



BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

January 15, 1969

REGULAR HEARING

IN THE MATTER OF:)

Application of Fred Pool)
Drilling Company for an)
exception to Order No.)
R-3221, as amended, Eddy)
County, New Mexico.)

Case No. 4026

BEFORE: A. L. Porter, Jr., Secretary-Director
Alex J. Armijo, Land Commissioner
Governor David F. Cargo, Chairman
George Hatch, Counsel

TRANSCRIPT OF HEARING

MR. HATCH: Case 4026, Application of Fred Pool Drilling Company for an exception to Order No. R-3221, as amended, Eddy County, New Mexico.

MR. McDERMOTT: W. H. McDermott appearing for Fred Pool on Case 4026, and we would like to have that case continued until the next regular hearing date.

MR. PORTER: You move for a continuance to the February Regular Hearing?

MR. McDERMOTT: Yes, sir.

MR. PORTER: If there is no objection, the case will be continued, and we will take up Case 4025.

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

I, SAMUEL MORTELETTE, Court Reporter in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.


COURT REPORTER

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BEFORE THE
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Santa Fe, New Mexico

February 19, 1969

REGULAR HEARING

IN THE MATTER OF:)

Application of Fred Pool)
Drilling Company for an)
exception to Order No.)
R-3221, as amended, Eddy)
County, New Mexico.)

Case No. 4026

BEFORE: A. L. Porter, Jr., Secretary, Director
Alex J. Armijo, Land Commissioner
George Hatch, Counsel

TRANSCRIPT OF HEARING



MR. PORTER: Case No. 4026.

MR. HATCH: Case No. 4026, continued from the January 15, 1969 Regular Hearing, application of Fred Pool Drilling Company for an exception to Order No. R-3221, as amended, Eddy County, New Mexico.

MR. McDERMOTT: W. H. McDermott, appearing for Fred Pool, Jr., on application 4026, and I have one witness.

(Witness sworn.)

(Whereupon, Applicant's Exhibits Numbers 1 through 7, inclusive, were marked for identification.)

FRED POOL, JR.

called as a witness on behalf of the Applicant, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. McDERMOTT:

Q State your name, please.

A Fred Pool, Jr.

Q What is your occupation, Mr. Pool?

A I am a partner in the Fred Pool Drilling Company with my father. We are oil producers and drilling contractors.

Q Where are you located?

A Our office address is Post Office 100, Orla, Texas. I live in Carlsbad, New Mexico.

Q And Case No. 4026 before the Commission is your application for an exception to Order No. R-3221, as amended?

A Yes, sir.

Q Now, how long have you been in the drilling business?

A Twenty years, myself.

Q Have you been associated with your father in the drilling business?

A All this time, yes.

Q Have you drilled numerous wells within this area?

A Yes, sir. I have drilled about 20 wells in this Delaware area around where these leases are.

Q Are you acquainted with the structures and the formations in this area?

A Yes, sir.

MR. McDERMOTT: Are the qualifications of the witness acceptable by the Commission?

MR. PORTER: They are.

Q Referring to Exhibit Number 1 and the portion outlined in red, does this take in your leases and your wells?

A Yes, sir.

Q Are there any water wells outlined in this Exhibit Number 1?

A Yes, sir, the water wells are shown where the little

windmill on this Exhibit 1 right here, one in Section 21. This one in Section 9 is just about on the section line between 8 and 9 there, just nearly on the section line. And then over here in Section 7, northwest quarter of Section 7.

Q Does this Exhibit No. 1 show all of the producing wells within this area, as far as your leases are concerned?

A Yes, sir.

Q Calling your attention to Exhibit No. 2, would you explain this exhibit for the Commission?

A This is the two sections, 8 and 9, in a little larger scale, and it shows the 40 acres of each well hole. This was a farmout originally from the Superior Oil Company and Perry R. Bass. That is the ones we have under the lease on these wells.

Q Do these exhibits show the location of the water pits that you are asking to be converted in use?

