CASE 5302: Application of SUN OIL CO. FOR TWO DUALS AND EXCEPTIONS TO RULE 107-D-3, LEA COUNTY

Aug 27, 1984

CASE No. 5302

Application,

Transcripts,

Small Exhibits

ETC.

NEW MEXICO OIL CONSERVATION COMMISSION

COMMISSION HEARING

SANTA FE, NEW MEXICO

Hearing Date AUGUST 27, 1974 TIME: 9 A.M.

NAME	REPRESENTING	LOCATION
Jason W Kellahin	Kellahin & Fox	Santa Fe
Bill T. Goza	Sun Oil Co	Midland, Tex
H R Huey	" "	Dallas.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
August 27, 1974

COMMISSION HEARING

IN THE MATTER OF:

Application of Sun Oil Company for two dual completions and exceptions to Rule 107-D-3, Lea County, New Mexico. Case 5302

BEFORE: A. L. Porter, Secretary-Director

Alex Armijo, Member.

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil Conservation Commission: William Carr, Esq.
Legal Counsel for the Commission
State Land Office Building
Santa Fe, New Mexico

For the Applicant: Jason Kellahin, Esq.
KELLAHIN & FOX
500 Don Gaspar
Santa Fe, New Mexico

THE NYE REPORTING SERVICE
STATE-WIDE DEPOSITION NOTARIES
225 JOHNSON STREET
SANTA FE, NEW MEXICO 87501
TEL. (505) 982-0386

I N D E X

PAGE

BILL T. GOZA

E X H I B I T S

MR. PORTER: The Hearing will come to order, please. The Commission will take up Case 5302, and let the record show that present for this Hearing the Commissioners are Armijo and Porter.

MR. CARR: Case 5302. Application of Sun Oil Company for two dual completions and exceptions to Rule 107-D-3, Lea County, New Mexico.

MR. KELLAHIN: If the Commission please, Jason Kellahin of Kellahin and Fox, Santa Fe, appearing for the Applicant. I have one witness I would like to have sworn.

(Witness sworn.)

MR. KELLAHIN: If the Commission please, we have here an amended Application which makes some corrections from the original. It doesn't materially change the case in any way, but attached to the Application are copies of waivers which have been received from all of the offset operators. I believe they have all been filed with the Commission with the exception of the one from John Hendricks. Has that been filed.

A VOICE: In fact, this morning, I guess. It has not been previously filed.

MR. KELLAHIN: We do have waivers from all of the offset operators.

BILL T. GOZA

called as a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A My name is Bill T. Goza.

Q By whom are you employed and in what position?

A I am employed by Sun Oil Company as an Engineer.

Q Where are you located?

A In Midland, Texas.

Q Have you ever testified before the Oil Conservation Commission of New Mexico?

A No, sir.

Q For the benefit of the Commission, would you briefly outline your education and experience as a petroleum engineer?

A I graduated in 1961 as a petroleum engineer from Texas Tech University. I have been employed by Sun Oil Company in the capacity of engineer and other capacities for ten or eleven years now.

Q Where have you worked in this period of time?

A Corpus Christi, Waterloo, Iowa and Midland.

Q Was all of this time with Sun Oil Company?

A Yes.

MR. KELLAHIN: Are the witness' qualifications acceptable?

MR. PORTER: Did you say 1961?

THE WITNESS: Yes, sir.

MR. PORTER: Yes, they are.

BY MR. KELLAHIN:

Q Mr. Goza, are you familiar with the Application of Sun Oil Company in Case 5302?

A Yes, I am.

Q What is the Applicant proposing in this case?

A As stated in our Application, dual completion for Walter Lynch No. 1 and No. 3.

Q Referring to what has been marked as Applicant's Exhibit No. 1 in this case, would you identify that exhibit, please?

A Yes. This is an offset operator plat for the Walter Lynch Lease. The two wells in question are marked in red on the Examiner's exhibit, I believe.

Q It gives the well location by footage, does it not?

A Yes, sir.

Q Referring to what has been marked as Exhibits Nos. 2 and 3, would you identify those exhibits and discuss the information that has been shown on them?

A Exhibits Nos. 2 and 3 are the compensated neutron formation density logs on the two wells. The formations which have been identified are the Top of the Tubb, Top of the Drinkard, Top of the Granite Wash and the Granite. These are all identified on the two-inch portion of the logs.

Q Now, referring to what has been marked as Exhibit No. 4, would you identify that exhibit?

A Exhibit No. 4 is the corrected report for the Walter Lynch No. 3 which will correct the perforations for the additional set of perforations opened after the initial Application was made. These are perforations from 7165 to 7219.

Q Is that the only change that has been made on the Form C-107?

A Yes, sir, as far as I know.

Q And this is merely filed to correct the information that has been previously filed?

A It just updates the information.

Q Now, referring to Exhibit No. 5, would you identify that exhibit, please?

A Exhibit No. 5 is a diagrammatic sketch of our completion in the Walter Lynch No. 1. This well was originally completed some years ago in the Paddock, perforations 5070 to 5215. Recently these perforations were squeezed off and the well was deepened to a total depth of 7525. After reaching total depth, we set a 5-inch, 15 pound-per-foot liner cemented with 200 sacks of cement. The cement was circulated around the top of the liner at 5116. After this, of course, we perforated to the Granite Wash, 7442 to 44 and made a completion there. And we have a completion in the Drinkard Zone from 6840 to 6956. The Granite Wash, being extremely water sensitive, we have an Otis Permalatch Packer set at 7139 with a seal divider and plug recepticle immediately above the packer so that we may work on the remainder of the hole without ever introducing any fluids to the Granite Wash. In order to properly produce the Granite Wash, we set 2 and 1/2 inch tubing which we feel is necessary for the pumping of the Granite Wash when it becomes necessary.

Q Would you be able to pump it through the 2 and 1/2 inch tubing?

A Yes, sir.

Q What is the effect of putting fluid on the Granite

Wash?

A It has a very adverse effect on the permeability of the zone. We feel that swelling clays or other material in the formation is very sensitive to work-over fluids.

Q Now, that completes your testimony in connection with this exhibit?

A Well, I will go ahead. We did set a second packer at 5004 feet which is above the top of the liner, giving us some room from the top of the liner to the packer for working and any tools that we may have in there and set 2-inch O.D. Buttress tubing in the upper packer for the tubing string for the Drinkard Zone.

Q What is the distance between the perforations in the Drinkard Zone and the packer?

A Our top perforation is 6840 and the packer is set at 5004 feet, some 1800 feet -- 1836.

Q And that's what you are asking an exception for in this case?

A Yes, sir. We just simply cannot get two large enough tubing strings down into a 5-inch liner to adequately produce and protect the Wantz Granite Wash Zone and at the same time have a tubing string to the Drinkard.

