtright	Phillips Petroleum	Odessa, TX
David A. Brown	Phillips Petroleum	Odessa, TX
Dennis Dehmeyer	Texaco	Hobbs, NM
Tim R. Juney	Midland Phoenix Corp	Midland, TX.
Bob Huber	Bynum	Santa Fe
J. Bruce	Hinkle Law Firm	Albuquerque
W. R. Crow	Charles B. Gillespie Jr.	Midland, TX.
P. H. McCance	Texaco	Midland, TX
Scott Hall	Campbell & Black	SF
William F. Carr	Campbell + Black, P.A.	Santa Fe
Gary J. Green	Exxon Oil & Gas	Midland, Texas
[illegible]	Fred Pool Drilling	Roswell
Fred F. Pool III	Fred Pool Dlg Inc	Rosw
Bill Clark	Blue Gerardi Nichols	Drago Co

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICO

Hearing Date MAY 24, 1989 Time: 8:15 A.M.

NAME	REPRESENTING	LOCATION
W. Perry Pearce	Kellahin, Kellahin & Aubrey	Santa Fe
Ernest L. Padilla	Padilla & Snyder	SF
Robert M. Lemmon	Enron Oil & Gas Company	Midland, Tx
Billy Helms	Enron Oil & Gas	Midland, Tx
Kent Beers	Meridian Oil Inc.	Farmington NM
Jim Scott	Midland Phoenix Corp	Midland Tx
Terry L. Cherryhomes	Enron Oil & Gas	Midland Texas
B. Craig Duke	Midland Phoenix Corp.	Midland, Tx

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO

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EXAMINER HEARING

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BEFORE: David R. Catanach, Examiner

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For the Division:

For Texaco Producing, Inc.: Scott Hall
Attorney at Law
CAMPBELL and BLACK, P. A.
P. O. Box 2208
Santa Fe, New Mexico 87501

I N D E X

E X H I B I T S

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(Witnesses sworn.)

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Q For the record, please state your name.

A My name is Dennis Wehmeyer.

Q Mr. Wehmeyer, for whom do you work, where, and in what capacity?

A I work for Texaco as the District Operations Engineer in Hobbs, New Mexico.

Q And you're subject with -- you're familiar with the subject application (unclear) are you not?

A Yes, I am.

Q You've previously testified before this examiner and has your credentials accepted?

A Yes, I have.

Q Briefly state what it is Texaco is seeking today.

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And also we have another proposed recompletion, the West Jal A No. 1, which is located in Section 21, kind of south and east of the West Jal Unit.

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Q All right. And that's the reason that you're recommending that associated rules be implemented for this pool?

A That is correct.

Q Do you recommend that the oil wells and gas well completions in this pool be defined on the basis of the GOR's --

A Yes.

Q -- as defined in Order R-5353?

A Yes.

Q Are there wells in the pool that will be at an unorthodox location as a result of the adoption of the proposed pool rules?

A No.

Q Mr. Wehmeyer, in your opinion will the granting of this application be in the best interest of conservation, the prevention of waste, and the protection of correlative rights?

A Yes, it will.

Q Let me have you look at Exhibit Seven. Is Exhibit Seven the notice that you've directed your counsel to send to all interested parties?

A Yes, it is.

Q And let me ask you, are there any current -- are there any operators currently operating wells within one mile of the pool boundaries?

A No, there are not.

Q All right. Were Exhibit One, Two and Seven prepared by you or at your direction?

A Yes, they were.

Q All right.

MR. HALL: At this time we'd move the admission of Exhibits One, Two and Seven and that concludes our direct of this witness.

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CROSS EXAMINATION

BY MR. CATANACH:

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A Not all of it. There is some acreage in Section 17 to the west and in Section 20 that are not leased by Texaco.

Q Who operates that acreage?

A It is Yates, MYCO and there's one other operator, it's in my notes here, MYCO, Yates and Abo Petroleum, and there's some unleased acreage owned by Mr. Dinwiddie, also. They all were provided notice.

Q This pool's been in existence for a long time, hasn't it?

A Since 1965, '65, yes.

Q Was Texaco involved in the original case?

A Yes, Texaco-- well, Skelly, a predecessor was the one that filed originally for the 640 acres.

Q Do you know which was the discovery well for this pool?

A The discovery was the -- let's see, I can tell you in a second -- it was the -- it was the West Jal Unit or the West Jal B Unit. I'm trying to remember which one. It was the West Jal Unit No. 1 in Section 20

down there.

