

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
October 24, 1962

EXAMINER HEARING

IN THE MATTER OF:

Application of Kennedy Oil Company for a water-
flood project, Eddy County, New Mexico. Applicant,) CASE 2681
in the above-styled cause, seeks authority to)
institute a waterflood project in the Square Lake)
Pool by the injection of water into the Grayburg-)
San Andres formations through three wells located)
in Section 28, Township 16 South, Range 31 East.)
Applicant further seeks the establishment of a)
capacity buffer zone allowable for the proposed)
project area which offsets a capacity type flood)
and comprises the S/2 SE/4, E/2 SW/4, and S/2)
NW/4 of said Section 28.)

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: The first case on the docket will be 2681.

MR. DURRETT: Application of Kennedy Oil Company for
a waterflood project, Eddy County, New Mexico.

MR. LOSEE: A. J. Losee, Losee and Stewart, Artesia.
I have one witness.

MR. UTZ: Are there other appearances in this case?
You may proceed.

(Witness sworn.)

(Whereupon, Applicant's Exhibits
Nos. 1 through 4 marked for
identification.)

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ROBERT B. KENNEDY

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

DIRECT EXAMINATION

BY MR. LOSEE:

Q State your name, residence and occupation.

A Robert B. Kennedy; residence, Artesia, New Mexico; oil producer.

Q Have you previously testified before this Commission?

A Yes, I have.

Q That was back in about 1947?

A Roughly.

MR. LOSEE: Mr. Utz, would you like for me to go through his qualifications?

MR. UTZ: No, I believe if he qualified then, he should be qualified by now.

MR. LOSEE: All right, sir.

Q= (By Mr. Losee) Please refer to what has been marked Exhibit No. 1, and state what it portrays.

A Exhibit No. 1 is a map of our proposed project area upon which is outlined the proposed injection wells and the producing locations that we are submitting before the Commission at this time.

Q Does that show the continuation of a regular five-spot pattern?

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A Yes, it is in exact accord with existing floods adjacent to us.

Q Are the existing floods to the south and to the west?

A There are existing floods to the south and west.

Q How many producing wells are there within your project area?

A Two producing wells; that is, producing wells currently?

Q Yes, sir.

A Just one producing currently.

Q Are there some abandoned holes in the project area?

A There are three abandoned holes.

Q What is the location of the producing well?

A The producing well is located in the Northeast of the Southwest of Section 28.

Q What is the average production of this well per day?

A Five to six barrels at the present time.

Q In your opinion, is this well in an advanced or stripper state of depletion?

A It's in the advanced or stripper state.

Q Were these abandoned wells once producing wells?

A Yes, they were.

Q Have you calculated the total cumulative production from your producing well and your abandoned wells?

A That comes to 80,948 barrels.

Q Up to what date was that calculation made?



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A October 1st, 1962.

Q Have you made an estimate as to the amount of secondary oil that would be recovered from your project area by reason of the waterflooding?

A We have, and we come up with a figure of 158,924 barrels.

Q That is oil that would not be recovered by primary?

A That's right.

Q Please refer to what has been marked Exhibit 2 and state the matter contained therein.

A Exhibit 2 is a resume of our producing well and abandoned wells, showing completion dates, elevation, total depths, casing depths, amount of cement, perforations or open hole interval; and in the case of wells that have been plugged previously, the casing stubbed depths.

Q What formation is your producing well producing from?

A The Grayburg-San Andres.

Q That is shown on this exhibit as the Federal No. 1?

A That is right.

Q Those perforations are both in the Grayburg-San Andres?

A San Andres open hole.

Q What formations did the abandoned wells produce from when they were producing?

A Grayburg and San Andres.

Q And that is the perforation or open hole interval shown



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on this exhibit?

A Right.

Q You propose to inject water into what wells?

A Water will be injected in three wells. It will be the Johnson 3-B, the Federal 1, and Johnson 7-B.

