BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
November 8, 1962

IN THE MATTER OF:

Application of Socony Mobil Oil Company for a dual completion and certain administrative procedures, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to complete its State Bridges Well No. 27-DD located in Unit H of Section 26, Township 17 South, Range 34 East, Lea County, New Mexico as a dual completion (conventional) to produce oil from the Vacuum (San Andres) Pool and an undesignated Yeso pool through parallel strings of 2 3/8 inch and 2 3/8 x 1 1/4 inch tapered tubing strings. Applicant further seeks the establishment of administrative procedures whereby similar dual completions could be approved in this area.

CASE NO. 2689

BEFORE:

Daniel S. Nutter, Examiner.

TRANSCRIPT OF PROCEEDINGS

MR. NUTTER: We will take the next case, 2689.

MR. DURETTE: Case 2689. Application of Socony Mobil Oil Company for a dual completion and certain administrative procedures, Lea County, New Mexico.

MR. SPERLING: Jim Sperling, appearing for Socony Mobil Oil Company. We have two witnesses in this Case, Mr. Gordon and Mr. Hill.

MR. NUTTER: Both you gentlemen are still under oath,

so you may continue.

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J. C. G O R D O N, a Witness, called by the Applicant, having been previously sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. SPERLING:

Q Mr. Gordon, you are the witness who qualified and testified in the preceding case, 2688, are you not?

A Yes, sir.

Q I would like to have you refer to what's been marked for identification as Mobil's Exhibit Number 1 in this case, which appears to be a plat; will you please explain the information contained on that plat that is pertinent and significant insofar as this hearing is concerned?

A This is a map of the Vacuum Field area, showing in yellow the State Bridges lease; the State Bridges Number 27 is indicated here in red. This well was a temporarily abandoned completion in the Vacuum-Grayburg-San Andres Field, and was drilled deeper to the Yeso. The remaining wells, or other wells shown on this plat are mostly Vacuum-San Andres completions, with the exception of the Number 95 which has been previously indicated as a deep wildcat.

Q Where is the 27 Well completed?

A The State Bridges Number 27 is presently completed through San Andres perforations between 4798 and 4756, and through

Paddock perforations located 6394 to 6697, over-all.

Q I want to refer you to what has been marked Exhibit 2, which I believe is the Electro-Log in this case, is that correct?

A Yes, sir.

Q Will you identify that as the Electro-Log?

A That is the Electro-Log of the subject well.

Q Mr. Hill will testify at length concerning the completion procedures employed in this well?

A Yes, sir.

MR. SPERLING: And with the Examiner's permission, we would like, for the sake of continuity, to recall Mr. Gordon after Mr. Hill's testimony.

MR. NUTTER: Very well.

MR. SPERLING: That's all I have of Mr. Gordon at this time.

MR. NUTTER: He may be excused.

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J A C K D. H I L L, a Witness, called by the Applicant, having been previously sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. SPERLING:

Q You are the same Jack D. Hill who testified in Case 2688, are you not?

A I am.

Q I'll refer you to what has been marked as Mobil's

Exhibit Number 3, which appears to be a diagram, a sketch of the completion method, casing, and tubing program. Would you explain what that exhibit shows?

A Yes, sir. As Mr. Gordon testified, this well was an old San Andres completion, which had 7-inch, 24-pound casing set at 4,220 feet. The San Andres was producing through an open-hole section from 4,220 feet to 4,735 feet. Upon the beginning of the drill deeper operation, this well was cleaned out to the original T.D., and the open hole section was cemented with 590 sacks of Portland neat cement. W.O.C. time was 18 hours. The well was then drilled to a depth, total depth of 7,000 feet, and a 5 inch, 15 pound liner was hung from 4,035 feet to T.D. The Paddock zone was subsequently tested, treated, and isolated. The San Andres zone was also tested, treated, and completion equipment was run in the hole in the following manner: A Baker Model "D" wire line packer was set at 6,360 feet; a string of tubing consisting of, from the bottom to the top, 877 feet of 2 and 3/8ths O.D. Buttress; 685 feet of 1 and 1/4 inch integral joint. A Baker preliminary string anchor 871 feet of inch and a quarter integral joint, and 2 and 3/8ths O.D. Buttress to the surface was run. The short string which consisted of 1509 feet of 2-inch O.D. Buttress, and then 2 and 3/8ths O.D. Buttress, was run to the surface and latched into the Baker preliminary string anchor at 4790 feet.

