

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
March 7, 1963

EXAMINER HEARING

IN THE MATTER OF:

Application of Cities Service Oil Company for three)
water injection wells, Chaves County, New Mexico.) CASE 2769
Applicant, in the above-styled cause, seeks author-)
ity to convert the Pure State No. 1 and the Gulf)
State Well No. 1 located in Units D and P, respec-)
tively, of Section 16, Township 14 South, Range 31)
East, Chaves County, New Mexico, to water injec-)
tion, offsetting Phillips Petroleum Company's)
West Cap Waterflood Project. Applicant further)
seeks authority to drill an additional water injec-)
tion well at the southwest corner of Unit K of said)
Section 16.)

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: We will call next Case 2769.

MR. DURRETT: Application of Cities Service Oil Company
for three water injection wells, Chaves County, New Mexico.

MR. KELLAHIN: Jason Kellahin, Kellahin and Fox, repre-
senting the Applicant. We will have one witness, Mr. Motter.

(Witness sworn.)

E. F. MOTTER

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



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DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name?

A E. F. Motter.

Q By whom are you employed and in what position?

A Cities Service Oil Company, Division Engineer in the Texas-New Mexico Division.

Q Have you previously testified before the Oil Conservation Commission and made your qualifications as a petroleum engineer a matter of record?

A Yes, I have.

MR. KELLAHIN: Are the witness' qualifications acceptable?

MR. NUTTER: Yes, sir, they are.

Q (By Mr. Kellahin) Are you familiar with the application of Cities Service Oil Company in Case Number 2769?

A Yes, I filed the application.

Q Briefly, what is proposed by Cities Service's application?

A We propose to convert two wells to injection; namely, Tract 34, Well 1, Unit D, Section 16, Township 14 South, Range 31 East; and Tract 36, Well 1, Unit F, Section 16, Township 14 South, Range 31 East, all in Chaves County, New Mexico. We further request that permission be granted to drill an injection well to be known as Tract 33, Well 2-W at the southwest corner of Unit



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K, Section 16, Township 14 South, 31 East.

Q Do you have a plat showing this area?

A Yes, I have.

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

Q Referring to what has been marked as Exhibit No. 1, will you state what is shown on that exhibit?

A This Exhibit No. 1 basically outlines in a red circle the three proposed injection wells.

Q Does it show the ownership and other information, too?

A Yes, it indicates the outline of the Phillips Petroleum Company West Cap Unit, the Drickey-Queen Sand Unit, and the John H. Triggs property to the north.

Q At this point, the Drickey-Queen Sand Unit and the Phillips West Cap Queen Sand Unit are adjacent, is that correct?

A Yes, that is correct. If it might be appropriate at this time, New Mexico Oil Conservation Commission Order R-2336 authorized the conversion of seventeen wells on the Phillips West Cap Unit in order to prevent migration of oil back and forth across the common unit lines; and also to protect correlative rights it will be necessary for the Drickey-Queen Sand Unit to convert these three wells or convert two wells and drill one, to prevent the migration of oil.

Q Has Phillips started injection on these seventeen wells as yet?



A No, we have not, but we anticipate injection in four to six weeks.

Q In order to protect your correlative rights, will it be necessary that the wells proposed here be put on injection?

A In our opinion, it will be.

Q Do you have a line agreement with John H. Trigg?

A Yes.

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

A Exhibit No. 2 is basically the same as Exhibit No. 1, but with an overlay in a red pencil with an attempt to show the injection pattern which will result from this proposed drilling of the well in the southwest corner of Unit K, Section 16. A little background on this. At the outset of the Drickey-Queen Sand Unit, Phillips chose not to put their 40 acres in the Southwest Southwest of 16 into the Drickey-Queen Sand Unit.

Approximately a year or so later, we realized that with this 40 acres out of there, this put whoever was going to operate the West Cap Unit, the so-called Drickey-Queen Sand Unit, in an awkward position, in that the Drickey Unit would have two injection wells which would be the Northwest of the Southwest, and also the Southeast of the Southwest, under the present injection pattern would be injection wells.

Our unit agreement, which is on file with the Commission, does not provide for a reduction of area. It would be necessary

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to get a full hundred percent of the working interest owners to change the unit agreement to provide for a reduction of area to put 40 acres, either one of these two, possibly, in the Phillips Unit; and thus we would have had an equalization on the common lines and could have followed the same injection pattern.

Consequently, about the time this was brought to the attention of Phillips, we found out they had already been in Washington and had proposed this agreement as it is seen here to the U.S.G.S. and they thought that perhaps another solution could be worked out, rather than going back and changing this, putting the 40 acres in with the Drickey Unit. The Drickey Unit Agreement does provide for an enlargement of the area but does not provide for reduction.

