BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE 1844: Application of Texaco Inc., for permission to commingle the production from two separate pools and for permission to install an automatic custody transfer system.

TRANSCRIPT OF HEARING

JANUARY 6, 1960

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
JANUARY 6, 1960

IN THE MATTER OF

CASE 1844 Application of Texaco Inc. for permission to commingle the production from two separate pools and for permission to install an automatic custody transfer system. Applicant, in the above-styled cause, seeks an order authorizing it to commingle the production from the Justis-Ellenburger and Justis-McKee Pools from all wells on its C. E. Penny lease consisting of the NW/4 of Section 19, Township 25 South, Range 38 East, Lea County, New Mexico, and for permission to install an automatic custody transfer system to handle said commingled production.

BEFORE:

Daniel S. Nutter, Examiner

TRANSCRIPT OF PROCEEDINGS

MR. NUTTER: The next case we will take will be Case 1844.

MR. PAYNE: Case 1844. Application of Texaco Inc. for permission to commingle the production from two separate pools and for permission to install an automatic custody transfer system.

MR. WHITE: If the Commission please, Charles White of Gilbert, White & Gilbert, appearing on behalf of the applicant. We have one witness to be sworn at this time.

(Witness sworn)

JOSEPH E. ROBINSON, JR.,

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

DIRECT EXAMINATION

BY MR. WHITE:

Q Mr. Robinson, will you state your full name for the record, please?

A Joseph E. Robinson, Jr.

Q By whom are you employed and in what capacity?

A Texaco, Inc. as proration engineer.

Q Are you familiar with the instant Case 1844?

A Yes, sir, I am.

Q Will you briefly state what the applicant is seeking in this matter?

A We are seeking permission to commingle two fluids from the Justis-Ellenburger and the Justis-McKee Pools, and for permission to install an automatic custody transfer system on our C. E. Penny NCT 4 lease.

(Thereupon, Texaco's Exhibit No. 1 was marked for identification.)

Q Will you refer to what has been marked as Exhibit No. 1 and explain that to the Commission, please?

A Exhibit No. 1 is a plat of the area with Texaco, Inc.'s C. E. Penny NCT 4 outlined in yellow marking. It shows the wells with what pools these wells are located in on the C. E. Penny NCT 4 lease. We have our Well No. 4 which has recently been completed as

a dual producer in the McKee and the Ellenburger formations.

Q This shows all the offset operators with names and addresses?

A Yes, sir, that's right, it does. It also shows their addresses at the bottom of the plat.

(Thereupon, Texaco's Exhibit No. 2 was marked for identification.)

Q Will you explain your commingling installation and in so doing refer to Exhibit No. 2?

A We propose to commingle the Ellenburger and the McKee production. Both of these zones are flowing completions. We propose to produce the Ellenburger production through a separator where the gas will be taken off the separator, passed through and metered through a gas meter and on to a gas sales line. The liquid will pass through a separator, through an A. O. Smith type T-6 PD meter. We will also have downstream from the meter a snap acting dump valve. This valve is necessary to assure the right amount of fluid passing through the meter for accurate measurement. It will pass on through the snap acting dump valve and on down the line. We propose to produce the McKee production in an identical manner as the Ellenburger production by passing it through a separator, metering our gas and hooking the gas to the gas sales line. The fluid will pass through a PD meter on through a snap acting dump valve, and then the fluid will be commingled downstream where it will be stored in two three hundred barrel surge tanks.

(Thereupon, Texaco's Exhibit No. 3 was marked for identification.)

Q Will you give some of the production characteristics of these crudes and in so doing refer to Exhibit No. 3?

A Exhibit No. 3 is the production characteristics of the two fluids. Before commingling, the McKee has an intermediate sweet type crude with a gas-oil ratio of five hundred and seven to one with a gravity of forty-three point zero degrees API corrected. The price per barrel that we would receive from the McKee is three dollars and one cent a barrel with the present allowable of eighty-seven barrels of oil per day.

The Ellenburger is also an intermediate sweet type crude with a gas-oil ratio of twelve thousand -- excuse me -- twelve hundred and twenty-seven to one with a gravity of forty-six point zero degrees API corrected to sixty degrees, with a price per barrel of two dollars and ninety-seven cents, with an allowable of eleven hundred barrels per day. After commingling of the McKee and Ellenburger crudes, we will still have an intermediate sweet type crude with a composite gravity of forty-four point six degrees API, and we will receive three dollars and one cent a barrel price for the commingled crude since the breakover price is forty-four point nine degrees API.

