BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
JUNE 11, 1958

IN THE MATTER OF:

CASE 1337 Application of Gulf Oil Corporation for an order amending Order R-1093. Applicant, in the above-styled cause, seeks an order amending Order R-1093 to provide for the commingling, in exception to Rule 303, but only after separate measurement, of oil produced from the Fusselman, Ellenburger, and McKee formations underlying its Learcy McBuffington Lease, comprising the S/2 of Section 13, Township 25 South, Range 37 East, Lea County, New Mexico, and the transfer of said production by means of automatic custody transfer equipment, in exception to Rule 309 (a); applicant also seeks authority to commingle the production, after separate measurement, from the Blinebry and Drinkard formations and the Langlie-Mattix Pool underlying the above-described McBurfington Lease, and to transfer said production by means of automatic custody transfer equipment. Applicant further seeks authority to produce more than 16 weels into each of the common transfer facilities described above, in exception to Rule 309 (a).

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: The hearing will come to order, please. First case on the docket this morning will be Case 1337.

MR. PAYNE: Application of Gulf Oil Corporation for an order

amending Order R-1093.

MR. KASTLER: If the Examiner please, my name is Bill Kastler. I am counsel for Gulf Oil Corporation. I live at Roswell, New Mexico. In today's extension of Case No. 1337, Gulf has made application to amend the Commission's Order No. R-1093. to permit the addition of the Fusselman zone to the commingling approval previously granted for the Ellenburger and McKee reservoir. In addition, Gulf desires authority to commingle the Drinkard, Blinebry and Langlie-Mattix production encountered on wells in this same lease into a separate surge tank for automatic custody transfer of sour crudes. Finally, the applicant seeks an exception to that portion of Rule 309 which provides, as now amended, that no more than 16 wells shall be produced into a single tank battery. Mr. C. M. Bumpass, area petroleum engineer, who testified in this case at the previous hearing held on November 14, 1957, will be Gulf's only witness today.

(Witness sworn)

C. M. BUMPASS,

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

DIRECT EXAMINATION

BY MR. KASTLER:

Q Will you state your name, by whom are you employed and what is your position?

A My name is C. M. Bumpass. I am employed by Gulf Oil Corpora-

tion, area petroleum engineer, Hobbs, New Mexico.

Q You are the area petroleum engineer for the Hobbs area, which encompasses southeastern New Mexico?

A Yes, sir.

Q Have you previously appeared before the New Mexico Oil Conservation Commission and qualified as an expert and testified?

A Yes, sir.

Q Are you familiar with Gulf's application -- amended application in Case No. 1337?

A Yes, sir.

MR. KASTLER: If the Examiner please, I would like to have Mr. Bumpass' qualifications accepted.

MR. MUTTER: Mr. Bumpass is qualified. Please proceed.

Q Mr. Bumpass, will you please outline or state the location of Gulf's Learcy McBuffington lease?

A Yes, sir. Our Learcy McBuffington lease consists of the S/2 of Section 13, Township 25 South, Range 37 East, Lea County, New Mexico.

Q Does Gulf own all the operating rights on this 320-acre lease?

A With the exception of the 80 acres, the east 80 acres which is farmed out, I believe, to Byrum.

Q W. K. Byrum? A Yes, sir.

Q To what depth is his farm-out made, do you know?

A 3000 feet.

Q Is there any diversity of royalty ownership in the 320-acre lease? A No, sir.

Q Has the Commission previously approved automatic custody transfer of commingled oil produced on this lease?

A Yes, sir, they have.

Q Did Order No. R-1093 authorize the commingling of crude oil produced on this lease from the McKee and Ellenburger pay zones?

A Yes, sir, it did.

Q Since Order R-1093 has been entered into, have additional producible pay zones been encountered on this lease?

A Yes, sir, there have been other pay zones encountered.

Q What are those zones?

A Well, we have the Fusselman, the Drinkard, and the Blinebry, and of course, the old pay, there is the Langlie-Mattix pay.

Q Is the oil from the Fusselman compatible with the Ellenburger and McKee crude oil so as to permit commingling as a practical matter?

A Yes, it is.

