

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE NO. 1617

TRANSCRIPT OF HEARING

DEARNLEY - MEIER & ASSOCIATES
GENERAL LAW REPORTERS
ALBUQUERQUE NEW MEXICO
Phone CHapel 3-6691

March 18, 1959

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

IN THE MATTER OF:

The hearing called by the Oil Conservation Commission on its own motion to consider the extension of the Ballard-Pictured Cliffs Pool in San Juan and Rio Arriba Counties, New Mexico, a prorated gas pool, to include the Canyon Largo-Pictured Cliffs Pool and the Otero-Pictured Cliffs Pool, both in Rio Arriba County, New Mexico, and both of which are non-prorated gas pools, and to include such other adjacent acreage in Rio Arriba County, New Mexico, as is necessary to form a common boundary.

CASE NO.
1617

BEFORE:

Mr. A. L. Porter, Jr.
Mr. Murray Morgan

TRANSCRIPT OF HEARING

MR. PORTER: The Commission will take up next Case 1617.

MR. PAYNE: Case 1617. In the matter of the hearing called by the Oil Conservation Commission on its own motion to consider the extension of the Ballard-Pictured Cliffs Pool in San Juan and Rio Arriba Counties, New Mexico, a prorated gas pool, to include the Canyon Largo-Pictured Cliffs Pool and the Otero-Pictured Cliffs Pool, both in Rio Arriba County, New Mexico

and both of which are non-prorated gas pools, and to include such other adjacent acreage in Rio Arriba County, New Mexico as is necessary to form a common boundary.

If the Commission please, we have one witness, Mr. Emery Arnold.

(Witness sworn.)

EMERY ARNOLD

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

DIRECT EXAMINATION

BY: MR. PAYNE:

Q Will the witness please state his name and position?

A Emery Arnold, supervisor of District 3 of the Oil Conservation Commission.

Q Mr. Arnold, in your official capacity with the Oil Conservation Commission have you made a study regarding the subject matter of this case?

A Yes, I have.

Q Now, referring to Exhibit No. 1 on the board there, I will ask you to explain to the Commission what it shows?

A Exhibit No. 1 is a map of a portion of the San Juan Basin showing pool boundaries of several Pictured Cliffs Gas Pools in the area. Marked on this exhibit also are the lines of cross sections which will be referred to later.

Q What is the area in blue, what are the areas in blue?

A The area in blue is presently undesignated, which is adjacent to the Ballard-Pictured Cliffs Pool and the Canyon-Largo Pictured Cliffs Pool and Otero-Pictured Cliffs Pool as now defined.

Q What does the yellow depict?

A The yellow depicts an area which we propose to delete from the proposed extension. The reason for this deletion will be discussed later.

Q All right, sir. Do you have anything else you would like to say about that exhibit, No. 1?

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

Q Referring to what has been designated as Exhibit No. 2, will you explain to the Commission what it shows?

A Exhibit No. 2 is a northwest-southeast cross section which crosses the area of the present Ballard-Pictured Cliffs Pool and an undesignated area between the Ballard-Pictured Cliffs Pool and Canyon Largo Pool in the Canyon Largo-Pictured Cliffs Pool; also an undesignated area between the Largo Cliffs Pool and Otero-Pictured Cliffs Pool, on across the Otero-Pictured Cliffs Pool and an area of Pictured Cliffs development to the southeast of the Otero Pool.

Q This is your AA prime cross section?

A Yes, sir, that's right. This cross section was made using electrical logs. The well to the extreme northeast is the El Paso Natural Gas Ge-Ele-Gu-Lith-E Well No. 1, located in the

southwest of Section 7, 26 North, 8 West, and the well to the extreme southeast is the Caswell Silver Jicarilla No. 1-33 in the northeast of Section 33 of 23 North, 3 West.

Q Mr. Arnold does this exhibit indicate the presence of permeable Pictured Cliffs sand extending the full length of the AA prime section?

A Yes, sir, this cross sections indicates that the Pictured Cliffs sandstone is continuously developed through this area.

Q Would you say that this exhibit is rather typical of a San Juan Basin Pictured Cliffs stratographic trap which extends from the northwest to the southeast.

A Yes, sir, you will notice the South Blanco Pictured Cliffs parallels this trend as do other Pictured Cliffs reservoirs in the area. It is typical in that you have belts of permeability and separated more or less by impermeable zones.

Q All right, sir. Do you have anything further you would like to add about this exhibit?

A No, sir, except to say that all the wells on this cross section are producing wells in the Pictured Cliffs formation with the exception of one which is waiting on completion at the present time.

Q That is the No. 1 Well?

A El Paso's No. 1 Canyon-Largo Unit in the Southeast of Section 3, 24 North, 6 West.

