BEFORE THE
OIL CONSERVATION COMMISSION
MABRY HALL
Santa Fe, New Mexico
September 21, 1960

IN THE MATTER OF:

Application of Gulf Oil Corporation for permission to complete the production from several separate pools and for permission to install two automatic custody transfer systems. Applicant, in the above-styled cause, seeks permission to commingle the production from the Brunson-Ellenburger Pool with production from the Hare Pool, and to commingle the production from the Terry-Blinebry Pool with the production from the North Paddock Pool, on its Harry Leonard "F" Lease, consisting of the E/2 of Section 2, Township 21 South, Range 37 East, Lea County, New Mexico. Applicant further seeks permission to install two automatic custody transfer systems to handle the aforesaid commingled production.

Case 2084

BEFORE:

Daniel Nutter

TRANSCRIPT OF HEARING

MR. NUTTER: We will call case 2084.

MR. PAYNE: Application of Gulf Oil Corporation for permission to commingle the production from several separate pools and for permission to install two automatic custody transfer systems.

(Whereupon witness was sworn.)

LONNIE SMITH

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

DIRECT EXAMINATION

BY MR. KASTLER

Q Will you please state your name, by what company you are employed, where you are employed and what is your position.

A My name is Lonnie C. Smith. I'm employed by Gulf Oil Corporation at Hobbs, New Mexico as a petroleum engineer.

Q Mr. Smith, have you previously appeared before the Oil Conservation Commission for an Examiner Hearing of that body and been qualified as an expert witness and given testimony in cases for Gulf?

A Yes, sir.

Q Are you familiar with Gulf's application in Case 2084?

A Yes, sir I am.

Q Will you briefly state what is involved in case 2084.

A We are seeking application in this case to install and operate two ACT systems on our Harry Leonard NCT-F lease one for sweetcrude production and one for sourcrude production. The sweetcrude battery would consist of commingled production from the Brunson and Hare Pools. While the other ACT unit would be Terry-Blinebry production from this lease.

Q As I understand it, you have a proposal to commingle two pays and to install two automatic custody transfer systems, is that right?

A The two pays for one system and a single pay for the

other system.

Q Are you proposing to commingle from the Paddock pay zone?

A No, sir, there is one Paddock Well on this lease, Well No. 13 and it is now penalized to three barrels per day and we will leave it out of this, either one of these units, and plan to either re-work this well or abandon it in the near future.

MR. NUTTER: So while your application was for Paddock, do you want that portion of that thing stricken?

A Yes, sir.

Q (By Mr. Kastler) We would like to have this thing ammended. Have you prepared an exhibit for introduction as Exhibit No. 1?

A Yes, sir.

Q Does this show Gulf's lease?

A Outlined in red is Gulf's lease involved the Harry Leonard NCT-F lease, it consists of blocks 1, 2, 7, 8, 9, 10, 15, 16, and the southeast quarter of Section 2, Township 21 South, Range 37 East, Lea County, New Mexico.

Q Substantially this embraces all of the east half of Section 2 which is an irregular section.

A Yes, sir.

Q Is this a State, Federal or Fee lease?

A This is a State Lease.

Q Does it have one common beneficiary?

A Yes, sir, it does.

Q And that being the Schools, is that right?

A Common Schools, yes, sir.

Q Does this plat Exhibit No. 1 also show the location of all wells?

A Yes, sir.

Q And would you please state what pay zones are productive on this Gulf Harry Leonard lease.

A We have the Brunson zone, the Hare, the Terry-Blinebry and the one existing Paddock Well.

Q Now, Mr. Smith, isn't it true that there are also other wells completed in other zones shown on this plat which are not necessarily at the present time producing from those zones?

A Several, yes, sir, are temporarily abandoned, two or three, one for instance number 7 has ABO in lot 10, that was re-tried for completion there in the Wantz-ABO and did not get it and that well is abandoned.

Q Finally, does Exhibit No. 1 identify and show all off-set operators?

