

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
MARCH 22, 1961

EXAMINER HEARING

IN THE MATTER OF

CASE 2219: Application of Shell Oil Company for an exception to Rule 309 (a) and for an automatic custody transfer system. Applicant, in the above-styled cause, seeks permission to transport oil from its Turner Lease, W/2 NE/4 of Section 34, to its Sanger Lease, Section 27, prior to measurement, and after measurement and commingling of production from the two leases, to transport it to the Grimes Lease, SW/4 of Section 28, for treatment. Applicant also desires to transport oil from its State "B" Lease, W/2 NW/4 of Section 33, to the said Grimes lease prior to measurement, and then, after measurement and treatment thereof, to commingle such production with the production from the other three leases, at which time the commingled production from the four leases is proposed to be handled by automatic custody transfer facilities. All leases are located in Township 13 South, Range 38 East, Lea County, New Mexico, and the production involved is all from the Hobbs Pool.

BEFORE:

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: We will take up next Case 2219.

MR. PAYNE: Case 2219, application of Shell Oil Company

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for an exception to Rule 309 (a) and for an automatic custody transfer system.

Let the record show that the witness was previously sworn.

MR. UTZ: Any other appearances in this case?

R. L. SOMERWELL,

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

DIRECT EXAMINATION

BY MR. SETH:

Q State your name, please, Mr. Somerwell, and by whom you are employed and in what capacity.

Q R. L. Somerwell, employed by Shell Oil Company, Roswell Division, as a mechanical engineer.

Q Are you familiar with the application in Case 2219?

A Yes, sir.

Q Have you testified before the Commission in previous hearings?

A Yes, sir.

Q Will you describe, please, to the Commission the general purpose of this application?

A Yes, sir. The two main purposes of this application are to effect conservation and to reduce above ground waste and remove the oil and water for treating and ACT from the residential area of Hobbs for safety reasons.

Q Do you have a diagram of this proposal?



A Yes, sir.

(Whereupon, Shell's Exhibit No. 1
was marked for identification)

Q Will you describe to the Commission what this Exhibit
No. 1 shows?

A Yes, sir. The lower right of the drawing shows Shell's
Turner lease which is enclosed, as you will note, within an acre
tract, and the Shell Sanger lease immediately above, that entire
Section 27, in which we have five producers.

Q Is this Fee lease?

A Yes, sir.

Q Now, what is the shaded area?

A It represents the residential area of Hobbs, New Mexico,
the extremities of it. That is not the city limits, but the popu-
lated section.

Q Describe generally the property.

A Case 2219 involved four of Shell's leases, that is, the
Turner lease, the Sanger, the State "B" and the Grimes lease are
fee leases and State leases. What we propose to do is to produce
both the Turner wells through a common line to the Sanger Remote
facility. At the Sanger Remote both the Turner and Sanger leases
will be metered. The fluid, after being metered continuously for
twenty-four hours, will be produced in surge tanks and pumped
through a line to the Grimes lease, which is out beyond the city,
and at the Grimes lease will be produced directly to the treating



system and for treating subsequently produced into ACT units. State "B" is proposed to divert the two into those lines to Grimes and four Grimes wells will come into a header. And they will be continuously commingled with the other two leases into the treating system, within the treating system, and one ACT unit and continuously meter each lease very similar to the McKinley.

Q One of the principal purposes is to reduce the amounts of above ground waste and remove treater heaters from populated routes?

A The principal reason, yes, sir. I would like to also refer back to Case 2218. To make this mechanically and economically feasible, we are asking both of these cases be thought of in light of safety to remove this from the city.

Q In what zone are the production of these four, please?

A All from the Hobbs and Sanger formations.

Q Do you have a diagram of the Sanger remote facilities?

A What one? I would like to start with Sanger.

(Whereupon, Shell's Exhibit No. 3 was marked for identification)

Q This has been marked Exhibit 3. Will you describe what this Exhibit 3 shows?

A Yes, sir. Approximately 5,000 feet, away from the lower right corner are the two Turner wells. They have a header right now, and the test header is a manual header.

Q Is that located on the Turner lease?



A Right down near the downtown section of Hobbs.

Q Both are producing already? We are referring to this line marked 5,000' 4" transfer line on Exhibit 3.

