

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
MARCH 9, 1960

IN THE MATTER OF: :

CASE 1916 Application of Humble Oil & Refining Company for :
permission to commingle the production from two :
separate leases. Applicant, in the above-styled :
cause, seeks permission to commingle the Empire- :
Abo Pool production from all wells located on two :
separate leases, one of which comprises the SW/4 :
of Section 9, the other of which comprises the :
NW/4 of said Section 9, all in Township 18 South, :
Range 27 East, Eddy County, New Mexico. :

BEFORE:

Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: We will now take Case No. 1916.

MR. PAYNE: Application of Humble Oil & Refining Company
for permission to commingle the production from two separate leases.

MR. CHRISTY: S. B. Christy of Hervey, Dow & Hinkle, for
the Applicant, Humble Oil & Refining Company. We have one witness,
Mr. Examiner. Mr. Carpenter.

(Witness sworn)

A. L. CARPENTER

called as a witness, having been duly sworn, testified as follows:

MR. CHRISTY: As will be brought out in the testimony,
Mr. Examiner, offset operators to the land and wells in question

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are Pan American Petroleum Company, Robert W. Windforh, Hondo Oil & Gas Company, Humble, and Gulf Oil Corporation. As Exhibits 3 and 4, we would like to offer in evidence the letter mailed to Hondo, Pan American, and Mr. Windforh, with the registered return receipts, and a waiver and consent by Gulf Oil Corporation. We also have the consent of the working interest owners and royalty owners within the area involved which will be brought out in the testimony.

DIRECT EXAMINATION

BY MR. CHRISTY:

Q Will you please state your name, address and occupation?

A A. L. Carpenter, 1101 Rose Lane, Hobbs, New Mexico. I am District Supervisor Engineer, Humble Oil & Refining Company.

Q I believe you are a petroleum engineer, Mr. Carpenter?

A Yes, sir.

Q Have you previously testified before this commission as a petroleum engineer?

A No, sir.

Q Would you briefly tell us where you went to school and your education and degrees you have received?

A Bachelor of Science Degree in Petroleum Engineering, Texas A & M College.

Q Have you been actively engaged in the practice of petroleum engineering, and if so, for how long?

A Yes, sir. Petroleum engineering, twelve years.

Q And with whom?



A Humble Oil & Refining Company.

Q What general areas, Mr. Carpenter?

A All over Texas and down into Mexico.

Q Are you familiar with the matters contained in the application of this case, Case 1916, now before the New Mexico Oil Conservation Commission?

A Yes, sir.

Q Are you familiar with the wells and the general area surrounding the west half of Section 9 in Township 18 South, Range 27 East, NMPM, Eddy County, New Mexico?

A Yes, sir.

MR. CHRISTY: Does the Commission have any questions concerning the qualifications of the witness?

MR. NUTTER: No, sir. Please proceed.

Q (By Mr. Christy) Now, would you tell us briefly what the nature of this application is and what it seeks, sir?

A Well, we are requesting an exception to Rule 309A to permit the commingling of the Empire-Abo Pool production from two leases covering the west half of Section 9, Township 18 South, Range 27 East, Eddy County, New Mexico, into a common tank battery located in the northwest quarter of Section 9.

Q Could this request have been handled administratively under Rule 309B?

A No, sir. All of the provisions of Rule 309B are met in this request, except the ownership of the leases is not common



throughout.

Q Now, what is the essence of your application, your request?

A Well, Humble Oil & Refining Company is the operator of a unit, the Chauk Bluff Draw unit, which embraces certain acreage in Townships 17 and 18 South, Range 27 East, Eddy County, New Mexico.

Q I believe the Chauk Bluff Draw unit was approved by this Commission in Case 960, Order R-705 on October 13, 1955. Is that correct, sir?

A Yes, sir, that is correct.

Q Please proceed.

A A portion of the unit is the west half of Section 9, Township 18 South, Range 27 East, and this 320 acres is the area that we are concerned with at this hearing.

Q That is shown in Exhibit No.1?

A Yes, sir, it is. And it is outlined in red on Exhibit No. 1. The unit members of this particular area are Humble, which has the working interest, northwest quarter of Section 9, outlined in green on Exhibit No. 1. And Hondo Oil & Gas Company with the southwest quarter of Section 9, outlined in yellow on Exhibit No. 1. The land is owned by the Federal Government. However, Mrs. M. C. Hudson has a $12\frac{1}{2}$ percent override on the acreage held by Humble, and Hondo has the 5 percent override on their own acreage. Royalty payment to the Federal Government is the same for all acreage, except the northwest quarter of the northwest quarter of Section 9.



Q I believe that royalty is $12\frac{1}{2}$ percent throughout the entire west half of 9, except the northwest northwest which is a step-scale royalty.

