BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
February 23, 1961

EXAMINER HEARING

IN THE MATTER OF:

Application of H. S. Moss for permission to commingle the production from three separate pools and for an automatic custody transfer system. Applicant, in the above-styled cause, seeks permission to commingle the production from the Southwest Gladiola-Wolfcamp Pool, the Southwest Gladiola-Devonian Pool and an undesignated Pennsylvanian Pool from all wells presently or hereafter drilled on its D. P. Peck Lease comprising the W/2 of Section 26, Township 12 South, Range 37 East, Lea County, New Mexico. CASE 2198

BEFORE:
Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: The hearing will come to order, please. The next case will be Case 2198.

MR. PAYNE: Case 2198: Application of H. S. Moss for permission to commingle the production from three separate pools and for an automatic custody transfer system.

MR. NEWMAN: E. Kirk Newman of Atwood & Malone of Roswell, New Mexico representing the Applicant, and we will have one witness.

(Witness sworn.)

GEORGE W. WILLIAMS,

called was a witness, having been previously duly sworn, testified

as follows:

DIRECT EXAMINATION

BY MR. NEWMAN:

Q Would you state your name and you employment?

A George W. Williams, Differential Separation Representative of Supply, Midland.

Q Have you previously testified before the Commission concerning the LACT equipment as an expert?

A Yes sir, I have.

MR. NEWMAN: The witness' qualifications are acceptable?

MR. UTZ: Yes sir, he is an expert on LACT equipment.

Q (By Mr. Newman) Would you state generally what is intended to be done by the application?

A We propose to commingle the production on the West Half of Section 26 and then go through an LACT system -- that is in Township 12, Range 37 East, Lea County, New Mexico.

Q Is this the H. S. Moss' D. P. Peck Lease?

A Yes.

Q Would you refer to your schematic drawing which we'll offer as our Exhibit 1 showing the flow pattern of the proposed LACT system and explain to the Commission what this Exhibit shows?

Marked Applicant's
Exhibits No's. 1, 2 & 3
for identification.)

A We will take the production from the Wolfcamp Pennsylvanian and Pennsylvanians and bring them into three commo n headers.

From there, they will go to eigher Treaters or Separators. In the case of the Pen. and Wolfcamp, no separation since it's not making any water. The water will be knocked out and oil will be metered through three PD type meter lines, each of either a Treater or Separator. The production is then commingled into a separate flow line into a 500 gallon tank, and then the production will be sold from the tank to the LACT unit.

We will monitor in production on the skid itself, and, of course, any bad oil will be sent back to the Wolfcamp Treater.

Q Would you explain your system there for control of volume of production into those tanks and how your pumps and flow switch are activated?

A The high-level switch J, when the tank is full to that point will start to pump and then will continue to pump until it reaches the low level "I" which turns the pump off. In case of malfunction in "J", if switch "J" does not function, the high switch "H" will shut the Pen. Devonian wells in at that point. Then the Wolfcamp, which are pumping wells, will go ahead and produce and will produce into the second high, 500 barrel tank by means of overflow line there.

Q What is your rate of production from the Wolfcamp well?

A About a 120 barrels a day.

Q What is the capacity of the second tank?

A About 500 barrels.

Q Do you have a chance to discover the malfunctioning be-

fore it happens?

A That is correct.

Q After your high-level switch activates the pumps and runs your oil through the flow panel, could you refer to what will be marked as our Exhibit 2, which is the large Exhibit and outline for the Commission the flow through this control panel and the function of their components?

A This a LACT unit itself, and it comprises of a six TAUM Worthington pump with a 5 horsepower motor. It's capable of pumping approximately 1,500 barrels a day. The pump is discharged through the monitor "K", or Probe, and if it sinks at all, it will close the valve "E" and open valve "D", and valve "D" will send the oil back to the Treater. As long as sellable oil is running, valve "D" will remain closed and valve "E" remain open, and the flow will continue through a PD meter with an error eliminator and Strainer so your sampler will take a sample every four barrels.

The meter also incorporates a safety shutdown. If there is any malfunction, if there is not oil flowing through the meter, the system will shutdown. If the pipeline pressure gets too high on the discharge side, the safety bypass around the meter, which will cause the meter to shutdown, or the LACT unit to shutdown. These are common safety features in most LACT SYSTEMS.

Q You have previously referred to Pen. and Devonian and Wolfcamp wells, two each. What is the present status of completion of the Pen. wells?

A These wells are drilled and dual -- they are not completed or dual -- but they are not completed as I understand it. There is application for completion -- they wouldn't at the present time be flowing through this system if accepted.

Q But this application contemplates that it include the Pen. wells if and when the application -- dually completed -- is granted by the Commission?

A That is correct.

Q Are there other installations using this particular type of equipment at present in the field?

A Yes sir.

Q And have those installations been approved by this Commission?

A Yes sir.

Q Does the purchaser of the production from this lease approve of this type of installation.

A Yes sir.

MR. NEWMAN: We have a letter, which are copies of a letter, which we will offer then as an Exhibit, which is self-explanatory.

