

DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
June 22, 1960

EXAMINER HEARING

IN THE MATTER OF:)

Application of Sun Oil Company for per-)
mission to commingle the production from)
several separate leases. Applicant, in)
the above-styled cause, seeks permission)
to commingle the Wolfcamp production from)
several separate leases in Sections 2, 3,)
4, 8, 9, 10, and 11 of Township 9 South,)
Range 34 East, Lea County, New Mexico, and)
Section 35 of Township 8 South, Range 34)
East, Roosevelt County, New Mexico.)

Case 1997

BEFORE: Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING

MR. NUTTER: We will take up next Case 1997.

MR. PAYNE: Application of Sun Oil Company for permis-
sion to commingle the production from several separate leases.

MR. CHRISTY: Sim Christy, Hervey, Dow & Hinkle for the
applicant, Sun Oil Company. We have one witness, Mr. Examiner,
Mr. Lawrence.

(Witness sworn.)

DONALD K. LAWRENCE

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



DIRECT EXAMINATION

BY MR. CHRISTY:

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

A I'm Donald K. Lawrence with Sun Oil Company, Odessa, Texas. I'm Petroleum Engineer for the Sun Oil Company.

Q Mr. Lawrence, have you previously testified before this Commission as a Petroleum Engineer?

A No, sir.

Q Would you briefly state to the Examiner the schools of higher learning you have attended, the degrees, if any, received and the year of their receipt?

A I received a Bachelor of Science degree in Petroleum Engineering from the University of Texas in 1953.

Q Since 1953 what have you done in the petroleum engineering field?

A I have been a petroleum engineer for Sun Oil Company since that time.

Q Does your work in Petroleum Engineering include the area in Lea County, New Mexico and specifically Townships 8 and 9 South, Range 34 East, N.M.P.M., Lea and Roosevelt County?

A It does.

Q Are you familiar with that general area and the wells in the area and their production history?

A Yes.

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

MR. NUTTER: No, sir, please proceed.

MR. CHRISTY: Thank you.

Q What is sought in this application, Mr. Lawrence?

A We wish authority to commingle all production from the Wolfcamp formation as outlined in the red coloring on Exhibit A.

Q Exhibit 1, I believe.

A Exhibit 1, Townships 8 and 9 South, Range 34 East, in Roosevelt and Lea Counties, New Mexico.

Q I believe that consists of State, Federal and fee land, is that correct?

A It does.

MR. CHRISTY: I might state to the Examiner at this time when these plats were prepared in the application, the applicant was unaware that it was probable the United States Geological Survey would not approve commingling on the Federal lease. However, we ask that the Commission consider the approval of those two Federal tracts and perhaps the United States Geological Survey may change their mind. I do not know whether they will or not. My personal belief is they will not.

MR. NUTTER: The advertisement was for the commingling from several leases?

MR. CHRISTY: It covers it. It covers it in the application. I personally do not believe that the Geological Survey will approve commingling on the two Federal tracts shown in

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Exhibit 1. However, I notice they are in the outer perimeter. With respect to the State acreage being the Section 2 lands, that is all one beneficiary. I have checked the lease so there is no problem of separate metering within the beneficiary there.

Q Now, continuing, Mr. Lawrence, I will refer you to what has been marked as Exhibit 2 and ask you if you will please briefly identify that exhibit and show us what it depicts.

A This exhibit, Exhibit 2 depicts our operating acreage in the Townships 8 and 9 South, Range 34 East in Roosevelt and Lea Counties, New Mexico.

Q It's a blown up version of Exhibit 1?

A Right.

Q Continue.

A And it also depicts an operating agreement which is outlined in the dotted line in the center of the properties. This is an operating agreement of the operators only.

Q Well, it also shows your McNulty No. 1 completed well, does it not?

A That's right, and our E. Watson No. 1, which is a solid dot as a well in completion state now, or M. Schmidt, which is in the operating agreement as outlined as drilling, and also a present tank battery on the McNulty lease.

Q I believe there are some other dotted circles on Exhibit 2. Those are proposed possible drill sites?



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A They're possible locations.

Q Within the area sought to be commingled production?

A Yes, sir.

Q I notice, incidently, on Exhibit 2 those other proposed locations are on 80-acre spacing?

A Yes, sir. That will be before another application for 80-acre spacing.

Q I believe that's the chief thing shown on Exhibit 2. Let's take the McNulty well while we're here. What is that producing from, what formation?

A The Wolfcamp formation.

Q At what depth?

A Approximate depth of 9600.

