BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
November 20, 1957

IN THE MATTER OF
CASE NO. 1342

TRANSCRIPT OF PROCEEDINGS

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to produce more than eight wells into common storage and to transport oil from the leases prior to measurement.

MR. SETH: Mr. Examiner, we have some exhibits. May we have just a moment to put them up?

MR. UTZ: Yes, sir. There will be a five minute recess.

(Short recess)

MR. UTZ: The hearing will come to order. Will you proceed?

MR. SETH: We would like to call Mr. Montgomery as a witness.

MR. COOLEY: Is he the only witness?

MR. SETH: Yes. I am Oliver Seth appearing for Shell Oil Company. If the Commission please, this is an application for exception to Rule 309 to permit the installation of centralized automatic transfer equipment and automatic reduction equipment. Our first witness is Mr. Montgomery.

J. W. MONTGOMERY

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

DIRECT EXAMINATION

BY MR. SETH:

Q Will you state your name, please?

A J. W. Montgomery.

Q By whom are you employed?

A Shell Oil Company.

Q In what capacity?

A I am an engineer in our Roswell Division office.

Q Will you outline for the Commission, please, your qualifications?

A I graduated from Iowa State College with a B.S. in electrical engineering in 1952; worked for Shell Oil Company since June of 1952, and during that time I spent approximately two years on development and automation work, and I am a registered professional engineer in the State of New Mexico.

MR. SETH: May he testify as an expert?

MR. UTZ: His qualifications are acceptable.

Q Mr. Montgomery, are you generally familiar with the automatic system installed or being installed by Shell in the Bisti area in New Mexico?

A Yes, sir. I was here at the hearing and I read their testimony and their presentation.

Q You are likewise familiar with the plan and the equipment sought to be installed under the present application in this Case 1342? A Yes, sir.

Q Would you state for the Commission, please, any significant difference between this system and the Bisti system?

A The only significant difference is in the method of allocation of production to the various leases in the field.

Q Would you describe that?

A Exhibit 1 here is a plat showing the leases in the field and they are composed of state leases, for example, and private individual leases in the field. Our centralization and automation

program is here, this is the initial proposed plan, shown in Exhibit 2, where we have one centralized facility, where there would be automatic custody transfer, and also your production from these leases outlined -- shown in green will come in and be controlled in the center.

We have two remote facilities where the oil will be tested and gathers and metered. I should say that the oil in this case, from each lease, will be metered before it enters the common storage point and remote facility, it will be metered before it enters and is transferred from the remote facility to central custody. This is the ultima[illegible] proposed system, or would be final for the lease that we have there provided development is complete for Shell's holdings in the lease.

Q What exhibit are you referring to?

A That's Exhibit 3.

Q And what do the colors represent, different leases on this lease on the different areas to be served, right?

A The colors represent the area served either by a central facility or a remote facility, and the yellow would be producing into this remote facility, and everything in this dashed area, here, would be transferred from the remote facilities into the central storage, central facility, treating facility, and tested, and in the other case; inside this area, it comes into this central custody transfer point, and the colors represent the remote or the origin where the test and control of the wells take place.

Q Now, referring again to the same exhibit, does that cover the entire area which is the subject of the application in this case?

A It does.

Q Now, are there any other significant differences between this and the Bisti system?

A No, sir. The only significant difference, as I said, is in the matter of allocation of production back to the leases from the central facility, from the central custody point. I can go into that a little more in detail.

Q I think if you would describe that a little more in detail.

A As I pointed out at Exhibits 2 and 3, the custody transfer point, represented by C and shown in green in the case of Exhibit 2, and in brown in Exhibit 3, brown and black or gray, those will be the custody transfer points where the oil is transferred from the production operator to the pipe line. The meters at those points will serve -- they will be the only metering points for all of the production from the leases in the area served by that custody transfer point. Now, the royalty payment for each lease will be based on its allocation, share of the total net production shipped from the central facility and determined by production meters from each of the leases. I should say production meters and samplers from each of the leases, pardon me.