The value of the daily production before commingling would be eighty-seven barrels at three dollars and one cent a barrel plus one hundred and eleven barrels at two ninety-seven for a total price

of five hundred and ninety-one dollars and fifty-four cents, and the value of the daily allowable after commingling will be a summation of a hundred and ninety-eight barrels at three dollars and one cent a barrel for a difference -- that total price would be five hundred and ninety-five dollars and ninety-eight cents, or we would stand to gain in total production by four dollars and forty-four cents a day.

Q Are both the Ellenburger and McKee flowing?

A Yes, sir, they both are flowing production right now.

(Thereupon, Texaco's Exhibit No. 4 was marked for identification.)

Q Now, will you refer to Exhibit No. 4 and explain that, please?

A Exhibit No. 4 is a schematic diagram of the LACT equipment that we propose to install. The LACT equipment will be installed in the approximate center of our lease; that is noted on Exhibit No. 1. After the oil is collected in the two three-hundred barrel surge tanks, as noted on Exhibit No. 2, they will pass into a gear type pump which is noted by Item No. A on this diagram. The fluid will pass through the gear pump and through a BS & W monitor system, which has a probe in it. If the fluid passing through is acceptable by the pipe line, there will be no action, and it will go on downstream. However, if the crude does not meet the pipe line specifications, the monitor will close the pipe line shutoff valve labeled G, a solenoid will open a valve labeled E,

and the crude will be circulated back to the surge tanks. In case of bad oil, the circulation will take place upstream of the meter and no fluid will be metered. At this time we do not have any heater treaters for this crude. However, should the need arise where we will start getting bad oil, then we will install a heater to take care of this. If the oil is acceptable through the monitor, it will pass on through a combination strainer and air eliminator marked D on this Exhibit. Actually, there are two items marked D. The air eliminator and strainer is located on the left side of the plat marked D. The strainer is to strain out all foreign matters before it gets into the meters. The air eliminator will remove any entrain gas or air within the crude. It will pass through the air eliminator through the meter labeled D, which is a type A. O. Smith, type T-6 meter. It will pass on through the meter on downstream through the back pressure valve labeled G and on into the pipe line.

We've also installed valves labeled F where we can install a master prover to calibrate the meter that is on the line when it needs to be calibrated. The back pressure valve will keep a constant pressure on the fluid to keep any gas in solution and what not. We also have a sampler which is located by the designation C. This sampler is -- takes fluid according to the volume that passes through the meter. We can set it to take a sample out of every barrel or out of every four barrels that pass through, and it is retained in the sampler until the pipe line takes the sample

that they desire to test, and then it can be pumped back out into the line and then on downstream.

Q What if your monitor failed to function properly, do you have any safeguard as to that?

A If the monitor fails to function correctly, we also have a brain system in the meter. However, I don't believe this will occur; this type of monitor the pipe lines have accepted, the monitor to measure BS & W that passes through. However, if an incorrect volume is passing through the meter, it will shut down the system and no more fluid will pass on through.

Q As to this type of equipment you are presently proposing, has the Commission previously approved similar installations?

A Yes, sir. There are two other LACT systems where the McKee and Ellenburger are being commingled and handled with LACT installations. Gulf's Larry McBuffington lease, which joins Texaco's C. E. Penny lease to the northwest, has an LACT system to handle these two crudes, and also Tidewater Coats lease, which is located to the west in Section 24.

Q Are these meters corrosive resistant?

A Yes, sir. The meter is cast iron with the moving parts and the inside plastic coated. The strainer and air eliminator are also plastic coated. However, with the crude being an intermediate sweet, we do not anticipate any corrosion problems. However, we have plastic coated the equipment in case corrosion

should start occurring.

Q Does Texaco have all the working interests?

A Yes, sir, we do.

Q Were these Exhibits prepared by you or under your supervision and direction?

A Yes, sir, they were.

MR. WHITE: We move to offer Texaco's Exhibits 1 through 4.

MR. NUTTER: They will be entered.

(Whereupon, Texaco's Exhibits Nos. 1 through 4 were received in evidence.)

MR. WHITE: That's all we have on direct.

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

MR. PAYNE: Yes, sir.

MR. NUTTER: Mr. Payne.

CROSS EXAMINATION

BY MR. PAYNE:

Q Mr. Robinson, are the McKee and Ellenburger wells on pump or flowing?

A They are flowing. Both zones are top allowable zones capable of making their full daily allowable.

Q Now, do you have any high-low switch to take care of the motors in case of a malfunction or line break?

A Yes, sir, we have. On our surge tanks we have high-

low switches where the motor will start on the high level, and at the low level it will shut off. This LACT will not operate continually since it will be governed by high-low level switches.