A Both are producing. The Turner separator and the meter are the same type of system described previously. The five Sanger wells will produce into Sanger remote where they are right now. An automatic header will be installed, and they will pass through the normal position, they will pass through the P. F. Sanger production separator and the meter and be commingled in this 500-barrel surge tank and transfer pump, actuated and the pressure switch will transfer the fluid to the Hobbs central battery on Exhibit 1, which is shown as Grimes lease on Exhibit 1. A three-phase metering phase separator will be installed to test the Sanger wells and will be automatically tested, and the gas and oil will be rerouted back to the Sanger to minimize accounting problems as far as our lease operators are concerned. To test, the Turner wells have a very good daily allowable, in about four hours, the daily allowable is produced. We propose to shut one of the wells in, purge the line for approximately two days, sufficient time to displace the line with fluid with gas.

It takes about two days producing within our 125% of our allowables. To purge a line, one will be shut in, the line then will be purged, and the other well flow will be tested through the production separator and a gas chart taken on the sales meter, so then both oil and water production right now is very low. The Turner

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average is approximately 1.1% of water, and the Sanger is 5 barrels per day, and we do not plan to install a free water knockout. All showed emulsion and water decrease of about five, ten percent. So then the fluid is transferred to Hobbs Central Battery.

Q Do you have a diagram of Hobbs Central Battery?

(Whereupon, Shell's Exhibit No. 2 was marked for identification)

Q Referring to what has been marked as Exhibit 2, describe what that shows, please.

A To follow up on Sanger remote, the lower line in this diagram shows the transfer line from Sanger remote facilities there for treating and the ACT.

In the headers shown, and at the left of the diagram the lower header is the two-well State "B" header, and the upper is four-well Grimes automatic header, and again, this is very similar to McKinley "A" and "B." The well is automatically placed on test with the Grimes lease reroute valve electrically interlocked, opening to allow test fluid to come back through the correct production separator and "B" continues and is metered by KARA engineering meters, and will make monthly reports of samples to determine water and BS&W. We are going to leave two tanks storing sufficient surge capacity because this is in the city. I believe approximately a forty-eight hour surge for our own safety.

Q That is longer --

A Again, sixteen hours. We are attempting to leave our



pumper on more time than other lease operators, but it is in the city.

Q Is the meter shown on Exhibit 2, on sampling, similar to the same as you testified to in 2218?

A Identical to Case 2218, and again, very similar to Pearl-Queen installation.

Q Do you have an ACT unit proposed, or anything more to say about Exhibit 2?

A I think that is self-explained "to gas sales," for example, gas from the separator is rerouted back, there is no local gas. For the ACT units, I have specifications, and they are identical to the previous ones.

(Whereupon, Shell's Exhibit No. 4 was marked for identification)

Q This is Exhibit 4. Will you please describe that?

A It is an ACT unit and it is exactly as described in the previous case with a pump and monitor, a BS&W monitor, a reroute valve and flowing through the air-eliminator and strained, PD meter and meter proving loop and back pressure valve.

MR. SETH: Rather than repeating the testimony, we will adopt the testimony relating to the ACT units and also the experience in Pearl-Queen, from Case 2218, in this record, if we may do so.

MR. PORTER: This ACT system is identical to the one you testified to in Case 2218?



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A Yes, sir, in every respect.

MR. PORTER: Let the record show that the testimony pertaining to the ACT system in Case 2218 will be incorporated in Case 2219.

Q Have you been advised by the purchaser that they will accept oil through these facilities?

A Yes, sir, we sure have.

Q Is this the same advice you received in Case 2218?

A Similar. I have underlined in pencil that lease.

Q And this facility referred to in this Exhibit, are they the facilities you have set out on Exhibit No. 4?

A Yes, sir.

Q In your opinion, will you state, if this application is approved, will this result in prevention of waste and promote conservation?

A Yes, sir. Part of the justification of this system was based on the assumption that some of that which we have proven, that we would effect a gravity conservation of .550, and 1% volume savings.

Q You have this problem, you are operating within a densely populated area?

A Within the city limits, three gas fire eaters within the city, it will minimize the fire hazard when the gas storage can be released from practically 15,000 rather than 100 within the city.

Q That would be a practical savings?



A We hope for that. That would be a completely closed system. Even the surge tank will be equipped with gauge tapes so we can read the oil externally rather than gauge the tank. We certainly feel this will conserve.

MR. SETH: We would like to ask that the Exhibits be introduced.

MR. PORTER: How many Exhibits?

A One through 4.

MR. SETH: One through 5.

MR. PORTER: The copies of Exhibits 1 through 5 will be entered into the record.

(Whereupon, Shell's Exhibits 1 through 5 were received in evidence)

MR. SETH: That is all our direct testimony.

MR. PORTER: Any questions of the witness?

CROSS-EXAMINATION

BY MR. NUTTER:

Q This metering test separator on the Sanger facility is a three-phase separator?

