





FRANK C. BARNES

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

## DIRECT EXAMINATION

BY MR. FEDERICI:

Q Would you state your name and occupation?

A Frank C. Barnes.

Q Have you testified before the Commission at other times?

A Yes, I have. I'm a Consulting Geologist and I have testified before the Commission on numerous previous occasions.

Q And you are acting in the capacity of consultant in this case?

A For J. Glenn Turner and Associates, correct.

MR. FEDERICI: Are the qualifications of the witness acceptable?

MR. UTZ: Yes, sir. His qualifications have previously been accepted.

Q (By Mr. Federici) You have some exhibits there. I believe they're marked Exhibit A and B. Would you state what those exhibits are?

A Exhibit A is an acreage or township plat which shows the location of the well in question, the Turner Nye No. 9-1, which is located in the Northwest Quarter of Section 9, Township 29 North, Range 10 West. Exhibit B is a schematic diagram which shows the dual completion method that was used in completing the

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

ALBUQUERQUE, N. M.  
PHONE 243-6691



Turner Nye No. 9-1.

MR. FEDERICI: With the Examiner's permission, we would like to go to Exhibit B first.

MR. UTZ: Do we have copies of those exhibits, or did you submit copies with the application, or what?

A I believe copies were submitted with the application. I will turn these in. I have made some changes on Exhibit A. I have added to it and I think it would be of interest to the Commission to have the additions, so I will turn in my copy of Exhibit A at the conclusion of the testimony.

Q (By Mr. Federici) Would you explain Exhibit B?

A Exhibit B is more or less self-explanatory. It shows the dual completion method that was used in completing this particular well. It has no unusual features. It's a standard type dual completion that's used generally throughout the San Juan Basin and in this particular area in which the well is completed; from the upper zone through 1 1/2-inch tubing and from the lower zone through 2 1/16-inch tubing with a packer set to separate the two zones. I don't believe that the exhibit here is controversial or that it actually enters into the case. There isn't anything about it that is different than any other well or any other method used, other than the fact that it's producing from a formation that is not normally producing in the immediate vicinity of this well. If the Commission has any questions on Exhibit B, I'll be glad to answer them. Otherwise, I'll go on to Exhibit A.



MR. UTZ: Go ahead to Exhibit A. We'll pick up the questions on both exhibits.

Q (By Mr. Federici) Before we go to Exhibit A, let me ask you about three questions here.

A Okay.

Q In your opinion, will this type of completion give complete separation of the producing formations?

A Yes.

Q Is this type of installation adequate to protect the different zones where only one zone is being produced at one time?

A Yes, it is.

Q In your opinion, would this type of completion be in the interest of conservation?

A Yes, sir, it would.

Q Would it protect correlative rights?

A Yes, I believe it would.

Q Would it prevent waste?

A It certainly would.

Q Now if you'll take Exhibit A and explain that to the Examiner.

A Exhibit A is a plat that shows the location of the well, and I have added to my exhibit all of the surrounding wells which were not on the original exhibit when it was turned in. We have a rather unique and peculiar situation here. We have three pools involved in this. First of all, we have the Aztec-Pictured Cliffs

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

ALBUQUERQUE, N. M.  
PHONE 243-6691



**DEARNLEY-MEIER REPORTING SERVICE, Inc.**FARMINGTON, N. M.  
PHONE 325-1162ALBUQUERQUE, N. M.  
PHONE 243-6691

Pool, in which you have wells located on 160-acre spacing, four wells to a section, producing from the Pictured Cliffs sandstone at an average depth of between 2,000, 2100 feet, that surrounds the area of this well. In addition to that, you have to the north of this well, approximately one-half to three-quarters of a mile is the southern boundary of the Blanco Mesaverde Pool, which produces from the Mesaverde formation at a depth that runs around 4,000, 4500 feet. This well is not actually in the Blanco Mesaverde Pool. It's just outside the pool boundary, but it is within the legal jurisdiction of that pool under the Oil Commission regulations.

Then you have a third zone producing in the same area, and it is actually the zone in which this well was completed and the zone in which the completion was projected when the well was first spudded in, and that's the Dakota sandstone which produces from a depth of around 6,000 plus feet.

Now there are no Mesaverde wells in the immediate vicinity of the Turner Nye 9-1. There are no Mesaverde offsets; however, it is offset by Dakota wells and it is offset by Pictured Cliff wells. The general sand condition in the area has not been entirely favorable to drilling Mesaverde wells. It hasn't been considered economically feasible to drill Mesaverde wells in this immediate vicinity.

