BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
December 11, 1959

EXAMINER HEARING

IN THE MATTER OF:	
Application of Continental Oil Company for an amendment of Order R-1445.	CASE 1826

TRANSCRIPT OF HEARING

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IN THE MATTER OF:

Application of Continental Oil Company for an amendment of Order R-1445. Applicant, in the above-styled cause, seeks an amendment of Order R-1445 to permit the installation of automatic custody transfer equipment to handle the Delaware production from its Wilder, Payne and Bradley leases in Sections 25, 26 and 35, Township 26 South, Range 32 East, and in Sections 30 and 31, Township 26 South, Range 33 East, Lea County, New Mexico, and for permission to produce more than 16 wells in a common tank battery. Case 1826

BEFORE:

Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: The hearing will come to order, please. We'll take next Case 1826.

MR. PAYNE: Case 1826: Application of Continental Oil Company for an amendment of Order R-1445.

MR. KELLAHIN: Jason Kellahin, Kellahin and Fox, Santa Fe, representing the Applicant. We have Mr. Lyon as a witness. May the record show that he was sworn in the preceding case.

MR. PAYNE: Fine.

VICTOR LYON

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Are you the same Mr. Lyon that testified in the preceding case?

A Yes, sir.

MR. KELLAHIN: Are the witness' qualifications acceptable?

MR. NUTTER: Yes, sir.

Q (By Mr. Kellahin) Are you familiar with the application in Case 1826?

A Yes, sir.

Q Would you state briefly what is proposed in this application?

A This application is for amendment to Order R-1445, I believe is the number. We are requesting in this amended order that we be allowed to commingle the production from our Wilder, Payne and Bradley 35 leases, including additional acreage in the Payne lease which at the time of the original hearing we had no reason to believe was productive.

We are also requesting exception to the requirement in Order No. R-1445 that not more than 16 wells be produced into a common battery, and we are also requesting approval of a lease automation installation.

Q Now you have a plat of the area involved in this application?

A Yes, sir.

(Applicant's Exhibit No. 1 marked for identification.)

Q Referring to what has been marked Exhibit No. 1, would you discuss that exhibit, please?

A Exhibit No. 1 is a plat of the general area in which these leases are located. The Wilder lease is shown to consist of Section 26 and the South Half, the Northwest Quarter, the West Half of the Northeast Quarter, and the Southeast Quarter of the Northeast Quarter of Section 25; that's all except for the Northeast Northeast of 25.

The Payne lease is shown to consist of the South Half of Section 30, the South Half of the North Half of Section 30, and all of Section 31, which is a fractional section. These sections are located in Township 26 South, Range 33 East, Lea County, New Mexico, and the lease also contains Lots 1, 2, 3, and 4 in Section 35 of Township 26 South, Range 32 East; and the Bradley lease is shown to consist of the North Half of the North Half of Section 35, Township 26 South, Range 32 East.

This plat also shows the location of the wells in the area, it isn't quite up to date. No. 4 on the Payne in Section 30 has been completed.

MR. NUTTER: As a producer?

A As a producer. No. 14 on the Wilder in Section 25 at a location 1980 from the North and 660 from the West has been completed as a producer; and the Bradley 35 No. 2 at a location

660 from the North and West of Section 35 has been completed as a producer. No. 15 on the Wilder, located 660 from the North and 1980 from the West, Section 25, has been drilled and is in the process of being completed.

The plat also shows the location of the tank battery, the metering area, it shows the location of the headers and the flow lines going from the headers, and from the headers to the battery.

Q How will the oil be handled then on the individual lease?

A There is a header located on each lease, and a production and a test line going from the header to the metering area located at the battery site.

Q As indicated by your Exhibit No. 1, this area is subject to continuing development, is that right?

A Yes, sir.

Q Is other development presently contemplated in the area?

A Yes, there is.

Q Now do you have a schematic diagram of the proposed system that you propose to use on these leases?

A Yes, sir.

(Applicant's Exhibit No. 2 & 2-A marked for identification.)

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

A Exhibit No. 2 is a schematic diagram of the flow of oil through our proposed installation. At the top left-hand corner is shown the installation on the Wilder lease, this header is located on the lease and when the wells are producing into the production leg of the header, production goes from the header to the production separator, then to the heater-treater; and through a monitor probe, through a dump meter and then into the storage tank. When a well is producing into the test leg, the production goes from the header into the metering free water knockout, which meters both oil and water and the production, the oil production then goes into the production heater-treater and from that point follows the same route as the production leg.

In the center on the left is shown the installation, I'm afraid it isn't designated at that point, but it shows the Bradley 35 system. The header is located on the lease and therefore is not shown on this exhibit. We pick up the production from the production line, and the test line, which are designated 19 and 20, respectively. On this lease, the production leg goes through a three-phase metering heater-treater which serves as a separator, a treater, and a metering vessel. Then it goes through the monitor and probe into the storage tank or surge tank. The test leg goes through a three-phase metering test separator where the oil and water are metered separately, and then the oil production goes into the three-phase metering heater-treater and is metered along with the rest of the production on the lease.