The San Andres is presently being pumped through the short string by utilizing an inch and a quarter pump on 5/8ths and 3/4

inch sucker rods. The Yeso is flowing through the long string. The internal diameter of the inch and a quarter integral joint tubing used is 1.308 inches, which does not conform to Rule 112-A. We are asking exception to this rule because of mechanical conditions present in the old well. There is not sufficient clearance in this well to run a larger size tubing, and we believe that the Paddock zone of the Yeso can effectively be flowed through this string of tubing.

Q Your limitations there were produced by the old casing present in the original San Andres well, is that correct?

A Yes, sir, that is correct.

Q Do you have anything further to add with reference to the casing or tubing, or the completion methods?

A Only that the Paddock zone of the Yeso has been potentialed and that it exhibits flow properties well exceeding those needed to produce a well at a top allowable rate.

Q Now, does the completion of these wells, and the contemplated completion of other wells in this field, result in a considerable economic saving, as distinguished from drilling new wells to the Yeso-Paddock?

A Yes, sir, it does. We have a total cost of a dual completion by deepening the old San Andres wells, of $65,000.00. It has been estimated that a single completion, a new well single completion to the Paddock zone would cost $71,000.00, which is a difference of $6,000.00 per well; and also another $12,000.00 to

deepen the old San Andres well to its present producing zone, which gives a total savings per well of $18,000.00.

Q Now, the method of completion that you have outlined here would, in your opinion, give adequate and safe separation insofar as these two zones are concerned, would it not?

A Yes, sir, it would.

MR. SPERLING: I believe that's all I have, Mr. Examiner.

CROSS-EXAMINATION

BY MR. NUTTER:

Q Mr. Hill, now, you said that it would cost seventy-one thousand to drill a new well?

A A new Paddock well, single completion.

Q A single Paddock. What was the $65,000.00 for then?

A That is the cost for deepening and making a dual completion from the old San Andres wells.

Q What was the twelve thousand for?

A That would be considering that we go into some of our old temporarily abandoned San Andres wells and deepen them approximately 300 feet to make a new San Andres completion.

Q To make a new San Andres completion?

A Yes, sir.

Q But to drill deeper and equip one of the existing San Andres wells as a dual completion would cost sixty-five thousand?

A Yes, sir, that is correct.

Q What did you say the I.D. on the one and a quarter inch

J-55 tubing was?

A 1.308 inches.

Q And you have a total for the Yeso of 871 feet above the anchor, and 6585 feet below the anchor?

A Yes, making a total length of 1556 feet of inch and a quarter pipe.

Q And the other string of tubing has 1509 feet of the small diameter tubing? This is 2-inch O.D.?

A Yes, sir; that has a diameter of 1.60108 inches.

Q Somewhere there in the Vacuum Pool there has been some recent completions in what they call the Drinkard; is there any correlation between the Drinkard in the other wells, and the Yeso in this well?

A I believe not; but I don't feel qualified to answer that question.

MR. NUTTER: Any further questions of Mr. Hill? He may be excused.

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WHEREUPON, J. C. GORDON was recalled as a witness, and testified further as follows:

DIRECT EXAMINATION (CONTINUED)

BY MR. SPERLING:

Q Mr. Gordon, as a part of Mobil's application in this

case you have asked for the establishment of a procedure for administrative approval of additional dual completions by Mobil upon the Bridges lease, which is shown in Mobil's Exhibit Number 1. Would you outline for the Examiner what your proposal is in this connection?

A We'd like to ask for administrative procedure of duals made under similar conditions, and using the similar equipment outlined here. At the present time most of the wells, our wells in this area, are completed in a similar manner, and we believe that there will be sufficient development work in this area to justify a special administrative approval with reference to the order possibly resulting from this hearing. The need here, I believe, is on the fact that this is a special small size tubing, and it would not therefore come under the regular administrative approval procedures for similar dual completions.

At the present time, we are in the completion stage of similar dual completion work on our State Bridges Number 36 and our State Bridges Number 4, which are diagonal offsets to the subject well Number 27. And we are in negotiation and drilling contract stage of dual completion work, or drilling ahead working on State Bridges Number 13, Number 38, and Number 30, which are direct offsets to State Bridges Number 27, the subject well.