Q Producing oil? A Producing oil.

Q Any gas?

A GOR of 1620 cubic feet per barrel of oil.

Q Is that a sweet or sour crude?

A It is a sweet producing well.

Q Do you have any corrosion problems with it?

A No, we do not.

Q And this application here today for commingling is limited to that production encountered in the McNulty well?

A That is correct.

Q Is that where you are completing your Watson well shown



on Exhibit 2?

A That is correct.

Q Now, I'll refer you to what has been marked Exhibit 3, which again, I believe, is a blown up version of the area in question. It seems to have some different symbols on it. Would you explain that to the Commission?

A Yes, it does, it shows the present battery location in the center of the McNulty lease and the center of the properties plus possible proposed battery locations in the State lease and the A. T. Hutcherson lease on each side of the properties.

Q So, as I understand you, from this exhibit, you would have a possible total of three batteries within the commingled area?

A We would have a maximum possible of three commingled batteries.

Q Your first one would be on the McNulty and as the pool expands you might add more?

A Yes, sir.

Q About how many wells would be producing into each of those batteries?

A Fifteen wells.

Q That's based on 80-acre spacing?

A That's based on 80-acre spacing.

Q Now, would you tell us something of the mechanics of how

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you propose to commingle the Wolfcamp production sought in this application? I believe it might be well to refer to Exhibit 4 in that connection.

A The well fluids will be transported through separate individual flow lines to the sites of the proposed commingled battery locations. At this time I will refer you to Exhibit 4 which depicts a typical commingled tank battery. At the bottom of the page it indicates the headers for each separate lease, and each separate flow line coming into the header.

Q How many leases are involved here?

A There are fifteen leases.

Q All right.

A The symbols, the round circles at the bottom indicates the vessels from left to right, test treater, production separator, another production separator, production treater, heater treater, and the last one on the right, production heater treater.

The O.M. symbol just above represents our oil meter. Up at the top, S.T. is our stock tanks, at the left and two-thirds up at the top, C.P. is our circulating pump.

Q Would you briefly take us through the oil coming in one particular lease? Where does it go when it comes in?

A The production from the lease will go through the production side of our header, which is marked with an orange arrow, and will go into either the production separator or production

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treater.

Q What would be the difference, why would you have a difference?

A The production treaters will be installed on leases if and when they make water.

Q All right.

A It will go through the treater and the oil will be measured with a dump tank type oil meter. The production will then be commingled past this meter and go into common storage tanks.

Q How can you test those meters, you said that was a dump type meter, how can you test the meter?

A There is a test line which will be manipulated by block valves between the Z symbol on the chart, which is a check, and the next plug valve, block valve will be diverted into the test line, which is depicted by the black arrow, will go to the left and will connect to our test line going to our battery.

Q I assume that's a measured stock tank?

A Our strap stock tanks.

Q Strap stock tank. You are measuring the dump type meter against the stock tank measurement?

A Yes, sir.

Q What is your test treater used for on the lower left-hand side?

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A For individual well tests. The production will go through the test treater through an oil meter and can either be diverted into production or this meter can also be checked by going straight into the test line and to a calibrated stock tank.

Q What do the red arrows indicate?

A The red arrows indicate our circulating system to circulate tank bottom.

Q Back through treater?

A Back through our test treater and metered again.

Q With relation to your stock tanks, what size tanks are those?

A The ones we have presently are 500 barrel stock tanks.

Q You said you had a maximum of fifteen wells per battery?

A Yes.

Q What is the allowable production on Wolfcamp out in that area?

A The present allowable on our 40-acre spacing is 125 barrels per day.

Q How much stock tank capacity will you have here?

A We will have a minimum of room to hold a four day allowable.

Q If you went to 40-acre spacing you would have to add additional stock tanks on down the line on Exhibit 4?

A That is correct.



Q You will have four days storage, however?

A Right.

Q Have any other similar types of commingling setups, as depicted in Exhibit 4, been used anywhere else?

A Yes, sir, they have, in the Revillo (Glorietta) Field in Scurry County, Texas and the McComb Field and other fields in Pike County, Mississippi.

Q With what success have they been used?

A With very good success.

Q I believe your margin of error was less than one percent, was it?

A Yes.

Q What advantages can be gained from granting this application to commingle the different leases?

A Substantial savings can be gained in both equipment and labor.

Q There will be separate metering for each lease as you have explained on Exhibit 4?

A That is correct.

Q In your opinion, would the granting of this application be in the interest of prevention of waste?

A It would.