A Humble unit operation is currently making development in the Empire-Abo Pool underlying the subject acreage. For Abo production, the Abo Chauk Bluff Draw unit designation is used. Two Abo wells, Abo Chauk Bluff unit wells 1 and 2 have been completed and are currently producing, and wells 3 and 4 are being drilled. A provision of the unit agreement is that participation in a given field development is not set until production has been established. As yet, no participating area has been designated for Empire-Abo Pool production. At present, Humble is producing Well No. 1 which is located on Hondo's lease for Hondo, and the oil is stored in temporary tankage located on the lease. Well No. 2 is located on Humble's lease and is produced into a tank battery which has been constructed on the lease.

Q I believe that is shown on Exhibit No. 1?

A That is correct.

Q All right, sir.

A The oil produced from Humble and Hondo's property has not been placed in common tankage since the participation has not been established, and there are different interests involved. As things stand now, the initial participating area covering Section 9 will include only the east half of the south half of Section 9. That acreage now is dedicated to the Abo Chauk Bluff Draw unit Wells

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1, 2, 3 and 4. As additional wells are completed, the participating area will be expanded to include them. So, we are really not concerned with commingling Abo oil from wells in Section 9, except that produced from Wells 1, 2, 3 and 4. We are, therefore, requesting permission to produce into common storage, Empire-Abo Pool production from Abo Chauk Bluff Draw unit Wells 1, 2, 3 and 4. Commingling as we propose, if approved, will continue only until such time when the initial participating area is established. Once this participating area, including Wells 1, 2, 3 and 4 is in effect, production from wells within the area can be produced into common storage, since each tract of land will have its participation set.

Q Now, how do you propose to commingle this production from the two leases you mentioned?

A Well, the production from the four wells involved will be produced into the tank battery located on Humble's lease. Just how this is accomplished is shown by Exhibit No. 2.

Q Would you identify this for us, Exhibit No. 2? I believe it is a schematic diagram of the proposed method for commingling the production.

A That is correct.

Q All right, sir. Go ahead.

A It's shown on the tank separator. This exhibit illustrates oil flow in a standard Humble tank battery. Except for the manifold hookup in this case, they are separated. The battery had been installed, except for the test separator that is shown as "B" on



the Exhibit. The test separator will be the metering type. A dump type metering vessel is going to be used there. Hondo production from Wells 1 and 3 will be directed through the test site and metered.

Q That would be going through channel "B" on Exhibit No. 2?

A That is correct.

Q Humble production from Wells 2 and 4 will be directed through the production side?

A That's true. And on the schematic drawing, the amount of production from Wells 2 and 4 will be determined by subtracting the metered volume from the total volume gauged in the tanks. When a participating area is established, this separate metering is no longer required. The two manifolds will be combined and tied together. The final tank battery installation will be as shown in Exhibit #2, except that the flow lines will be tied into both the production and test manifolds. By this combining method, commingling will be accomplished without the expense of changing out the regular production separator with a metering type separator. Only top allowable wells will go into the participating areas. So, there is no danger of shorting any lease on production. It will simply be a matter of dividing the total allowable by leases. We have discussed this procedure with the USGS, and they are in accord.

Q Now, do you have a method of calibrating these meters?

A Yes, sir, we do. In looking at the schematic diagram, you simply shut one of the wells in. We will take a Hondo well,

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1 or 3. Shut one of them in, and produce the wells 2 and 4 through the production separator into one tank, and produce the other Hondo well into a tank through the metering vessel. And you can check the calibration meter in that manner. So, making up your production is no problem, because the 125 percent of the top allowable is permissible, and these are all very capable wells.

Q So that you simply calibrate against the tank itself?

A That is correct.

Q I see. Do you have an approval to commingle from the royalty owner which, I believe, is the Federal Government, and the override owners, Hondo and Mrs. Hudson?

A Yes, sir, we sure do.

(Whereupon, Humble's Exhibits Nos. 5, 6 and 7 were marked for identification.)

Q I have had Exhibits Nos. 5, 6 and 7 marked.

A Yes, sir.

Q The consent letters?

A Yes, sir.

Q Now, this type of metering vessel you mentioned, has that ever been approved by this commission?

A Yes, sir. It will be, as I said previously, a dump metering vessel type, which has been previously approved by the Commission many times, as has the PD meter.

Q Is this oil pipeline quality oil at this time?

A Yes, sir, it is.

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Q There is no treating required?

A No, sir. No water.

Q Have you run any tests on these wells, and if so, will you give us the test dates and what the results of the tests were?

A Yes, sir. There is some new -- all we have on them is the potentials. And Well 1, on February 14, produced at a rate of 122 barrels of pipeline oil per day. It's oil-gas ratio was 1053. Well 2, on leap year day, February 29, produced at a rate of 189 barrels of oil per day, pipeline oil. The gas-oil ratio was 638.

Q Is this oil corrosive?

A Yes, sir, we feel that it must be. And this metering vessel is going to be plastic coated so that we will have no corrosion inside for the possible -- and the measurement of the vessel should be very accurate at all times.

Q What do you feel the advantages would be to this commingling of production?