We would estimate that possibly in the near future, fifty wells might be treated in a similar fashion by Socony Mobil.

Q I assume that these San Andres wells that are shown on

Exhibit 1, were all completed at substantially the same time, and in substantially the same manner?

A Yes, sir. The casing and the open-hold spacing on almost all of the San Andres wells in this area, are virtually identical.

Q What is the stage of depletion so far as these old San Andres wells are concerned?

A These are at a very advanced stage of primary depletion. Quite a few of these wells have been temporarily abandoned for lack of production.

Q And your proposed program contemplates deepening and re-completing in the San Andres in a fashion which has been testified to here, plus drilling to the Yeso-Paddock?

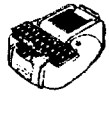
A Yes.

Q And completion there in a similar fashion?

A I would like to add here that we have had some apparent confusion between the use of the terms "Yeso" and "Paddock". The Yeso refers to the large over-all geological formation; the Paddock term has been used by the Hobbs Commission office in designating our completion in State Bridges Number 27. They have given us a designation of Vacuum-Paddock for the completion in this well.

Q Mr. Gordon, are you able to answer the Examiner's question put to Mr. Hill with reference to completions in the general area and in what is referred to as the Drinkard formation?

A From conferences with the Commission in Hobbs, they



have told us, and we are in agreement, that the nearby Drinkard completions are in -- I beg your pardon -- are not in a similar sequence of the formations in this Yeso formation encountered here. This is a distinctly different formation, and has been correlated by the Commission with Paddock completions to the extreme east and west of this location.

Q This perforated interval here would be in the Yeso formation, and the Drinkard wells that we referred to would be in the Yeso formation, but this is Paddock in the upper Yeso, and that would be Drinkard in the lower Yeso, is that it?

A Yes, sir, this has been so designated by the Commission.

Q Do you have anything you would like to add, Mr. Gordon?

A I believe that's all.

CROSS-EXAMINATION

BY MR. NUTTER:

Q Socony Mobil is conducting a secondary recovery operation a short distance to the North here; will the use of this small size tubing affect the efficiency of the recovery operation if it should extend as far south as this dual completion practice would extend that far north?

A At the present time, sir, the distance between these two doesn't make any use of this equipment and a water-flood operation appears to be imminent. I would hesitate to say whether it was feasible or not. In the future, I personally believe that we would possibly seek some other measures in case the water-flood

area came into an overlap with this dual completion area. At the present time, we don't see that there will be any conflict between them in the near future.

Q The 2 and 3/8ths to the San Andres actually could be extended another seven or eight hundred feet lower in this well, could it not, that is, down to the top of the liner at least?

A Yes, sir. But I believe that would be approximately only another hundred feet. I beg your pardon, you mean the San Andres 2 and 3/8ths? Yes, sir, this could go on down to approximately the same depth as the Yeso string is set with 2 and 3/8ths at 3900.

Q So that if you had to put in a larger pump to lift larger volumes of water, you feel that other measures might be possible?

A Yes, sir. I'd hesitate to say, in view of the present status of our waterflood, as to just what might be needed.

Q Are you having to lift larger volumes of water there now?

A No, sir, we are not having to lift larger volumes of water.

MR. NUTTER: Any further questions of Mr. Gordon? He may be excused.

MR. SPERLING: That's all we have, Mr. Examiner. I would like to offer Exhibits 1 through 3 at this time.

MR. NUTTER: Mobil's Exhibits 1 through 3 will be admitted in evidence. Does anyone have anything they wish to offer in Case 2689? We will take the case under advisement.

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

I, ADA DEARNLEY, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 26th day of November, 1962.

Ada Dearnley
NOTARY PUBLIC-COURT REPORTER.

My Commission Expires:

June 19, 1963.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2689, heard by me on 11-8, 1962.

....., Examiner
New Mexico Oil Conservation Commission

I N D E X

E X H I B I T S

NUMBER	EXHIBIT	MARKED	OFFERED	ADMITTED
Mobil #1	Plat	3	12	13
Mobil #2	Electro-Log	4	12	13
Mobil #3	Diagram	5	12	13