A Yes, there are three leases, the Hanagan State Lease in the southwest of the northeast of 8, and there is 80 acres which is the middle 80 on the east side of 8, and 40 acres in the Perry R. Bass is 40 acres, southwest of the southwest of 9. I have three tank batteries and three pits for these four wells.

MR. PORTER: At this point, would you give us the specific location of those pits for each?

THE WITNESS: Well, I don't have the measurements, sir.

MR. PORTER: Just the 40 acres in which they are located?

THE WITNESS: The Richardson and Bass Lease in Section 9, the water pit is in the southwest of the southwest.

MR. PORTER: Of 9?

THE WITNESS: Of 9, yes. And the tank battery on the Superior State Lease is in the southeast of the southeast of 8. And the Hanagan State water pit is in the southwest of the northeast of 8.

MR. PORTER: Southwest of the northeast of 8?

THE WITNESS: Yes, sir.

MR. PORTER: All right.

Q (By Mr. McDermott) Referring to what is marked as Exhibit Number 3, would you describe this to the Commission?

A Well, this is a description of the tank battery in the pits on each lease. I have the three, and Richardson and Bass is one well, and has one tank, and the Superior State-Hanagan there. And then the water well down at the bottom is the water well in Section 9. And I went to the U.S.G.S. to get the information on that, and they didn't have a total depth on that well, but the water depth recorded by U.S.G.S. is 332 feet.

MR. PORTER: 332 feet, that is the depth of the fresh

water well located where?

THE WITNESS: In Section 9. And then there is another water well, I have the location down in Section 21.

MR. PORTER: Yes, sir.

THE WITNESS: And it is reported to be 291 feet deep, and the water at 266 feet.

MR. PORTER: What was the depth of the water in that first well that you mentioned, Section 9?

THE WITNESS: 332 feet.

MR. PORTER: Was that the depth of the water or the well?

THE WITNESS: That was the depth of the water. The depth of the well is unknown, but it is reported by a ranchhand to be 390 feet, but he is not sure.

Q (By Mr. McDermott) In your drilling experience in this area, at what levels have you encountered any water formation?

A I drilled a cable tool hole, in the Hanagan State we cable tooled and we encountered water at -- I have the log here -- about 315 to 340 feet, a very small amount of water, but probably as much as that windmill makes.

Q What are the depths, from your own knowledge, in this area where you have encountered water?

A Some of the wells, we would get water down to about 400 feet, and some of the wells encountered water in the Castille Formation about 2,000 feet, between 2,000 and 2,200. And then water in the Delaware from 37 to 38 feet.

Q Referring to Exhibit Number 4, would you explain this to the Commission?

A This Exhibit 4 is a water analysis by the Western Company of the water from that well in Section 9. And it shows -- well, you have a copy of it there. But the chloride content is very low, but the sulfate content is pretty high on the well.

Q This would be a well that has a depth of approximately -- not the well, but the water formation at 332 feet, is that correct?

A Yes, sir.

Q Referring to Exhibit Number 5, the water analysis of Perry R. Bass No. 1, would you state the contents of that water?

A Chloride contents are very high on that, 92,000, but pretty salty water, produced water from the Delaware.

Q How deep is the Delaware Formation?

A About 3,780. I don't have the exact depth of the perforations, but it is around 3,780.

MR. PORTER: That is the Hanagan Lease?

THE WITNESS: No, sir, the Richardson and Bass.

Q According to Exhibit Number 3, that well produces about 48 barrels per day, is that correct?

A Yes, sir.

Q And in your opinion, you think that there is any amount of seepage because of the existence of these pits in your disposal of this water?

A No, sir, I don't think so. Because we have some shale and clay formations from the surface where the pits are down to the water formations.

Q In your experience in this drilling, have you ever found that the water would percolate or seep through these types of formations to reach this fresh water zone?

A No, sir, I don't think it would.

Q In Exhibit 6, would you say to the Commission the contents of that water analysis?

