CASE 6895: SUN GAS COMPANY FOR AN NGPA
DETERMINATION,, LEA COUNTY, NEW MEXICO

Case No.

6895

Application

Transcripts

Small Exhibits

ETC

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
21 May 1980

EXAMINER HEARING

IN THE MATTER OF:

Application of Sun Gas Company for an NGPA determinaion, Lea County, New Mexico.

CASE 6895

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant: W. Thomas Kellahin, Esq.
KELLAHIN & KELLAHIN
500 Don Gaspar
Santa Fe, New Mexico 87501

I N D E X

E X H I B I T S

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Phone (505) 455-7409

MR. STAMETS: Call next Case 6895.

MR. PADILLA: Application of Sun Gas Company for an NGPA determination, Lea County, New Mexico.

MR. KELLAHIN: We would like to correct that. It should reflect that -- Sun Gas Company is a division of Sun Oil Company. I think to be absolutely correct it is still Sun Oil Company.

MR. PADILLA: Would the NGPA application be Sun Gas Company?

MR. KELLAHIN: Sun Oil.

I'm Tom Kellahin of Santa Fe, New Mexico, and Mr. Stamets, I'd like the record to reflect that Mr. Davis is an expert geologist, that he's qualified as an expert, and is currently under oath in the previous case.

MR. STAMETS: We will have the record reflect that and you said it's Sun Gas Company, a division of Sun Oil Company?

MR. KELLAHIN: Yes, sir.

MR. STAMETS: Okay.

ROBERT DAVIS

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

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DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Davis, would you look at Exhibit One for us, please, and would you identify the 80-acre proration unit which is the subject of this hearing?

A. Okay. Exhibit Number One, the 80-acre proration unit is outlined with hachures.

Q. Would you identify all the wells on that 80-acre proration unit?

A. J. A. Akens No. 7, a blue dot in the northern half of that proration unit is a Blinebry Well, spudded 5-13-63 and completed the same year.

Q. You're seeking NGPA determination of a new producing well in the Blinebry --

A. Right.

Q. -- for this proration unit.

A. Yes, sir.

Q. The No. 7 Well was spudded when?

A. 5-13-63.

Q. And when was it completed?

A. 6-8-63.

Q. Was that well the first Blinebry well on this proration unit?

A. Yes, sir.

Q. What is the well identified by the green

circle immediately to the east?

A. It's a shallow Grayburg San Andres well.

Q. Okay. What is the current producing capacity of that No. 7 Well?

A. In February of 1980 it was producing 34 oil, 10 water, and 317 Mcf a day.

Q. Now would you identify for us the wells in the south portion of the proration unit?

A. The blue dot, Well No. 10, is a Blinebry completion.

Q. That is the well that's the subject of this hearing?

A. Correct.

Q. And when was that well spudded?

A. 9-16-78.

Q. And when was it completed?

A. 12-27-78.

Q. What is its current production capacity?

A. In February of '80 it was making 11 barrels of oil, 16 barrels of water, and 57 Mcf.

Q. Would you identify for us the well located to the east of the No. 10 Well, identified by the green circle?

A. Again it's a shallow Grayburg San Andres producer.

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Q. Okay. Go ahead and explain to us the significance, if any, of your Blinebry structure map.

MR. STAMETS: Excuse me, what -- when you say shallow, what you mean is it didn't penetrate the Blinebry zone?

A. Correct.

MR. STAMETS: Thank you.

A. The structure on the top of the Blinebry indicates there is only 11 feet of structural difference from the lowest well to the highest well on top of the Blinebry on our J. A. Akens Lease. There is a considerable amount of difference in the cumulative production on the lease, the highest well having the lowest cumulative production, which indicated to me that structure wasn't the deciding factor in productivity here. There must have been some other reason for it.

Q. Do you have an opinion as to what is the deciding factor concerning productivity?

A. It appears the presence of porosity is much more important than structural position.

Q. What, if any, evidence of porosity do you have?

A. Exhibit One-A.

Q. All right, sir, Let's look at Exhibit

One-A and have you explain that to us.

A. Exhibit One-A is a stratigraphic cross section between the two wells on the subject 80-acre proration unit, Well No. 7 on the right and No. 10 on the left. Porosity zones are colored in red and correlated between the two wells. The vertical scale is one inch equals forty feet. There is no horizontal scale.

The exhibit is intended to show the discontinuity of porosity between the two wells.

Q. What is indicated by the red coloring on Exhibit One-A?

A. Zones of porosity.

Q. Let's start with the No. 7 Well, which was the existing well on the proration unit. Where is that well perforated?

A. It is perforated in all the zones colored red.

Q. Now, if you'll look at the subject well, the Akens No. 10, where is that well perforated?

A. It's also perforated in the zones colored red.

Q. Now would you compare the No. 7 and the No. 10 Wells in terms of porosity to show us the number increase between the two?

A. J. A. Akens No. 7 contains approximately

60 feet of porosity, net porosity, and J. A. Akens No. 10 contains approximately 76 feet of net porosity, and there is 16 feet of difference total porosity.

Q. Because of that difference in porosity, Mr. Davis, what is your conclusion concerning the continuity between the two wells?

A. There is a marked lack of continuity between the two wells.

Q. And based upon that marked discontinuity between the two wells, do you have an opinion concerning the need for the No. 10 Well, Akens No. 10 Well?

A. Yes.

Q. In order to effectively and efficiently drain the proration unit?

A. From a geological standpoint it doesn't appear that the reservoir could be effectively and efficiently drained with just the one well on the proration unit.

Q. Does that conclude your geological testimony -- presentation?

A. Yes, it does.

MR. KELLAHIN: Mr. Stamets, we have an engineer to present additional testimony. That concludes our examination of Mr. Davis.

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CROSS EXAMINATION

BY MR. STAMETS:

Q. Mr. Davis, going down these logs it would appear as though perhaps some of these red lines could be drawn a different direction and indicate continuity across between the two wells.

For example, let's see, starting on your Akens No. 7, if you take the fourth, fifth, and sixth red zones, it would seem that perhaps those could be correlated directly with the third, fourth, and fifth red zones on the No. 10.

A. In the course of the study of this lease I felt like the porosity correlated better going as is drawn. I did correlate the fourth and the sixth zones across on 7 and 10 so that moving them would -- I just wouldn't think it would fit as well.

Q. Even if that were the case, they could be drawn across there, as you move on down vertically on these two sections, aren't there some zones that are much more obviously separate? For example, the fourth zone from the bottom on No. 7?

A. Yes, sir, that's true.

Q. That's one that does not -- it is very obvious that it does not continue between wells.

A. That's true.

Q. And then the zone immediately above that on the Akens No. 10.

A. That's correct.

Q. So even though there may be some room for debate on some of these lines, obviously a number of them don't correlate.

A. That's correct.

I might also add they are net porosity numbers, so the porosity may be present correlative from 7 to 10 but it's so low that it's virtually not there.