Q (By Mr. Newman) Is there any probability that the use of an installation such as this or the permission to commingle would result in waste?

A No sir.

Q What is the situation with waste; is there apt to be an

elimination of waste?

A We feel like we would be able to salvage some leased tanks to this lease. Also, it is a crossed system which would retain some items of the tanks, and also, we will be able to produce at least for a considerably longer period of time due to automatic custody transfer.

Q Will this commingling of production in any way affect correlative rights?

A No sir, it's all the same royalty owner.

Q The ownership, he is common, the entire west section

A That's correct.

Q Did you have any other comments to add in the mention of this system?

A No sir.

MR. NEWMAN: I believe that is all the direct.

MR. UTZ: You wish to offer the Exhibits at this time?

MR. NEWMAN: We would like to offer the Exhibits 1, 2 and 3.

Q (By Mr. Newman) Were these Exhibits 1, 2 and 3 prepared by you or under your direction?

A Yes sir.

MR. UTZ: Without objection, Exhibits 1, 2 and 3 will be entered into the record.

MR. PORTER: Your Exhibit is the letter from Service?

MR. NEWMAN: Yes sir, Service Pipeline.

MR. UTZ: What was your name, again?

MR. WILLIAMS: George Williams.

CROSS EXAMINATION

BY MR. UTZ:

Q Referring to your Exhibit Number 1, as I understand it, the Wolfcamp will come into a Separator and be metered by Meter "F" in that system and commingled with the Pennsylvanian and then go into your tanks?

A Yes sir.

Q And from there to your ACT system, and the bad oil from the LACT system, as I interpret this, come back into your Wolfcamp and is again metered through meter "F"?

A That's right.

Q Well, how do you account for commingled bad oil when it's metered with the Wolfcamp; wouldn't that give you an erroneous reading?

A At that particular time, it would give you an erroneous reading, but I think if you had bad oil, you would have a malfunction in the Treating system, and you'd have to calibrate your meters -- recalibrate your meters at that time. You would take a reading on the meters.

Q Well, how do you know how much -- in other words, how do you separate the meter volumes of your Wolfcamp and your bad oil?

A Well, the only way you could do it would be to put a

meter on the bad oil line, actually, to be able to know how much bad oil you are getting, because you wouldn't know whether it was coming from the Pen,, Devonian or Wolfcamp. You could subtract the -- deduct the bad oil from the other to the Pen. or Devonian.

Q That was my next question: Are you metering bad oil through meter "F" in the Wolfcamp system at the same time that you are metering Wolfcamp oil?

A Yes sir.

Q I am really confused now. That is after it's been re-treated --

MR. NEWMAN: It comes out through the same meter.

Q (By Mr. Utz) Then the subtraction method wouldn't work; it would be metered together, the Wolfcamp and the oil commingled, wouldn't it?

A That's right, with your bad oil coming back into the same Treater as your Wolfcamp production is coming into, that is correct. But if you subtracted your Pen. and Devonian from what your Wolfcamp had been making, you could pretty well determine what bad oil -- I mean, how much bad oil you were metering then.

Q You mean to separate the metered volume of Pen. and Devonian from your total of your bad oil and Wolfcamp?

A No, that wouldn't do it.

CROSS EXAMINATION

BY MR. PAYNE:

Q Why is it necessary to meter the bad oil, to run it

through that meter again?

A Well, it has to go through that meter, as that meter is on the outlet of that Treater.

MR. NEWMAN: It would require the separate installation of a Heater Treater if you didn't.

Q (By Mr. Payne) Production from all these to be Treated?

A No sir, just the Pen. Wolfcamp carry some water.

Q Well then, why don't you run your bad oil through your Devonian?

A Because this is a Separator, not a Heater Treater. You would have to run the bad oil through the Heater Treater in order t o knock out the water.

Q You could do that if you placed a Heater Treater there instead of a Separator?

A You would have the same problem if you ran the bad oil back into there; then you would have or receive approximate going through the meter.

Q Except you could meter on the side of it since the Heater Treater is not necessary to the production?

A You mean put a separate Heater Treater?

Q No, I mean put it on the other side of your Heater Treater?

A I see.

MR. UTZ: The Separator, actually, from the Heater Treater, is knocking out gas, not water.

MR. WILLIAMS: That's right, not water.

MR. UTZ: But to meter the gas, or else the meter wouldn't meter properly.

MR. WILLIAMS: That's right, you have to run the meter behind the vessel.

MR. UTZ: The only solution to keep the bad oil straight is another Heater Treater, isn't that it?

MR. WILLIAMS: Either that, or put a "PD" meter on the bad oil and put the bad oil and subtract it from the Wolfcamp.

MR. UTZ: In which you would be metering bad oil and so forth?

MR. WILLIAMS: That's right, total fluid. It would be total fluid -- would be the bad oil.

Q (By Mr. Payne) You'd know how much the Wolfcamp made already?

A That's right.

MR. UTZ: Yes, that would work. This is a 320-acre lease, is that correct?