Q All right. Now, referring to Exhibit No. 3, what

does that show?

A Exhibit No. 3 is shown on this map as cross section BB prime. It shows the structure of the area which is dipping to the northeast. It also indicates that there are two separate developments in the Pictured Cliffs sandstone in this area paralleling each other, also being separated by an area which shows very little sandstone development.

Q Now, those two wells that show very little permeability, were those attempted Pictured Cliffs completions?

A Yes, sir.

Q However, were they in any presently designated pool, within the limits of any presently designated pool?

A No, sir, they are located in the undesignated area between the Canyon Largo in the South Blanco Pictured Cliffs Pool.

Q Mr. Arnold, would you say that this Exhibit indicates that there is an impermeable barrier between the South Blanco Pictured Cliffs Pool and Ballard Pictured Cliffs Pool?

A Yes, sir, I believe that there is such an impermeable barrier.

Q Do you have anything further you would like to say about that exhibit?

A No, sir.

Q All right. Now referring to what has been designated as Exhibit No. 4, what does that depict?

A Exhibit No. 4 is our cross section marked CC prime on the map. This exhibit crosses - - begins on the southwest in a presently undesignated area, crosses the presently designated Canyon Largo Pictured Cliffs Pool and ends in the South Blanco Pictured Cliffs Pool again.

Q Now, I note that the four wells shown on this cross section show very little or no permeable sand. Is this a dry hole within what is presently designated as the Canyon Largo Pool?

A Yes, sir, based upon this well in this cross section, it appears that probably an error was made in pool delineation. I further think this because the pressures shown on wells in Section 6 of 25 North, 6 West are more nearly South Blanco Pictured Cliffs pressures, and that is why I am recommending that we delete from the area that proposed extension, the area marked in yellow.

Q I see. All right, sir. Do you have anything else in regard to Exhibit 4?

A I don't believe so. I would like to say probably in a subsequent hearing we will recommend that this area be taken into the South Blanco Pictured Cliffs Pool.

Q That is the portion that is productive?

A That's right.

Q Not the portion that's now got the dry hole?

A That's right.

Q All right, sir. Now, referring to Exhibit No. 5,

will you explain to the Commission what that shows?

A Exhibit No. 5 is a cross section marked DD prime on this map, which first of all is drawn to the southeast on the left and is drawn in the Otero Pictured Cliffs Pool. The second log is also in the Otero Pictured Cliffs Pool. The third log was in an undesignated area between the South Blanco and Otero Pictured Cliffs Pool. The fourth log is on the South Blanco Pool.

Q That fourth log on there, which shows very little permeable sand, you say that is within the defined limits of the pool?

A No, sir, that is in an undesignated area.

Q All right, sir. Does this exhibit show a permeable belt in the Pictured Cliffs sand continuing in a southeasterly direction?

A Yes, sir, this shows some parallel sandstone development separated by an area where it is not developed.

Q All right. Mr. Arnold, does your study lead you to believe that the three Pictured Cliffs Pool presently designated as the Ballard, the Canyon Largo, and the Otero are one common source of supply?

A Yes, sir.

Q Is that also true in regard to the area shaded in blue on Exhibit 1, that they are not presently within any defined pool?

A Yes, sir, I believe those areas should be included

in the extended Ballard Pictured Cliffs Pool.

Q Do you feel that they are also part of one common source of supply, that being the Ballard-Pictured Cliffs Pool?

A Yes.

Q What have you noticed in regard to pressure in this general area, Mr. Arnold?

A There is a pressure difference in the area of this proposed extension of about one hundred pounds. Average pressures on the south end of the reservoir are about seven hundred and fifty pounds, and then in the present Ballard Pool, about six hundred fifty. However, there does appear to be a gradual pressure gradient across the area which further leads me to believe that this is one reservoir.

Q All right, sir. Referring back to your AA prime cross section, which is Exhibit 2, I notice that the last well shown on this cross section is not included in your proposed extension. Would you explain why, to the Commission?

A Yes, sir. At the time we started this study, and at the time that this case was advertised for hearing, we were not sure at that time that the area in 23, 3, and 23, 4 would prove to be part of this same reservoir. Therefore, we didn't include it in the advertisement of the area in Sandoval County. I do think that this is part of the same reservoir and I will, at a later hearing, recommend that the pool be extended.

Q If the Commission extends the pool today at a sub-

sequent nomenclature case, you propose to recommend further extension to take in that additional acreage, is that right?

A That's right.

Q Now, Mr. Arnold, is it your opinion that the potential producing capacities of the wells in this area is in excess of the market demand?

A Yes.