Q. And just from a geological standpoint, the Akens Well No. 7 could not produce all the zones that can be produced in the No. 10.

A. No, sir.

Q. Okay.

MR. STAMETS: Are there any other questions of this witness? He may be excused.

DANIEL W. RHOADS

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you please state your name and by whom you're employed?

A I'm Daniel W. Rhoads, employed by Sun Oil Company as a reservoir engineer.

Q Mr. Rhoads, have you previously testified before the Division?

A No, I have not.

Q Would you tell the Examiner when and where you obtained your degree?

A I graduated from Oklahoma A&M College, which is now Oklahoma State University, in 1951 with a BS in mechanical engineering, petroleum option.

Q Subsequent to graduation where have you been employed as a petroleum engineer?

A In north central Texas, south central Oklahoma, eastern Venezuela, west Texas. I've been in Midland almost twenty years, working in southeast New Mexico, Permian Basin area.

Q How long have you been employed by Sun Oil Company?

A About five and a half years.

Q In what capacities?

A As production engineer and reservoir engineer.

MR. KELLAHIN: We tender Mr. Rhoads as an expert engineer.

MR. STAMETS: The witness is considered qualified.

Q. Mr. Rhoads, would you turn to what we've marked as Exhibit Number Two, identify that exhibit, and explain what information it contains?

A. This exhibit states the well number, J. A. Akens No. 10, the suject well number, and the spud date, completion date, and a well test April 20th, 1980, which indicates 12 barrels of oil per day, 16 barrels of water per day, and 71 Mcf gas per day.

Q. You're familiar with the production capabilities of the No. 7 and of the No. 10 Well?

A. Yes.

Q. And have you looked at the logs of those wells?

A. Yes.

Q. Do you have an opinion as to whether the No. 10 Well is necessary in order to effectively and efficiently drain this proration unit?

A. Yes, sir, in fact the completion of the No. 10 has not affected the production of the No. 7 and the number of feet in comparing the two logs that are not continuous porosity between the two wells.

Q. Have you made a calculation to determine the additional gas recovery and oil recovery from the Blinebry formation that could not be produced out of the No. 7 Well?

A. Yes, sir. The volume of increased ultimate recovery expected to be obtained from the Akens 10 is 33,885 barrels of oil and 209,562 Mcf of gas.

Q. Would you describe for us in general terms how you reached those numbers?

A. The recoverable barrels of oil, as indicated by the formula on Exhibit Two, is equal to the original oil in place times recovery factor, which the original oil in place from the formula, basic reservoir engineering formula, 7758 barrels per acre feet times the number of acres which you're assuming drainage is 40 acres, the 23 feet, which is the difference net pay present in No. 10 that is not present in No. 7, times the porosity.

Q. Where does the porosity number come from?

A. This is the porosity number of .076 is from my log analysis on No. 10.

Q. And the 20 feet of net pay is also from log analysis?

A. Yes, 23 feet is the net pay from Exhibit One-A that is present in No. 10 that is not present in No. 7.

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7.

Q. Where does the water saturation number come from?

A. That's from my log analysis.

Q. How do you get your recovery factor?

A. That's more or less standard for carbonate reservoirs as being an average recovery factor.

Q And what is that factor?

A. 15 percent, .15.

Q. All right. And what -- what is indicated by the 1.43 number?

A. That is the original formation volume factor, which we obtained from the correlations used in normal reservoir engineering work.

Q. In working that calculation results in the barrels of additional oil recovery you've indicated above?

A. Right.

Q. All right. Now go through the gas calculation for us, would you?

A. Recoverable Mcf of gas is obtained by taking the original oil in place times the solution gas/oil ratio, the original solution gas/oil ratio, times a recovery factor, which is also reasonable for solution gas recovery in a carbonate reservoir, and can be backed up by decline

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analysis.

Q All right, sir, and if you'll turn to Exhibit Number Three, would you explain that for us?

A These are production curves for the Sun Oil Company J. A. Akens No. 7 in the Oil Center Blinebry Field.

Q Is this the exhibit upon which you base your opinion that the recovery from the No. 7 Well has not been affected by the new No. 10 Well?

A Right.

Q All right, would you go through that for us?

A The top curve, solid line connected with circles, is the gas production in Mcf per day; the middle solid line is oil production in barrels of oil per day; the dashed line is the water production in barrels of water per day.

Q On your production decline curve, would you indicate for us at what point in the curve that the No. 10 Well first started production?

A In December of 1978.

Q All right, would you take us through the graph from December, 1978, and show us why you believe that this graph, or the production from the No. 7 Well has not been affected by the No. 10 Well?

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A All right. Starting in the early part of 1979 the oil production and the gas production decreased, as well as the water production, in the No. 7 and we found that the pump was gas-locked, and in July of 1979 we changed the pump, using a different kind of pump --

Q Just a minute, Mr. Rhoads, let me find it on the curve here. There's a marked depression in your curve in about July of '79.

A Yes, that's --

Q Is that what you're talking about?

A That's -- it started declining in January down to June and we -- the increase started in July.

Q What accounts for that sharp up and down bottom curve?

A The decrease is from the pump gas-locking and we changed the pump in July and that is indicated by the increase in both gas and oil production.

Q That drop in the curve is not an indication of communication with the No. 10 Well?

A No, sir, I don't think so, because the production of both the gas and oil is -- has been about the same as it was in the previous years before the completion of No. 10.

Q In your opinion, then, Mr. Rhoads, is the approval of this application necessary for the effective

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and efficient drainage of the proration unit assigned to the No. 10 Well?

A. Yes, sir.

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

A. Yes, sir.

Q. Were Exhibits Three and Four -- Two and Three prepared by you?

A. Yes, sir.

MR. KELLAHIN: Exhibit Number Four, Mr. Stamets, is our notice to the offset operators pursuant to Commission Order R-6013-A, and was simply included as an exhibit to indicate that notice had been mailed.

We move the introduction of all our exhibits.

MR. STAMETS: These exhibits will be admitted.

CROSS EXAMINATION

BY MR. STAMETS:

Q. Mr. Rhoads, running over Exhibit Number Two, one more time, you have estimated, based on the formula, that there will be 33,885 barrels of oil recovered by No. 10 that could not be recovered by No. 7?

A That's correct.

Q And then also with this oil 209,562 Mcf of gas?

A That's right.

Q Okay. Now, would you say that these are minimum figures in that they don't take into account any more efficient drainage of the continuous zones between the two wells?

A That's correct. These are minimums.

Q Do these estimates pretty well square with the experience that you have had with Well No. 7?

A You mean for recovery of oil?

Q Right.

A No, there's quite a bit of difference. No. 7 has recovered a lot more oil but we feel the pressure has depleted some because of these zones that are continuous but there is some left, this amount of oil left from the zones that are not continuous as being drained by No. 7.

Q Well, I mean as far as your recovery efficiency, and so on, that this is what you're seeing or what you're experiencing in Well No. 7?

