

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
OCTOBER 7, 1959

IN THE MATTER OF: (CASES 1778 and 1779 Consolidated)

Application of Olsen Oils, Inc., for an exception to the over-production shut-in provisions of Order R-520, as amended by Order R-967, for four wells in the Jalmat Gas Pool. Applicant, in the above-styled cause, seeks an order allowing the following-described wells in the Jalmat Gas Pool to compensate for their overproduced status without being completely shut-in in order to prevent possible waste:

Cooper B Well No. 2, NE/4 NW/4 of Section 14, T-24-S, R-36-E.

Myers B Well No. 1, SE/4 NW/4 of Section 13, T-24-S, R-36-E,

S. R. Cooper Well No. 1, SE/4 NE/4 of Section 23, T-24-S, R-36-E,

Winningham Well No. 3, NE/4 SE/4 of Section 30, T-25-S, R-37-E,

All in Lea County, New Mexico.

Application of Jal Oil Company for an exception to the overproduction shut-in provisions of Order R-520, as amended by Order R-967, for seven wells in the Jalmat Gas Pool. Applicant, in the above-styled cause, seeks an order allowing the following-described wells in the Jalmat Gas Pool to compensate for their overproduced status without being completely shut-in in order to prevent possible waste:

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CASE NO.
1778

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I N D E X

<u>NUMBER</u>	<u>EXHIBIT</u>	<u>FOR</u> <u>IDENTIFICATION</u>	<u>OFFERED</u>	<u>ACCEPTED</u>
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Legal Well No. 2, NE/4 SE/4 of Section 21,)	
Dyer Well No. 3, SE/4 NE/4 of Section 31,)	CASE NO.
Jenkins Well No. 1, SW/4 SW/4 of Section 29,)	
Jenkins Well No. 2, NE/4 SW/4 of Section 29,)	1779
Owens Well No. 1, SW/4 SW/4 of Section 21,)	
Repollo Well No. 1, SW/4 NW/4 of Section 28,)	
)	
all in Township 25 South, Range 37 East,)	
and the)	
)	
Watkins Well No. 2, SE/4 NE/4 of Section 25,)	
Township 24 South, Range 36 East, all in Lea)	
County, New Mexico.)	

BEFORE:

Mr. Elvis Utz
Mr. Oliver Payne

TRANSCRIPT OF PROCEEDINGS

MR. UTZ: Case Number 1778.

MR. PAYNE: Case Number 1778. Application of Olsen Oils, Inc., for an exception to the over-production shut-in provisions of Order R-520, as amended by Order R-967, for four wells in the Jalmat Gas Pool.

MR. GIRAND: If the Commission, please, at this time my name is and has been for some time, W. David Girand. I am appearing on behalf of the Applicant, Olsen Oils, Incorporated. At this time we would like to dismiss the two wells, Cooper B Well Number 2 in the NE NW of the Section 14, Township 24 South, Range 36 East, and the Myers B Well Number 1 located in the SE/4 of the NW/4 of Section 13, Township 24 South, Range 36 East.



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As attorney for the Olsen Oils Company, I also represent the Jal Oil Company, the Applicant in Case Number 1779, and at this time I move on behalf of both of the Applicants, that the two cases be consolidated for the purpose of offering testimony, as the exhibits in the one case, in any of the cases, will have some reference to the other cases involved. The issue before the Commission is one as to the manner in which the two applicants will be allowed to produce these wells, and their trouble is uniform and related; it is a matter of water encroachment in the method of production.

MR. UTZ: For the purposes of testimony in this case, Case 1778 and 1779 will be consolidated.

MR. GIRAND: May the record show that Case 1778 was called.

MR. PAYNE: Yes, let the record so show.

MR. GIRAND: Now, in regard to Case 1779, in regard to the Notice on the Legal Well Number 2, there was an error which was not discovered early enough to notify the Commission and re-advertise, and the Section is shown to be Section 21, when in truth and in fact the well is located in Section 31. And the Watkins Well Number 2 SE/4 NE/4 of Section 35, and it is shown in the advertisement as Section 25. I consider these errors to be insignificant in light of all of the other identifying wording in the application, because anyone going to a map or familiar with the area could locate Legal Well Number 2, as well as Watkins Well



Number 2, and I do not think the errors are such as to mislead or confuse anybody.

MR. UTZ: Mr. Girand, do you possibly have an error in regard to your Jenkins Number 2?

MR. GIRAND: In regard to Jenkins Well Number 2, Mr. Examiner, I'm going to withdraw that application; I'm just trying to take one thing at a time. I want to get my description corrected first, and then as to the Jenkins Well Number 2, the NE/4 SW/4 of Section 29, we dismiss or withdraw that application.

MR. UTZ: Is there objection to the correction, and correction in applicant's decision of Jenkins Number 2?

(No response.)

MR. UTZ: The application will be so amended.

MR. GIRAND: Mr. Examiner, I have two witnesses; I would like to have them sworn at the same time.

(Witnesses sworn.)

MR. GIRAND: I would like to call Mr. West. Mr. Examiner, it will be necessary for these cases to be put on well by well, to a certain extent, until we get a rather far-reaching and over-all picture, and we will offer testimony at this time in regard to the Winninghan Well Number 3.

MR. UTZ: All right, sir.

J O H N W. W E S T, a witness called by and on behalf of the

Applicant, being first duly sworn, was examined and testified

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as follows:

DIRECT EXAMINATION

BY MR. GIRAND:

Q Will you state your name, please, sir?

A John W. West.

Q Where do you live, Mr. West?

A Hobbs, New Mexico.

Q Mr. West, have you had occasion to testify before the Oil Conservation Commission in the past?

A I have.

Q In what capacity?

A As engineer.

Q And you have done that on several occasions?

A Two or three occasions, I believe.

Q Is the Commission satisfied with Mr. West's testifying in that capacity?

MR. UTZ: Yes, sir, satisfactory.

Q (By Mr. Girand) Mr. West, I've handed you there an exhibit identified as Exhibit Number 1, will you state what that exhibit represents?

A That's a map of part of the Southeast of Lea County, New Mexico; it has Township 25 South, Range 37 East in total, and part of the surrounding townships.

Q You are familiar with the applications filed by the Olsen Oils Company, Incorporated, and Jal Oil Company?

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A I am.

Q Does that map identify the questioned wells?

A Yes, sir, they are outlined in red.

Q Now, the wells belong to, or being considered in the Olsen Oil, are identified in what manner?

A They are identified by the red circle.

Q I believe -- check your map there -- I believe they are underscored in red, are they not?

A Oh, yes, I see what you mean, they are underscored.

Q And the wells involved in the Jal Oil Company are circled in red?

A Right.

Q Now, the larger circled wells are the Olsen Oils wells, and the smaller circled wells are the Jal Oil Company wells, is that correct?

A That is correct.

Q Directing your attention to your Exhibit 1, will you locate the Winningham Well Number 3?

A Winningham Well Number 3 is located in the NE/4 of the SE/4 of Section 30, Township 25, South, Range 37 East.

Q Do you know of your own knowledge whether or not that is in the Jalmat Gas Pool?

A Yes, sir, it is.

Q Now, at this time I would like to call for the exhibits as I have them identified, rather than run the hazards of omitting



them.

MR. UTZ: All right.

MR. GIRAND: At this time we would like to offer Exhibit Number 1.

MR. UTZ: Without objection, it will be accepted.

Q (By Mr. Girand) Directing your attention to the exhibit containing two pages, marked Exhibit 2, will you state what that exhibit represents?

A Well, the graph represents the line pressure that was, that El Paso records show they maintained on the line that was taking the gas from the Winningham Number 3; and the other graph is the monthly production drawn in graph for the years the last part of 1958 and the first part of 1959. It is drawn graphically by the month, and then with the red pencil it has been put in the average pressure and average production for the two years, this information all being taken from records of the El Paso Natural Gas Company in Jal.

Q So I understand your testimony, the solid line is the production line, is that correct?

A That is correct.

Q And your broken line is the operating pressure of the line?

A That is correct.

Q Now, you have attached to that a memorandum, more or less in the nature of a legend; would you explain to the Examiner



the contents of that legend?

A Well, we have tabulated the pressure that the well had in 1959, we do not know what it was in 1958 on this particular well; and we have the means of lifting, which in this particular case was a pump jack, and the date that the pump jack was installed, and the estimated amount of water that it was producing in 1958, and the actual amount of water producing in 1959 by accurate gauge, and the amount that the well was over-produced as of July 1959.

Q Mr. West, did you have occasion to visit the well location?

A Yes, sir, I did.

Q Briefly state the mechanical setup, or how the well is being produced.

A Well, it's being produced now by regular rods and pump jack, and operated with an electric motor.

Q Now, the casing pressure and tubing pressures shown on the exhibit for October 1959 --

A That's right.

Q -- did you make those tests yourself?

A I did.

Q And the estimated water being produced to date, from what records did you obtain those?

A Well, it was estimated from the Jal Oil -- I mean, the Olsen Oils' records for 1958 to 1959 was from actual gauge take in the field.

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Q Now, at the time you investigated the property, was a pump jack operating at that time?

A No, it was off at that time.

Q And on what day did you examine the property?

A The day before yesterday; what's today?

Q October the 5th, Monday?

A October the 5th, right.

MR. GIRAND: We would like to offer Exhibit Number 2.

MR. UTZ: Without objection, it will be accepted.

MR. GIRAND: Will you step down at this time, sir?

I would like to call Mr. Watson.

D E W E Y W A T S O N, a witness called by and on behalf of the Applicant, having been previously sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. GIRAND:

Q State your name, please, sir?

A Dewey Watson.

Q Where do you live, Mr. Watson?

A Jal, New Mexico.

Q By whom are you employed?

A Olsen Oils, Incorporated.

Q How long have you been employed by them?

A One year.



Q And prior to your employment with Olsen Oils Company, by whom were you employed?

A Jal Oil Company.

Q Mr. Watson, have you testified before the Oil Conservation Commission in the past?

A Yes, sir, I have.

Q In what capacity?

A As engineer.

MR. GIRAND: Is the Commission satisfied with Mr. Watson's qualifications?

MR. UTZ: Yes, sir.

Q (By Mr. Girand) In what capacity are you employed by the Olsen Oils Company?

A Geologist and engineer.

Q Mr. Watson, I direct your attention to the Applicant's Exhibit Number 1, and ask you if you are familiar with the well designated as the Winningham Number 3, located in the SE of the SE -- NE of the SE of Section 30-25-37?

A Yes, sir, I am.

Q Just what has been your association with that well?

A Well, when I went to work for Olsen Oils Company originally in 1950, the well had been drilled and I have been associated with it all except about a year and a half since that time.

Q And during the last year, you've had absolute control



over the operation of the well, is that correct?

A Yes, sir.

Q Now, has that well continuously produced at all times since you have been employed by the company?

A Yes, sir, except for brief periods whenever the well would die.

Q Now, did the well die in recent months?

A Yes, sir.

Q At the time the well died, how was it being operated?

A It was operating on a free piston installation.

Q And what caused it to die at that time?

A Well, the El Paso line pressure, and also it was shut in at the time for test.

Q And after the shut in period, were you able to bring the well back?

A No, sir, we could not.

Q Did you ever swab the unit on the well at that time?

A Yes, sir, we did; not continuously, but for about ten days.

Q And were unable to bring the well back with that method?

A It would not continue to flow; it flowed for a few hours and then died.

Q In your opinion, and your knowledge of the well, what caused the well to die?

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A Excess water production.

Q Now, did the company decide to change their method of producing gas from this particular well?

A Yes, sir, they did.

Q What were the changes they made, and how were they arrived at?

A We decided to put on a conventional pump jack and pump the fluid up.

Q Digressing just a moment, the production of gas in this Jalmat Pool where they have encroachment of water by the use of pump jacks, floating pistons, and such other mechanical devices, do you know who instigated that type of production procedure?

A Well, sir, the first piston was put on the Winningham Number 3 by myself in 1955.

Q And then in regard to the use of the pump jack for the removal of water?

A The pump jack was installed by Mr. Olsen in 1953 at the Repollo, originally.

Q Since you have been in business, out of school, has your practice and your trade been primarily conducted within the Southeastern portion of New Mexico?

A Yes, it has.

Q And you are familiar with the Jalmat Pool?

A Yes, sir.

Q Based upon your knowledge, was the Olsen Repollo well



the first well that was attempted to be produced in this manner?

A Yes, sir, it is in Southeast Lea.

Q Now, how long has the Winningham Number 3 been producing with a pump jack?

A The pump jack was installed the 23rd of September, 1959.

Q And has it been pumping continuously up until the 5th of October, 1959?

A Yes, sir.

Q Has the Winningham produced any gas during that period?

A Yes, sir, it has.

Q Do you know when the first gas production was obtained after the pump jack was installed?

A The first gas produced was about five days after we got the pump jack on; it didn't pump up, and we had trouble getting it to pump up, it was around the 1st of October.

Q It took approximately 5, 6 days in order to unload the hole where the gas could buck the water, is that correct?

A Yes, sir, it did.

Q Now, on October the 5th, did you cause the Winningham Number 3 well, the pump unit to be shut in?

A Yes, sir, I did.

Q And how long did it remain shut in at that time?

A We shut it in at 8:45 on the 5th, and it was shut in until 7:20 the next morning, the 6th.

Q Mr. Watson, I hand you what has been designated,

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identified as Applicant's Exhibit Number 3, would you state for the record what that exhibit represents?

A This is a photostatic copy of a chart taken from El Paso Natural Gas Company meter on the Winningham 3 Well.

Q On what date was it removed from the meter?

A It was removed at 7:20 A.M., 10-6-59.

Q and does this chart cover the entire producing cycle of the well since the pump jack was put in operation?

A There was approximately four hours production prior to this chart.

Q And I note that the exhibit showed a date of 10, 1st, and '59; was that the date after production had been obtained?

A Yes, sir, that's the day that they change the charts, the first of the month.

Q Now, in your own words, and based on your knowledge of the well, would you explain for the benefit of the Commission, what the chart shows?

A Well, starting on 10-1-59, I have calculated roughly, and that is subject to some correction, but it would be very close to the . MCF produced, and it is 608.4 MCF. Now, that's visual reading of the chart, and the average producing rate.

Q Now, was that production, how was that production obtained, I mean --

A The well --

Q -- how was your pump set, your choke, and the line



pressure?

A The well was pumping normally, and the choke on El Paso's line was opened, and I believe it is either a quarter inch or three-eighths; now which one it was, I do not have any way of knowing. And the line pressure at that point is steady, and it is around 70-pounds.

Q All right, proceed, sir.

A Now, on the second day at approximately 10:00 o'clock, reading this chart, we pinched the choke back; now just exactly how much it was pinched back, I pinched it back until we got a drop on El Paso's chart to see if it had any effect by pinching the well in at a lesser rate of production.

Q All right. Now, what does the chart show in regard to that?

A Well, it shows a steady rate of production on that particular choke, at a lesser rate than what it was when it was wide open.

Q Against what pressure?

A It is the same pressure, it was about 70 pounds.

Q Now, was the choke altered or changed or readjusted in any way from that time on until October the 5th when you shut in your pump?

A No, sir, it was not, it was left the same.

Q As a matter of fact, it is in the same condition today, is that right?

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A Yes, sir.

Q All right. Now, turning to the chart and particularly to the fifth day shown on the chart, which would be October 5th, 1959, at approximately 8:00 o'clock thereabouts, what occurred at that time?

A The pump jack was shut down.

Q Now, by the shutting down of the pump jack, what happened, as shown by the chart?

A Well, over a period of approximately 24 hours, the gas decreased steadily, as shown by the chart. I made some notations on that chart, and it dropped from approximately 557.7 MCF down to 155.1 MCF in about, in approximately 24 hours. Now, there is one thing I would like for you to note. The decrease from the time it was shut in until along about 6:00 o'clock that evening there, and due to some cause or another, El Paso's line pressure has a slight increase, it is not very much, it is just one sharp division on there, which would be less than 5 pounds, and you can see the critical point there where the gas flow just drops right on down from 425.9 to 206.8 MCF. Now that holds true for all of these wells in the area under the similar circumstances as Jal Oil Company's and Olsen Oils too. And the same effect is felt on the free pistons installation, any slight degree of change will cause the well in some instances to just die, and if that raises more than 15 pounds, you have to be pretty close to the well or it will be dead. Of course, on the pump jack installation, it

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would be necessary to swab it, and we just start the engine up, but from this I would say that we are going to have to operate the pump jack continuously to keep the production, keep it on the line.