Q You have automatic sampling and positive displacement meters for each lease, is that correct?

A Yes, sir, the automatic sampler would be the same as that

proposed in the Bisti report in that we will have, I should say, meter tickets.

Q Now, will you refer to Exhibit 4, if you would, please, when you get through there, and indicate the location of this equipment and then describe its operation briefly on the ticket system?

A Exhibit 4 is an exhibit showing one of the proposed remote control facilities or control stations. In this particular case, there are three leases coming into the control point, the Allen Estate, State "PC" and Record "A". Your production from your individual wells on any one lease is controlled at the remote location by the clock, and it is routed through a three-way valve into your individual separators is a P.D. meter and an automatic sampler. Production from this lease would go through its lease production separator, P.D. meter, and into a run tank, as we call it, for storage into the central facility. Production from another lease follows essentially the same route except that it goes through its individual production separator and P.D. Meter and sampler before it enters into what you call a comingling point or a common point to be transferred to the central facility.

Q Now, is this sampling equipment for each individual lease, is that under automatic operations? A Yes, sir.

Q Would you describe that briefly?

A The system -- I will go to the tickets then on that. Each one of the leases, for example, the one shown is No. 357. In your meter there will be a ticket number, a meter number, excuse me, this

ticket will be inserted into the meter and a handle is pressed down there and the ticket is fixed so that it cannot be taken out of the meter without being mutilated. On that you will have your meter number and the lease will be printed on there. The example shown is the State P.A. lease. The pumper just inserts it into the separator. The meter then will print out a barrel reading that is corrected to sixty degrees Fahrenheit, but it is not corrected for API gravity. It will give you a beginning barrel reading and ending barrel reading, and the difference will be the total production that flows from the lease in fluid. That, with the information which will be entered later, where automatic line sample is shown, with that information then, you will have the net oil run from the lease. Those will be provided, one for each lease.

Q And the automatic line sample comes up with correct figures, does it not, correct -- A Yes, sir.

Q Now, by this system, again referring to Exhibit 4, is it possible also to test the individual wells?

A Yes, sir, the test portion is shown in red on each one of these. Your production coming in at this point can be routed either through the production separator shown in brown, or if it is you wish to test this well, which is done automatically or manually, it is set to test automatically, but you have manuel testing too, any way, you want it, or any time. It follows this route through the test separator, P.D. meter and cut recorder. Now, on that, that is Shell's "phase-null" cut recorder, and I can go into that

with a little more detail. It is routed back by means of other valves and this is automatically controlled, whether you are doing it manually.

Your manual operation consists of just flipping a switch, so that this is still automatic on the lease and goes back through the production separator on the lease from which it came so that your meter all oil from a given lease, whether it is on test or on its normal flow period.

Now, you can only have one well testing at a time due to the way the control system is set up, but you can test at the same time that you flow regular production from the field. Then, you have an integrated gas meter and in your control house you record the lease number, the well number, the month, the time that the test is initiated and the time it ended. You have a time print, the gross fluid, and net oil, and your gas in standard cubic feet. Now, this can be printed as a total at the end of your test or on a rate basis.

Q Now, can it be set up so that individual wells are tested on a regular cycle?

A Yes, sir. It would normally be set up for that, but we will test regularly, once a month or oftener.

Q That cycle can be interrupted, can't it, for particular tests?

A Yes, sir, at any time.

Q For well tests you can set up a special test, is that right?

A Yes, sir.

Q And the test data you say is printed on a tape or graph of some sort?

A It is printed on a strip of paper is what it would be. It would be a tape. I might add at that point, that on our automatic test, we intend to test with the unit allowable. All of our wells are pumping, they all have the same allowable, and they are all making their allowable at the present time, but we will test on a unit allowable basis in that our equipment in the control house, when your production goes through the separator pumper, will set up the unit allowable plus this 25 percent allowance at the first of the month, in each one of the wells we will then test for that amount of oil and when that amount of oil is reached, we will go to the next test.

