

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE 1847: 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 1847 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 the disposal of produced salt water through its Hobbs SWD Well No. F-29 to be located 1880 feet from the North line and 1742 feet from the West line of Section 29, Township 18 South, Range 38 East, Hobbs Pool, Lea County, New Mexico. Applicant proposes to inject the produced salt water into the San Andres formation in the interval from 4700 feet to 5000 feet.

BEFORE:

Daniel S. Nutter, Examiner.

T R A N S C R I P T O F P R O C E E D I N G S

MR. NUTTER: Take next Case 1847.

MR. PAYNE: Case 1847. Application of Rice Engineering and Operating, Inc. for an order authorizing a salt water disposal well.

MR. KELLAHIN: If the Commission please, may the record show the same appearances as in the preceding case?

WILLIAM G. ABBOTT,

called as a witness, having been previously duly sworn, testified as follows:



DIRECT EXAMINATION

By MR. KELLAHIN:

Q Would you please state your name, sir?

A My name is W. G. Abbott.

Q Are you the same Mr. Abbott who testified in Case 1846 and sworn and qualified?

A Yes, sir.

MR. KELLAHIN: Are the witness' qualifications acceptable?

MR. NUTTER: Yes, sir.

Q Mr. Abbott, are you familiar with the application in Case 1847?

A Yes, sir.

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

A We propose to drill a salt water disposal well to be located on the Amarada State "B" Lease in -- located 1880 feet from the North line and 1742 feet from the West line of Section 29, Township 18 South, Range 38 East, Lea County, New Mexico. This is located in the Hobbs Pool. We propose to drill this well and dispose of salt water in the Lower San Andres formation.

Q The well has not yet been drilled, has it?

A No, sir. This will be a new well drilled for disposal.

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

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

A Exhibit A is a plat of this area. Also, there is a trace of a cross-section shown as AA Prime in red, and going through the proposed SWD F-29 West. Also, there is a half mile radius circle shown around this proposed salt water disposal well.

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

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

A Exhibit B is the proposed casing program of this well. We propose to set nine and five-eighths inch casing at 400 feet and circulate the cement to the surface, and set seven inch casing at 4700 feet, and then complete for disposal from 4700 to 5050 feet.

Q Will that be open hole completion at that point?

A Yes, it will be open hole completion. We may want to perforate another zone behind the pipe from 4450 to 4650 feet. That hasn't been marked on Exhibit B.

Q What zone would that include, Mr. Abbott?

A Well, this is all the Lower San Andres formation.

Q In regard to your casing and cementing program, do you consider that adequate to protect any fresh water zones that might be encountered?

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A Yes, sir, we believe it is. Besides this casing program, we plan to run five and a half inch casing as tubing in the well, and this casing will be plastic lined. And then behind the five and a half and in the annular space between the five and a half inch and the seven inch we will load that annular space with sweet oil or gasoline or neptha, which should protect the outside of the tubing string and also the inside of the casing. We also do that so we'll have continual history on the disposal zone. We will put a pressure gauge on the tubing casing annulus and record that pressure daily. That way we can tell if we ever get a tubing leak or a casing leak.

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

A That's the Hobbs Pool.

Q Is it corrosive water?

A Mildly corrosive, yes, sir.

Q What volume do you anticipate disposing of in the well?

A We plan for future disposal to be as high as 14,000 barrels a day.

Q Are you familiar with the characteristics of the San Andres formation in this area?

A Yes, sir.

Q In your opinion, will the formation take that volume of water?



A Yes, it will take that volume 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?

A Exhibit C is a cross-section showing the completion of the wells in this, surrounding this proposed disposal well, and also shown on trace AA Prime of Exhibit A. It runs through the Humble Bowers "A" No. 12, which is a Bowers Well, and that's shown in red on this Exhibit; through the Bowers "A" No. 10 and Amerada "B" 1 through the proposed SWD F-29, and then the Amerada "B" 4 and the Atlantic Grimes No. 1. Those producing zones are marked there in blue for the Grayburg and San Andres zones, and red for the Bowers.

Q Do you have a list of the wells within half a mile radius of the subject well?

A Yes, sir. That's shown on Exhibit D. This shows the operator and the lease and the well number and the completion interval and also the completion zone.