Q Is it your understanding that the West Cap Queen agreement provides for a reduction?

A It's written almost identical to ours and it doesn't provide for a reduction, also.

Q Have you been able to reach a line agreement with Phillips as operator of the West Cap Queen?

A Yes, we have a line agreement between Phillips and Cities Service. Basically, this line agreement allows for the conversion of certain wells and the drilling of the 33 Well 2-W. Phillips and Cities Service have agreed that Cities Service will pay three-fourths of the interest of this well, Phillips one-fourth, and Cities Service will be the operator. It probably will



be drilled some ten foot inside the corner of Unit K, so it will be on the Drickey-Queen Unit, Sand Unit property.

Q Will Phillips participate in the injection expense?

A Yes.

Q In your opinion, will the proposal made by Cities Service in this case adequately protect the West Cap Queen Sand Unit?

A Yes, in my opinion this is a reasonable solution to this problem, probably the only solution to this problem.

Q In your opinion, will it adequately protect the correlative rights of the operator of the Phillips properties?

A Yes, it will.

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

A Yes, they were.

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

Q And Exhibit 3 is the line agreement which has been reached by your company and Phillips Petroleum Company as operators of the two units?

A Yes. I might add that the agreement has been signed by Phillips but not signed by Cities because of -- if I may refer to Section 9, it calls for a well to be completed within 120 days of the execution of this, and we felt it might be necessary to have approval of this Commission prior to signing that line agreement.



I would like to add one more thing. On our original application, the schematic showing water injection well, it shows 5-1/2 or 7-inch casing. We propose to use 4-1/2 inch casing on the injection well.

MR. KELLAHIN: At this time I would like to offer in evidence Exhibits 1, 2, and 3.

MR. NUTTER: Cities Service 1, 2, and 3 will be admitted in evidence.

(Whereupon, Applicant's Exhibits Nos. 1, 2, and 3 admitted in evidence.)

MR. KELLAHIN: That's all we have on direct testimony.

MR. NUTTER: Any questions of Mr. Motter?

CROSS EXAMINATION

BY MR. NUTTER:

Q This line agreement calls for the well to be drilled to be drilled at approximately 1320 from the south and 1320 from the west. You stated it would be about 10 feet inside. Could you give us a footage description of the location of that well, please?

A Well, we could probably add five feet to each of those. That would put it 1325, put it on the Drickey property.

Q That will be the location, surface?

A Yes. Mr. Examiner, I might add that we do not have a line agreement with Mr. Trigg at this Examiner Hearing, but that has been submitted to your office when we formed the unit. We have



a line agreement along the common boundaries also with Mr. Trigg.

Q The well that's up there offsetting the Trigg property will be off pattern as far as the Drickey-Queen and John Trigg's flood, also?

A Yes. If you will notice on 1 and 2 we have circled in a blue pencil the wells that are injection on both the John Trigg and the Drickey-Queen Sand Unit.

Q In your opinion, will this new pattern which is necessitated by this odd 40 acres down here result in an efficient and thorough sweep of the oil in this area?

A Yes. It would be our proposal to inject perhaps about half as much water into this well to be drilled as we would normally into a 40-acre five spot or 80-acre five spot, so that we do thoroughly sweep to the four wells immediately offsetting the well. Once we get a high water cut at those wells, we will increase injection rates.

Q As far as you know, the Phillips wells will be on injection in four to six weeks?

A I have been advised that they will complete their facilities and will be able to inject water in that time. I assume they will probably start injection in the westerly portion of their unit until we can get the well drilled, and put the injection wells on approximately the same time.

Q Does the line agreement which Phillips and Cities Service have discussed provide for the time in which this well of



yours will be put on injection?

A No, but it provides for mutual agreement, which I'm sure we'll work out.

Q Are you going to attempt to put it on at approximately the same time as the Phillips well?

A Yes, that's correct.

Q That would hold true for all three of these?

A We have no problems whatsoever on our wells, with the exception of drilling this. Our South Plant already has lines laid to the proposed injection wells. It's just a matter of converting.

Q This new well is going to be drilled and equipped with 4-1/2 inch casing?

A Yes.

Q Will injection be down the casing?

A No, it will be through the tubing.

Q That would also hold true of the other two wells?

A Yes, that is correct. The 4-1/2 inch casing affords us a saving of a thousand to fifteen hundred dollars because of the smaller casing.

Q But injection will be down tubing through a packer?

A Yes.

MR. NUTTER: Any other questions of Mr. Motter? He may be excused.

(Witness excused.)

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