Q Will the system later on down the line, will it shut off when the allowables have been reached?

A You mean the lease allowable?

Q The lease allowability?

A No, we don't have any provisions. We don't feel it is necessary in your automatic system. Referring to Exhibit 5, from this point back, this is the central facility, and this is identical to that, except that it has more wells, and the other two control stations come in at this point. The system is, as I said, earlier, essentially the same as the Bisti Field, but at this point, at custody transfer point, we have provisions where the monthly allowable for all leases and all wells connected to the central facility

can't be overrun in a month, or daily allowables.

Q Do you have any comment or opinion on the accuracy of these positive displacement meters as compared to the ordinary tank guages, do you believe they are more accurate or less accurate?

A We feel that they are more accurate, or at least equally accurate to the closest controlled manual guages in tanks.

Q Now, this system is an entirely enclosed system, is it not?

A Yes, sir, it is.

Q Does that prevent the loss of volatile gases?

A It does. It intends to maintain gravity that is accrued.

Q Is that a significant factor in system of this type, the prevention of loss? A Yes, sir.

A Yes, sir. It is one of the basic advantages of a system of this type.

Q And does it thereby intend to prevent waste of crude?

A Yes, sir.

Q Is there anything unusual on the type of crude that is handled in this particular --

A No, sir, we know of nothing unusual at this point. There seems to be nothing. We have provided in our meters for corrosion resistant material, we don't expect corrision. It is just an added safety device.

Q Now, on Exhibit 3, you have indicated -- what is your present thinking on the expansion of the facilities? What actually may occur in the future is going to depend on a large extent on the

actual development in the field, is it not?

A That's correct.

Q And consequently, there may be some necessary variations on this proposal, is that correct? A Yes, sir.

Q Do you have any recommendation to make to the Commission concerning the calibration of the meters?

A On the custody transfer point, we have recommended the same as the Bisti, and that was one month's calibrating period in the lease custody, pardon me, the lease production meters. We are recommending that it be calibrated on through-put basis of a hundred thousand barrels of fluid. We have discussed this with meter manufacturers and representatives from other companies and we believe this to be a very conservative figure. The hundred thousand barrels is based on calibration data of meters under identical, for all practical purposes, conditions of metering, and it was in Louisiana and it was the experience of personnel making the calibration checks that your meter factor drift would be less than one-tenth of one percent if it was checked every one hundred thousand barrels.

Q Would you consider that within reasonable limits on the amount of drift?

A Yes, sir, we do. I would like to point out that any large area, if any meter -- malfunction of a meter will be noticed by the pumper at that time, from our monthly test data.

Q That would be immediately disclosed on your regular cycle of testing, would it not? A Yes, sir.

Q Would this meter go out of function because of time, or amount of fluid?

A No, sir. Time alone wouldn't wear out a meter, it is a matter of through-put.

Q And in your opinion, every hundred thousand barrels of fluid would be a reasonable time to calibrate? A Yes, sir.

Q Have you run any preliminary test on the accuracy or on the elements of the system?

A We have conducted limited tests on the Kimberlin lease. I will point that out here, where we have a producing well at the present time, and indications were on that, that we could except an accuracy of plus or minus two-tenths of a percent. We point out in our report several other cases under similar circumstances where the accuracies were within that range.

Q Have you received any objections from any of the adjoining lease owners regarding the installation of a system of this character? A No, sir, we have not.

Q Do you know whether or not the transporters are prepared to truck out of this central lease facilities?

A They are. It's presently being trucked out by Western Oil Transportation and they have indicated by letter that they do -- that they go along with our proposal.

Q Have you any experience or know of any experiences the company has had or other producers with other transporters in other parts of the country with similar facilities? There are similar

facilities installed in other parts of the country?