Q In regard to this particular well, the Winningham Number 3, do you feel that the experience that you have had in regard to the production of this well, after the placing of the pump jack, and then the cutting off of the pump jack as you did here, and as shown by your Exhibit Number 3, that that would be the result that would occur to any new well that will be required to be shut in for any time?

A Yes, sir, I feel that that would be the case.

Q Well, based on the exhibit, you know that would happen in the Winningham?

A Yes, sir.

Q And once the well is shut in, your experience shows it requires five or six days continuous pumping in order to lift the water?

A Yes, sir, it does.

Q Basing your answer on your knowledge of the field, if the water is allowed to encroach and fill up in the well bore, what in your opinion might happen to the gas reservoir underlying this particular acreage?

A Well, there is no question in my mind about it being damaged, and it is probable it would be lost completely.

Q Do you believe that the shutting in of this well would



result in the protection of correlative rights?

A Not --

Q I'll ask that another way. Do you believe that the continuous operation of the pump jack and the production of this well in the manner as you originally started here in October of 1959, is a proper way to produce that well in order to protect correlative rights, and to prevent waste?

A Yes, sir, I do.

Q And do you feel it is necessary for the efficient operation of the well?

A Yes, sir.

Q Now, Mr. Watson, approximately what was the cost in round figures to the company in order to install pump jack facilities, and the other operations that were required in order to put the Winningham Number 3 on a production basis after the shut in?

A Our AFE, which is authority for expenditure, was in Oklahoma City office for approval, was \$5584.84, however, I'm sure it cost over that due to some mechanical difficulty.

Q Now, Mr. Watson, during the past six or seven years, you have been associated either with the Jal Oil Company or the Olsen Oils Company, or R. Olsen, have you not?

A Yes, sir, I have.

Q And as such you have had under your supervision not only the Winningham Number 3, but other wells that are the subject

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matter of this application consolidated?

A Yes, sir, I have.

Q The methods and modes to be employed in order to produce gas from these wells where they have the encroachment of water, have been a matter of study and continual trial and error on operational matters, has it not?

A Yes, sir, it has.

Q Do you feel that through this experience and your close observation of the area that it will be necessary for the Olsen Oils, Incorporated to continually operate the pump jack, and that the well be excused from being shut in --

A Yes, sir.

Q -- in order to protect the reserves?

A Yes, sir, I definitely do. Along that line it seems we have developed a cycle on those wells as they were drilled; originally, they made very little water and there was a period of three or four years the fluid increased to where the well would have to be blown down or swabbed off. Now, after the free piston installation on the Winningham Number 3 specifically was installed, it flowed four years and eight months in that manner, and now I feel and think that from what we know of the other wells that are in the area, that we are concerned with, the problem will come about in the same manner, I mean, they'll probably flow for a year or two years, or whatever time is left for those things, and then a pump jack will be necessary in the wells that we have on

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this application; and going ahead a little bit on one of Olsen -- one of the Jal Oil Company wells, the Repollo Number 1, the pump jack was installed on it in 1953, and at the present time, under the same operating conditions that it has operated under in those six years, there is no production out of it as of now. It may be that that's a little longer, or a little shorter, but I would say that's a pretty good indication of how long these wells will pump.

Now, our water problems in these other wells may not be quite as acute as they were in the Repollo originally, but I think that that will give us all an idea of what is going to happen in the future as far as all of these wells are concerned.

Q Well now, in regard to the Repollo well, since you made that comparison, the Repollo well stopped producing in January, I believe, and became logged up in January, is that correct?

A I believe it is.

Q Of this year?

A Yes, sir; started its downhill climb in December.

Q Now, since that time, have you essentially attempted to obtain production from that well?

A Yes, sir, it has been pumped in the same manner it was before; in fact, last week the pump was removed in order to check to see if it was still in good operation.

Q Other than that, it has been a continuous operation?

A Run continuously, yes, sir.

Q And after employing those methods, you have not been



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able to produce any gas into the El Paso line?

A That is correct.

Q Now, is that a low pressure line?

A It is not considered a low pressure, it is a 70-pound line, which is the lowest pressure on their intermediate and high pressure gathering system.

Q It is an intermediate line --

A Yes, sir.

Q -- to which it is connected. Do you feel that the experience that you have had in regard to the Repollo well would be a pattern that could be anticipated reasonably for all these wells that have water encroachment?

A Yes, sir, I definitely do.

Q I'll ask you this: Has the Winningham Number 3 up to the present time responded in a like manner, or acted in a like manner, to the Repollo well during its course of decline?

A Yes, sir, it has. It has followed the same pattern. I would like to say the Winningham didn't have as much water to begin with as the Repollo did, but production has continuously dropped, and the pressure has dropped at the same time.

Q Well, the characteristics, the producing characteristics are compatible?

A Yes, sir.

Q And it is your opinion that it is only a matter of a short period of time until the well has exhausted itself --



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A Yes, sir.

Q -- through the methods employed?

A Right, it is just a matter of time.

Q Now, is it also your opinion that in the event the Commission should see fit to shut this well in, that the reservoir gas attributable to the Winningham Number 3 would be lost to the operator?

A Yes, sir.

Q Does that by any stroke of the imagination imply that this reservoir would be available to any other operator in the area?

A I do not think it would, no, sir; I think it would be lost completely.

Q It would then constitute a waste of that reservoir, whatever it might be?

A Right.

Q Now, do you have any production records in regard to the Repelle Well during the period of time it was allowed to produce, as to the amount of gas after your pump jack was installed until January of this year?

A Well, when it first, when it first started the pump jack up, it was flowing at the rate of 800,000 cubic feet a day, and it has continuously gone downhill from that point.

Q Would you estimate that the production from that well has been in the neighborhood of one billion cubic feet?



A Yes, sir, since 1953, it has been in the neighborhood of one billion. There is one other point I would like to point out. This is a well, if you will look at Exhibit Number 1, it is in the Section 31, 25, 37.

Q 38, isn't it?

A No, sir, this is the Covington Federal Number 2 that I'm referring to, it is not on our application at all. This well, just to go back on a little history, R. Olsen purchased that well from Jerry Covington, I believe he got it from him.

MR. WITZ: Which well was this?

A NW of the SW/4 of Section 31. It has "Jal Oil" written right below it. That well was purchased by R. Olsen from Jerry Covington, and we went in and we worked it at considerable expense and had a pump jack installed on that well as he did the Repelle Number 1; and at the time that I'm speaking of, it was producing approximately half a million cubic feet of gas into the intermediate El Paso line, and due to State regulations for testing a well, El Paso went out and shut the well in for a period of less than 72 hours, they were taking a 72-hour shut-in pressure on it, they shut the pump jack down and were testing the well, and Mr. Olsen found out that they shut it in, contacted them, and started it up, and as of this day there has not been any comparable amount of gas produced in that well as to what it was before. We went in after I went to work for the Jal Oil Company, went back in and reworked the well, it cost about \$16,000.00, and at the

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present time the production is 3 to 8 barrels of oil per day, plus a very small amount of casing head gas, with no indication of the pressures that we originally had. Now that's, I mean, that is what can happen if they are shut in.

Q During that period of time, and in your capacity as an employee of Jal Oil Company and the Olsen Oils Company, Incorporated, Olsen Oils, Incorporated, do you recall occasions where exemptions have been given the company in regard to the Repollo Well, allowing it to produce for as much as one-year period at a time?

A Yes, sir, they are.

Q Without limitation?

A Right, there are.

Q I believe that would be recognized by the prior secretary, Mr. Macey, is that true?

A Yes, sir, that's correct.

Q Was there also an opinion expressed by one of the Commission engineers, Mr. Stanley?

A Yes, sir, it is.

Q At this time for the purpose of the record, we would like to introduce Exhibits 4, 5 and 6, being copies of letters written by the Oil Conservation Commission, or its agents and representatives, and the original copies of these letters should be in the Commission files; since all of these were not addressed to the applicant, we have no way of establishing or verifying the

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particular exhibits, however, they were furnished to us out of the files of the El Paso Natural Gas Company.

MR. UTZ: Without objection, Exhibits 4, 5, and 6 will be accepted into the record.

MR. GIRAND: I might state to the Commission, the purpose of that evidence is to show the recognition of the problem of the producers on the part of the Commission back as early as 1955, when they were having trouble with the Repollo well.

Referring to Exhibit Number 7, which was July 27, 1957, this letter deals with two wells that are involved in the hearing here, the Ebo Owens Number 1, and the Jenkins Number 2. Ebo Owens was shut in by regulation, and the Jenkins was not producing because of the fact it was logged up, plugged; it goes, Mr. Examiner, to the overall condition existing down there among the wells that are producing water, or fluid.

Your April 22nd letter, being Exhibit Number 8, covers the Ebo Owens Number 1 and the Watkins Number 2, which are both involved in this hearing, as one of the consolidated cases.

The Exhibit Number 9 deals with a recognition of the condition of the Dyer Number 3, the Legal Number 2, the Jenkins Number 1, the Repollo Number 1, in the Jalmat Gas Pool, and in which the purchaser, the common purchaser to which these wells are connected, suggested some exemption be obtained from the Commission, some relief, to keep these wells from logging up because of the encroachment of fluid.

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MR. UTZ: I note we have reference to Jenkins Number 2; again I would like to clarify that again. Do we have a Jenkins Number 2, or --

MR. GIRAND: No, sir, it is withdrawn, but we intend to use a chart on it, if the Examiner please, for the basis of comparison.

MR. UTZ: Is there a Jenkins Number 2 well in the Jalmat Pool?

MR. GIRAND: No, it is in the Langley-Mattix, but it is simply cited from the standpoint of water, and when it gets in on the gas, it has the same characteristics, that's what they tell me. We would like to offer at this time Exhibits 4 through 9.

MR. UTZ: Without objection, Exhibits 4 through 9 will be accepted.

MR. GIRAND: Did I offer Exhibit 3?

MR. PAYNE: I do not think so.

MR. GIRAND: I would like to include Exhibit 3 in our offer.

MR. UTZ: It will be accepted. Are you about through with the Winningham and the Legal, and are going to others?

MR. GIRAND: I'm going to the L. R. Cooper.

MR. UTZ: I would like to ask a few questions.

MR. GIRAND: I have no desire to encumber the record, but we have copies of the minimum contract test on the Winningham Number 3 for years '57, '58 and '59. Now, these are a matter of

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record in the Commission docket, and if we can just refer to them by reference, tend to show the operation and the result of the text made. Off the record.

MR. UTZ: Off the record.

(Discussion off the record.)

Q (By Mr. Girand) Mr. Watson, I'll ask you whether or not the El Paso Natural Gas furnished you certain copies of their records down at the Jal office pertaining to the Winningham Number 3 well?

A Yes, sir, they did.

Q And they are actual records on that particular well that they maintained?

A Right.

Q I hand you here what has been identified as Applicant's Exhibit Number 10. Would you explain to the Commission what that exhibit represents?

A This is a minimum contract test taken by El Paso periodically on all wells that they are tied into for their contract pumps. They are used for their records to show them how the well is progressing, whether they are decreasing or what have you on their gas production; and it is taken very similar to the deliverability test required by the Commission, it is a similar test.

Q Now, I hand you here what has been marked as Applicant's Exhibit Number 11, and ask you if that is a similar report

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for the year 1958? What was the Exhibit 10 report for, what year?

A 1957.

Q And Exhibit 11 is a report for the year 1958?

A Yes, sir, it is.

Q And the same answer would be given to the same questions if I interrogated you in regard to Exhibit 11?

A Yes, sir.

Q I hand you what has been identified as Applicant's Exhibit Number 12.

A This is --

Q Go ahead, what does that exhibit represent?

A This is a minimum contract test as of 1-16-59.

Q Now, if you were asked the same questions in regard to that exhibit, that you have been for exhibits 10 and 11, would your answers be the same?

A Yes, sir, they would.

Q Now, I hand you here what has been identified as Applicant's Exhibit Number 13, and ask you to state what that exhibit represents?

A Well, this is actually a deliverability test, required by the Commission. It was run in March of '58.

Q And that is a report that is actually filed with the Commission, or a copy of that report?

A Yes, sir. Now, this is El Paso's form, and it is on 122-C, I believe, is it not?

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Q What year does that cover?

MR. UTZ: Yes, sir, this is, I would call it 122-C.

Q (By Mr. Girand) What year does that cover?

A That is 1959, March 1959.

Q Now, is the same information reflected on that report as is reflected on Exhibit 12?

A It is not identical, no, but similar. I do not know exactly what the difference is.

Q Well, based upon your experience in the field, is the information that appears on Exhibit Number 13, is it acquired from the information, and acquired and shown on Exhibit Number 12?

MR. UTZ: If counsel will permit, I believe I can clarify that.

MR. GIRAND: If the Examiner knows, I'm satisfied; I wouldn't know.

MR. UTZ: If Exhibit Number 12 is calculated deliverability on a 100-pound deliverability pressure, and 13 is 80 percent of shut-in pressure?

A Yes, sir.

MR. GIRAND: At this time we would like to offer Exhibits 10 through 13.

A There is one other thing on those tests that it will show; there is no doubt in this case that there is fluid intrusion at shut-in pressures most of the time from 24 to 72 hours decrease, rather than increase, on those tests.

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Q (By Mr. Girand) Mr. Watson, I hand you here a copy of an exhibit identified as Applicant's Exhibit Number 14; will you advise the Commission what that exhibit represents?

A This is a letter from El Paso Natural Gas Company's Jal office to Olsen Oils in Jal, pertaining to the Winningham Number 3, and it states that:

"Gentlemen: We are unable to produce your Winningham 3 within 30-25-37, in the Jalmat for the following reasons: 'logged off'. When this situation is corrected and the well is ready to be produced, please contact this office."

And then in remarks it says:

"This will confirm Mr. Stanke's telephone conversation with your office May 15th, 1959. Mr. Stanke advised your office that the above well was found apparently logged off with fluid and would need to be unloaded before normal production could be resumed. Thank you for your cooperation."

Q Now, after that notification, did the company get that well back on production?

A May '59, yes, it was.

Q Then I hand you here what has been marked Applicant's Exhibit Number 15, identify what that exhibit represents.

A This is a letter almost identical to the other one, except that it is July 24th, 1959; the other one was in April, I believe, was it not?

Q May.

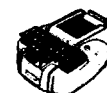
A May. And it's Winningham Number 3, and it is unable to be produced on account of being logged off.

Q Then during the interval between May the 20th, 1959, when you received this notice as shown by Exhibit 14, and the

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notification you received on July 29th --

A 24th?

Q -- 29th, I believe -- 24th, which is shown on Exhibit 15, the Winningham Number 3 had logged off again, is that correct?

A Yes, sir, it had and the only explanation for it is excess line pressure, I mean, the pressure went up on their line.

Q The pressure went up on their line. Now, at that time you were producing the Winningham Number 3 with the floating piston operation, were you not?

A Yes, sir, it was.

Q And you have now determined that you cannot produce that well in that manner?

A We cannot.

MR. GIRAND: We would like to introduce Exhibits 14 and 15 to show the frequency of the interval in which the water was encroaching on that particular well.

MR. UTZ: Without objection, they will be received.

Q (By Mr. Girand) Now, basing your answer on your knowledge of the Jalmat Gas Pool, and in particular the location of the Winningham Number 3, can you state whether or not you have an opinion as to whether or not gas reserves still underlie the land allocated to the Winningham Number 3 Well?

A Yes, sir, I think there are some reserves under it.

Q And is it the company's thought in the matter that those reserves are of such an extent that it would be worthwhile

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of going to the expense in an attempt to produce it?

A Yes, from the experience we have had on the Repollo Well, it is justified to go ahead with the extra expenditure.

Q Now, basing your answer on your experience and qualifications, do you believe that the Winningham Number 3 can be produced at a lesser rate than the rate inaugurated by you in September of 1959 when you installed the pump job?

A I do not think it can be brought down any better satisfactorily, no, sir.

Q Any curtailment of that production, in your opinion, would result in loss of reservoir?

A Yes, sir.

MR. GIRAND: I believe that's all we have to offer on the Winningham Number 3.

MR. UTZ: Mr. Watson, the rates you just spoke of, is that the rate shown on the Exhibit Number 3?

A Yes, sir.

MR. UTZ: Now which rate are you speaking of, the 608.9, or the 557.7?

A I was thinking of the 557.7 figure.

MR. UTZ: That would be roughly 1700 MCF a month?

A Yes, sir, it would.

MR. UTZ: That rate is substantially below your average allowable for the past year, is it not?

A You mean the average monthly allowable?

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MR. UTZ: Yes, sir.

A Yes, sir.

MR. UTZ: It is also well below the average rate for the average allowable for the past six months, is it not?

A I believe it is, yes, sir.

