

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
April 5, 1961

EXAMINER HEARING

PHONE CH 3-6691

DEARNLEY-MEIER REPORTING SERVICE, Inc.

ALBUQUERQUE, NEW MEXICO

IN THE MATTER OF:)

Application of Mobil Oil Company for)
an unorthodox oil well location and for)
a non-standard oil proration unit.)
Applicant, in the above-styled cause,)
seeks approval of an unorthodox oil)
well location for its E. O. Carson Well)
No. 23 in an undesignated San Andres)
pool at a point 1980 feet from the)
North line and 2640 feet from the East)
line of Section 33, Township 21 South,)
Range 37 East, Lea County, New Mexico.)
Applicant proposes to establish a 40-)
acre non-standard proration unit com-)
prising the E/2 SE/4 NW/4 and the W/2)
SW/4 NE/4 of said Section 33, to be)
dedicated to said Well No. 23.)

Case 2237

BEFORE: Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING

MR. NUTTER: The hearing will come to order. The first case this afternoon will be 2237.

MR. MORRIS: Case 2237: Application of Mobil Oil Company for an unorthodox oil well location and for a non-standard oil proration unit.

MR. ERREBO: Burns Errebo, Modrall, Seymour, Sperling, Roehl and Harris of Albuquerque, appearing on behalf of the Applicant. We have one witness.



MR. MORRIS: Let the record show that the witness has previously been sworn.

J. C. GORDON, JR.

called as a witness, having been previously sworn, testified as follows:

DIRECT EXAMINATION

BY MR. ERREBO:

Q Will you state your name, please?

A J. C. Gordon, Jr.

Q By whom are you employed? A Socony-Mobil Oil Company.

Q Where are you located? A Hobbs, New Mexico.

Q Have you previously testified as an engineer before this Commission and have your qualifications been accepted?

A Yes, sir.

(Whereupon, Exhibit No. 1 was marked for identification.)

Q I'll refer you to the exhibit which has been marked Exhibit No. 1 and ask you to identify the exhibit.

A Exhibit No. 1 is a form C-128 filed by our office on February 17, 1961 indicating the location of our E. O. Carson Well No. 23.

Q It also shows the outline of the acreage which you propose to dedicate to this well?

A Yes, sir. This is a proposed 40-acre unit.

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MR. ERREBO: I would like to state at the outset that this matter was initiated by Socony-Mobil by the filing of this form and also by the filing of a letter. I think before I go any further I would like to ask that the record be amended to show the name of the applicant as Socony-Mobil Oil Company, Inc., Mobil Oil Company is an operating division and the applicant here is actually **Socony-Mobil Oil Company, Inc.**

MR. NUTTER: While the advertisement was for Mobil Oil, it is an application for **Socony Mobil Oil**?

MR. ERREBO: Yes, and it is the same party that is here today. The matter was initiated by the request for administrative approval of an unorthodox location for this well which was originally approved as a salt water disposal well. The well is now capable of producing oil. This original application which was approved as a salt water disposal well, was approved in 1952. This well **as**, you will note, is located on the center line North-South of Section 33. Upon receipt of this letter, and examination of the facts, the Commission notified Socony-Mobil that they would set the matter for hearing because it was not qualified for administrative approval under Rule 104-F, because that rule provides only for administrative approval in the event that topographic conditions preventing the regular location are present.

At the same time the Commission also noted that because

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~~of the peculiar location of the well that it would also be~~
 necessary that an exception to the statewide rules be granted for
 a non-standard unit. This well being located exactly on this
 line, it would be desirable to assign the West Half of the
 Southwest Quarter of the Northeast Quarter of this section and
 the East Half of the Southeast Quarter of the Northwest Quarter,
 making a total of 40 acres to the well. So, that is the way
 that this matter now comes before the Commission as an applica-
 tion for a non-standard unit and an unorthodox location.

Q (By Mr. Errebo) Mr. Gordon, would you briefly state
 to the Commission the circumstances surrounding the use of this
 well or the non-use of the well as a salt water disposal well as
 previously approved by the Commission in 1952?

A We secured permission to drill the subject well as a
 salt water disposal well in 1952 by Order No. R-183. The well
 was drilled and completed as specified as a salt water disposal
 well. Upon completion there was a pressure on the well of 1200
 pounds against which we would have had to inject salt water.
 This pressure could be killed by continued injection of salt water.
 We did not have the continuing supply of water to keep the well
 killed, so we found another well and extended our system to dispose
 of our salt water into this other well. This well was just left
 in its, I can't say temporarily abandoned, but in its present
 status.