Q How would commingling of these crudes, that is, Fusselman with Ellenburger and McKee benefit the operator?

A Well, mainly prevent additional installation of equipment.

Q What pay zones capable of producing sour crudes have been encountered on this lease?

A The Blinebry, the Drinkard, and of course, the old pay, the Langlie-Mattix.

Q If authority were granted by the Commission, could the sour crude be commingled in a common surge tank for automatic custody transfer to pipelines in a method identical to sweet crudes?

A Yes, sir, it would.

Q Would it, or might it necessitate an exception to Rule 309 as recently amended to produce all the crude oil in the manner proposed?

A Yes, it would because of the multiple pays and the possible completion of more wells, such that the total of all the wells from the multiple pay, both sweet and sour, would exceed 16.

Q Have you prepared exhibits which show the flow diagrams for the sweet and sour crude oil batteries from the wells to the pipeline?

A Yes, sir.

Q On these Exhibits, may they be numbered Exhibit No. 4 and Exhibit No. 5 to supplement the previous three exhibits already entered in this case?

Mr. Bumpass, will you refer to the Exhibit marked Exhibit No. 4, and will you outline or trace the flow of crude oils as indicated there, and explain the facilities which are proposed to be located for handling the sweet crudes produced on this lease?

A Well, the flow diagrams for the sweet crudes is Exhibit No. 4. And we have here, just generally speaking, at this time we have indicated here the Ellenburger, the McKee and the Fusselman. Now, if you will just look at those for a moment, you will see that

all of those are identical, that we have somewhat of a five spot here, a central test facility. I would like first to explain the flow of production test and normal production through say, let's take the Fusselman and then the flow of the production in the McKee and Ellenburger would be identical, so to save time, I think we will just take the flow of the production, both production and test through the Fusselman, it will simplify the matter. We have here indicated No. 1 in the legend the well header. The well header is a simulation of automatic valves pneumatically controlled; electrically operated. The flow of oil coming in from the well enters the production side of the header and passes into the separator here in the line marked in red. It then passes on into the emulsion treator and on leaving the emulsion treater, the oil is shown in green to this point here, where the oil is pulled into the monitor system by a pump electrically powered that runs continuously.

Q Mr. Bumpass, are you indicating a point between the header treater and the dump valve which is indicated on your Exhibit as No. 7?

A That's an automatic valve.

Q Yes. Is that -- A That's true.

Q This point here was the one marked No. 7?

A That's right.

Q Now, the purpose of this equipment shown here, Items 9, 10, 11 and 7 is to insure that when the oil passes the point 7 it is merchantable oil and that is accomplished through the operation of

this pump, the BS and W monitors, and then controls it to accomplish either rerouting the oil for further treatment or returning it to allow it to be metered by this matter dump type meter, Item 12 C. Now, while we are at this point, it might be well to go ahead and go through an explanation of what would happen if the BW and W content of this crude was such that the oil was non-merchantable. For example, let's just say that the BS and W content that we would allow to be passed through a meter was two-tenths of one percent. We would set this monitor two-tenths of one percent, and as long as the crude flowing from the treater through this monitor did not exceed two-tenths of one percent, this valve No. 9 would be closed to this position here, but would be opened in this direction, such that your flow would be from this point through the monitor back to this point. And, in that case, with this valve closed, this valve No. 7 remains opened which allows this vessel here to open and receive oil, measure it, close, and transfer the oil through this line here to the one thousand barrel surge tank.

Q Mr. Bumpass, if I understand you right, then, what you just said is that if the BS and W content is not over two-tenths of one percent, assuming that was the critical point, then, your pipeline transfer or your valves, the passage would be open from the heater treater to the surge tank through the dump valve, is that correct?

A That is correct.

Q Thank you.

A Now, in the event that the BS and W content is exceeded, the

monitor immediately sends a signal which closes valve No. 7, which prevents any further oil from passing that point. It opens valve No. 9 in this position and closes the flow in this direction, that allows the oil to be recirculated back for further treatment. Now, --

Q It also interrupts the continued flow of crude oil from the wells to the surge tank?