Q What would you be able to do if you could put

tubing in there? What kind of tubing could you put in?

A In order to use our separation tool and plug recepticle we have for the Wantz Granite Wash Zone, the tubing we would have to use on the lower tubing, or the Wantz Granite Wash is 2-inch non-upset with special clearance collars and use a 1-inch string, CSI drill for the Drinkard.

Q Would you be able to pump the Drinkard through the 1-inch tube?

A No, sir.

Q Do you anticipate that you may have to pump the Drinkard?

A I do not. I anticipate the Drinkard will probably go to high ratio later in its life and probably flow.

Q And become a gas well?

A Perhaps.

Q Now, on the Granite Wash, could you pump it through the smaller tubing?

A It could be done. It would not be as easy.

Q Is the type of tubing you would require to make this completion available today?

A I tried to buy just a collar for it the other day and I couldn't find one. Maybe you can find it. I

don't know.

Q You haven't been able to?

A No.

Q Turning to what has been marked as Exhibit No. 6, would you discuss that exhibit, please?

A This is the diagrammatic sketch of the proposed completion of Walter Lynch No. 3 which is practically identical with the Walter Lynch No. 1, and what I have said about the No. 1 applies to the No. 3.

Q You do have an additional packer set in that well, though?

A Yes, sir. This Otis W.B. Packer at 7235 was set in order that we could perforate and treat the perforations at 7165 to 7219. It was set with a plug in place which has since been removed.

Q You do not intend to remove the packer?

A No, sir. This would necessitate drilling the packer out which would necessitate work-over fluids on the Granite Wash which, as I said before, we want to avoid it at all costs.

Q Would you have the same problems with this well on making a conventional completion, or could you even make a conventional completion in the well?

A. As I said, what I outlined on the No. 1 also applies to the No. 3, as they are identical type completions, the 5-inch 15-pound liner with the permalatch packer and it is not shown on the drawing, I am sorry, but it does have a tubing seal divider and the end nipple profile immediately above the packer.

Q If you were to use the size tubing that would be required to make that completion, would that require an exception to the Commission's rules?

A Yes, sir, it would in that the Commission requires, I believe, a minimum I.D. of 1.670 which is 2-inch O.D. Tubing and it is impossible to get two strings of 2-inch O.D. Tubing in the 5-inch liner without -- I don't know of any joint that will go in there.

Q Is there any danger of the tubing, the long lengths of tubing becoming tangled up or twisted in this type of completion?

A As a matter of practice, Sun Oil Company does not like to use 1-inch tubing or does not like to use the non-upset type of tubing because the joint string in 1-inch tubing is just not very strong to start with.

Q Would that endanger the wellbore?

A It would endanger the wellbore and perhaps lead

to a fishing job or perhaps a junked hole.

Q Now, in your opinion, is it necessary to make the type of completion you are proposing in order to recover the available oil in the Wantz Granite Wash?

A We feel that the completion that we have proposed is the most efficient and the -- well, we feel it is the best completion for this set of circumstances.

Q And I believe you said you could pump the Granite Wash with the type of completion you propose?

A Yes, sir.

Q But that you could not if you had to run two strings of tubing in the conventional manner?

A With the 2-inch or 2 and 3/8 O.D. non-upset tubing, it could be. We wouldn't like to, but it could be.

Q It could be done. Would completion, then, in the conventional manner possibly result in leaving oil in the reservoir that could not otherwise be recovered?

A We feel that the danger of possibly having trouble with the hole, getting work-over fluid on the Wantz Granite Wash and so forth could lead to premature abandonment of the well.

Q Would there be any pressure loss as a result of this type of completion?

A We have done calculations using a computer program as developed by Shell Oil Company. This was done in Dallas, and Exhibit No. 7, I believe, shows the results of the two completions, one of them being our present completion and one being with the 1-inch CSI drill as an upper tubing string and shows that we actually have less pressure loss from top to bottom with our present completion than we would with the 1-inch tubing in the hole by some 25 pounds, I believe.

Q Would that make the well more efficient, then, as far as producing from the Wantz Granite Wash?

A The upper tubing is the Drinkard completion, so this would not materially change the Granite Wash completion. As I say, these calculations were done by some of our people in Dallas on the computer.

Q That indicates no significant pressure loss at all in the completion that you have in this well, is that correct?

A No, sir. It is not at all unreasonable, we don't feel.

Q In your opinion, will approval of this Application result in the prevention of waste?

A It will, in my opinion.

Q Will the correlative rights of any other operator be affected by it?

A No, sir.

Q You have obtained waivers from all of the offset operators?

A Yes.

Q Were Exhibits 1 through 7 prepared by you or under your supervision?

A Yes, sir.

MR. KELLAHIN: I would like to offer Exhibits 1 through 7.

MR. PORTER: Without objection, the exhibits will be admitted.

(Whereupon, Applicant's Exhibits Nos. 1 through 7 were marked for identification and admitted into evidence.)

CROSS EXAMINATION

BY MR. PORTER:

Q What is the producing capacity of each of these zones?

A It is -- the initial potential on these zones were 211 barrels of oil a day for the Granite Wash with a 1313 to 1 gas-oil ratio.

Q With 211?

A With 211, yes, sir.

Q And what was the ratio?

A 1313 to 1.

Q 1313 to 1?

A Yes, sir.

Q All right, and the Drinkard?

A 148 barrels of oil per day with a 1938 to 1 ratio.

Q 1938 to 1?

A Yes, sir. Incidentally, this is the figure shown on the pressure gradients in Exhibit 7.

Q I see. Now, would this figure represent the maximum allowable for each of these zones? Do you know what the --

A (Interrupting) Both of these figures are slightly above maximum allowable.

Q So, it would be two top allowable zones at least initially?

A Yes, sir.

MR. PORTER: Mr. Nutter, do you have any questions?

MR. NUTTER: Yes, sir. I didn't see Exhibit No. 7. I wonder if I could see it? Thank you.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Goza, I don't know what they have calculated here on this Exhibit No. 7, but let's get into some of the basic facts here. You've got 5-inch liners, is that correct, in each?

A 5-inch, 15-pound.

Q And in your No. 3 Lynch, you've got 2 and 7/8 inch casing or tubing going down to the Granite Wash?

A Yes, sir.

Q And in the other well you have 2 and 3/8 inch casing, is this correct?

A No, it is 2 and 7/8 in both wells.

Q Well, I notice here on this exhibit it says that the lower packer is a 5-inch by 2 and 3/8 inch packer?

A Yes, sir. Both packers are 2 and 3/8 inch packers and the separation assembly is 2 and 3/8. Immediately above the separation assembly, we go 2 and 7/8 to the top of the hole.