A Yes, sir.

Q Thank you. I now wish to call your attention to Exhibit No. 2. Would you please identify what this exhibit is.

A Exhibit No. 2 is the production flow diagram of the proposed tank batteries and LACT systems.

Q Referring now to Exhibit No. 2, would you please trace

the flow in the direction of flow from the wells to the surge tanks as to the respective pay zone involved in this application.

A Yes, sir. Starting from the left hand side of the page, the uppermost battery is sweet production and we want to commingle the Brunson and Hare production. The Brunson production which consists of two wells and I believe one of these is a top allowable well so we proposed a metering separater and a sampler to come in from the header to the metering separater and the oil and water would be separated as well as the gas and the oil would be measured and a sample taken before it joined the commingled with the production joining from the Hare Well. And the two Hare Wells coming in there they would join the production with that of the Brunson and then go into a separater where the gas would be taken off and then the atmospheric heater treater will commingle into the atmospheric heater separater.

Q Would pass into the heater treater after the Brunson oil had first been separately measured.

A That is right.

Q Proceed.

A Upon leaving the atmospheric heater separater on the right side it will come through a BS and W moniter and through a diverter valve and if the BS and W moniter should show it to be good it would go to the low 500 barrel surge tank and if the BS and W moniter showed the oil to be excessive, it would be diverted by

the valve and come and swing back around to the up stream heater treater and join the normal flow production. If this situation did not correct itself before the heater treater filled up to the high level, the lease would be shut in by means of the valve at the headers.

Q Do you have a high level float switch at the atmospheric heater treater?

A Yes, sir.

Q All right.

A And then presuming the oil itself is good, it comes on into the surge tank and there by means of verec fluids which actuates the PD meter pump on the pipeline meter run, we would send it on to the pipeline and meter it there.

Q Suppose you had an occasion to test the oil from the Brunson zone, Hare, would you trace the flow in that instance.

A We have a common test facilities for both proposed batteries, and back to the header. For instance one of the Hare Wells we put one of them on lease, the valves on the header arrangement would allow one well to go to the flow stream down to the bottom of the page from the header and then join the test stream there and go into the pressure heater treater. The heater pressure where the gas would be separated and run through a gas meter and then go to the sales and the water would be separated and run through a dump meter and join the other waste water to

the pit and the oil production would be separately metered by a dump meter and diverted by the uppermost diverter valve back to its normal flow stream just up stream from the BS and W moniter.

Q From this test well it would be monitered and if found saleable would go into the surge tank, is that correct?

A If it was saleable, it would go to the surge tank, and if the BS and W moniter showed excess it would be diverted to the heater treater with the rest of the production.

Q You have safety production in the event the lease, the leases, would be shut in.

A Yes, sir, on the test heater treater a high level float control, also that would be in case the dump valves failed to work and the vessels filled up, it would divert the well on test back to production at the header, at the production header.

Q Would these tests be manually scheduled or automatically set?

A Automatically set.

Q I now wish to call your attention to Exhibit No. 3. Would you please identify this.

A This is the proposed automatic custody transfer system which is identical with many others we have installed around and are operating satisfactorily in the field at this time. The surge tank contains a verec fluid control which operates to the pump, at a certain high level it will turn the pump on and when

it gets down to a certain low level it would cut it off. Production comes in from the surge tank through the de-aireator, through the strainer to the proportioning type sampler and at this point it goes through a PD meter with the set stop counter control, the monthly allowable for the lease and then through a lease shut-in valve and a back pressure valve and on to the pipeline and at this point there is a master meter prover and connections with pipeline seals. We are dealing with Shell pipeline and they are approving both ways at this time.

Q There will be two automatic custody transfer systems, is that correct?

A Yes, sir.

Q And both of them would be substantially the same?

A Yes, sir, they would.

Q As shown in Exhibit No. 3?

A Yes, sir.

Q Do you have the pipeline company's approval?

A Yes, sir, we do. The Shell pipeline has been contacted and they are agreeable to taking this oil as we propose from this proposed system.