Q Mr. Arnold, do you feel that prorating this area should change the demand in the area?

A No, I see no reason why it should.

Q Now, the order which you would recommend, what would you propose as the effective date for such an order?

A I would propose that the effective date of the order be May 1st, 1959.

Q And what is the reason for that?

A Well, main reason for that is that the nominations for gas for the Ballard-Pictured Cliffs Pool do not reflect the demand for gas from this area as taken in this morning's hearing.

Q What would you recommend as regards non-standard proration units?

A I would recommend that operators be given thirty days to file for administrative approval of any units which are non-standard by reason of being either over or under the standard 160 acres because of variations in the legal surveys.

Q Do you have anything further you would like to present

in this case?

A No, sir.

Q For the benefit of the record, Mr. Arnold, perhaps we should read into the record the area shaded in blue and the area shaded in yellow, the yellow being the proposed deletion and the blue being the proposed extension, which was not in the legal description of these areas and was not in the advertisement.

A All right. The first area is in 25 North, 7 West, Section 8, S/2 of Section 8, all of Section 9 and 10, 14 and 15, 20, 21, 22, 23, 26, 27 in the E/2 in the SW/4 of Section 28, all of Section 33, 34, 35, and the W/2 of Section 36, and then 24 North, 7 West, 17, 24 North, 7 West, the NW/4 of Section 1, N/2, Section 2, all Section 3, N/2 Section 4, North/2 of Section 10. In 25 North, 6 West, the E/2, SW/4 of Section 2, the SW/4 of Section 3, S/2 of Section 4, N/2 in the SW, and SW/4 of Section 9, N/2 Section 10, all Section 11, in the W/2, Section 12, and in 24 North, 5 West, S/2, Section 25 all of Section 26, NE, Section 27, N/2 and SE of Section 35, all Section 36 in Township 24 North, 4 West. The W/2 of Section 30, the W/2 and SE/4 of Section 31, S/2 Section 33 in 23 North, 5 West, all Section 11, all Section 2, E/2 Section 3, E/2 Section 10, all of 11, 12, and 13, and 23 North, 4 West, S/2, Section 2, S/2 and NW/4, Section 3, all of Sections 4, 5, 7, 8, 9, 10, SW/4 and N/2 Section 11, all of Section 16, 17 and 18, and the area to be deleted from the proposed extension is in 25 North, 6 West, S/2 and NE/4 of

~~Section 6, all Section 17, SE/4 and N/2, Section 18, and the S/2~~
of Section 7.

Q Are you generally familiar with all the exhibits shown here today?

A Yes, sir.

MR. PAYNE: Mr. Commissioner, I move for the admission of Exhibits 1 through 5 into evidence in Case No. 1617.

MR. PORTER: Is there objection to the admission of these exhibits? They will be admitted.

MR. PAYNE: That concludes our direct examination.

MR. PORTER: Does anyone have any questions of Mr. Arnold? Mr. Bushnell.

MR. BUSHNELL: H. D. Bushnell, appearing on behalf of Amerada and in association with J. C. Kellahin.

CROSS EXAMINATION

BY: MR. BUSHNELL:

Q Mr. Arnold, the Ballard Pictured Cliffs Pool was developed on the basis of 160-acre spacing, is that right?

A Yes, sir, that's right.

Q And the Otero Pictured Cliffs has been developed on the basis of 320-acres spacing, is that right?

A No, that is not correct. It also has been developed on the basis of 160-acre spacing and so far as the Commission rules and regulations are concerned --

Q Would you state, I am not sure I understand the

effect of your recommendation with reference to your proposal as to exception, what was the effect of that recommendation?

A That operators be given thirty days from the effective date of ~~the~~ order to file with the Commission applications for administrative approval for non-standard proration units.

Q Would that be units of less than standard size, Mr. Arnold?

A Yes, sir, that would be in accordance with the present Ballard Pool rules which state, I believe that any unit which is small than 158 acres or larger than 162 acres is a non-standard unit, and so long as that variation is due to variations in the public land surveys, administrative approval can be granted.

MR. BUSHNELL: That's the only questions I have.

MR. PORTER: Anyone else have any questions of Mr. Arnold? You may be excused.

(Witness excused.)

MR. PORTER: Anyone else have anything further to offer in this case? Take the case under advisement.

STATE OF NEW MEXICO)
)
COUNTY OF BERNALILLO) ss

I, Joseph A. Trujillo, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing was reported by me in Stenotype and that the same was reduced to typewritten transcript by me and contains a true and correct record of said hearing, to the best of my knowledge, skill and ability.

DATED this 26th, day of March, 1959, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Joseph A. Trujillo
NOTARY PUBLIC

My Commission Expires:
October 5, 1960