BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASES 1771, 1772, 1773

TRANSCRIPT OF HEARING

SEPTEMBER 30, 1959

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IN THE MATTER OF:

CASE 1771 Application of Pan American Petroleum Corporation for approval of a lease automatic custody transfer system. Applicant, in the above-styled cause seeks an order authorizing the automatic custody transfer of oil produced from its USA Malco Refinery "F" Lease, Section 1, Township 18 South, Range 27 East, Empire-Abo Pool, Eddy County, New Mexico.

CASE 1772 Application of Pan American Petroleum Corporation for approval of an automatic custody transfer system for four state leases in the Empire-Abo Pool, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order amending Order No. R-1292 to provide for automatic custody transfer of oil commingled thereunder.

CASE 1773 Application of Pan American Petroleum Corporation for approval of two automatic custody transfer systems for seven federal leases in the Empire-Abo Pool, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order amending Order No. R-1399 to provide for automatic custody transfer of oil produced into the two commingled tank batteries authorized therein.

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 the next case, Case 1771.

MR. NEWMAN: Kirk Newman, Atwood & Malone, Roswell,

New, Mexico, and Guy Buell, members of the Texas Bar of Fort Worth, Texas, representing the applicant.

MR. BUELL: May it please the Examiner, at this time I would like to move that Cases 1771, 1772 and 1773 be consolidated for the purpose of having a consolidated record of all these LACT installations, and these three cases are in the Empire-Abo Field and all are practically identical, one with the other.

MR. NUTTER: We will also now call Cases 1772 and 1773. Is there objection to that, counsel's motion for consolidation of Cases 1771, 1772 and 1773 for the purpose of taking the testimony? The cases will be consolidated.

MR. BUELL: We have one witness, Mr. Green, who was sworn in the prior case. Would you like to re-swear him?

MR. NUTTER: Let the record show that Mr. Green is the same Mr. Green who was sworn in the previous case.

ALBERT H. GREEN,

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

DIRECT EXAMINATION

BY MR. BUELL:

Q Mr. Green, will you state your full name, by whom you are employed, and in what capacity, and what location, please?

A Albert H. Green, employed by Pan American Petroleum Corporation as petroleum engineer, Lubbock, Texas, District office.

Q Mr. Green, you testified in prior Commission hearings,

and your qualifications -- or rather, a prior Commission hearing, I should say -- and your qualifications as an engineer are a matter of public record, are they not?

A Yes, sir.

MR. BUELL: Are his qualifications acceptable?

MR. NUTTER: Yes, sir. Please proceed.

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

Q I direct your attention to what has been marked as Pan American's Exhibit No. 1. What is that Exhibit, Mr. Green?

A That is a plat of the Gladiola Pool, and identified thereon are the areas -- four areas -- in which Pan American proposes to install LACT units to serve Pan American's production from its Gladiola -- excuse me -- from Empire or Abo Pool.

Q What is the area outlined in brown on Exhibit 1?

A That is the Pan American's USA Malco "F" Lease.

Q That is one basic lease, and commingling is not involved with respect to that application?

A No, sir, it is not.

Q All right, sir. What is the area outlined in orange?

A That is the -- those are the State Leases which are served by what we identify as storage system 2.

MR. BUELL: In that connection, Mr. Examiner, with reference to the area outlined in orange that is composed of four separate State Leases, at a prior hearing under Case 1552, Order

R-1292 was issued authorizing commingling.

Q (By Mr. Buell) All right, sir. What is the area outlined in red?

A That is the area which is composed of Federal Leases, and is served by storage system 1.

Q All right, sir. Now, the area outlined in green?

A Those are also Federal Leases which are served by storage system 3.

MR. BUELL: I might state here, Mr. Examiner, that the area outlined in red and a portion of the green area were the subject matter of the hearing in Case 1551, as a result of that hearing, Order R-1295 was issued authorizing commingling from these separate Federal Leases. With respect to the area enclosed in green and red, that area was the subject matter of a commingling hearing under Case 1662, and Order R-1399 was issued amending Order R-1295, authorizing commingling of the leases that comprise the red and green.

MR. NUTTER: That Order authorizes the commingling of all the leases enclosed in the green line and red line?

MR. BUELL: Yes, sir.