A The efficiency?

Q Right. You used a 15 percent recovery factor.

A Yes.

Q Is that what your finding relative to Well No. 7?

A I think probably No. 7 would be higher, a little higher than that.

Q All right.

MR. STAMETS: Any other questions of this witness? He may be excused.

Anything further in this case?

The case will be taken under advisement.

(Hearing concluded.)

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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 beforethe Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

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I do hereby certify that the foregoing is a co[illegible] of the proceedings in the [illegible] of Case No. _____, heard by me on _____ 19____.

_____, Examiner
Oil Conservation Division

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

June 13, 1980

POST OFFICE BOX 2088
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Mr. Thomas Kellahin
Kellahin & Kellahin
Attorneys at Law
Post Office Box 1769
Santa Fe, New Mexico

Re: CASE NO. 6895
ORDER NO. R-6365

Applicant:

Sun Gas Company

Dear Sir:

Enclosed herewith are two copies of the above-referenced Division order recently entered in the subject case.

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCD x
Artesia OCD x
Aztec OCD

Other

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

CASE NO. 6895
Order No. R-6365

APPLICATION OF SUN GAS COMPANY FOR AN NGPA DETERMINATION, LEA COUNTY, NEW MEXICO.

FINDINGS OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on May 21, 1980, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 5th day of June, 1980, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Sun Gas Company, a division of Sun Oil Company, seeks findings that the drilling of its J. A. Akens Well No. 10 located in Unit N of Section 3, Township 21 South, Range 36 East, NMPM, Oil Center-Blinebry Pool, Lea County, New Mexico, was necessary to effectively and efficiently drain that portion of an existing proration unit which could not be drained by the existing well on the proration unit.

(3) That the standard spacing unit in the Oil Center-Blinebry Pool is 80 acres.

(4) That Sun Gas Company is the operator of an 80-acre proration unit consisting of the E/2 SW/4 of said Section 3 in said pool.

(5) That said 80-acre proration unit is dedicated to applicant's J. A. Akens Well No. 7 located in Unit K of said Section 3.

(6) That said J. A. Akens Well No. 10 has encountered productive stringers in the Blinebry formation not found in said J. A. Akens Well No. 7.

(7) That the evidence presented establishes that said J. A. Akens Well No. 10 should recover at least 209,562 MCF of gas which could not otherwise be recovered from the proration unit.

(8) That such additional recovery from the proration unit will result in such unit being more efficiently and economically drained.

(9) That the drilling of applicant's J. A. Akens Well No. 10 was necessary to more effectively and efficiently drain that portion of said 80-acre proration unit which could not be drained by the existing well thereon.

(10) That the Division retains jurisdiction of this cause for the entry of such further findings as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY
Director

S E A L

fd/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
21 May 1980

EXAMINER HEARING

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Legal Counsel to the Division
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Q. Mr. Davis, going down these logs it would appear as though perhaps some of these red lines could be drawn a different direction and indicate continuity across between the two wells.

For example, let's see, starting on your Akens No. 7, if you take the fourth, fifth, and sixth red zones, it would seem that perhaps those could be correlated directly with the third, fourth, and fifth red zones on the No. 10.

A. In the course of the study of this lease I felt like the porosity correlated better going as is drawn. I did correlate the fourth and the sixth zones across on 7 and 10 so that moving them would -- I just wouldn't think it would fit as well.

Q. Even if that were the case, they could be drawn across there, as you move on down vertically on these two sections, aren't there some zones that are much more obviously separate? For example, the fourth zone from the bottom on No. 7?

A. Yes, sir, that's true.

Q. That's one that does not -- it is very obvious that it does not continue between wells.

A. That's true.

Q. And then the zone immediately above that on the Akens No. 10.

A. That's correct.

Q. So even though there may be some room for debate on some of these lines, obviously a number of them don't correlate.

A. That's correct.

I might also add they are net porosity numbers, so the porosity may be present correlative from 7 to 10 but it's so low that it's virtually not there.

Q. And just from a geological standpoint, the Akens Well No. 7 could not produce all the zones that can be produced in the No. 10.

A. No, sir.

Q. Okay.

MR. STAMETS: Are there any other questions of this witness? He may be excused.

DANIEL W. RHOADS

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Would you please state your name and by whom you're employed?

A. I'm Daniel W. Rhoads, employed by Sun Oil Company as a reservoir engineer.

Q. Mr. Rhoads, have you previously testified before the Division?

A. No, I have not.

Q. Would you tell the Examiner when and where you obtained your degree?

A. I graduated from Oklahoma A&M College, which is now Oklahoma State University, in 1951 with a BS in mechanical engineering, petroleum option.

Q. Subsequent to graduation where have you been employed as a petroleum engineer?

A. In north central Texas, south central Oklahoma, eastern Venezuela, west Texas. I've been in Midland almost twenty years, working in southeast New Mexico, Permian Basin area.

Q. How long have you been employed by Sun Oil Company?

A. About five and a half years.

Q. In what capacities?

A. As production engineer and reservoir engineer.

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Santa Fe, New Mexico 87501
Phone (505) 455-7409

MR. KELLAHIN: We tender Mr. Rhoads as an expert engineer.

MR. STAMETS: The witness is considered qualified.

Q Mr. Rhoads, would you turn to what we've marked as Exhibit Number Two, identify that exhibit, and explain what information it contains?

A This exhibit states the well number, J. A. Akens No. 10, the suject well number, and the spud date, completion date, and a well test April 20th, 1980, which indicates 12 barrels of oil per day. 16 barrels of water per day, and 71 Mcf gas per day.

Q You're familiar with the production capabilities of the No. 7 and of the No. 10 Well?

A Yes.

Q And have you looked at the logs of those wells?

A Yes.

Q Do you have an opinion as to whether the No. 10 Well is necessary in order to effectively and efficiently drain this proration unit?

A Yes, sir, in fact the completion of the No. 10 has not affected the production of the No. 7 and the number of feet in comparing the two logs that are not continuous porosity between the two wells.

Q. Have you made a calculation to determine the additional gas recovery and oil reccvery from the Blinebry formation that could not be produced out of the No. 7 Well?

A. Yes, sir. The volume of increased ultimate recovery expected to be obtained from the Akens 10 is 33,885 barrels of oil and 209,562 Mcf of gas.

Q. Would you describe for us in general terms how you reached those numbers?

A. The recoverable barrels of oil, as indicated by the formula on Exhibit Two, is equal to the original oil in place times recovery factor, which the original oil in place from the formula, basic reservoir engineering formula, 7758 barrels per acre feet times the number of acres which you're assuming drainage is 40 acres, the 23 feet, which is the difference net pay present in No. 10 that is not present in No. 7, times the porosity.

Q. Where does the porosity number come from?

A. This is the porosity number of .076 is from my log analysis on No. 10.

Q. And the 20 feet of net pay is also from log analysis?

A. Yes, 23 feet is the net pay from Exhibit One-A that is present in No. 10 that is not present in No. 7.

7.