MR. UTZ: That rate is also substantially below the rate that you have produced the well over the last year, is it not?

A I would have to have the figures to answer that question as far as -- I do not have them in front of me.

MR. UTZ: You do not have any of the allowable production figures available to you?

A Not right this minute, no, sir.

MR. UTZ: Are you familiar with them, if I stated you a figure that would be close, would you recognize it?

A I believe I could.

MR. UTZ: According to your calculation, Commission records the average allowable for the past year was 5896; therefore, your request will be substantially below that?

A 5896 represents what figure now?

MR. UTZ: The average allowable for the past twelve months.

A Per month?

MR. UTZ: Yes, sir.

MR. GIRAND: If the Commission please, I have some figures here that have been presented by the home office on that,



which if the Commission will allow Mr. Watson to refer to --

A These were prepared in the Oklahoma City office, is that correct?

MR. GIRAND: If he may refer to the memorandum, it has the figures that the office determined.

MR. UTZ: Well, all I'm trying to establish is that your requested rate is substantially below your previous allowable, which would enable you to make up your over-production at a reasonable rate?

A That 557.7 MCF would be per day; do I understand your question, 5,896,000 MCF per month?

MR. UTZ: Yes, sir.

A That figure of 557.7 ----

MR. UTZ: Is a daily figure.

A -- is a daily figure, yes, sir.

MR. UTZ: Monthly figure, using that daily figure, would be roughly 18,000 MCF per month, would it not?

A Right, would be 18,000, I believe; figuring it on a 30-day month, it would be about 16,000.

MR. GIRAND: Mr. Examiner, may I ask a question or two?

MR. UTZ: Yes, sir.

QUESTIONS BY MR. GIRAND:

Q In that connection, Mr. Watson, the well has to be produced based on the amount of water it is making, is that correct?

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A I think that is very evident from this chart that we presented, Exhibit Number 3, and it dropped from a producing rate after the pump jack was set down, from 557.7 MCF per day, to approximately 155.1 MCF per day, and it still showed a decline; so I would think that from that information that if it is shut down, it is going to go clear to zero and not produce at all.

Q The productivity of the well is contingent upon the happening of the two things: One removing all of the water, and the water that the line pressure has to buck, is that correct?

A Yes, sir, that is correct.

Q So at this time, or at any given time, producing the well under the methods that you propose to produce it, can you arrive at any particular allowable that the well should be tied to?

A No, sir, I do not think so. I mean, the water has to be removed, we know that.

Q And the speed in which it is encroaching on the well, leaves it undetermined as to how much water you have to produce from day to day?

A That is right.

Q By the same token, you have no control over the line pressures, so the variation in the line pressure can have quite a marked affect on the amount of gas the well is capable of producing into the line?

A Yes, sir; even though this well, if it was put back in the 250-pound line, the gas production would be very little,



would be considerably less than what it is at 70 to 100-pounds.

Q This application, Mr. Watons, is not an intent and attempt to ignore the allowable rules of the Commission, it is based entirely on a conservation matter to prevent waste and protect correlative rights, is that correct?

A Yes, sir, it is, in my opinion.

Q And as set forth in your application, and exemplified in your testimony, is the only method where those rights can be protected?

A Yes, sir, there is no way of making it flow primarily on its own gas. It has to be mechanically lifted, the water does.

MR. GIRAND: Mr. Examiner, I wanted to bring that out, in the light of your question. That's all I have at this time.

MR. UTZ: Mr. Watson, in regard to your Exhibit 3 again, at the time you spoke of the line pressure increasing approximately 5 pounds, you also had the pump jack shut down, did you not?

A Yes, sir.

MR. UTZ: Now, wouldn't it be reasonable to assume that your decrease in production was due more to the pump jack being shut down, than the 5 pound increase in line pressure?

A No, I don't think so.

MR. UTZ: Your well would be logging up, would it not?

A It is logging up, that is true, but I think the



suddenness of the decline is evident there, because after we shut down, it established a pretty normal curve; if you will draw a line through the median of that hashed line as it goes up and down there, you come up around 4.2 on the chart where it was, where the line pressure, and the corresponding place the line pressure went up and you had a drop down to approximately 2, and it almost went to zero when that line pressure went up, and that is true of all those wells on pistons. I wish I had some more charts to show that, because any time that line pressure varies even the slightest amount, all those wells have a tendency to do the same thing, and that's what I was trying to do in that thing.

MR. GIRAND: You are referring to Exhibit 3?

A He is.

MR. UTZ: Does this well produce any more water at a higher rate of flow than it does at some lesser rate of flow?

A That we have not determined, that is something we need to find out.

MR. UTZ: All that is necessary to keep this well, to produce gas, is to keep water out of the production formation, is it not?

A Yes, sir.

MR. UTZ: As long as you are pumping the water out of the producing formation, then how would the rate of flow be affected?

A Let me back up a little.

MR. UTZ: You are pumping at a rate here of 23 barrels



a day?

A Yes, sir.

Q If the rate of 23 barrels a day, keeps the formation clear of water, then why would you have to produce it at a higher rate in order to keep the formation clear of water, rather than a lower rate?

A As you clear the formation of water, you naturally get more gas; if you keep it clear, that's the history of all these wells. Now, let me refer you to this Exhibit Number 2, if I may. In 1958, the El Paso line pressure was higher than it was in 1959, they lowered the line pressure in January of '59 approximately there; if you will look at that production curve, you will see that that thing is dropping at the end of '58 at that higher line pressure, and immediately when the high pressure was lowered, the productivity came back up, and the only explanation I have for that is that the well was flowing, is capable of lifting that water on its own with the aid of the free piston, and keeps the well from being logged off; whereas at a higher pressure, it was not able to do so.

MR. UTZ: Yes, sir, but you were using a free piston, a free piston was being used under these conditions, as shown in this exhibit rather than a pump jack --

A Right.

MR. UTZ: -- and --

A Right, and at the end of '59 you can see a sharp drop

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to where we got to 853 MCF during the month of August; I mean, the well is no longer capable of producing any more gas mechanically under the pistons, that's the reason we put the pump jack on it, and I feel that over a period of time, the same conditions are going to exist with the pump jack. We are flowing at a higher rate of flow now, in the progress of time the volume will decrease the same as it did on our piston, even though you keep the water off all the time.

MR. UTZ: Do you have any idea how much water the well was producing with the free piston during 1958?

A Well, I didn't personally make any test on it, but I would assume that it is neraly the same as the pump production. I mean, it would have been for the well to keep flowing. It is probably less than that, it would probably be a lesser figure.

MR. UTZ: Close to 20 barrels a day?

A Yes, sir, I think it would be.

MR. UTZ: The well was producing through tubing at that time?

A Yes, sir, it was.

MR. UTZ: Is it producing through tubing now?

A It is producing through both the tubing and the casing; we are turning the water into a high pressure separator and it is separated, and the gas, if any comes out through the tubing, goes into the sales line the same as the gas out of the casing.

MR. UTZ: You are pumping some gas out with the water?



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A Yes, sir.

MR. UTZ: Both pumping and flowing, whatever it is?

A Yes, sir.

MR. UTZ: And the balance of the production is through the annulus?

A Through the annulus, that's right.

MR. UTZ: The rate you are requesting here, it will never be possible for the well to ever get into balance?

A Well, what about the increase in allowable due to the winter months as far as El Paso's end of it, the sales end?

MR. UTZ: That would about triple demand in order to equal what you are asking for?

A Yes, sir, we are asking, at the rate that they will keep producing.

MR. UTZ: Your maximum production from over the past year has been 17,048 MCF per day; did you have any water trouble during that production rate?

A Yes, sir.

MR. UTZ: And that was when you had the free piston and all?

A Right, the free pistons were installed shortly after it was completed.

MR. UTZ: And you don't feel you can reduce that rate with the pump jack installed?

A Well, I would be willing to try, but I don't think



it would last. If this follows the history of the free piston, in a matter of time this production here is going to be down even though you produce the water at all times the way we are now. Now, I don't think, in my opinion, this is not a sustained rate of production, it is going to drop, it is going to follow a decline curve as it did on the piston to nothing.

MR. UTZ: Any other questions of the witness?

MR. PAYNE: Yes, sir.

CROSS EXAMINATION

BY MR. PAYNE:

Q Mr. Watson, what is the rate that you propose for this well, as a minimum rate to keep from having these water problems?

A Well, as far as a minimum rate is concerned, at the present time we don't know exactly what it might be.

Q Are you asking for capacity production?

A If that is what it takes to keep the water off, yes.

Q And your application asks for relief for this well under Rule 10, I believe, of order R-967?

A Yes, sir.

Q Let me read the composition of that Rule:

"The Commission may allow overproduction to be made up at a lesser rate than would be the case if the well were completely shut in, upon a showing at public hearing, after due notice, that complete shut in of the well would result in material damage to the well."



Does that indicate to you that the intent here is that overproduction should be made up, but simply at a lesser rate than if the well were completely shut in?

A Well, we know what will happen if the well is completely shut in, we feel we do.

Q Now, all of these wells in this flank of the pool have water problems, do they not?

A Yes, sir.

Q So do you feel that when a pool starts making water, that the well should be exempt from proration?

A It is possible that would be the best solution for everybody. This to me is a very similar situation to a water flood project, it is a natural water flood, no question about that; but, I mean it is acknowledged in an oil pool, a water flood project, that if the water is allowed to be produced, if the oil is allowed to be produced at a capacity of the well, there would be more oil ultimately recovered than if that well is restricted by an allowable.

Q It is recognized by whom?

A Well, I think it is pretty standard throughout the industry that unrestricted allowables are given or transferred to the wells in a water flood project.

Q Have you read various technical articles by the Humble engineers?

A I can't tell you that I have, no.



Q Well, to pin it down then, unless market demand from the Jalmat Pool goes up considerably, and nominations go up accordingly, it would never be possible to bring this well back into balance?

A I can't say that it wouldn't be possible, because the production that we have at the present time is not going to continue at that rate even with the pump jack; it is just a matter of time, it may be 4, 5, 6, or 7 years before that thing is completely gone.

Q Before the well has to be abandoned?

A Yes, sir.

Q Well, now, referring to your Exhibit Number 5, which deals with a different well, deals with the Repollo, I notice a statement here by Mr. Stanley, he says:

"Furthermore, it will only be a matter of time whereby the Commission will cause the well to be plugged and abandoned."

Now, of course it is always a matter of time until the well is plugged and abandoned, but assuming you were producing this well at capacity, when do you think it will have to be plugged and abandoned?

A I think we are faced with the Repollo at the present time; it is 6 years.

Q Let's get back to the Winningham.

A I think that these other wells will follow along in the same general pattern. Like I say, it may be more or less years,



I don't think any of us can sit here and say. My guess is that it would be longer than six years, due to the lesser water in the Winningham; that area was severely drained in the beginning of the pool by some of the older wells originally drilled in the pool.

Q This well is making some 23 barrels of water per day?

A Yes, sir.

Q Was it making that back when you produced your maximum, was it making that much water in July of '58?

A To my knowledge, I don't know whether there was any accurate water test taken on it or not; I couldn't say how much water it did make.

Q Well, you feel then that your production rate has to be geared to the amount of water that the well is making?

A Very definitely do. I mean, what we have done and gone through, I don't see any other way to approach the subject and still get the reserves that are there.

Q What deliverability does this well have?

A It is 366 MCF, I believe, is the last deliverability test. Now, it is very difficult to obtain an accurate deliverability test on all the wells that are on piston.

Q You say this well does have tubing in it?

A Yes, sir, two and a half inch tubing.

Q Does it have a blow-down string?

A It's got a string of sucker rods. See, it is on pump at the present time.



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Q Now, referring to Exhibit Number 6, which I believe your counsel introduced to establish the fact that relief has been granted to some of these wells in the past, due to water problems, I would like you to read the last paragraph:

"Both you and the transporter, El Paso Natural Gas Company, should attempt to produce the well in such a manner that the overproduction is made up as soon as possible."

Under your proposal, do you feel that overproduction will be made up as soon as possible, or is it just not possible?

A Well, if in our opinion we are not damaging the well, I think we'll be entirely willing to go along with anything that the Commission desires to reduce it, if it is possible.

Q But at this time you feel that the 17 or 1800 is the lowest rate, or 18,000?

A I think it is in that neighborhood, yes, sir.

MR. PAYNE: Thank you.

MR. GIRAND: If the Commission please, I would like to make a statement here. We are saying according to our Exhibit 3 that that would be the rate of recovery of gas, as shown on just the early test. This well has only been on pump since the last of September, what the decline or rate of decline will be, we don't know; we are not seeking any given fixed or set allowable, no, sir. We are calling the Commission's attention to a water encroaching situation, and asking this Commission to give us relief from it so as to allow us to protect our reservoir.

MR. PAYNE: Let me ask you this, Mr. Girand, while



you are not proposing any set figure, as I gather from the testimony of your witness, you would not be satisfied with an order that said, that provided that well would be allowed to make up its overproduction by producing say at 50 or 75 percent of the average monthly allowable for the preceding six months proration period?

MR. GIRAND: Mr. Payne, we don't know that we can protect our well and our reservoir, and produce a well in that manner. I believe if you'll recall the testimony of the witnesses in both the Continental case and in the El Paso case heard at the September 30th hearing, they both withdrew that part of their application, amended that part of their application, which dealt with a percentage of allowable, because we are dealing with an unknown. Now, there is another factor to be considered in these cases. These wells are overproduced because they have, previous to the May check, been produced as marginal wells. There had been no effort on the part of either the transporter or the operator to arrive at any conclusion of what the production practice should or should not be. Basically, I feel that making the test, and under your rules, that your rules can be unfairly exercised, because on any given day on any given proration month, if that happens to be the day a well is investigated, and if it happens to be a day in which the nominations are unusually low, a well could be overproduced more than six times, based on that particular day; when the following month it might be underproduced.

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MR. PAYNE: We don't go by the day.

MR. GIRAND: I understand, but I'm referring to the rule that was adopted by the Commission.

MR. PAYNE: Well, it is based on a month.

MR. GIRAND: Yes, and we are willing to work along with the Commission in any way possible. We just say let's don't take an action here that will destroy our reservoir and our property. If the Commission wants to take another look at what we have done at a later period, that's fine, but right now, give us a chance to find out what we are doing; and we came forward with the best we could get in the period of time we had. We had one well here that we have been able to go from a piston type operation over to a pump jack, we have been able to furnish the Commission with a record of that well, not conclusive, it is too early to tell, but at least it shows that these applicants are coming before this Commission with clean hands, we are trying to do something. Right now, our opinion is we can't be shut in without loss of reservoir, and we have been messing with producing gas this way for more -- since 1953, and we feel that we are fairly qualified on this type of method of production.

Now, we have not gone through the elaborate detail of furnishing factual information as to what the ratio would be, what we can do, how much we can choke a well down, how much we can't, we are dealing with something that any inexperienced handling of could easily result in the loss of our reservoir. So we got to

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have some relief in order to prevent waste and protect our property.

MR. PAYNE: Let's proceed to the next well.

MR. UTZ: I have a couple of more questions. Getting back to your Repollo well, what was the history of water production on that well which you say is virtually in the stage of abandonment at this time? Did the water production increase as the gas production decreased?

MR. WATSON: After a period of time, yes. Now, when that well was originally drilled, it was drilled in April of 1950, and I came out here in September of '50, and prior to that time, I'm not familiar with what the actual completion, I mean, how much it made on the initial completion, but all the records and the initial deliverability test show that the well did make a considerable amount of water. Now, the water has increased, I mean, it did increase as the gas decreased until the pump jack was put on, and then in a manner similar to this Winningham, the gas rate increased to approximately a million and a half a day after they got it unloaded and pumped off, it was allowed to produce a million and a half to a million eight hundred thousand a day. During that period that I was talking about, on this exhibit, and since that time, it has not been able to produce at that rate with the pump jack operated continuously; the only time the well has ever been down, to my knowledge, is whenever there is something mechanically wrong. Once in a while we have to change the electric

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motor, or the lighting would knock it out, and the pump had to be changed, so the water was increasing as the gas decreased, definitely.

MR. UTZ: Well, you had to increase the strokes per minute on your pump, increase the rate of withdrawal?

MR. WATSON: Yes, sir, when we originally put it on, we had a real small pump jack on it in 1953, and a small pump, inch and a half pump, I believe, and after so long a time, in 1955 we had to install a larger pump jack and put it on electricity to keep it on all the time, and a larger pump was installed, and I'm not sure of the date, but some time since 1955, a volume producing pump has been put on, capable of producing 650 to 800 barrels of water per day, and that's the way it has been producing since that time.