A Yes. If the BS and W problem is not solved in sufficient length of time, then the fact that you have the flow, leaving the treater shut off, and you still have flow coming into the treater, the working fluid level in this treater will build up sufficiently to accentuate this float control switch marked Item 19 in this drawing.. And you'll notice that that 19 is common in each one of the treaters and the separators. With this signal received at the control house, a signal is sent to the automatic valves at the header which closes those valves, and you have flow line pressure building up in the flow line which accentuates a pressure sensitive valve at the well, thus closing in the wells for the length it takes for the system to reduce the BS and W content of the crude to the point that it will be acceptable.

Q Realizing that you've already testified as to the dump type valve and its operation in the earlier hearing in this case, would you now outline the proposal that would be made if you were to test one particular well producing from the Fusselman?

A Yes. As I said before, this header is composed of a series of valves; there is a valve for each well. It is placed just at

about the end of the flow line, and that's a three-way valve. That means in one position it will be closed to production while it will be open to the test;in another position it will be closed to test while open to production. Let's just say that we had in this particular header four wells and by our test programmer, we wanted No. 1, No. 2, No. 3 and No. 4 to be tested in that sequence. And we can specify the length of time that these wells are to be on test from one hour to twenty-four hours, so having gone through the flow diagram of the normal production, we will now take the flow diagram for test production.

Q No. 1 is to be tested now?

A No. 1 is to be tested. So, let's say the well comes on test at eight o'clock up until eight o'clock. All wells are going through production here. The well test programmer, when eight o'clock comes to be, will automatically send the signal which will switch the No. 1 header valve from production to test. That closes off its normal flow through the production site and reroutes it through the test site which the production will travel down this line indicated in red, coming to this test separator.

Q What is the number of the test separator on the exhibit?

A Item No. 3.

Q Thank you.

A The production on leaving the separator enters the central test emulsion treater and, as in the other case of the production treaters, the oil will follow the path indicated in green here, and

this Item No. 5 is a dump type test oil meter, with Item No. 6 being the dump test water meter.

Q As I understand it, your central test facilities consist of Item 3, a test separator, Item 4, a test header treater, Items 5 and 6, which are respectively an oil and water dump meter?

A That's true, and then also to measure the gas, we have Item No. 21 which is located just on the vent line from the separator, Item 3.

Q That's an orifice flange flow meter?

A Yes, sir. Now, oil leaving the treater will enter the dump type oil meter and, likewise, the water from the fluid on this test will enter the water meter and be measured and then discharged into the waste water line. Now, coming back to the oil line at the same time the signal is sent to place this Well No. 1 on test, this automatic valve No. 7 is opened, it receives the same signal and it is opened to allow the oil after having been metered by the test dump meter to be returned back to the respective pay. In this discussion here we are using the Fusselman, return back to the Fusselman line just up stream of the Fusselman heater treater. Now, you will also note that in this diagram at this point here we have three such valves.

Q What are you indicating now?

A Item No. 7, these three here. Of course, this one here, as you can see, is for the Fusselman, and this valve No. 7 is for the McKee, and this valve is for the Ellenburger. Now, these

valves, this is somewhat the heart of this testing feature, to allow us to have a central test facility. This valve can only be opened when it receives the signal.

Q You are speaking of valve No. 7 which now leads to the Fusselman production treater, is that right?

A That's true. The same applies for any zone that you have on test, but I just wanted to emphasize that when the signal is transmitted by the well test programmer to place No. 1 on test, that same signal is transmitted to this, in this example. Valve No. 7 for the Fusselman, that opened that valve, these other two remain closed. That allows this oil to be returned here and then, of course, it is intermixed with the oil of the other wells in that pay, and then it is monitored and comes on in through the master type dump meter and is measured with the other oil.

Q Mr. Bumpass, do your central test facilities proposed in this exhibit differ in any respect from the test facilities proposed at the earlier hearing?

A Yes. Actually, in the initial hearing it was our proposal to have test facilities for each individual pay, and this proposal is to have a central test facility common to all pays in the sweet and in the sour battery.

Q One common to the sweet and another one common to the sour?

A That is correct.