Q I see. I just assumed it was 2 and 3/8 since that is the size of the packer, but that is 2 and 7/8 inch tubing?

A Yes, sir.

Q All right, sir. What is the weight of the 5-inch?

A 15 pounds.

Q So, what would be the I.D. on that casing?

A I knew you were fixing to ask that and I was looking for my -- I have a 4. I better not say off the top of my head. The drift diameter on the 5-inch 15-pound is 4.151 inches. No, that is ex-line casing. I am sorry. I am not familiar with the string book. I haven't worked with it in years.

Q Mr. Goza, let's assume it is almost what you almost said a while ago, 4.408.

A 4.408 is what I was going to say. I do have a 4.408 drift with one string of 2 and 7/8. The coupling clearance would be .783 inches.

Q So, what is the cross section area of that casing? Do you have that?

A No, sir, I do not.

Q Mr. Goza, assuming that the cross sectional area of the casing is approximately 15.261 inches which would be simply the area of the casing with that idea of 4.408 inches, and assuming that we have 2 and 7/8 inch casing in there, then, do you have the cross sectional area of this 2 and 7/8 inch tubing?

A No, I do not.

Q Well, assuming that that would come out to be approximately 6.49 inches, then the difference between the annular space there, the difference between the I.D. area of the casing and the O.D. area of the tubing -- you have made these calculations on 2 and 3/8.

A I am sorry. I thought that was marked on the exhibit. I am sorry.

Q No, it sure wasn't.

MR. KELLAHIN: It is on one, but not the other.

BY MR. NUTTER:

Q Then the cross sectional area of the casing would be approximately 15 inches and the outer cross sectional area of the tubing would be about 6 inches, so it would have a difference there of approximately 9 inches?

A Yes, sir.

Q So the annular spacing would be 9 inches. Now, this product would be coming up through this annulus, but every 30 feet, it would be bumping into a collar, is that correct?

A That is correct, sir.

Q What would be the effect of this fluid bumping into that collar and passing through the restriction of the collar and then progressing on through the larger-sized

annular area again?

A Of course, this would increase frictional resistance, however, our calculations that we made, as I understand them, do take this into consideration.

Q Are they taking into consideration the frictional loss over the collars also?

A I did not actually do the calculations myself, and I do not actually know myself if this is included in the equation.

Q And you don't know whether this equation has taken into consideration the cavitation that would occur as the fluid passed over the collars or not?

A No, sir, I do not.

Q Also the fact that you would be flowing up a larger area, cross sectional area, by coming up the annulus than you would be if you were in tubing?

A This is taken into consideration in the calculations?

Q Just a comparison of cross sectional areas, then?

A I know that the cross sectional area is taken into consideration.

MR. PORTER. The only question here is whether the collars were taken into consideration?

THE WITNESS: And, as I answered, I am not sure.

BY MR. NUTTER:

Q What do they compare it with? They compared it with the flow through the annulus as compared with flow through 1-inch high drill?

A Yes, sir. Also, the reason we compared with 1-inch high drill, this was the maximum size tubing we could get in the hole and still maintain at least 2 and 3/8 inch O.D. to bottom to Granite Wash.

Q Now, actually, the comparison, then, was with a more undesirable type of completion because if you had a single completion here, would you run 1-inch high drill or would you run 2-inch tubing to the Drinkard?

A If we had a single completion, we would likely run 2 and 3/8 O.D. external upset tubing. A comparison was made with 1.38 I.D. tubing which I believe is a 1 and 1/2 nominal, and this resulted in a bottomhole flowing pressure of 788 pounds which is some 25 pounds less than the flow would be through the present completion.

Q Now, did the Dallas outfit, when they were making their comparison of flows through these two completions, make any comparison of the break-out of gas due to the slower velocity of the fluid coming up the larger annulus

base than if it were coming up the tubing string?

A These calculations are for two-phase flow.

Q Well, did they actually make any calculation of the break-out of gas because of the lower velocity and the tendency to increase the GOR on the well?

A As I say, these pressure calculations are for two-phase flow at the observed gas-oil ratio. Now, I perhaps do not understand your question.

Q Well, Mr. Goza, it is a known fact that as fluid comes up a piece of tubular goods, and the fluid contains gas, that the lower velocity of the fluid coming up that piece of pipe or up an annulus, if you please, that the lower the velocity, the more the tendency of the gas to break out, thereby resulting in a larger gas-oil ratio. Now, when you have a cross sectional area here that is almost double what it would be if it were coming up a nominal size tubing, you are certainly going to have a lower velocity under a given rate of production because it is coming up a larger cross sectional area. Now, therefore, doesn't it follow that you are going to have more gas breaking out if that is a fundamental rule that gas breaks out under a lower velocity?

Q I do not feel that it would materially affect

our gas-oil ratio of the well. Perhaps, at some given point in the well, you would have more gas flowing or more gas phase.

Q Which would, in effect, be an increase in ratio, would it not?

A We observe that, of course, at that point in the wellbore, it might be a change in the ratio, but not at the surface.

Q But with the lower velocity and with gas breaking out, it is going to take more gas to lift the given volume of fluid, is it not?

A Not according to our flow calculations.

Q Well, your flow calculations don't even mention gas, Mr. Goza.

A Yes, sir. They are for a two-phase flow.

Q But I don't see any comparison of gas production here or gas break-out on this exhibit. I see a pressure decline in the tubing as compared with the pressure decline on the annulus, but I don't see a comparison of the gas break-out or the effect on the GOR here.

A Well, it will have no effect on the GOR at the surface that I can see.

Q You don't agree with me, then, that the slower

the velocity the more the gas breaks out in a given string of fluid?

A I am not arguing the point. It is very likely that the gas would break out at one particular point in the flow string, however, these calculations have taken this into consideration, or taken two-phase flow into consideration as they were calculated.

Q In determining friction loss or pressure loss due to friction?

A Pressure loss due to friction and gradient.

Q Now, the one well has 1724 feet of flow through the annulus between the 2 and 7/8 inch tubing and the 5-inch liner, does it not? That's the Lynch No. 1.

A From the 6840 to 5116?

Q Yes, sir. So that would be 1724 feet of flow through the annulus between the 2 and 7/8 inch tubing and the 5-inch I.D. liner or 5-inch liner?

A Yes.

Q Then we would also have 112 feet of flow through the annulus between 2 and 7/8 inch tubing and 7-inch pipe, is that correct?

A Yes, sir.

Q Now, the other well, the No. 3, has 1176 feet

of flow through the annulus between the 2 and 7/8 and the 5-inch, and then it would have approximately -- where would that packer be at 4900 feet?

A 4897 or 4900.

Q Then that well would have approximately 168 feet of flow in the annulus between the 2 and 7/8 and the 7-inch pipe, is that correct?

