

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE No. 2086  
Order No. R-1789

APPLICATION OF GULF OIL CORPORATION  
FOR APPROVAL OF AN AUTOMATIC CUSTODY  
TRANSFER SYSTEM IN THE GLADIOLA  
(DEVONIAN) POOL, LEA COUNTY, NEW  
MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on September 21, 1960, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 3rd day of October, 1960, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Gulf Oil Corporation, is the owner and operator of the M. M. Harris Lease, comprising the NW/4 of Section 8, Township 12 South, Range 38 East, NMPM, Lea County, New Mexico.

(3) That the applicant proposes to install an automatic custody transfer system to handle the Gladiola (Devonian) Pool production from all wells presently completed or hereafter drilled on the above-described M. M. Harris Lease.

(4) That the previous use of automatic custody transfer equipment, similar to that proposed by the applicant, has shown that such equipment is a reliable and economic means of transferring the custody of oil, and that the use of such equipment should be permitted, provided adequate safety features are incorporated therein.

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CASE No. 2086  
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IT IS THEREFORE ORDERED:

That the applicant, Gulf Oil Corporation, be and the same is hereby authorized to install an automatic custody transfer system to handle the Gladiola (Devonian) Pool production from all wells presently completed or hereafter drilled on the M. M. Harris Lease, comprising the NW/4 of Section 8, Township 12 South, Range 38 East, NMPM, Lea County, New Mexico.

PROVIDED HOWEVER, That the applicant shall install adequate facilities to permit the testing of all Devonian wells located on the above-described M. M. Harris Lease at least once each month to determine the individual production from each well.

PROVIDED FURTHER, That in order to prevent the overflow and waste of oil in the event the automatic custody transfer system fails to transfer oil to the pipeline, the applicant shall add additional storage facilities from time to time, as it becomes necessary, to store the production which will accrue during the hours that said lease is unattended, or in the alternative, shall so equip the existing facilities as to automatically shut-in the lease production at the wellhead in the event the storage facilities become full.

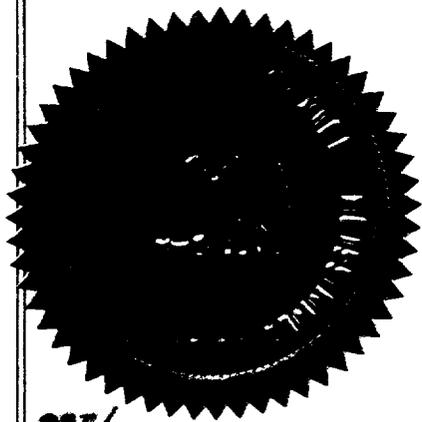
IT IS FURTHER ORDERED:

That all meters used in the above-described automatic custody transfer system shall be operated and maintained in such a manner as to ensure an accurate measurement of the liquid hydrocarbon production at all times.

That meters shall be checked for accuracy at least once each month until further direction by the Secretary-Director.

That meters shall be calibrated against a master meter or against a test tank of measured volume and the results of such calibration filed with the Commission on the Commission form entitled "Meter Test Report."

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.



STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

*John Burroughs*  
JOHN BURROUGHS, Chairman

*Murray E. Morgan*  
MURRAY E. MORGAN, Member

*A. L. Porter, Jr.*  
A. L. PORTER, JR., Member & Secretary

esr/



## TRANSCRIPT OF PROCEEDINGS

MR. NUTTER: Case Number 2086.

MR. PAYNE: Application of Gulf Oil Corporation for an automatic custody transfer system.

MR. KASTLER: Bill Kastler, appearing for Gulf, and Lonnie Smith who has been previously sworn and qualified is appearing as our only witness.

MR. PAYNE: Do you want to consolidate 2086 and 2087 inasmuch as it is the same pool?

MR. KASTLER: I believe I can do that.

MR. NUTTER: We will call 2087 at this time.

MR. PAYNE: Application of Gulf Oil Corporation for an automatic custody transfer system.

MR. NUTTER: We will consolidate these two cases.

MR. PAYNE: Let the record show the witness has previously been sworn.

MR. SMITH

having been previously duly sworn, testified as follows:

## DIRECT EXAMINATION

BY MR. KASTLER:

Q Mr. Smith, briefly outline what Gulf is seeking in Case 2086.

A Gulf is seeking an application to install an automatic custody transfer development for the Devonian Gladiola Pool on our M. M. Harris Lease.