Q You just volumetrically calculated your reserves for the two wells, is that correct?

A Well, the reserves are the actual cumulative production that I was backing into a drainage radius, and then the acres that were drained. So I really backed into that using the actual cums produced from the wells.

Q Both of those wells have been plugged, right?

A Yes, both those two gas wells, 17 and 20 have been plugged.

Q Do you know what these wells are making at the time they were plugged?

A Yeah, we've got them on the next exhibits. They were making --

Q If it's in a later exhibit --

A We'll have a later exhibit, production decline curves showing the last rates, approximately 100 MCF, maybe a little bit better. We've got some water problems with them, also, though.

Q Is it -- is it your opinion, Mr. Wehmeyer, that all the reserves in Section 17 and 20 were not recovered by those two wells?

A Yes, it is.

Q And do you plan to continue developing -- developing those two sections?

A We plan to continue development of Section 17 by the recompletion of the West Jal Deep No. 1, which is that well over to the east side of the section in Section 20.

We have the well in Section 21 which we plan to recomplete that well and into the Strawn. So we don't have any present plans for Section 20 at the moment. We will be looking at that -- those sections upon evaluation of the recompletions on the other two wells.

Q Where is that West Jal B Deep No. 1 located?

A That is -- it's in the northeast quarter of Section 17. It's near the east line of the section there. It's marked 1-B. You can see it. You can barely see it there. I think it's 1980 from the north line and 660 from the east line.

Q What do you -- if you get 320-acre spacing, how do you propose to continue development in Section 8 (not clearly heard) --

A As far as Section 8 goes, the Elliott Well, the well is nearing depletion. We are currently evaluating the uphole potential on that well at this moment. A lot of it really depends on the recompletions

on these existing two wells. We are trying to utilize the current completions to test the Strawn that we have available. Upon favorable results we will consider drilling of additional wells in the pool. It's -- a lot of it depends on our proposed work that we have pending right now, though.

Q Was (unclear) -- if all that acreage in Section 8 was Texaco's or was that communitized sometime?

A That's -- as far as I know, it's all Texaco.

Q What I'm trying to get at is if you reduce the proration units to a 320 unit, who's going to be affected in Section 8?

A It would just be Texaco. We own all -- the whole section. The acreage still would be, let's see, as far as I know the whole section is still HBP, held by production by Texaco with the existing with the existing well.

Q And that's a Federal lease.

A That's correct, yes.

MR. CATANACH; That's all the questions I have of the witness at this time. He may be excused.

ANDREW COVER,

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

DIRECT EXAMINATION

BY MR. HALL:

Q For the record would you please state your name?

A Andrew Cover.

Q Mr. Cover, where do you live, by whom are you employed, and in what capacity?

A I live in Hobbs and I'm employed by Texaco as a production engineer.

Q All right. And you have not previously testified before the Division, have you?

A No.

Q If you would, please, give the Examiner a brief summary of your educational background and work experience.

A I received my BS degree in petroleum natural gas engineering from Penn State in 1982.

I worked for Getty in the Texas and Oklahoma panhandle for three years as a production engineer and I worked for Texaco in southeast Lea County for four years as a production engineer.

I'm currently a registered petroleum engineer in the State of New Mexico.

Q All right, and you're familiar with the application here today and the lands affected, are you not?

A Yes, I am.

MR. HALL: Are the witness' credentials acceptable?

MR. CATANACH: They are.

Q Mr. Cover, I understand that you've prepared certain exhibits in conjunction with your hearing. Would you refer to Exhibit Three and explain that to the examiner, please, sir?

A Exhibit Number Three are production curves on the three wells that have produced from the Strawn in this pool.

This first one is on the C Elliott Federal No. 1. It was completed in the Strawn in November of '65 and cumulative production was 81,000 barrels and 198 MMCF to date; it's still producing, marginal production.

The gravity of the oil on this well is 41 degrees API gravity.

The next curve is on the West Jal B No. 1. It was completed in the Strawn in June of 1964. It has made a cumulative of 5.1 BCF of gas and 73 MBO as of abandonment in March of '76. Abandonment on this well was due

to water influx, as can be seen by this curve. It made producing the well uneconomical.

The next curve is West Jal Unit No. 1. It was completed in the Strawn in January of '63. Cumulative production is 4.2 BCF and 82,000 barrels of oil at abandonment in 1972. The gravity of the oil in this well was 49 degrees API.

I'd like to go back, on the West Jal B No. 1 the gravity of the oil was 52 degrees API.