MR. UTZ: If your rate of water increases as the rate of gas production decreases, then it would seem that your water encroachment is not sensitive to gas production?

MR. GIRAND: Mr. Examiner, we have not had the exhibit on that yet, and if I may, I think the witness may be a little confused on your question. My understanding, while the well was a sitting well, the well was consistently producing water, is that correct?

MR. WATSON: Yes, sir, when the well was first put on, they pumped the water and the gas out through the tubing, and while we were doing that in the Winningham, and at a later date it

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got to where no gas was coming out of the tubing, and it was pumped right straight to the pit as it is now. The water that comes out of the tubing goes straight to the pit, though no separation; it comes out and into the pit, and the only gas production is produced through the casing, and at the same time the well did, up until it died here, it produced water and gas out of the casing.

So the gas, the pump jack was lifting the maximum amount of water that it could lift, and the water was being lifted by the gas out of the casing, and as long as that amount of water is lifted from the tubing it is all right, which is a tremendous amount of water.

MR. UTZ: The hearing will be recessed until 1:30.

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AFTERNOON SESSION1:30 P.M., WEDNESDAY, OCTOBER 7, 1959

MR. UTZ: Did you want to continue with Mr. Watson:

MR. GIRAND: I think that's all we have to offer in that particular case, the Winningham. Of course, we have offered some evidence in regard to the Repollo, but then we will cross reference it, expedite it as much as we can. I would like to have Mr. West back on the stand.

MR. UTZ: The hearing will come to order.

DIRECT EXAMINATION (Continued)

BY MR. GIRAND:

Q Your name is John West?

A Yes, sir.

Q You are the same John West who appeared in the morning session, testifying in regard to the Winningham Number 3 Well?

A Yes, sir.

Q Mr. West, I direct your attention to Exhibit 1 before you there, and ask you to identify the location of the S. R. Cooper Number 1?

A S. R. Cooper Number 1 is located in the SE/4 of the NE/4 of Section 23, Township 24 South, Range 36 East.

Q Now, Mr. West, did you have occasion to inspect the property known as S. R. Cooper Number 1?

A Yes, sir.

Q On what date did you make that inspection?



A October 5th, this year.

Q In connection with your inspection, did you also make certain checks and tests in regard to that particular well?

A That is right.

Q I hand you Exhibit Number 16, that has been identified as Exhibit Number 16, and ask you if that exhibit was prepared under your supervision?

A Yes, sir, it was.

Q Tell the Commission what the exhibit purports to show?

A This, as in our previous exhibit, shows the average production and the monthly production from the solid line graph, and the average line pressure each month that was on the El Paso lines; this information was taken from the El Paso records in their Jal office, and we have indicated here for you the type of lifting, which is a free piston, and we did not have any records as to what the casing pressure was in 1958 or tubing pressure, but October the 1st 125, tubing pressure 110, and the estimated production of 15 barrels in October 1958; but the water, we still have it lifted as estimated, 16 and a half was an actual field gauge on that, and overproduction as of August 1959 was 20,630 MCF.

Q You actually went upon the premises and inspected on August the 5th?

A Yes, sir.

Q I beg your pardon, October the 5th, 1959?

A Right.

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Q Was the well producing at that time?

A Yes, sir, it was producing.

Q And the water that was required to be lifted per day was 16.5 barrels per day?

A That's right.

MR. GIRAND: We would like to offer Exhibit Number 16.

MR. UTZ: Without objection, it will be accepted.

MR. GIRAND: That's all the questions we have from Mr. West in regard to that well.

CROSS EXAMINTION

BY MR. PAYNE:

Q Mr. West, how did you measure the water?

A It was measured in the tank, actual gauge tank.

Q It flows into the tank, and then you run it out, is that it?

A That's right. Flowed in there and measured, and then released.

MR. UTZ: Any other questions of this witness?

(No response.)

MR. UTZ: If not, he may be excused.

MR. GIRAND: I would like to call Mr. Watson, please.

DIRECT EXAMINATION (Continued)

BY MR. GIRAND:

Q State your name, please.

A Dewey Watson.



Q Are you the same Dewey Watson who was on the stand here this morning in regard to the Winningham Number 1?

A Number 3, yes, sir.

Q Number 3. Mr. Watson, what if anything have you had to do with the production of S. R. Cooper Number 1?

A The well was reworked in 1955, under my supervision, and I have been associated with it over a year and a half since that time.

Q Now, in your association with the well, are you familiar with the producing practices that have been employed in order to produce the well?

A Yes, sir, I am.

Q What and when did the well go off natural flow, as a gas well?

A There was an intermitter installed on the well immediately after it was reworked in 1955, however, there was not a free piston installed until January of 1958.

Q And was the installation of the free piston under your supervision?

A Yes, sir.

Q And has it been produced, being produced at the present time by the use of the free piston?

A Yes, sir, it is.

Q Based on its past history of production and the influx of water, and the producing methods you are now employing,

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what is your opinion as to whether or not the well would be maintained and the reserve exhausted, if the well is allowed to be shut in at any time for any appreciable length of time?

A Well, I think it would permanently damage the formation; whether it would completely kill the well or not, I don't know.

Q Now, in installing your free piston method, how does that free piston work? Is that set on a time basis for operation of dumping every so often by time, or by volume, or how do you work it?

A Well, it is in reverse of what we would normally use on an oil well installation; the well is allowed to flow, the intermitter opens up, and it is allowed to flow for a period of time, say as an example three hours, and it, during that time the well is flowing gas and water through the tubing, and the piston comes to the top and is held up there by the flowing pressure; and the intermitter closes in for, we try to give it about 30 minutes for that piston to go back to bottom, which the tubing has a setting nipple and a stop at the bottom of the tubing, and the piston goes back to bottom and travels through the water that has accumulated in the tubing as the well flows, and in 30 minutes it is opened back up and produces say for another three hours. Now, and that has to be adjusted as the water increases and the pressure goes down, you have to flow more often to keep the well on production.

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Q Since the installation of that piston, has the company watched the well closely to protect against the well logging off by adjusting the interval and the operation of the free piston, or not?

A Yes, sir, we have.

Q And at the present time, do you feel that the interval that the piston is allowed to operate at the present time, is the one that would afford the maximum operation of your installation?--

A Yes, sir.

Q -- obtaining the maximum of your gas reserves?

A Yes, sir, right now it is.

Q Do you anticipate that in time the wells will be required to be converted to artificial lift, such as a pump jack?--

A Yes, sir.

Q -- in order to raise the gas?

A Yes, sir, I do.

Q Have you had occasion for this well to be shut in in the past?

A It has been shut in, yes, sir.

Q When the well has been shut in in the past, what was required of the operator in order to bring the well back on production?

A We've only had to swab this well one time; we've only swabbed it one time since the piston was installed.



Q When you swab the well, does that require your moving in a swabbing unit --

A Right.

Q -- go through that expense?

A Right; right.

Q How long would the swabbing unit have to stay on the location?

A In the neighborhood of four hours.

Q Now, do you have any way of determining within reasonable bounds, how long you would be able to continue this well with the mechanical method you are presently using, that's your free floating piston?

A Well, the only basis that we have is the experience that we have had with the other wells that have already gone on pump, just as the Winningham 3, and it flowed on the free piston for approximately, it was four years and eight months, and I assume that this well will follow the general pattern; it may be less or more.

Q Well, are there any other determinative factors involved such as the line pressures the well has to produce in, or the encroachment of water, are they to be considered?

A Yes, sir, they very definitely are. If at any time the line pressure goes up, you reduce your volume of gas and water both; and the more water that comes in, which is maybe slow but it is steady in this case here, well, it will have to be lifted.



Q Do you believe that the method you are now employing in the production of the S. R. Cooper Number 1, to be a method designed to protect the correlative rights and to prevent waste of the reservoir?

A Yes, sir, I do.

Q Do you feel that a shutdown of this well could result in a loss of the well or the loss of reserves?

A Yes, sir.

Q You previously testified in regard to the Winningham Number 3, and to some extent the Repollo Number 1, and if the same questions were asked you in regard to the S. R. Cooper Number 1, as were asked you in regard to the Winningham Number 1, insofar as their applicability to the method of production, would your answer be the same or similar?

A Yes, sir, they would.

MR. GIRAND: We will pass the witness. I would like to withdraw that.

Q (By Mr. Girand) Mr. Watson, I'm going to hand you here Exhibits Numbered 17 through 23, and ask you to identify those, if you will, please.

A Exhibit Number 17 is a letter from Gas Engineer, El Paso Natural Gas Company, Edward Maybe to Aaron Cummings, who was then employed by Olsen Oils Company. This is December the 9th, 1953, and it states there that:

"We were unable to run a minimum contract test on your Jenkins Number 1 and S. R. Cooper Number 1 on date scheduled,



November 9, 1953. The Jenkins 1 was logged off, and would not produce into our line; the S. R. Cooper Number 1 well had valve leaks.

"If remedial work is done on these wells, please notify our Dispatching Department when well is ready for production."

Well, I think this will have more to do, as far as the wells are concerned, to the Jenkins Number 1 than it would be to the S. R. Cooper Number 1. I would like to refer to that, or defer it until the Jenkins Number 1 comes up.

Q Well, we will refer back to it on the Jenkins Number 1.

A Exhibit Number 18 is a minimum contract test taken by El Paso on March 8, of '57, and I think you'll note there on the tubing data, when the 24 and 48 and 72 hour tests were taken, the 72-hour test was 2 pounds less; the shut-in pressure test was 2 pounds less than it was at the end of the 48-hours, which indicates fluid. I believe that's -- and it's -- I would like to note there it is a fairly low rate of flow even at that early date in '57.

And Exhibit Number 19 is a minimum contract test run on 7-19-57, and here again the shut-in pressure follows the same pattern. It built up the first 24 to 48, and then drops at the 72-hour shut-in test. And the open flow deliverability is a little bit higher than it was in the other well, it is 175 against 182 on the last test.

And Exhibit Number 20 is another test run on March 14th, 1958, and that was taken after the free piston installation in January. And I think the significant thing there that this shows is the fact that the tubing and casing pressures are higher on

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the shut-in, which to me means that the fluids, due to the piston installation, have been removed from the well bore, giving it a better chance to flow. And the shut-in pressure on the 48-hours was lower, and then it came back up to its maximum on the 72-hour; and also the rate of flow is increased over the previous tests from approximately six months before.

Exhibit Number 21 is another minimum contract test, taken on 9-15-58, and here again it follows the same general pattern as the others except the flow rate drops from 205 MCF down, or the deliverability of a hundred pounds comes from 205.90 to 206.8 MCF.

And Exhibit Number 22 is a deliverability test taken in February of '59. This has been reported to the Commission on 122-C, and the casing head pressure here and the tubing pressure shut-in there is in the shut-in zone. This is just a rate of flow, and then your deliverability calculated from your 80 percent. I would like to call attention to the fact that there is only a deliverability of only 52.54 MCF at 80 percent, which is very low, and as I mentioned before, it is very difficult to take a real accurate test on a well of that type when it's on piston.

Exhibit Number 23 is a minimum contract test taken on February the 20th through the 27th of 1959, and the shut-in pressures here again go back to where it was before we installed the piston, the 24-hour build-up, the 48 is higher, and then it drops again on the 72-hour, which indicates to us that the water is catching up with the free piston installation to a certain



degree, and I think that is further evidenced by the low rate of flow which is 72 MCF, and the deliverability was 801 MCF, which there is a correction on it, should be 80.1 instead of 801.

Q That's on Exhibit 23?

A Yes, sir.

MR. GIRAND: With the Examiner's permission, we would like to make a correction on that exhibit.

MR. UTZ: Is that .8?

A 80.1. As you can see, that's getting to be a pretty low rate of flow, as far as commercial production is concerned. However, the well seems to be doing better than this would indicate as far as actual production is concerned. I believe that's the significance of those exhibits.

Q (By Mr. Girand) In your opinion, would the operator take on an undue risk and loss of the well if the operation of the well would change in any manner?--

A I certainly think it would, yes, sir.

Q --including the removal of artificial lifts?

A Would you state your question again?

Q I say, such as removal of the artificial lifts of one kind or another?

A Well, if we removed the artificial lifts, the well would be dead, I'm sure.

Q And if it were shut down for any period of time, in your opinion would the well be dead forever?



A It is very possible it would be.

Q Do you have anything to add to your testimony, Mr. Watson, in regard to the S. R. Cooper Number 1?

A Nothing except that I think it's -- I mean, we can consider that it will follow the same pattern that the Winningham Number 3 did, in requiring a pump jack at a later date.

MR. GIRAND: That's all the questions we have. We would like to introduce the Exhibits 17 through 23.

MR. UTZ: Without objection, they'll be accepted.

QUESTIONS BY MR. UTZ:

Q Mr. Watson, after your test of February 27th, '59, the minimum contract test, was it necessary to swab the well?

A No, sir, it was not.

Q I note on these tests that without exception your highest shut-in pressure is from 48 to 72 hours, is that correct?

A Well, on this last one, the highest shut-in pressure was 48 hours, and it dropped at the end of 72. Now, the one previous to that, the high shut-in pressure was 72 hours, and it dropped from 48 to the 24; and the one previous to that is the same situation. Now, this is right, this is about two months or sixty days after the installation of the free piston, and I think as I noted the pressures the surface pressure increased considerably over the pressures that were taken before; the next test back they come from 488 to 670 pounds. Now, that can only mean to me that the water has been relieved from the bore that had been



accumulated in the bore, and I think in '59 it shows it is going back to the same situation it was on the intermitter, showing that the water is overtaking the method of lifting.

Q You are producing this with free piston and intermitter?

A Yes, sir.

Q And your shut-in period on the intermitter is 30 minutes?

A I have not got the exact time, but I know it is right close to 30 minutes, it will not be more, it might be less.

Q With only a 30-minute shut-in on the well, the shut-in pressure would be substantially less than it would be for these 24, 48 and 72-hour shut-ins, wouldn't it?

A Yes, sir, it is.

Q And even with that amount of buildup, your free piston is operating satisfactorily, lifting the load of water?

A It is except for one exception, from the one time we had to fish it out and swab it, it was dead.

Q If you allowed the well to be shut-in a little longer and build up a little more pressure, wouldn't it still lift?

A I assume it would, I mean as far as knowing for sure, I wouldn't know until I tried it; I imagine that's something we would be willing to do.

MR. UTZ: Any other questions of the witness?

MR. PAYNE: Yes, sir.

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CROSS EXAMINATION

BY MR. PAYNE:

Q Mr. Watson, I notice you don't have an intermitter chart on this well?

A No, sir, I do not.

Q Now, you testified that this well was reworked in 1955, what was done to it?

A We were producing out of open hole prior to that time in the Yates section. All those forms and everything are in the Commission files, and there was a 4-inch liner run and a portion of the Yates section perforated and fractured.

Q Now, you also testified that this well was shut in at least on one occasion, why was it shut in then?

A It was shut in to take the minimum contract test, and this is different periods that we have here; it was shut in on all those occasions.

Q Do you have any idea what the reserves are that are left under this tract that are dedicated to this well?

A Not exact figures, no.

Q Would a pressure production decline curve tend to show what reserves are there?

A I think it would be an indication, yes, that's all.

Q Now, since you have not run an intermitter chart on this, what do you feel this well has to produce to avoid premature abandonment, the average for the last twelve months?

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A Well, under the existing circumstances, the way it is producing right now seems to be the only way it will keep the water off.

Q Now, by "right now", you mean to the, say the last month that you have the production history on?

A I mean we feel that under the present operating conditions, that we are operating it as best we can.

Q Well, how much did it produce the last month that you have records on?

A Well, let's see here.

MR. UTZ: You can have access to Commission's records here, if you care to.

A Well, we have them right here. I'm taking a minute to look at them. Well, according to this figure here, we have produced 4,301,000 MCF for the month of September.

Q (By Mr. Payne) 4,301,000?

A Yes, sir, I think that's a relatively new figure; yes, it is. It has not been entered. And the August production was 2,675,000.

Q All right, sir. Now, taking the 4,301,000, let's see, that would be a little over 4,000 MCF, right?

A I would like to make a correction. That is not production, that is allowable for August and September, rather than production.

Q You do not have the production figure?



A I do not have the production figure for that.

MR. PAYNE: Do you have the production figure?

MR. UTZ: Not for September.

MR. PAYNE: What's August?

MR. UTZ: The production figure we have for August is 5421.

MR. GIRAND: MCF?

MR. UTZ? Right.

A Yes, sir, that is correct.

Q (By Mr. Payne) Now, I believe you testified in answer to Mr. Girand's question, that your answers in regard to this well insofar as the same were applicable, would be the same as in regard to the previous well, the Winningham well?