A Yes, sir.

Q Have you heard of any objection from transporters concerning such facilities? A No, sir, we have not.

MR. SETH: I would like to offer this.

MR. UTZ: This is entered as Exhibit No. 6? It will be so identified.

Q I hand you what has been marked as Exhibit No. 6. Is that the letter that you referred to from the current transporter there?

A Yes, sir.

Q We will offer this letter in evidence.

MR. UTZ: Do you want to offer this separately or all together?

MR. SETH: We can offer them all together.

Q Do you have any other comments, Mr. Montgomery, on this application proposal? A No, sir.

MR. SETH: That's all on direct.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Montgomery, I am referring to Exhibit No. 3. Each color on that exhibit represents more than one lease?

A No, sir. Some of them represent more than one lease and some do not.

Q And the little square within the unit designates the meter set-up as shown on Exhibit 4, does it not?

A That is correct.

Q And you are metering on the setup as shown on Exhibit 4 more than one lease? A Yes, sir.

Q Would there be any possibility of error in measuring the production from separate leases by having too many valves open on the header as you went through the test separator and going into the wrong meter?

A No, sir. There would be separate controls, I am sure that can't happen. And we do have suitable checks. There will be check valves in our system, in our header system so that you can't have them go back through into our other leases from one lease to the other.

Q What you are saying is that that will be prevented by check valves? A Yes, sir.

MR. UTZ: Are there any further questions of Mr. Montgomery?

BY MR. COOLEY:

Q Mr. Montgomery, let's try to summarize the exceptions from Rule 309 that Shell Oil Company seeks from this application. First, with respect to your automatic production and testing facilities as shown on Exhibit 4, I believe you propose to measure the production by means of positive displacement meters rather than in tanks, is that correct? A That's correct.

Q Further, you propose to accomplish this measurement of the lease in certain instances, at least? A Yes, sir.

Q And there will be a possibility, at least, in your request-

ing permission to produce more than eight wells into such measuring facilities? A Yes, sir.

Q And likewise, you propose to use a positive displacement meter for custody transfer from the operator of the wells, or leases, to the pipeline? A Yes, sir.

Q Or the purchaser of the oil? A Yes, sir.

Q In answer to one of Mr. Seth's questions, I believe I misunderstood you. Would you please tell me if this automatic custody or these automatic productions and testing facilities are so designed as to prevent the production of any given lease in excess of that lease's allowable?

A I am sorry, would you repeat that?

Q On Exhibit 4, I believe -- I will try it another way. You have a test separator for all leases producing into that system, and you have a separate production separator for each lease?

A That's correct.

Q And a separate positive displacement meter showing the exact amount of production from that lease?

A The amount of fluid, yes, sir.

Q Amount of fluid. With the testing equipment you can then calculate the amount of oil that has been produced from any given lease?

A From the automatic sampler and the meter, that is correct.

Q Now, all fluids will be constantly metered, is that correct?

A That's correct.

Q This will not be an estimate? A No, sir.

Q Now, is the system so designed to -- say the lease producing into the production separator on the far left, as shown on Exhibit 4, that lease has three wells producing into it as shown there, does it not? A Yes, sir.

Q And assume those three wells to be top allowable, when the production from that lease has reached, the allowable for that lease, the cumulative allowable, since we do prorate by wells, is the system designed to prevent any further production during that month from that lease?

A From that lease, no, sir. The only point that we have -- That is, at the custody transfer point, we have a numeral counter there, and as I pointed out, there will be tickets printed at that lease so that any over production at that time would be compensated for during the next month. That would be standard practice from the lease. Now, the central facility, for all wells connected to the central facility, there is a method, or it is designed to prevent over production being run from the central facility.

Q What do you mean by over production, the cummulative production?

A All leases and wells connected to the central facility.

Q Mr. Montgomery, is there some method which can be, or some facility that can be added to your present setup that will automatically cut off the production from the lease when it has achieved its allowable?