Q Kennedy Oil Company is the operator of all of the locations within this project area?

A That is right.

Q What formation do you propose to inject your water in through these wells?

A Into the Grayburg-San Andres formations.

Q What proposed casing program have you outlined for these three injection wells?

A Federal No. 1 is a producing well, and we will inject directly down the 4-1/2 casing. This was new pipe, having been run in 1958. The Johnson No. 3 Well has been a plugged oil well, and we propose to tie in the 8-5/8 and the 5-1/2 and run tubing and have a packer on tubing and inject water down tubing. Johnson 7-B, having been a plugged oil well, we will again tie in 8-5/8 and 7-inch and run a packer on tubing.

Q And inject through the tubing?

A Inject through the tubing, that's right.

MR. UTZ: Where will these packers be set?

A A joint or so above the shoe is our normal procedure.

Q (By Mr. Losee) Is there any fresh water or any surface



water available in this area?

A There is none. I was on most of the original wells when they were drilled with cable tools in early days. We were looking for fresh water and we had a camp in the area, and we never found any fresh water in this area.

Q Your company, in addition to these wells, drilled and completed other wells in this Square Lake Pool, did they?

A Twenty-five or thirty.

Q Do you feel like your proposed casing program will adequately protect any water that might be in the area?

A Well, since there is no water, we are still going to run casing and have it under control. It certainly would.

Q Please refer to what has been marked as Exhibit 4 and state what it portrays.

A Exhibit 4 is a sequence of sample logs covering the wells in question. The logs again are gathered from sources of the O. C. C. and the U. S. G. S.

Q Did you furnish the Commission with any radioactive logs?

A Yes, we did on our Federal No. 1 Well.

Q Is that the only well upon which you have such a log?

A That's the only well upon which we have a radioactive log.

Q What is the source of water for this proposed project?

A Yucca Water Company.

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Q You intend to purchase water from them?

A And we will deal with pressure water in conjunction with Newmont.

Q Have you made an estimate as to the initial pressures and rates at which you propose to inject water into these wells?

A 1500 pounds per square inch, and 500 barrels per well per day.

Q Is Newmont Oil Company operating a waterflood project immediately adjoining your project area to the south and west?

A Yes, they are.

Q Is their project under flood at this time?

A Yes, sir.

Q Referring momentarily back to your Exhibit 1, I will ask you if Newmont now has under flood within their project area the West Half Southwest Quarter of Section 28, the entire East Half of Section 29 in Township 16 South, Range 31 East?

A That is all under flood or converted, in the process of being converted at the present time.

Q Was their initial flood project authorized before the adoption of Rule 701 of the Oil Commission?

A That's right.

Q So that that flood is actually operating at capacity rates?

A Yes, sir.

Q Would it be possible for your company to offset this



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capacity flood with a restricted allowable flood and protect the correlative rights?

A No.

Q Do you request the Commission to authorize this water-flood project with a capacity buffer zone allowable?

A I do.

Q Is this proposed waterflood project in the interest of conservation, and will it recover oil by secondary methods which would not otherwise be recovered?

A Very definitely.

MR. LOSEE: I move the introduction of Applicant's Exhibits 1 through 4.

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

MR. LOSEE: That is all of the testimony. I would like to make a statement, if I may, with respect to the State Engineer's Office. We mailed him, when the application was filed, a copy of these exhibits, except the base map was not colored in and apparently we didn't give him a copy of the application, because Mr. Irby corresponded with me last week and I sent him the application. I feel like from past experience that this casing program as outlined will be satisfactory. However, if he does have objection to it, and he is not available at this time, if he'll contact me I'm sure we can arrive at satisfactory --

MR. UTZ: The State Engineer's Office has a represent-



ative present.

MR. LOSEE: Oh, do they? Maybe he has examined the application. I think that's all I have at this time.

CROSS EXAMINATION

BY MR. UTZ:

Q I would like to go through the location of the adjoining waterflood here.