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

Q A number of those wells are San Andres producers, are they not?

A Yes, sir, a majority of them are San Andres.

Q In your opinion, will the injection of the salt water into this zone enhance the recoveries in those San Andres wells?



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A We don't believe it will affect the pressure.

Q Now, do you have an easement or lease from the lease owner on this well?

A Yes, sir, we have a lease from William Grimes for two acres surrounding this well.

Q What arrangement do you have with Amerada Petroleum Corporation?

A We have a letter from Amerada where they agree to our completion and approve us -- our drilling a well on the lease.

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

Q Exhibit E, is that a copy of the lease fee land owner?

A Yes, sir.

Q That's the surface owner?

A Yes, sir.

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

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

A Exhibit F shows all the companies that are making up the Hobbs salt water disposal system.

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

A Yes, sir, they were.

MR. KELIAHIN: At this time we would like to offer



in evidence Exhibits A through F inclusive.

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

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

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

MR. NUTTER: Does anyone have any questions of the witness?

MR. PAYNE: Yes, sir.

CROSS EXAMINATION

BY MR. PAYNE:

Q Mr. Abbott, all of the operators in the Hobbs Pool haven't signed up for this disposal, have they?

A I understand there are some other operators that haven't.

Q Now, I believe you testified that the water produced from the Hobbs Pool is mildly corrosive. The water produced from the Gladiola Pool is even more corrosive. Yet, in this well you propose to inject through tubing and fill the annular space with kerosene or some such fluid?

A Yes, sir.

Q Why do you propose to do that in this well and not in the other one?

A Well, the Gladiola, we need the immediate capacity

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of the five and a half inch casing to dispose of water. There are a couple of operators that are already hauling water in the Gladiola Pool; one operator in particular, costs him sixty dollars a day to haul water, and we need that capacity. But we feel that in six months we'll have enough evidence, if there is corrosion, that we'll have to run tubing in the well.

Q For a temporary period of time, at least, it is a matter of urgency in the Gladiola?

A Yes, sir.

Q What size tubing was it that you expect to run in that Gladiola?

A Well, I don't know. We are going to try to run a hydril tubing as large as we can get in the well.

Q Here you plan to use five and a half inch pipe for your tubing?

A Yes.

MR. NUTTER: Mr. Abbott, referring to Exhibit B, you stated you were going to run your seven inch to 4700 and cement it, yet you didn't say how much cement you plan to use.

A We plan to use sufficient cement to bring the cement back to our nine and five-eighths.

MR. NUTTER: I see. After you get the size of the hole calipered, you'll calculate this sufficient volume to come up to the 95?

A Yes, sir.



Q (By Mr. Payne) Now, you said that you might perforate the well in the interval from 4450 to 4650?

A Yes, sir, 4450 to 4650.

Q Now, how high up on this Exhibit No. C would that extend the green line, then? Is the green line, first of all, the interval of injection?

A That's right, yes, sir.

Q And then you would extend that upward if you would perforate it, would you not?

A Yes, sir. That will extend it up to approximately a minus 850.

Q Minus 850?

A Yes, sir.

Q Referring to Exhibit D, are any of these wells within a half mile radius perforated down as low as minus 850?

A No, sir.

Q So even if you do perforate the higher section in this disposal well, you still wouldn't be injecting water into the interval that is being produced by any of the wells within a half mile radius?

A No, it will still be two to three hundred feet below that.

Q And you don't anticipate any damage to any producing horizon?

A No, sir.



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MR. PAYNE: I see.

MR. NUTTER: Are there any further questions of Mr. Abbott? He may be excused.

(Witness excused)

MR. NUTTER: Do you have anything further, Mr. Kellahin?

MR. KELLAHIN: No.

MR. NUTTER: Does anyone have anything further for Case 1847? We will take that case under advisement.



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 18 day of January,
1960, in the City of Albuquerque, County of Bernalillo, State of
New Mexico.

NOTARY PUBLIC

My Commission Expires:

October 5, 1960

I do hereby certify that the foregoing is
a complete record of the proceedings in
the said hearing of Case No. 1847
heard by me on 1-6, 1960.

[Signature], Examiner
New Mexico Oil Conservation Commission

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