

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

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BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
OCTOBER 2, 1958

IN THE MATTER OF: :

CASE 1520 Application of Phillips Petroleum Company :
 for permission to commingle oil produced :
 from two separate pools. Applicant, in the :
 above-styled cause, seeks an order authoriz- :
 ing it to commingle the oil produced on its :
 Santa Fe Lease from the Yates formation ad- :
 jacent to the Vacuum Yates Pool with the oil :
 produced from the Vacuum (San Andres) Pool :
 in four separate existing tank batteries :
 located in Sections 26, 27, 28, and 33, :
 Township 17 South, Range 35 East, Lea County: :
 New Mexico. :

BEFORE:

Mr. Elvis A. Utz, Examiner.

T R A N S C R I P T O F P R O C E E D I N G S

MR. UTZ: The next case on the docket will be Case 1520.

MR. COOLEY: Case 1520. Application of Phillips Petrol-
eum Company for permission to commingle oil produced from two
separate pools.

MR. MORGAN: I am Forest Morgan, representing Phillips
Petroleum Company. I am the only witness and would like to be
sworn.

(Witness sworn)

FOREST C. MORGAN,

called as a witness, having been first duly sworn on oath, testified

as follows:

DIRECT EXAMINATION

BY MR. COOLEY:

Q Will you state your name, please?

A Forest Morgan.

Q By whom are you employed, Mr. Morgan?

A Phillips Petroleum Company.

Q In what capacity?

A I am the assistant district superintendent, Hobbs District.

Q Are you a petroleum engineer?

A I am a graduate general engineer with a minor in petroleum.

Q Have you previously testified before the Oil Conservation Commission and had your qualifications as an expert witness accepted?

A Yes, sir, I have.

Q Would you go ahead and present your case?

A This application is for an exception to Commission Rule 303, for approval to commingle into common storage oil produced from Vacuum (San Andres) Pool wells, and undesignated Yates Wells in Sections 26, 27, 28, and 33, Township 17 South, Range 35 East, Lea County, New Mexico.

Mr. Examiner, at this time I would like to move that our original application be amended to delete Section 21 as a part of the application.

MR. UTZ: Is there objection to the applicant amending the application to delete Section 21? It will be so amended.

A I will now pass out Exhibit A. Exhibit A is a plat showing the general area involved, and the location of the present four tank batteries along with the area served by each tank battery. Phillips' acreage is shown in blue. You will note that the present tank batteries are located in Sections 26, 27, 28 and 33. This application envisions no change in the area served by the present batteries. I will now pass out Exhibit B. Exhibit B is a structure map on the top of the Yates pay in the portion of the Vacuum Pool that we are now discussing. Phillips acreage is again shown in blue. It will be noted that the area between the subsea elevation of plus 850 and plus 875 is colored in yellow. This is a primary area in which we anticipate the Yates pay will be commercially productive. This belief is based on examination of numerous gamma ray neutrons logs and study of production performance of several wells, particularly those wells in -- Yates Wells in Sections 27 and 24. In other words, we recognize that the Yates is productive somewhat above the plus 875 and slightly below the 850 contour, but we feel the position on structure shown by the yellow area represents the best portion of the pay, and you will note that the yellow area extends to all sections involved in this application. To further explain that structure map, the Standard of Texas Well No. 6, which you will note in the S/2 of Section 27, has a gas-oil ratio of 4,500. Well No. 7, its west offset had an exorbitant gas-

oil ratio in completion and was shut in. Well No. 5, which is very near that 875 foot contour, has a ratio of only 8,900. Magnolia State "M" No. 6, which you can note in the NW/4 of Section 34, has a very high gas-oil ratio of 13,250, while Well No. 5, which again is located near the 875-foot contour has a reasonably low ratio, 2,100, and has produced in excess of 15,500 barrels of oil.

