

BEFORE THE  
OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE NO. 1489

TRANSCRIPT OF HEARING

AUGUST 13, 1958

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

BEFORE THE  
OIL CONSERVATION COMMISSION.  
SANTA FE, NEW MEXICO  
AUGUST 13, 1958

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IN THE MATTER OF:

CASE 1439 Southeastern New Mexico nomenclature case:  
calling for an order for the extension of:  
existing pools in Lea, Eddy and Chavez  
Counties, New Mexico.

(a) Extend the Anderson Ranch-Wolfcamp  
Pool to include:

TOWNSHIP 16 SOUTH, RANGE 32 EAST, NMPM:  
Section 2: Lots 1, 2, 7, 8, 9, 10,  
15, & 16

(b) Extend the Artesia Pool to include:

TOWNSHIP 17 SOUTH, RANGE 28 EAST, NMPM:  
Section 34: NE/4

(c) Extend the Bagley-Upper Pennsylvanian:  
Gas Pool to include:

TOWNSHIP 12 SOUTH, RANGE 33 EAST, NMPM:  
Section 4: NW/4

(d) Extend the Blinebry Oil Pool to in-  
clude:

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM:  
Section 36: SE/4

(e) Extend the Bronco-Wolfcamp Pool to  
include:

TOWNSHIP 12 SOUTH, RANGE 38 EAST, NMPM:  
Section 35: SW/4

(f) Extend the Caprock-Queen Pool to in-  
clude:

TOWNSHIP 14 SOUTH, RANGE 31 EAST, NMPM:

Section 8: SW/4 SW/4 :  
 Section 23: SW/4 :  
 Section 26: NW/4 :

(g) Extend the Cave Pool to include: :

TOWNSHIP 17 SOUTH, RANGE 29 EAST, NMPM:  
 Section 4: SE/4 :

(h) Extend the Empire Abo Pool to include: :

TOWNSHIP 18 SOUTH, RANGE 27 EAST, NMPM:  
 Section 10: NE/4 :  
 Section 11: NE/4 :

(i) Extend the Jalmat Pool to include: :

TOWNSHIP 23 SOUTH, RANGE 36 EAST, NMPM:  
 Section 20: S/2 :

(j) Extend the Roberts Pool to include: :

TOWNSHIP 17 SOUTH, RANGE 33 EAST, NMPM:  
 Section 7: SW/4 & W/2 SE/4 :

(k) Extend the Shugart Pool to include: :

TOWNSHIP 18 SOUTH, RANGE 31 EAST, NMPM:  
 Section 36: W/2 NW/4 :

(l) Extend the Tatum-Wolfcamp Pool to include: :

TOWNSHIP 13 SOUTH, RANGE 36 EAST, NMPM:  
 Section 7: NE/4 :

(m) Extend the Tubb Gas Pool to include: :

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM:  
 Section 14: NE/4 :

(n) Extend the South Vacuum-Devonian Pool to include: :

TOWNSHIP 18 SOUTH, RANGE 35 EAST, NMPM:  
 Section 27: W/2 :  
 Section 34: N/2 :  
 Section 35: NW/4 :  
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BEFORE:

Mr. Edwin L. Mechem  
Mr. Murray Morgan  
Mr. A. L. Porter

T R A N S C R I P T     O F     P R O C E E D I N G S

MR. PORTER: We will take up next Case 1489.

MR. PAYNE: Southeastern New Mexico nomenclature case calling for an order for the extension of existing pools in Lee, Eddy and Chaves Counties, New Mexico.

MR. COOLEY: If it please the Commission, Mr. Campbell, representing Texas Pacific Coal & Oil Company, has requested that he be permitted to present testimony on Paragraph (c) of Case 1489 regarding the extension of the Bagley-Upper Pennsylvanian Gas Pool. We have no objection to that proposal.

MR. CAMPBELL: If the Commission please, I am Jack M. Campbell of Campbell & Russell, Roswell, New Mexico, appearing on behalf of Texas Pacific Coal & Oil Company. I might explain the reason we have requested to put on this testimony. We have a 320-acre unit in that Pool, and we discovered that while we had obtained administrative approval in the proper manner for a 320-acre unit, that, unfortunately, 160-acre wasn't in the defined limits of the Pool. In this hearing we will put on some testimony with regard to whether or not that 160 acres may reasonably be presumed to be productive of gas and, therefore, should be within the defined limits of this Pool. We have one witness.