A Well, as I stated previously, eventually the subject wells will be a unit participating area in common tankage, if permissible. When Well 3 is permissible, temporary storage facilities will have to be provided for it. If the formation of participating areas is delayed, we may have to install a temporary tank battery in the southwest quarter of Section 9, and that is in the order of \$15,000.00. It's the expense that we wish to avoid. In any case, the most economical and logical method for us to file is to commingle production from Wells 1 and 3 with Wells 2 and 4 until such

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time when a participating area is formed. The oil is being hauled now at thirty-seven cents a barrel.

Q In your opinion, would the granting of this application be in the interest of conservation and the protection of the correlative rights of the interested parties?

A Yes, sir, it certainly will.

Q Is there any need, in your mind, for the expediting of this petition or application?

A Yes, sir. It would be greatly appreciated. The temporary storage facilities in the southwest quarter now, as the oil is being produced, is being trucked at a thirty cent per barrel expense, and we would like to defer that as soon as possible.

Q Were Exhibits Nos. 1 and 2 made by you or under your direct supervision?

A Yes, sir.

MR. CHRISTY: That is all the questions of this witness.

MR. NUTTER: Does anyone have questions of the witness?

CROSS EXAMINATION

BY MR. PAYNE:

Q Mr. Carpenter, as I understand it, all the parties owning interests in these two leases have agreed to this proposal?

A Yes, sir.

Q Which could probably be considered tantamount to common ownership, in effect?

A Yes, sir.



MR. PAYNE: That is all. Thank you.

QUESTIONS BY MR. NUTTER:

Q Mr. Carpenter, do I understand correctly that separator "A" will be a standard production separator?

A Yes, sir.

Q And separator "B" will be a dump type test separator?

A Correct.

Q And the production in the Hondo lease will go through the test separators; production from the Humble-Hudson lease will go through the standard production separator?

A Yes.

Q Then production from the two separators will go into one of these tanks, "C"?

A Yes, sir.

Q How do you know when you have made your allowable from each one of these leases?

A We have daily gauging, and all the wells are top allowable produced on positive choke, and they are wonderful wells. After you test one a little while, you can set it on a given size choke, and it's pretty reliable, and they are gauged every morning and adjusted, if necessary.

Q Well, now, if the switcher goes off there, and the gauge attendant finds out that he has made the allowable for the two leases --

A Yes, sir.



Q -- and then goes back and subtracts the reading on his test separator, separator "B," and subtracts that from the total in the tank, would he know how much oil came from lease "A," from the Humble-Hudson lease, then?

A Yes, sir, I think he would.

Q The difference would be the production from the Humble-Hudson?

A Yes, sir.

Q What about the shrinkage that the oil may be incurring during the night while the pumper wasn't there? All that shrinkage would have to be attributed to one of the leases, wouldn't it?

A Yes, sir, it would. It would be a very small amount in this case, I believe, a negligible amount.

Q Are you aware that shrinkage in southwest New Mexico does vary up to three percent and five percent when the oil is sitting in the tank?

A Yes, sir, depending on the temperature.

Q What size are these tanks?

A Those are 500's.

Q You have four wells that will be producing into them?

A Yes, sir. We have currently two. We only have one producing in temporary storage, and then we have one just recently completed, producing into the tank battery. And as I have previously reiterated, I will reiterate it again, this is a stop-gap measure to prevent a large expenditure for a short period of time. As soon



as the participating area is presented and agreed upon, which is anticipated shortly, this will no longer be in effect.

QUESTIONS BY MR. PAYNE:

Q Both wells are top allowable?

A Yes, sir.

Q And in all probability will remain so for many years?

A Yes, sir.

Q So, there is no problem as to the allowable, then?

A No, sir.

Q And the parties have all agreed?

A Yes, sir. And we plan on testing the wells at short intermittent intervals during this period.

QUESTIONS BY MR. NUTTER:

Q Now, the reason I was asking these questions, Mr. Carpenter, about using this production separator on the Humble-Hudson lease, the application for this hearing stated that Applicant proposes to use a metering separator to meter the production from each lease.

A Yes, sir, I know that.

Q And it appears now that we have a metering separator for production from one lease.

A Yes, sir.

Q What would be actually involved in putting a test separator on both leases?

A Merely installing it when it gets here. It's already



ordered. We ordered two. What it would boil down to, dollars and cents wise, as soon as the participating area is agreed on, we certainly won't need two there then. And accounting wise, thirty-five percent of the cost of that vessel would be chopped against that well, and there is no way you can remove it. And it's a negligible loss, but on paper, it looks like a pretty good size.

Q If I know of any wells in New Mexico that could sustain this thirty-five percent loss, these would be the ones.

A Yes, sir.

MR. NUTTER: I believe that is all. Any further questions of Mr. Carpenter?

MR. CHRISTY: The Applicant has no further questions. We would like to offer in evidence Exhibits Nos. 1 and 2, Mr. Examiner. That is all we have for the Applicant.

MR. NUTTER: Humble's Exhibits Nos. 1 and 2 may be entered.

(Whereupon, Humble's Exhibits Nos. 1 and 2 were received in evidence.)

MR. NUTTER: Does anyone have anything further on Case 1916? We will take the Case under advisement and adjourn the hearing.

(Whereupon, the hearing was concluded at 3:55 p.m.)