Phillips Petroleum Company's Santa Fe No. 18, located in the NE/4 of Section 34, has a ratio of 1,600, and is considered to be about as low structurally as the Yates will be productive. And to further support that, I can refer you to the Magnolia State "M" No. 8, which is located in the NW/4 of Section 34. That well is now producing about two barrels of oil a day on the beam pump with gas too small to measure. In summary, we feel the Yates Well with elevation above plus 875 will be expected to have high gas-oil ratio and wells much lower than 835 to 850 will have little porous pay section. In other words, a gas porosity pinchout pay. We anticipate dually completing our Santa Fe Well No. 30, located in the SW/4 NW/4, Section 26. That's the SW/4 of the NW/4 of Section 26, following administrative approval of our dual application which has been submitted. This Well will yield valuable additional information about the Yates pay in this particular area. Other dual completion work will follow in a logical sequence in the remaining sections involved in this application. Commission Order 1158 issued April 22nd, 1958, approved the dual completion of Phillips Petroleum Company's Santa Fe No. 18, which you will note

in the NW/4 of the NE/4, Section 34 on Exhibit B. The Order also authorized the commingling of Vacuum Yates and Vacuum San Andres crudes providing the production from each of said pools was measured by means of positive displacement meters or dump type meters prior to being commingled. It is our intention, if this application is approved, to separately measure production from both zones involved in the application with positive displacement meters prior to being commingled. Further, the meter will be checked for accuracy at intervals satisfactory to the Commission. All acreage involved in this application, state land and all royalty under said acreage is owned by the common school fund for the State of New Mexico. Producing the Yates and San Andres zones into the common storage will effect a savings of \$3,684 to Phillips Petroleum Company for each tank battery involved. This concludes my testimony, unless there are questions, and I would like to move that Exhibits A and B be placed in evidence.

MR. UTZ: Without objection, they will be placed in evidence. Are there questions of the witness?

Q (By Mr. Cooley) Mr. Morgan, is it your request that you be authorized to commingle the Vacuum Yates production with the Vacuum-San Andres production in each of these four tank batteries shown on your Exhibit 1, I guess it is?

A Yes, sir, it is Exhibit A, and that is correct.

Q Now, which lease will go into which battery?

A Exhibit A has the big black line that shows the area

presently served by each tank battery, and as I mentioned in my testimony, we do not envision any change in the area served. In other words, any well being served by a present battery that is dually completed, it is our intention that that battery handle the Yates production in addition to the San Andres.

Q There will not be any new wells?

A No, sir.

Q Just the existing wells being within the heavy black outline for each battery?

A Yes, sir.

MR. COOLEY: That's all the questions I have now.

MR. UTZ: Any other questions of the witness?

CROSS EXAMINATION

BY MR. FISCHER:

Q Mr. Morgan, did you give the gravity differential between the two pays, and if you didn't, will you give it, please?

A I did not, but the gravity of the Yates that we have presently dually completed in our Santa Fe 18 is 33.8. Our San Andres gravity will average 37. It will average between 36 and 37; 36.7 and 37.3.

MR. FISCHER: That's all I have.

QUESTIONS BY MR. UTZ:

Q Mr. Morgan, at what point will the oil be metered from each zone?

A We envision the oil being measured on the Yates im-

mediately out of the separator between the vessels and the dump valve. In other words, prior to being commingled with the other crude, the San Andres crude will be measured out of the receiving tank prior to again being commingled with the Yates crude.

Q Where will the separators be located?

A The separators will be located according to our company standard, which will be 75 feet from the nearest tank.

Q And the oil will probably go across other lease lines before being metered?

A As it is being served now, Mr. Utz, that's right.

MR. UTZ: Any other questions of the witness? If not, the witness may be excused.

(Witness excused)

MR. UTZ: Any other statements to be made in this case? If not, the case will be taken under advisement.

C E R T I F I C A T E

STATE OF NEW MEXICO)
: ss
COUNTY OF BERNALILLO)

I, J. A. TRUJILLO, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me in stenotype and reduced to typewritten transcript by me and/or under my personal supervision, and that the same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal, this, the 2nd day of October, 1958, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

J. A. Trujillo
Notary Public

My Commission Expires:
October 5, 1960.

I do hereby certify that the foregoing is a complete record of all proceedings in the Examiner's hearing in Case No. 1520, heard by me on 10-3-58, 1958.

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