BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE 1846 : **Application of Rice Engineering and Operating, Inc. for an order authorizing a salt water disposal well.**

TRANSCRIPT OF HEARING

JANUARY 6, 1960

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IN THE MATTER OF:

CASE 1846 Application of Rice Engineering and Operating, Inc. for an order authorizing a salt water disposal well. Applicant, in the above-styled cause, seeks an order authorizing it to recomplete the Lowe Oberholtzer Well No. 2 as a salt water disposal well. Said well is located 1980 feet from the North and East lines of Section 8, Township 12 South, Range 38 East, Gladiola Pool, Lea County, New Mexico. Applicant proposes to inject the produced salt water in the Devonian formation in the interval from 12,223 feet to 12,500 feet.

BEFORE:

Daniel S. Nutter, Examiner.

TRANSCRIPT OF PROCEEDINGS

MR. NUTTER: Take next Case 1846.

MR. PAYNE: Case 1846. Application of Rice Engineering and Operating, Inc. for an order authorizing a salt water disposal well.

MR. KELLAHIN: Jason Kellahin, Kellahin & Fox, Santa Fe, representing the applicant. We have one witness, Mr. Abbott.

(Witness sworn)

WILLIAM G. ABBOTT,

called as a witness, having been first duly sworn, testified as

follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A My name is W. G. Abbott.

Q By whom are you employed and in what position, Mr. Abbott?

A I am division manager of Rice Engineering and Operating, Inc. in Hobbs, New Mexico.

Q Have you testified before this Commission before as an expert and have your qualifications been accepted?

A Yes, sir.

MR. KELLAHIN: Are the witness' qualifications acceptable?

MR. NUTTER: Yes, sir. Proceed.

Q (By Mr. Kellahin) Mr. Abbott, are you familiar with the application in Case 1846?

A Yes, sir.

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

A We propose to go back into the Lowe Oberholtzer No. 2 Well, which is a dry hole, located 1980 feet from the North line and 1980 feet from the East line of Section 8, Township 12 South, Range 38 East, Lea County, New Mexico. It is located in the Gladiola Pool. We propose to make a salt water disposal well of

this Devonian dry hole, and it will be known as the Gladiola SWD Well G8.

Q Before we go into the Exhibits, will you discuss briefly the history of the well?

A Yes. This well was originally completed as a dry hole by Ralph Lowe, a dry hole in the Devonian Pool, that is January 26, 1958. The well was then plugged back to 9593, and recompleted through perforations from 9498 to 9508 February 11, 1958 as a producing well in the Pennsylvanian zone. The well was evidently of poor quality, and they temporarily abandoned it in this Pennsylvanian zone on June 21st, 1958. The well now has been sold to the Gladiola salt water disposal system for this proposed disposal well.

(Thereupon, Applicant's Exhibit A was marked for identification.)

Q Now, referring to what has been marked as Exhibit A, will you state what is shown on that Exhibit?

A Exhibit A is a map of the Gladiola Pool, and marked in red there is a trace of a cross section AA Prime, which we will discuss later. The subject well is the extreme east well of this trace. It is marked G8. There is a green circle around that well half a mile radius showing the wells within a half mile of the proposed disposal well.

Q Now, Rice Engineering and Operating, Inc. has another salt water disposal well in the area, does it not?

A Yes, sir, in the extreme -- I mean due west of the G8 on the west side of Gladiola Pool there is another dispoal well.

Q Now, is it disposing of salt water in the same zone it is to be used in the instant case?

A Yes, disposing salt water in the Devonian pay --

(Thereupon, Applicant's Exhibit B was marked for identification.)

Q Referring to what has been marked Exhibit B, will you discuss that?

A Exhibit B shows the casing program; the thirteen and three-eighths set at 365 feet with the cement circulated; the eight and five-eighths, set at 4480, and the cement circulated, and the five and a half inch casing set at 12,034 feet. We used 500 sacks of cement on that. We propose to run this after we squeeze off the perforations from 9498 to 9508. We propose to drill out, and drill out to about 12,500 feet, and run this four and a half inch OD liner which we will set at 12,223 feet. And we propose to dispose of the water from 12,223 to 12,500 feet.

Q Do you consider the casing and cementing program on this well adequate to protect any fresh water zones or any producing horizons encountered in this well?

A Yes, sir. The fresh water is usually encountered -- it's spotty throughout the Gladiola Pool, but where the fresh water is present, it is usually found from 50 to a hundred feet.

Q In disposing of salt water in the well, will it be

disposed of through the liner?

A Yes, it will go through the liner. We propose to -- initially to dispose of the water directly down the five and a half inch casing and through the liner, and we will run a caliper survey before we dispose of any water, and then we are coming back within six months and run another caliper survey to see if there is any corrosion on the five and a half inch casing. If there is corrosion present, and we do expect it, then we will run a tubing string.

Q Are the fluids that will be disposed of corrosive?

A Yes, sir, the Devonian waters are pretty corrosive.

Q What is the source of water that will be disposed of in this well?

A It will be produced water from the Devonian wells that are tied into the salt water disposal system.

Q Will there be any water from the Wolfcamp Pool?

A I believe there are two wells that are going to be disposed of from the Wolfcamp formation.

Q Now, what volumes of water would you anticipate would be disposed of in this well?

A We expect to have approximately 15,000 barrels a day going in the well.

