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BEFORE THE

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

May 21, 1969

EXAMINER HEARING

IN THE MATTER OF:)

Application of Pan American)
Petroleum Corporation for an)
exception to Order No. R-3221)
as amended, Eddy County,)
New Mexico.)

Case 4132

BEFORE: ELVIS A. UTZ, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case 4132.

MR. HATCH: Application of Pan American Petroleum Corporation for an exception to Order No. R-3221, as amended, Eddy County, New Mexico.

MR. RYAN: Gordon D. Ryan, Forth Worth, Texas, and I am appearing in behalf of the Applicant, Pan American Petroleum Corporation. I have one witness to be sworn.

(Witness sworn)

(Thereupon, Applicant's Exhibits 1 through 3 was marked for identification.)

MR. UTZ: Any other appearances? You may proceed.

WILLIAM C. WELLS, JR.

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

DIRECT EXAMINATION

BY MR. RYAN:

Q Will you state your name, by whom are you employed and in what capacity?

A My name is William C. Wells, Jr., and I am employed by Pan American Petroleum Corporation as

a Petroleum Engineer in Forth Worth, Texas.

Q Have you previously testified with the Commission, and had your qualifications as an expert witness admitted?

A Yes, sir, I have.

MR. RYAN: Are the witness's qualifications acceptable?

MR. UTZ: Yes, sir, he is qualified.

MR. RYAN: Are you familiar with the application that is presently pending before this Commission?

A Yes, sir.

Q Would you briefly state what Pan American seeks by this application?

A We are requesting exception to the Statewide Order No. R-3221, as amended, for three of our wells, located in Eddy County, New Mexico. These three wells are our Hinkle, Federal Well No. 1, our Greenwood Unit, Well No. 4, and our Greenwood Unit Well No. 1. We are also requesting that a provision be included in the Order for expansion to two additional wells, should the need arise to dispose water from these wells. They are not making **water** at the present time.

Q Now, are those wells so marked in what the

Reporter has marked as Exhibit No. 1?

A Yes. Exhibit No. 1 is a plat of the area around our Greenwood deep unit. The Greenwood deep unit is designated or outlined by black -- lines. We have also colore -coated all of the wells in the immediate area of this unit, as per color coating in the lower left hand corner of the plat. The wells which will be under consideration today, will be the red color-coated Shugart Delaware wells, and the yellow color-coated Shugart Devonian gas wells. We also show on this plat, the outline of the no-pit exception grant of B.S. Welsh. This is shown, outlined in green, and is located in the northwest quarter of Section 27, and the southwest quarter of Section 27. The three wells for which we are requesting this exception, are designated by a red arrow. They are our Greenwood Unit No. 4, located in Unit D, of Section 27; our Hinkle Federal No. 1 located in E; and our Greenwood Unit No. 1 located in Unit P. We have also, shown the location of the two pits, which would serve these two wells. These are designated by red squares. They are located in Unit H and P, in Section 27 -- Section 27.

Q Do you have any further comment on this Exhibit?

A No, sir, I don't.

Q Now, will you please refer to what the Reporter has marked as Exhibit No. 2, and identify and explain that exhibit?

A Exhibit No. 2 is a topographic, contoured on the surface, and extended area around our Greenwood D Unit. The Greenwood unit is designated or outlined in black - lines, in the upper right hand portion of the map. The Welsh exempt area, is outlined in green. The contours are at a 100 foot interval on this map. We have also shown the outline of the Potash no-pit exempt area, which, I believe, was granted by Order No. R-3221-B. This map generally shows that all surface drainage is to the south and southwest, throughout this entire area into the Potash exempt area, by its correlation between this map and maps in Vada, New Mexico Bureau of Mines -- the New Mexico Bureau of Mines and Mineral Resources, ground water report No. 3, we determined that the sub-surface structure is, also, similar to the surface structure in this area. That is, drainage is generally to the south and southwest.

Q And what did you conclude from that?

A That any water disposed of into our pits, which are designated again by red squares in Section 27 -- should it drain at all, would be to the south and southwest, into the already exempt Potash area.

Q Now, what was that Order No. that granted Mr. Welsh the no-pit exemption? Do you have that?

A Yes, I have that. I believe that was Order No. R-3670. And it was Case 4124.

Q Anything else to add to this exhibit?

A No, sir.

Q Would you now refer to Exhibit No. 3, and identify that exhibit; please, sir?

A Exhibit No. 3 is a pertinent data sheet, applying to our request here. We show the source of the produced water, which would be disposed of into these pits, the pool from which the water is produced, the quantity of the water, and the chloride content of this water. The location of the pits is also shown. I will go through some of the pertinent data on the sheet. We show that the three wells, which would apparently produce water into these pits are the Hinkle Federal

Well No. 1, the Greenwood Unit No. 4, and the Greenwood Unit No. 1. The Hinkle No. 1 and the Greenwood Unit No. 4, are both located in the Shugart-Delaware pool, and produce 8 barrels of water per day, and 9 barrels of water per day, respectively. The chloride content for the Delaware pool is about 151,000 parts per million. The Greenwood Unit No. 1 is producing -- is a gas well, producing from the Shugart-Devonian pool -- it makes about 190 barrels of water per day, with a chloride content of some 18,000 parts per million. This produces about a total of 207 barrels of water per day, which would be disposed of into these two pits. The pits locations are given on this, and the pits sizes are also shown. The pit locating Unit H, is 35 by 40 feet, and the pit in Unit P is 50 by 60 feet. Right now, we are disposing water from these wells by virtue of an agreement with Gulf in the sections north -- Section 22, and is costing a sum of \$450.00 to \$500.00 a month to dispose of this water. This, of course, will be saved, and would be the prevention of an economic waste, should we be allowed to dispose of the water in these pits.