Q Would the correlative rights of the interested parties be protected under this system?



A It would.

Q Now, have you submitted this proposed operation or plan to the other working interest owners you mentioned, Ohio and United States Smelting?

A It has.

Q They seem to be in agreement?

A Yes, sir.

Q And have you discussed it with the Commissioner of Public Lands?

A Yes, sir.

Q And I believe I have mentioned the discussion with the United States Government?

A Yes.

Q Were Exhibits 1 through 4 prepared by you or under your direct supervision?

A Yes, sir, they were.

MR. CHRISTY: I believe that's all.

MR. NUTTER: You want to enter the exhibits?

MR. CHRISTY: No, sir, I'll enter them at the end in case there was any correction.

MR. NUTTER: Anyone have any questions of Mr. Lawrence?

CROSS EXAMINATION

BY MR. NUTTER:

Q Referring to Exhibit 3, just which lease would be going



into each of the various batteries?

A That will be determined at the time of development of each lease depending upon how the development of the properties go.

Q So you, how would you suggest that the Commission enter an order here, just authorizing the approval of commingling from these leases?

A Yes, sir, we do.

Q And place a restriction that no more than fifteen wells will be produced into any single battery?

A No, sir. In case 40 acres are assigned to each well, each of the three batteries can handle thirty wells. The batteries can handle more than thirty wells. However, on complete development of 80 acres we feel that the three battery sites and their locations are most economical.

MR. CHRISTY: I might state to the Examiner as a suggestion to them, if you wish to provide in the order that a minimum of four-day storage will be required at any battery, I believe that takes care of the situation whether it's 40 or 80. We will ask you to say until further order of the Commission, because we may want to come back with an ACT system. I believe that will get over your problem.

Q What is the significance of the operating unit that is shown on Exhibit No. 2?

A That was formed in order to drill our McNulty well



which is drilled near the center of the operating unit.

Q Is that a unit agreement which has been approved by the Commission?

MR. CHRISTY: No, sir, that's a working interest. I don't believe it has any particular significance with reference to this application.

MR. BALLOU: It's a drilling agreement.

MR. NUTTER: Its royalty ~~interests~~ aren't unitized?

MR. CHRISTY: No, sir. I don't feel it has any significance to this hearing.

Q (By Mr. Nutter) Which are Sun Oil Company leases and which are leases belonging to other operators?

A All of the leases are Sun Oil Company leases with the exception of the West or the 80 acres shown in Section 10 of the M. Schmidt.

Q What company is that?

A That is United States Smelting. That was the West Half of the Northeast Quarter of Section 10, Township 9 South, Range 34 East.

Q And everything else here is the Sun Oil Company lease then?

A Yes.

Q I presume from Exhibit No. 4 where we see the gas coming off these various separators and treaters and going to a meter

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run, that would be an individual meter run for the gas from each one of those leases, wouldn't it?

A That is correct.

Q Prior to commingling the gas?

A That is correct.

Q Are you presently disposing of the gas from this pool?

A We just have one well and we do not have an outlet for our gas.

Q It's being flared at this time?

A Yes, sir.

Q On your Exhibit No. 4 we have a couple of production separators and a couple of production treaters. Do I understand correctly that the separators could be replaced by treaters?

A They will be replaced by treaters when any well from that lease begins to make water.

Q Or you may not have any treaters at all if you didn't need them, this is just a typical arrangement --

A This is a possible arrangement we could have.

Q I see. Now, you said that you were going to use a dump type of metering vessel?

A Yes, sir.

Q Does the oil in this area produce any paraffin to speak of?

A Very little, the meter will be coated for paraffin with a



plastic coating that works very well in eliminating paraffin adhering to the sides of vessels.

Q And you can check this metering vessel to see that it isn't getting a paraffin buildup on the inside of it?

A That is correct.

MR. NUTTER: Any further questions? If no further questions, Mr. Lawrence may be excused.

(Witness excused.)

MR. CHRISTY: We would like to offer in evidence Applicant's Exhibits 1 to 4 inclusive.

MR. NUTTER: Sun Oil Company's Exhibits 1 through 4 will be entered in evidence.

MR. CHRISTY: That's all for the Applicant.

MR. NUTTER: Does anyone else have anything for 1997?

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STATE OF NEW MEXICO)
 : SS
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 25th day of June, 1960.

Ada Dearnley

Notary Public-Court Reporter

My commission expires:
June 19, 1963.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examination of Case No. 1997 heard by me on 6/22, 1960.

[Signature]

Examiner
New Mexico Oil Conservation Commission

