

BEFORE THE  
CIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
November 24, 1959  
EXAMINER HEARING

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IN THE MATTER OF: )

Application of Sunray Mid-Continent Oil Company )  
for an automatic custody transfer system and )  
for permission to produce more than sixteen )  
wells into a common tank battery. Applicant, )  
in the above-styled cause, seeks an order )  
authorizing it to install an automatic custody )  
transfer system to handle the production from )  
all Bisti-Lower Gallup Oil Pool wells on its )  
Central Bisti Unit comprising certain acreage )  
in Townships 25 and 26 North, Range 12 West, )  
San Juan County, New Mexico. )  
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Case 1817

BEFORE:

Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case 1817.

MR. PAYNE: Case 1817: Application of Sunray Mid-Continent Oil Company for an automatic custody transfer system and for permission to produce more than sixteen wells into a common tank battery.

MR. WHITE: If the Examiner please, Charles White of Gilbert, White and Gilbert, Santa Fe, New Mexico, appearing on behalf of the Applicant. We have one witness to be sworn at this time.

(Witness sworn.)

WILLIAM A. SAYLOR

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



(Applicant's Exhibits Nos. A through C and 1 through 4 marked for identification.)

DIRECT EXAMINATION

BY MR. WHITE:

Q Mr. Saylor, state your full name, please.

A William M. Saylor.

Q By whom are you employed, Mr. Saylor?

A Sunray Mid-Continent Oil Company.

Q In what capacity?

A Petroleum engineer.

Q Have you previously testified before the New Mexico Oil Conservation Commission or before one of its Examiners?

A No, I haven't.

Q Will you briefly state your educational background and your professional qualifications?

A I have a B. S. degree in Petroleum Engineering from the University of Oklahoma. January of 1947 I was employed by Sunray Mid-Continent as Field Engineer, I was employed as Field Engineer for four years, was made District Engineer in Sunray Mid-Continent's Tri-State District, which included Arkansas, North Louisiana, and East Texas. 1955 I was transferred to Sunray Mid-Continent West Texas District as water flood engineer for North and West Texas and all of New Mexico.

MR. WHITE: Are his qualifications acceptable?

MR. UTZ: Yes, they are.

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Q (By Mr. White) Are you familiar with the Central Bisti-Lower Gallup Sand Unit, San Juan County?

A Yes, sir.

Q What was the effective date of the Unit?

A Effective date January 1st, 1959.

Q Will you briefly describe the acreage within the Unit?

A The Central Bisti-Lower Gallup Unit includes in Township 26 North, Range 12 West in San Juan County, portions of Sections 31, 32, 33; in Township 25 North, Range 12 West, it includes portions of Section 3, all of Sections 4, 5, 6, 7, 8, 9, portions of Sections 10, 15, all of Section 16, portions of Sections 17, 18, 20, 21. It contains 7,240 acres.

Q Is all this acreage detailed on what's been marked as Exhibit A?

A Yes, sir.

Q Will you refer to Exhibit A and explain that, please?

A Exhibit A is a plat showing the location of the Central Bisti-Lower Gallup Sand Unit in San Juan County, New Mexico.

Q Is that the thatched portion as delineated upon the plat?

A The dark thatched outline is the outline of the unitized area.

Q Also within the Unit is there not the West Half of the Northwest of Section 15, and the West Half of the Southwest of Section 10?



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A Yes, sir.

Q Will you briefly state what Sunray Mid-Continent proposes by the subject application?

A This application of Sunray Mid-Continent to produce more than sixteen wells into the common tank battery also seeks an order authorizing it to install an automatic custody transfer system to handle all the production from the Central Bisti-Lower Gallup Sand Unit in San Juan County, New Mexico.

Q And the wells presently completed or hereafter completed?

A Yes, sir.

Q Well, now, refer to what has been marked as Exhibit No. 1 and explain that, please.