Q Do you know where the closest fresh water is to this area?

A There is a fresh water well, located about 5 miles due north, of the area. As shown by previous exhibits, all drainage of our requested exempt area, would be to the south and southwest, away from this fresh water well, to the north. We know of no fresh water underlying our immediate area. As stated in previous testimony, before this Commission, and Mr. Welsh's application, some 82 wells have been drilled in the area, and to our knowledge, fresh water has not been encountered. Now, hydrologic studies in the area have shown that fresh water is sparse, and generally of a poor yield in nature in the area. It's, also, locally impotable. So, we feel, there would be no possibility of pollution.

Q In that Welsh application and order, did the Commission find that that was the closest fresh water in this area?

A Yes, sir.

Q Were Exhibits 1 through 3 prepared by you or under your supervision?

A Yes, sir. They were.

MR. RYAN: I would offer Exhibits 1, 2 and 3 into evidence, please.

MR. UTZ: Without objection, Exhibits 1, 2 and 3 will be entered into the record in this case.

(Thereupon, Applicant's Exhibits 1, 2 and 3 were admitted into evidence.)

MR. RYAN: I have one more question. On Exhibit 1, the wells that are marked with red arrows are the wells that are specifically requested by this application for salt water, is that correct?

A Yes, these wells now produce a total of about 207 barrels of water per day. We operate two additional wells in this immediate area; one of which is located in Unit H, of Section 27. It is our Greenwood Unit No. 3. The other well is located in Unit G of Section 34, just to the south. It's our Greenwood Unit No. 2. These are both gas wells, currently producing no water. We anticipate no problems whatsoever, but we would like to include some sort of provision where we could get administrative approval for disposing water from the wells, should we need it, into the same pit. All of these -- well, the Hinkle No. 1 and the Greenwood No. 4 battery is located adjacent to the pit, in Unit H, of Section 27.

The battery for the Greenwood Unit No. 3 and the Greenwood Unit No. 1 is located adjacent to the Greenwood Unit No. 1, in Unit P, of Section 27.

MR. RYAN: I believe that's all we have, Mr. Examiner.

CROSS EXAMINATION

BY MR. UTZ:

Q Now, how many pits do you have for these three wells?

A Two pits.

Q Which two wells go into the one pit?

A The Greenwood Unit No. 4, which is located in Unit D, of Section 27; and the Hinkle No. 1, which is located in Unit E, of Section 27. We dispose of water into the pit located in Unit H. Now, the battery for these two wells is located at that pit.

Q That would be the well marked No. 3?

A Yes, sir.

Q So, the well in Unit P -- would be right at the well?

A Yes, sir.

Q Now, the No. 4 and No. 1 are Delaware wells?

A Yes, sir, they are.

Q And the No. 1 in Unit P is in the Shugart-Devonian Well?

A Yes, sir; gas well.

Q And the area that you have outlined in green is the area in Case 4024 of Order 3670, is that correct?

A Yes, sir.

Q And that well just has the upper formation and the Seven Rivers, of the Queen?

A Yes, sir.

Q How is it that he has 80 acres within the Greenwood Deep Units?

A That's strictly a deeper formation unit, and a deeper unitization per unit.

Q So the part that he really has is not in the Unit?

A Right. Now, also, to eliminate some confusion, I mentioned that the well located in Unit D is called our Greenwood Unit No. 4. It's outside the unit boundaries, but I believe it was originally drilled to a deeper interval and found non-productive, and recompleted to this Delaware interval. The well was originally given a

Greenwood Unit name, and rather than changing all of our records, we just continued to call it the Greenwood Unit Well.

Q Now, how does the contamination of the water in the Welsh Wells compare to yours?

A The chloride contents?

Q Right.

A I believe -- I'm not really sure. I believe it's around 10,000 parts per million, but I wouldn't swear to that.

Q It looks like it might not be as salty?

A No, sir. I believe that he testified what it was in this case, but I don't recall what it was.

Q Well, I'm sure that his record would show that; I just didn't happen to remember it. The only fresh water is to the north; I believe you testified -- is that correct?

A Yes, sir. That's the only fresh water that we know of in the area. My understanding is that water for cattle is brought in by pipeline or from some of the POTash companies in the area. I feel sure that if there were fresh water present, some of the ranchers

would have drilled for it, rather than from the Potash pipeline.

MR. UTZ: Any questions of the witness? The Witness may be excused. Statements? The case will be taken under advisement.

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STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, CA FENLEY, 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.

John Fowler

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 4132
heard by me May 2, 1969
[Signature]
Examiner
New Mexico Oil Conservation Commission