Q. Where does the water saturation number come from?

A. That's from my log analysis.

Q. How do you get your recovery factor?

A. That's more or less standard for carbonate reservoirs as being an average recovery factor.

Q. And what is that factor?

A. 15 percent, .15.

Q. All right. And what -- what is indicated by the 1.43 number?

A. That is the original formation volume factor, which we obtained from the correlations used in normal reservoir engineering work.

Q. In working that calculation results in the barrels of additional oil recovery you've indicated above?

A. Right.

Q. All right. Now go through the gas calculation for us, would you?

A. Recoverable Mcf of gas is obtained by taking the original oil in place times the solution gas/oil ratio, the original solution gas/oil ratio, times a recovery factor, which is also reasonable for solution gas recovery in a carbonate reservoir, and can be backed up by decline

analysis.

Q. All right, sir, and if you'll turn to Exhibit Number Three, would you explain that for us?

A. These are production curves for the Sun Oil Company J. A. Akens No. 7 in the Oil Center Blinebry Field.

Q. Is this the exhibit upon which you base your opinion that the recovery from the No. 7 Well has not been affected by the new No. 10 Well?

A. Right.

Q. All right, would you go through that for us?

A. The top curve, solid line connected with circles, is the gas production in Mcf per day; the middle solid line is oil production in barrels of oil per day; the dashed line is the water production in barrels of water per day.

Q. On your production decline curve, would you indicate for us at what point in the curve that the No. 10 Well first started production?

A. In December of 1978.

Q. All right, would you take us through the graph from December, 1978, and show us why you believe that this graph, or the production from the No. 7 Well has not been affected by the No. 10 Well?

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A. All right. Starting in the early part of 1979 the oil production and the gas production decreased, as well as the water production, in the No. 7 and we found that the pump was gas-locked, and in July of 1979 we changed the pump, using a different kind of pump --

Q. Just a minute, Mr. Rhoads, let me find it on the curve here. There's a marked depression in your curve in about July of '79.

A. Yes, that's --

Q. Is that what you're talking about?

A. That's -- it started declining in January down to June and we -- the increase started in July.

Q. What accounts for that sharp up and down bottom curve?

A. The decrease is from the pump gas-locking and we changed the pump in July and that is indicated by the increase in both gas and oil production.

Q. That drop in the curve is not an indication of communication with the No. 10 Well?

A. No, sir, I don't think so, because the production of both the gas and oil is -- has been about the same as it was in the previous years before the completion of No. 10.

Q. In your opinion, then, Mr. Rhoads, is the approval of this application necessary for the effective

and efficient drainage of the proration unit assigned to the No. 10 Well?

A. Yes, sir.

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

A. Yes, sir.

Q. Were Exhibits Three and Four -- Two and Three prepared by you?

A. Yes, sir.

MR. KELLAHIN: Exhibit Number Four, Mr. Stamets, is our notice to the offset operators pursuant to Commission Order R-6013-A, and was simply included as an exhibit to indicate that notice had been mailed.

We move the introduction of all our exhibits.

MR. STAMETS: These exhibits will be admitted.

CROSS EXAMINATION

BY MR. STAMETS:

Q. Mr. Rhoads, running over Exhibit Number Two, one more time, you have estimated, based on the formula, that there will be 33,885 barrels of oil recovered by No. 10 that could not be recovered by No. 7?

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A. That's correct.

Q. And then also with this oil 209,562 Mcf of gas?

A. That's right.

Q. Okay. Now, would you say that these are minimum figures in that they don't take into account any more efficient drainage of the continuous zones between the two wells?

A. That's correct. These are minimums.

Q. Do these estimates pretty well square with the experience that you have had with Well No. 7?

A. You mean for recovery of oil?

Q. Right.

A. No, there's quite a bit of difference. No. 7 has recovered a lot more oil but we feel the pressure has depleted some because of these zones that are continuous but there is some left, this amount of oil left from the zones that are not continuous as being drained by No. 7.

Q. Well, I mean as far as your recovery efficiency, and so on, that this is what you're seeing or what you're experiencing in Well No. 7?

A. The efficiency?

Q. Right. You used a 15 percent recovery factor.

A. Yes.

Q Is that what your finding relative to Well No. 7?

A I think probably No. 7 would be higher, a little higher than that.

Q All right.

MR. STAMETS: Any other questions of this witness? He may be excused.

Anything further in this case?

The case will be taken under advisement.

(Hearing concluded.)

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Phone (505) 455-7409

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 beforethe Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the examiner hearing of Case No. 6895 heard by me on 5-21 1980.

Richard L. Stamets, Examiner
Oil Conservation Division

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Phone (505) 455-7409

SUN OIL COMPANY
J. A. AKENS NO. 10
SPUD DATE: September 16, 1978
COMPLETION DATE: December 27, 1978

CASE No. 6895
EXHIBIT NO. 2

Well Test April 20, 1980: 12 Bbls oil per day
16 Bbls water per day
71 MCF gas per day

The J. A. Akens No. 7, the older well on the proration unit, would not recover the oil and gas being recovered by the new well (J.A. Akens No. 10) due to reservoir discontinuity. This lack of continuity is shown by the decline curve of No. 7, (Exhibit 3) which has not been affected by the production of No. 10. This lack of production loss at No. 7 indicates there is not complete pressure connection between the two wells. The lack of porosity continuity is also shown on the cross section, Exhibit 1A.

The volume of increased ultimate recovery expected to be obtained from Akens No. 10 is 33,885 Bbls of oil and 209,562 MCF of gas. From the cross section (Exhibit 1A) there is 23 feet of net pay present in No. 10 that is not present in No. 7. The following formula was used to calculate the additional reserves.

$$\text{Recoverable BBls of oil} = \text{Original Oil in Place} \times .15 \text{ Recovery Factor}$$

$$\text{OOIP} = \frac{7758 \text{ B/AF } (40 \text{ acs} \times 23 \text{ ft}) (.076\ \emptyset) (1-.405 \text{ sw})}{1.43 \text{ Boi}}$$