Q Now, if installed, will these proposals result in adequate test facilities to permit the testing of each well, at least one

each month?

A Yes. It will certainly do that, and of course, we have the latitude of testing them more frequent than that, depending on the length of test that we wish to perform.

Q Is the salt water discharge measured in any other place than at the central test facility?

A No, it is not.

Q That is the only place where the salt water content in the oil is measured?

A That's true. That's just for the purpose of well testing.

Q And likewise the orifice meter is only located on the test facility, and that's the only place it is necessary to be, is that correct?

A Yes, for test purposes, that's true.

Q Now, your Items 12-A, 12-B and 12-C, which are your dump meters for each respective pay, do those measure the aggregate allowable or production from each separate pay?

A They measure the production from each pay, the total production.

Q In other words, the well from each -- the production from each well is not here measured, but the production from each pay zone is measured, and that, of course, is divisible by the number of wells to see how much each well has produced?

A Yes. Of course, we have our well test that we can keep right on top of what each well is doing, and the main purpose of --

this meter here is the mastive dump meter. As the name implies, it measures all the oil before it enters the common surge tank.

Q Do I understand that the valve No. 7, which is the outlet from the test facilities back into the production treater, and the header valve for the well that's on test, operate simultaneously?

A Yes, sir.

Q So that from the moment the test begins until the test is completed, the oil going through the test facilities is all attributed to this particular well tested?

A That's true.

Q Unless you have something to add now, on Exhibit No. 4, will you go and explain Exhibit No. 5?

A Well, I don't have anything to add specifically to Exhibit No. 4. For the sake of saving time, I would like to say that Exhibit No. 5 is identical materially to Exhibit No. 4. We are accomplishing the same goal in Exhibit 5 that we are doing in 4. There is a slight difference in the equipment, such as this tank. Well, I believe the only difference in equipment is that this is a five hundred barrel tank whereas in Exhibit No. 4 for the sweet crude is a thousand barrels. That's just because of the difference in allowables.

Q Other than that, is the battery setup you propose for handling the sour crudes the same as the one proposed for handling the sweet crudes on this particular lease? Will it, in all respects, be identical? A Yes, sir.

Q And the flow diagram disclosed shows that they are identical, does it not? A Yes.

Q Will these proposals result in efficient accounting of crude oil transferred to the pipeline, if approved?

A Yes, sir, they will.

Q Mr. Bumpass, the transfer from the surge tank to the pipeline has been previously outlined, has it not, in principal?

A Yes, it has, in previous cases.

Q Exhibit No. 1 in 1337?

A 1337 and approved by the Commission's Order 1093. I believe that's the correct number.

Q Is there no differentiation from that proposal and that explanation that you made at that time in this setup?

A No. It is all the same.

Q Is this application in the prevention of waste and the interest of prevention of correlative and protect correlative rights?

A Yes.

Q Have other operators in this lease been notified of this application? A Yes, sir.

Q Have any objections been received? A No, sir.

Q Were these Exhibits prepared by you or under your supervision and direction? A Yes, sir.

MR. KASTLER: Mr. Examiner, those are the only questions I have at this time, and I would like to move for the admission of Exhibits No. 4 and 5.

MR. NUTTER: Is there objection to the introduction of Gulf's Exhibits No. 4 and 5? If not, they will be received in evidence. Does anyone have any questions of Mr. Bumpass?

CROSS EXAMINATION

BY MR. PAYNE:

Q Mr. Bumpass, is there an employee on duty at the control house at all times?

A No, there isn't. It is just -- at the present time he is spending more time there than he would for a normal battery. But in time, as we get more familiar with the equipment, we feel his time will be less than a normal battery.

MR. NUTTER: Any further questions?

NANCY ROYAL: What are the sour crude zones to be commingled?

A Langlie-Mattix, the Drinkard, and the Blinebry.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Bumpass, in following the flow of this oil, as the raw crude leaves the production treater, what is to prevent it from going directly into valve No. 7 and on into the flow meter without being monitored?

A Well, we have a circulating pump that is pulling the oil constantly out of this line through the monitor and recharging it back into this point here. There is actually a check valve at this point here.