A That is the water analysis on the Hanagan State. It has a high chloride content, which shows the water as very salty, the produced water from the Delaware.

Q And Exhibit Number 7?

A The chloride content on it are high, too, about identical to the other two water pits.

Q In this area, what is the drainage of the ground water with respect to these particular pits?

A Well, the surface drainage, there is a ridge that passes, it is not a real high ridge, but a separation of drainage area in these two sections that goes approximately down the line between the two sections. Of course, in the whole general area, the drainage is to the west. But right local on these two sections, right down between the two of them, the surface drainage is to the west. And to the east of that is down to this low place right here that I have circled, this little line on Section 9, and then that comes off and goes down south and then back west, but around this water pit on this Superior State. But this water pit on the Richardson and Bass, it is about 20 foot lower in elevation than the water pit on the Superior State, and it is pretty close to this low area, and if any one were going to seep any water going off, it would be the one that would do it. It may be should be moved over up on top of the hill out of that low place where it is in.

Q Now, calling your attention to Exhibit Number 1 and the location of the water well in Section 9, do you feel that there could possibly be any type of seepage from these pits to that particular water well?

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

Q Now, from the Exhibits 4, 5, 6, and 7, would it be your conclusion that there is any seepage of the chlorides into the fresh water formations from these pits?

A No, sir, not at this point.

Q Is that based upon the fact that Exhibit No. 4, the chloride content is only 260, as against -- well, a range of 92,000 to 95,000 parts chloride?

A Yes, sir. Excuse me, there is a water well reported in Section 17, the northwest of the northwest. It must be one of these that Ralph Lowe has by there, Richardson and Bass well right by there, but it is never reported used, and I couldn't find out anything except it was reported completed but never been used. So I don't know the status of that.

Q Is Ralph Lowe the adjoining operator?

A Yes, sir.

Q Does he, as far as you know, have any objection to your continuation of the use of the water pits on your leases?

A No, sir.

Q Were you present last month at the hearing on Ralph Lowe's application, 4025?

A Yes, sir.

MR. McDERMOTT: I have no further questions at this time.

MR. PORTER: Mr. Pool, I didn't get the information as to the depth of the water well located up there in Section 7?

THE WITNESS: It is -- well, I don't have a reported depth of it, sir. But I have a log, I mean a report from the Oil Gas Commission on that Carper and Hanson well in the northwest of the northwest right here on this Exhibit 1.

MR. PORTER: Northwest of the northwest. I was talking about the water well there.

THE WITNESS: Well, the water well, as best I can determine, is that well, plugged well, plugged back to a water well.

MR. PORTER: Converted to a water well?

THE WITNESS: Yes. And it shows on there the depth of the first water is 226 feet.

MR. PORTER: I see, 222 to 226?

THE WITNESS: The first water there.

Q (By Mr. McDermott) In this area, would there be any drainage in that direction, or would it be more to the southwest if there is any possible seepage out of these pits.

A It seems to be more to the southwest.

Q Would it be your opinion whether or not there would be any contamination or pollution of that well -- water well to

the northwest of the northwest in Section 7 in your pits?

A I don't think so.

Q Would there be any possible pollution, as far as you can tell, from the pits on the Ralph Lowe acreage?

A No, I don't think there would.

MR. PORTER: Does anyone else have a question?

Mr. Nutter.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Pool, now you mentioned that there is a low ridge that runs up the section line there between Section 8 and Section 9.

A Well, it is not called a ridge, it is a little raise in elevation.

Q Where is the one that is on the section line, where is it with respect to the ridge?

A It is just a little bit to the west. The ridge goes just a little bit to the east of that section line.

Q So the windmill then would be on the west side of the little high there?

A Yes, sir, it would. There is kind of a hill goes up there, goes to the north. Part of 9 is a little higher than the south half of 9.

Q What formation would that windmill be producing water from?

A It would just be out of that conglomerate in that Red Bed. I have no log.

