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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico
July 23, 1969

EXAMINER HEARING

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IN THE MATTER OF:)

The hearing called by the)
Oil Conservation Commission)
on its own motion to consider)
excepting from the provisions)
of Order No. R-3221, as amended,)
certain wells in Eddy County,)
New Mexico.)
-----)

Case No. 4176

BEFORE: Elvis A. Utz, Examiner.

TRANSCRIPT OF HEARING



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MR. UTZ: Case 4176.

MR. HATCH: Case 4176. In the matter of the hearing called by the Oil Conservation Commission on its own motion to consider excepting from the provisions of Order No. R-3221, as amended, certain wells in Eddy County, New Mexico.

If the Examiner please, George Hatch appearing on behalf of the Commissioner's staff. I have one witness, Mr. Stanets, to be sworn.

(Witness sworn.)

R. L. STANETS

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

DIRECT EXAMINATION

BY MR. HATCH:

Q Would you state your name and position for the record?

A R. L. Stanets, geologist for the New Mexico Oil Conservation Commission in Artesia, New Mexico.

Q Mr. Stanets, in your position as geologist for the Commission in District 2, do you make studies and recommendations concerning the disposal of produced water in that district?

A Yes, sir, I do.

Q Are you familiar with the purpose of Case 4176?

A Yes, sir, I am. To give a little background on this case, in order to protect fresh water supplies from contamination by water produced in conjunction with the production of oil and gas, the Commission, on May 1, 1967 entered Order No. R-3221 which prohibits the disposal of said associated brines on the surface of the ground, in any pit, pond, lake, depression, draw, stream bed or arroyo, or in any water course, or in any manner which will constitute a hazard to any fresh water supplies. Subsequent to the entry of Order No. R-3221, the Commission has received Applications for exceptions to the "no pit" provisions of this Order, and several cases have been heard.

In instances where it has been proven that continued disposal of associated brines in pits does not present a hazard to fresh water, the Commission has granted requests for exceptions. Specifically, by Order No. R-3684 and R-3685, the Commission granted exceptions to Order 3 of Order No. R-3221 to Ralph Lowe and the Fred Pool Drilling Company to continue to dispose of their produced water in unlined pits in the Corral Canyon-Delaware Pool. As a result of this action, only one well, one producing well

remained in the pool for which no exception had been taken.

A study was made to determine whether or not the remainder of the pool should be exempt. As a result of that study, this case is being heard.

Now, the area under consideration here, the Corral Canyon-Delaware Pool is located in southeastern New Mexico and is shown as the cross-hatched area on Exhibit No. 1.

(Whereupon, Exhibit No. 1 was previously marked for identification.)

It should be noted that Exhibit No. 1 is a portion of Plate 4, Ground Water Report No. 3, Geology and Ground Water Sources of Eddy County, and that the notation 5-B and 5-C on the map near the pool refers to the general availability of ground water as shown on the lower portion of the Exhibit.

(Whereupon, Exhibit No. 1 was previously marked for identification.)

A larger map of the pool is shown on Exhibit No. 2. The pool is outlined on this Exhibit and the one well remaining which has not been exempt is shown in the NW/4 NW/4 of Section 20 and is identified as the Perry R. Bass Continental Federal No. 1.

The previous exemptions in the Corral Canyon-Delaware Pool were granted on the basis of the lack of shallow fresh water in and near the pool. On Exhibit No. 2 you will note that there are 3 windmills shown. These are located in the NW/4 NW/4 of Section 7, another located in the NE NE of Section 8. This well was previously shown as the NW/4 NW/4 of Section 9, but my own observations indicate that it is located in Section 8. The third windmill is located in what would be the NE/4 NE/4 of Section 29. Here again, this well has previously been shown as the SW/4 SW/4 of Section 21. Actually, I feel that this well could be located in either Section. My own trip through there indicated that it was in Section 29.

The depth to water was testified to in Case No. 4026 by Mr. Fred Pool, Jr., and the depths were as follows: The well in Section 7, 222 feet. Later evidence showed the casing in this well is set at 250 feet, so the actual depth of water may be somewhat lower at this time. Now, the well formerly shown in Section 9 and shown in Exhibit No. 2 as Section 8, is a depth that has been noted as 332 feet. This is the depth of that water. The windmill shown in Section 29, formerly Section 21, the depth of the water in there is 266 feet. This windmill has been

abandoned. I don't know what the problem is, whether it is water quality or lack of water, but it is abandoned at this time.

My own review of well logs for this Township show water stringers occurring at depths of --

Q (Interrupting) Excuse me just a minute. The depths of those three wells would indicate they are in what formation?

A Triassic.

Q Go ahead.

A My own review of well logs for this Township show water stringers occurring at depths of from 160 feet to 776 feet. The main water zone appears to be normally found between 300 and 400 feet deep.

Mr. Poole further testified that shallow shale and clay beds overlaying the water zone should effectively prevent downward percolation of the water from the pits to the fresh water zones.

Now, if you will look on Exhibit No. 2, the location of the various pits are shown on that exhibit by a square with a dot in the center. The only new pit we are talking about here is for Perry R. Bass and it is located near the well in Section 20.

(Whereupon, Exhibit No. 3 was previously marked for identification.)

