

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

September 11, 1962

EXAMINER HEARING

IN THE MATTER OF:

Application of General American Oil
Company of Texas for a waterflood
project, Eddy County, New Mexico.
Applicant, in the above-styled cause,
seeks approval of a pilot waterflood
project in the Upper San Andres
formation, Grayburg-Jackson Pool,
Eddy County, New Mexico, by the
injection of water into its Keeley
"B" Well No. 13, located in Unit H,
Section 26, Township 17 South, Range
29 East.

CASE NO. 2639

BEFORE:

Elvis A. Utz, Examiner

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691



TRANSCRIPT OF HEARING

MR. UTZ: Case Number 2639.

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

MR. RUSSELL: John F. Russell, Campbell & Russell, Roswell, New Mexico, appearing on behalf of the Applicant and we have one witness. May the record show he was sworn on the previous case?

MR. UTZ: The record will so show.

RAYMOND MILLER

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

DIRECT EXAMINATIONBY MR. RUSSELL:

Q Would you please state your name, address, employer and in what capacity you are employed?

A Raymond Miller, Artesia, New Mexico. General American Oil Company of Texas, I am the New Mexico District Engineer.

Q You have previously qualified to testify before this Commission?

A I have.

Q Are you acquainted with the Application in Case Number 2639?

A I am.

Q Will you briefly state to the Examiner what you seek by



that Application?

A This is a test to continue to illustrate the injectivity that we are asking for permission of the Commission, We are asking for approval of a one well pilot and we propose to determine the feasible injection rates and pressures and to see if there might be a possibility of an early breakthrough of water in this formation. If there is, of course it would not encourage further future development of the flood.

Q If this pilot well proves the feasibility of the flood, what would the next step be?

A We would expand into a pilot of a more normal matter and pattern for a pilot. And we would produce the producing wells in accordance with Rule 701 of the Commission.

Q And the proposed project to a regular pilot project would be within the sections covered and proper, would it not?

A Yes, sir, it would.

(Whereupon Applicant's Exhibit No. 1 was marked for identification.)

Q I now show you what has been marked as Applicant's Exhibit No. 1 and referring you to that, would you explain what that reflects?

A That is a plat of portions of Township 17 and 18 South, Ranges 29 and 30 East. It shows the location of the proposed injection well, our Keeley "B" No. 13 and shows the location of all wells within a two-mile radius and the formation or formations from



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which they are produced or have produced.

Q It also shows the leases within a radius of two miles, does it not?

A Yes, it does.

Q Will you give the location of the proposed injection well?

A It's located 1345 from the north line, 1295 from the east line.

Q Of what section?

A Of Section 26, Township 17 South, Range 29 East.

Q And what is the name of the well?

A Keeley "B" No. 13.

Q What is the history of production of these wells within the areas covered within and by your Application?

A I have another map which is perhaps a little plainer.

(Whereupon Applicant's Exhibit No. 2 was marked for identification.)

Q Before referring to Exhibit 2, is the area covered by the Application herein a federal unit?

A It is.

Q And have you prepared an exhibit reflecting that and purporting to be the area in that unit?

A I have.

Q Referring to that, Exhibit No. 2, I will ask you if that is the exhibit?



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A Yes, it is.

Q Will you please explain to the Examiner what is covered by that exhibit?

A The Grayburg Cooperative and Unit Agreement and this particular area that is colored in red on it is the participating area for the Grayburg-Keeley zone, completely unitized under the above agreement. Under this plat, are shown all the wells that have produced or are producing from this Grayburg-Keeley zone and--

Q In the event this well is approved and the pilot project is successful, will the area shown as participating areas participate in production from the flood project?

A It will, yes, sir.

Q Is the well located on participating acreage?

A Immediately adjacent to it there is some participating acreage and the USGS has assured us they will approve this well as an injection without enlarging the participating area for the unit.

(Whereupon Applicant's Exhibit No. 3 was marked for identification.)

Q Now, referring you to Exhibit 3, what is that?

A That is a log of the well as filed with the USGS upon exception of the well. It shows the casing program and also the formations encountered during its--the drilling of the well.

(Whereupon Applicant's Exhibit No. 4 was marked for identification.)

Q I will refer you to what has been marked Exhibit No. 4 and ask you what that is?



A That is a status sheet showing the location of the proposed injection well, the present status, the geologic tops and the proposed conversion program.

Q Will you briefly give a resume of the casing program?

A This well was originally drilled for 5,076 and it's now plugged back to 3,050 with seven inch casing set from the surface to 2,820 with 210 sacks of cement and is in the hole from 3,020 to 2,420 of the cemented area with 125 sacks of cement. When this pipe was originally run, it was run to 3,420 and we attempted to complete this well in Grayburg-Keeley zone and after acidization the well provided a proposal of normal-commercial in the Grayburg-Keeley zone with 90% water producing. At that time, we received permission from the USGS to fract seven inch casing over at 3,020 and we pulled back to 2,820 and cemented it to that point so in effect, we have an open hole from 2,820 to 3,020 with seven inch casing above that to the surface and seven inch casing from 3,020 to 2,420 and we propose possibly to drill out the cement plug and to plug back to a depth of 3,507. We will then test the Grayburg-Keeley zone as designated or fracture it and set pipe and drill a volpaker in the seven inch casing at 1400 feet and run internal plastic coated tubing and start injecting water in the Grayburg-Keeley zone.

