E. C. Anderson, Socorro, New Mexico.

For the State Bureau of Mines.

COMMISSIONER SPURRIER: Gentlemen, let's open the meeting. As some of you may know, Governor Mabry is in California and former Governor Miles is sick in the hospital. So I have been instructed, as the minutes of the Commission will show, to again take the record of the cases to be heard today. There will be no decisions made. All cases will be taken under advisement. And the other members of the Commission will pass on the record before the orders are signed.

Mr. Graham, will you read the advertisement for the first case, please?

(Reads the notice of publication in Case No. 166)

MR. MEARS: I am drilling superintendent for the western division of the Tide Water Associated Oil Company. I would like to appear as representative and witness.

COMMISSIONER SPURRIER: You have a witness?

MR. MEARS: I do not.

COMMISSIONER SPURRIER: You are the witness?

MR. MEARS: Yes.

COMMISSIONER SPURRIER: We will swear you as the witness.

(Mr. Means sworn)

COMMISSIONER SPURRIER: The Tide Water has presented a statement here. I will be glad to read it. Since Mr. Mears is appearing as their only representative and witness, you may ask or cross-examine him as you care to. I would like to read this statement that they have entered as an exhibit. (Reads the statement) Now, Mr. Mears, if you would like to add anything to this, you may do so.

MR. MEARS: Well, Mr. Spurrier, as far as I know the stick for the location of the well was placed there on the best geological information available. And, of course, in my position with the company I cannot furnish any other reason why it was put in that particular place. But I do believe, as stated in the statement that you read, that the party that placed the stick wasn't familiar with the laws and did not place it there other than for geological purposes.

COMMISSIONER SPURRIER: Does anyone care to question the witness? Well, I should like to make a little summary here. The well has been located, drilled, and found non-productive and plugged. So it may seem rather useless to have a hearing before this Commission to approve an unorthodox location. The well was located on Federal land, I believe?

MR. MEARS: That's right.

COMMISSIONER SPURRIER: Indian land. Now, as a matter of practice, we don't concern ourselves too much with exact locations on Federal land because we know that Mr. Canfield's crew on Federal land are usually on the job and they are allowed some discretion. We also realize that there is no producing field. There is no offset problem. But I think the point I would like to make here is that it should go without saying any company operating in the state should acquaint themselves with the rules and regulations. If they should like to take exception, there is a way it can be very simply done. But to go ahead and do something like this, and then find out what the regulations are is just inconvenient for them and us too. Now, we are not placing--this is not a personal chastisement because Mr. Mears wasn't personally responsible for this at all. And there has been

no harm done. But if the Commission doesn't enforce its rules and regulations, then it might as well not have rules and regulations. We feel that Tide Water has handled the case very well since it came to our attention. And I could personally say that I think an order will be issued approving this. However, we will have to wait for the Commission to pass on it.

I think if no one has anything further, and if you have nothing further, Mr. Mears, that we will call the case ended.

MR. MEARS: O. K., Mr. Spurrier. I might add that since talking with Mr. Barnes yesterday with regard to these samples I now find that they were delivered to Socorro yesterday. They are already there.

COMMISSIONER SPURRIER: Fine. Thank you very much.

Read the advertisement for the next case, please.

(Reads the notice of publication in Case No. 167)

MR. SETH: I appear for Amerada. I would like to have Mr. Blackwood sworn.

J. C. BLACKWOOD, having been first duly sworn, testified as follows:

DIRECT EXAMINATION BY MR. SETH:

Q. Please state your name.

A. J. C. Blackwood.

Q. By whom are you employed?

A. Amerada Petroleum Corporation.

Q. In what capacity?

A. District engineer, west Texas and New Mexico district.

Q. Will you please state briefly your educational qualifications and experience in the oil business?

A. Well, I was educated at Texas A. & M. College in petro-

leum engineering in 1936. Since that time I have been employed by the Amerada Petroleum Corporation except for a four-year period with the Army.

Q. Are you familiar with the well described in the notice, I believe in the SWNW of Section 36, Township 23 South, Range 36 East?

A. Yes, I am.

Q. When, approximately, was this well completed?

A. It was completed in March 1946.

Q. At what approximate depth?

A. It was completed at 3,607 feet.

Q. And is it now producing?

A. Yes, it is producing oil, about fifteen barrels a day.

Q. From what sand?

A. That is the Stuart sand. Queens formation.

Q. Would you give the casing of the well?

A. The casing record is 13-3/8 set at 504 feet, 8-5/8 set at 3,450 feet.

Q. Now, you desire to dually--to make the well produce from an additional sand?

A. Yes, that's right. We wish to produce from the Yates and Seven Rivers sands which generally is gas productive in the area and ranges in depth from 2900 to 3,400.

