BEFORE THE
OIL CONSERVATION COMMISSION
in the
STATE CORPORATION COMMISSION
HEARING ROOM, BASEMENT
CAPITOL BUILDING
Santa Fe, New Mexico
9:00 A. M.
July 6, 1960

EXAMINER HEARING

IN THE MATTER OF:

Application of Rice Engineering & 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 Skelly State "D" Well No. 3, located 2310 feet from the South line and 660 feet from the East line of Section 1, Township 20 South, Range 36 East, Lea County, New Mexico, with injection to be in the lower San Andres formation with the injection interval from 4,450 feet to 4,950 feet.

Case 2002

BEFORE:

Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case 2002.

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

MR. KELLAHIN: My name is Jason Kellahin, Kellahin and Fox, Santa Fe, New Mexico, representing the Applicant. We will have one witness, Mr. Abbott.

(Witness sworn.)

W. G. ABBOTT

called as a witness, having been first duly sworn on oath, testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q State your name, please?

A My name is W. G. Abbott.

Q By whom are you employed and in what position?

A I am a Division Manager of Rice Engineering and Operating, Inc., of Hobbs, New Mexico.

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

A Yes, sir.

MR. KELLAHIN: Are the witness' qualifications acceptable?

MR. UTZ: Yes, sir, they are.

Q (BY MR. KELLAHIN) Mr. Abbott, are you familiar with the application which is filed in Case 2002?

A Yes, sir.

Q Would you state briefly what is proposed?

A We propose to re-complete a Skelly State "D" No. 3 Well, it's an oil well in the Monument Oil Pool at the present time, which we propose to re-complete as a salt water disposal well.

Q Referring you to what has been marked as Exhibit No. A, as Exhibit A, would you discuss that Exhibit, please?

A Yes, sir. Exhibit A is a well plat showing the location of the wells in this immediate area of this proposed salt water disposal well. On this Exhibit A is a circle drawn in a half mile

radius around the Skelly State "D" No. 3 well and also on this Exhibit A there is a trace of a cross section, a line traced in red.

Q Is that further shown by another Exhibit to be presented?

A Yes, sir, that will be brought up later.

Q Now, referring to what has been marked as Exhibit B, would you discuss the proposed completion to be made in this well?

A Exhibit B is a diagram sketch of the casing program used in the Skelly "D" No. 3 well. The thirteen and three-eighths casing is set at 324 feet and the nine and five-eighths casing is set at 2786, and the five and a half inch casing is set at 7625. We propose to set a bridge plug in the five and a half inch casing at 5,050 feet. In the open PA zone for disposal, which is in the lower San Andres formation, the interval of 4,450 feet to 4,950 feet.

Q Now, are you familiar with the cementing program on this well?

A Yes, sir.

Q Would you state what that is?

A O. K. The thirteen and three-eighths casing was set with 420 sacks and that cement was circulated and the nine and five-eighths was set at 1500 sacks of cement and the five and a half inch casing was set with--

MR. UTZ: What was the top of the cement on the nine and five-eighths?

A Let's see if they recorded that. Nine and five-eighths was circulated with 1500 sacks of cement. The five and a half inch

casing was set with 875 sacks and the top of the cement was 5390. Then, Skelly originally made a Monument Paddock completion on this well, so before they did that, they perforated the casing to 5-1/2 inch at 5383, with two holes and cemented the casing through those perforations with 385 sacks, that brought the top of that cement with that 385 sacks was at 3126, so we feel that the five and a half inch casing is cemented pretty well and will make a good salt water disposal well.

Q I understand the cement would extend above the zone which you propose to perforate?

A Yes, sir.

Q Now, what formation will you perforate in?

A In the San Andres and the lower part of the San Andres formation.

Q What bodies of water do you propose to inject into this well, Mr. Abbott?

A We propose--the maximum would be 12,000 barrels a day.

Q What is the source of the water?

A The water is coming from the produced wells in that area, the Monument Pay, the Monument Paddock and Blinebry.

Q What is your opinion of the lower zone of the San Andres, will it take that volume of water?

A Yes, sir.

Q Is that injection by gravity or under pressure?

A Gravity injection.

Q How do you propose to complete this as an injection well?