A Just as far as to all fluid is concerned, that could be, but we felt that it was unnecessary.

Q It seems very necessary to me that the lease be kept within its allowable. Similarly then, it would be impossible to prevent any given lease from producing its allowable plus the five days tolerance, is that correct, if you can't keep it within the allowable you can't keep it within the five day tolerance?

A If you mean automatically, that is correct. And Rule 502 provides that any oil produced in excess, plus the five day tolerance, is illegal oil.

Q I don't believe your company desires to produce illegal oil?

A No, sir, but we can shut down the lease manually at any time, and we do have a continuous record for all production from that lease.

Q Then, if this --

A It would be a case for the production department, our own operating personnel shutting down the lease so that we don't over run production from the lease then.

Q If this application were approved, subject to the condition that no lease will produce in excess of its monthly allowable plus the five day tolerance, it would be necessary to manually shut it off, at least until the time that that point had been reached?

A Not necessarily. As I stated before, we could put in equipment to shut it down on the fluid basis automatically. In other words, anything that we have at the custody transfer point, which

is a P. D. meter installation, could incorporate any shutdown equipment, could be incorporated at the lease point also.

Q Mr. Montgomery, let's assume for the moment that you are in charge of an operation where the production has produced into a tank, as has been the standard case up until the time of automation, and you go out to measure this tank to determine whether your well has produced its allowable or not, do you make a calculation as to what portion of the fluids produced is oil? When you measure this tank? You measure the oil to determine -- A Yes, sir.

Q Not the total fluid? A Yes, sir.

Q Similiarly, in this situation, you could, by a combination of the reading of the positive displacement meter for the given lease, combine it with the data you have --

A From the automatic sampler.

Q -- from the automatic sampler to determine what the total oil production at any given time has been from that lease?

A Yes, sir.

Q The time that this lease reaches its top allowable plus tolerance, it would have to be shut in? A Yes, sir.

Q Do you have any method of determining how much oil is in storage at any given time and whether that oil is attributable to lease "A" or lease "B"?

A We can determine the amount that would be in storage at any given time, and can attribute, or allocate it back to the various leases in the same manner that we would royalty payments for all

oil run from the custody point.

Q How do you determine the amount of oil from the storage system?

A The only point where you have, where you would have a varying amount of oil -- I presume you mean at the end of the month.

Q Especially in regard to the Bisti report on Form 115, the amount of oil sold and the amount of oil stored on the lease?

A We would have some in transit in our lines and also in our treating system, which could easily be calculated. The amount in our tanks would be measured by ground level gauges at any time, so that you have --

Q It would not be an insurmountable problem to determine how much oil you have above ground on the lease at any given period of time? A No, sir.

Q Mr. Montgomery, what will be the maximum number of wells producing into any control station as shown on Exhibit 4?

A Into any control station? It is hard to say. I can say what we have in our exhibit. We have sixteen shown into one. I will have to count them, I don't remember exactly . They are less, considerably less than thirty; I believe it is 21. I should say, as shown on Exhibit 4, but Exhibit 5, I believe, has the largest number of wells, but from this point, as I stated before, it is the same as the remote facilities. It's either this, I think it is this one or this one, if I am not mistaken.

Q That number, in any event, would be less than 30?

A Considerably less, around 20 or 22.

Q It would be possible to test each well at lease once during any given month? A Yes, sir.

Q How many wells does Shell Oil Company presently have completed capable of producing into this system, if it were approved?

A Six.

Q Six? A Yes.

Q All these wells will be producing from the same pool?

A Yes, sir.

Q And in this application you seek authority for the entire system as shown on Exhibit 3?

A That's correct. I believe we stated earlier that it might be modified to a certain degree.

MR. COOLEY: I believe that's all the questions I have, Mr. Examiner.

MR. UTZ: Are there any other questions? Mr. Nutter.

