

BEFORE THE
OIL CONSERVATION COMMISSION
MABRY HALL
Santa Fe, New Mexico
June 22, 1960

EXAMINER HEARING

IN THE MATTER OF: Case 1999

Application of Socony Mobil Oil Company for an exception to Rule 107 (e) (1). Applicant, in the above-styled cause, seeks an exception to Rule 107 (e) (1) in order to complete the following-described wells as "slim-hole" completions in the Devonian formation at depths in excess of 5,000 feet:

Federal "A" Well No. 1, 2310 feet from the North and West Lines of Section 31

Santa Fe "F" Well No. 2, 1980 feet from the South line and 660 feet from the West line of Section 20

both in Township 9 South, Range 36 East, Lea County, New Mexico.

BEFORE:

D. S. Nutter, Chief Engineer
O. E. Payne, General Counsel

TRANSCRIPT OF HEARING

Mr. Nutter: Case 1999.

Mr. Payne: Application of Socony Mobil Oil Company for an exception to Rule 107 (e) (1).

Mr. Errebo: My name is Burns Errebo. I am from Modrall, Seymour, Sperling, Roehl and Harris of Albuquerque. I am appearing on behalf of the Applicant, and we will have one witness.

(Witness sworn)

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JOE GORDON, JR.

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

DIRECT EXAMINATION

BY MR. ERREBO:

Q Would you state your name?

A Joe Gordon, Jr.

Q By whom are you employed, in what capacity, and where are you located?

A Socony Mobil Oil Company as Senior Production Engineer at Hobbs, New Mexico.

Q Have you previously testified as an expert witness?

A Yes.

Q As an engineer, have you not?

A Yes.

Q Are you familiar with the application of the Socony Mobil Company in this case?

A Yes, sir.

Mr. Errebo: I note, Mr. Payne, that our two applications have been combined for this hearing. If it is satisfactory, we will proceed with the Federal lease well.

Mr. Payne: All right.

Q (By Mr. Errebo) Mr. Gordon, turning your attention to your Federal "A" No. 1, I would like to ask you if you will state



what the location of this well is?

A The Federal "A" No. 1 is located 2310 feet from the North Line and 310 feet from the West Line of Section 31, Township 9 South, Range 36 East, in Lea County, New Mexico.

Q This well has been started, has it not?

A Yes, sir.

Q It is now drilling?

A It is drilling ahead of the production by 7,000 feet.

Q The Socony Mobil Application is for special permission to permit this well as a "slim-hole" completion. I take it that this well has such a depth and will be at such a depth when a decision is rendered by the Commission in this matter that it will be possible to complete this well in the conventional, or normal, manner should the application be denied, is that correct?

A Yes, sir.

Q Your application here today is for an exception to the Rule 107 (e), is it not?

A Yes.

Q And, with respect to the Federal "A" No. 1, in what regard is the exception necessary?

A This, by State-wide rules, you can apply for a slim-hole completion under administrative approval from the District Supervisor. However, this well is to be completed below 5,000 feet and, therefore, we cannot ask for administrative approval from the Dis-

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trict Supervisor.

Q It is also a 'wildcat' well, is it not?

A No, sir, this is the Federal well.

Q This is a Federal well?

A A development well.

Q Have you prepared a schematic diagram illustrating the method in which you propose to complete this well?

A Yes, this is the copy or the diagram we have given here.

Q And, this has been marked by the Commission as the Applicant's Exhibit Number 1. Will you proceed to briefly explain what this diagram reflects?

A This diagram shows the height and normal casing setting depths and cementing we have used. The surface casing of ten and three-quarters has already been set at 435 feet. The next string is set at seven and five-eighths and has been set at 4,225 feet. We are now drilling a six and three-quarter inch hole, which will be carried to the total depth of approximately 12,100 to 12,200. The oil string, we request permission to run a string of two and seven-eighths OD casing or tubing from the surface to total depth, and to be cemented from back from bottom. We contemplate from the only other well in the field, West Crossroads, is the only field at the present time to obtain a flowing completion and this two and seven-eighths OD casing would constitute the tubing and the casing from the Devonian pay. The two and seven-eighths string at the



time it's cemented, we proposed to use a guide shoe on the bottom, a plug to be caught in the baffle plate, one joint above the guide shoe. The plug will have swept the tubing clear of all cement and come to rest below our expected perforated interval so that there will be no cement in the tubing between the surface and our perforated interval, and no drilling out will be required. We also plan to install a permanent setting shoe, setting nipple above the pay for possible future use as a seating in installations for pumping equipment. The tubing is to be centralized above through the pay, and below the pay, in order to get the best possible cement job through our Devonian and, then, also, we plan to install a centralizer, one centralizer in the seven and five-eighths inch casing to steady the tubing in that string of seven and five-eighths.