A Well, we will run a 4-1/2 inch high drill tubing string inside and that 4-1/2 inch tubing string will be plastic lined and then the annular space between the tubing string and that annular space is filled with sweet oil or naptha or kerosene to protect the outside of the tubing string and, also, the inside of the casing string.

Q In your opinion, will that type of completion be adequate protection in the fresh water zone, or any producing horizons which may be encountered in this well?

A Yes, sir, it will.

Q Referring you to what has been marked as Exhibit C, would you discuss that Exhibit?

A Exhibit C is a cross section which is also shown in red, the trace shown in red on Exhibit A. It shows the subject C completion depths of the wells on that cross section and it points out our disposal, proposed disposal well, the interval will be well below the oil pay in this area, in the San Andres.

Q There is some Blinebry production below that interval, is there not?

A Yes, sir, there is some Blinebry and also some Paddock completions below that.

Q In your opinion, is there effective separation between those zones which would protect them against any water encroachment from your well?

A Yes, sir.

Q What is the nature of that separation?

A Well, it's mostly formation there, but the Paddock below our proposed formations approximately 400 feet below the bottom of our perforations and the San Andres above it is approximately 600 feet above it.

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

A Exhibit D is a list of these wells in our half-mile radius of the proposed salt water disposal well. Now, on Exhibit D is shown the well operator and the well numbers, completion interval and completion zone, and any remarks that we could find in the files.

Q Now, according to that Exhibit, there is production from the San Andres, or at least completions within the San Andres interval, within a half-mile radius of the injection well, is there not?

A Yes, sir, right on top of this Monument structure there is some well producing from the San Andres, although most of the wells have been plugged back to the Grayburg. You notice on Exhibit D the Amerada State H No. 1 is San Andres, and the Skelly "D" No. 1 is a Grayburg-San Andres completion.

Q Now, are those wells completed in the same interval into which you propose to inject water?

A They are quite above where we propose to dispose the

water.

Q Would the injection of water at the zone interval which you propose to use, have any adverse effect on the wells completed in the San Andres?

A No, I don't think it will have no effect on it.

Q Were Exhibits A, B, C and D prepared by you or under your direct supervision?

A Yes, sir.

MR. KELLAHIN: I would like to offer Exhibits A through D.

MR. UTZ: Without objection, Exhibits A, B, C and D will be accepted into the record.

(Whereupon, Applicant's Exhibits A, B, C and D were received in evidence.)

MR. KELLAHIN: Those are all the questions I have, Mr. Utz.

Q (BY MR. UTZ) Mr. Abbott, I believe you said that the top of the cement after the squeeze job was at 5383, was 3126 on the 5-1/2 inch?

A (BY THE WITNESS) Yes, sir, I believe that is right.

Q And, the nine and five-eighths shoes were at 2786?

A Yes.

Q That leaves a 340 foot area which is not protected by cement. Do you know what operator offsets that section?

A That is probably Yates, 7 Rivers, and part of the Queen.

Q Is that productive in this area?

A It's productive of gas, yes, sir.

Q However, you have a 4-1/2 inch string of high drill, a sweet oil between the 5-1/2 inch annulus and high drill?

A Yes, sir.

Q Do you think that will adequately protect this zone that is not protected by cement?

A We feel that is a good completion. We used this annular blanket, which floats on the water level, and we put a pressure gauge on the tubing casing annulus so we will have a record at all times what the pressure is on that annular space, and if any leaks develop we notice them immediately. We think that is a good method of completing our wells.

Q I think you possibly said, I don't recall offhand, when was this well completed?

A This well was completed on July 19, 1949.

Q So the 5-1/2 inch casing is about eleven years old?

A Yes. We propose on our work over to test the casing with 2,000 pounds after we set the bridge plug and before we do any perforating.

Q All right. And, your injection zone is at what interval, now, 4950?

A Yes.

Q 4950?

A Yes.

Q So the hydrostatic head pressure at that point would be approximately 2,000 pounds?

A Yes.

Q And, do you feel that 2,000 pounds is enough test?

A Yes, we believe we will never have any pressure zones that great on the casing.

Q You will have the injection zone, won't you?

A Yes, we will. This 2,000 pounds will be applied at the surface, which will give us 4,000 pounds at the bottom of the pipe.

Q Do you test with the hole full of water?

A Yes, sir.

MR. UTZ: Any other questions of the witness?