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Q Will you briefly outline what Gulf is seeking in 2087.

A Gulf is seeking exactly the same thing there and in the same pool for our Lease State "AV" Lease.

Q Have you prepared for introduction here an Exhibit Number 1 in each case.--

A Yes, sir.

Q -- which would show the lease boundaries?

A Yes, sir.

(Whereupon, Applicant's Exhibit Number 1 for 2086 was marked for identification.)

Q Will you please identify the M. M. Harris Lease which is described and shown on the Exhibit 1 for Case 2086?

A Yes, sir. The M. M. Harris Lease is located in the NW/4 of Section 8, Township 12 South, Range 38 East, Lea County, New Mexico. It is outlined in red on this plat, which is Exhibit Number 1 and consists of 4 producing wells.

Q Are those 4 producing wells Devonian wells?

A Yes, sir; they are Devonian Pools from the Gladiola Pool, they are all pumping with Reada Pumps.

Q Top allowables?

A Yes, sir.

Q Now, I call your attention to Exhibit Number 1 in Case 2087, please identify the State "AV" Lease by description and as outlined here?



(Whereupon, Applicant's Exhibit Number 1 in Case 2087 was marked for identification.)

A On the lease plat, Exhibit 1 is outlined in red and is located in the NW/4 of Section 19, Township 12 South, Range 38 East, Lea County, New Mexico.

Q What production does Gulf have on this lease?

A We have 4 Devonian Gladiola Pool producers and one Wolf Camp Gladiola Pool producer. The Wolf Camp Well is a very small producer at this time and our plans are to abandon it in the near future and we are leaving it out of this proposed project unless it develops otherwise.

Q Now, Mr. Smith, if possible, I am going to call your attention to Exhibit Number 2 in Case 2086 and Exhibit Number 2 in Case 2087.

(Whereupon, Applicant's Exhibits 2 in Case 2086 and 2087 were marked for identification.)

A Both of these are flow diagrams.

Q . And would you please state what features are common in both cases?

A These productions both have the M. M. Harris and Lea State "AV" Lease Battery, they are identical, they may not look it. It is the configuration of the battery as it is set up. I sketched one of these and another engineer sketched another, but the conforming on the M.M. Harris Lease to the present Header position



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relative to the vessels, he came up with a much different drawing than I did to the Lea State "AV". I think it would be easier to Lease "AV" sketch, easier to follow. We have the flow lines coming in from the left side. 4 wells in each case and through the valve and header arrangement. You can to through production over testing, there through production we go through a master shut in, there the production heater treater which is a pressure heater treater where the gas is separated and goes to gas sales. The water is separated and goes to the disposal system. The oil is separated and goes on to the, it goes right through a BS&W monitor, through a diverter valve and on to the Surge Tank as long as it is good clean oil. If the BS&W monitor indicates excess BS&W, then the diverter valve takes it through to the circulation tank, and back to the, upstream of the production heater treater. If this condition does not correct itself, we will leave a lever and shutting in the lease. This would pressure up from the master shut-in, through the header to the wells, and the pumps would be automatically shut down. If as long as, if this condition corrects itself, the valve would open back up the diverter and would allow good oil to go to the Surge Tank. Coming from the Surge Tank we have a Tank Bottom automatic arrangement, we are doing on many of our batteries. Our system having BS&W diverter valves upstream of the Surge Tank prevents any bad oil from ever reaching the Surge Tank. However, we often get small carry over of water, so we put in an automatic tank bottom draw-off. Once or twice every 15 minutes or so, the tank bottom



will be drawn off and recirculate back to the heater treater to clean it up. And then there is a  $V_{grec}$  fluid level control in the Surge Tank which operates the PD Meter pump as previously outlined in the other case. Coming from the header to the test flow we come through a shut-in valve into a test metering separator, there would be 3 phase metering separator where the gas is separated, goes through a meter and onto gas sales. The water is separated and measured and joins the water disposal system. The oil is separated at the header and has a sample taken and joins the production flow stream, upstream of the heater treater. This heater treater is a high level, heats as a high level float, should one of the meters fail, that the float would be actuated and shut-in the well that is on test.

Q Have you correlated this with the Case 2086?

