

DEARNLEY-MEIER REPORTING SERVICE, Inc.

ALBUQUERQUE, NEW MEXICO

PHONE CH 3-6691

PAGE

**BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
September 20, 1961**

EXAMINER HEARING

CASE 2387

TRANSCRIPT OF HEARING



BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
September 20, 1961

EXAMINER HEARING

IN THE MATTER OF:

Application of Continental Oil Company for permission)
to dispose of salt water, Lea County, New Mexico.)
Applicant, in the above-styled cause, seeks permission) Case
to dispose of produced salt water from the Anderson) 2387
Ranch Wolfcamp Pool in to the Wolfcamp formation)
through its Anderson Ranch Unit Well No. 8, located)
1980 feet from the South line and 660 feet from the)
East line of Section 11, Township 16 South, Range 32)
East, Lea County, New Mexico.)

BEFORE:

Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: Call case 2387.

MR. MORRIS: Application of Continental Oil Company for
permission to dispose of salt water.

MR. KELLAHIN: May I have the record show the same
appearances, and that Mr. Coltharp, the witness, has been sworn.

E. D. COLTHARP,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

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A E. D. Coltharp.

Q Are you the same Mr. Coltharp who testified in the preceding case?

A Yes, sir.

Q Mr. Coltharp, are you familiar with the application of Continental Oil Company in Case 2387?

A Yes, sir, I am.

Q Would you state briefly what is proposed in this application?

A Case No. 2387 is the application of Continental Oil Company for authority to dispose of produced salt water from the Anderson Ranch Unit, Wolfcamp and Devonian Pools, into the Wolfcamp formation, Anderson Ranch Unit Well No. 8.

Q I call your attention to the docket where it says the salt water from the Anderson Ranch Wolfcamp Pool. The application actually covers more than that, does it not?

A Yes, sir, it covers also the Devonian Pool, salt water produced from the Devonian Pool also.

Q Do you have a plat showing the area involved in this application? Referring to what has been marked as Exhibit No. 1, will you discuss the information shown on that exhibit?

A Exhibit 1 is the lease plat which shows the area boundaries of the Anderson Ranch Unit as approved by the Commission on May 1, 1952 by Order No. R-154, also the Anderson Ranch Unit boundary embraces portions of Section 1, 2, 12, 13 and 14, and all of



Section 11, Township 16 South, Range 32 East, Lea County, New Mexico.

Q Is Continental Oil Company the unit operator?

A Yes, sir, Continental is the unit operator.

Q In addition to the information you have just stated, what else is shown on Exhibit No. 1?

A Exhibit 1 also indicates those wells which are producing from the Wolfcamp formation, and those wells which are producing from the Devonian formation. The wells circled in red are Wolfcamp; those circled in blue are Devonian, and those that have both blue and red are dual-completed wells in the Wolfcamp and Devonian formations.

Q Does the exhibit likewise show the producing horizon for wells within two miles of the proposed salt water disposal well?

A Yes, sir, it does.

Q And that is all the producing wells within that area, is that correct?

A Yes, sir.

Q Within a radius of two miles?

A Yes, sir.

Q Then, I take it, all of the production in this area is either Devonian or Wolfcamp, is that correct?

A Yes, sir.

Q The salt water disposal will be in the Wolfcamp formation, is that correct?

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A Yes, sir.

Q Has disposal of salt water heretofore been approved by the Commission in the Wolfcamp formation?

A Yes, sir, it was approved under application by Gulf Oil Company in Case No. 2008, Order No. R-1719 dated July 15, 1960. The application called for the disposal of water into the Wolfcamp formation in the Gulf Oil Lea State 3-R No. "B" Well, 330 feet from the South line and 980 from the East line, Section 2, Township 16, Range 32.

Q Is that the well that is presently shown on the plat as the No. 3 well, as a wolfcamp producing well?

A Yes, sir, as a Wolfcamp well.

Q What volumes of water will be disposed of in the salt water disposal well?

A We are currently producing approximately 1200 barrels of water from the Devonian formation.

Q Has the Commission authorized disposal of water in any other formation in this area?

A Yes, sir, the Commission authorized the disposal of salt water from the Anderson Ranch Unit into the Saunders formation in the Anderson Ranch Unit Well No. 9 on May the 5th, 1958, by Order No. SWD-16.

Q Are you presently disposing of water in that well?

A Yes, sir, we are disposing of 2,000 barrels per day at 2600 pounds pressure and, therefore, we are having great difficulty from this high injection pressure in maintaining pumps and keeping



the operation going twenty-four hours of the day, which is necessary for the unit operations.

Q Is that the reason of the operator seeking a new disposal well?

A Yes, sir, it is.

Q Do you have a log of the proposed disposal well?

A Yes, sir, I do.

Q Referring to what has been marked as Exhibit No. 2, would you discuss the information shown on that exhibit?

A This is a portion of the simultaneous radiation log run on the Anderson Ranch Unit, and the portion includes all of the Wolfcamp formation of interest, and approximately four or five feet above and below this zone of interest. The No. 1, which is marked on the exhibit at approximately ⁹¹⁵⁰ 9,715, is the top of the ~~San Andres~~ ^{San Andres} lime or the Wolfcamp formation. The No. 2 interval is the interval which was drillstem tested on initial attempted completion of the well, and that drillstem test recovered 1,500 feet of salt water. The No. 3 on the exhibit is the proposed location of a cement retainer plug which we would like to set and squeeze off all perforations that are presently open below this interval.

Q Does this section, as shown on the exhibit, correspond with the Wolfcamp formation found in the other wells in the unit?