Q Mr. Gordon, I assume from the notes you have on your Exhibit, that the ten and three-quarter inch casing will be of cement to the surface behind it, is that correct?

A Yes, sir, the ten and three-quarter is cement, 385 sacks and 25 sacks were circulated on that.

Q It is a full cement sheath and likewise there will be a full cement sheath on the seven and five-eighths casing?

A On that we circulate a surface of 165 sacks.

Q Have you determined whether or not corrosion oil will be produced from the provision which you complete?

A The job is free from corrosion.



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Q Have you made a study of the cost of the conventional completion of this well as compared to the completion which you propose here today?

A Yes, sir. The conventional completion would differ from the completion proposed here by the addition of a liner from approximately 4,000 feet to TD, the liner would be approximately five and a half inch casing and the differential cost could be approximately \$45,000.00 more if we were to run the five and a half inch liner.

Q Then the granting by the Commission of this application would permit the saving by Socony Mobil of approximately \$45,000.00 in the completion and drilling of this well, is that correct?

A Yes, sir, that was 40,000.

Q 40,000. Now, do you know of any similar slim-hole completions which have been approved by this Commission heretofore?

A The Commission has approved the application of Tri-Production Company for a similar type of completion to the depth of, approximately, 10,500.

Q At the time that application was Docketed and heard, you contemplated these completions here, did you not, that are being discussed today?

A Yes, we were initiating our application at the time that case was heard.

Q For that reason you had particular interest in that case,



did you not?

A Yes, sir.

Q And, can you state what the difference is between the completion approved in that instance, and the one that is proposed here today for this well?

A Mainly the difference is strictly in the total depth. The proposed methods are approximately the same, the difference being in the total depth.

Q You testified before the Commission before, and your duties do include proration, do they not, for your Company in the State of New Mexico?

A Yes, sir.

Q Is it your opinion waste would not be caused in any way by the granting of this application?

A No, sir, it would not.

Mr. Errebo: That is all.

Mr. Nutter: Anyone have any questions of Mr. Gordon?

Mr. Payne: Mr. Gordon, are you going to circulate to the top of all the pays that might be encountered?

A (By the witness) Yes, sir. Now, from my present knowledge, the only possible pays in this areas are the Devonian, the top approximately 11,900, and the Pennsylvanian, I think, at approximately 9,000 plus.

Q (By Mr. Payne) That is true in the case of both wells,



or to the Federal "A" No. 1?

A On Federal "A" No. 1 we get cement off both pays.

Q Where is the fresh water encountered?

A Fresh waters are already cased off, sir.

Q Is that ten and three-quarters and seven and five-eighths?

A Yes, sir, thirty-three quarter catches all of them.

Q Do you have any particular pressure problems?

A No, sir.

Q It's rather difficult, isn't it, to work over one of these slim-holes in the event that becomes necessary, particularly when it's at this depth?

A I believe there, sir, we have taken all the safeguards we can at the present time, and with knowledge of what you have installed, and what you are trying to do, I think the two and seven-eighths casing is conventional.

Q I see.

A You may be limited in some respects, it can be done.

Mr. Nutter: I can't find it on this Exhibit here anywhere, where you depict how much cement you plan to use on this tubing string. How many sacks do you estimate you are going to need?

A I couldn't say. It would be based on the caliper.

Q You will run a caliper survey?

A Yes, sir, and temperature survey.



Q You calculate the cement to reach to 9,000 or 8,500, or just where?

A Our calculation will be based on bringing back to approximately 8,000 feet.

Q About 8,000 feet?

A Yes.

Q Now, will you have any kind of latching device in the tubing string so in the event you run into any kind of trouble you can unscrew at above, the top of the cement?

A No, sir, we propose there, in the future, to use a string shot and back off up in the casing in case we want to install a larger sized tubing up inside the casing, and we would rather use a string shot, rather than have anything installed which would be a source of possible leakage or mismanagement.