A Yes, sir, it would.

Q Now, I believe you testified in regard to that well that you felt that a water drive field and a secondary recovery project should be governed generally speaking by the same rules and regulations, is that right?

A Well, I said insofar as the allowable was transferred and allowed to produce at capacity on those wells.

Q Well now, in an actual water drive field, that's not in the process of secondary recovery, do you know of any that are allowed to produce at capacity?

A No, sir, I don't. In Texas they are given an unrestricted allowable on numbered days to produce; I mean, that's



the way they handle it.

Q Yes, but it is not unrestricted insofar as the well's ability to produce?

A No, sir.

Q They produce 8 or 9 days?

A No, they produce 31 days, or whatever it is, as the field allowable.

Q The same as New Mexico?

A No, sir, they have shut down days, I mean, their allowable is governed by shut down days, and unrestricted allowable means that they are allowed to produce every day their field allowable, rather than 10 or 12 days.

Q Isn't that the way we prorate here?

A That's the proration here.

Q Do you actually feel that the same physical principles and engineering principles apply to a water drive field that apply to secondary recovery projects?

A No, they can't be exactly the same, but I maintain they are similar.

Q Your recommendations in regard to this well are that it be allowed to continue producing in the neighborhood of what it is producing right now?

A Well, the way we have it producing now is the maximum, or minimum rate that we feel that will keep the water off of the formation and prevent any damage to the well.

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MR. PAYNE: Thank you.

MR. UTZ: In order to correct the record, I possibly ought to ask this question of the other witness. On your Exhibit Number 16, as well as your Exhibit Number 1 on the Winningham 3, there appears to be some discrepancy in the amount of overage. Exhibit Number 16 states August overproduction of 2630, when actually our records show that to be September 1st overproduction status.

MR. GIRAND: Well, I assume they took the figure at the end of the month. It was an end of the month figure.

MR. UTZ: But it had August production charged against it.

MR. GIRAND: That's right.

MR. UTZ: That's all I have. Any other questions?

REDIRECT EXAMINATION

BY MR. GIRAND:

Q I may be repeating. The productivity of the subject well, the S. R. Cooper Number 1, is dependent upon two things, the encroachment of water and the line pressure the well has to produce into?

A That's true.

Q And are both of those factors, the encroachment of water, and the line pressure, variable from time to time?

A Well, I think your line pressure is subject to more variation than the water encroachment, because the water encroach-



ment is continuous.

Q If allowed to come in uninhibited, in other words without lifting any of the water off, just let it be flowing in without any pressures on it whatever, would the water build up faster than it would volumewise as you are lifting it off from time to time? In other words, if your well is shut in, will your accumulation of water accumulate at a greater rate than it would while the well is being produced?

A Yes, sir, it accumulates around the bore hole, and just shuts itself off.

Q What I mean, does that accumulation, is it more advanced, is it faster when the well is shut in than when the well is being produced? In other words, in a 24-hour period you get so many barrels of water from the well bore; now, if the well were shut in that period of time, would you have more water accumulated than the amount of water you produce during the 24-hours?

A Yes, sir, I believe you would.

RECROSS EXAMINATION

BY MR. PAYNE:

Q Mr. Watson, did you just testify that the productivity of this well is dependent upon the encroachment of water and the line pressure?

A Well, let me qualify the productivity, if I may. May I ask Mr. Girand, do you mean by productivity, the ultimate recovery on that well?



MR. GIRAND: That's right, its ability to produce.

A Yes, sir, and the line pressures too. I mean, in this way, with our contractor, El Paso, as you are familiar with, they will take the gas down to a certain pressure, and then compressors will be put on; these wells are running in the neighborhood of 70-pound pressure now, and El Paso can't go much below that. So as far as the ultimate production of the well, it does depend partly on the line pressures, and the water encroachment in the same time.

Q But that is not all it depends on is it? It also depends on the deliverability, doesn't it, the reserve, recoverable gas in place?

A Well, your reserves are no good if you log off with water.

Q But the recoverable gas in place is what you are attempting to get out of this well, isn't that right?

A Yes, sir, sure is; and if we shut that well in, not only this well but all of them in -- some of that recoverable gas we are not going to get due to being shut in.

Q How long do you think this well could be shut in without doing any material damages to the reservoir, or the well?

A Well, I wouldn't even hazard a guess, and I wouldn't go shut it in, because I probably would be run off if I did; those things are pretty critical, we just don't feel like they can be shut in for any length of time at all.



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Q They are shut in sometimes for what, 72 hours, 48 hours?

A That's right, but it is not like being shut in for six months or a year.

Q When do you feel you will have to go to the pump jack method on this well?

A Well, I think the pump jack is down the road quite a ways, it would be a guess on my part to set a date on it.

Q Do you think the pump jack method of getting rid of the produced water is more efficient than the free piston?

A Very definitely; I mean, that's the last resort, we can't go any further than that pump jack. I mean, when you get to that, you are at the bottom of the barrel.

Q Would you explain to me just how this pump jack works?

A Well, it is a conventional pump jack, you run a ~~sitting~~ nipple on the end of your tubing, and run a pump, a tubing pump on the end of your sucker rod string, and hook it up just like an oil well installation, I mean, it is no different at all.

Q Well now, when you are using this pump jack and you are pumping the water by -- does this run by electricity or --

A Well, they can be run either way, there is no -- I mean, no designation there.

Q You are using this to get rid of your water; I still don't understand what physical principle requires that the rate of production will have anything to do with the water en-



croachment, or the injuring of the well. I mean, your pump jack is getting rid of all the water, is it not?

A Well under the way we are producing it now, it is keeping the well bore clean, yes.

Q All right. Even if the well was making no gas, well, even if the well was shut in, the production part of the well was shut in, and you were pumping the water out, could you damage the reservoir then?

A Well, the only thing that would happen there is whenever, if you can pump the water fast enough to get it out of the tubing and leave your casing shut in, and still have pressure on your well, the well, the casing when it is shut in and if you keep that water out of there, it is going to flow through your tubing and wherever the water is going, that's where your gas is going; if you had it hooked onto a low pressure line, it will be there, and if you had it going to a pit, your gas would go to a pit. That's the reason why you can't shut this particular pump -- and as new as the pump jack installation is, if you shut your casing in, that would build up and the first thing you would know, you would be flowing part of your gas out of your tubing.

Q I see.

A And under our circumstances, we are tied in where that gas goes into the low pressure meter and the battery?

MR. UTZ? It would be a substantially lesser rate, wouldn't it?

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A Yes, sir, it would be very much less.

MR. PAYNE: That's all, thank you.

MR. UTZ: Mr. Watson, do you think this water problem you have is the result of water drive in this area, or is it just the formation water problems? Is the water table moving up structure?

A Yes, sir, I believe it is. It is not a real active water drive, I know that, but especially in the south end of the thing, and on the west side where it is coming out of the basin, I feel it is an active water drive.

MR. UTZ: Any other questions?

MR. GIRAND: I have one or two questions.

REDIRECT EXAMINATION

BY MR. GIRAND:

Q If I understand you correctly, Mr. Watson, does the method you are employing in producing this S. R. Cooper Number 1, and as well as the Winningham, the method produces water and gas at the same time?

A Yes, sir.

Q And as you produce your water there, is some gas produced along with it?

A Yes, sir, there is.

Q And the mere unloading the hole of water, and keeping it clean of water, would not stop the flow of gas, there would be some gas flowing?



A Yes, sir.

Q And if it is, if they shut down the gas, why you'd have to shut down your pump and water, or flare the gas, or waste off the gas?

A Under these circumstances, yes, we would.

Q Now, in regard to when you had to put a pump jack on this particular well, that could be any period providing the well was required to be shut in for any considerable period, why it might hasten the time when you might have to put a pump jack on it?

A Yes, I'm sure it would, and if it is shut in for more than normal tests that have been conducted on this.

Q As a matter of fact, later on we are going to present evidence in regard to the well known as the Owens Number 1 --

A Yes, sir.

Q -- it is a well that has been shut in for some time?

A Yes.

Q I'm asking these preliminary questions just to give you a background for answering another question. When the Owens Number 1 was checked on October the 5th, 1959, was the well dead?

A Yes, sir, it was dead.

Q And how long had it been shut in?

A Approximately one year.

Q You don't know whether or not you are going to be able to bring the well back or not?

A No, sir, we wouldn't know until we go in there and try.



Q It is evident that you are going to have to swab the well at this time in order to try to bring it back?

A Yes, sir, we will.

Q Do you solicit attendance of a Commission agent at the time, to go back into the Eva Owens well to see what happens?

A I think it would be beneficial for all of us.

RECROSS EXAMINATION

BY MR. PAYNE:

Q Mr. Watson, does the water production increase as your gas production rate increases? The more gas you produce, do you produce more water?

A Well, there has never been any specific tests run for that reason, so I mean I can't honestly say; and I wouldn't want to make a statement without being able to say it was, because we have not run any test, I mean, to substantiate that one way or the other.

Q I take it then that the water encroachment problem is the same no matter what the rate of production is?

A No, I don't think that is, I mean, I can't go with that being true.

Q Well, have you established to the contrary?

A Would you state your question again, please?

Q If you increase your gas production, does this increase the water production?

A Well, to answer that, I don't know, because as long



as those wells have been producing without being shut in, I mean, it is a maximum rate, so the only way we could do that would be pinch them back and go the other way and see.

Q It is a maximum rate, but you don't know if it -- if it is a minimum rate?

A Not for sure, but we feel it is.

Q Assuming that increased gas production causes increased water production, then you also have an additional wastage of gas that comes out with the water, don't you?

A Well, under the system that we are using now, that gas all goes down the line, there is no waste to it. See, it is pumped directly into a high pressure separator which separates, and the casing goes through that also, and it all goes into a high pressure separator, and then El Paso's line, and the water is dumped out the dump valve in a regular manner.

Q None of this gas goes in with the water --

A No --

Q -- any substantial amount?

A -- just very minor amount, yes, sir, so there is no waste as far as that operation is concerned at all.

MR. GIRAND: But you could not do that if you shut in your gas, or attempted to shut in your gas, and continued to produce your water?

A No, sir, I don't think so.

MR. UTZ: But if you continue to pump your water, then



you could reduce the rate of gas production, couldn't you?

A By how, now?

MR. UTZ: Well, you just stated awhile ago that if you shut in the casing, it would build up and flow through the tubing as you were pumping the water?

A It is possible, yes.

MR. UTZ: At some reduced rate?

A Yes.

MR. UTZ: When you are producing through the tubing and through the casing, is there any gas produced through the casing?

A In this particular installation, I don't know; we have not had it long enough to find out. The Repollo, it produced solid water with just no gas at all out of the tubing, and water and gas out of the casing. Of course, that was in a more advanced stage. This is a relatively new installation, and I don't feel like there is any fluids coming out of the casing. I think we are getting it all out of the tubing.

MR. UTZ: Any questions of the witness? If not, we will continue to the next well.

DIRECT EXAMINATION (Continued)

BY MR. GIRAND:

Q You are the same John West who previously testified in this matter?

A Yes, sir.



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Q Mr. West, have you had occasion to check the production of the well installation known as the Repollo Number 1?--

A Yes, sir.

Q -- located in the SW/4 NW/4, 28-25-37?

A Yes, sir.

Q I hand you here what has been marked Applicant's Exhibit Number 24, and ask you whether or not that exhibit was prepared under your supervision or not?

A Yes, sir, it was.

Q What does that exhibit purport to show?

A It is a graphic representation of the production of of the well in the last part of '58, and the first part of '59 in the solid line, and a broken line for the line pressure that El Paso Natural Gas line maintained that this well was producing into. And all these records are taken from El Paso Natural's files.

Q Did your check of that well include a study of the subsequent cost to operators one and two in order to install the pump jack --

A Yes, sir.

Q -- and attempt to produce the well?

A Yes, sir, this was their records, I mean, in fact the records of the Jal Oil Company shows money that they actually spent, which was roughly \$8,000.00.

Q Did you have occasion on October the 5th, 1959, to physically inspect the subject well?



A I did.

Q And at that time, did you make checks in regard to casing and tubing pressure, as reflected by Exhibit Number 24?

A Right, they were very, very dead, pressure on both of them.

MR. GIRAND: I believe that's all.

QUESTIONS BY MR. UTZ:

Q That well, at the time you inspected it, that well was being pumped?

A That's right, it was pumped, and there was a, I suppose it was sulphur, it was a very blackish water coming out in pretty good quantities.

Q Did you determine the quantity of water?

A We didn't, this is an estimate, we did not, I mean, it was just going into a big pit and we didn't, did not take this into a tank and gauge it or anything; it was just an estimate volume of water. They had three big pits there that this water was running from one to the other.

Q Has this well been shut in?

A So far as I know it has not; it is not producing any gas, it's just, they are just continuing to pump it because as I understand the situation, they are trying to get the water off of it, and maybe release some gas that is trapped. Isn't that the general thinking on that continuous pumping there?

MR. WATSON: That's about all we can do, to pump it



continuously to see if that water will decrease enough to let some of the gas come on in.

MR. GIRAND: I intend to establish that with Mr. Watson.

MR. UTZ: I figured you might. That's all the questions I have. Any questions of the witness?

(No response.)

MR. GIRAND: At this time we offer Exhibit Number 24.

MR. UTZ: It will be admitted.

MR. GIRAND: Mr. Examiner, rather than give all these exhibits for numbering, may I give a portion of El Paso Natural Gas Company's file on the Repollo Number 1, dated from June 9th, 1950 through July 29th, 1959, and I'll give you the number?

MR. PAYNE: You are just asking relief on this particular well, Mr. Girand, in case you are able to get it back into production, is that right?

MR. GIRAND: Mr. Payne, you have guessed it. We are still pumping, we are hoping we do, and if we do, we don't want to lose it. That's the only purpose of this application, plus the fact that we think ~~this~~ a representative well, that the history of this well will in time become the history of any other well producing from there.

Our Exhibit Number 25 is 15 pages.

DIRECT EXAMINATION (Continued)

BY MR. GIRAND:

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Q You are the same Mr. Watson who previously testified in this case?

A Yes, sir, I am.

Q You previously testified in regard to the Repollo Number 1, located in SW NW of Section 28, Township 25 South, Range 37 East, Jalmat Pool. In regard to your testimony covering the Winningham Number 3, which was the first well upon which evidence was offered, the remarks you made in regard to the Repollo Number 1 at that time, do they constitute your testimony in support of the application of the Repollo Number 1?

A Yes, sir, they do.

Q At the present time, is the Repollo Number 1 capable of producing any gas into the El Paso Natural Gas line?

A No, sir.

Q How long has it been in that condition?

A I'm not exactly sure of the date, but it has been in the neighborhood of a month, or maybe two months.

Q And how is the well equipped, Mr. Watson?

A It is equipped with a conventional pump jack, but the pump is a double displacement pump, which is capable of producing 750 barrels per day.

Q And has the pump jack been operated at its maximum efficiency?

A Yes, sir, it has.

Q Now, has the Repollo well ever been shut in in recent

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years?

A Not more than just a few hours at a time.

Q As a matter of fact, has it been a well that has been produced since 1955 under exception of one kind or another by the Commission relieving it from shut in periods?

A Yes, sir, it has been.

Q Now, prior to the installation of the pump jack on the Repollo Number 1, how was the Repollo Number 1 being produced, if you know?

A Well, the only way we could get it to flow any at all would be to go out there and swab it for, I think the last time it was swabbed about 24 hours steady, and it produced, as I recall, it has been quite a while, quite some time back, as I recall, it produced about three days and then completely died.

Q Now, were you with the Jal Oil Company, or R. L. Olsen at the time the Repollo Number 1 was placed on pump jack?

A Yes, sir.

Q Now, at that time, and the time you made the decision to install a pump, had they refused or failed to make that installation with the Repollo Number 1, as a dead well?

A Yes, sir.

Q By reason of the installation of that pump jack, has the Repollo Number 1 been able to produce gas?

A Yes, sir, it has, up until now.

Q Did you consider the gas, produced reservoir gas that

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had been indicated under the well?

A Yes, sir.

Q If the well had been abandoned at that time, or if the pump jack had not been installed, then all the gas the Repollo Number 1 has produced since the pump jack was installed has been saved for the public, for the State, for the people, is that right?

A Yes, it has.

Q And which otherwise would have been lost?

A Yes, sir.

Q Now, at the present time, you don't know whether or not you are going to be able to bring this well back to where it can produce?

A At the present time we don't know that it will ever produce again.

Q However, you are still continuing your pumping operation?

A That's right.