Q Where is this now?

A In between here. This is not exactly grammatically correct. We have the flow coming from the treater through the monitor and then back into this line before it goes on to this point here.

Q You mean there is a -- is the flow in the monitoring loop from right to left, as depicted on your exhibit?

A Actually, this should be shown over here because the flow comes from this point and through the monitor and then back into this line here.

Q So the flow is from right to left?

A Yes.

Q And you have in No. 11 a circulating pump which has constant suction on the flow line from the production treater --

A Yes, sir.

Q -- drawing oil into the monitoring loop?

A Yes, sir. In fact, it has a capacity greater than what our normal rate through this line would be, so actually, it is circulating all of the oil that would normally be going through that line plus some more oil, if you see what I mean there. It has a greater capacity; I think it is around, I don't remember offhand what the rate through there is, but actually, if you start out there with one barrel, maybe the first circulation you would circulate that barrel plus other part of another barrel, which would be circulating more than what you started circulating before.

Q Mr. Bumpass, what is the need for the line that runs parallel to the monitoring loop, being the direct flow line? What is the

need for this line?

A Actually, I don't know.

Q It appears to me there is a likelihood that some of the oil may be transferred directly to the transfer meter and not be monitored or circulated by the additional parallel line.

A Well, if our pump failed, it is possible that it could, with the pump having a greater capacity than the volume through-put of that, the normal production rate, that's the only way I could see that it could, would be the fact that the pump were to fail.

MR. KASTLER: May I direct examine on this point?

MR. NUTTER: Yes, sir, please do.

REDIRECT EXAMINATION

BY MR. KASTLER:

Q Mr. Bumpass, isn't it true that the green line, which shows over this pump and flowing to the dump meter from the production heater treater, isn't this for the use as a return line of any crude oil that is not --

A Well, we have to, that's right.

Q -- merchantably?

A This oil, as it comes through the monitor, has to be returned to this line. Of course, we could go -- if we put this on this line, then come to that valve here, we would have to fix it up so that this would be over there on the "T" along this line, and if the oil became bad it would be rerouted back through here.

Q Well, the oil that is returned for additional treatment

passes through valve No. 9 in the brown line, doesn't it?

A That's right. I think, Mr. Nutter, there is no use denying it, we were just a little bit lost, when you asked that question. We run through things; we work them out; we plan them, and then we run against things we have to change. I am not sure that this is graphically correct. It may be, but I can assure you this, that we have a pump here that has to have fluid passing through here, and we have to have a return coming through here, and if we just had a monitor in there and had a pump that ran a certain rate without having a line that you could loop back into that, we would be continually having to change the size of the pump so that we wouldn't pump the pump dry. See what I mean there? In other words, let's just assume that the rate through here was ten barrels an hour and we put a pump that was twenty barrels an hour, we would have a tendency to pump a vacuum through this thing and we would be running the pump dry, so we have to have a return loop into this thing. Now, I do believe that monitor will work. It certainly wouldn't be desirable just to stick the monitor in there. The literature tells us that we want to have a constant rate through there because if you don't have, you'll have somewhat of a settling out, you won't get an acceptable sample.

Q At any rate, Mr. Bumpass, this installation will be made in such a manner that unnecessarily large volumes of BS and W will not be passed into the through-barrel surge tank?

A That's right, we have to have it that way, yes, sir.

RECROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Bumpass, what is the disposition of the tank bottoms from the through barrel tank?

A That is shown in this, shall we call it a brown flow string, and since we cannot very well take this oil and put it back through a normal system because it would allow it to return back to the dump type meters, which would again indicate production when that had already been produced, we have chosen to bring that through a circulating pump, Item No. 17, back to our test treater where the oil will be treated, and then you will note that there are two valves just below the Item No. --

Q Are those the valves indicated by crosses on the little circle?

A That's true. Those are manually operated valves and this will be a manually operated operation. We will go in there and close the valves underneath the treater and open the valves just below that valve and then start our circulating pump, which will pull off the bottoms whenever it is required and treat it, and allow the oil to be returned back. This will be done, of course, when there is no testing of the well.