Q. This Yates sand, what does that produce, gas only?

A. That's right.

Q. Just state briefly the manner in which you propose to handle this if the permission is granted by the Commission.

A. Well, the first step we propose is to shoot with explosives the present producing formation to increase its productivity. The second step is we will set a Baker Model D

Retainer Production Packer at 3,435 in the 8-5/8 casing. This packer has a smooth bore through the center of it about 3⅛ inches in diameter. And once the packer is set in place it cannot be moved either up or down. The tools--the tubing will then be released from this packer and withdrawn from the well. Then we will make up tools in the following order: 125 feet of 2 inch tubing as tail pipe, which will extend through the packer from the bottom of the packer down to about 3,560 feet or 47 feet off bottom. Immediately above the 2 inch tail pipe is a standing valve sub and Type F Otis standing valve. The purpose of this is to prevent the passage of any fluid down through the valve--the packer--to the lower producing formation. Above the standing valve sub are two Baker Multi-V tubing seals which will be positioned in the smooth bore of the packer and seal off between the casing and the packer. Above that is a Baker No Left Turn Latching Sub, which is a device which will latch in the top of the packer body and prevent the moving of the tubing seals either up or down. Above that is a tubing seal receptacle, which is a tube with a smooth bore of 3⅛ inch in diameter. And a setting tool above that which will be attached to the tubing seal receptable by means of shear pins. The tools then are run in on the casing and when the latching sub sets and latches on top of the packer, the weight of the tubing will shear the pins of the setting tools and leave the tools positioned in place. The object of all this packer and standing valve arrangement is to prevent mud fluid from getting down on the lower producing formation. The Yates is a high-pressure gas sand. It has a bottomhole pressure of from 1,300 pounds in the area,

and to perforate it sufficiently it will be necessary to float the hole with mud, and we don't want to get mud on the lower formation. That is the reason for this packer and standing valve arrangement. After the tools are positioned in the packer, we will circulate mud into the well and withdrawn the tubing and gun perforate the Yates and Seven Rivers sands. We give the depth of the perforation point as 2,900 to 3,400. Actually, before we select the actual perforation point, we will run a radio activity log to determine the effective point. After the gas sand is perforated, we will run in a tubing guide shoe, tubing seal nipples, retrieving tool, and Otis Type L Side Door Choke nipple. The tubing guide shoe and tubing seal nipples pass down into the tubing seal receptacle to affect the seal. Actually, what happens is we rejoin the tubing back to the packer. We will then circulate the mud out with oil through the ports in the Otis Side Door Choke nipple and bring in the gas sand. After it is produced enough to clean it up, we run on a wire line under pressure the Otis Side Door Choke which will seal off the ports in the Side Door Choke nipple. That makes the operation complete between these two points.

Q. Do you believe this arrangement you have testified about will effectively separate the two pays?

A. Yes, it will.

Q. Prevent the high pressure gas from getting into the low pressure oil at the bottom of the well?

A. Yes.

Q. The well is not producing at all at this time from the upper gas pay is it?

A. No, it is not.

Q. Do you believe the gas upper pay, the Yates sand, and the Stuart are separate strata, entirely separate?

A. Yes. There is an impervious strata between them and the pressure difference indicates there is separation between them.

Q. What is the pressure in the oil producing strata at the bottom of the well?

A. The bottom hole pressure after a twenty-four hour shut in period is 570 pounds in the Stuart sand.

Q. Have you a market for the gas when you produce it?

A. Yes, there is a market. El Paso Natural Gas Company has a line laid to the lease.

Q. And they will take the gas?

A. Yes.

Q. Is there any other way to get the gas from the Yates sand without drilling an additional well?

A. No.

Q. Is gas being produced from the Yates sand all around you?

A. Yes, there is. Our State LMT lease is the N½ of Section 36. In the S½ of Section 36 there are two wells dually completed. They are producing gas from the Yates. And in the S½ of Section 25 to the north there are two wells producing gas from the Yates.

Q. There are two dually completed wells immediately offsetting there already?

A. Yes.

Q. And do you believe this process you have outlined will result in that recovery of the gas that otherwise would not be recovered?

A. Yes, that is correct.

Q. Would it be feasible or economically feasible to drill a well for that gas?

A. Well, not very economically feasible because of the shortage of casing. We don't like to drill wells that are doubtful from an economic standpoint.