(Witness sworn)

J. D. BAGWELL,

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

DIRECT EXAMINATION

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

BY MR. CAMPBELL:

Q Will you state your name, please?

A J. D. Bagwell.

Q By whom are you employed?

A T. P. Coal & Oil Company.

Q In what capacity?

A Geologist in Midland, Texas.

Q Have you previously testified before this Commission in your professional capacity?

A Yes, sir, I have.

MR. CAMPBELL: Are the witness' qualifications acceptable?

MR. MORGAN: They are acceptable.

Q (By Mr. Campbell) Mr. Bagwell, in connection with your duties, have you had occasion to make a study of the Bagley-Upper Pennsylvanian Gas Pool in Lea County, New Mexico?

A Yes, I have.

Q Have you made a study of that with regard to the proposed extension of the limits of the Pool to include the NW/4 of Section 4, Township 12 South, Range 33 East?

A Yes, I have.

Q Mr. Bagwell, I hand you what has been identified as Applicant's Exhibit No. 1, as Texas Pacific Coal & Oil Company's Exhibit No. 1 in this case, and ask you to state what that is.

A Exhibit 1 is an Isopachs map of the net porosity in the Upper Pennsylvanian Gas Pool.

Q With reference to the western and southwestern portions of that map, will you state what that reflects, in your opinion, with regard to the NW/4 of Section 4?

A This map indicates to me that it is reasonable to assume that the NW/4 of Section 4 is productive of gas in the Bagley-Upper Pennsylvanian Gas Pool.

Q Why do you reach that conclusion?

A T. P.'s State "C" Account 2 Well No. 1 in the NE/4 there has the thickest net pay by microlog of any well in that Pool, that being eighteen feet. There are no wells west of it, or southwest of it, which show a decrease in porosity. I do not believe that the western or the southwestern or the northwestern limits of production have been clearly defined as yet.

Q You have nothing to indicate to you that there is any immediate pinching out of the productive zone there that appears in Texas Pacific's wells in the NE/4 of Section 4, is that correct?

A None whatsoever.

Q Do you have anything further with regard to the Isopachs map?

A It might be interesting to note that Amerada's State "BTM" No. 2 up in 6 and 33 in the NE/4, which is in the process of being completed, showed sixteen feet of **microlog** porosity in the Upper Pennsylvanian Gas Pool. So it appears that from time to time further extension of the Pool may be necessary, pending further development.

Q Now, I hand you what has been identified as Texas Pacific Coal & Oil Company's Exhibit No. 2 and ask you to state what that is, please.

A Exhibit No. 2 is a structure contour map contoured on a marker near the top of the Upper Pennsylvanian Gas Pool.

Q Is it true, Mr. Bagwell, that actually a contour map of this particular producing formation is of somewhat limited value?

A It is. Structure is not the primary factor in the occurrence of oil in this Upper Pennsylvanian Gas Pool. However, this map does show that there are no **radical** structural changes occurring in the vicinity of this NW/4 of Section 4 which might tend to adversely affect productivity there.

Q Then based upon the -- recognizing the limitations of the Exhibit, but based on what it reflects, you find nothing in there to indicate to you that it is unreasonable to assume that the NW/4 of Section 4 is productive of gas from the eighty-six hundred foot zone, is that correct?

A That's correct.

Q Now, refer to what has been identified as Texas Pacific Coal & Oil Company's Exhibit No. 3 and state to the Commission what that is, Mr. Bagwell.

A Exhibit 3 is a cross section covering the Upper Pennsylvanian Gas Pool. It runs in an east-west direction. On the east end, the Amerada No. 5 C-a-u-d-l-e to the H. S. Moss State No. 1, over in Section 32, which is outside the limits of the Pool, by the way.

Q From where did you obtain the microlog data you used for the purposes of this Exhibit, Mr. Bagwell?