Q Groundwater Report No. 7, Geology and Groundwater Resources of Eddy County, New Mexico, Plate No. 4 in that report indicates that there is a belt extending on the east side of the Pecos River with the width of approximately four to six or seven miles, running up and down the Pecos River in that area on its east side, in which it is reported that stock water is generally obtainable at depths less than 250 feet in the Rustler Formation, generally impotable and locally unfit for stock.

I wonder if that would be producing from the Rustler, or if it would be producing from the area which is east of this belt which is indicated on the plate to be area 5-C, described as stock and domestic supplies available at depths less than 300 feet in Triassic Red Beds.

A Well, I wouldn't know, sir, but I imagine it is in the Triassic Red Beds where this water is producing from where we are there.

Q What occurs from the top of the Triassic Red Beds on up to the surface in this area?

A It is shale, and sands, and clays.

Q Are there formations that you would generally consider to be impermeable to water?

A The shales, I would think so.

Q How about the clays?

A Yes, sir, I would consider the clays to be impermeable to water.

Q What is it on the surface?

A A sandy loam, and caliche, ten or fifteen feet of caliche right on top in some places, not all places.

Q Now, the well in Section 7, it was originally drilled as a oil well, is that correct?

A The way I understand, it is, yes.

Q Was it ever made into a water well? Is there a windmill there?

A Yes, there is a windmill there now.

Q But it is not producing?

A Yes, sir. Well, yes, it is producing. I didn't go over to it, but I did see it turning. I guess it is making water.

MR. PORTER: Our records should reflect the fact that this has been converted.

MR. NUTTER: They should.

THE WITNESS: Here is a well record of the well right here.

MR. PORTER: Did you find that in our files?

THE WITNESS: Yes, sir.

Q (By Mr. Nutter) Is that one of your exhibits?

A No, sir, I just have one copy of it.

Q Now, that was drilled by Ralph Lowe?

A No, Carper Hanson Drilling Company.

Q Did they report any water sands there?

A Yes, sir, 222 to 226, 268 to 377, 425 to 430, and 553 to 557.

Q So they reported several water sands from 222 down to 557.

A Yes, sir.

Q And you don't know the interval that the well is producing from, or completed in?

A No, sir, I don't.

Q Who owns that water well?

A That would be, I guess it would be George Ross that has the surface on that.

Q You haven't made any contact with Mr. Ross to find out anything about that well?

A No, sir, I didn't.

Q And this ranchhand that described the well along the section line, he indicated to you that he thought the well was about 390 feet deep?

A Yes, sir.

Q How did he determine the water level at 332?

A U.S.G.S. Report in, I believe it was 1961.

Q Would that have been Groundwater Report No. 3?

No, Groundwater Report No. 3 is dated 1952. I believe they reported the water level in that well at 295 at that time.

A It is '59 or '61, I don't remember which one it was.

That was the pumping level, what it said in the report.

MR. NUTTER: I would like to request that some information be obtained on that well in Section 7 from the landowner. I think it may be pertinent to the case to know the perforated interval or the casing point, or whatever we have there in the interval that the well is producing water from.

MR. PORTER: Mr. Pool, do you think you could get that information for us right away?

THE WITNESS: Yes, sir.

MR. PORTER: And submit it to us in the form of a letter?

THE WITNESS: Yes, sir.

MR. McDERMOTT: I would like to ask him another question.

REDIRECT EXAMINATION

BY MR. McDERMOTT:

Q How long have your pits been in operation on these different wells?

A The superior State, 1963, early 1963. Richardson and Bass, 1963. And Hanaqan State, 1966.

Q And your water analysis was just taken as of February 5, 1969, is that correct?

A Yes, sir.

Q On the water wells and the producing wells, your oil wells?

A Yes, sir.

MR. McDERMOTT: I have no further questions, but I would like to make a statement, if I may.

MR. PORTER: All right, we will give you an opportunity in just a moment.

I believe you said that your Richardson and Bass Lease produces 48 barrels of water per day, and the Superior 18 barrels, and the --

THE WITNESS: Per well.