Q What about your centralizers, except this one that is up in the seven inch pipe, and also the one that is seen at thirty foot intervals through the pay?

A Yes, sir.

Q Centralizers in the rest of the pipe?

A No, sir.

Q No centralizers?

A No, sir.

Q I believe there are some intervals across the pay, and that is where you need the centralizers.

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Q (By Mr. Errebo:) Now, with regard to the other well covered by this application, Mr. Gordon, the Santa Fe "F" No. 2, you have prepared, have you not, a schematic diagram of the proposed completion of that well which is similar to the first well, which was covered by your testimony?

A Yes, sir, very similar, differing only in details.

Q That has been marked Number 2. Will you please tell the Commission whether there are any significant differences in the method of completion as proposed for this second well?

A The main difference here is that in the case of the Santa Fe "F" No. 2, which is an old well drilled deeper, the seven and five-eighths inch casing was cemented at 9,623 feet. The well was produced as a pan well and we have now depleted that formation and are drilling deeper, and this leaves us with approximately 3,000 feet of six and three-quarter inch hole to drill. We are now drilling at approximately 11,700 feet. The insulation of two and seven-eighths inch casing and the cementing procedures, the equipment installed in the tubing string is identical with what we outlined for Federal "A" No. 1.

Q What is the necessity for a hearing in this matter here?

A This well is a wildcat in regard to the Devonian formation, more than a mile from any other Devonian pay producing well. This well is also deeper than the completion, the completion will be deeper than 5,000 feet, which brings us back to the administra-



tive approval of the District Supervisor.

Q Have you calculated the comparative costs of this completion as compared to the conventional completion in which you did some comparison on the previous well?

A I estimate here we are approximately \$12,000.00 savings, strictly in the pipe, the five and a half-inch liner which we would not be required to set.

Q Do you have anything further you care to add in regard to either of these two wells?

A I believe we need to state the location of the Santa Fe "F" No. 2, 1980 feet from the South Line , 660 from the West Line, Section 20, Township 9 South, Range 36 East, Lea County, New Mexico, and it would be appreciated if the Commission could expedite their decision in regard to this well, since we are getting fairly close to our TD.

Q Mr. Gordon, in order to explain to the Commission why you do not intend to crowd them on their decision of this, will you tell them why you have thought it necessary to go ahead and commence operation on both of these wells, and the circumstances?

A In the event that the proposed completion method is not approved we are still able to run our five and a half-inch liner and proceed with normal completion techniques.

Q Actually, are there not wells off setting both of these wells, or lessors which are presently proceeding, and you feel you

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should commence development of these two zones as soon as possible?

A Especially in the case of Federal "A", run the off set by production. The Santa Fe "F" No. 2 is a wildcat.

Q Do you have anything further?

A No, sir.

Mr. Errebo: That is all we have.

Mr. Nutter: How much cement would you use on this Santa Fe "F" No. 2 well?

A (By Witness) Here we would bring the cement back into the seven and five-eighths inch casing to approximately 9400 feet based on caliper volume.

Q 9400 feet?

A Yes, sir, this is our standard technique in bringing a liner back into a casing.

Q Your central program is similar to the other well?

A In regard to central across the Devonian.

Q In the case of the Santa Fe "F" No. 2, are the tubing springs pulled tense while the cement is setting, I guess you can't?

A They would just be hanging, sir.

Q That is right.

A The portion of any tension setting in the tubing spring would only come up when we install pumping equipment.

Q You are putting your setting shoes in your tubing strings?



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A Yes, sir.

Mr. Nutter: Any further questions? We will take the case under advisement.



I N D E X

WITNESSES:

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JOE GORDON, JR.

Direct Examination by Mr. Errebo

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E X H I B I T S

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STATE OF NEW MEXICO)
) SS
COUNTY OF BERNALILLO)

I, LEWELLYN NELSON, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing was reported by me in Stenotype, and that the same was reduced to typewritten transcript under my personal supervision and contains a true and correct record of said proceedings, to the best of my knowledge, skill and ability.

DATED this 8th day of July, 1960, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Lewellyn F. Nelson
NOTARY PUBLIC

My Commission Expires:

June 14, 1964

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 1999, heard by me on 6/22, 1960. *[Signature]*, Examiner New Mexico Oil Conservation Commission