BY MR. NUTTER:

Q Mr. Montgomery, the area colored on Exhibit 3 is the area under consideration today. Is Shell the only working interest owner in that colored area? A That is correct.

Q How many separate royalty accounts are in that particular area?

A I don't have that information readily available.

Q Are there several royalty accounts represented though?

A Yes, sir, State and private interests.

Q How many private tanks owned by different individuals are

included in the area?

A That's covered in our letter of application. Just a second and I will count them. I believe it is 11, although I am not certain about three of them. That is the Record "A", the Record A and the Record B. Whether that is the same individual or whether it is in the family or not, I don't know.

Q Have you received approval from the State Land Commissioner for commingling of production from the various state leases that are included in this area?

A We have, with the exception of Section 2, which is the State "PH" lease.

Q Has Shell mentioned this proposal of commingling to the various other royalty interests in their --

MR. SETH: I could answer that better. The answer is no, we do not feel that it is necessary to get consent of the royalty owners.

MR. NUTTER: And yet there is no provision for determining whether a lease has been overproduced or not?

MR. SETH: We have a continuous record of the production on each lease, so there is certainly a way of telling whether or not it is.

Q (Mr. Nutter) You can tell how much a lease has produced, but there is no facility for shutting it off automatically?

A No, sir.

Q Mr. Montgomery, are these positive displacement meters that

you propose here the same type of positive displacement meters that were proposed for installation in the Bisti Pool?

A Yes, sir.

Q And that type of meter has been subjected to field tests, has it not?

A Yes, sir.

Q What system do you propose for the calibration of P.D. meters in this installation?

A Well, either dprover or tank or master meter, we haven't specified any one of them.

Q You will use either one of these two systems, however?

A Yes, sir, our custody transfer prover tank, and it is shown on the brouchure.

Q Mr. Montgomery, will this type of installation require less personal attention on the part of a switcher or pumper --

A Yes, sir.

Q -- than a manually operated system is required?

A Yes, sir.

Q Has any protection been provided against overflow of tanks or line breakage in the event that the switcher isn't around?

A We have all the safety devices but not on a flow line breakage. We have given some consideration to that, and our plans haven't been finalized on that point yet, but we do have high level and emergency flow switches in all of our tanks.

Q So that the tanks won't overflow?

A No, sir, we do not expect that at all.

Q Are these low pressure wells or high pressure wells?

A Low pressure wells, they are all pumping wells at the present time.

Q What is the minimum size of any of these leases, are there any 40-acre leases in this area?

A Yes, sir, they are single well leases up to full sections. I will have to correct that. Yes, I believe this one lease is practically two sections in size.

Q Now, the production from each separate lease will be metered separately in a remote controlled station, is that correct?

A Either there or at the central facility, in that we have a control station at the central facility as well as the remote points.

Q In other words, the production from a 40-acre lease would be going through one of these positive displacement meters at either the remote control station or central facility?

A Yes, sir.

Q Have you made any calculations as to the amount of time it might take for a normal unit allowable from one of these wells to go through one of these positive displacement meters in the event there was one well producing from the meter in order to get this hundred thousand barrels?

A It would be a considerable time.

Q Is this oil sweet oil? A No, I believe it is sour.

Q It might be a little corrosive, then?

A Yes, sir. As I pointed out, we have corrosion materials in

our meter but we are providing for that.

Q Mr. Montgomery, at the rate of thirty-seven barrels per day, it will take something like seven and a half years for a hundred thousand barrels to go through one of those meters. Don't you think the meter should be calibrated a little more frequently than that possibly?

A Well, we have recommended one hundred thousand barrels and we feel that a meter wears with through-put rather than time.

Q Even with corrosive oil?

A I think probably, but that is something we could check. I will state this, just as a standard practice, that we will -- naturally it is a new system, and we will be testing or checking frequently, and especially something like that, on our own.