Q (BY MR. PAYNE) Mr. Abbott, is this well presently producing?

A Yes, sir, it's presently producing from the Monument-Abo pay.

Q Do you know approximately how many barrels it's producing?

A No, I don't. Skelly said it was uneconomical to operate. I think it's down to two or three barrels a day, something like that.

Q There is an adjacent Monument-Abo well which might be able to produce whatever oil is left in this zone?

A I don't know about that. This Monument-Abo pay is a very poor pay. It's the only well that was completed in this area, to my knowledge, and none of the Abo completions have ever paid out.

Q Is it uneconomical to produce the well because it makes considerable amounts of water?

A It isn't making any water, it's a flowing well. I think it's fairly high ratio and low bottom hole pressure, not very much there.

Q I see. Now, are you relying on something like the bridge plug to protect the Blinebry and Paddock formations?

A Yes, sir, we plan to set this bridge plug and then dump a couple of sacks of cement on top of it.

Q (BY MR. UTZ) How much pressure do you think that will hold?

A Well, all we will be putting in the well.

Q (BY MR. PAYNE) Do you know how much production the Amerada State H well is making from the San Andres?

A The Amerada State H, which one?

Q The Amerada State H No. 1.

A No, sir. I believe it's a top-allowable well.

Q I take it from your testimony you feel that the San Andres has separate zones which have no communication between them.

A Well, I would say that I think there is communication, but I feel there has been so much oil and gas and water taken out of the reservoir that one is disposing back in the base of it. I don't think there will be any interference or cause any damage to the reservoir.

Q Might actually improve it?

A Yes, it could.

Q And, this pressure test you are going to take, you are going to do that prior to perforation?

A Yes, sir.

MR. PAYNE: That is all, thank you.

MR. UTZ: Any other questions?

MR. PORTER: I have one question and it doesn't have any bearing on the case. How much water are you disposing of right now through, in your entire EME system?

A (BY THE WITNESS) It varies from day to day, but it will be 32,000 to 35,000 barrels a day.

MR. PORTER: Thanks.

MR. UTZ: What was the amount of water you were going to inject?

The WITNESS: 12,000 pounds.

MR. UTZ: Per day?

The WITNESS: Yes, sir.

MR. UTZ: The witness may be excused. Are there any other statements to be made in this case? If there are none, the case will be taken under advisement.

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I N D E X

E X H I B I T S

Number	Exhibit	Marked for Identification	Offered	Received
Appl 4	A,B,C,D		7	7

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, LEWELLYN NELSON, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing was reported by me in Stenotype, and that the same was reduced to typewritten transcript under my personal supervision and contains a true and correct record of said proceedings, to the best of my knowledge, skill and ability.

DATED this 13th day of July, 1960, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

NOTARY PUBLIC

My Commission Expires:

June 14, 1964

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2002, heard by me on July 6, 1960.

, Examiner
New Mexico Oil Conservation Commission

NEW MEXICO OIL CONSERVATION COMMISSION

Examiner hearing - Elvis A. Utz

Santa Fe, NEW MEXICO

Corporation Commission Hearing Room

REGISTER

HEARING DATE July 6, 1960 TIME: 9 a.m.

NAME:	REPRESENTING:	LOCATION:
G. W. Eaton, Jr.	Pan American Petr. Corp	Farmington, N.M.
Burns H. Errebo	Socony Mobil Oil Co., Inc.	Albuquerque, N.M.
J. C. Gordon Jr.	Socony Mobil	Hobbs N.M.
W. G. Abbott	RICE Eng. & Op. Inc	Hobbs, N.Mex
Jason Kellahin	[illegible] Fox	Santa Fe
[illegible]	El Paso Natural Gas	El Paso
Jerry Hudson	El Paso Natural Gas	El Paso
Jack M Campbell	Campbell & Russell	Roswell NM
Claude Neeley	Wagon Oil Corp	Midland, Texas
[illegible]	John R Yarbrough	Farmington, N.Mex.
[illegible]	[illegible]	
G. J. Savage	Gulf	Roswell, New Mex
J. E. Gibson	Gulf	Roswell, New Mex.
Frank W. (Bud) Moran	Gulf	" " "
Bill Kastler	"	" " "
A. L. Porter, Jr	OCC	Santa Fe, N.M.

ILLEGIBLE