In the course of drilling the Turner Nye Well, due to sample electric logs and other geological data, the operator



**DEARNLEY-MEIER REPORTING SERVICE, Inc.**FARMINGTON, N. M.  
PHONE 325-1182ALBUQUERQUE, N. M.  
PHONE 243-6691

concluded that there was an opportunity here that could be exploited in developing an additional shallower zone, to which he had the lease rights, namely, the Mesaverde formation. So they went ahead and dually completed the well mainly as a test. It made approximately half a million cubic feet of gas from the well, which obviously is not a great well by anyone's standards.

If the operator is permitted to go ahead with the dual completion, there may be other dual completions with this operator and other operators, but it is doubtful that with that magnitude any of them would drill Mesaverde wells on their own.

It's a perfect location to the Dakota sandstone within the pool boundaries of the Basin Dakota Pool, but as far as the Mesaverde formation goes, the normal spacing pattern is one well in the Northeast quadrant of the section and one well in the Southeast quadrant of the section; and this well is in opposition to that and that is what makes it an unorthodox location. The operator asks that the Commission allow him to go ahead with his production from this well, on the grounds that the Mesaverde production is too small to warrant drilling a Mesaverde well under any circumstances conceivable now or in the immediate or long-term future.

Q Approximately what would it cost to drill a well to the Mesaverde formation?

A It would cost somewhere between, oh, possibly \$50,000 under present completion practices, and with a well that small it



just simply would never pay out, you just couldn't do it. You have proration in the Mesaverde formation. In addition to that, the general gas production in the area and the take by the pipeline companies is not as good as it could be right now. Your marketing situation is not conducive to marginal drilling at the present time.

Q Do Exhibits A and B accurately reflect what is shown on them?

A Yes, sir, they do, except that I have added all the wells that offset the Section 9 and the Turner Nye Well on my copy of Exhibit A. I will turn this in to the Commission.

Q Those are shown in red?

A Correct. I have shown them all in red and marked "PC" for Pictured Cliff wells, and "D" for Dakota wells, and no Mesaverde wells immediately offsetting this one.

MR. FEDERICI: We offer Exhibits A and B in evidence.

MR. UTZ: Without objection, Exhibits A and B will be entered into the record of this case.

Q (By Mr. Federici) Is there anything further you wish to take up?

A No.

MR. FEDERICI: I have nothing further.

CROSS EXAMINATION

BY MR. UTZ:

Q What is the nearest Mesaverde well, what is its location?



**DEARNLEY-MEIER REPORTING SERVICE, Inc.**FARMINGTON, N. M.  
PHONE 325-1182ALBUQUERQUE, N. M.  
PHONE 243-6691

A I don't know the exact location of it. The nearest well is at least a mile or mile and a half away inside the boundaries of the Blanco Mesaverde Pool, and it's located north, north and northwest of this well, but I don't know the exact location. I only tried to plot the wells that were within a mile or mile and a half that would constitute any kind of a direct offset to the well.

Q You don't know whether it's a standard location or not?

A As far as I know, the locations, the nearest Mesaverde locations are standard locations.

Q Do you know why Mr. Turner decided to drill this well in this particular location? Now this was a Dakota single completion that was projected?

A That is correct. It was not intended as a Mesaverde well. There was no intention at all in the beginning to complete it, it was just something that developed during the drilling of this well.

Q Did he drill this well on this location to get as close as he could to known production?

A I believe that had something to do with it. The sands in this area in the Mesaverde and the Dakota sandstone leave a good deal to be desired from the operator's point of view. The area is also close to Kutz Canyon. You have a certain number of rather localized terrain problems due to gullying in the area and small mesas, and extremely rough terrain. The area is flat, but in local



areas you do have some trouble getting the location exactly where the law requires it.

Q In logging this well, he determined that there was a good possibility for the Mesaverde to be productive, and therefore decided to try to dual it?

A Yes, sir, it was done as an experiment without any great hope of success when they started, and obviously a half million cubic feet well from that depth is nothing to become overjoyed about. I think that this well will have a bearing on future Mesaverde development; if the operators can go ahead and exploit favorable sand conditions when they occur in a Mesaverde well, there probably will be additional Mesaverde dual wells in this area. If they have to drill wells on their own, I don't think the area will be developed, as it is too costly.