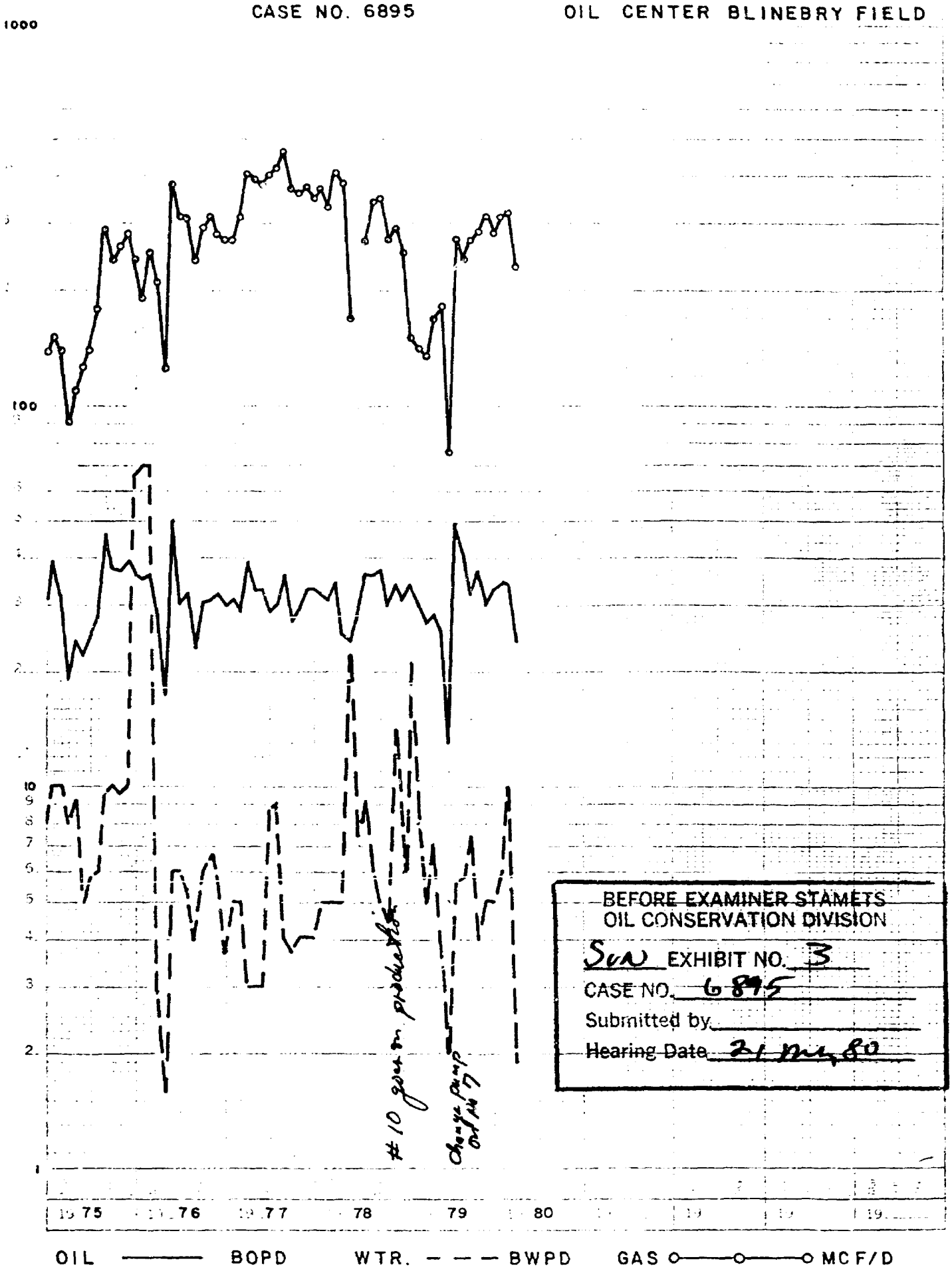
$$\text{Recoverable MCF of Gas} = \frac{225700 \text{ OOIP } (1238 \text{ CF/B Solution Ratio}) .75 \text{ Recovery Factor}}{1000}$$

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
Sun EXHIBIT NO. 2
CASE NO. 6895
Submitted by
Hearing Date 21 May 80

EXHIBIT NO. 3

SUN OIL CO.
J.A. AKENS NO. 7
OIL CENTER BLINEBRY FIELD

CASE NO. 6895



BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
SUN EXHIBIT NO. 3
CASE NO. 6895
Submitted by
Hearing Date 21 May 80

SUN PRODUCTION COMPANY CAMPBELL CENTRE II, P.O. BOX 2880, DALLAS, TEXAS 75221

May 7, 1980

ARCO Oil & Gas Co.
Box 1610
Midland, Texas 79701

Exxon Co. U.S.A.
Box 1600
Midland, Texas 79701

Me-Tex Supply Co.
Box 2070
Hobbs, New Mexico 88240

Conoco, Inc.
Box 9159
Midland, Texas 79701

Gulf Oil Corp.
Box 670
Hobbs, New Mexico 88240

Re: NGPA New Onshore Production Well
Sun Oil Company
J. A. Akens Well No. 10
Oil Center - Blinebry Pool
Lea County, New Mexico

Gentlemen:

Sun Oil Company has completed the above well as an infill well in the Oil Center-Blinebry Pool. Pool rules permit the drilling of second wells on the same proration unit to effectively and efficiently drain a portion of the reservoir covered by the proration unit which cannot be so drained by the existing well. A finding that Well No. 10 was necessary for this purpose was not secured prior to spudding.

Sun has filed on the above well for NGPA Determination as a new onshore production well under Section 103, and our case has been set for hearing on May 21, 1980. Order No. R-6013-A amended February 8, 1980 requires that we notify all offset operators by certified mail.

If you as an offset operator have no objection to this application, it would be appreciated if you would so indicate by signing below and returning two copies to this office in the enclosed envelope.

Yours very truly,

J. T. Power

By: J. T. Harris

THE BELOW HAS NO OBJECTION:

COMPANY: _____

BY: _____

DATE: _____

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
SUN EXHIBIT NO. 4
CASE NO. 6895
Submitted by _____
Hearing Date 21 May 80

SUN OIL COMPANY
J. A. AKENS NO. 10
SPUD DATE: September 16, 1978
COMPLETION DATE: December 27, 1978

CASE No. 6895
EXHIBIT NO. 2

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71 MCF gas per day

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The volume of increased ultimate recovery expected to be obtained from Akens No. 10 is 33,885 Bbls of oil and 209,562 MCF of gas. From the cross section (Exhibit 1A) there is 23 feet of net pay present in No. 10 that is not present in No. 7. The following formula was used to calculate the additional reserves.