Q Referring back to Exhibit No. 4, what is the average production of the wells in that producing area?

A Their average is 9.2 barrels per well per day.

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Q At the present time?

A Yes, sir.

Q What is the source of water you intend to use for the injection?

A It's from the aquifer and Pan American formations we developed for use in another waterflood project in the area. It is from 9,265 to 9,299.

Q You have previously authorized the injection of that water for another project?

A Yes, sir.

Q After Irby, of the State Engineer's Office, Mr. Irby and yourself have a copy of the water analysis?

A I will explain that, yes, sir.

Q And now, what formations and what depth do you propose to flood?

A What is known locally as the Grayburg-Keeley zone. It's in this particular well. It occurred at a depth from 3,450 to 3,530.

Q Were Exhibits 1, 2, 3, and 4 prepared by you and under your supervision?

A Yes, sir.

MR. RUSSELL: We will offer them in evidence.

MR. UTZ: Without objection, Exhibits 1 through 4 will be entered in the record.

(Whereupon Applicant's Exhibits No.



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1, 2, 3 and 4 were admitted in evidence.)

Q (By Mr. Russell) Do you have any further exhibits?

A I do have a radioactivity log. I have two copies of this particular exhibit.

(Whereupon Applicant's Exhibit No. 5 was marked for identification.)

Q Referring to what has been marked Exhibit 5, will you identify that?

A Yes, sir. That is a radioactivity log run on this well when it was originally drilled in 1947.

Q Is there any specific information reflected that you would like to call to the Examiner's attention?

A Nothing in particular. It's an old lithology gamma-ray and is reflected quite well, I believe.

Q Was that prepared by you or under your direction?

A It was run by the service company.

Q That is a true copy?

A Yes, sir, it is.

MR. RUSSELL: I would like to offer Exhibit No. 5.

MR. UTZ: Without objection, it will be entered.

(Whereupon Applicant's Exhibit No. 5 was admitted in evidence.)

MR. RUSSELL: Do you anything further in connection with this Application that you would like to state at this time, Mr. Miller?



A No, sir.

MR. RUSSELL: This consists of our direct, Mr. Examiner.

MR. UTZ: All right.

CROSS EXAMINATION

BY MR. UTZ:

Q You said the average production of all wells in the unit was 9.2 barrels?

A Yes, sir.

Q What is the range, do you have that?

A That is--Yes, sir. I have. If you would like it, I have a production history showing the decline by years and the average per well per day and also a record showing it on our latest for July, 1962, average. The greatest production of one well, one well makes 28.7 per day and the smallest is 5.0 barrels per day.

Q It's just one well that makes that much?

A Yes, sir.

Q What well?

A The Bisch "B" No. 4, I might add that there are two zones open in it up in the Grayburg-Keeley zone which would not obtain flooding in this case and that is the case, more than the other wells,--

Q The next highest production is what?

A 12.8 barrels per day.

Q If this injection experiment is successful, you do in-



tend to go ahead and develop this unit?

A We do. We have had meetings with the off-set operators and have some things going that are trying to work out a cooperative flood with them in the event that this injectivity test is successful.

Q How long do you think it would probably take you to make the determination?

A I think that we shall be, if we have poor results from the injections, it wouldn't take very long. If we have an early breakthrough of water or something like that, but it would probably take at least six months before we could be satisfied it was a successful injectivity test.

Q An order for a year's period should give you ample time, shouldn't it?

A I think so, if we could, if possible, if we could have it extended, if it was not determined at that time, that should give us ample time, yes, sir.

Q What is the location of your water source well?

A It's located 660 from the south line and 560 from the west line of Section 24, Township 17 South, Range 29 East. It was originally drilled to the Ellenburger, 13,341 feet.

Q And that is fresh water?

A No. It's not fresh water, but it contains some hydrogen sulfide and the specific gravity is 1.04, but it does have hydrogen



sulfide in it and it is corrosive.

MR. UTZ: Are there any other questions of the witness?

The witness may be excused. Are there other statements in this case?

MR. RUSSELL: I would like to make a short statement and have it incorporated in this and have it applied to both of them at the end of the next case.

MR. UTZ: We will take the case under advisement.

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STATE OF NEW MEXICO)
)
 COUNTY OF BERNALILLO) ss.

I, Michael Rice, 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 under my personal supervision, 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 11th day of October, 1962, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Michael Rice
 Notary Public

My Commission Expires:

May 11, 1966

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2639 heard by me on 9-11, 1962.
James A. [Signature] Examiner
 New Mexico Oil Conservation Commission

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