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In February of this year we planned, by the installation of tubing equipment, to be able to continue the injection of salt water into this well, and the equipment would be so arranged to allow us to work at low pressures, work a gravity disposal system against this pressure. However, when the well was examined and they started work on it to equip it in bleeding of the pressure that still existed on the well head, we flowed approximately 90 barrels of oil and the accompanying salt water of a daily rate of approximately 250 barrels of oil a day and 360 barrels of salt water. This is approximately 6% water. We shut the well in then and we're now asking for permission to produce this well as a non-standard location, non-standard unit.

Q This well is completed, then, in the San Andres formation, is that correct?

A Yes, the well is completed open hole from 4100 feet to 4600 feet in the San Andres formation.

Q What knowledge do you have, or what information do you have, Mr. Gordon, as to the productability or the content of oil and gas other than what you found in this well of the San Andres formation in this area?

A To our knowledge, the San Andres is non-productive in the entire general area surrounding this well. We have never attempted to produce it and we've never attempted, to my knowledge, to even test the San Andres. There's no indication, or shows,



~~of oil or gas in this. In fact, in 1952 we very flatly made the statement that the San Andres was not productive.~~

Q This was in your inter-company correspondence?

A Well, yes, sir. One of our personnel testified in the hearing on the salt water disposal well that the San Andres was not productive, and, to the best of my knowledge, the San Andres is still not productive in the Eunice area.

Q That knowledge has been gained, has it not, from the drilling of other numerous wells on this lease and other wells on the areas, one or more of which has been produced on other pools in this area?

A Yes. This well is entirely surrounded by a mile or so in each direction by wells that are not producing in the San Andres.

Q So your application here today is for the classification of this well as an oil well and for a non-standard unit and an unorthodox location, all of which results from the drilling of this well initially as a salt water disposal well?

A Yes, sir.

Q Do you think that under the circumstances, the assignment of the acreage as shown on your form C-128 is the most practicable way to assign acreage to this well?

A It is a solution. There are possibly other solutions; ~~to the best of my knowledge the well is located as shown~~

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on this plat. It has not been rechecked to ascertain if it does so lie, but it was staked in this location and I have every reason to believe that it is as shown, and it's directly on the center line.

Q It was your company's intent when this well was drilled as a salt water disposal well, to locate the well exactly on this line which bisects the 40-acre unit which you propose?

A Yes, sir, I believe that our purpose was to stay as far away as possible from other producing wells in the area.

Q There are actually two other wells in this area, one located immediately east, is that correct?

A Yes, sir. The other standard 40-acre units are occupied by producing wells at this time.

Q But those standard 40-acre units are assigned to these wells as a result of production from other pools?

A Yes, sir.

Q Is the South Half of the Northwest Quarter all owned by the same lessor?

A The South Half of the Northwest Quarter, yes, sir.

Q Does that same lessor own all of the Southwest Quarter of the Northeast Quarter?

A Yes, sir.

Q Have you checked your records to determine whether or not all of the mineral ownership as to this 240 acres is common

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throughout?

A I believe here you mean the 200 acres.

Q Excuse me, 200, that's correct.

A Yes, the royalty ownership under the 200 acres is identical.

Q The leasehold ownership is identical?

A Yes.

Q You have no intention of further developing the San Andres on this lease?

A No, sir. At the present time we have no plans at all.

Q I suppose it's possible that, depending on the performance of this well when produced as an oil well, might have some bearing on your future intent, might it not?

A It probably would in the future if something substantially different than what we now know turns up.

Q Based upon your best information that you now have, however, do you expect production from this No. 23 Well to be substantial?

A No, sir. I predict that it would deplete itself within a very short time.

Q Would it be possible, if it were necessary to drill additional wells on this 200 acres, for you to remeasure quite exactly the space location of this well and, if required by the Commission, ascertain the bottomhole location?

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A Yes, sir, could very easily.

Q At that time it would be feasible then, would it not, in view of the common ownership of interest throughout, to re-assign the proration unit, perhaps covering a different acreage within this 200 acres?

A Yes, sir, by so doing we could shift back and attain a standard unit surface designation.

Q And having done that, then the units in this 200 acres would then be on a regular pattern?

A Yes, sir.

Q You actually have here, do you not, as I judge from your previous testimony, a rather marginal and doubtful situation?

A Very doubtful.

Q And you would be reluctant to spend any more money than was necessary to further go into these questions that you have discussed in your testimony just now?

A Yes, sir.

Q I believe you stated that this form C-128 was filed by the office in which you are employed?

A Yes.

MR. ERREBO: We would like to offer this form in evidence as Exhibit No. 1.