A Yes, sir.

Q Thank you.

A Of course, this upper packer is tentative. This well is presently completed as a single in the Granite Wash.

Q Well, I notice even the Drinkard perforations are tentative on that one?

A Yes, sir.

MR. PORTER: Does anyone else have a question?

CROSS EXAMINATION

BY MR. STAMETS:

Q Mr. Goze, is this a one-shot deal, or do you have plans for a number of other completions like this?

A I hope we don't have anymore. We were forced to do this type of completion by having to deepen the well and the pipe that was available to complete it.

MR. STAMETS: That's all.

CROSS EXAMINATION

BY MR. PORTER:

Q In the event this Application were denied, what is your alternative to produce the Granite Wash here?

A To produce the Granite Wash as a single, most likely.

Q Then later produce the Drinkard?

A After depletion of the Granite Wash.

Q How long do you calculate it will take to deplete the Granite Wash?

A I haven't made those calculations. I would expect quite a number of years. As an alternative, we possibly would set the one-inch tubing in there and the 2 and 3/8, but as I say, this also would require Commission approval because the 1-inch tubing is not in accordance with your rules.

CROSS EXAMINATION

BY MR. NUTTER:

Q One other question, Mr. Goza: You mentioned that you expected the Drinkard to flow to depletion, however, if the Drinkard ceased flowing, then the fluid level dropped to a point lower than that uppermost packer, you would be unable to lift it, is that correct?

A That's correct. In any case, I think we would be unable to artificially lift the Drinkard, however, our experience does not indicate that the Drinkard will cease flowing at anytime in the near future.

MR. PORTER: As an engineer, is it your opinion that the proposed completion method here would have a significant effect on ultimate recovery from either of these zones?

THE WITNESS: I do not feel it would have any adverse effect on the ultimate recovery, no, sir.

MR. PORTER: You think you will ultimately get about as much oil from your proposed completion as you would if you run conventional tubing?

THE WITNESS: Yes, sir.

BY MR. NUTTER:

Q How can you say that in the light of the fact that you are going to have more of a pressure drop under your proposal than you would under the other one?

A As I said --

Q (Interrupting) You would have to abandon it at a higher pressure?

A No, sir. With our present completion, we are set up to where we can artifically lift the lower zone.

As we said, we expect the upper zone to flow practically to depletion.

MR. PORTER: Does anyone else have a question?

REDIRECT EXAMINATION

BY MR. KELLAHIN:

Q Mr. Goza, are these wells subject to the offset drainage in the Drinkard?

A Yes, sir.

Q There is Drinkard production in the area?

A Yes, sir.

Q Where is that, referring to Exhibit No. 1?

A As you can see, there is Drinkard completion immediately to the south of us operated by Mr. Hinrichs and by Sohio. Other people are doing completion work in the area at the present time.

MR. KELLAHIN: That's all I have.

MR. PORTER: Any further questions? The witness may be excused.

(Witness dismissed.)

MR. PORTER: That concludes the testimony, then, in this case?

MR. KELLAHIN: Yes, that's all we have.

MR. PORTER: Is there anything further in this

case? Do you have a closing statement that you would like to make, Mr. Kellahin?

MR. KELLAHIN: I think you have heard our case. There is nothing I can say that would add to it.

MR. PORTER: The Commission will take the case under advisement, and the Hearing is adjourned.

(Whereupon, the Hearing was adjourned at approximately 9:35 a.m.)

STATE OF NEW MEXICO)
) SS.
COUNTY OF SANTA FE)

I, RICHARD L. NYE, Court Reporter, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

COURT REPORTER

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. ....., heard by me on ....., 19..

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

THE NYE REPORTING SERVICE
STATE-WIDE DEPOSITION NOTARIES
225 JOHNSON STREET
SANTA FE, NEW MEXICO 87501
TEL. (505) 982-0386

OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
P. O. BOX 2088 - SANTA FE
87501

September 10, 1974

Re: CASE NO. 5302
ORDER NO. R-4853
Applicant:
Sun Oil Company

Mr. Jason Kellahin
Kellahin & Fox
Attorneys at Law
Post Office Box 1769
Santa Fe, New Mexico

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A. L. Porter, Jr.

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x
Artesia OCC
Aztec OCC

Other

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 5302
Order No. R-4853

APPLICATION OF SUN OIL COMPANY
FOR TWO DUAL COMPLETIONS AND
EXCEPTIONS TO RULE 107 D-3,
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on August 27, 1974, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 10th day of September, 1974, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Sun Oil Company, is the operator of the Walter Lynch Wells Nos. 1 and 3 located in Units K and M of Section 1, Township 22 South, Range 37 East, NMPM, Lea County, New Mexico.

(3) That each of said wells is completed with a 5-inch lower string of casing in the Drinkard and the Wantz-Granite Wash Pools.

(4) That the upper perforations in the Drinkard Pool in the Walter Lynch Well No. 1 are at a depth of approximately 6840 feet and the upper perforations in the Wantz-Granite Wash Pool in said well are at a depth of approximately 7442 feet.

(5) That the applicant proposes to dually complete its Walter Lynch Well No. 1 by setting packers at approximately 5004 feet and 7139 feet to produce the Drinkard Pool through tubing set at 5004 feet and the Wantz-Granite Wash Pool through tubing set at 7139 feet.

(6) That in this proposed completion, the Drinkard tubing string is set approximately 1836 feet above the Drinkard perforations.

(7) That the upper perforations in the Drinkard Pool in the Walter Lynch Well No. 3 will be at a depth of approximately 6242 feet and the upper perforations in the Wantz-Granite Wash Pool in said well are at a depth of approximately 7165 feet.

(8) That the applicant proposes to dually complete its Walter Lynch Well No. 3 by setting packers at approximately 4900 feet and 7049 feet to produce the Drinkard Pool through tubing set at 4900 feet and the Wantz-Granite Wash Pool through tubing set at 7049 feet.

(9) That in this proposed completion, the Drinkard tubing string is set approximately 1342 feet above the Drinkard perforations.

(10) That the applicant further seeks an exception to Commission Rule 107-D-3 which requires inter alia that tubing shall not be set more than 250 feet above the top of the pay.

(11) That granting the application would authorize production of the Drinkard in the Walter Lynch Wells Nos. 1 and 3 through the casing-tubing annulus for distances in excess of 1800 feet and 1300 feet, respectively.

(12) That there is a danger that the production of oil through the casing-tubing annulus as proposed in the subject application would be inefficient, result in underground waste, and impair correlative rights and that the subject application should, therefore, be denied.

IT IS THEREFORE ORDERED:

(1) That the application of Sun Oil Company in Case 5302 be and the same is hereby denied.