Q In that event, Shell Oil Company would have no objection to the order that is entered in this case being similar to the order that was entered in the Bisti automatic custody transfer case in which the order merely stated that the meter would be tested or calibrated at intervals prescribed by the Commission, and at the time, the Commission felt that thirty days' test would be adequate, but left the door open for the operator and the Commission to change that length of time for calibration. If it became known that thirty days was too frequent to obtain the tests, would Shell Oil Company have any objection to an order like that?

MR. SETH: Well, if I may answer that, we wouldn't want to have that kind of an order because of the large number of meters,

and this situation is contemplated, if there is full development, as compared to the Bisti, there are many more meters here, and you will notice also that the automatic test cycling, every meter is really checked, every test cycle, and that, together with the fact that we are speaking about one hundred thousand barrels of fluid and not of oil going through these meters, we thought that that was sufficient. That is what the meter manufacturers say, and from other experiences in other areas, that was a frequent period of calibration.

Now, as I understand it, there is a varying amount of water here, but in some areas, it is quite large, so that the time factor that you indicated for oil would be somewhat less because we are talking about fluid, total fluid, through-put through the meters. Now, if the meters on the individual leases are calibrated every month, it's going to be quite a burden to do that, and as I pointed out, with the individual test cycle which is automatic, that is, a continuous switching from well to well automatically, we can compare that test data with the meter reading data and we can tell whether any meter is substantially out of kilter. Is that a correct analysis of it, Mr. Montgomery.

A To a certain -- I should like to say on that, that if we were required monthly calibration test of all of these meters, that that would nullify any gain that we would get through reduced labor cost. Practically nullify it, I should say.

MR. NUTTER: My only thought is that Shell Oil Company pro-

pose, Mr. Nutter, was on the automatic custody transfer, but I don't recall that we proposed any calibration period for the relatively few meters that the Commission asked to be installed on the non-participating areas on the Bisti, so we don't have much of a problem up there. As you can see, in this instance, with the large number of leases involved here, how many meters there will be. If the Commission -- we'll be happy to cooperate and run a series of tests and give them a history on these meters as we go along and see what the experience shows. I think experience is going to answer that question more than anything else.

MR. NUTTER: That was the purpose of the Bisti Order being written the way it was. Actually the order left the door open for changing the test interval, if experience showed that they were being tested too frequently.

MR. SETH: But our point here is that 30 days is too frequently on these lease meters in view of the amount of usage. I understand your point on corrosion, even if the meter is idle, but we would like to try it out on a longer period than 30 days or have a volume rather than a time, or whatever the Commission wants done, but not 30 days, if we can avoid it.

MR. COOLEY: Your position, then, Mr. Seth, is that Shell has no objection to provisions similiar to that in Order 1029 approving the Bisti system, only that you are pointing out that 30 days might not be a reasonable period in this instance.

MR. SETH: That's right. No, we think that the time should

be left open as Mr. Nutter indicated, because the situation may be different down here.

MR. NUTTER: How is the production attributed to any lease to be known except by the accuracy of the meter?

MR. SETH: Well, the accuracy of two meters really, that is the only way it is known.

A The meter and well testing information.

MR. NUTTER: I believe that's all.

BY MR. COOLEY:

Q Mr. Montgomery, there is a question about an additional meter, is that the meter shown on Exhibit 4 after the oil passes from the test separator? Would you point out the additional meter which you referred to? A Yes, it is the one.

Q It is your test meter? A Yes, sir.

MR. COOLEY: Thank you.

MR. SETH: I have a few more questions if there are no others.

MR. UTZ: I have one more.

BY MR. UTZ:

Q Mr. Montgomery, regarding an answer to one of Mr. Nutter's questions, I believe that you stated that there were no safety precautions taken at the wellhead to prevent excessive pressures or to shut in the well in case of linebreak or low pressures, is that correct?

A That's correct. There is none in the system as planned.

