

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE 1836: Application of Continental Oil Company for
approval of an automatic custody transfer
system.

TRANSCRIPT OF PROCEEDINGS

JANUARY 6, 1960

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OIL CONSERVATION COMMISSION
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IN THE MATTER OF:

CASE 1836 Application of Continental Oil Company for approval of an automatic custody transfer system. Applicant, in the above-styled cause, seeks an order authorizing it to install an automatic custody transfer system to handle the Arrowhead Pool production from all wells on its State J-2 lease consisting of the N/2 and the SE/4 of Section 2, Township 22 South, Range 36 East, Lea County, New Mexico.

BEFORE:

Daniel S. Nutter, 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. NUTTER: We will take up Case 1836.

MR. PAYNE: Case 1836. Application of Continental Oil Company for approval of an automatic custody transfer system.

MR. KELLAHIN: Let the record show the same appearances, and Mr. Queen, the witness, already having been sworn.

MR. NUTTER: The record will so show.

JOHN QUEEN

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

DIRECT EXAMINATION

BY: MR. KELLAHIN:

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Q Are you the same John Queen who testified in Case 1835?

A I am.

Q Mr. Queen, are you familiar with the application in Case 1836?

A Yes, sir, I am.

Q Will you discuss that application briefly, please?

A Case 1836 has to do with application of Continental Oil Company to install an automatic custody transfer facility on the State J-2 lease. The State J-2 is outlined on Exhibit 1, of which I have just passed out, and it shows, among other things the State J-2 lease, the offset operators, and their respective leases as known to us.

Q Now, is all the ownership common on the State J-2 lease?

A Yes, sir, it is.

Q That applies to the royalties and overriding royalties?

A Yes, sir, it does.

Q Referring to what has been marked Exhibit No. 2, will you discuss that exhibit please?

A Exhibit No. 2 is a schematic diagram of the proposed installation showing the production and test facilities and the flow procedure through the LACT. Production from the State J-2 lease wells is produced through the header through the separator and through the heater treater and into the surge tank

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as marked on Exhibit 2. The surge tank has a high-low level operating switch whereby it can be automatically controlled at such time that this tank becomes full or becomes empty. When a well is being tested, the production is produced through the header through a three-phase metering test separator and into the production line ahead of the production heater treater with the other production from the lease. The oil in the surge tank is pumped through a strainer and air eliminator and across a probe nipple, and the BS & W content of the oil can be pumped from the surge tank. This is an inlined type probe. If the BS & W content of the oil exceeds the amount for which the monitor is set, an electrical signal will switch the bad oil valve and route the oil back through the heater treater and the BS & W content of the oil is lowered to pipeline requirements. It will allow the oil to pass through to the sales equipment. The oil then is pumped through a temperature compensated positive displacement meter and back pressure valve into the pipeline.

The test facilities that we propose to install would accurately meter the production from each well on the lease and check each well's performance.

Q Will the test facilities which you will have available enable you to make adequate test of production of each individual well as may be required by the Commission?

A They will.

Q What would be the result, Mr. Queen, if there were

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a break in flow lines between the well and the header?

A We will install sufficient safety valves to adequately protect all producing wells and all vessels from breaks.

Q Will there be a high-low pressure switch?

A There will be after some time. It will depend on whether the well is a pumping well or a flowing well.

Q Now, in your opinion, is the proposed installation in the interest of conservation and prevention of waste?

A It is.

Q Were Exhibits 1 and 2 prepared by you or under your direction and supervision?

A They were.

MR. KELLAHIN: At this time we would like to offer Continental's Exhibits 1 and 2.

MR. NUTTER: Continental's Exhibits 1 and 2 in Case 1836 will be admitted.

Q (By Mr. Kellahin) Who is the pipeline purchaser for this crude, Mr. Queen, do you know?

A We have contacted the pipeline in regard to this matter and discussed the installation with them, and while I'm trying to find out who it is, I believe it is Shell Oil Company, but I do not seem to have all the copies of my correspondence with me at this time. They have been contacted, and a copy of their requirements will be filed prior to the installation of this LACT. We realize we must have this cooperation in getting

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this work done.

MR. KELLAMIN: That's all the questions I have.

A I would like to add one other statement. In my proposed testimony, or in my testimony I stated that a positive displacement meter would be used. Continental Oil Company, along with, I guess, all other companies in the industry, is undecided as to what is the most economical and most efficient meter to be used. At this time we propose to use a positive displacement meter. As I understand it, the Commission does not in their orders stipulate what meters to be used, and it is possible that Continental would desire to put in a positive volume meter, if at that time we have additional information. This is a major problem with us, as to which is the more accurate meter to use.

CROSS EXAMINATION

BY MR. NUTTER:

Q Regardless of the type of meter, you will test periodically?

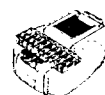
A Yes, sir.

EXAMINATION BY MR. PAYNE:

Q Mr. Queen, I notice from your exhibit there that you have a different method of shutting in the wells, depending on whether they are flowing or pumping.

A That is correct.

Q How does this emergency shut-in valve work on the No. 2 well, on the flowing well?