A Yes, sir.

Q Somewhere I got Section 28. It isn't involved in this, is it?

A Yes, sir.

Q You meant Section 29?

A No, sir.

Q Is the West Half of 29 part of the capacity flood at the present time?

A The West Half of 29 is part of Newmont's capacity flood, yes, sir.

Q How about the West Half -- I meant the East Half of 29.

A Yes, sir, that is part of Newmont's capacity flood.

Q How about the West Half of Southwest Quarter of 28?

A The West Half of Southwest Quarter of 28 is under capacity flood.

Q How about the North Half of 33?

A That is under capacity flood.

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Q So you are contiguous to capacity waterflood in all the west and south part?

A Yes.

Q In regard to your Federal No. 1 which is the only well in which you propose to inject water through the casing, is that correct?

A Yes, sir.

Q That casing is set at 3599 with a hundred sacks?

A Yes, sir.

Q The top of the Queen sand is 2770 to 2808?

A That's right.

Q And you'll be injecting through perforations?

A Through perforations and there is a section of open hole opening the Lovington sand from that well.

Q In the bottom of the well?

A Yes, sir.

Q You don't intend to plug that back?

A No, we'll inject into that and the Grayburg also, which is concurrent with the floods adjacent to us.

Q How much open hole do you have in that well?

A Approximately ten feet. It's a well that was originally drilled to 4300, and then plugged back, originally having been a dry hole on that well.

Q The No. 3 Well, will it be injecting into open hole also?



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A That will be an open hole injection, yes, sir, altogether.

Q And the 7-B?

A The 7-B will be open hole injection.

Q Do you intend to go into the No. 2 Well and make a producer out of it?

A Yes, sir, we have a spudder on it right at the moment.

Q And you will also produce out of the No. 5?

A No. 5 will be a producer.

Q Do you intend to drill a well in the Southeast Quarter of the Northwest Quarter?

A It's very likely as economic feasibility sets in that we will drill that location.

Q Then the locations described in your application are correct, are they, for the three injection wells proposed?

A Those are correct.

MR. UTZ: Are there other questions of the witness? Will you give your name to the reporter?

MR. GRAY: B. E. Gray, State Engineer's Office.

BY MR. GRAY:

Q These questions pertain to Federal No. 1. When was this well drilled?

A The well was originally drilled, approximately, the completion date was October the 25th, 1943, according to the records.



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Q Was the cement circulated to the surface on the 8-5/8 inch casing?

A No, sir, according to records there was 50 sacks of cement.

Q Is there an approximate rise on that, what the elevation will be?

A Well, the elevation -- you mean the rise of the column of cement is what you are interested in?

Q Yes.

A Well, in a 10-inch hole, I would estimate we had, oh, say 200 feet rise.

Q Why isn't it necessary to inject through a tubing and packer in this well as you have suggested on No. 3 and 7-B?

A If we didn't have a tight casing string that would withstand the pressure that was imposed, it would be necessary; and in the event the casing would not stand it or any abnormal condition would come about, we would immediately run a packer on tubing. But this was just re-completed in 1958 with a new string of pipe, and we feel that we're in better shape than most of the injection wells where they are injecting down the casing in that vicinity.

MR. UTZ: You said 1950?

A '58.

MR. UTZ: Excuse me.

A Yes, sir.



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MR. UTZ: You are not producing this well with tubing at the present time?

A Yes, we are on the No. 1 Federal.

MR. UTZ: You intend to salvage that tubing?

A Well, we'd use it somewhere else. That is, as long as we have no trouble and everything is concurrent, that we are not losing any water anywhere, since we have a new string of casing we are not worried; course, we're quick to rectify a situation that's not operating efficiently. That goes back to the operator again, where it meets up with a situation that is adverse.

MR. UTZ: Any other questions? The witness may be excused.

(Witness excused.)

MR. UTZ: Are there statements in this case? The case will be taken under advisement.

* * * * *