The installation for the Payne is identical to that on the Bradley. I would like to point out at this time that the monitor and probe that are shown schematically on this diagram have not been installed because at the present time we aren't in a position to install automation. There are two things which prevent this at this time. One is that there is no pipeline connection. The oil is being trucked; and another is that there is no electricity, no electric power available at the present time so this installation we hope to put in in the future, when the conditions are such that it is possible to install it.

Now from the storage tank or surge tank, the flow proceeds to that portion on the right of the exhibit which is proposed to be a skid-mounted automatic custody transfer unit. This has not been installed and cannot be installed until the conditions which I spoke of are corrected. But following the flow from the surge tank, which has a high level and low level controls, it goes through a pipeline pump with a starter controlled by the automation controls. The strainer, the aerator, positive displacement meter, we presume that we will have a test P. D. meter in series with it. Should this not be installed, we will have connections with a prover meter be installed so that the accuracy of the meter can be checked at whatever intervals the Commission may require. Downstream from the meter is a sampler and sample container, check valve and back pressure valve. Referring to the portion at the lower right-hand portion of Exhibit 2, we show the

proposed installations which we will make, to make this as field safe as possible.

On a flowing level, we will have a high-low controller operated by pressure, so that should the pressure at the wellhead become higher or lower than the settings, the well will automatically be shut in, which is accomplished by a motor valve. On a pumping well, we will install Mercoid switches, which will accomplish this same purpose. We also propose to install more floats on the treaters and separators, and on the sump tank, so that at any time these vessels fill with fluid, the wells will be shut in.

At the lower portion of the exhibit, we have shown diagramatically the proposed equipment which will control this, which includes the test programmer, the production programmer, the monitors, which will operate the diverting valves so that any time the bad oil passes the monitor probe, this will re-route the production into the heater-treater to restore the oil to pipe-line conditions.

Q What method will you use for making individual tests on the lease, Mr. Lyon?

A At the time this is automated, we could set the wells to test periodically by the test programmer, and when the control gets to the point where a well is to be tested, then a signal is sent to the header so that the production from the well is diverted from the production leg into the test leg, and then the production follows the flow as shown by this exhibit.

Q And under this system, all of the production from the individual leases would be separately measured?

A Yes, they would.

Q Now as I understand your testimony, the installation of the automatic custody transfer system will be delayed somewhat, is that correct?

A Yes.

Q Is it necessary, then, that the present order be amended at this time?

A Well, it is not essential. We thought that we might be able to save some expense by presenting our views to the Commission at this time.

Q Is all the land covered in the present order which is necessary in order to commingle the production?

A No, sir, the present order does not include Sections 30 and 31 in Township 26 South, Range 33 East.

Q Now the amendment of that portion of it would be necessary for the economical operation of the system?

A Yes, sir. When the production from our Wilder No. 15 goes into the present battery, we will be in violation of the Commission's order requiring not more than 16 wells be produced into a common battery. The production from the Payne at the present time is being diverted into two tanks, which are located at the battery site, but they receive only from the Payne and it is kept separately at this time, pending approval of this application.

Q Are the minerals under each of the tracts common ownership?

A No, sir, there are three different leases, they are all Federal leases.

Q But different overriding royalties are involved?

A Yes, sir.

Q But is it all from a common pool?

A Yes, it is, all the production.

Q Would it be practical in your opinion to set separate batteries on each of these leases involved?

A Well, it would be practical; however, we feel it would be much more efficient and would be more in the interest of conservation to have one battery and commingle the production from the several leases.

Q What would be the maximum number of wells that you would anticipate for each of the individual leases involved?

A On the Wilder lease, should all the locations be productive, we could have 31 wells. On the Payne lease, it would be possible to have 22 wells; and on the Bradley four wells.

Maybe I had better check that, 24 on the Payne and four on the Bradley 35; 31 on the Wilder.

Q In your opinion is this proposed installation in the interest of conservation and the prevention of waste?

A Yes, sir.

Q Do you have anything further to add to your testimony?

A I believe not.

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

A They were.

MR. KELLAHIN: I would like to offer Exhibits 1 and 2.

MR. NUTTER: Continental Exhibits 1 and 2 will be admitted.

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

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

MR. PAYNE: Yes, sir.

CROSS EXAMINATION

BY MR. PAYNE:

Q Why do you propose a different installation on the Wilder lease than you do on the Payne and Bradley 35 leases? Is there any particular reason for that?

A Yes, sir. The discovery well in that was the Hill and Meeker State 36 No. 1. Soon after that a well was drilled and completed just above our Wilder No. 9 in Section 25. That well, of course, was located in Section 24. Based on these two wells, we were reasonably certain that we would have ten to twelve or more wells on the Wilder, but we do not know how many wells to expect on the Payne. Consequently, we assumed that there would be just a few wells, and the metering heater-treater appeared to be adequate to handle that production. In the event it proves to be inadequate, we will install adequate facilities to handle it.