Q This is just the period when no well is on test?

A That is true.

Q Would you tell me what type of meters Items 12-A, 12-B and 12-C are?

A. These are dump type meters.

Q. What is the capacity of these?

A. I believe those are 750 barrels a day.

Q. Mr. Bumpass, has Gulf Oil Corporation taken any test of these dump type meters in an installation similar to the proposed installation here?

A. Yes, we have. We -- in letter of, I think it was January the 9th, we sent in results of these tests. I don't know if you received them at that time, but we have taken tests on our McKee and our Ellenburger. Of course, that's all we have at this time, and the tests are continuing to be conducted. One reason is that we do not have our temperature compensating and our pressure compensating elements on these mastive type dump meters. The results that we have obtained are very good, in our opinion, and we feel that even better accuracy can be obtained, particularly the pressure compensating elements, when they are installed. We just haven't received these yet. We expect to in the very near future, and we hope to have them in operation by the end of -- oh, sometime around the 15th of July.

Q. How many tests have been conducted to date, Mr. Bumpass?

A. Let's see. I have through 5/23/58 13 tests on the Ellenburger and 10 tests for the McKee through 5/26/58.

Q. Now, were these tests made against a strapped tank?

A. Yes. In each case -- in the case of the Ellenburger we would use manual gauging in this one thousand barrels tank, checking

it against the volume measured by this dump type meter. In the instance of the McKee, we had a thousand barrel, which is a low five hundred, actually, and set here a test tank, moved in there, and by manual gauging checked that with this meter.

Q What was the average differentiation of the meter readings as compared with the volumes of oil measured in the tanks?

A I don't have the average. I can give you the range.

Q Would you give me the range, please?

A All right. In the Ellenburger, the range was from a plus 1.69 percent to a minimum of plus .23 hundredths of one percent.

Q And this is in the range of what volume of oil?

A Well, in a thousand barrel tank. Of course, we tried to gauge it to a quarter of an inch, and a quarter of an inch in a thousand barrels is one and 35 hundredths barrels. Now, since more of our tests were in the neighborhood of a 300 barrel volume, a quarter of an inch represents 15 hundredths of one percent. So you can see there we get to the point, are we using an accurate basis for checking our meter; maybe the manual gauging is not quite as accurate as the meter, that question arises.

Q Each of these tests that were taken were in the range of 300 barrels total volume measured through the meters?

A Yes, sir. Some of them were over 300 and there were one or two under that.

Q Were all of the tests that were taken within the same range of differentiation, more or less?

A Yes, sir, they were. In the case of the McKee, when we first put that on, let's see, we had some very erratic variations, and we had to change the counter, and after we changed counter, the percent ranged from a maximum of plus 1.19 percent to minus 07 hundredths of one percent.

Q Previous to changing the counter, did you have variations in excess of these 1.19?

A Yes, we did. We had as high as 35.6 percent. That's minus. Of course, we only metered 56 barrels. Now, the first few tests that we have here run from a minimum of 56 barrels up to 398, and that was because we were just anxious to get started, as soon as we put them in. The allowable on the Drinkard was somewhere around 44 barrels, something like that, and it took a long time to accumulate the volume, around 304 barrels, but we noticed that the counter was very erratic, and after we changed the counter, the percent of error dropped to what I related there. I believe that was a maximum of plus 1.19 percent to minus 07 hundredths of one percent.

Q Is it your opinion that the variation in the range that you had when the counter wasn't operating correctly could occur after installation had been made and the counter was operating correctly, or was this a faulty counter when it was installed?

A Apparently it was a faulty counter because when it was installed, I don't know if it was damaged in transit or had some slight imperfection in the assembly or fabrication, or what it was, but when you get, oh, maybe 14 to 20 barrels difference in maybe

70 to 80 measured, there is something wrong. We knew something was wrong right off because it wasn't working right, and after it was changed, we would get somewhere between one to two barrels difference in 3 to 400 barrels measured, which is very accurate, I would say.

Q And you don't believe, then, that this would occur spontaneously after a meter had been installed and was operating correctly?