Recoverable BBls of oil = Original Oil in Place x .15 Recovery Factor

$$OOIP = \frac{7758\ B/AF\ (40\ acs \times 23\ ft)\ (.076\ \emptyset)\ (1-.405\ sw)}{1.43\ Boi}$$

Recoverable MCF of Gas =

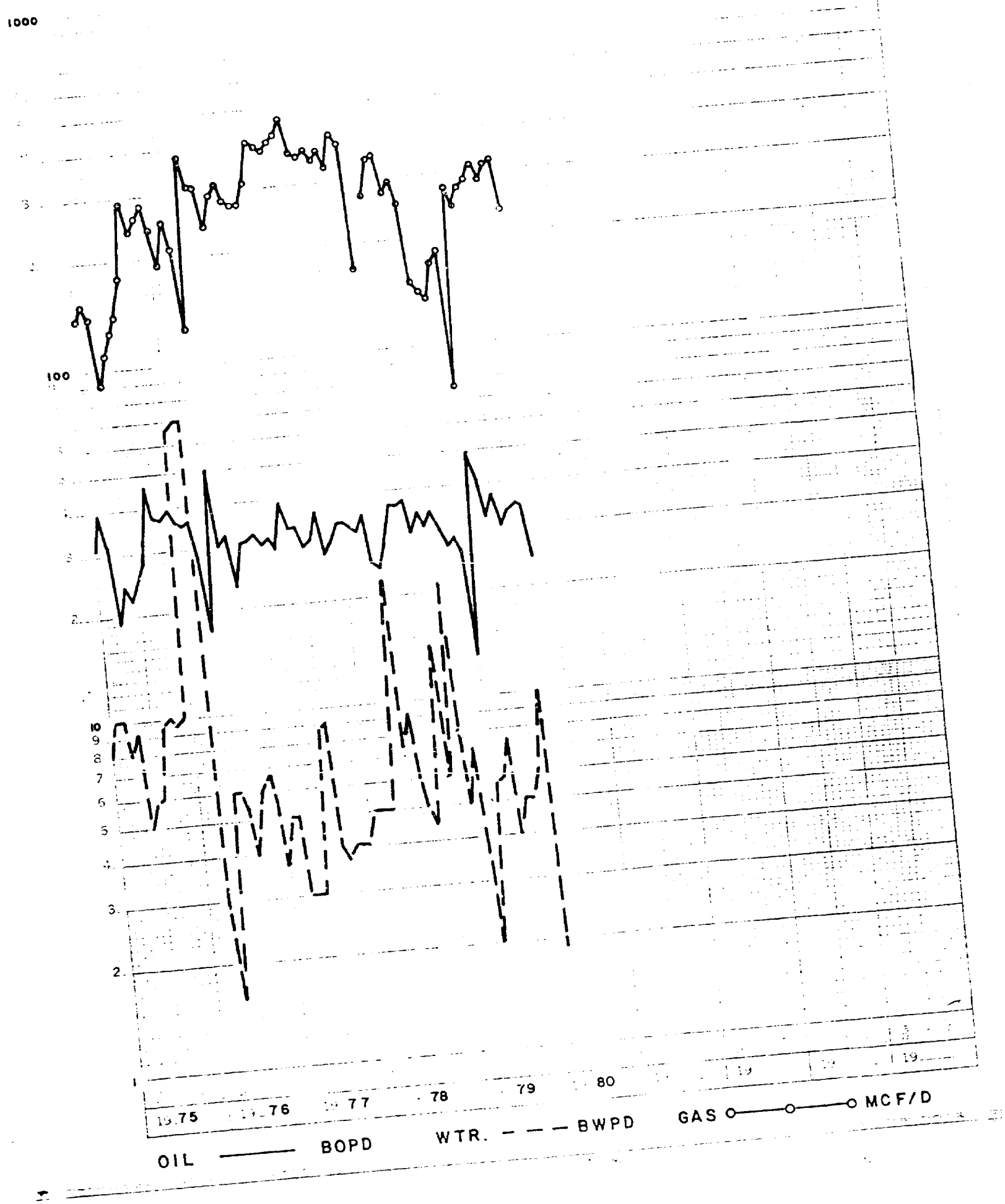
$$\frac{225700\ OOIP\ (1238\ CF/B\ Solution\ Ratio)\ .75\ Recovery\ Factor}{1000}$$

2

EXHIBIT NO. 3

CASE NO. 6895

SUN OIL CO.
J.A. AKENS NO. 7
OIL CENTER BLINEBRY FIELD



SUN OIL COMPANY
J. A. AKENS NO. 10
SPUD DATE: September 16, 1978
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CASE No. 6895
EXHIBIT NO. 2

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The volume of increased ultimate recovery expected to be obtained from Akens No. 10 is 33,885 Bbls of oil and 209,562 MCF of gas. From the cross section (Exhibit 1A) there is 23 feet of net pay present in No. 10 that is not present in No. 7. The following formula was used to calculate the additional reserves.

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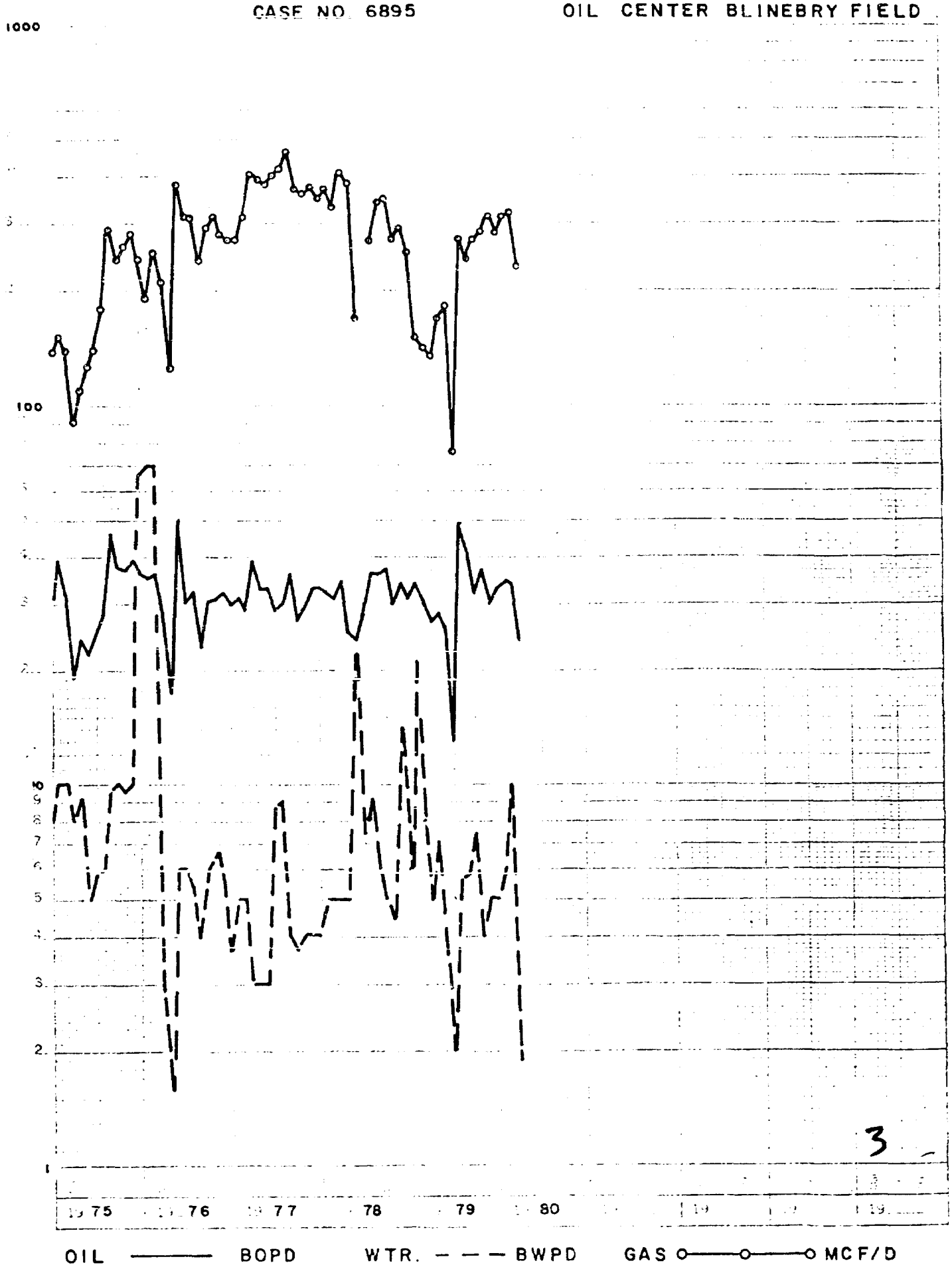
EXHIBIT NO. 3