Q Has the Commissioner of Public Lands given approval to this proposal for commingling as the trustee for one of the royalty owners?

A We advised them of our application and we have a letter,

a copy of their letter and we will submit that as Exhibit No. 4, a verifax copy, I have the original here if you would like to verify it. It is their agreement to that that it is one beneficiary and its common schools and it is okay for this proposed project.

Q Have the off-set operators been given notice to this application?

A Yes, sir.

Q In your opinion would the granting of this application result in the prevention of waste and the protection of correlative rights?

A Yes, sir.

Q Would it result in the substantial savings to Gulf?

A Yes, sir. It would prevent or reduce our labor force involved in taking care of the production on this lease and at the same time allow us to salvage a great deal of the equipment on the lease and use it elsewhere.

Q Were Exhibits 1, 2, and 3 prepared by you or at your supervision?

A Yes, sir.

Q Is Exhibit 4 a true copy of the letter from the Commissioner of Public Lands?

A Yes, sir.

MR. KASTLER: This concludes the testimony.

CROSS EXAMINATION

BY MR. PAYNE

Q Are any Brunson or Hare Wells top allowable?

A One Brunson Well that is, yes, sir.

Q How are you going to determine the production from the Hare Well?

A By well tests, the same way we do now, sir. Of course all the production will really be allocated back on the basis of the well tests. They are set on the basis of the well test but we have put additional control of a metering separater with a set-stop counter and a sampler and we can take and set our monthly allowable for the Brunson Pool on that and taking into account the BS and W and the sampler, we can shut in our Brunson Wells when they reach their total production.

Q Well, now, you only separate the Brunson production, is that right?

A Yes, sir.

Q Would that charge all the shrinkage to one pool, if any there be?

A If any there be, we do not feel the shrinkage factor is significant enough for additional metering on marginal wells two marginal wells when we have the best test facilities that we can get which are better than what we have now as far as accuracy goes.

MR. NUTTER: You are not commingling two pools now, are you?

A No, sir, we have allocated back to these wells.

Q You could not exceed your allowable when you are not commingling, isn't it possible that you could when you are commingling ~~or~~ and metering production from one pool?

A No, sir, I don't believe so. We have also a set stop on the master PD meter on the pipeline. We would not run more than the allowable from the Brunson and Hare Pools.

Q Do you intend to adjust your Brunson allowable through that meter?

A Through which meter?

Q Through the meter ~~and~~ ing separater.

A Yes, sir.

Q I see. So that you wouldn't ever produce more from the Brunson than the reading on the meter ~~and~~ ing separater.

A Yes, sir.

Q You usually do, don't you, ~~the~~ its oil that you sell that counts ~~not~~ and what your meter reads? In other words, you ~~did~~ do have shrinkage.

A You are saying we would have some volume on hand from the Hare ~~and~~ in the surge tank.

Q No, what I am saying is ordinarily if you say you were producing from one pool only, and you were metering it for one recommendation reason or another, you wouldn't take your allowable as determined by the meter reading, would you take it from what you

sell at the stock tank so you would have credit for whatever shrinkage there may have been.

A That is true.

Q You don't propose to do that here?

A Well, to comply with other Commission orders about top allowable wells, we didn't feel we could so we submitted it in this way, the only door we had open.

Q I see. I think I've got it straight now. Thank you. What size of a separater is this metering separater?

A What size?

Q Yes, sir.

A Well, it's I don't know as its even been sized yet, it's adequate to take care of the production water and gas from those two wells.

Q Regardless of what its size is, I presume this other separater is a larger separater, isn't it, because it handles production for more than two wells.

A Yes, sir it would have to handle more. It would have to handle all of it.

Q When the two Brunson ~~Pools~~ wells, when they come through the metering separater, the oil production comes on out of the separater and goes through this sampler and then into a common line, that is coming from the Hare Pool?