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

I. R. TRUJILLO, Chairman

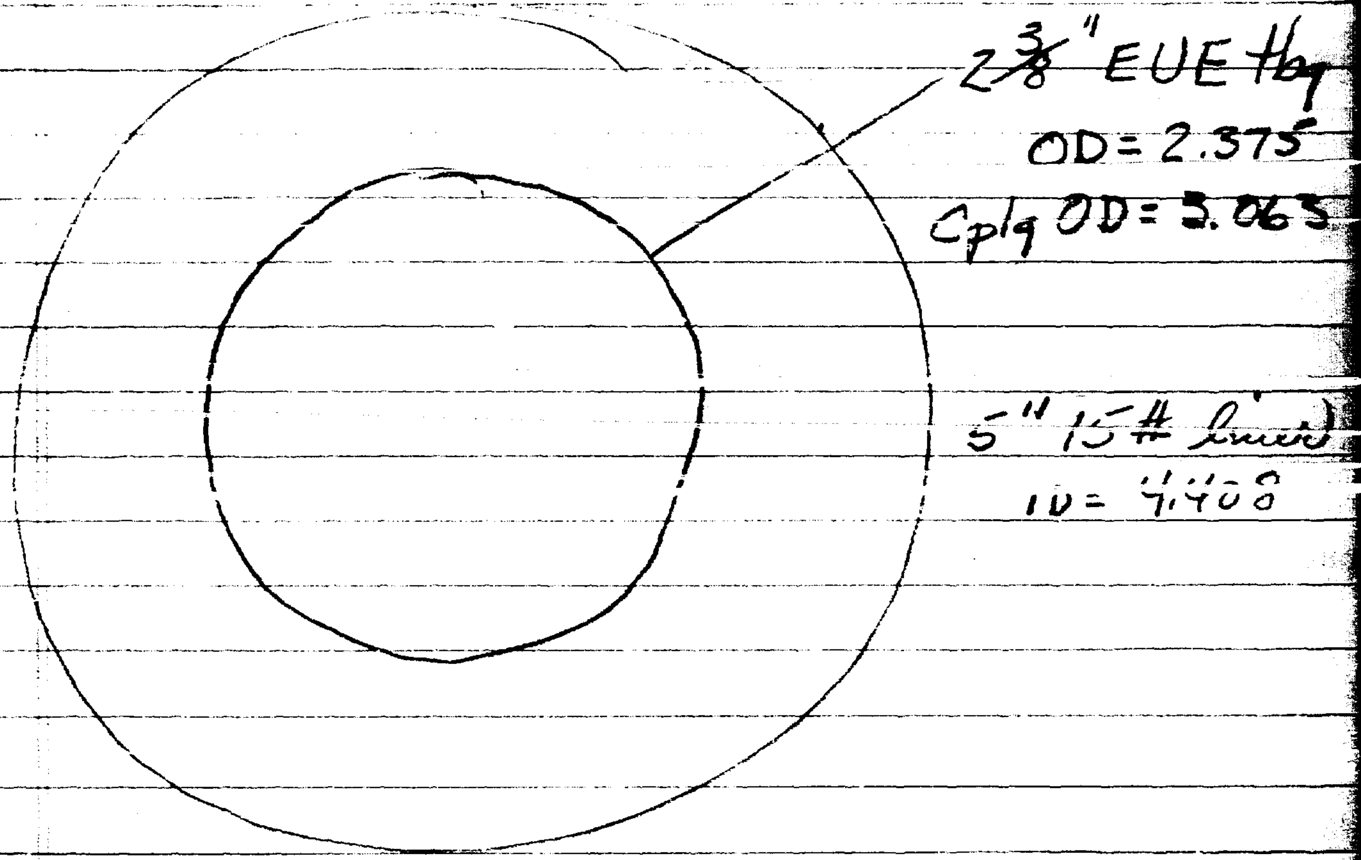
ALEX J. ARMIJO, Member

A. L. PORTER, Jr., Member & Secretary

dr/

9802

must off for this set of circum



Area casing (ID) = $\pi r^2 = \pi\ 2.204^2 = 15.261$

Area Tubing (OD) = $\pi r^2 = \pi\ 1.1875^2 = 4.430$

Annular Area = 10.831

ID = 2.441 A: 2 7/8 in Tbg (6.4# [illegible] 10.7(R)) = $\pi r^2 = \pi\ 1.2205^2 = 4.680$

ID = 1.995 A: 2 3/8 in Tbg (which probably would be used) = πr^2 = $\pi\ .9975^2 = 3.126$

Area Tbg OD 2 7/8 $\pi r^2 = \pi\ 1.4375$ 6.4918

Docket No. 25-74

DOCKET: COMMISSION HEARING - TUESDAY - AUGUST 27, 1974

OIL CONSERVATION COMMISSION - 9 A.M. - MORGAN HALL, STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

CASE 5302: Application of Sun Oil Company for two dual completions and exceptions to Rule 107-D-3, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Walter Lynch Wells Nos. 1 and 3 located in Units K and M, respectively, of Section 1, Township 22 South, Range 37 East, Lea County, New Mexico, in such a manner as to produce oil from the Drinkard and the Wantz Granite Wash Pools through parallel strings of tubing. Applicant further seeks an exception to the tubing requirements of Commission Rule 107-D-3 to permit setting the Drinkard tubing string some 1800 feet above the Drinkard perforations.

Originals

T 21 S – R 37 E

T 21 S – R 3[illegible]

Called: S 89° 59'E – 5280'

2	4	3	2	1	6
EXXON	EXXON	MARATHON	GULF		
J-25-N	M-D				
13-A	(39.77 AC.)	(39.84 AC.)	(39.90 AC.)	(39.97 AC.)	

Called: N 0° 04'E – 5271.42

Called: S – 5280'

SUN OIL CO.

3-I

2 *

660' – 1320' – 1

120 AC.

WALTER LYNCH

1320'

1980'

SUN OIL CO.

3

660'

STATE	A. CHRISTMAS	E. J. PADDOCK, EST.