MR. NUTTER: Exhibit No. 1 for Socony-Mobil, is accepted in evidence.

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Q (By Mr. Errebo) Did you have anything further to add to your testimony?

A No, sir.

MR. ERREBO: That's all we have.

MR. NUTTER: Does anyone have any questions of Mr. Gordon?

MR. MORRIS: Yes.

CROSS EXAMINATION

BY MR. PAYNE :

Q Did you say that there is a well on the Southeast Quarter of the Northeast Quarter of this section?

A Yes, on the J. N. Carson lease.

Q What pool is that well producing from?

A Just a minute. We have two wells on the J. N. Carson, the Drinkard and the Blinebry gas.

Q Is the Drinkard above or below the pay zone in this well?

A It's below.

Q Now you say there's a well on the Southwest of the Northwest?

A Yes, sir.

Q What pool is that producing from?

A We have twin wells there, they're producing from the McCormick and the Drinkard.

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Q Is the McCormick above or below the San Andres?

A The San Andres, I believe, is above all the other pay zones presently in this area.

Q So you don't feel that this well could be producing from oil leaking from another formation into this well?

A Through the same bore hole, no, sir.

Q And yet you have encountered no other San Andres in this area at all?

A No, sir.

Q And you don't intend to drill for any more San Andres wells?

A No, we sure don't.

Q Do you propose to drill any more salt water disposal wells since that seems to be the way you find San Andres?

A I hope if we drill some more and are fortunate enough to find oil, we won't wait nine years. We are in the process of looking for some more salt water disposal facilities.

Q As a matter of fact, what do you propose to do with the salt water this well produces, which is 372 barrels a day?

A This was a rather unlimited flow rate. We will have to accomodate it in the present salt water disposal system and secure adequate means for disposing of it into our present disposal well.

Q Have you actually compared this crude to see how it

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compares generally with San Andres production?

A No, we haven't.

Q I believe you testified that you feel this will be sort of a marginal operation. Do you feel that the entire 40 acres dedicated to the well will be productive of oil from the San Andres?

A With my present knowledge of the formation and the terrain here, I would say it could be assumed to be productive.

MR. PAYNE : Thank you.

MR. NUTTER: Any further questions of Mr. Gordon?

BY MR. NUTTER:

Q Mr. Gordon, what was the casing and cementing program on this salt water disposal well when it was completed?

A We set 13-3/8" casing at 343 feet with 325 sacks. We set 9-5/8" casing at 2786 feet with 1600 sacks; 7" casing set at 4100 feet with 460 sacks.

Q 460? A Yes, sir.

Q Was the cement on the surface pipe circulated?

A My records don't indicate that.

Q What was the top of the cement on 9-5/8"?

A I have no record of that.

Q What was the top of the cement on the 7"?

A No record. I believe, though, from these cement volumes, that unless we encountered excessive washed-out zones and such, that we would have adequately protected all zones behind the pipe

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with cement.

Q What was the total depth of the well when it was drilled?

A 4600 feet.

Q No plug-back at all? A No, sir.

Q This is in the same area, as a matter of fact, on the same lease, as the lease which was involved in Case No. 2236 previously, is it not?

A Yes, sir.

Q In which you had production from six or seven or eight different zones on that lease?

A Yes.

Q There are only two wells, however, in the Northwest Quarter and the South Half of the Northeast Quarter, or four wells, two twin locations?

A Would you state those locations again?

Q Well, the acreage that's involved here and in the immediate vicinity of this well --

A Yes. Could I just show you this? This is the acreage that we have outlined on the C-128. The twin here, triplets here.

Q Immediately East of this disposal well in the Southwest of the Northeast Quarter of Section 33 you have three wells. What formations are those three wells immediately East completed in?

A We have one well in the Penrose-Skelly, one well in the

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Paddock, and one well in the Brunson.

Q That's in the 40 acres directly East of No. 23?

A Yes, sir.

Q Now, the 40 acres that's directly West has some wells too, does it not?

A Yes, sir, we have one well in the Brunson, one well, a dual, in the Blinebry-Tubb.

Q How about the 40 acres Northwest of this No. 23, which would be the Northeast of the Northwest?

A Yes, sir.

Q What formation are those wells completed in?

A The Wantz-Abo, the **Hare** and the Drinkard.

Q Gulf has 40 acres Northeast of your No. 23 Well. Do you have a notation there on your map as to what formation?

A I believe those are in the Drinkard, Penrose-Skelly, and the Brunson.

Q How about Southeast and Southwest of your No. 23? You have a lease there in the Northwest of the Southeast Quarter of this section?

A Yes, sir, that's the Northwest of the Southeast?