A Well, I think any equipment is subject to failure. We haven't had any to know in what length of time we could expect failures. I don't know if there is any set pattern on it, but the -- to just say that the equipment would never fail, I would think would be an erroneous statement.

Q You will take tests of this equipment at rather frequent intervals until it has been determined that it is reliable?

A That's true, just like in our installation here on the PD meter, we have found out from the operation of the PD meters that after you have calibration for several months and get kind of a trend, that it is not necessary to calibrate then too frequently. You can more or less tell by the volume of oil that is going through them as to how often you should calibrate them. We are very interested in this. We have to assure ourselves that everything is operating right here, so we will still continue to take these tests and we will do so in the future and, of course, that's about all we can say at this time until we have had some experience with it.

Q Mr. Bumpass, do you anticipate that the use of sour oil in the one system as depicted on Exhibit 5 will cause any difficulties, which might not be expected in the sweet system on Exhibit No. 4?

A You mean from corrosion or such as that?

Q Yes, sir, being sour crude?

A Well, I don't know. I'm sure there is automatic equipment operating in sour crude strings. Also, we have taken into consideration, for any build-ups in our metering equipment, to plastic coat that, which should eliminate the encrustration of any build-ups in our treating equipment -- I mean in our measuring equipment. We are plastic coating our treaters, and our pilot valves are non-bleeding valves, they are just instantaneous bled, and we are even contemplating an auxiliary supply to operate our valves. As you know, those constant bleed valves use a lot of gas, but these intermediate valves use very little gas, and with the sweet gas, that should eliminate any trouble you have from the controls. I am just talking here in general, we don't anticipate any trouble or the malfunctioning of this equipment.

Q Mr. Bumpass, I know you stated that if you had a build-up of fluid in the production treater or the production separator, that the high level float valves would activate the valves at the header and cause a build-up of line pressure at the flow line and shut off the flow at the well head, is that correct?

A You possibly left out one step. When the fluid level rises through the high level shut off, that makes a contact, which sends

the signal to the control house which then sends the signal to the header valves. I think, as I understood you, Mr. Nutter, you said, when this high level occurred, a signal was sent to the header valve. Well, it is, but it goes through the control house.

Q And the build-up of pressure in the flow line shuts in the valve on the well head?

A That is correct.

Q Is there any installation there, or is this a two-way deal, on the well head, that a drop in pressure on that flow line will shut it off?

A No, sir. It is just pressure increase, to close it in.

Q Is the one positive displacement meter, which is on the outlet of the surge tank, the only PD meter in the entire installation?

A When you say "entire," do you mean the sweet and sour?

Q Either one of the two installations, is there just one PD meter in each system?

A There is one for the sweet and one for the sour, yes.

MR. NUTTER: Does anyone else have any questions of Mr. Dumpass?

MR. PAYNE: One question.

MR. NUTTER: Mr. Payne.

QUESTIONS BY MR. PAYNE:

Q How does this equipment prevent undue waste in the case of a line break?

A Well, sir, if we have a line break within this system here -- Well, I think I will be all inclusive and say that if we have a line break from the well to this point here, it would be no more different than a normal battery operation, where you have conventional batteries.

MR. NUTTER: Except that you expect the lease attendant to be on the lease less frequently with this system?

A I would like to say here that it is not anything new, it has been done by operators a long time. We do have all of these lines above ground, which should eliminate or reduce any corrosion that you normally have around the battery where you have your lines buried, and even a little seep, with the lines above ground, it would be very apparent to somebody walking on that property.

MR. PAYNE: That is all.

MR. NUTTER: Any further questions? If not, Mr. Burpass may be excused.

(Witness excused)

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

MR. KASTLER: No, sir, I don't.

MR. NUTTER: Does anyone have anything they wish to offer in Case 1337?

MR. SETH: Tidewater would like to concur in the application of Gulf and urge it receive favorable consideration.

MR. NUTTER: Thank you. Are there any further statements? If not, we will take Case 1337 under advisement and take next Case

1341.

C E R T I F I C A T E

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/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 10th day of July, 1958, 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. 1337, heard by me on 6-11, 1958.

..... Examiner
New Mexico Oil Conservation Commission