Called: N89°54'W – 5291.88'

11			12	7
EXXON	TEXAS PACIFIC OIL CO.	SOHIO OIL CO.	J. H. HENDRIX	
57-A	1-D	II-F	1-B	2-A
EXXON WELLS NO'S. [illegible]-D, 11-F, 12-H	U.S.A.	WHITAKER, ETAL		

T 22 S – R 37 E

T22S-R38E

SOHIO OIL CO

3-E

2-M

3-N

J. H. HENDRIX WELLS

LEGEND

- ⊙ DRINKARD PRODUCERS
- △ GRANITE WASH PRODUCERS
- □ PADDOCK PRODUCERS
- * PRESENTLY PADDOCK PRODUCER SCHEDULED TO BE RECOMPLETED AS PADDOCK-DRINKARD DUAL

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 5302 Exhibit No. 1
Submitted by SUN OIL
Hearing Date 8-27-79
SUN OIL COMPANY

WALTER LYNCH – 120 AC. LSE.
OUT OF
SW/4 SEC. 1, T22S – R37E
LEA CO., NEW MEXICO

SCALE: 1" = 1000'

NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
APPLICATION FOR MULTIPLE COMPLETION

Form C-107
5-1-61

CORRECTED REPORT

Operator			County	Date
Sun Oil Company			Lea	8-23-74
Address			Lease	Well No.
P. O. Box 1861, Midland, Texas 79701			Walter Lynch	3
Location of Well	Unit	Section	Township	Range
	M	1	22 S	37 E

1. Has the New Mexico Oil Conservation Commission heretofore authorized the multiple completion of a well in these same pools or in the same zones within one mile of the subject well? YES X NO ___
2. If answer is yes, identify one such instance: Order No. R-4656 ; Operator Lease, and Well No. Sun - A. Christmas #1

3. The following facts are submitted:	Upper Zone	Intermediate Zone	Lower Zone
a. Name of Pool and Formation	Drinkard		Wantz Granite Wash
b. Top and Bottom of Pay Section (Perforations)	6242 (Proposed) 6859		7165 7270
c. Type of production (Oil or Gas)	Oil		Oil
d. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing

4. The following are attached. (Please check YES or NO)

Yes	No	
X	☐	a. Diagrammatic Sketch of the Multiple Completion, showing all casing strings, including diameters and setting depths, centralizers and/or turbolizers and location thereof, quantities used and top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.
X	☐	b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.
X	☐	c. Waivers consenting to such multiple completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.*
X	☐	d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed it shall be submitted as provided by Rule 112-A.)

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 5302 Exhibit No. 4
Submitted by SUN OIL
Hearing Date 8-27-74

5. List all offset operators to the lease on which this well is located together with their correct mailing address.

Exxon, U.S.A., P. O. Box 1600, Midland, Texas 79701

Gulf Oil Company - U.S., P. O. Box 1150, Midland, Texas 79701

John H. Hendrix, 403 Wall Towers West, Midland, Texas 79701

Marathon Oil Company, P. O. Box 552, Midland, Texas 79701

Sohio Petroleum Company, P. O. Box 3167, Midland, Texas 79701

6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES X NO ___. If answer is yes, give date of such notification 7-30-74 prior.

CERTIFICATE: I, the undersigned, state that I am the Proration Analyst of the Sun Oil Company (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Charles Gray
Signature

*Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.

NOTE: If the proposed multiple completion will result in an unorthodox well location and/or a non-standard proration unit in one or more of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

APPLICATION FOR MULTIPLE COMPLETION

Form C-107
5-1-61

CORRECTED REPORT

Operator	County	Date
Sun Oil Company	Lea	8-23-74
Address	**Lease**	**Well No.**
P. O. Box 1861, Midland, Texas 79701	Walter Lynch	3

Location of Well	Unit	Section	Township	Range
	M	1	22 S	37 E

1. Has the New Mexico Oil Conservation Commission heretofore authorized the multiple completion of a well in these same pools or in the same zones within one mile of the subject well? YES X NO ____

2. If answer is yes, identify one such instance: Order No. R-4656 ; Operator Lease, and Well No. Sun - A. Christmas #1

3. The following facts are submitted:	Upper Zone	Intermediate Zone	Lower Zone
a. Name of Pool and Formation	Drinkard		Wants Granite Wash
b. Top and Bottom of Pay Section (Perforations)	6242 (Proposed) 6859		7165 7270
c. Type of production (Oil or Gas)	Oil		Oil
d. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing

4. The following are attached. (Please check YES or NO)

Yes	No	
X		a. Diagrammatic Sketch of the Multiple Completion, showing all casing strings, including diameters and setting depths, centralizers and/or turbolizers and location thereof, quantities used and top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.
X		b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.
X		c. Waivers consenting to such multiple completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.*
X		d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed it shall be submitted as provided by Rule 112-A.)

5. List all offset operators to the lease on which this well is located together with their correct mailing address.

Exxon, U.S.A., P. O. Box 1600, Midland, Texas 79701

Gulf Oil Company - U.S., P. O. Box 1150, Midland, Texas 79701

John H. Hendrix, 403 Wall Towers West, Midland, Texas 79701

Marathon Oil Company, P. O. Box 552, Midland, Texas 79701

Sohio Petroleum Company, P. O. Box 3167, Midland, Texas 79701

6. Were all operators listed in Item 5 above notified and furnished a copy of ~~this~~ prior application? YES X NO ____. If answer is yes, give date of such notification 7-30-74 .

CERTIFICATE: I, the undersigned, state that I am the Proration Analyst of the Sun Oil Company (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Charles Gray
Signature

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NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

APPLICATION FOR MULTIPLE COMPLETION

Form C-107
5-1-61

CORRECTED REPORT

Operator	County	Date
Sun Oil Company	Lea	8-23-74
Address	**Lease**	**Well No.**
P. O. Box 1861, Midland, Texas 79701	Walter Lynch	3

Location of Well	Unit	Section	Township	Range
	H	1	22 S	37 E

1. Has the New Mexico Oil Conservation Commission heretofore authorized the multiple completion of a well in these same pools or in the same zones within one mile of the subject well? YES X NO
2. If answer is yes, identify one such instance: Order No. R-4690 ; Operator Lease, and Well No. Sun - A. Christmas #1

3. The following facts are submitted:	Upper Zone	Intermediate Zone	Lower Zone
a. Name of Pool and Formation	Drinkard		Wants Granite Wash
b. Top and Bottom of Pay Section (Perforations)	6242 (Proposed) 6859		7165 7270
c. Type of production (Oil or Gas)	Oil		Oil
d. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing

4. The following are attached. (Please check YES or NO)

Yes	No	
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5. List all offset operators to the lease on which this well is located together with their correct mailing address.

Exxon, U.S.A., P. O. Box 1600, Midland, Texas 79701

Gulf Oil Company - U.S., P. O. Box 1150, Midland, Texas 79701

John H. Hendrix, 403 Mall Towers West, Midland, Texas 79701

Marathon Oil Company, P. O. Box 552, Midland, Texas 79701

Sohio Petroleum Company, P. O. Box 3167, Midland, Texas 79701

6. Were all operators listed in Item 5 above notified and furnished a copy of this application prior? YES X NO _____. If answer is yes, give date of such notification 7-30-74.