Q (By Mr. Buell) Now, in that connection, these areas, the red area, the green area, the orange area are described. In the interest of saving time, I would like to ask Mr. Green to describe the Malco "F" area, the area outlined in brown only, for the record, since the other areas are described in the various Orders

which we recited, and are a matter of Commission Orders.

A The Malco "F" Lease is composed of the W/2 in the SW/4 of Section 1, Township 18 South, Range 27 East.

MR. NUTTER: And that is all one lease?

A That is one basic Federal Lease, yes, sir.

MR. BUELL: Mr. Examiner, I might direct your attention to what has been marked as Pan American's Exhibit No. 2, which is a brochure describing the LACT installation on our Malco "F" Lease. Exhibit No. 3, which is a brochure describing the LACT installation on the -- that would be served by storage system No. 1, which will be located in that area outlined in red on Exhibit 1.

MR. NUTTER: Now, let's see, what are the numbers?

MR. BUELL: Exhibit 2 is the Malco "F" Lease.

MR. NUTTER: And what storage -- that's Exhibit No. 2?

MR. BUELL: Yes, sir, Malco "F." Exhibit 3, storage system No. 1. Exhibit 4 storage system No. 2. And Exhibit 5, brochure on storage system No. 3.

MR. NUTTER: Exhibit 5.

MR. BUELL: And again, Mr. Nutter, these brochures are complete in detail. In the interest of saving time, we will simply cover what we think are the more pertinent points covered in detail in the brochure. Each one of these brochure Exhibits also has Attachments. Attachment 1 is a plat, Attachment 2 is a schematic flow diagram, Attachment 3 is a letter from the pipeline company which gathers the oil, signifying their complete concurrence in

our proposed installation and applicable. Attachment 4 will be a letter from the USGS or the State Land Commissioner, signifying their approval of these installations.

Q (By Mr. Buell) Now, Mr. Green, from the standpoint of the LACT equipment, are all four of these proposed installations identical?

A Yes, sir, they are.

Q For the purposes of this consolidated record, which one of these installations would you like to discuss?

A Since they are all identical, I suggest that we discuss the one for the Malco "F" Lease.

Q All right, sir. Before we get into that, would you briefly state, for the record, whether or not, in your opinion, the LACT installation, such as Pan American proposes, will serve conservation in that it will prevent physical waste and economical waste?

A Yes, sir, it will.

Q Briefly state in what fashion that will occur.

A The LACT unit will, first of all, conserve a portion of those light hydrocarbon vapors which are normally lost to the atmosphere with conventional lease operation. Secondly, it will conserve manpower both for the lease operator as well as the pipeline. And, thirdly, it will conserve capital investment since the LACT system costs less than does comparable conventional lease facilities.

Q What type of LACT installation is proposed here, Mr. Green?

A A positive displacement metering type.

Q The Commission has approved this type of installation in other fields in New Mexico, have they not?

A Yes, sir, that is correct.

Q In the brochure, have you stated some of those installations, giving the Order number?

A Yes, sir, I have.

Q All right, sir. Would you briefly explain, for the record, the equipment that will be installed and the flow pattern of the crude through the system to the pipeline?

A Yes, sir. By referring to Attachment 2 of Exhibit 2, we can follow the flow of the oil through the LACT system. The produced crude enters the tank battery, passes through the oil and gas separators, and then into the LACT surge tank. I might point out that between the oil and gas separators and the LACT surge tank, on the subject lease there, it being a single basic lease, commingling is not a problem. However, in the LACT units to be installed at storage systems 1, 2 and 3, commingling is required and advised. Lease production meters will be installed between the treating system and the LACT surge tank.

Q And that meter is reflected on the Attachment to the brochure for those particular installations, which are Exhibits 3, 4 and 5, in this hearing?

A Yes, sir, that is correct.

Q Will you go on, now, with your explanation?

A An oil level in the surge tank reaches the high level float switch (A), the pipeline pump, Item (C), is automatically started and the crude oil is then pumped through the LACT unit into the pipeline.