Exhibit No. 3 is a log of a well drilled in Sections 21,25,30. This shows some of the clay beds between the surface of the ground and the water zone. It was further testified that the drainage from the pool is to the west. This can be seen on Exhibit No. 1 which shows two drainage systems leading westward from the pool. You have Wood Draw located to the north, and Pickett Corral Canyon to the south. My own observations on the ground, driving into this area, confirmed that this is the situation. There is no evidence that the sub-surface drainage follows any other pattern. Previous testimony indicates that No. 425 and 426 showed chloride concentrations of 260 parts per million for the windmill water and over 9000 parts per million for produced Delaware water. My own observation shows that these are reasonable figures.

(Whereupon, Exhibit No. 4 was previously marked for identification.)

Exhibit No. 4 is a list of all current wells in the Corral Canyon-Delaware pool. This exhibit shows the operator and lease name, the well number, its location, the date it was completed, the elevation, producing interval,

a current production of both oil and water in barrels per day, and the Order number which has exempted the various wells in the field. The Exhibit shows, again, the only well which has not been exempt as the Perry R. Bass Continental Federal Well. The Exhibit shows that all of the wells are producing oil at a low marginal status. The highest producer making only 8 barrels per day. The Exhibit shows that Mr. Bass' well is one of the lowest producers of water in the field. Here again, my own observation indicates that this is true. When I was in there in January, I was under the impression that it produced no water because I couldn't find any out but they have been producing water at this rate. The exhibit also shows that all wells were completed at least 6 years ago with the exception of the Fred Pool Company Hannigan Well which is a re-entry of the well drilled in 1961. At this time Mr. Pool has a temporary abandoned drilling well, the Poker Lake Unit No. 37, but my information is that this well has not yet made any oil in commercial quantities, and it is doubtful that it is going to be completed. There is one shut-in gas well in the area which I doubt will be produced. Seeing as it is located very close to the El Paso gas line, it must not be too

commercial.

To more or less summarize what these exhibits show and previous testimony, this is an old pool with low rates of oil production. Extensive additional development appears unlikely at this time. Exemption of the entire pool would increase the volume of water disposed of in open pits by 106 barrels per day or about 2 percent. The only new well to be exempt is further away from existing wells and is further down from the drainage system, so it would appear that no hazard to fresh water supplies would occur through the exemption of the Corral Canyon-Delaware Pool from the provisions of Order No. R-3221.

Q How far is it from the Pecos River from this location, Mr. Stanets?

A Let me think. I think it is about 6 miles, but I can be a little more accurate. At the closest point it would appear to be on the order of 7 miles.

Q Now, your Exhibit No. 1 does show other water wells other than the three that you show on Exhibit 2, doesn't it?

A It does.

Q But those all seem to be either a number of miles --

A (Interrupting) They are either upstream to the

drainage or a considerable distance away.

Q Five or six or more miles away?

A Right.

Q Do you know of any springs in the vicinity?

A No, I certainly don't. I have driven through the area and they don't show. There is none shown on this Exhibit No. 1 which is supposed to be -- supposed to show any springs or water wells in existence at the time of the report -- and this shows none.

MR. HATCH: Mr. Examiner, I would like for you to take notice of Case No. 4025 and Order R-3684 that issued from that case, and Case No. 4026 and Order R-3685 which issued from that case in your consideration of this case.

MR. UTZ: Both of those cases have to do with wells in this pool?

MR. HATCH: Yes. One is on the Application of Ralph Lowe, and the other is Fred Pool. That is the only questions we have.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Stanets, the general drainage in this area is toward the Pecos River?

A That's correct.

Q Is the surface in this area ranched?

A No, sir, there are cattle out there, and some of it is sand hills; most of it is gravelly, rough country. There is no farming in this area. There is some ranching.

Q Where do the cattle get their water?

A I am not sure which well it originates at, but stock watering in the area according to Fred Pool, Jr., comes from a line made by the Bureau of Land Management. I also know that a little bit further south some of the ranchers are allowed to use the line that is laid from the well in Section 8, 26 South, 30 East which furnished water to El Paso Natural Gas Company's pumping station. That's on the River in Township 26 South.

Q Is Mr. Pool a rancher?

A No, Mr. Pool is an operator in the area. He is a partner in the Fred Pool Drilling Company.

Q You contacted the rancher in this area?

A No, I did not contact the rancher in this area. I have been through here myself, and since this particular well is located further away from the windmills than the wells already approved -- or the pits already approved -- I felt there was no need to go over information which had

already been furnished to the Commission in other cases.

MR. UTZ: Other questions?

REDIRECT EXAMINATION

BY MR. HATCH:

Q There are two windmills in existence?

A Yes, these are used for stock watering. One is in Section 7 and there is one along the line between Sections 8 and 9. These are used for stock watering.

MR. HATCH: I don't believe I moved for the introduction of Exhibits 1 through 4. You did prepare these exhibits?

THE WITNESS: Yes.

MR. UTZ: Without objection, Exhibits 1 through 4 will be entered into the record of this case.

(Whereupon, Exhibits Nos. 1 through 4 were offered and admitted in evidence.)

RECROSS EXAMINATION

BY MR. UTZ:

Q These windmills in this area are upstream from the pit?

A That's right. The one in Section 7 and the one in Section 8, they are upstream to the drainage and further away from the pit in question. The only additional pit.

MR. UTZ: The witness may be excused. The case will be taken under advisement. The Hearing is adjourned.

(Whereupon, the Hearing was concluded at approximately 3:45 P.M.)