Q Referring to Exhibit B, the top of the cement on the 5 1/2-inch casing is 6125, the stage collar on the same string is at 4462, which leaves 1663 feet of open hole in that immediate area. Do you know what formations are behind that pipe there?

A The cement in this well was put up, calculated to come up to a depth to protect the Pictured Cliffs sandstone between the Pictured Cliff and the Mesaverde. All of the potential producing horizons in the area are protected. Now there is one sand, the Farmington sandstone or its equivalent sometimes produces in the area, and this is not cemented off in this particular well. However, there was nothing in the Farmington or that zone to



be worth testing or dually completing in this particular well.

Q Do you know what the depth of the Pictured Cliff was, or in the offsetting wells?

A In the offset wells, the Pictured Cliff in this area runs approximately 2,000 to 2100 feet, and it would be the same in the Turner Nye Well. It would be somewhere between two --

Q It would be between 1690 and 2350, then?

A Yes, it would be protected by the cement.

areas you do have some trouble getting the location exactly where the law requires it.

Q In logging this well, he determined that there was a good possibility for the Mesaverde to be productive, and therefore decided to try to dual it?

A Yes, sir, it was done as an experiment without any great hope of success when they started, and obviously a half million cubic feet well from that depth is nothing to become overjoyed about. I think that this well will have a bearing on future Mesaverde development; if the operators can go ahead and exploit favorable sand conditions when they occur in a Mesaverde well, there probably will be additional Mesaverde dual wells in this area. If they have to drill wells on their own, I don't think the area will be developed, as it is too costly.

Q Referring to Exhibit B, the top of the cement on the 5 1/2-inch casing is 6125, the stage collar on the same string is at 4462, which leaves 1663 feet of open hole in that immediate area. Do you know what formations are behind that pipe there?

A The cement in this well was put up, calculated to come up to a depth to protect the Pictured Cliffs sandstone between the Pictured Cliff and the Mesaverde. All of the potential producing horizons in the area are protected. Now there is one sand, the Farmington sandstone or its equivalent sometimes produces in the area, and this is not cemented off in this particular well. However, there was nothing in the Farmington or that zone to



indicate any production in this well. The sand was fairly tight and there's nothing to indicate that it isn't fully protected by the mud that was left in the annulus between the casing and the hole.

Q Do you know whether or not there was any Gallup between the Mesaverde and the Dakota in this area?

A The Gallup sandstone does exist in this area, but there again there was nothing to indicate that the Gallup sandstone would be worth testing or dually completing in this particular well.

Q Do you know what the depth of the Pictured Cliff was, or in the offsetting wells?

A In the offset wells, the Pictured Cliff in this area runs approximately 2,000 to 2100 feet, and it would be the same in the Turner Nye Well. It would be somewhere between two --

Q It would be between 1690 and 2350, then?

A Yes, it would be protected by the cement.

MR. UTZ: Are there other questions of the witness? The witness may be excused.

(Witness excused.)

MR. UTZ: Are there any statements in this case? The case will be taken under advisement and the hearing is adjourned.

\* \* \* \* \*

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

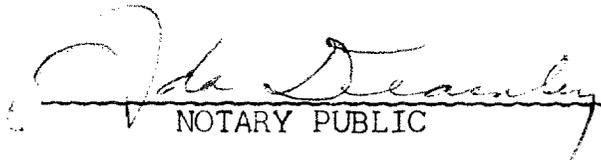
ALBUQUERQUE, N. M.  
PHONE 243-6691



STATE OF NEW MEXICO     )  
                                   ) ss  
 COUNTY OF BERNALILLO    )

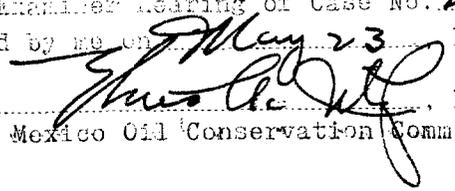
I, ADA DEARNLEY, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings was reported by me in stenotype and that the same was reduced to typewritten transcript under my personal supervision and contains a true and correct record of said proceedings, to the best of my knowledge, skill and ability.

DATED this 9th day of June, 1962, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

  
 \_\_\_\_\_  
 NOTARY PUBLIC

My Commission Expires:

June 19, 1963.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2565, heard by me on May 23, 1962.  
  
 \_\_\_\_\_, Examiner  
 New Mexico Oil Conservation Commission

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
 PHONE 325-1182

ALBUQUERQUE, N. M.  
 PHONE 243-6691