CASE NO. 6895

SUN OIL CO.
J.A. AKENS NO. 7
OIL CENTER BLINEBRY FIELD



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Docket No. 14-80

Dockets Nos. 16-80 and 17-80 are tentatively set for June 4 and 25, 1980. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: COMMISSION HEARING - TUESDAY - MAY 20, 1980

OIL CONSERVATION COMMISSION - 9 A.M. - ROOM 205
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

CASE 6715: (DE NOVO)

Application of Texaco Inc. for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Loomis Fed. Well No. 1 to be drilled 1600 feet from the North line and 660 feet from the West line of Section 5, Township 21 South, Range 32 East, South Salt Lake-Morrow Gas Pool, the N/2 of said Section 5 to be dedicated to the well.

Upon application of Texaco Inc. and Bass Enterprises Production Company this case will be heard De Novo pursuant to the provisions of Rule 1220.

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Docket No. 15-80

DOCKET: EXAMINER HEARING - WEDNESDAY - MAY 21, 1980

9 A.M. - OIL CONSERVATION DIVISION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Richard L. Stamets, Examiner, or Daniel S. Nutter, Alternate Examiner:

ALLOWABLE: (1) Consideration of the allowable production of gas for June, 1980, from fifteen prorated pools in Lea, Eddy, and Chaves Counties, New Mexico.

(2) Consideration of the allowable production of gas for June, 1980, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.

CASE 6891: In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Midwest Refining Company and all other interested parties to appear and show cause why the State Well No. 1 located in Unit A of Section 16, Township 33 South, Range 14 West, Hidalgo County, should not be plugged and abandoned in accordance with a Division-approved plugging program.

CASE 6859: (Continued from April 9, 1980, Examiner Hearing)

Application of R & G Drilling Company for an unorthodox gas well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 1890 feet from the North line and 1830 feet from the East line of Section 28, Township 28 North, Range 11 West, Kutz-Fruitland Pool, the NE/4 of said Section 28 to be dedicated to the well.

CASE 6886: (Continued from May 7, 1980, Examiner Hearing)

Application of Aminoil USA, Inc. for compulsory pooling and an unorthodox location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp and Pennsylvanian formations underlying the S/2 of Section 10, Township 24 South, Range 28 East, to be dedicated to a well to be drilled at an unorthodox location 2080 feet from the South line and 1773 feet from the East line of said Section 10. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6884: (Continued from May 7, 1980, Examiner Hearing)

Application of Supron Energy Corporation for compulsory pooling and a dual completion, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Mesaverde and Dakota formations underlying the N/2 of Section 4, Township 30 North, Range 11 West, to be dedicated to a proposed dual completion to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6892: Application of Merrion & Bayless for compulsory pooling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the South Blanco-Pictured Cliffs Pool underlying the SW/4 of Section 27, Township 24 North, Range 2 West, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6878: (Readvertised)

Application of Stevens Oil Company for a non-standard gas proration unit and unorthodox location, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 160-acre non-standard gas proration unit comprising the N/2 SW/4 and S/2 NW/4 of Section 25, Township 8 South, Range 28 East, Twin Lakes-San Andres Associated Pool, to be dedicated to its O'Brien "F" Well No. 4 at an unorthodox location 1650 feet from the South line and 2310 feet from the West line of said Section 25.

CASE 6893: Application of Stevens Oil Company to amend Order No. R-5353, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks a revision of the special rules for the Twin Lakes-San Andres Associated Pool as promulgated by Order No. R-5353 to provide that each well, oil or gas, shall be located no nearer than 330 feet to any quarter-quarter section line, except that any well drilled in a known gas productive area shall be located within 150 feet of the center of the quarter-quarter section.

CASE 6894: Application of Sun Oil Company for an unorthodox well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Jennings-Federal "B" Well No. 1, a Yates test to be drilled 2440 feet from the South line and 2290 feet from the West line of Section 15, Township 19 South, Range 32 East, Lusk Field, the NE/4 SW/4 to be dedicated to the well.

CASE 6895: Application of Sun Gas Company for an NGPA determination, Lea County, New Mexico. Applicant, in the above-styled cause, seeks findings that the drilling of its J. A. Akens Well No. 10 located in Unit N of Section 3, Township 21 South, Range 36 East, was necessary to effectively and efficiently drain that portion of an existing proration unit which could not be drained by the existing well.

CASE 6896: Application of John E. Schalk for a non-standard gas proration unit and an unorthodox gas well location, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 160-acre non-standard Blanco Mesaverde gas proration unit comprising the NE/4 of Section 8, Township 25 North, Range 3 West, to be dedicated to his Gulf Well No. 2 to be drilled at an unorthodox location 1925 feet from the North line and 790 feet from the East line of said Section 8.

CASE 6897: Application of McClellan Oil Corporation for two compulsory poolings, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from 1200 feet below the surface to the base of the Abo formation underlying the SW/4 and the SE/4 of Section 30, Township 6 South, Range 26 East, each to be dedicated to a proposed gas well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said wells and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the wells and a charge for risk involved in drilling said wells.

CASE 6898: Application of Conoco Inc. for an unorthodox gas well location and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Meyer B-28 Well No. 4 to be drilled 560 feet from the North line and 1980 feet from the West line of Section 28, Township 20 South, Range 37 East, Eumont Gas Pool, to be simultaneously dedicated with its Meyer B-28 Well No. 1 in Unit G to the NE/4 and E/2 NW/4 of said Section 28.

CASE 6899: Application of Yates Petroleum Corporation for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a Morrow test well to be drilled 660 feet from the South and East lines of Section 9, Township 17 South, Range 26 East, the E/2 of said Section 9 to be dedicated to the well.