Q For the purpose of this application, if you obtain an order from this Commission, that should the Repollo start flowing any gas through this operation, that you be entitled to go ahead and produce that gas?--

A Yes, sir.

Q -- is that based on the fact that your continued pumping over the two or three months' period here, would make it entirely feasible to try to bring the well back if it was shut in



again?

A Would you go through that again?

Q I mean this: You have a history now, how much it would cost to bring this well back for two or three months, should you get gas back on the well or out of the well, would another shutdown result in the same expense and experience?

A Yes, sir, I'm sure it would.

MR. GIRAND: I believe that's all I have. One other thing.

Q (By Mr. Girand) Mr. Watson, I hand you here a photograph, which has been marked Applicant's Exhibit Number 26, and ask you can you identify that?

A Yes, sir, that's a picture of the pits that the water is going into from the Repollo Number 1.

Q About what is the depth of the pit, if you know?

A Those pits run anywhere from 6 to about 12 foot deep.

Q And during the producing period of the Repollo Number 1, even up to the present time, would you say that the water level on that pit has remained constant?

A Very nearly constant, yes, sir.

MR. GIRAND: We would like to offer this exhibit primarily for the purpose of showing the volume of water that is being produced.

Q (By Mr. Girand) Mr. Watson, do you have anything to add to your previous statement in regard to this well?



A No, sir, I don't believe I do.

MR. GIRAND: That's all.

CROSS EXAMINATION (Continued)

BY MR. PAYNE:

Q Mr. Watson, you testified that if you had not put the pump jack on there and tried to get this well back on production, that all the gas would have been lost. Are you assuming that no other well in the immediate area would have produced it?

A I'm assuming that the greatest share of it would not have been produced by any other well. Now, I don't think it can be said that some of it might not have been.

Q How do you arrive at that conclusion, what do you think one well in there will efficiently drain?

A Well, I don't think it is very efficient when you have that amount of water; but one well will drain a considerable amount of acreage, just exactly how much, I don't think anybody can say.

Q This well only has 40 acres dedicated to it?

A No, sir, it has 160 acres.

Q You don't feel that that gas can be produced at the start out of the Number 2 well to the South, or the Number 1 well to the West, or the Number 1 to the East?

A Not nearly the amount that has come out of the well the way it was producing, no.

Q Was this the first well that Olsen drilled in this Jalmat Pool?



A I don't think it was the first well, no.

Q I just wondered if he had some sentimental attachment to this well.

A Well, I think he is pretty proud of the fact that he put that pump jack on there, and rightly so.

REDIRECT EXAMINATION

BY MR. GIRAND:

Q Mr. Watson, you are convinced that where water is encroaching, and the well is required to be shut in, that the gas underlying that immediate well, or the acreage assigned to it, to a great extent will be lost?

A Yes, sir, I certainly do.

Q And that drainage will not occur to any other wells or other location?

A No, sir.

Q And you are concerned with the fact that should that exist, that your gas might go to some other operator and not to you?

A Let me hear that again.

Q And -- well, if there was such a migration, it would be of no benefit to you if one of your offset operators, or competitors produced your gas, just because you weren't allowed to produce water?

A No, sir, it wouldn't.

MR. GIRAND: That's all.

MR. UTZ: Mr. Watson, this well has produced anywhere



from two to ten times its allowable anywhere in the past year.

Do you think possibly the reason you lost that well was because of the rate of production causing a certain amount of coning?

A Well, it was either produce it that way, or not produce it.

MR. PAYNE: Is this well tubed?

A Pardon?

MR. PAYNE: Is it tubed?

A Yes, sir.

MR. UTZ: Is the production through tubing?

A Well, at the beginning it was, and since that time the water has become such great volume the production was through the casing.

MR. UTZ: I notice on El Paso's 1, back pressure test, they listed it as producing through the casing?

A Yes, sir, it is only for several years that it has produced water through the tubing.

MR. UTZ: Do you think that if this well would have been produced at a substantially lower rate, that it would still be producing?

A No, sir, I don't believe it would; the fact that the water is coming in on the bore hole, and if it is not kept clean it is going to do damage to the Yates section.

MR. UTZ: The overproduction on this well is around 123 million at the present time, is it not?



A Yes, sir, it is.

MR. UTZ: If you can't bring this well back, you will abandon it at a pretty, well, good allowable situation, would you not?

A It should be good for a month or two. I would rather not abandon it, if it is at all possible, but it does not look like there is anything more for us to do.

MR. UTZ: Is there any other questions of the witness? If there are no others, we will proceed to the next well.

MR. GIRAND: We would like to offer exhibits 25, 26 -- 24, 25, and 26.

MR. UTZ: Without objection, they will be received. Let's take a 10-minute recess.

(Recess.)

MR. UTZ: The hearing will come to order.

MR. GIRAND: At this time we would like to take up another well. Mr. West, will you take the stand, please?

DIRECT EXAMINATION (Continued)

BY MR. GIRAND:

Q Mr. West, you are the same Mr. West who has been testifying before in this proceeding?

A Yes, sir.

Q I hand you here an instrument which has been marked Exhibit Number 27, and ask you whether or not that exhibit was

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prepared by you and under your direction?

A Yes, sir, it was.

Q Without going into what the exhibit shows, does that, is that exhibit comparable with the tests and records that you inspected in regard to the other wells you tested before?

A Yes, sir.

Q And contains the same information?

A Right.

MR. GIRAND: That's all. We offer Exhibit 27.

MR. UTZ: Without objection, it will be accepted.

MR. GIRAND: Mr. Watson, will you take the stand, please?

DIRECT EXAMINATION (Continued)

BY MR. GIRAND:

Q You are the same Mr. Dewey Watson that has previously testified in this matter?

A Yes, sir.

Q Mr. Watson, in addition to testimony you have previously given concerning the wells, the Winningham Number 3, the S. R. Cooper, the Repollo Number 1, do you have any additional remarks to make in regard to the Eva Owens Number 1, the subject well?

A Well, I think that as Mr. Utz stated a minute ago, the well is back in balance and it had been shut in for approximately a year, and I think it would be well for the Commission and

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ourselves both, for the Commission to have a representative present when we attempt to put that well back on production, because I think it will show everybody concerned, I mean, what it does mean whenever a well like that is shut in.

Q Well now, as a representative of the operator in this application, you are willing to notify the Commission when you intend to start your work toward bringing the well back on production?

A Yes, sir, I think so.

Q And you are willing to furnish the Commission with any production data that is available until the well is brought in?

A Yes, sir.

Q And thereafter in regard to the water situation, as well as the ability of the well to produce gas?

A Yes, sir.

Q Now, prior to the time this well was shut in, what type of well was it?

A It was flowing under the same circumstances as the other wells, free piston.

Q When it was checked recently, the well was dead, is that correct?

A Yes, it was.

Q What do you anticipate you will have to do to bring this well back, if you can bring it back?

A The first step in the procedure would be to move a



swab unit on the well and attempt to remove the water and get it to flowing.

Q Do you have any idea how long that will take?

A There is no way to know.

Q And until you do bring the well back into production, you will have no way of comparing the production you are able to obtain after you do this work, as against the production it was capable of making prior to the shut in period?

A It will have to be produced for a while.

Q In your opinion, would the well to some extent be an example of what will happen, and can happen, if these wells are shut in, the wells that are being presently produced?

A Yes, sir, I think it will.

MR. GIRAND: If the Commission please, we have some remarks from the files of El Paso Natural Gas, which I have marked and numbered, marked Exhibit Number 28; these exhibits speak for themselves. They show information about the well, which shows that the well was making water from time to time even during producing periods. We would like to offer Exhibit 28.

MR. UTZ: Without objection, it will be admitted.

MR. GIRAND: Now, I would like to make a remark here, if I may. While the well is in balance, we would like to commence getting that well back on production as soon as possible; and I realize the Commission has no further control on it now that the well is in balance, we would like to solicit the Commission's

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participation to some extent, or whatever extent they think advisable during these operations.

MR.UTZ: I'm sure the Commission will be quite interested in following this operation. I suggest that when you are ready to begin operations, that you contact the Hobbs office.

MR. GIRAND: Yes, sir. I suspect that will be in the next day or two, because we would like to get it back on if possible.

QUESTIONS BY MR. UTZ:

Q Mr. Watson, the well produced 1364 MCF the month of April, 1959, how did you produce that? Did you open it up?

A No, it was on a free piston installation.

Q Is it still on a free piston?

A Well, the piston was taken out of it after it was shut in, but the installation is still there.

Q You opened it up and it just went to producing in April?

A I'm not familiar -- I see what you mean, that's on this exhibit here, is it not?

Q Yes, sir.

A I don't know what that well was on, we might possibly be able to find out through the well record, but I personally don't have knowledge of that particular test. It is possible that was a deliverability test on the well, I'm not certain.

Q At any rate --

MR. GIRAND: I don't have any information unless --



let me see, the exhibit, the deliverability test was in May?

MR. UTZ: 5-16-58, that's probably what it was.

MR. GIRAND: '59, in March, that's probably when the production occurred.

A Is that deliverability?

MR. GIRAND: It is deliverability.

A That's the only time that I could think it would be turned on; and I believe there was permission obtained at the time, I'm sure there was, for that work to be done.

Q (By Mr. Utz) We are not questioning production, I want to know whether or not you had to swab the well at that time in order to make it produce?

A I don't have personal knowledge of that particular test to answer the question.

MR. GIRAND: When we get in there this time, we will know. Up to that time, the well was being produced as a marginal well, and had that classification.

Q (By Mr. Utz) That well has never been a marginal well.

MR. GIRAND: Withdraw my statement.

A No, sir, I don't believe it has ever been classified as a marginal well, due to the 80-acres on the well. I think regardless of classification, that by water being in that formation will show us what we are up against there, whether it is marginal oil or non-marginal.

MR. UTZ: Any other questions of the witness?

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MR. GIRAND: The remarks you made in regard to the other wells, insofar as they apply to Eva Owens Number 1, is that your testimony for that particular well, the Eva Owens Number 1 Well?

A Yes, sir, it is.

MR. GIRAND: That's all.

MR. UTZ: Any other questions? We will proceed to the next well.

MR. GIRAND: We will call Mr. John West to the stand.

DIRECT EXAMINATION (Continued)

BY MR. GIRAND:

Q Your name is John West, and you are the same John West who has appeared in this case before?

A Yes, sir.

Q In regard to the well known as the Watkins Number 2, did you make similar checks as you did on the wells known as the Eva Owens Number 1, and the Winningham Number 3, and the S. R. Cooper Number 2?

A I did.

Q I hand you here what has been identified as applicant's Exhibit Number 29, and ask you whether or not that exhibit contains the information comparable to the information on the exhibit introduced by you, or identified by you?

A Yes, sir.

MR. GIRAND: We would like to offer Exhibit Number 29.



MR. UTZ: Without objection, it will be accepted.

MR. GIRAND: Mr. Watson, will you take the stand?

DIRECT EXAMINATION (Continued)

BY MR. GIRAND:

Q Now, Mr. Watson, are you familiar with the well known as the Watkins Number 2?

A Yes, sir.

Q Is that well presently in balance?

A I don't know; let me look here.

Q Did you answer the question?

A No, sir, it is not overproduced --

Q Then --

A -- it is in balance.

Q Will you state for the benefit of the record, the purpose of this application in regard to the Watkins Number 2?

A I would like to bring out, referring to Exhibit Number 29, the fact that when the well was drilled and completed in November of '58, the shut-in tubing pressure was 1025, or 10, and casing pressure was 1025. And the casing pressure on October 5th, 1959 is 525 pounds, and the tubing pressure was zero.

Q Now, based on the pressure readings, what conclusion do you arrive at as to what is happening to the well?

A The well is logging off with water.

Q Now, you have not attempted to commence reproduction of that well at this stage, have you?



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A No, sir, not to date.

Q Do you know at this time just what will have to be done in order to bring that well back on production?

A Not exactly; we do know it will have to be swabbed to put it on production.

Q Now, in connection with the swabbing, do you know how much swabbing will have to be done?

A No, sir, it would only be an estimate.

Q Now, you previously testified that up until about a year, year and a half ago, you had been with the Jal Oil Company, is that correct?

A Yes, sir.

Q And during the time you were with the Jal Oil Company you were familiar with the Jal Oil Company wells that are involved in this hearing, were you not?

A Yes, sir.

Q And since the threatened shutdown order was entered, you have made some study of the Jal Oil Company wells involved in this hearing, is that correct?

A Yes, sir, I have.

MR. GIRAND: We would like to have these marked for identification; they deal with the records of El Paso Natural Gas Company, dealing with multiple point back pressure test and graph, and two deliverability tests, one in '58 and one in '59. Be our Exhibit Number 30, I believe.



(Thereupon the documents referred to above were marked Applicant's Exhibit No. 30, for identification.)

Q (By Mr. Girand) Now, Mr. Watson, your testimony in regard to soliciting the observation on the part of the Oil Conservation Commission of what transpires when you try to bring this well back, the Watkins Number 2 applies to it as well as to the Eva Owens Number 1, does it not?

A Yes, sir, I think it would.

Q Now, was the Watkins Number 2 ever determined to be a marginal well?

A No, sir.

Q However, you don't know what its classification will be after you re-enter the hole and try to produce it again?

A No, sir, we do not.

Q Do you anticipate that there will be any material permanent damage by reason of the shut-in?

A Yes, sir, I do.

Q After you have brought the well back on production, will you be in a position to determine to what extent the damage would be?

A Yes, sir, I think, with the Commission's approval, we could determine what if any damage had been done.

Q How do you propose to do that, by comparison of production records, amount of water involved?--

A Yes, sir.

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Q -- and the pressures on the tubing and the casing?

A Right.

MR. GIRAND: No further questions.

QUESTIONS BY MR. UTZ:

Q Mr. Watson, is this oil completely shut in at the present time?

A It is at the present time, yes, sir; and on the tubing it is dead.

Q How long has it been, do you know?

A I don't know the exact number of days, how long it has been shut in.

Q Well, during the time that, since the well went on the line, it has never been completely shut in, has it?

A Well, from the -- in April there was no production, and only 51 MCF in March, 244 MCF in May, and 63 MCF in June, and 112 MCF in July, and 1,866,000 in August.

Q Did you have any water problems in producing this well, or was it shut in part of August?

A Yes, sir, it was swabbed off during the month of August, and produced, I don't know how many days it did produce.

Q Did you shut the well in after you produced it?

A Yes, sir.

Q Why did you shut it in?

A Well, that I can't answer. The only thing I know is to keep it in balance, not to have it overproduced; and it was not



to my knowledge ordered shut down, no.

Q The well became in balance in July?

A That is correct.

Q And you had a 1940 MCF allowable in December which you could have produced if the well --

A Yes, sir. I don't know whether the well was produced in September or not, but it is very dead at the present time.

MR. GIRAND: May I ask some questions?

MR. UTZ: Yes, sir.

DIRECT EXAMINATION (Continued)

BY MR. GIRAND:

Q Mr. Watson, checking Exhibit Number 29, I believe it is, looking at the drop in the casing pressure from 1025 in 1958 to 525 pounds in 1959, October the 5th, and the water, increase in water production from 100 barrels per day to 300 barrels per day, in your opinion, after and if you are able to get this well on production, do you feel that it will be a non-marginal well, or a marginal well?

A I think it has a very good chance of being a marginal well before it is over with.

Q Is it your opinion that the well should be so classified as a non-marginal well?

A Yes, sir, I believe it should.

Q What is the pressure maintained by the El Paso line?

A I assume that -- let's see, the dotted line on



Exhibit Number 29 --

Q The average pressure I believe shows on Exhibit 29 to be 170 -- I beg your pardon, 188 pounds average, is that what they call a low pressure line, or intermediate?

A Well, that is on the intermediate line at the present time.

Q Now, a casing pressure of 125, assuming that you are able to bring the well back, will the pressure as reflected by the Exhibit 29 be sufficient to plug the intermediate line of El Paso?

A I seriously doubt that it will, due to the excess amount of water that will have to be produced.

MR. GIRAND: I believe that's all.

QUESTIONS BY MR. UTZ:

Q Have you requested this well be put on the low pressure system?

A No, sir, I don't think so; normally, not always but a majority of the time, El Paso is pretty good to us. They'll go ahead and tie it in without our request; in some cases they have requested it.

I would like to make a statement on this Exhibit Number 30, if I may. I think it's significant on the two deliverability tests that the rate of flow --

Q Are you --

MR. GIRAND: Will you refer to them by date, Mr. Watson?