In order to assue delivery of merchantable oil to the pipeline at all times, a BS&W probe, identified as Item (E), is mounted downstream of transfer pump, Item (C). If oil delivered by the LACT unit exceeds 1% BS&W content, the BS&W monitor will cause the diverting valve, Item (F), to close the meter run and direct bad oil, unmerchantable oil into the recycling tank. When the BS&W content of the oil returns to a satisfactory range as determined by the BS&W monitor, the diverting valve, Item (F), will close to the recycling tank and again direct the reflow of oil to the LACT meter run. Merchantable oil passes through the strainer (G), the gas eliminator, Item (H), and on through the positive displacement meter, Item (I). After being metered, the oil is sampled at point (J), passes through the back pressure valve, Item (K), and flows on to the pipeline. The back pressure valve will be set at approximately 5 pounds per square inch to assure that a positive head is held across the P.D. meter and to prevent flow when the transfer pump is not operating. The meter prover tank, identified as Item (L), is located downstream of the back pressure valve. When sufficient oil has been transferred to the pipeline to lower the

fluid level in the surge tank to the low lever float switch, Item (B), the pipeline pump is automatically stopped. When lease production again fills the surge tank up to the level of float switch (A) the automatic custody transfer cycle again commences.

Any unmerchantable oil which is collected in the recycling tank will be treated in the tank. After the oil is treated, water is drawn off from the tank bottom, the recycle pump, Item (N), returns the treated oil to the LACT unit surge tank.

Q While you are there, Mr. Green, actually, water production in the Empire-Abo Field is not anything of a problem, is it?

A No, sir. Only four or five wells in the entire field thus far produce any water, and they, on the average, will produce about two to two and a half barrels a day.

Q All right, sir. Go ahead.

A That completes my description of the flow through the unit.

Q Mr. Green, I would like to hear your opinion with respect to the accuracy and reliability of an LACT unit as Pan American is proposing under these three cases here today.

Q The type unit which Pan American proposes to install has been proven to be highly dependable and very accurate by a similar type, utilizing similar type equipment in numerous other locations.

Q Mr. Green, you've testified that this LACT installa-

tion, as proposed, will prevent physical and economic waste. What is your opinion with respect to the protection of the correlative rights of all parties of interest?

A Due to the dependability of the equipment which we propose to install, and the reliability of that equipment, we feel that all the parties involved will be properly protected.

Q In these brochures, which are our Exhibits 2, 3, 4 and 5, I believe you have also set out the brand name of the meter which we will probably install, is that not correct?

A That is correct, yes, sir.

Q And, again, that was in the interest of giving complete information -- detailed information, and you are not requesting that the order, if the Commission approves these applications, make any specific reference to any particular type meter?

A That is correct.

Q Do you have anything else you would like to add, Mr. Green?

A No, sir. I believe we've covered this.

MR. BUELL: At this time, Mr. Examiner, we offer formally our Exhibits 1 through 5 inclusive.

MR. NUTTER: Without objection, Pan American's Exhibits 1 through 5 will be entered.

MR. BUELL: That's all we have at this time.

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

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Green, in the event that monitor (E) receives oil with a BS&W of more than 1%, three-way valve (F) diverts the flow from the meter run into the recycling tank, is that correct?

A That is correct, yes, sir.

Q Now, the valve at the bottom of the recycling tank is always open?

A No, sir, it will be normally closed.

Q The production -- any rejected production goes into that tank and stays there until the pumper comes on out and removes from it that tank and treats it?

A He treats it and then removes the oil from the tank.

Q Now, in the event that this recycling tank fills up, is there a valve (M) at the top that will shut down the lease?

A Yes, sir. That is correct.

Q That's a high level valve --

A That's a high level float switch which actuates shut-off valves on the lease production headers, and will shut off the entire lease.

Q How do these actually shut the lease in, at the header itself, or does pressure build up and shut in the valve on the wellhead?

A It will shut diaphragm-operated valves at the production headers. We are utilizing high pressure flow lines.

Q You are using high pressure flow lines?

A Yes, sir.

MR. NUTTER: Any further questions of the witness? He may be excused.

(Witness excused)

MR. NUTTER: Does anyone have anything further they wish to offer in Cases 1771, 1772, and 1773?

MR. BUELL: We have nothing else, Mr. Examiner.

MR. NUTTER: If there is nothing further in these cases, we will take the cases under advisement and recess the hearing until nine o'clock tomorrow morning.

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 October, 1959, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Joseph 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. 1771,1772,1773 heard by me on 9-30, 1959.

, Examiner
New Mexico Oil Conservation Commission