

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
January 3, 1974

EXAMINER HEARING

IN THE MATTER OF:)
)
)

Application of Skelly Oil Company)
for a waterflood project and four)
dual completions, Eddy County, New)
Mexico.)
)
)

Case No. 5138

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For New Mexico Oil Conservation
Commission:

Thomas Derryberry, Esq.
Legal Counsel for the Com-
mission
State Land Office Bldg.
Santa Fe, New Mexico

For the Applicant:

Chester E. Blodget, Esq.
SKELLY OIL COMPANY
P. O. Box 1650
Tulsa, Oklahoma 74102

and

L. C. White, Esq.
220 Otero
Santa Fe, New Mexico

I N D E X

	<u>Page</u>
BERT BROWN	
Direct Examination by Mr. Blodget	3
Cross Examination by Mr. Nutter	9

E X H I B I T S

	<u>Marked</u>	<u>Admitted</u>
Applicant's Exhibits Nos. 1 thru 17	--	9
Applicant's Exhibit No. 18	--	12

MR. NUTTER: Call Case No. 5138.

MR. DERRYBERRY: Case No. 5138. Application of Skelly Oil Company for a waterflood project and four dual completions, Eddy County, New Mexico.

MR. BLODGETT: Mr. Examiner, I'm Chester Blodgett, representing Skelly Oil Company. Mr. L. C. White of Santa Fe has entered his appearance as local counsel in this matter. We have one witness in this matter, Mr. Bert Brown, who has just been sworn in the previous case.

(Whereupon, a discussion was held off the record.)

BERT BROWN

called as a witness, having been previously affirmed, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. BLODGETT:

Q Mr. Brown, are you familiar with the Application of Skelly Oil Company Order authorizing waterflood project in the Fren Rivers Pool underlying Skelly Unit area covering all section 14, 15, 21, 22, 23 in the North half of the Northwest quarter, Section 26 of the Northwest quarter of the West half of the Northeast quarter and the Northeast quarter of the Northeast quarter of Section 27, and the North

half and the North half of the South half of Section 28,
Township 17 South, Range 31 East, Eddy County, New Mexico.

A Yes, sir.

Q I'll call your attention to Skelly's Exhibit No.
1. Would you identify that, please?

A Skelly's Exhibit No. 1 is a plat of a pilot, pro-
posed pilot waterflood project in the Seven Rivers formation
within the confines of the Grayburg-Jackson Pool in the
aforementioned Section in Eddy County, New Mexico.

Q Skelly proposed to conduct a pilot flood operation
involving the W-5 spot pattern?

A Yes, we propose to inject water into the wells
No. 10, 12, 16, 54, 77 and 89 and to monitor and produce
Wells Nos. 11 and 76.

Q Do you have anything else you want to explain
about that particular Exhibit?

A I might. Let's see, I might add that Skelly operate
16 Fren Seven Rivers wells in the Fren Seven Rivers Pool here
and 15 of them are in this area here and one is about a mile
north of here and in order to accomplish this waterflood
pilot installation, we propose to dual -- let's see -- three
Seven Rivers Grayburg-Jackson injectors and the equip three
single-completion Seven Rivers injectors and dual --

yes, it would be two dual Seven Rivers Grayburg-Jackson producers and No. 11 and 76.

Q I call your attention to Skelly's Exhibit No. 2. Would you identify that, please?

A Skelly Exhibit No. 2 is a log, gamma rays neutron log, on Skelly's Unit No. 10.

Q Skelly's Exhibit No. 3?

A Exhibit No. 3 is a gamma rays neutron log on Skelly Unit No. 77.

Q Would you identify Skelly Exhibit No. 4?

A Skelly Exhibit No. 4 is gamma rays neutron log on Skelly Unit No. 89.

Q Well No. 89?

A Yes, Well No. 89.

Q I call your attention to Skelly Exhibit No. 5. Would you identify that, please?

A Skelly Exhibit No. 5 is a schematic of a proposed injection Well No. 10.

Q Would you identify Skelly Exhibit No. 6?

A Skelly Exhibit No. 6 is a schematic diagram of an injection well, proposed injection Well No. 12.

Q Identify Skelly Exhibit No. 7.

A Skelly Exhibit No. 7 is a schematic diagram of a

Seven Rivers injection well No. 16.

Q Would you identify Skelly Exhibit No. 8?

A Skelly Exhibit No. 8 is diagramatic diagram of a proposed dual Skelly Injection Well No. 54.

Q Identify Skelly Exhibit No. 9.

A Skelly Exhibit No. 9 is a down-hole schematic of Skelly Unit Well No. 77, a dual Seven Rivers unit at Jackson-Grayburg.

Q Identify Exhibit No. 10.

A Exhibit No. 10 is a down-hole schematic of Skelly Unit Well No. 89 proposed Seven Rivers Grayburg-Jackson injection well.

I might mention at this point, Well No. 11, we don't have a diagram on it for the reason that it is equipped now as it would be after the pilot is installed. It's a dual producing well.

Q Would you then identify Skelly Exhibit No. 11?

A Skelly Exhibit No. 11 is an analysis of the water that would be injected into this reservoir through wells 10, 12, 16, 77 and 89.

Q Would you identify Skelly Exhibit No. 12?

A I beg your pardon. I have to make a correction here. Skelly Exhibit No. 11 is the water that would be

injected in the Well No. 54. It comes from Skelly Unit Grayburg-Jackson Plant 1.