Q. The well will continue to produce oil through the tubing, whatever its allowable may turn out to be, after it is shot?

A. Yes, that is correct.

MR. SETH: I would like to offer in evidence this drawing showing the method of dually completing, and this statement covering to a large extent what Mr. Blackwood has already testified to.

Q. Do you believe the allowance of this application for the dual completion contemplated will result in the ultimate recovery of more oil and gas from the field?

A. Yes, it will.

MR. SETH: That is all we have.

MR. GRAHAM: Are you familiar with the discussions surrounding the Gulf application for dual completions?

A. No, sir.

MR. SETH: What field was that?

MR. GRAHAM: Hobbs.

A. No, sir.

MR. GRAHAM: The discussion in that case, as I remember, was as to the corrosiveness of the oil. Is it sulphur? And the gas, is that sweet gas?

A. That is sweet gas.

MR. GRAHAM: And its corrosive properties would be ....?

A. As a gas it wouldn't be corrosive. The oil might be slightly corrosive.

MR. GRAHAM: At that time, the Commission felt that there was some question about the effectiveness of the mechanical packer. What is your opinion on this arrangement you have? Will it

prevent the mixture?

A. Yes, it will prevent mixture. Of course, in the case of severe corrosion it might have to be replaced.

MR. SETH: But in your view, it would prevent the intermingling of the oil and gas?

A. Yes.

MR. GRAHAM: Could you identify those two wells to the south of you?

A. Ralph Lowe Shell State C No. 2. And the other one is Skelly Oil Company New Mexico D.

MR. GRAHAM: Are they offset wells?

A. They are not exactly offsets. The leases adjoin and they are in the S½. They are within the same section. They are not exactly offsets.

COMMISSIONER SPURRIER: Does anyone care to cross-examine the witness?

BY MR. LOVERING:

Q. I would like to make a statement for the record and ask one or two questions. As to the corrosiveness of the fluids in the well, I think you will find that that oil is somewhat corrosive, but also the fact remains that there will be considerable water produced from that horizon.

A. There hasn't been any indication of it so far.

Q. Well, I believe that there will be water. I don't know in what quantities. Waters in the vicinity are generally corrosive. But that is neither here or there. What I wanted to state was with regard to the completion of the well. Do you have a record of how much cement was used in the oil string? Any idea where the cement column is behind the casing at the present time?

A. I don't believe I have that with me. But there was a cement test made and the top of the cement was well above the Yates. If I remember correctly, it was about 1,500 feet.

Q. Then in handling the fluids at the surface, how do you propose to handle the fluids or gases after they reach the surface?

A. The oil from the lower formation will be produced into a low pressure separator and the present tank battery as it is now being produced. The Yates gases we propose to produce through a high pressure separator that is connected only into the El Paso Natural Gas line.

Q. The gases from the Yates then will be metered separately before they enter the same line with the other gases from the tank battery?

A. Yes, that's right. As a matter of fact, we propose to put the Yates in the El Paso main which carries a pressure of 750 pounds in the area. The lower formation won't go into that line.

Q. Then they go into two separate lines?

A. That's right.

MR. LOVERING: That is all.

COMMISSIONER SPURRIER: Anyone else care to examine the witness?

MR. GRAHAM: Do you have any figures on costs of digging a well down to the shallow sands as compared to this arrangement?

A. No, I don't have any figures with me on that.

MR. SETH: There would be a wide discrepancy?

A. There would be, yes.

COMMISSIONER SPURRIER: Do you have anything further, Judge?

MR. SETH: No, that is all.

COMMISSIONER SPURRIER: If no one has anything further, the witness is excused. Read the next case, please.

(Reads the notice of publication in Case No. 168)

COMMISSIONER SPURRIER: This case we will ask the Commission to continue to a definite date for the reason that the principals in the case were unable to be here this morning. We were notified by telephone and confirmed by telegram late yesterday that they would be unable to attend.

If no one has anything further, the meeting is adjourned.

STATE OF NEW MEXICO)
: ss
COUNTY OF SANTA FE)

I, E. E. Greeson, notary public, hereby certify that the foregoing transcript of proceedings before the Oil Conservation Commission of the State of New Mexico in Santa Fe on December 7, 1948, is a true record of the same to the best of my knowledge, skill, and ability.

DATED at Santa Fe, New Mexico, this 13th day of December, 1948.

E. E. Greeson
Notary Public

My Commission Expires 8-4-52.