A Exhibit No. 1 is a plat of the Central Bisti Unit with flow lines from the producing wells to fourteen test station locations strategically located throughout the field.

Q Will you refer to what has been marked as Exhibit 2 and explain that?

A Exhibit 2 is a schematic flow diagram of the test stations shown on Exhibit 1. It is proposed to utilize the present heater treater locations as test stations where gas separation and well testing will be performed. Wellhead fluid is directed manually to either the heater treater or test separator. The test separator is equipped with a meter on for gas measurement, and a dump type liquid meter.

After measurement, the fluid returns to the inlet of



the heater treater, an automatic sampler will be operated where needed in conjunction with the test separator to determine the B.S. and W. content of the test well fluid. The group treater is equipped with high level shutdown controls to close motor valves upstream from the test station, in the event of a malfunction downstream. The malfunction downstream could be pressure increase or a break in the flow line.

A shut-off at the motor valve will cause a pressure increase in all the group flow lines, which will in turn turn motor control valves at flowing wellhead, or actually pressure switches at pump wellhead, and thus facilitate a group shutdown. The pressure relief valve is also provided; in the event of the failure of a wellhead control, excessive pressure would be bled off at this point from any flow line.

Q Will you now refer to what has been marked as Exhibit 3 and explain that?

A Exhibit 3 is a plat of the participating unit area, showing the field gathering system, starting at each of the fourteen test stations and terminating at a central battery location in the north part of Section 5.

Q Have you made any installations to take care of any paraffin?

A This entire system with laterals and main lines will be provided with paraffin scraping equipment.

Q Will you now refer to what has been marked as Exhibit



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No. 4 and explain that?

A Exhibit No. 4 is a schematic flow diagram of an L.A.C.T. Unit proposed for this Central Bisti production. Oil production from the field is directed to a 10,000 barrel welded tank. The tank is equipped with high and low level switches which activate control valves for automatic operation. The high level control will shut in the six-inch field shut-in inlet valve which in turn would result in closing in all producing wells, while the low level switch will shut the pipeline pump down. After leaving the tank, the oil passes through what is shown as a strainer. It's a six-inch pipeline strainer to take out any large foreign material.

The flow is then through, goes to the L.A.C.T. Unit itself. It passes by a cut monitor, which permits only marketable oil to pass through the meters. A high-cut signal from this monitor will open the three-way bypass valve and divert the stream through a heater treater before returning it to the tank. This signal also will stop the shipping pump.

The flow is then by a Peco flow switch, which is a low flow shutdown switch. In the event of a break of any line, this low flow switch will shut down the centrifugal transfer pump. It then flows into the aerator to remove all free air and gas. This aerator is required by the pipeline company.

It goes by a sampler, which will store and collect under pressure a small sample of the stream in a closed container at set intervals. The flow is then through a strainer to trap any



foreign objects ahead of the meters, then by the positive displacement meter for measurement. There's two meters are provided for stand-by service. A back pressure valve is installed behind the meters to hold the pressure on the meter above the vapor pressure of the crude. Couplings are also provided for bypass upstream to proving tank. The flow is then to the pipeline pump.

Q Mr. Saylor, have all the royalty interests signed the Unit Agreement?

A No, sir. There are three overriding royalty interests that have not signed.

Q Is there a likelihood that any or all of them will sign up?

A There's a seven percent overriding royalty interest on eighty-acre tract, the Hickman Tract in Section 32, it's the South Half of the Southwest One-Quarter, which has refused.

Q How do you intend to incorporate that outstanding royalty?

A That interest has refused to sign, and the production from that lease will have to be tanked separately and treated as a separate lease.

Q How many wells are presently producing within this Unit?

A Fifty-one.

Q And are all of them completed in the Lower Gallup Oil Pool?

A Yes, sir.



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Q Has the Commission approved similar installations both as to design and as to type of installation?

A Yes, sir.

Q Will you have personnel present to take care of any remedial steps and also to supervise the operation in general?