Q Well, Mr. Robinson, what happens in the event the motor detects bad oil and returns the oil to the storage tanks and you continue to produce? Now, you have -- what do you have, six hundred barrels of storage there?

A Yes, sir, we have six hundred barrels of storage capacity. These two tanks have an equalizor line so in case of bad oil we have an indicator light there that would light up, and even in case of bad oil we would still have approximately two days' additional capacity in the surge tanks.

Q What if the bad oil came at the time when the tanks were pretty near full?

A I don't believe that with the operations that it would come at such a time since the high level switch will not be located at a position where the tanks would be near capacity before the system starts putting oil on the line.

Q What is the level of the switch that puts the oil on the line? How much reserve capacity do you have at the time the pump, Item No. A, is turned on?

A We would have approximately four hundred barrels.

Q Of storage?

A Storage available when the high level switch goes on.

Q And these wells make a hundred and ninety-eight barrels

a day total?

A That is correct.

QUESTIONS BY MR. NUTTER:

Q Do you anticipate there will be any more wells completed in the C. E. Penny lease in either the Ellenburger or McKee formations?

A Possibly one more McKee-Ellenburger well.

Q The other wells presently completed on this lease are Langley Mattix?

A That is correct, yes, sir.

Q And they are all being handled in a separate conventional type battery?

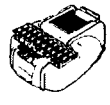
A Conventional type battery, yes, sir.

Q What safeguards are provided here in the event of a flow line break?

A The back pressure valve always maintains a constant back pressure on the system, and should a line break occur, then a solenoid would cut off the gear pump and not allow any fluid to be pumped past the gear pump.

Q I mean the flow line breaks between the well and the header, where the two wells come together, or the flow line breaks on the lease itself.

A We don't have any, to my knowledge. There is no safeguard there that would shut the flowing well down if a flow line would break between the well head and the surge tank.



Q Mr. Robinson, it is commonly said that one of the advantages of the automatic custody transfer system on a lease is the savings in pumper time, that the pumper does not have to spend as much time on the lease under normal conditions. Therefore, the lease is unattended for more hours per day, as a rule.

A That is possibly correct. However, in -- particularly in this instance, we find that it is more economical on initial completion to install this LACT rather than a conventional type battery since we can't install this system for a less amount than we could a conventional type battery.

Q You mean your pumper is going to be on the lease the same amount -- if you had a conventional type tank, he is going to be on the lease?

A I can't answer that for sure since I don't know what other rounds this particular pumper makes who pumps this lease. However, I don't think that -- we haven't had the experience of having difficulties with flow lines, a break in between.

Q What are the flowing pressures on these two zones?

A Well, we would operate the separator with a pressure of approximately forty pounds.

Q I meant the pressure at the wellhead.

A I don't have that available for you, but the separator would control the line pressure from the choke at the well to the separator.

Q And the separator would maintain a back pressure of

forty pounds on the flow line back to the wellhead?

A Yes, sir, from approximately twenty-five to forty pounds.

Q What are you using for flow lines there, just ordinary line pipe, or are you using high pressure line pipe, or just what are you using, do you know?

A We are probably using two and three-eighths line pipe, standard line pipe.

Q Standard line pipe?

A Yes, sir.

MR. NUTTER: Any further questions of Mr. Robinson?

QUESTIONS BY MR. FLINT:

Q Mr. Robinson, I gather you are not sure for just how long a time the subject lease would be unattended?

A No, sir, in that I don't know presently the amount of hours that the pumper spends on the lease.

MR. PAYNE: He will visit this lease every day, though?

A Yes, sir, he will visit the lease every day. Roughly, I would say he would probably spend a couple or three hours, at least, every day on the lease since we do have three other Langley-Mattix wells. It is a company policy that we take daily tank gauges.

Q (By Mr. Flint) Are your flow lines above ground?

A No, sir, they are buried. I might correct myself, I'm assuming that they are buried.

MR. NUTTER: Any further questions?

QUESTIONS BY MR. NUTTER:

Q Mr. Robinson, would you be willing to prepare and send to the Commission a schematic diagram of the surge tank showing the location of the float level switches and so forth?

A Yes, sir, I would.

Q We would appreciate it.

A All right.

MR. NUTTER: If there is nothing further from this witness, he may be excused.

(Witness excused)

MR. NUTTER: Do you have anything further, Mr. White?

MR. WHITE: That's all we have.

MR. NUTTER: Does anyone have anything further in Case No. 1844? The case will be taken under advisement.

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 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 12th day of January, 1960, 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 the proceedings in the Examiner hearing of Case No. 1844 heard by me on 1-6, 1960.

Examiner
New Mexico Oil Conservation Commission