CERTIFICATE: I, the undersigned, state that I am the Proration Analyst of the Sun Oil Company (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Charles Gray
Signature

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NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
APPLICATION FOR MULTIPLE COMPLETION

Form C-107
5-1-61

CORRECTED REPORT

Operator		County	Date
Sun Oil Company		Lea	6-23-74
Address		**Lease**	**Well No.**
P. O. Box 1861, Midland, Texas 79701		Walter Lynch	3
Location of Well	**Unit**	**Section**	**Township**	**Range**
	H	1	22 S	37 E

1. Has the New Mexico Oil Conservation Commission heretofore authorized the multiple completion of a well in these same pools or in the same zones within one mile of the subject well? YES X NO
2. If answer is yes, identify one such instance: Order No. R-4656 ; Operator Lease, and Well No.: Sun - A. Christmas #1

3. The following facts are submitted:	Upper Zone	Intermediate Zone	Lower Zone
a. Name of Pool and Formation	Drinkard		Wants Granite Wash
b. Top and Bottom of Pay Section (Perforations)	6242 (Proposed) 6859		7165 7270
c. Type of production (Oil or Gas)	Oil		Oil
d. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing

4. The following are attached. (Please check YES or NO)

Yes	No	
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Gulf Oil Company - U.S., P. O. Box 1150, Midland, Texas 79701

John H. Hendrix, 403 Mall Towers West, Midland, Texas 79701

Marathon Oil Company, P. O. Box 552, Midland, Texas 79701

Sohio Petroleum Company, P. O. Box 3167, Midland, Texas 79701

6. Were all operators listed in Item 5 above notified and furnished a copy of this application prior? YES X NO _____. If answer is yes, give date of such notification 7-3-74.

CERTIFICATE: I, the undersigned, state that I am the Proration Analyst of the Sun Oil Company (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Charles Gray
Signature

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NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
APPLICATION FOR MULTIPLE COMPLETION

Form C-107
5-1-61

CORRECTED REPORT

Operator			County	Date
Sun Oil Company			Lea	8-23-74
Address			Lease	Well No.
P. O. Box 1861, Midland, Texas 79701			Walter Lynch	3
Location of Well	Unit	Section	Township	Range
	H	1	22 S	37 E

1. Has the New Mexico Oil Conservation Commission heretofore authorized the multiple completion of a well in these same pools or in the same zones within one mile of the subject well? YES X NO ____

2. If answer is yes, identify one such instance: Order No. R-4070 ; Operator Lease, and Well No.: Sun - [illegible]

3. The following facts are submitted:	Upper Zone	Intermediate Zone	Lower Zone
a. Name of Pool and Formation	Drinkard		Wants Granite Wash
b. Top and Bottom of Pay Section (Perforations)	6242 (Proposed) 6859		7165 7270
c. Type of production (Oil or Gas)	Oil		Oil
d. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing

4. The following are attached. (Please check YES or NO)

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Exxon, U.S.A., P. O. Box 1600, Midland, Texas 79701

Gulf Oil Company - U.S., P. O. Box 1150, Midland, Texas 79701

John H. Hendrix, 403 Hill Towers West, Midland, Texas 79701

Marathon Oil Company, P. O. Box 552, Midland, Texas 79701

Mobil Petroleum Company, P. O. Box 3167, Midland, Texas 79701

6. Were all operators listed in Item 5 above notified and furnished a copy of this application prior? YES X NO ____. If answer is yes, give date of such notification 7-3-74.

CERTIFICATE: I, the undersigned, state that I am the Proration Analyst of the Sun Oil Company (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Charles Gray
Signature

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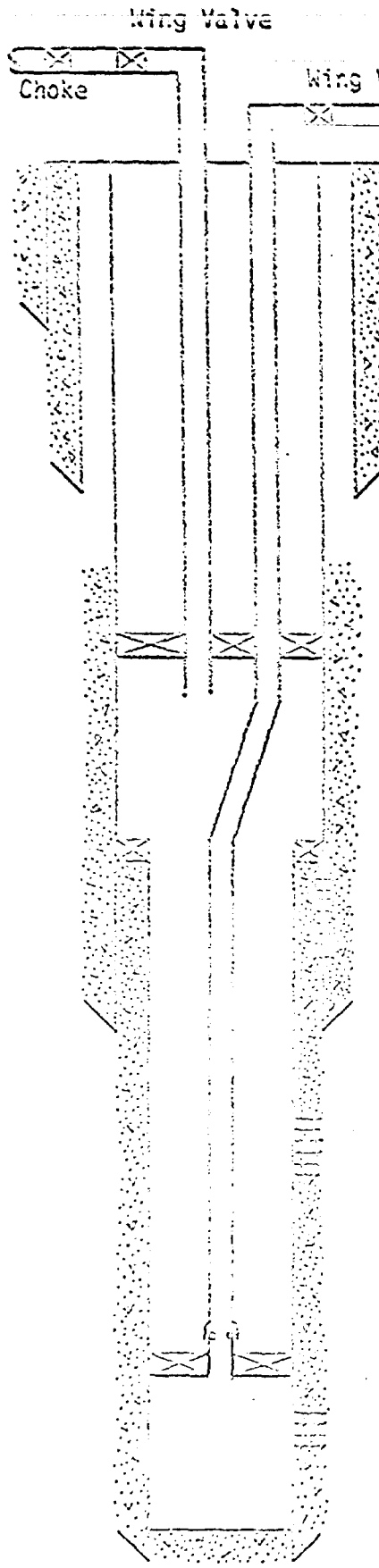
PRESENT COMPLETION
DIAGRAMMATIC SKETCH

SUN OIL COMPANY
WALTER LYNCH No. 1
SEC. 1, T-22-S, R-37-E
Unit K



BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 5302 Exhibit No. 5
Submitted by SUN OIL
Hearing Date 8-27-74

13-3/8", 40# @ 326' w/350 sx.

9-5/8", 36# @ 2848 w/2500 sx.

Top of Cement 3700'

5004' 7" x 2-1/2" x 1-1/2" Otis 23 RDH Hyd. Packer
UT 0' to 5000' 2" OD 3.4#, J-55 Butress Thread Tbg.
5,000' to 5014 (through packer) 1-1/2" (1.660" OD) Integral Joint,5010' Otis "N" Nipple.

5116' TIW Type J Hanger & Type L Packer

5070-5090
5123-5146
5185-5215
} Paddock Perforations Squeezed w/200 sx.