CASE 6900: Application of Yates Petroleum Corporation for a non-standard oil proration unit, unorthodox well location, and downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of an 80-acre non-standard oil proration unit comprising the N/2 SE/4 of Section 22, Township 16 South, Range 33 East, Kemnitz Field, to be dedicated to its Sombrero "MS" State Well No. 1 at an unorthodox location 1650 feet from the South and East lines of said Section 22. Applicant also seeks approval for the downhole commingling of Wolfcamp and Cisco production in the wellbore of said well.

CASE 6901: Application of Harvey E. Yates Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp thru Mississippian formations underlying the E/2 of Section 19, Township 14 South, Range 36 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6902: Application of Harvey E. Yates Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Young Deep Unit Well No. 1 located in Unit D of Section 10, Township 18 South, Range 32 East, to produce gas from the Morrow formation and oil from the Bone Springs formation thru parallel strings of tubing.

CASE 6903: Application of Harvey E. Yates Company for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a Pennsylvanian-Mississippian test well to be drilled 660 feet from the South line and 990 feet from the East line of Section 33, Township 13 South, Range 36 East, the S/2 of said Section 33 to be dedicated to the well.

CASE 6904: Application of Harvey E. Yates Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the McDonald Unit Area, comprising 1,440 acres, more or less, of fee lands in Townships 13 and 14 South, Range 36 East.

CASE 6905: Application of Harvey E. Yates Company for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Buffalo Lake Unit Area, comprising 2,560 acres, more or less, of Federal, State, and fee lands in Township 15 South, Range 27 East.

STATE OF NEW MEXICO

DEPARTMENT OF ENERGY AND MINERALS

OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLICATION OF
SUN GAS COMPANY FOR AN NGPA DETERMINATION,
LEA COUNTY, NEW MEXICO

Case 6895

APPLICATION

COMES NOW SUN GAS COMPANY, by and through its attorneys, KELLAHIN & KELLAHIN, and applies to the Oil Conservation Division for infill findings that its J.A. Akens No. 10 well, Unit N, Section 3, T21S, R36E, NMPM, Lea County, New Mexico, constitutes a new onshore production well in accordance with Section 103 of the Natural Gas Policy Act and in support thereof would show:

1. Applicant is the operator of the E/2 SW/4 of Section 3, T21S, R36E, NMPM, Lea County, New Mexico.

2. That the subject infill well, the J. A. Akens Well No. 10, located 660 feet from the South line and 1650 feet from the West line of Section 3, which was spudded on September 18, 1978 was necessary in order to effectively and efficiently drain the 80 acre spacing unit which was dedicated to its J. A. Akens No. 7 Well located 1880 feet from the West line and 1980 feet from the South line of said Section 3.

3. That the subject well produces from the Oil Center-Blinebry Pool.

4. This Application is made pursuant to New Mexico Oil Conservation Division Order No. R-6013-A.

WHEREFORE, Applicant requests that this application be set for hearing before the New Mexico Oil Conservation Division and that after notice and hearing the Application be granted as requested.

KELLAHIN & KELLAHIN

By _____
W. Thomas Kellahin
P. O. Box 1769
Santa Fe, N.M. 87501
Phone: 505-982-4285

ATTORNEYS FOR SUN GAS COMPANY

KELLAHIN and KELLAHIN
Attorneys at Law
500 Don Gaspar Avenue
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Santa Fe, New Mexico 87501

Jason Kellahin
W. Thomas Kellahin
Karen Aubrey

Telephone 982-4285
Area Code 505

April 30, 1980

Mr. Joe Ramey
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Case 6895

re: Sun Gas Company
J. A. Akens Well No. 10
Infill Findings

Dear Joe:

In accordance with my conversation with Mr. Ernie Padilla on April 28, 1980, please find enclosed our application on behalf of Sun Gas Company to request a hearing for infill findings in accordance with Section 103 of the NGPA.

Please set the case for hearing on May 21, 1980.

Very truly yours,

W. Thomas Kellahin

encl.
cc: Ms. Suzanne G. Davis (Sun Gas Co.)
WTK:msf

STATE OF NEW MEXICO

DEPARTMENT OF ENERGY AND MINERALS

OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLICATION OF
SUN GAS COMPANY FOR AN NGPA DETERMINATION,
LEA COUNTY, NEW MEXICO

Case 6895

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ATTORNEYS FOR SUN GAS COMPANY

STATE OF NEW MEXICO

DEPARTMENT OF ENERGY AND MINERALS

OIL CONSERVATION DIVISION

Case 6895

IN THE MATTER OF THE APPLICATION OF
SUN GAS COMPANY FOR AN NGPA DETERMINATION,
LEA COUNTY, NEW MEXICO

APPLICATION

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Phone: 505-982-4285

ATTORNEYS FOR SUN GAS COMPANY

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

CASE NO. 6895

Order No. R-6365

Application of Sun Gas Company for an NGPA determination, Lea County, New Mexico.

FINDINGS ~~ORDER~~ OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on May 21, 19 80, at Santa Fe, New Mexico, before Examiner R. L. S.

NOW, on this _____ day of _____, 19____, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Sun Gas Company, a division of Sun Oil Company seeks findings that the drilling of its J. A. Akens Well No. 10 located in Unit N of Section 3, Township 21 South, Range 36 East, NMPM, Oil Center-Blinebry Pool, Lea County, New Mexico was necessary to effectively and efficiently drain that portion of an existing proration unit which could not be drained by the existing well on the proration unit.

(3) That the standard spacing unit in the ~~Eumont Gas Pool~~ oil Center Blinebry Pool is 80 acres.

(4) That ~~El Paso Natural~~ Sun Gas Company / is the operator of an 80-acre ~~tract~~ proration unit in said ~~Eumont Gas~~ Pool consisting of the E/2 SW/4 of said Section 3.

(6) That applicant's 80-acre tract is communitized with the ~~NW/4~~ of said Section ~~3~~ forming an approved 160-acre non-standard proration unit for said pool.

(5) That said 80-acre ~~non-standard~~ proration unit is dedicated to ~~the~~ applicant's J.A. Akens Well No. 7 located in Unit K of said Section 3.

(6) That said J.A. Akens Well No. 10 has encountered productive stringers in the Blinebry formation not found in said J.A. Akens Well No. 7.

(7) ~~(12)~~ That the evidence presented ~~further demonstrated~~ establishes that said J.A. Akens Well No. 10 should recover at least ~~the drilling and completion of applicant's said Shell E State Com Well No. 2 should result in the production of an additional~~ 209,562 MCF of gas ~~from applicant's acreage~~ the proration unit could which ~~would~~ not otherwise be recovered from the proration unit.

(8) ~~(13)~~ That such additional recovery from the ~~non-standard~~ proration unit will result in such unit being more efficiently and economically drained.

(9) That the drilling of ~~the~~ applicant's J.A. Akens Well No 10 was necessary to more effectively and efficiently drain that portion of said 80-acre proration unit which could not be drained by the existing well thereon.

(10) That jurisdiction of this cause ~~is retained~~ the Division retains for the entry of such further ~~orders~~ findings as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.