Q On the basis of your experience in this area, in your opinion, will the well take that volume of water?

A Well, it will be pretty close to that volume. On the SWD F-7, we have tested that at 660 barrels an hour by gravity.

(Thereupon, Applicant's Exhibit C was marked for identification.)

Q Now, referring to what has been marked as Exhibit C, will you discuss that Exhibit?

A Exhibit C is this cross-section that's marked as AA Prime and is also the trace as shown on Exhibit A. It is a cross-section showing the wells extending from the Continental Wallace Well south to the SWD F-7. And then east, the proposed well SWD F-8, shows the top of the Devonian and also the interval that is opened in the Devonian. In the case of SWD F-7, it shows the injection interval, and in SWD F-8 it shows the proposed injection interval in that well.

Q Now, do you have a list of the wells within half a mile radius of the disposal well and the completion interval in those wells?

A Yes, sir. That's listed as Exhibit D. It shows the operator and the lease well number, completion interval, completion zone and the top of the Devonian.

Q Have you obtained permission of the land owner for use of this well for salt water disposal?

A Yes, sir. We've obtained two acre lease surface leases surrounding this well from Mr. and Mrs. B. C. Jones.

Q Is that marked as Exhibit No. E?

A It isn't marked, but that will be Exhibit E.

(Thereupon, Applicant's Exhibits D, E and F were marked for identification.)

Q Now, referring to what has been marked as Exhibit No. F, will you state what that shows?

A Exhibit F is the list of the operators that are in the Gladiola salt water disposal system. I might call your attention -- the last one on the list there is Lou Storm. Actually, he is an engineer for Jack Marcum, and he just got on this mailing list. He isn't considered an operator, he just works for Jack Marcum.

Q Now, do you have anything to add to your testimony, Mr. Abbott?

A I don't have anything.

Q Were Exhibits A through F inclusive prepared by you or under your direction and supervision?

A Yes, sir.

MR. KELLAHIN: At this time we would like to offer in evidence Exhibits A through F inclusive.

MR. NUTTER: Applicant's Exhibits A through F will be entered in evidence.

(Whereupon, Applicant's Exhibits A through F were received in evidence.)

MR. KELLAHIN: That's all the questions I have, Mr. Examiner.

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

MR. PAYNE: Yes, sir.

CROSS EXAMINATION

BY MR. PAYNE:

Q Mr. Abbott, do you propose to dispose of this water by gravity in this particular well?

A Yes, sir, we do.

Q Now, you say it will be approximately 15,000 barrels a day?

A Yes, sir.

Q So I take it from that these wells are making a great deal of water?

A The water -- produced water in the Gladiola Pool is increasing, yes.

Q Now, this is a water drive pool, is it not?

A Yes, sir.

Q Is there a possibility that you might enhance the recovery from the Devonian by adding to the natural water drive?

A That may be the case, but we feel that the aquifer of the Devonian is so large that this wouldn't bring the pressure up any.

Q You don't have to answer this next question if you don't want to, but just as a matter of information, is there a possibility that the producing rate of the wells in this pool is too high, which is causing premature water encroachment?

A Well, I don't have any ideas on the subject. I have noticed that the water does not seem to follow any set pattern. It's producing generally throughout the whole field. Structurally,

it doesn't look like it is following the structure.

MR. PAYNE: I see. Thank you.

QUESTIONS BY MR. NUTTER:

Q Mr. Abbott, was that well originally completed or previously completed in that interval from 9498 to 9508, is that Pennsylvanian or Wolfcamp?

A I believe they called it Pennsylvanian.

Q Did the well ever produce from the Wolfcamp, do you know?

A No, I don't believe so, and it had just produced a little while in that Pennsylvanian zone.

Q Now, has Mr. Lowe already plugged and abandoned the well?

A Yes, sir, he has temporarily abandoned it. It made an initial pump potential of 160 barrels of oil and 125 barrels of water.

Q Do you know what the cumulative production from the interval was?

A I think it is less than 5,000 barrels, if I am right.

Q Do you feel that you are going to be injecting water low enough here that you wouldn't cause any damage to the Devonian production?

A No, sir.

Q And may, in fact, augment the production by helping the natural water drive?

A We've tested the bottom hole pressure of the SWD F-7 and the zones we were injecting water. The bottom hole pressure was higher than the producing zone, but it was lower than the initial bottom hole pressure of the reservoir so that there is communication, but it is still -- it seems to be pretty slow communication between this zone and the producing zone.

Q Now, did Rice have a hearing to get authority for this SWD F-7?

A Yes, sir.

Q Do you remember the case number or order number?

A No, I sure don't.

MR. NUTTER: Does anyone have any further questions of Mr. Abbott? Does anyone have anything further? He may be excused.

(Witness excused)

MR. NUTTER: Does anyone have anything further they wish to offer in Case No. 1946? Take the case under advisement and take Case No. 1847.

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, J. A. TRUJILLO, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me in Stenotype and reduced to typewritten transcript by me, and that the same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal this, the 5th day of [illegible], 1960 in the City of Albuquerque, County of Bernalillo, State of New Mexico.

[illegible]
NOTARY PUBLIC

My Commission Expires:

October 5, 1960

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. [illegible], heard by me on [illegible] 16, 1960.

[illegible], Examiner
New Mexico Oil Conservation Commission