

BEFORE THE
OIL CONSERVATION COMMISSION
STATE OF NEW MEXICO

CASE 569: In the matter of the application of Buffalo Oil Company for approval of a secondary-recovery project (by water injection) in the Baish Pool, Sections 21 and 22, Township 17 South, Range 32 East, NMPM, Lea County, New Mexico, for the proposed intake well being its Baish 'A' 17-Y Well, 2310 feet from the north and east lines of Section 21, Township 17 South, Range 32 East.

TRANSCRIPT OF HEARING

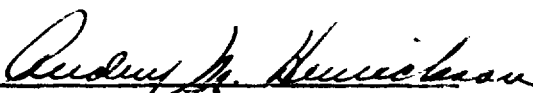
August 20, 1953

BEFORE: Honorable Ed. L. Mechem, Governor
Honorable E. S. Walker, Land Commissioner
Honorable R. R. Spurrier, Director, OCC

STATE OF NEW MEXICO)
) ss.
COUNTY OF LOS ALAMOS)

I hereby certify that the within transcript of proceedings before the Oil Conservation Commission is a true record of the same to the best of my knowledge, skill and ability.

TRANSCRIBED at Los Alamos, New Mexico this 2nd day of September, 1953.


Audrey M. Henrickson
Notary Public

My commission expires September 22, 1953.

NEW MEXICO OIL CONSERVATION COMMISSION

Regular Hearing

9:00 a.m., August 20, 1953

MR. WATSON: My name is Neil A. Watson, Artesia, New Mexico appearing for Buffalo Oil Company. I have as a witness Mr. Ralph L. Gray.

RALPH L. GRAY,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. WATSON:

Q. State your name, please?

A. Ralph L. Gray.

Q. Are you employed by Buffalo Oil Company, Mr. Gray?

A. I am.

Q. In what capacity?

A. Assistant superintendent.

Q. How long have you been so employed?

A. About five years.

Q. Do you hold a degree in engineering, Mr. Gray?

A. Yes.

MR. SPURRIER: I believe Mr. Gray has qualified before the Commission before. You can just go ahead if you want to.

Q. Mr. Gray, I hand you Exhibit A in Case 569 and ask you to state what that is, please?

A. Exhibit A is a map showing the Baish Pool, showing the estimated pool limits and showing also the proposed water injection project.

Q. The acreage included in the Baish pool, is that federal, state or fee acreage?

A. That's federal acreage.

Q. And who is the lessee?

A. Buffalo Oil Company.

Q. How many wells are there producing from the Baish pool?

A. Six wells.

Q. And who is the owner of those wells?

A. Buffalo Oil Company.

Q. Are there any other owners of wells in that area that produce from the Baish pool?

A. No.

Q. Did you prepare Exhibit A?

A. Yes, I did.

MR. WATSON: We would like to submit it now.

MR. SPURRIER: Without objection, it will be admitted.

Q. I hand you what has been marked Exhibit B in Case No. 569 and ask you to state what that represents.

A. Exhibit B is a cross-section of the Baish Pool well showing the location of the producing oil sand and the location of the fields.

Q. From what depth approximately, does a well produce from the Yates sand in the Baish pool?

A. From approximately 2,350 feet.

Q. I hand you what has been marked Exhibit C and ask you to state what that represents.

A. Exhibit C is a declaration of the oil production by months for each of the six wells up to June, 1953.

Q. What does Exhibit C show with reference to production over the past six months?

A. This shows that during the past six months this well has produced an average of about 30 to 80 barrels^{of oil}/per month.

Q. What are the characteristics of the formation in the Yates sand in the Baish pool?

A. Two of the wells were cored with diamond bit and core analysis was obtained and this analysis showed that the average porosity is 22, the permeability is about 60 millidarcies and the water tabulation was about 30 per cent.

Q. What is the productive area in the pool?

A. Not more than 320 acres. 390 acres, that is.

Q. And what is the gravity of the oil?

A. It's 39 degrees.

Q. In this proposed program to inject water into the Yates sand in the Baish pool, how do you propose to carry on the injection program?

A. We propose to take from 40 to 100 barrels of water per day from our Baish C No. 12 well, which is has been making, and this water will be moved to Baish A 17-Y into a storage tank at that location and then injected into the Baish A 17-Y either by gravity or

if necessary, by means of a pump.

Q. At what point do you propose to inject the water into the well?

A. This will be at the approximate location of 2,202 feet and will be injected above 2,290 feet. The lower zone might take some water.

Q. What results do you anticipate in this program?

A. It is hoped that by injecting water into this well, we will be able to increase the amount of oil we are able to recover from this well.

Q. Do you have any other statement in connection with this application that you would like to make at this time?

A. This being on federal acreage, of course, it will take USGS approval also and we have contacted USGS and they have offered no objection to this program although it will be necessary for us to file the notice of approval in order to carry on.

MR. SPURRIER: Are there any questions of the witness?

MR. WATSON: I would like to submit B and C, at this time.

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

MR. MACEY: Is your well making any water at present?

MR. GRAY: Only a very small percentage - about 2 or 3 per cent water.

MR. MACEY: You would be able to determine that way the effect of this other method?

MR. GRAY: That's right. The well produces about 20 barrels of oil per day and if we get any benefit, it will be readily recognizable.

MR. MACEY: Would you say there was a possibility that you might have an allowable problem?

MR. GRAY: I hope so.

(Laughter)

MR. MACEY: I was thinking perhaps you might have to slow it down and thereby hurt the efficiency of your flood.

MR. GRAY: Well, we recognize that as being possible but due to the very small amount of water that is being injected, we didn't anticipate any trouble for quite a while and should that occasion arise, it may be necessary for us to come back to the Commission and get some rule on allowable.

MR. MACEY: You own all the producing property in the pool?

MR. GRAY: That's right.

MR. GRAHAM: What about the allowable that this in-put well now has? What disposition would you make of that?

MR. GRAY: The allowable on the Baish A 17-Y will be discontinued and at the present time, the other wells are producing to capacity so we are not asking for any additional allowable.

MR. SPURRIER: Any further questions? If not, the witness may be excused.

We will take the case under advisement and move on to Case 570.