A -- on November 10th to 14th of 1958, the deliverability

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test, the deliverability is 1,320,000 MCF per day. On 2 -- would be in February of '59, another deliverability test was taken, and the deliverability is only 650.8 MCF. Now, that I think shows pretty clearly that the well is dropping pretty fast for one reason or another, and it is most likely the water increase is causing it; and I think the well head pressure indicates that on the tubing on 24, 48 and 72-hour shut in pressure test, because they go from 843 on down to nothing on the February test; and they are dropping continually on the other one, from 723 to 633 on the November '58 test.

Q (By Mr. Utz) This is on the tubing?

A Yes.

Q The casing increased?

A Right. And as long as the well is tubed, and the production comes through the tubing, she's dead. I believe that's all I have on that.

MR. UTZ: Any other questions of the witness?

MR. GIRAND: Just one question.

DIRECT EXAMINATION (Continued)

BY MR. GIRAND:

Q Apparently I misunderstood the witness a moment ago. I intended to ask him this question: Mr. Watson, do you consider the subject well to be a well that should be classified as marginal or non-marginal well, in the light of the records that have been introduced in evidence?



A Well, from the drop in the deliverability, and production inability, I'd say it is due to be classified as a marginal well, if not right at the present in the very near future.

Q Then if you answered that question, or a similar question by saying "non-marginal", you misunderstood my question?

A Yes, sir.

MR. GIRAND: That's all I have. Do you have anything else to offer?

A No, sir.

MR. UTZ: On what do you base the answer to that question, what premise, the deliverability test, or the amount of production, or by comparison against the well's allowable?

A Well, I think the amount of production, and the deliverability test show that the well is falling off pretty rapidly.

MR. UTZ: This well produced more than normal allowable, so you think it would be a marginal well?

A Due to influx of water.

MR. UTZ: Do you interpret our Rule 520 to say that?

A Not exactly.

MR. UTZ: I don't either. Off the record.

(Discussion off the record.)

MR. GIRAND: Mr. West, will you take the stand, please?

DIRECT EXAMINATION (Continued)

BY MR. GIRAND:

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Q I hand you an exhibit that has been marked Exhibit 31, and ask you if that exhibit was prepared under your supervision?

A Yes, sir.

Q And does that exhibit show the same information in regard to the Jenkins Number 1 as was reflected in the exhibit you prepared for the Winningham Number 3, and the other wells you previously testified to?

A Yes, sir, that is correct.

Q And the record was prepared from the records of El Paso Natural Gas Company in regard to the line pressures and the production of the well?

A Right.

Q I hand you here Exhibit Number 32, been marked Number 32, a similar exhibit to Exhibit 31, and it deals with the Legal Number 2; I'll ask you whether or not this exhibit was prepared under your supervision?

A Yes, sir, it was.

Q And the same information reflected on it as reflected on the Jenkins Number 1?

A Right.

Q I hand you here Exhibit Number 33, pertaining to the Dyer Number 3, and ask you whether or not this exhibit was prepared under your supervision?

A Yes, sir.

Q And the information shown thereon is comparable to the



information shown on Exhibit 31 and 32, dealing with the Jenkins No. 1 and the Legal Number 2 wells?--

A That's right.

Q -- only insofar as it pertains to the Dyer Number 3?

A That's correct.

MR. GIRAND: We would like to offer Exhibits 31, 32, and 33.

MR. UTZ: Without objection, they will be received.

MR. GIRAND: Mr. Watson, take the stand, please.

DIRECT EXAMINATION (Continued)

BY MR. GIRAND:

Q Mr. Watson, you are the same Mr. Watson who previously testified here in this matter?

A Yes, sir.

Q Now, in regard to the Jenkins Number 1, how is that well being produced?

A It is producing on a free piston installation.

Q Do you anticipate that you will have to go to a pump jack in the immediate future?

A Yes, sir.

Q Now, in regard to that particular well, if the same questions were asked you in regard to it as were asked you in regard to Watkins Number 2 and the other wells that you have previously given testimony to, would your answer be the same?

A Yes, sir.

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Q The only variations being the variations between the two wells?

A Yes, sir.

Q Do you believe that this well is such a well as would have to be continuously produced using the methods now employed in order to protect the gas reserves underlying the well?

A Yes, sir, I do.

Q Do you think such an operation will result in the protection of correlative rights, and the prevention of waste?

A Yes, sir.

MR. GIRAND: I would like to get this marked for exhibit, 2-page exhibit.

(Thereupon the document referred to above was marked Applicant's Exhibit No. 34, for identification.)

Q (By Mr. Girand) In regard to the Jenkins Number 2, I beg your pardon, Number 1, are there any peculiarities with regard to producing that well contrary to the other wells that you have testified to?

A No, sir, it follows the same general pattern as the rest of them; it was shut in for a period of time, the piston went to the bottom, opened it up and flowed for a period of time.

Q That procedure, up to date, has been the most satisfactory manner known, the manner in which you could produce the well without putting it on a pump jack?

A Yes, sir.



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Q Now, in answering this generally as to all the wells in question, where a piston had been used, in setting the frequency of that, the run of that piston, I understand it is time controlled, is that right?

A Yes, sir, it is.

Q Can that piston be set to unload itself at intervals that will maintain the well as a producing well, is that right?

A Yes, sir.

Q Those intervals just have an even flow, a period of time of setting and re-setting and adjusting the interval, is that correct?

A Yes, sir, that is correct. Usually when a well goes on an installation of this type, it is an experimental proposition when you first start out, but we have found that somewhere between 6 and 8 flows per day is the usual number required to keep the water off of the formation, keep the well on production. And as time progresses over a period of months, even years, the frequency of those piston trips are increased in order to handle the influx of water that is coming in.

Q Basically, the bottom of the water controls the frequency of the trip?

A Yes, sir.

Q Then you get to that point where it can't make enough trips to keep the hole cleaned up?

A That's right.



Q Then you are required to go to pump jack?

A That's right; that's exactly what happened to the Winningham Number 3.

MR. GIRAND: We would like to offer Exhibit 34, being the minimum contract test sheet, as well as the deliverability report. We call the Examiner's attention to the notation on the bottom of both. Under the Minimum Contract Test Report, the notation is: "Well cannot be shut in; shut in pressure taken from R. Olsen Winningham Number 3". And on the Deliverability, why virtually the same notation was -- P. C., what's that?

A Shut in pressure.

Q -- P. C. was taken from our R. Olsen Well Number 3. "Well cannot be shut in because of water logging at well bore". Do you have anything else to add, Mr. Watson, in regard to the Jenkins Number 1?

A No, sir, I don't believe I do.

MR. GIRAND: We will pass the witness.

CROSS EXAMINATION (Continued)

BY MR. FLINT:

Q Mr. Watson, in response to a question by Mr. Payne regarding a well on the pump jack, you stated in producing water, a certain amount of gas of necessity is produced with it?

A Yes, sir.

Q Would that be true of the free piston installation as well?



A Yes, sir, it is more so; you produce more gas with the water in a free piston installation than you would on a pump jack.

Q In either of those -- I think this question has been asked, but I'm not certain of what your answer was, in either of those two types of installations, do you feel that it would be possible to produce the water, sufficient water to keep the well cleaned out, and still produce less gas than you would anticipate producing with it, if the request that you have made is granted?

A Well, under the present operating conditions, we are lifting what we think is the minimum amount of water to produce to keep the wells flowing.

Q And are you at the same time producing a minimum amount of gas that it is possible to produce with that amount of water?

A We feel that we are producing the amount of water necessary to keep that well flowing, which would be the minimum amount of gas.

Q In other words, the gas that is being produced now is as little gas as it is possible to produce with that amount of water?

A Until further tests prove different, why I think we are, yes.

Q You mean, is this a matter of physical possibility, or is this a question of your decision as to the desirability of



producing this amount of gas?

A Well, I think it is a physical proposition.

Q It is?

A I mean, we will be perfectly willing to cut the gas down if it were possible.

Q But producing, for example in this Jenkins well, producing an estimated 30 barrels per day, it would not be possible to restrict the gas that is produced with that to any extent?

A No, sir, we have not been able to. Now, the well will log off at the slightest increase in El Paso's pressure, even as much as 10 pounds will kill the well; and you are operating under such a close tolerance that there is no tolerance there, does not seem to be any margin for relief there at all.

MR. FLINT: Thank you, that's all.

QUESTIONS BY MR. UTZ:

Q Mr. Watson, I believe that you are asking, actually asking here to produce more gas than the non-marginal allowable, this is what this amounts to, isn't it?

A We are asking to be able, be permitted to produce the water necessary to keep the well on production.

Q So far we have ended up with the non-marginal allowable in every case?

A Yes, sir, in the past six months, I think that is true. However, I think if you would just roll back the clock a year and compare the allowable at that time with the allowable



that we've had in the past six months, it would probably be in balance; it would still be above, but it would be somewhat nearer, so I think we are a victim of the demand of gas during that period as much as anything else. I mean that definitely, in my mind, has something to do with our overproduced status.

Q Well, I think that is a very true statement, but I believe you stated that this would be necessary in order to prevent waste and protect correlative rights. How would overproducing these wells protect correlative rights?

A Well, the ultimate production of gas would be shortened, in our opinion, by shutting these wells in and doing permanent damage to the formation, and in that sense it would; I mean, I think we are protecting correlative rights.

Q Whose correlative rights?

A Ours and the offset operators.

Q Well, if you are producing more gas than he is allowed to produce, then how would it protect his correlative rights?

A It does not sound as it would; I will retract that statement.

MR. UTZ: Any other questions of the witness?

REDIRECT EXAMINATION

BY MR. GIRAND:

Q Mr. Watson, with water encroachment on your wells, if your wells are shut in, is it your opinion that that water will go on over to offset operators' property?



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A To a certain degree, yes; it is at the present time.

Q And so if your well were shut in, and water allowed to accumulate to the extent that it isolated gas from your well bore, as well as the well bore of offset operators, it would then affect correlative rights in the area, would it not?

A Yes, sir, it would.

MR. FLINT: However, if that gas that is trapped were produced through the well that is not shut in, it would not have been your neighbor's gas anyway, so that it wouldn't really be an ultimate gas loss to him, would it?

A No, sir.

MR. FLINT: And your land, it is under your land?

A That's right.

MR. FLINT: Except that it would be gas that you would hope to produce, not gas which he is entitled to?

A Yes, sir.

Q (By Mr. Girand) But if you were denied the right to produce the gas that is underlying your own land, then the correlative rights would be denied?

A That's right.

Q And you are denied -- and you are entitled to as much protection as the offset operator?

A Yes.

MR. UTZ: And you agree that you are denied as much production as the offset --



MR. GIRAND: I said the same protection as the offset operators.

MR. UTZ: The same protection. Well, Mr. Watson, have you been allowed to produce as much gas as your offset operators in the past twelve months?

A In the past twelve months, yes, but not in the previous twelve months or eighteen months. As you will recall, those wells were classified from non-marginal to marginal either in '57 or '58, and at that time there were some three hundred million under-production cancelled; I believe I'm correct, some time in '57 or '58, some of them were reclassified in '57 and some in '58, and at that time all the underage was cancelled, and as far as we are concerned evidently its lost to us, and now during that period the offset operators definitely produced more gas than we did.

MR. UTZ: Well, the reason they did was because your well was not capable of producing the allowable for that particular period, isn't that right?

A That's correct, but that does not balance the fact that they didn't, they did produce more gas than we were allowed to, not that we were allowed to, but that we were unable to.

MR. UTZ: You feel that in view of the fact that your wells are severely overproduced that your correlative rights have been impaired at this time?

A No, sir, that is the problem.

MR. UTZ: That's all I have.

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Q (By Mr. Girand) Do you feel that you have been impaired, if you are required to shut the wells in and possibly the loss of your reserves?

A Yes, sir, that's right.

MR. UTZ: The wells are overproduced at this time; at this time you are ahead of the game as far as correlative rights are concerned?

A As of the past twelve months, yes, sir.

MR. GIRAND: We would like to introduce Exhibit Number 35, containing five sheets, and being a part of the records of El Paso Natural Gas Company, which covers the subject well, Legal Number 2.

MR. UTZ: Exhibit Number 35?

MR. GIRAND: It is Exhibit Number 35, yes.

MR. UTZ: Without objection, it will be accepted.

Q (By Mr. Girand) Mr. Watson, in regard to your -- you are familiar with the application covering the Legal Number 2, are you not?

A Yes, sir.

Q You are acquainted with the method and type of production, and the production method used?

A Yes, sir.

Q Briefly state what those methods are in similarity to the other wells you have testified to.

A It is the same as the piston installation that we



have described in the S. R. Cooper, Eva Owens, Jenkins Number 1.

Q In other words, this well is making water --

A Yes, sir.

Q -- and is being mechanically produced at the present time?

A Yes, sir.

Q Is it your opinion that this well will suffer irreparable damage if it is required to be shut in over any extended period of time?

A Yes, sir, it is.

Q The well is being properly produced by a piston or by a pump?

A It's being properly produced by a piston.

Q Do you anticipate that in the future that you will have to install a pump jack in order to recover the gas underlying the property?

A Yes, sir, we do.

Q Do you feel that the methods employed by the Jal Oil Company in the production of gas on the subject wells at this hearing, as well as the Olsen Oils Company on the subject wells is in the best interest of conservation of natural resources --

A Yes, sir.

Q -- and to obtain the ultimate recovery from the mineral deposits underlying the acreage?

A Yes, sir.

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MR. GIRAND: I have no further questions.

MR. UTZ: Any other questions of the witness? If not, you may proceed.

Q (By Mr. Girand) Mr. Watson, since figuring these applications, have you had occasion to check into the Dyer Number 3 Well of the Jal Oil Company?

A Yes, sir.

Q Were you familiar with that well and its operation during the time you were employed by Jal Oil Company?

A Yes, sir, I was.

Q Was that well, the Dyer Number 3, a comparable well to the other wells you have testified to?

A Yes, sir, very similar.

Q And if the same questions were asked you in regard to the Dyer Number 3 as have been asked you in regard to the other wells, would your answer be the same?

A Yes, sir, they would be.

Q That well makes water?

A Yes, sir.

Q And it is presently being produced in what manner?

A By a free piston.

Q And in your opinion, is that the only method other than a pump jack with which the well can be produced?

A Yes, sir, I believe it is.

Q And in producing that well, it is the production of

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the water that controls the production of gas, and not the production of the gas that controls the water, is that correct?

A Yes, sir, it is.

Q As a matter of fact, in all of the subject wells, including the wells of the Olsen Oils Company, and the wells of the Jal Oil Company, the prime question involved in this hearing is, and the prime concern of the operator is the removal of the encroaching water, is that correct?

A Yes, sir, that is right.

Q And the only means you use, and those means that you have used, seem to be satisfactory and best practice for the preservation of the reservoir?

A That is the only means in which we have been able to keep the wells on production.

Q So you are not before this Commission asking for more gas or less gas, you are just asking for whatever gas is produced incidentally with the required amount of water you have to produce?

A Yes, sir, that is correct.

Q Now, I'll ask you, during your overproduced period here, and on some of the wells involved, I'll ask you whether or not at the time that production was being made, you had been reclassified from the non-marginal -- I mean from marginal to non-marginal well?

A Yes, sir.

Q You had been re-classified at that time, at the time



the overproduction occurred?

A During the period the overproduction occurred, it was classified as a non-marginal well.

Q It was classified at the time, is that true on all the applications?

A No, not all. The Eva Owens and Watkins 2 were never marginal wells.

Q But the overproduction occurred after they had been re-classified?

A I don't think the Eva Owens or the Watkins have been re-classified.

Q I'm talking about the other wells.

A The other wells, yes, sir.

Q It is my understanding that the notice from the Commission stated that due to the lack of information in 1958, that the wells have not been, had not been able to reclassify the wells at that time, is that correct, Mr. Examiner, on your May or June notices when you sent out the allowables?

MR. UTZ: On the memorandum?

MR. GIRAND: On the memorandum, yes.

MR. UTZ: Yes, sir, I believe that's correct.

MR. GIRAND: I'll ask you if this is a correct statement to go on the record, Mr. Utz. The well operators, as well as the purchasers were not notified of any re-classification of any subject well down there or that their allowable would be, during

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that period in which the old production occurred?

MR. UTZ: Except by provisions of Order R-967.

MR. GIRAND: Except by the old order, but then as far as the actual taking of the ~~tests~~ and evaluating the allowable that would be assigned to these wells, those had not been completed, nor had the operators been notified of their assigned allowables under your order R-967?

MR. UTZ: No, they had not been notified of the actual amount of non-marginal allowable. However, the data is available at any time for an operator to calculate his non-marginal allowable, if he so desires.

MR. GIRAND: I'm not trying to argue, I'm just trying to find out. It was my understanding that the operators had not been notified of their re-classification.