A This is a high-low pressure type of valve that operates and will allow the well to produce or stay open. I should say the valve will stay open within certain pressure ranges. If this pressure range exceeds this, the valve will shut in by shutting the well in. We have had numerous conferences and discussions as to which is the best and most economical valve to use, and we have been in contact with numerous other companies in the industry, and this again is one of the other major problems as to how to accurately test these wells from both high pressure cost and a line break, which would be a low pressure cost, but it is our intention to adequately protect these wells.

Q Now, in the pumping wells, the mercoid pressure switch operates in the same manner that you described?

A Right. It shuts the well off in that case.

Q It is high-low also?

A It is high-low also. There are problems involved actually in the sense that you might, if you have a flow line break--we use a pump--and it is not seen by the pumper. There are problems involved in LACTs where you have a small break where part of the oil goes into the LACT and part pumped into the ground where you have no large break.

Q You will have a man on the lease, is that correct?

A We will have a man on the lease. Actually, in most of your present installations, we do not even immediately see any increase in his work load, and Continental has a policy that



whereever possible, and so far this has not been done, of releasing any personnel's duties. Most of your people are older and they, no doubt, in time will be replaced if these are as economic as everyone says they are.

MR. PAYNE: That's all.

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

MR. UTZ: Yes.

MR. NUTTER: Mr. Utz.

EXAMINATION BY MR. UTZ:

Q What, if you know, is the operating range of your valve, the Mercoid pressure switch?

A We have a meeting scheduled for a week from Thursday, and the types of meters available to date we propose to discuss. This particular lease is a New Mexico federal lease, which Pan American, Standard of Texas, and the Atlantic are co-owners with Continental. The problem, as I previously stated, is of such magnitude on the meters and safety equipment, that we have not decided what we will put on, and I'm not qualified right now to tell you what those limits are, even on the one we initially proposed, but since we are having this meeting, everything has been dropped until after this meeting.

Q Do you have any idea what your line pressure will be?

A In the majority of the cases, if they exceed thirty to fifty pounds, why you have operating problems involved, so in most of your flow line cases, they are in that neighborhood

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We have one or two flow lines that we have evaluated the pressures where we consider LACT for a hundred pounds pressure, and we are trying to reduce that operating pressure on the flow lines.

Q Do you feel that if you can get it up it will operate?

A The manufacturers are the ones who say they can. This is one of your problems. Actually, there are several possible answers to this. Of course, the safer they are, the more expensive they are. We are just as interested in saving that oil from being pumped into the ground as the royalty owners and the Commission, because it is loss of revenue to the industry, but this is one of the problems, and the thing that should be kept in mind, Mr. Utz, is that should a line fail under manual operations, this must be seen by pumper or gauger or foreman to be fixed, and as bad as it may sound, we have known of some of these leaks to go on for days and days. We have some pumpers that are not as energetic as they should be, and maybe a flow line has access to a small creek with a pretty good sized dam on the creek. What problems we have with automation are no new problems, they are there now and we feel we can control them with automation, even though we can't possibly eliminate all problems.

Q Do you feel this type of valve is necessary to this system?

A These valves, to get into the price, that will appear at this time to do the job, cost between eight hundred and a thousand dollars per valve, which on several wells involved, gets

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to be considerable money. We feel like it is necessary to protect our wells if we talk about automation as we do today. I do not believe we would need them because we will have a pumper available, probably as often as he would be otherwise. If we are looking at automation in the future, when we talk about push-button house cleaning and push-button automobile driving and push-button automobile operation, then at this time we will need more safety measures, and we are trying to evaluate that equipment, we are trying to aid the manufacturer into producing new equipment, and the only way they can do that is to sell some that they have on hand, that's why they are installed on that basis and not because we actually needed them. We have been told there are some cheaper, and that's one of the reasons we are having a meeting this week. One of our partners has told us that they have had success with a cheaper valve, and we are interested in finding out about this.

EXAMINATION BY MR. NUTTER:

Q Mr. Queen, is the operating level in your storage tank between the high level switch and low level switch?

A As shown here --

Q Is that the range of operation of the tank, or is there another valve in there that is not shown?

A What we considered showing here are the high level switch, the shut-in switch this storage tank will have, and the adjustable switch that will control it when the oil goes to sales.



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Your metering accuracy is better controlled if you sell a small amount of oil frequently rather than a full tank of oil occasionally. This will be controlled in part by the pipeline. Some pipelines during the daytime operate at three hundred pounds pressure; sometimes those same pipelines operate at a vacuum at night. It may pay the operator to have sufficient storage to sell his oil only at night and thereby not require him to put in high pressure pumps to pump this oil at the times --

Q This high level switch is the shut off switch?

A Safety shut off switch, yes.

Q And when this high level switch is activated, it shuts in the headers?

A In this particular instance, it does. We do have these things in the treater. The treater is not shown here merely because of room. These treaters must have a high level switch too.

Q If your high level switch in your storage tank is activated, it shuts off the header and the flow lines by pressure; activates the switches at the wells?

A That is correct.

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

He may be excused.

(Witness excused.)

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

Kellahin?



MR. KELLAHIN: No.

MR. NUTTER: Does anyone have anything further in this case?

Take the case 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 11 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 and correct transcript of the proceedings in the New Mexico Oil Conservation Commission, No. 1836, heard by the Commission on 1-6, 1960.

J. A. Trujillo Examiner
New Mexico Oil Conservation Commission

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