Exhibit No. 12 is an analysis of the water that will be injected in the well in 12, 16, 77 and 89.

Q In other words, Mr. Brown, it looks like you're putting fresh water in No. 54 and this would be produced water into the other wells?

A That's right, sir.

Q Would you identify Exhibit No. 13, please?

A Exhibit No. 13 is a gamma rays neutron log of Skelly Well No. 76.

Q Would you identify Exhibit No. 14?

A Exhibit No. 14 is a down-hole schematic of producing Well No. 76 proposed after it's at full completion and a producer in the Fren Seven Rivers Grayburg-Jackson Pool.

Q Would you identify Skelly Exhibit No. 15, please?

A Skelly Exhibit No. 15 is a two-mile radius map around the proposed project showing all wells in the zones from which they produce, operators, lease names.

Q I call your attention to Skelly Exhibit No. 16. Would you explain and identify that, please?

A Exhibit No. 16 is a letter from the United States Department of Interior indicating their approval of this

pilot Seven Rivers Project.

Q I call your attention to Skelly Exhibit No. 17.

A Skelly Exhibit No. 17, it's C-115, filed with the Oil Conservation Commission in the State of New Mexico for October '73 which shows the production for that month on the Fren Seven Rivers wells and shows the state of depletion of the wells indicating there are in advance stage of completion.

Q What initial volume of water do you plan to inject into these wells?

A We plan to inject from two to 400 barrels of water per day per well, about 1850 pounds would be our maximum pressure.

Q In your opinion, would this proposed waterflood result in recovery of otherwise unrecoverable oil and thereby prevent waste?

A Yes, sir.

Q Skelly is also asking in this Application that any Order issued hereunder would if favorable in granting the Application provide for administration expansion of -- administrative expansion of the project and conversion of additional wells by administrative means?

A Yes.

Q Were the Skelly Exhibits 1 through 17 prepared by

you or under your supervision and request?

A Yes, sir.

MR. BLODGET: Mr. Examiner, we move the admission of Skelly Exhibits 1 through 17.

MR. NUTTER: Applicant's Exhibits Nos. 1 through 17 will be admitted in evidence.

(Whereupon, Applicant's Exhibits Nos. 1 through 17 for identification were admitted in evidence.)

MR. BLODGET: We have no further questions.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Brown, this unit was originally formed for waterflooding in the Grayburg-Jackson Pool. Now, this proposed pilot here is in the Fren. Is the Fren formation unitized also?

A No, sir. It is not.

Q So, actually, this project then is in two separate leases, is it not?

A No, sir.

Q It's on the Dow Lease and also on the Lynch Lease?

A Let me see. I'd have to restate that. It is my --
to the best of my knowledge, it is unitized in the same

respect as the Grayburg-Jackson.

Q Suppose what we'd really have to do is refer to the Unit Agreement and see what the unitized formations are unless you really know. Of course, the Grayburg-Jackson Pool, I believe, is the San Andres formation?

A Right.

Q And the Fren Pool is the Seven Rivers formation?

A Right.

Q Only.

A However, all that is a royalty unit. It is not an operator's unit.

Q I realize that. Skelly is the sole working interest owner on the Dow and the Lynch State and those leases that you've got in there.

A You brought up a question there I really can't answer right now. It is my opinion, that it would be on the same -- see, we keep separate -- we keep the leases separate on the Grayburg-Jackson and sell the oil separately. It's not all one big unit. It's cut up into two parts, two different royalty interests. We have Lack 1 and Lack 2 and we'd have to do, this is already commingled. It is a commingled lease already and with that in mind, I don't really see where that would come into it right now. If we commingle

now, putting the oil in the proper place, we'll continue to put it in the same place.

Q Yes, but your injections are wrong. You've got an injection well on the Lynch lease with no producing well there and you'll be moving oil off of the Lynch lease onto the Dow lease for production and if it's not unitized, how do you handle two leases that way?

You may be commingling on the surface now, but the oil is attributed to the lease from which it came based on some kind of test or measurement or something.

MR. BLODGET: I think what we'll probably have to do is just check the agreements and see.

MR. NUTTER: I think we better have something a little more concrete on this, Mr. Blodget.

MR. BLODGET: Okay.

BY MR. NUTTER:

Q Now, another point, Mr. Brown, referring to Exhibits 5 through 10, I notice that each one of these injection wells is equipped with a factor. What means would you have to determine whether there was leakage in the tubing, casing or packer? Would you load this annulus with some kind of inert fluid?

A Yes, sir, water.

Q And equip it at the surface with a pressure gauge?

A Yes, sir.

Q Okay. That would be the same in each well's case?

A Yes.

MR. NUTTER: Okay. Thank you. Are there any further questions of the witness?

(Whereupon, a discussion was held off the record.)

MR. BLODGET: Mr. Examiner, we offer into evidence, Exhibit to be designated Skelly Exhibit No. 18, the unit agreement pertaining to the property involved.

MR. NUTTER: All right, sir. Exhibit 18 will be the unit agreement covering the acreage involved in this Hearing for this pilot waterflood project and it will be admitted into the evidence. That Exhibit is on record with the Commission, I think.

(Whereupon, Applicant's Exhibit No. 18 was admitted in evidence.)

MR. NUTTER: Does anyone else have any questions of the witness? He may be excused.

(Witness is excused.)

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

MR. BLODGET: Nothing further.

MR. NUTTER: Does anyone have anything they wish
to offer in Case 5138?

We will take the case under advisement.