MR. UTZ: No, they had not been notified of your re-classification until you received the supplement of it.

MR. GIRAND: That's right, and that was the one in which the Commission gave them until the first of September in which to file.

MR. UTZ: That is correct.

MR. GIRAND: So I would like to introduce Exhibit 36, which is the record of the El Paso Natural Gas in regard to Legal Number 2.

MR. UTZ: Without objection, it will be accepted.

MR. GIRAND: Mr. Utz, for the purpose of the record,



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I would like to make just a brief statement. I know I have been up here too long, but the problem of these operators involved in the two cases in which we are appearing here, is a water problem.

Now, the producing of gas is controlled entirely by the alleviation of that water problem, and it is their opinion, as it was the opinion of other operators who had cases before us, that if the water is allowed to encroach, it will result in loss of reserves. We feel that the subject wells are entitled to some exception, which is authorized under Rule R-967, in order that the great waste which could occur might be alleviated.

Now, I don't think it is the object of this Commission, or of the operators, or of the operator to take any further gamble than has been taken, particularly the applicants here, where they have gone to every mechanical device in order to produce the gas. I think the Commission will agree with me that the overproduction was brought about, you are tied into a gas line, you don't have much to say when you take from them and when you don't, At the time that we ~~were~~ taking, you had a marginal classification which was not covered, and that is one of the pitfalls of the order. You go along in that position, and then one of these sunshiny days why you are six times overproduced and you cease to be a man; you are over here, a female, you change sex in midstream, and you didn't even know you had it done to you. That is where these applicants find themselves.

Now, we are willing to cooperate with the Commission in



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every way possible to arrive at a just and honest way to produce these wells, but we think it would be much more wrong to require us to shut in wells and thereby lose our reserve, that that will not be conservation; that would be confiscation. We feel that -- I don't think it has been definitely established, I went through all those gas hearings, and everybody said that, some of them said one well would drain the entire Lea County in Southeastern New Mexico. I believe that was the position Phillips took in that matter, they only needed one gas well; others had different lines that they drew on the maps. How much one gas well will drain, until somebody gets down there and digs it out and sees, goes down there and sees and smells the gas and walks out the 40-acres, we don't even know whether it will take out 40-acres; none of us were here when it was put down, and we just got to guess, because their spacing program is such that we don't, we don't get that much inside, so I say that these applicants are willing to cooperate with the Commission in every way possible, but I don't think the Commission should require them to lose their reserves which they are entitled to.

Now, I appreciate allowables and the requirements for allowables, we all recognize that, where you got a producing ability in excess of your allowable, of your market demand, but then at the same time their old law has been to help the weak as against the strong; there has been no evidence here that by reason of your present method of production, that we were going to drain their



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acreage that would have been here. One of these weak sister gas wells out there producing water and gas is not going to cause the gas to come back from offsetting operators into their reservoir. We are doing pretty good just trying to maintain a dry reservoir, and that's all we are trying to do, and we are helping them to the extent that if we didn't control the water, the water is bound to move somewhere in this gas zone, where a void has been created by production of either oil or gas, or both, and I submit it is a problem that is here not on just a few wells before this Commission today, but as the field goes down, it is going to be before this Commission from every corner where you have any encroachment of water.

MR. UTZ: Mr. Girand, you are not contending here, are you, that Order R-967 allows, by virtue of the fact that a well is classified as marginal, that you are allowed to produce that well more than a non-marginal well if it is capable of doing it?

MR. GIRAND: I think that is the purpose of the Commission, yes, sir. The Commission was designed to protect and conserve. Now, the Commission has latitude in how it will arrive at that conservation, but it has all got to be designed toward the ultimatum of conservation.

Well, from the record before this Commission on these cases, the fact that the wells will be damaged stands uncontradicted, and I think the Examiner is acquainted with the fact that if water comes in, it can kill your well and might lose it. Now, I say



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under your R-967, your Rule 10 gives the Commission quite a bit of latitude there," at any time a well is overproduced in an amount equal to six times current monthly allowable, it shall be shut in during that month and each succeeding month the well is overproduced," that's your shutdown provision. It goes on in the same Rule 10, "The Commission may allow overproduction to be made up at a lesser rate than would be the case if the well were completely shut in, upon a showing at public hearing, after due notice, that complete shut in of the well would result in material damage to the well."

Mr. Examiner, we have shown that this is not a spigot outfit, we don't have that gas and water mixed in certain proportions, one-third water and one-third gas. We have a certain volume of water, and by lifting that water, the gas pressure is able to produce so much. We operate in some of these wells, some of the testimony was that it varies and often will be, pressure would log up a well. We have trimmed the thing down, as I see it, to just about as near a marginal operation as you can have, and I think there is plenty of support in the Rule here that your -- and the evidence, that the production curve on these type of wells are going to be declining rapidly.

There can't be any relief on the part of anyone in the method that we are using, that we are going to overproduce our wells as compared to the extent of pulling gas out from other wells. If we had that kind of pressure behind us, we wouldn't be having this trouble; we are bound to be getting the dregs on it from under our



own wells.

Now, I believe the spirit of the Act is conservation, it has to be or you don't have any legal entity, you don't have any right to be here, because that's the power of the State to conserve it. And if you don't conserve, if the Commission allowed the ultimate recovery now, I don't think the Commission is confronted with any problem that requires it do run and hide its head; that we take the secondary recovery oil wells where they are using water flood, the Commission has entered several orders there where they can produce from certain wells all they could produce. I can see a great deal of similarity between the encroachment of water on gas, and secondary recovery on an oil field, and I don't believe it is comparable to a water drive oil field because we know that the water will push the oil in front of it, that is, that has been the history.

Now, if we were talking about tremendous volumes of gas being taken from the Jalmat Pool, as against the overall Jalmat Pool allowable, it would be one thing, but it occurs to me that we are overlooking the growl of the bear and listening to the rattle of the cricket in this case. We have seven wells that the operators can lose, and on one of them we think we have already lost. We've got two wells we are going to find out when we get in.

In my prayer, I asked for 120 days to see if we could bring out some further information, not just for our information, but for the information of the Commission. We realize the Commission

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has not entered a shut in order on these wells except the Eva Owens well, which was shut down a year ago, and the Watkins Number 2, but those wells are now where they can be reopened. Why wouldn't it be reasonable for the Commission to see what happened to those two wells?

I think I've clearly established that in this method of production there is no way to separate the gas and the water; they both come out together. Of course, we go ahead and get back in balance by flaring that gas up in the air if the Commission turns its head to it, but then we can't do that under the regulations. I might state here that I think that I'm trying to enlarge on the scope of the Commission's authority, and have you prorate water, not the gas, because actually that is what we are asking you to do.

MR. WATSON: Could I make a statement here?

MR. UTZ: Sure.

MR. WATSON: Although we are the only ones here at the present time, there are several operators in and around the same area that are confronted with the same problems, and the whole South end of that field is in a very similar shape.

MR. UTZ: We've had other applications, as you know, but none who requested that they produce more than a non-marginal allowable. I have to differentiate this case from the other cases that refer to the matter.

MR. GIRAND: May I make this statement in connection with that? None of those cases are producing through any mechanical

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device such as we are in the wells in question.

MR. WATSON: These wells passed the blowdown stage several years ago, where you go down and blow them down maybe for an hour or two, and blow out the water and go on to producing.

MR. GIRAND: Off the record.

(Discussion off the record.)

MR. GIRAND: I would like to go back on the record just a minute. I believe I'm correct in stating that the Commission received a letter from El Paso Natural Gas --

MR. FLINT: Yes.

MR. GIRAND: -- supporting both Application 17.-- both Case 1778 and 1779, is that correct?

MR. UTZ: 78 and 79?

MR. GIRAND: Yes, 1778 and 1779. Mr. Howell showed me the letter, and I direct your attention to their wording in regard to their belief that this was a matter of conservation. And like we said, we are not making any request for offset reserves, we better keep what we got and utilize them to the fullest extent.

MR. UTZ: The letter of El Paso's will be entered into the record. Is there anything further in this case?

MR. GIRAND: That's all the applicant has.

MR. UTZ: Any other statements to be made? If not, the case will be taken under advisement, the cases will be taken under advisement, and the hearing is adjourned.

(Whereupon the hearing was concluded at 4:45 P.M.)

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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 20th day of October, 1959, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Joseph A. Trujillo
 NOTARY PUBLIC
 BERNALILLO, N.M.

My Commission Expires:

October 5, 1960.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing No. 1228, heard by me on Oct. 7, 1959.

Thos. A. [Signature]
 Examiner
 New Mexico Oil Conservation Commission

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ALBUQUERQUE, NEW MEXICO



El Paso Natural Gas Company

El Paso, Texas

H. F. STEEN
VICE PRESIDENT AND
MANAGER OF PIPE LINE OPERATIONS

October 6, 1959

New Mexico Oil Conservation Commission
107 Mabry Hall, Capitol Building
Santa Fe, New Mexico

Gentlemen:

In re: Cases 1778 and 1779

In Case 1778 Olsen Oils, Inc., asked for an exception to the overproduction shut-in provisions of Order R-520 for four wells located in Lea County, New Mexico. In Case 1779 Jal Oil Company makes similar application for seven wells located in Lea County, New Mexico. Other operators have filed similar applications which have been heard by the Commission.

As purchaser from a large majority of the wells mentioned in the various applications this Company urges the Commission to approve exceptions which will prevent the wells from being abandoned. The Company believes that many gas wells in southeastern New Mexico which have been produced for a number of years will continue to produce substantial quantities of gas if these wells can be operated without extensive shut-ins. Since the operators were operating in accordance with the Commission's rules at the time the overproduction was accumulated, it is hoped the Commission will not penalize the operators by shutting in wells which may result in abandonment and loss of the recoverable gas which might be produced under the most efficient operating conditions. While the quantities of gas are small in comparison to the entire pool, the quantities are substantial to the operators and the cumulative effect of abandoning a number of wells would be substantial with respect to the entire pool.

The Company is sure that the Commission will give every reasonable consideration to the operators affected.

Yours very truly,

H. F. STEEN

HFS:BRH:lbh

DOCKET: EXAMINER HEARING OCTOBER 7, 1959

OIL CONSERVATION COMMISSION - 9 a.m., Mabry Hall, State Capitol, Santa Fe, New Mexico

The following cases will be heard before Elvis A. Utz, Examiner, or A. L. Porter, Jr., Secretary-Director.

- CASE 1782: Application of Gulf Oil Corporation for an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Eunice King Well No. 10, located 660 feet from the North line and 1980 feet from the East line of Section 28, Township 21 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Paddock Pool and the production of oil from the Wantz-Abo Pool through parallel strings of tubing.
- CASE 1783: Application of Skelly Oil Company for an amendment of Order No. R-1237. Applicant, in the above-styled cause, seeks an order amending Order No. R-1237 to provide that new wells in the Otero-Gallup Oil Pool in Rio Arriba County be given 60 days after completion in which to make beneficial use of the produced casinghead gas.
- CASE 1784: Application of Tennessee Gas Transmission Company for an oil-gas dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Glen Callow Well No. 8, located 890 feet from the South line and 1850 feet from the East line of Section 27, Township 29 North, Range 13 West, San Juan County, New Mexico, in such a manner as to permit the production of oil from an undesignated Gallup oil pool and the production of gas from an undesignated Dakota gas pool through parallel strings of tubing.
- CASE 1785: Application of Whitehall Oil Company, Inc., for an unorthodox oil well location. Applicant, in the above-styled cause, seeks an order authorizing an unorthodox oil well location adjacent to the Allison-Pennsylvanian Pool, at a point 1980 feet from the North line and 660 feet from the West line of Section 14, Township 9 South, Range 36 East, Lea County, New Mexico.
- CASE 1786: Application of The Atlantic Refining Company for two non-standard oil proration units and for two unorthodox oil well locations. Applicant, in the above-styled cause, seeks the establishment of two 40-acre non-standard oil proration units in the Horseshoe-Gallup Oil Pool, one to consist of a portion of the W/2 W/2 of Section 33, the other to consist of a portion of the W/2 SW/4 of Section 28, both in Township 31 North, Range 16 West, San Juan County, New Mexico. The respective unit wells are to be located on unorthodox locations 1980 feet from the South line and 386 feet from the West line of said Section 33 and 660 feet from the South line and 386 feet from the West line of said Section 28.
- CASE 1778: Application of Olsen Oils, Inc., for an exception to the over-production shut-in provisions of Order R-520, as amended by Order R-967, for four wells in the Jalmat Gas Pool. Applicant, in the above-styled cause, seeks an order allowing the following-described wells in the Jalmat Gas Pool to compensate for their overproduced status without being completely shut-in in order to prevent possible waste:

Docket No. 34-59

Case 1778: (Cont.)

Cooper B Well No. 2, NE/4 NW/4 of Section 14,
T-24-S, R-36-E.

Myers B Well No. 1, SE/4 NW/4 of Section 13,
T-24-S, R-36-E,

S. R. Cooper Well No. 1, SE/4 NE/4 of Section 23,
T-24-S, R-36-E,

Winningham Well No. 3, NE/4 SE/4 of Section 30,
T-25-S, R-37-E,

All in Lea County, New Mexico.

CASE 1779:

Application of Jal Oil Company for an exception to the overproduction shut-in provisions of Order R-520, as amended by Order R-967, for seven wells in the Jalmat Gas Pool. Applicant, in the above-styled cause, seeks an order allowing the following-described wells in the Jalmat Gas Pool to compensate for their overproduced status without being completely shut-in in order to prevent possible waste:

Legal Well No. 2, NE/4 SE/4 of Section 21,
Dyer Well No. 3, SE/4 NE/4 of Section 31,
Jenkins Well No. 1, SW/4 SW/4 of Section 29,
Jenkins Well No. 2, NE/4 SW/4 of Section 29,
Owens Well No. 1, SW/4 SW/4 of Section 21,
Repollo Well No. 1, SW/4 NW/4 of Section 28,

all in Township 25 South, Range 37 East, and the

Watkins Well No. 2, SE/4 NE/4 of Section 25,
Township 24 South, Range 36 East, all in Lea
County, New Mexico.

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASES 1778, 1779

TRANSCRIPT OF HEARING

SEPTEMBER 30, 1959

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
SEPTEMBER 30, 1959

IN THE MATTER OF:

CASE 1778 Application of Olsen Oils, Inc., for an excep- :
tion to the overproduction shut-in provisions :
of Order R-520, as amended by Order R-967, for :
four wells in the Jalmat Gas Pool. Applicant, :
in the above-styled cause, seeks an order al- :
lowing the following-described wells in the :
Jalmat Gas Pool to compensate for their over- :
produced status without being completely shut- :
in in order to prevent possible waste: :
Cooper B Well No. 2, NE/4 NW/4 of Section 14, :
T-24-S, R-36-E, Myers B Well No. 1, SE/4 NW/4 :
of Section 13, T-24-S, R-36-E, S. R. Cooper :
Well No. 1, SE/4 NE/4 of Section 23, T-24-S, :
R-36-E. :
Winningham Well No. 3, NE/4 SE/4 of Section 30, :
T-25-S, R-37-E, all in Lea County, New Mexico. :

CASE 1779 Application of Jal Oil Company for an exception: :
to the overproduction shut-in provisions of :
Order R-520, as amended by Order R-967, for :
four wells in the Jalmat Gas Pool. Applicant, :
in the above-styled cause, seeks an order al- :
lowing the following-described wells in the :
Jalmat Gas Pool to compensate for their over- :
produced status without being completely shut- :
in in order to prevent possible waste: :
Legal Well No. 2, NE/4 SE/4 of Section 21, :
Dyer Well No. 3, SE/4 NE/4 of Section 31, :
Jenkins Well No. 2, NE/4 SW/4 of Section 29, :
Ropollo Well No. 1, SW/4 NW/4 of Section 28, :
all in Township 25 South, Range 37 East, Lea :
County, New Mexico. :

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.
The next cases on the docket will be cases Nos. 1778 and 1779.

MR. PAYNE: Mr. Examiner, Bob Girand, attorney for --
do you want me to go ahead and read it? Bob Girand, attorney for
Olsen Oil Company and Jal Oil Company, has requested that these
cases be continued until October the 7th. We knew this sometime
in advance, and they have been advertised within more than ten
days prior to the October 7th hearing.

MR. NUTTER: Cases Nos. 1778 and 1779 will be heard
by the Examiner at the Examiner Hearing on October 7th, 1959.

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 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 13th day of October, 1959, 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. 1778-1779 heard by me on 9-30, 1959.

[Signature] Examiner
New Mexico Oil Conservation Commission