Q All right. Do you have anything further to add with respect to Exhibit Three?

A No, that would be it.

Q All right, let's look at Exhibit Four, if you would identify that and explain that, please.

A Okay. Exhibit Four are GOR plots for the same wells.

The first well is the C. E. Elliott Federal No. 1 showing that the GORs in this well have generally run around 5,000 MCF per barrel, 5000 and lower, depending on the (unclear).

The West Jal B shows a GOR of approximately 100,000 MCF per barrel.

The West Jal Unit has ranged from 50,000 to 250,000 MCF per barrel.

The point of these curves is that the

Elliott has made a significantly lower GOR than the other two wells in the field.

Q All right. What conclusions are you able to draw from the Exhibits Three and Four?

A That there is some discontinuity in the reservoir and that it could be difficult to drain 320 acres. I'd also like to note in the West Jal B Deep, which is one of the wells we plan to workover into the Strawn, it was drilled in December of 1975 at approximately abandonment date of both -- of all three wells -- well, of these two wells and the Elliott is still producing.

However, while we were drilling the Strawn pay in that well, it had a good show of gas while drilling with 11.4 pound mud. It had a gas flow go from 4 foot to 9 foot in that Strawn pay, also indicating that we hadn't drained 640 acres because this well, this B Deep is only 1400 foot from the West Jal Deep Well.

Q So the production characteristics and the widely varying GORs among the three wells indicated to you that there are significant discontinuities in the reservoir among the three wells, is that correct?

A Yes, it did.

Q All right, in your view can this pool be efficiently and effectively drained by wells drilled on 640 acre spacing?

A No.

Q All right. Do you have anything further you wish to add?

A No, that would be it.

Q All right, were Exhibits Three and Four prepared by you or at your direction?

A They were prepared by me.

MR. HALL: At this time we'd move the admission of Exhibits Three and Four.

That concludes our direct of this witness.

MR. CATANACH: Exhibits Three and Four will be admitted as evidence in this case.

CROSS EXAMINATION

BY MR. CATANACH:

Q Mr. Cover, why was the West Jal Unit Well abandoned?

A The West Jal Unit Well was abandoned due to poor economics. It was only -- at the time it was only making about 70 MCF a day and approximately a barrel and a half of condensate.

PRESSLY H. McCANCE,

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

DIRECT EXAMINATION

BY MR. HALL:

Q For the record please state your name.

A Pressly H. McCance.

Q Mr. McCance, where do you live, by whom are you employed and in what capacity?

A I live in Midland, Texas. I'm employed by Texaco Producing, Incorporated, where I'm development geologist.

Q And you've previously testified before the examiner and had your credentials accepted, have you not?

A Yes, I have.

Q Are you familiar with the subject application and the lands involved?

A Yes, I am.

Q All right, Mr. McCance, I understand you've prepared certain exhibits. Let's look at Exhibit Five, if you would explain that to the examiner, please.

A All right. Exhibit Five is a structure map contoured on the top of the Strawn. It's based on

fusulinid data.

It shows the current Strawn producing wells and those that have been plugged, as well as other production in the area. The West Jal Unit outline is indicated in green. The significant features of the map are some -- some faults, a reverse fault and normal fault which define the eastern boundary of the field and the position of the West Jal B Deep, which is located in -- in unit letter H of Section 17, which is the proposed workover, shows that it's roughly 100 feet up dip from the West Jal B No. 1, which is plugged.

I might add that the West Jal Federal No. 1, located down in Section 21 is also being looked at for a proposed workover in the Upper Strawn that's -- there's a reverse fault that cuts that well and there are two fault blocks. The Lower Strawn or the Second -- Second Strawn was perforated and they had plans to work over the Upper Strawn at a future date.

Let's see, the faults were picked from -- from Paleo data and the significant well is the well in Section 21 where you can actually see the fault cuts in the Strawn.

I guess that's about all.

Q The location of the faults running north and south through Sections 9, 16 and 21 would seem to pre-

clude drainage across anything more than 320 acres, is that not correct?

A I believe so.

Q All right, let's look at Exhibit Six, if you would explain that, please.

A Exhibit Six is a structural cross section that runs north/south through the West Jal Unit. The proposed re-entry is the second well from the left, as indicated.

The color coding is the fusulinid data that I used to pick my formation tops. The pink color is -- is -- represents Strawn fusulinids. The proposed locations are indicated for the proposed workover, as well as the other perforations in the wells. The significant features on the cross section are the faults on the south part of the cross section, or the righthand side, that actually cuts the -- cuts the Strawn; the farthermost (sic) fault is a reverse fault and the one just to the left of that is a normal fault, and that -- those faults were placed using Paleo data.