MR. NEWMAN: Yes sir.

MR. UTZ: And how many wells in each formation at the present time?

MR. WILLIAMS: Two wells; there are one and two of the Wolfcamp and three and four of the Devonian.

MR. NEWMAN: And dual sub to application -- approval of the application. The Devonian and Pen. will be dual completed in

Wells 3 and 4.

MR. UTZ: You have two completions in each pool?

MR. NEWMAN: Yes sir.

MR. UTZ: And you intend to further develop this pool on a 40-acre basis?

MR. WILLIAMS: Spacing temporarily.

MR. UTZ: You intend to proceed with development on 80 acres, then.

MR. WILLIAMS: Yes.

MR. UTZ: You are going to have a sizeable volume of oil flowing through this system

MR. WILLIAMS: With the two Pen. wells if they are accepted by the Commission, there would be a total of a 1,072 barrels.

MR. UTZ: Per day?

MR. WILLIAMS: Yes sir.

MR. UTZ: Is this oil corrosive?

MR. WILLIAMS: No sir.

MR. UTZ: Is it all sweet crude?

MR. WILLIAMS: Yes sir.

MR. UTZ: You would be willing to take meter tests on this situation in accordance with the usual Commission rules?

MR. WILLIAMS: Yes.

MR. UTZ: Any other questions of the witness?

RE-CROSS EXAMINATION

BY MR. PAYNE:

Q What is that commingling going to do to the value of the oil by comparson to it without commingling and selling it commingled?

A It wouldn't make any difference, because it's all over 40 gravity oil.

Q Is that the breaking point?

A Yes sir, it runs from 42 up to 55 on the Pen. and Devonian, so it would be the same price.

Q I believe you said in the event of a malfunction, it would be shut-in?

A At the head of the Devonian and Pen., we'll put two-three thousand motor Fisher valves, and the flow lines up to that would be a pressure to withstand the shut-in pressure of the wells.

Q What would that be?

A 1,600 on the Pen., and 800 on the Devonian.

Q You intend to pressure test your lines to determine if they will stand that pressure ?

A We will use innating tubing to which has been tested above that working pressure.

Q Do you intend paraffin problems ?

A No sir.

Q What do you feel would be the unattended period from this lease?

A Sixteen hours.

Q So your present plan even with dual development, you

would have storage for more than 24 hours, approximately, or would you?

A No sir, in the event of a malfunction, you are in shipping range there. You would only have a matter of a foot for your Pen. Devonian oil and then to lease, those two would be shut-in and the Wolfcamp would have approximately 4 days of production to go into the other tank. We didn't want to shut in the pumping well, and that is the reason why we have plenty of storage for those two, the two pumping wells.

MR. UTZ: In the event of malfunction of your safety switch, what happens?

MR. WILLIAMS: Well then, you are filling up another 500 gallon barrel tank.

MR. UTZ: You don't have much leeway then?

MR. WILLIAMS: You have 500 barrels of storage -- or 600 barrels of storage -- a little better than half a day's storage there.

MR. UTZ: Any other questions?

MR. PAYNE: What do these bypasses do on the Pen. side and Devonian?

MR. WILLIAMS: Just in order to get pressure downstream of the shut-in valve. They are there in order to get diaphram gas pressure to open them up; in other words, they are formerly closed valves, and the switch on the tank has to have its pressure up to it and the valves to open it. That is why the one inch by-

passes around those valves, to get pressure downstream and open them up.

MR. PAYNE: Through inadvertence, oil couldn't pass up through this dotted line from one to the other?

MR. WILLIAMS: No sir, that is a quarter-inch supply line to the high safety switch to a little drip-trap on the three vessels. We will have supply from all three vessels in the event we are shut down on on one particular zone or the other and supply to the other safety switch, and then back to the diaphram of the other two motor valves.

MR. UTZ: How about this connecting line between your Heater Treater supply gas or safety switch?

MR. WILLIAMS: Yes, that is what I was referring to, just to supply gas from the three vessels, gas off the three vessels to open this pneumatic switch on the tank there.

MR. UTZ: I thought you were talking about the gas diaphram to open up your motor valves?

MR. WILLIAMS: We will supply gas cans from those three vessels to the switch and from the switch back to the diaphram of the motor valve.

MR. UTZ: Are you two-stage in the Pen?

MR. WILLIAMS: Yes sir.

MR. UTZ: Why is it necessary to two-stage it?

MR. WILLIAMS: It carries a considerable amount of gas where the Devonian does not.

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

(Witness excused.)

MR. UTZ: Do you have another witness? If not, any other statements in this case? The case will be taken under advisement, and the hearing is adjourned.

(Whereupon, the proceedings were concluded at 2:55 o'clock P. M.)

STATE OF NEW MEXICO)
: ss
COUNTY OF BERNALILLO)

I, LA VERNE E. JAMES, 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 13th day of March, 1961.

La Verne E. James
Notary Public - Court Reporter

My commission expires:

January 6, 1965.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2188, heard by me on July 25, 1961.

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