A On Amerada's wells. I took that information from cross sections which they had prepared and entered in evidence at prior hearings here. I did check them.

Q Essentially, did your check of those agree basically with the conclusions of Amerada when those were presented in testimony before this Commission?

A Essentially, they do, yes.

Q Now, referring to that Exhibit No. 3 in that regard, would you state to the Commission what it portrays and what conclusions you draw from it?

A The dark marks on the center column of the logs indicate **microlog** pay except where marked otherwise. As can be seen in the Texas Pacific State "C" Account 2 Well No. 1, approximately eighteen feet of net porosity is indicated which was taken from the **microlog**. . . I don't show the **microlog** on this portion, but that is where it came from. It is interesting to note on the west end of the cross section that the drill stem test taken covering this interval in the Moss Well recovered a slight show of gas. Therefore, I am assuming that there was at least a remnant of the porosity developed in that well, as we have in the major portion of the Pool. I see no reason, from this cross section, to believe that the NW/4 of Section 4 would not be productive of gas.

Q Using that Exhibit 3 there as a reference, approximately

where, in relation to those two wells on the left portion of the Exhibit as you face it, where would the NW/4 of the Section fall in relation to -- between those two points?

A The westernmost line of the NW/4 of Section 4 would fall approximately half way between the Moss Well and Texas Pacific's "C" 1.

Q Now, Mr. Bagwell, based upon your study and upon the information contained in the Exhibits, is it your opinion that the NW/4 of Section 4 may reasonably be presumed to be productive of gas from the Upper Pennsylvanian Gas zone?

A I certainly think so.

Q Have you found anything in your study to lead you to any contrary conclusions in that regard?

A No, nothing whatsoever.

Q All of the evidence you found indicates that it is productive in that zone, is that correct?

A It is reasonable to assume so, yes.

MR. CAMPBELL: That's all the questions I have at this time.

MR. PORTER: Anybody have a question of Mr. Bagwell? Mr. Utz.

#### CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Bagwell, referring to your Exhibit No. 3, I believe it was your testimony that you assumed the NW/4 to be productive

on the basis of gas shows on the Moss State No. 1 in the southwest of 32?

A That's not the primary basis, Mr. Utz, no, sir, I don't think so. I just merely find no reason to believe that the porosity ceases to be developed going toward that NW/4. I base that on the fact--on your State "C" Account Well No. 2, which has the thickest net porosity of any well in the pool. I mentioned that Moss Well simply because it appears to be that there is a remnant still of some of the poorer zones that we do find within the limits of the field.

Q That was not a productive well, was it?

A No, sir, it was not.

Q Somewhere between the Moss Well and your State "C" Account No. 2 in the NE/4 of Section 4, then, the porosity or permeability or whatever -- the pinchout, or whatever it is, of course, --

A Yes, somewhere between those two.

Q -- and that was your only control --

A My only control to the west, yes, sir, other than projecting my data from my Isopachs map and from cross sections.

Q Has Texas Pacific considered drilling in the SW/4 of Section 4?

A They have considered it. I don't know what the Commission is going to do to something like that, Mr. Utz, I don't know.

Q Do you feel that that quarter is productive?



A I feel it stands a good chance. I feel that the whole southeastern edge does -- the limited production of the southwestern edge of the pool has not been defined, and there is no dry hole to the east in any of the strings of wells that you see producing on the map there.

Q What was the Amerada Well in the NW/4 of Section 33 that you referred to?

A That's the "BTM" State No. 2.

Q Was that well productive of gas in the Upper Penn?

A To my knowledge, it was not tested in the Upper Penn. They are in the process of completing that well in the lower zone. However, the microlog of the well did show sixteen feet porosity.

Q In the Upper Penn?

A Yes.

Q How are they going to complete it?

A To my knowledge, they are not. The last I heard, they were attempting completion in the lower zone.

Q I believe it was your Exhibit No. 1, your Isopachs map.

**Do those zones indicate productiveness?**

A I know of no porosity in the Upper Pennsylvanian Gas Pool that is not productive of gas.

Q You don't have any control to show what the porosity is over in the NW/4, do you?

A The NW of Section 4?