MR. PORTER: Per well. How many wells are involved in this?

THE WITNESS: Two wells on the Superior State.

MR. PORTER: That would be 36 going into that pit?

THE WITNESS: Yes, sir.

MR. PORTER: And 48 into the other one?

THE WITNESS: Yes, sir.

MR. PORTER: And 15?

THE WITNESS: Yes, sir.

MR. PORTER: So you would have approximately 100 barrels a day produced water?

THE WITNESS: Yes, sir.

MR. PORTER: Mr. Stamets.

CROSS EXAMINATION

BY MR. STAMETS:

Q Mr. Pool, as I recall, the road into this area follows this draw which drains the general area, is that correct? As you are coming in from Carlsbad?

A Yes, sir.

Q And are there any windmills located along this draw between, say, the river and the pool?

A No, sir, there isn't.

Q I notice there are quite a bit of stock in there.

Where do they get their water?

A The Bureau of Land Management laid a water line, a plastic water line. It is down hill all the way, and they have taken water, I don't know how far down, but they have laid that plastic line down there to some stock tanks. And I don't know of any more windmills down that way.

Q In other words, in the general direction of the drainage, as far as we know it, there doesn't appear to be any windmills in this area?

A No, sir, there isn't.

Q Now, the map shows, and I believe that my investigation shows a well, that there are two draws in that area, one on the south side of the pool and another one heads more or less on the north side of the pool, is that correct?

A Yes, sir.

Q Is it possible that the drainage from the Hanagan State and the Superior State pits could go to this north draw?

A Yes, sir.

Q Towards this north draw?

A Yes, sir.

Q And this north draw drains generally past the windmill in Section 7, is that right?

A In that general direction, yes. I have never walked

it out.

Q But if, in your opinion, if all the pits were located on the--well, near the highway, the drainage direction would then be toward the southwest rather than towards the north?

A Yes, that's right. Where the Superior State tank battery is.

MR. STAMETS: I believe that is all the questions I have.

MR. PORTER: Does anyone else have any questions?
Mr. McDermott.

MR. McDERMOTT: I did want to call your attention to what you referred to before, that this ground water report, 1947, 1950, or 1956. And in that report on Plate No. 4, it does show the water well in Section 9, and also the water well in Section 21. There is no reference on that report as to the well in No. 7. And as further evidence of drainage in this area, if you refer to that report, Plate No. 3 shows that the mineral drainage is in a southwest direction. Also, in the Table No. 3 in that report, the analysis made at that time for this particular township, it also cites three wells in Section 2, 9 and 21, setting forth the amount of chemical analysis within the water.

And further, there is a chart in that same report showing the depths as to the water, or depth of the wells in

Section 21. They have here depth of well 280 feet, and it appears to come from the red beds, as stated by Mr. Pool. I think the Commission is aware of the point that I am getting at partly is that we are producing water that is highly salted in comparison to the water coming out of the ground formation at a lower depth, and it's been doing this for five or six years. The analysis from the water well is so low in chlorides, they indicate there is no seepage whatsoever. And the ground water report substantiates these figures as far back as 1949, 1950, whenever the report was made.

MR. PORTER: Does anyone else have anything to offer in this case? The Commission will take the case under advisement. We will take up case 4046.

I N D E X

<u>WITNESS</u>	<u>PAGE</u>
FRED POOL, JR.	
Direct Examination by Mr. McDermott	2
Cross Examination by Mr. Nutter	12
Redirect Examination by Mr. McDermott	17
Cross Examination by Mr. Stamets	18

<u>EXHIBITS</u>	<u>MARKED</u>	<u>OFFERED AND ADMITTED</u>
Applicant's Exhibits Numbers 1 through 7	2	

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

I, SAMUEL MORTELETTE, Court Reporter in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.



COURT REPORTER

I do hereby certify that the foregoing is a true and correct record of the proceedings in the hearing held before the Commission, held at the Commission, on _____.

_____, Secretary
New Mexico Oil Conservation Commission