Q Is all this acreage in the Elmar-Delaware Pool?

A Yes, sir, it is.

Q Have you any corrosion problems with Delaware production here?

A There does seem to be a slight paraffin problem in this area, the extent of it we haven't evaluated.

Q You feel that you will be able to take care of it by means of this installation?

A Yes, sir.

Q If you develop these three leases fully, you'll have 59 wells to run into a common tank battery?

A Yes, sir.

Q Is Continental prepared to have sufficient storage capacity to take care of that many wells?

A Yes, we will.

MR. PAYNE: Thank you. That's all.

BY MR. NUTTER:

Q According to Exhibit No. 2, the Wilder lease has a production separator, but I don't see any separator on the others. I presume it's off this exhibit and over on the leases, is that the deal?

A No, sir, in the event that separators are installed, they will be installed in this area, in the metering area; however, the gas-oil ratios are reasonably low and the metering heater-treater has been adequate to handle it, except in the case of the Payne

lease, and we are in the process of installing a production separator for that lease at the present time.

Q You mean the gas-oil ratios are so low you don't have to pass the production through a separator at all on some of the leases?

A Well, the heater-treater acts as a separator, it will handle up to about two and a half million cubic feet a day.

Q And this production is treated and the gas is removed prior to the time it's metered then?

A Yes.

Q Now is this probe, I think it's Item No. 9, in constant operation?

A Of course the probe is always in constant operation. There are two types of probes under consideration: One is a bypass and one is an inline probe, the difference being that a pump is required to pump oil over the bypass probe, whereas the inline probe monitors the oil that passes through the production line.

Q Now the one that you have depicted here would be the bypass type?

A Yes, sir.

Q Would the motor be in operation at all times on this type?

A On a bypass, the motor is in continuous operation.

Q In the event it detects oil that is not pipeline quality, does it put it back through the heater-treater?

A Yes.

Q Does it have capacity, the heater-treater, to handle current production as well as production that is being rerouted?

A I think the way we will install it, of course, this is subject to change because this may be completely obsolete by the time we get ready to install it, but the way we have in mind to do it now is that in the event bad oil is detected, we will shut in the header and the production will cease until good oil is detected by the probe.

Q How much of these plans are actually firm, and how much may be changed, Mr. Lyon?

A Well, the part here, the normal lease equipment, the separator, the treater, the test vessels are installed. The rest of it we cannot install or have no reason to install until we have a pipeline and a source of electric power.

Q I notice also on this exhibit you show that the gas production is going to gas sales. This is also tentative?

A Yes.

Q You have no gas sales at the present time?

A Not at the present time.

Q When do you anticipate that an oil pipeline will be available?

A We hope that it will be early next year, but we have no definite committment at all. It may be necessary to build our own.

Q And this automatic custody transfer will not be installed until such time as you do have a pipeline?

A That's correct.

Q Now is this portion of the plan pretty well firmed up, Mr. Lyon, that you will have these Mercoid and these high-low pressure shutoffs?

A Yes, unless there is a better device that comes on the market.

Q You will have a means of shutting in the wells if you have a high level of oil in the storage tanks, or if you would have a flow line break?

A Yes, sir.

MR. NUTTER: Any further questions?

Q (By Mr. Nutter) Are Hill and Meeker also trucking their oil from this area?

A Yes, sir. all operators are trucking their oil in this area.

MR. FLINT: I have a couple of questions.

MR. NUTTER: Mr. Flint.

BY MR. FLINT:

Q What percentage of the wells on these leases do you anticipate will be pumping wells?

A Eventually all of them.

Q Assuming that this system would be put into operation sometime next year, would it be something over half of them pumping

wells?

A I think not.

Q That Mercoid pressure switch, which is identified as No. 1 on your Exhibit No. 2, does that close in the well on high pressure or low pressure?

A On high pressure.

MR. NUTTER: Only?

A I believe so. I'm not sure whether it can be set both ways. As far as I know, it's operated by high pressure element.

MR. NUTTER: Your flowing well is a high-low?

A Yes, sir.

MR. FLINT: That's all I have.

MR. NUTTER: Any further questions? The witness may be excused.

(Witness excused.)

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

MR. KELLAHIN: No, that's all.

MR. NUTTER: Does anyone have anything further in Case 1826?

MR. PAYNE: Off the record.

(Whereupon a discussion off the record was held.)

MR. NUTTER: We'll take the case under advisement.

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STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing was reported by me in stenotype, and that the same was reduced to typewritten transcript under my personal supervision and contains a true and correct record of said proceedings, to the best of my knowledge, skill and ability.

DATED this 24th day of December, 1959, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Ada Dearnley
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. 1826, heard by me on 12-11, 1959.

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