Q Yes, sir.

A No, sir, I have no control out there, other than the fact that I have no wells indicating that I have no porosity out there. And since going westward from Section 3 and through our wells in Section 4, the percentage of porosity is increasing. It leads me to believe that the NW/4 of Section 4 would have possibly as much, maybe even more, porosity than we encountered in our State "C" Well No. 1.

Q Your Exhibit No. 1, the top of the Pennsylvanian Gas zone, is that map in itself -- those contours do not indicate the productive zones?

A No, sir, they don't.

Q The top of the Pennsylvanian?

A That's right.

Q And to the southwest, what control did you have to contour that?

A Well, as you can see on the map, control is nil to the southwest, it's merely a porjection from the Moss Well over in Section 32 back down to the Amerada Wells in Section 10.

Q There is considerable speculation?

A Yes, sir, there is always in a contour map.

MR. UTZ: I believe that's all I have.

MR. PORTER: Anyone else have a question of Mr. Bagwell? If not, the witness may be excused.

(Witness excused.)

MR. CAMPBELL: I would like the record to show that I

offer Exhibits 1, 2, and 3 in evidence.

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

ERIC ENGBRECHT

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 Eric Engbrecht, oil and gas inspector in District No. 1 for the Oil Conservation Commission.

Q Mr. Engbrecht, in your official capacity with the Oil Conservation Commission of New Mexico, have you had an opportunity to make a study concerning the desirability of the extension of certain existing pools in Lea, Eddy and Chaves Counties, New Mexico.

A Under my direction, yes; supervision, yes.

Q What are your recommendations concerning extension of the Anderson Ranch-Wolfcamp Pool?

A Paragraph (a), to extend it as advertised because of two completed wells capable of producing.

Q What are your recommendations concerning the extension of the Artesia Pool?

A In Paragraph (b), to extend it as advertised because of one completed well capable of producing.

Q What are your recommendations concerning extension of the Blinebry Oil Pool?

A In Paragraph (d), to extend it as advertised because of one completed well capable of producing.

Q What are your recommendations concerning extension of the Bronco-Wolfcamp Pool?

A Extend Paragraph (e) as advertised because of one completed well capable of producing.

Q What are your recommendations concerning extension of the Caprock-Queen Pool?

A Paragraph (f), extend it as advertised because of two completed wells capable of producing, and five drilling wells in this area.

Q What are your recommendations concerning extension of the Cave Pool?

A Paragraph (g), extend as advertised because of two completed wells capable of producing.

Q What are your recommendations concerning extension of the Empire Abo Pool?

A Paragraph (h), extend it as advertised because of one completed well capable of producing, and one drilling well in this area.

Q What are your recommendations concerning extension of the Jalmat Pool?

A Paragraph (i), extend as advertised because of one completed well capable of producing.

Q What are your recommendations concerning extension of the Roberts Pool?

A Paragraph (j), extend it as advertised because of one completed well capable of producing.

Q What are your recommendations concerning extension of the Shugart Pool?

A Paragraph (k), extend it as advertised because of one completed well capable of producing.

Q What are your recommendations concerning extension of the Tatum-Wolfcamp Pool?

A Paragraph (l), extend it as advertised because of one completed well capable of producing.

Q What are your recommendations concerning extension of the Tubb Gas Pool?

A Paragraph (m), extend it as advertised to include acreage dedicated to a gas well.

Q What are your recommendations concerning extension of the South Vacuum-Devonian Pool?

A Paragraph (n), extend it as advertised because of one completed well capable of producing, and one drilling well.

Q Mr. Engbrecht, have you prepared Exhibits substantiating your recommendations?

A Yes, sir, I have.

Q How have you identified them?

A Exhibits from "A" to "B" and from "D" through "N" inclusive.

MR. PAYNE: Mr. Examiner, I move that Exhibits "A" through "B" and "D" through "N" in Case 1489 be received in evidence.

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

Any questions of Mr. Engbrecht?

The witness may be excused.

(Witness excused)

MR. PORTER: Does anyone else have anything to present in this case, any statement? Case 1489, the Commission will take the case under advisement, and proceed to Case 1490.