A Yes, sir.

Q Now will you refer to Exhibit No. B and explain that, please?

A Exhibit B is a letter from the Four Corners Pipe Line Company, purchaser of the crude from this Unit, in which they have accepted the installation of this L.A.C.T. Unit.

Q Will you explain Exhibit C, please?

A Exhibit C is a letter from the Four Corners Pipe Line Company detailing their proving procedure for positive displacement meter.

Q In your opinion will this installation materially reduce your maintenance and operation costs?

A No, we have made no detailed study to see what maintenance cost this Unit would save. We have justified the installation of this Unit on the basis of the vapors that we will save and thus extend the economic life of this Unit.

Q In your opinion this will be a prevention of waste?

A Yes, sir.

Q Were Exhibits 1 through 4 and Exhibit A prepared by you or under your direction?





A Yes, sir.

MR. WHITE: We offer Exhibits A through C and 1 through 4 at this time.

MR. UTZ: Without objections the exhibits will be entered into the record.

MR. WHITE: That's all the testimony we have on direct.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Saylor, maybe you made a statement to this effect but if you did, I missed it. What do you have to prevent the waste of oil in case of line breakage between your wellhead and the L.A.C.T. system?

A I stated that we will have a control at the wellhead, but I didn't go into detail. The flowing wells will be equipped with two-inch intermitter; under normal flowing operation the well will be shut in three to eight times per day to facilitate the passage of paraffin scrapers down the tubing. This valve will also be equipped with a dual pilot. The dual pilot is a pressure control which will close the valve on signal from malfunction downstream, and malfunction downstream would be a flow line break or a pressure increase. The pumping wells will be equipped with emergency pressure switch to facilitate engine shutdown on signal from malfunction downstream. Of course, after any of these automatic shutdowns in the pumping well or flowing well, the installation will require manual reset and start-up.



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Q Do you know offhand what the spread of pressure will be between low and high on your high and low cutoff?

A Our system was designed at 150 pounds, so our pressure relief valve at the test stations will have to be set at 150 pounds. Low pressure shutoff would have to be below 25 pounds, which is the pressure of the heater treater. So we will have a pressure range between 15 and 150 pounds.

Q All wells on this Unit will go into this L.A.C.T. system, except the Hickman eighty-acre lease?

A Yes, sir.

MR. UTZ: Any other questions?

MR. PAYNE: Yes, sir.

BY MR. PAYNE:

Q On the wells ultimately do you plan to have them go into common tankage? You have fifty-two now, is that right?

A Fifty-two.

Q Do you anticipate additional wells?

A No, sir.

Q You have 10,000 barrel tank, is that it?

A Yes, sir.

Q Are most of these wells top allowable wells?

A I won't say most of them. This Unit at present currently is being produced by the operators at a reduced rate, voluntarily reduced rate while we were building up bottomhole pressure. We are producing this Unit now at a rate fifty percent



of allowable.

Q I see. Now the allowable, of course, does give you credit for transferring from injection wells, doesn't it?

A Yes, sir.

Q The point is, do you feel you have sufficient storage?

A The maximum rate that we believe this Unit can be operated and still hold our pressure, bottomhole pressure, is 5,000 barrels a day, so we have --

Q And you are connected to the Four Corners Pipe Line?

A Yes, sir.

Q You don't have any difficulty getting your oil run?

A No, sir, we haven't.

MR. UTZ: Any other questions? If no other questions the witness may be excused.

(Witness excused.)

MR. UTZ: Any other statements to be made in this case? If not, the case will be taken 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 were reported by me in Stenotype, and that the same was reduced to typewritten transcript by me and contains a true and correct record of said proceedings, to the best of my knowledge, skill and ability.

DATED this 2nd 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 Examiners hearing of Case No. 1817,  
 heard by me on Dec 24, 1959.

*[Signature]*, Examiner  
 New Mexico Oil Conservation Commission

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