A Yes, sir.

Q Also through the Hobbs central battery?

A Yes, sir.

Q How about the other separators?

A Three to two-phase.

Q What about the water on the Sanger?



A The water on the Sanger remote three-phase will be recombined and produced in the surge tank. All the salt water of these four leases are collected at Grimes lease.

Q The water of that separator, using the commingled production, prior to the time commingled production enters the surge tank from the sample lease?

A Yes, sir.

Q And the Hobbs central battery system generator?

A That is not exactly correct. I meant to change that. We are planning to use a heater which we have and install a plastic impeller pump continually circulate salt water, rather than a system generator. We have a lot of trouble with the soil.

Q You have a lot of soil but are circulating the salt water?

A Yes, sir. We don't like to warm the fluid in the gun barrel due to the high peak loads there.

Q You indicated the ACT units will be identical to the previous case. Do one to three foot levels apply?

A Yes, sir.

Q So you have a fluid level the same in both of these cases?

A No, sir, the standby will not have a fluid in it unless an emergency arises.

Q It opens manually?

A No, sir, corrected from the top equalizer on the system but rather than weather that tank day after day --

Q The extra 500-barrel tank is an overflow tank?



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A Yes, sir.

Q Normally you will have 520 barrels in this 500-barrel working surge tank?

A Yes, sir.

Q You will have 500 barrels of storage in the other?

A Total of 900 barrels.

Q What is the total allowables by lease, please? Daily would be fine.

A The Grimes is 140 barrels per day.

Q McKinley A?

A The Sanger is 170. The Turner is 70, the State "B" is 70.

Q What is that total?

A 455 barrels.

Q 120 barrels of available storage?

A Yes, sir.

Q I have the water production you would like.

MR. PORTER: I think we had better add this again, we have a 5 that --

A No, the Sanger is 175 and the Grimes is 140; State "B" is 70 and Turner 70.

MR. PORTER: That's right.

Q (By Mr. Nutter) So the total is 555?

A 455, all top allowable.

Q Are these leases attended on the same basis you discussed in the previous case?



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A Yes, sir.

Q A maximum of sixteen hours attended time?

A Yes, sir.

MR. NUTTER: Thank you.

BY MR. PAYNE:

Q Mr. Somerwell, as I understand your testimony, your Turner production will never go through the meter test separator for the Sanger lease?

A That's right.

Q What you are saying is, shut in one well, pump the line and test the other well?

A Yes, sir.

Q Just like you proposed to do on the McKinley?

A No, sir. On the McKinley "B" lease, we have a header only, and rather than lay an expensive test line in the city, we will install that test separator on the Turner lease and meter and recombine.

Q That will be for the Turner only, that separator?

A Yes, sir.

Q Now, as I understand it, your Sanger and Turner production are going to be treated at your Hobbs central battery?

A That's correct.

MR. PAYNE: Thank you.

BY MR. NUTTER:

Q Does the testimony in the previous case on the automatic



valves and the panels and wiring, and so forth, apply here also?

A Right.

Q The Turner wells are not automatically controlled?

A We ask our operator to check them every day.

Q What is the 5000 foot of five-inch transfer line?

A A pipeline carrier was used to transfer this fluid. Part of it is a gathering system.

Q Does it belong to Shell?

A Yes, sir.

BY MR. PORTER:

Q Then the other three headers are automatic other than the Turner?

A Yes, sir. The Grimes State "B" and Sanger are automatically controlled. I would like to state on these manually operated valves we will be willing to seal them or have the State seal them, or be willing to omit them, if you like, on that.

MR. SETH: Manually sealed to determine whether they have been operated by hand?

A Yes, sir, drill them and the State could inset a certain wire seal. Any time it's broken without permission, it would be a violation.

MR. PORTER: If you use that procedure, actually, we would have to check them occasionally.

A Yes, sir, a burden on our part. Yes, sir, that would be definitely optional.



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

(Witness excused)

MR. PORTER: Any other statements in this case? If no further statements, the case will be taken under advisement. We will take a ten-minute recess.

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STATE OF NEW MEXICO)
) SS
 COUNTY OF BERNALILLO)

I, PATRICIA GOMIA, Court Reporter, 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 machine shorthand and reduced to typewritten transcript 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 27 day of April, 1961, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Patricia Gomia
 NOTARY PUBLIC

My Commission expires:

June 19, 1963

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2219, heard by me on March 27, 1961.

James L. [Signature], Examiner
 New Mexico Oil Conservation Commission

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REGISTERED OFFICE - ALBUQUERQUE, N.M.