A The one place where it might be hard to follow on Case 2086 the header is in the middle and the normal production comes from the right and straight into the heater treater and leaves the heater treater on the bottom side of the page and goes through the BS&W monitor and diverter valve into the tank. If the well is on test, it goes from the level from the header into the test metering separator where everything is done as previously outlined, but the oil production goes through a sample and then comes back to the right, and where it joins the production flow, is just before the production from the header goes into the heater treater. It comes down from the top and back to the right with the normal



production.

Q Mr. Smith, will you go to Exhibit 3A and Exhibit 3 in Case 2086, and on Exhibit 3A in Case 2087, will you trace the flow in each case from Surge Tank to the pipe line?

(Whereupon, Applicant's Exhibits 3 in 2086 and 2087 were marked for identification.)

A These, both of these exhibits are substantially the same with the exception being we have shown a 10 barrel prover vessel in Case 2086. Magnolia pipe line has required us to show that in this case, we have shown it in skid units. On the other system as far as I know it will be done with the 10 barrel but service pipe line will service that vessel and there is a different location on the Exhibit 3 of 2086 of the strainer. The other engineer worked this one up and in working with the pipe line they decided it would be better to put the strainer upstream of the pump too and that way have a safety feature on the pump as well as the rest of the equipment. That hasn't been included in our other drawings.

Q In each of these 2 cases, 2086 and 2087, Gulf proposes and will need only a single Lact system, is that correct?

A One for each, yes.

Q Only the Devonian pay involved?

A Yes, sir.

Q Would both of these applications in your opinion be in the interest of economic savings to Gulf, the operator?

A Yes, sir, specially since they are in the same area, we



stand to save on pumpers, our labor time and as well as the ability to salvage other equipment that is now on the lease.

Q Are the applications in the interest of prevention of waste and protection of correlative rights?

A Yes, sir.

Q Have all offset operators been given notice?

A Yes, sir.

Q Were Exhibits 1, 2 and 3 in each case prepared by you or somebody else under your direction?

A Yes, sir.

Q This concludes the questions on direct examination. I would like to move for the introduction of Exhibits 1, 2 and 3 in both cases.

MR. NUTTER: 1, 2 and 3 will be entered in each case. Do you have any further questions, Mr. Kastler?

MR. KASTLER: No.

MR. NUTTER: Does anyone have any questions? Mr. Payne.

BY MR. PAYNE:

Q Mr. Smith, does the Gladiola Devonian give you any corrosion problem?

A Not anything major, it is minor. We are treating down hole treatment at this time and we have, are planning on devising an automatic recirculating device for treating around our casing, around our tubing.

Q Do you plan on corrosion meters or do you feel that is

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necessary?

A PD Meters that are marketed are essentially corrosion resistant to mild corrosion such as we would have in this case. You can get more expensive that are resistant to acting corrosion, but it would not be necessary in my opinion in this case.

MR. PAYNE: Thank you.

BY MR. NUTTER:

Q Mr. Smith, you mentioned that a high level float switch in the production heater on the State "AV" which shut-in the header which in turn would shut down the Reada pumps. Does the same proposition apply to the lease in Case 2086?

A The other engineer drew this one up having in mind using individual shut-in valves on each well at the header and 3 way position valves, whereas I used 2 way position valves on the header and master shut-in valves on the flow streams, essentially the same thing, yes, sir.

Q Now, in Case 2086 you have a high level switch in the heater treater?

A Yes, sir.

Q And that shuts in the Harris header then?

A Yes, sir.

Q And then what happens?

A The flow line pressure builds up and a switch would break the contact of the electricity going to the Reada pump.

Q Are both those with the Reada pump?



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A Yes, sir.

Q In the event of build up in the heater treater the pump on all 8 wells would be shut-in?

A Yes, sir.

MR. NUTTER: Any further questions of Mr. Smith? You may be excused.

(Witness excused.)

MR. NUTTER: Does anyone have anything further? We will take both cases under advisement.



STATE OF NEW MEXICO    )  
                                   :    SS  
 COUNTY OF BERNALILLO   )

I, LEW NELSON, 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 Oil Conservation Commission was reported by me in stenotype and reduced to typewritten transcript by me and/or under my personal supervision 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 *11th* day of October, 1960, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

*Llewellyn G. Nelson*  
 \_\_\_\_\_  
 NOTARY PUBLIC

My Commission Expires:  
 June 14, 1964

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. *2086-87* heard by me on *9/21*, 1960..

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

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I N D E X

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