Now there are some -- there are discontinuities suggested by the cross section. There's some -- some of the porosity correlates and some of the porosity doesn't correlate. Most significantly is right above the dashed correlation line there's some perforations in the

West Jal B No. 1 with porosity indicated on the sonic log. Corresponding porosity in the West Jal B Deep is -- doesn't appear to be present, suggesting that there are discontinuities in the reservoir. I might add that the Elliott Federal, given the different gravity of oil, might suggest that it is fault separated from the other Strawn production in the area. Based on well control I wasn't able to place a fault between the wells but there is a good possibility that it is fault separated further adding to the discontinuities in the reservoir.

I guess that's about all.

Q Mr. McCance, is it your view that the discontinuous nature of the reservoir would preclude efficient and economic recovery of hydrocarbons by wells drilled on 640-acre spacing --

A Yes.

Q -- as opposed to 320?

A Yes, I think 320 would be necessary to drain the reserves.

Q All right. Were Exhibits Five and Six prepared by you?

A Yes, they were.

MR. HALL: We'd move the admission of Exhibits Five and Six, and that concludes our direct of this witness.

MR. CATANACH: Exhibits Five and Six will be admitted as evidence.

I have no questions of the witness.

DENNIS WEHMEYER,

being recalled as a witness and remaining under oath, testified as follows, to-wit:

RECROSS EXAMINATION

BY MR. CATANACH:

Q Just a couple more questions, Mr. Wehmeyer.

A Uh-huh.

Q How would -- what gas/oil ratio would be -- or would the separation between the gas and oil wells be 100,000-to-1 or is that what you propose? Is that how you propose it?

A We're proposing the standard rules in associated pools. It's -- of course, the limiting gas/oil ratio would be 2000-to-1. The -- according to standard rules, associated pools it's 30,000.

Q 30,000?

A Yes, that's what we're proposing, is standard.

Q Would that put the Elliott as -- would it remain as a gas well?

A The Elliott would still remain as an oil well.

Q An oil well.

A Yes.

Q I guess in that (unclear) you would dedicate 40 acres to that well.

A Yes, 40 acres would be dedicated to the Elliott proposed recompletion. For the West Jal B Deep the east half of 17 would be dedicated, and the West Jal A in Section 21, I'm assuming the west half of 21. I'll have to check on that exactly, though, since we're just looking at it. We haven't done the work yet.

Q So you're anticipating that the well, the two recompletions are going to be gas?

A We anticipate, we're processing the paper work on the well in 17, Section 17. We anticipate it to be a gas well. Preliminary look at the well in Section 21, we're estimating it to be a gas well, also, at this time.

Q Were these the only three wells drilled in the pool, to your knowledge?

A Those are the only three wells that were completed in the pool. Now one thing that you might note,

the well in Section 21, the proposed recompletion of the West Jal A No. 1, it was perforated in that second Strawn. There's a couple Strawns in the well due to that fault. The second Strawn was perforated and tested and subsequently shut in. When we came back, opened the well up, it wasn't there any more. We couldn't produce it or it would produce at a very low rate. It tested at first around 5-600 MCF a day. When we came back to open the well up down a sales line, it was producing less than 100, more like 50 MCF a day. We abandoned it, abandoned the Second Strawn right then; couldn't afford to produce it.

So it was perforated in the Second Strawn but it never really produced from the pool.

And now we have that First Strawn that we want to come up, come up the hole and test.

Q Do you have any estimates on what kind of additional reserves you could produce from the 17 -- from Section 17 and from Section 21?

A The work that we've looked at on Section 17, we're estimating approximately half a BCF gas, due to partial drainage; 3000 barrels of condensate; I said 3-to-5000 barrels, 3-to-5000 barrels.

The well in Section 21, we're looking at some similar type reservoir reserves, maybe even less than the well in Section 17. It's more indeterminate for the

West Jal A in Section 21.

Q Are you proposing these 320 rules being a permanent part of R-5353?

A Yes, we are.

MR. CATANACH: That's all the questions I have. He may be excused.

MR. HALL: We have nothing further.

MR. CATANACH: Being nothing further in this case it will be taken under advisement.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C. S. R. DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division (Commission) was reported by me; that the said transcript is a full, true and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9674, heard by me on May 2, 1984.

David R. Catanach, Examiner
Oil Conservation Division