Q Could such automatic valves be installed to prevent the waste

of oil in case of linebreak between the wellhead and the metering equipment.

A Could there be, you say?

Q Yes. A Yes, sir, I believe so.

Q Can you say what was done in the Bisti as a result of the Commission's Order No. 1029 which reads, "Provided", and I read from the order "Provided further that each of the above described system shall be so equipped so as to prevent undue waste of oil and gas in event of malfunction of linebreaks?"

MR. SETH: If the Commission please, this witness is from the Roswell-Midland area, and the Farmington people handled the Bisti. We'll get you a written report on that if you like. That system is under construction now. I don't believe this witness is familiar with what construction --

MR. COOLEY: He testified that this system would be essentially the same as the Bisti.

MR. SETH: You are asking him what they have done on the ground, if I understand the question in the Bisti, in conformance with that order, and what variations on the facility have been made.

MR. UTZ: Well, Mr. Seth, if he can't answer the question, he can so state.

Q (Mr. Utz) Can you answer the question, Mr. Montgomery?

A No, sir.

Q (Mr. Utz) Would the installation of such equipment, in your opinion, be an excessive cost or an undue requirement?

A I'll say that it will be an added cost, and I would like to state that as far as we know now, we are almost certain that all of these wells will be pumping wells, which I am not sure about the Bisti, I don't believe that was the case entirely up there, and on the pumping well, we still have to have approximately the same amount of pumper supervision on this automatic system as we do in a normally operated system in that our stuffing boxes, and so forth, we still have that same problem which happens to be one of the big problems of the industry an a pumping well, so that our pumper will have to visit the leases approximately the same number of times as he would under a normal operating system. Our savings that I mentioned earlier are due to the testing time required. Some of the calculation time that is required while he is on the lease, and the measuring of his tanks and the gauging of his tanks.

Q How often will there be personnel present on the lease that would detect a linebreak? In other words, what I am trying to get at is, if a line did break, how long would it be before it was detected?

A I can't answer that exactly. I am not that familiar with the exact operation in that field or what it will be in the future. I think I stated in my last statement that I think it will be essentially the same for all practical purposes, that we won't lessen our supervision, I mean, the time on the lease of personnel, our operating personnal will be essentially the same. I would assume that that would be approximately once a day.

MR. UTZ: Are there any further questions of Mr. Montgomery? Mr. Seth, you may proceed.

MR. SETH: That was the question that I was going to ask him. I don't believe I have any more questions.

I would like to move the admission of Exhibits 1 through 6. I would like also to incorporate in the record in this case, the record in 1275, either completely or insofar as it is pertinent to the testimony that has been given here. It's part of the Commission's records, anyway. I don't know whether you need a formal motion on that or not.

MR. UTZ: Is there objection to the entrance of Shell's Exhibits 1 through 6? Is there objection to the entrance of the record of Case 1275 insofar as it is applicable to Case 1342?

If not, it will be so entered.

MR. SETH: It was just called to my attention whether the witness was sworn or not.

MR. UTZ: Yes, he was. Any further statement in this case? The witness may be excused.

(Witness excused)

MR. COOLEY: There is one statement in this case, a communication from Signal Oil & Gas Company, Los Angeles, California, addressed to the Oil Conservation Commission. Reads as follows:

"Signal Oil and Gas Company, as offset operator, hereby approved the application of Shell Oil Company for permission to install centralized automatic production facility and lease custody

transfer in certain of its leases in the Pearl-Queen Pool of Lea County, New Mexico and for permission to produce more than eight wells into common storage and to transfer oil from the leases prior to measurement. Signed Signal Oil & Gas Company, by N. E. Goodby, Chief Division Engineer.

MR. UTZ: Is there any further statement in this case? Case will be taken under advisement.

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 Hearing 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; the same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal, this, the 28th day of December, 1957, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

J. 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. 1342, heard by me on Nov. 20, 1957.

Examiner
New Mexico Oil Conservation Commission