A Yes, sir, it does.

Q Is there any oil production from the interval in which you propose to dispose of salt water?

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A Based upon the drillstem tests there is no oil production from this interval.

Q What is the structural position of the well in regard to the Saunders lime, do you have an exhibit showing that?

A Yes, sir.

Q Referring to what has been marked as Exhibit No. 3, will you discuss the information shown on that exhibit?

A Exhibit 3 is a structure map, contoured on top of the Saunders lime.

Q How does this exhibit show the structural position of the proposed salt water disposal well?

A The structure is actually 20 feet lower than the two producing wells, Anderson Ranch 5 "W" direct west offset to Anderson Ranch Unit 8, and it is approximately 30 feet lower than the Anderson Ranch 10 "W" direct north offset to the proposed well.

Q Have you prepared an exhibit showing the casing program on this well?

A Yes, I have.

Q Referring to what has been marked as Exhibit No. 4, would you discuss the information on that exhibit?

A Exhibit No. 4 is a schematic of the casing and cementing program in the Anderson Ranch Unit No. 8, also the relative positions of the Saunders lime, proposed perforations in the Wolfcamp, proposed plug-back depths are shown, on the schematic.

Q From the information shown on the exhibit, your surface



string was cemented from 606 feet to the surface, is that correct?

A Yes, sir, it was.

Q Cement was circulated?

A Yes, sir.

Q Your 9-5/8 inch casing from 4,707 feet, was that circulated?

A No -- It is 4,207.

Q 4,207 on the 9-5/8 inch casing, is that correct?

A Yes, sir.

Q And as to the production string which was set, where is the top of the cement on that?

A Top of the cement is indicated by temperature surveys at 7,460.

Q And the temperature survey was run on the well?

A Yes, sir.

Q In your opinion, will this casing program and the cementing program followed fully protect any fresh water zones that may have been encountered in this well?

A Yes, sir, it will.

Q Will it fully protect any producing formations encountered in this well bore?

A Yes, sir, it will.

Q Will disposal of salt water in the Wolfcamp pay as proposed in this application cause any damage to any producing formation?



A No, sir, it won't.

Q Is your present Anderson Ranch Unit No. 9 Well adequate for salt water disposal?

A No, sir, because of high pressures encountered in trying to inject the water.

Q Is the proposed installation in the interest of conservation and the prevention of waste?

A Yes, sir, it is.

Q Were Exhibits 1 through 4 prepared by you or under your supervision?

A Yes, sir.

MR. KELLAHIN: I would like at this time to offer Exhibits 1 through 4 inclusive.

MR. NUTTER: The exhibits will be admitted in evidence.

MR. KELLAHIN: That is all the questions I have.

MR. NUTTER: Does anyone have any questions of Mr. Coltharp?

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Coltharp, when this No. 8 Well was originally completed, casing was run and perforated, but no production at all was obtained, is that correct?

A Sir, that was a Devonian test, and on the way down they did try to drillstem test in the Wolfcamp formation and only recovered water. Then we attempted to complete it in the Pennsyl-



vanian, and never attempted to complete it in the Wolfcamp because of the water on the drillstem test.

Q What was the interval that was tested on that drillstem test?

A It is shown on the Exhibit 2; it was the No. 2 listed on the log; that was the drillstem test interval.

Q Is it the area marked by the little vertical lines there?

A Yes, sir.

Q Which corresponds with your proposed perforated interval, 8,776 to 9,716?

A That is correct.

Q If you obtained salt water on the drillstem test, evidently that interval from 8,776 to 9,816 is below the oil-water contact?

A That is our assumption; from our information, that is.

Q Is the No. 5 Wolfcamp and the No. 10 Wolfcamp producing water at the present time?

A They are producing some water at the present time.

Q What is their perforated interval, do you know?

A They are -- I don't have it listed right here, but they were right at the very top, approximately eight foot open at the very top of the formation, and from a subsea depth. No. 5 is 5,436 to minus 54, approximately 44.

Q That is the perforated interval?

A Yes, sir.

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Q And the perforated interval, 5,427 to about eight feet below that one?

A Yes, sir, top eight feet.

Q So you don't anticipate the injection of water into the interval here in the No. 8 will flood out the Nos. 5 and 10, then?

A No, sir, we don't.

MR. NUTTER: Any further questions of Mr. Coltharp?

Q (By Mr. Nutter) Are you going to be injecting down the casing or down the tubing?

A We plan on down the tubing.

Q What size of tubing will you have to have to get 2,000 barrels a day?

A We are going to use three-inch.

Q Will that be on a packer?

A No, we are going to keep it open so we can observe all pressures directly and also check the pressure build-up, using the same methods as in the past.

Q Will the annulus between the tubing and casing be filled with any medium?

A Yes, it will be filled with fresh water inhibited.

MR. NUTTER: Any further questions of Mr. Coltharp? Do you have anything further, Mr. Kellahin?

MR. KELLAHIN: No, that is all, Mr. Nutter.

MR. NUTTER: Does anyone have anything they wish to offer in Case 2387? Take the case under advisement.



STATE OF NEW MEXICO)
) ss
 COUNTY OF BERNALILLO)

I, JUNE PAIGE, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 2nd day of October, 1961.

June Paige
 Notary Public - Court Reporter

My commission expires:

May 11, 1964.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2387, heard by me on 9/20, 1961.

[Signature], Examiner
 New Mexico Oil Conservation Commission

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I N D E XWITNESSPAGE

E. D. COLTHARP

Direct Examination by Mr. Kellahin

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Cross Examination by Mr. Nutter

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