A From the Hare header just as the well have joined the

Hare production down stream on this Hare separater just so it is up stream of the heater treater so we can use the common heating facilities.

Q What I was wondering, you got a large separater to handle the production from the two pools whereas you can place a small separater up stream, a small metering separater up stream from the junction of the Brunson line and the Hare, couldn't you? A metering separater to meter the Hare production?

A We already have these other vessels. They are the only thing we will have to buy, that is the metering separater. That is one reason we have a separater at all. You will notice I don't have a separater, that is a pressure heater treater. There's an old atmospheric on the Hare production stream and we already have a separater with it to prevent big new vessels, we propose to use these.

Q What capacity do these Brunson Wells have, do you have their production figures there?

A I am not sure I brought that. I have number 3 as 13 barrels and of oil and two barrels of water. I mean number 2 and number 3 Brunson has 94 barrels of oil, that is per day and no water.

Q How about the Hare Pool, you got two wells there.

A No. 1 is capable of 28 barrels of oil per day and 10 barrels of water per day and number 15 is capable of 31 barrels

of oil per day and no water.

Q And then there are a total of 11 Terry-Blinebry Wells, are there?

A Yes, sir.

Q However, the Terry-Blinebry production is not commingled with any production, is that right?

A That is right.

Q Are there any safeguards to prevent the oil which is being produced from the Brunson or the Hare when it's on test and coming through the heater treater, the test heater treater being accidently diverted into the Terry-Blinebry surge tank rather than into their proper surge tank.

A It would be a matter of electrical contacts because when you switch the well at the production header, the diverter valves are normally closed, the motor valves are normally closed, closed all the time when you switch a well into it. It gives the same signal to open the respective right valves.

Q So these aren't hand operated valves.

A They are tied in electrically with each header valve.

Q I see.

BY MR. KASTLER: In the event of failure, they close.

A That is right. They are normally closed all the time and failure of electricity they would close.

BY MR. NUTTER: You mentioned you have some high level float

switches in these treaters to the surge tank, have you any low level in them?

A They'reat fluid level control or gauge which we use a 5 point electrical contact gauge and you use two of them one for a low level shut off on your pump and one for high level start on your pump and you have three other contacts you use for anything you want to. We use at least two of them for high level shut offs.

Q That is the working level?

A That is the working level. This works - are you familiar with the verec fluid level?

Q No, sir.

A At the higher,the higher it gets you can set these contacts and they will make it break at certain points, any level, we usually use at least two of them for shut in contacts.

Q To handle the situation in the event the automatic custody transfer did not take the oil?

A Yes, sir.

Q Then the oil level exceeds the upper working level.

A It turns on the pump, the pump won't go on, it continues up to the high level. It signals to shut the lease in.

Q That shuts the wells in at the header.

A That shuts the wells in at the header.

Q Do you believe any high pressure wells are flowing into

this lease?

A Not high pressure. I think some of the flowing wells, not many go up to around 600 pounds on 48 hour shut-in. We plan on shutting in, of course killing the electricity by pressure build-up arrangement on the pumping wells and putting well head shut in valves on the flowing wells.

Q So in other words, when your headers are shut in.

A You build up a flow line, you shut down all the wells at the well.

Q And the headers are shut in?

A Yes, sir.

MR. NUTTER: Any further questions of Mr. Smith.

(No response.)

MR. NUTTER: You may be excused. Do you have anything further for this case, Mr. Kastler?

MR. KASTLER: I would like to have Exhibits 1 through 4 made a part of this record.

MR. NUTTER: Gulf's 1 through 4 will be admitted into evidence. Does anyone have anything further for Case 2084?

(No response.)

MR. NUTTER: We will take the case under advisement and take case 2085.

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I N D E X

E X H I B I T S

Number	Marked for Identification	Offered	Received
1		16	16
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4		16	16

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, LEWELLYN NELSON, 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 27th day of September, 1960 in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Lewellyn F. Nelson
NOTARY PUBLIC

My Commission Expires:

June 14, 1964.