Q Yes.

A The Penrose-Skelly, the Drinkard, the Brunson.

Q How about Amerada's acreage to the Southwest, that would be the Northeast of the Southwest?

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A Yes, sir, the Drinkard and the Brunson.

Q Well, there are three wells then that are completed in formations above this disposal zone in this well, are there not the three Penrose-Skelly wells?

A Are they shallower? I haven't reviewed this.

Q I believe that they are.

A Penrose-Skelly is shallower than the San Andres?

Q I believe so. I think the Penrose-Skelly would involve a Queen pay. Possibly Grayburg, I don't remember.

A I'm not prepared on that point.

Q Would there be any means, Mr. Gordon, of determining whether this oil in this well is, in fact, being produced from the San Andres formation or whether it's migrating into the San Andres through the well bore from some other formation?

A To my knowledge, there would be no definite means of establishing that this was the case.

Q At any rate, you don't feel that there was any oil in the San Andres when the well was drilled in 1952?

A No, sir.

Q Now, the oil had to come from another formation or migrate through the San Andres into this location?

A Yes, sir, or it may have been overlooked at the time in 1952. Our present thinking is that we would like case off the open hole section in an attempt to shut off a portion of the

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water, in order to get more efficient production, but we have no hopes that we would ever be able to regain oil production if we ever put casing and cement across the open hole section.

Q You have 500 feet of open hole?

A Yes. We can not say at this time, from our logs and all the other information that we have available, just what portions are productive.

Q No analysis has been made of this oil?

A No, sir.

Q What is the gravity of the oil that's being produced?

A Thirty-two and a half.

Q What is the nearest San Andres production to this well?

A I don't know.

MR. NUTTER: Any further questions, Mr. Errebo?

REDIRECT EXAMINATION

BY MR. ERREBO:

Q Do you know what the gravity is, Mr. Gordon, of the oil produced from any of the other formations in this area?

A Yes, sir.

Q Do you know how it compares with the gravity produced from this well?

A Yes, sir. The gravity, you want the gravities of all the zones possible?

Q The zone immediately above this.



A The zone immediately above the Penrose-Skelly?

Q No, the zone immediately above the San Andres.

A If that is the Penrose-Skelly, it is 32.5 degrees.

Q How does that compare with some of the other formations on above the Penrose-Skelly?

A I don't believe we have anything above the Penrose-Skelly, the McCormack in the general area, but it is much deeper, is 33 degrees. The Paddock, which is underlying this San Andres, is 37.8. I also have another gravity indication of 36.4 from the Penrose-Skelly, and a Paddock gravity of 38.9. The gravity, taking it on spot checks, which is my information, these are not average gravities, and I don't know if they can be regarded as conclusive.

MR. NUTTER: Are you still in the San Andres at 4600 feet?

A Yes, sir.

Q (By Mr. Errebo) Would it be correct to call this operation, in producing this well, a salvage operation in which you will attempt to get whatever might be there and that you don't expect to get very much?

A Correct. We can't, with our present knowledge, put water into the zone. So, we would like to produce the oil off. Perhaps at some later date we might want to re-establish our right to dispose of salt water.

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Q Do you have much hope of making very much out of this well, or producing it for a long time?

A I don't believe it will last long or produce very much.

Q Based upon that assumption and belief, would you feel justified in doing much remedial or downhole work on this well to produce what oil you think might be there now?

A No. We would like to do the very minimum amount of work.

MR. ERREBO: That's all I have.

RECROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Gordon, you stated that you didn't have the tops of the cement on these casing strings with temperature survey runs when the strings were cemented?

A Yes.

Q Can you obtain the tops when you return to the office?

A Yes, sir.

Q Would you furnish that information to us?

A Yes.

BY MR. PAYNE :

Q Was this well drilled before or after the Penrose-Skelly wells?

A Off-hand, I can not say. I believe it was drilled after. This was drilled after almost all the other wells had been



drilled.

Q From an engineering and geological standpoint, would it be possible for oil from a lower formation to end up in the well bore of a well drilled to a shallower depth, taking into consideration pressures and so forth?

A It's conceivable it would be oozing possibly, or escaping from a well bore of another well at this depth or into the San Andres formation and migrating from that other well over through the San Andres formation into this well. That is a possibility.

MR. MORRIS: Thank you.

MR. NUTTER: Any further questions?

MR. ERREBO: Nothing further.

MR. NUTTER: Mr. Gordon may be excused.

(Witness excused.)

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

MR. ERREBO: Nothing further.

MR. NUTTER: Does anyone have anything they wish to offer in Case 2237? We'll take the case under advisement and call Case 2238.

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