7", 23# @ 5255 w/350 sx

6288' Top of Drinkard Zone

6840-6903
6933-6956 Drinkard Perfs

0' to 7138' 2-7/8" OD EUE 8 RD J-55 6.5#/ft. Tbg
7138' Otis 2-3/8" Seal Divider w/"N" Receptacle
7244' Top of Wantz Granite Wash zone
7139' 5" x 2-3/8" Otis Perma Latch Packer

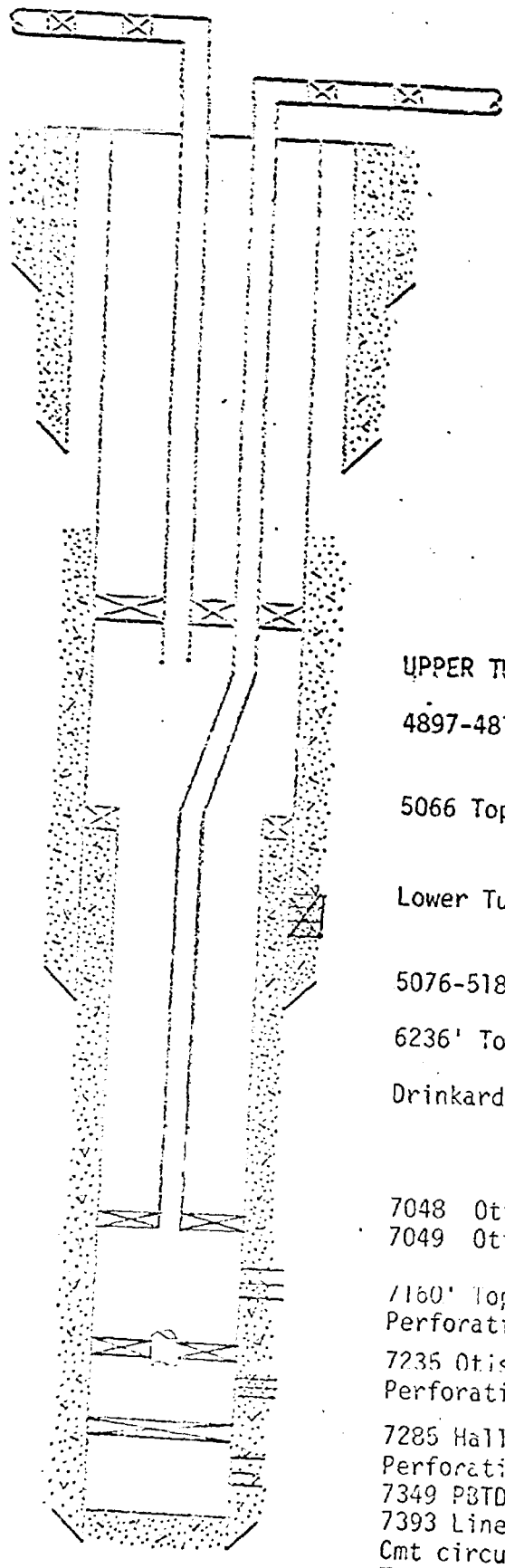
7442-44 Wantz Granite Wash Perfs

7480 FC and PBTD
7523 5", 15# w/200 sx. Circ around pkr. @ 5116'.
7525 TD

PROPOSED COMPLETION
DIAGRAMMATIC SKETCH

SUN OIL COMPANY
WALTER LYNCH 3 M
SEC. 1, T-22-S, R-37-E
Lea County, New Mexico

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 5307 Exhibit No. 6
Submitted by SUN OIL
Hearing Date 10-27-71



13-3/8", 40# @ 336' w/350 sx.

9-5/8", 36# @ 854' w/2200 sx

TOC 4100' Calculated

4900' Tentative 7" x 2-1/2" x 1-1/2"
Otis 23 RDH Hydraulic Packer

UPPER TUBING, PROPOSED; 0-4897 2" OD
3.4#/ft. J-55 Buttress
4897-4811 1-1/2" (1.660 OD), J-55 2.33#/ft.
Intergal Joint

5066 Top of 5" Liner - TIW Type J Hanger &
Type L Packer

Lower Tubing: 0-7048 2-7/8" OD, 6.4#/ft. J-55
EUE 8 RD

5076-5180 Paddock Perforations Squeezed w/200 sx

6236' Top of Drinkard Zone

Drinkard Perforations. Tentative 6242-6859

7048 Otis Tubing Seal Divider W/N Profile
7049 Otis Perma Latch Packer & Tubing Seat

7160' Top of Wantz Granite Wash zone
Perforations 7165-7219

7235 Otis W/B Packer
Perforations 7250-7270

7285 Halliburton EZ Drill Bridge Plug ?
Perforations 7290-7308
7349 PBTD
7393 Liner Seat 5", 15#, J-55, cmtd w/200 sx
Cmt circulated around packer at 5066
TD 7394'

SUN OIL COMPANY

WALTER LYNCH #1

PRESSURE GRADIENTS
UPPER TUBING

PRESENT COMPLETION
0-5004' 2" OD Butress (1.67" ID)
5004-6843' 2-7/8 x 5" OD Csg.(4.408 ID)
148 BOPD
1938/1 GOR
250 PSIG FTP

PRESSURE	DEPTH
250 PSIG	0 ft.
300	808'
360	1723'
432	2752'
518	3904
606	5004' (Packer)
727	6142'
813	6840'

ALTERNATE COMPLETION
0-5004 2" OD Butress
5004-6843 1" (1.049" ID) CS Hydrill
148 BOPD
1938/1 GOR
250 PSIG FTP

PRESSURE	DEPTH
250 PSIG	0 ft.
300	808'
360	1723'
432	2752'
518	3904
606	5004'
727	5957'
838	6840'

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 5302 Exhibit No. 7
Submitted by SUN OIL
Hearing Date 8-21-14

W A I V E R

DATE: Aug 6, 1974

TO: N. M. OIL CONSERVATION COMMISSION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Attn: Mr. Carl Ulvog

RE: Walter Lynch Well #1 - Application for Multiple Completion
Unit K, Located 1980' FWL & 1980' FSL
Sec. 1, T-22-S, R-37-E
Lea County, New Mexico

Walter Lynch Well #3 - Application for Multiple Completion
Unit M, Located 660' FSL & 660' FWL
Sec. 1, T-22-S, R-37-E
Lea County, New Mexico

Gentlemen:

As Offset Operator to the above wells, we wish to confirm that Sun Oil Company has furnished us with a copy of Form C-107 (Application for Multiple Completion) and a copy of the lease plat.

Therefore, having reviewed Sun Oil's applications to dually complete said wells in the Drinkard and Wantz Granite Wash pools, we hereby state that we have no objections to the proceedures and applications, and waive all rights of protest.

Very truly yours,

COMPANY: John H. Hendrix

ADDRESS: 403 Wall Towers West
Midland, Texas 79701

SIGNED: John H Hendrix

TITLE:

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 5302 Exhibit No. 8
Submitted by SUN OIL
Hearing Date 8-27-74

MC -
Case 5-302

NORTH AMERICAN EXPLORATION AND PRODUCTION GROUP
Midland Production District

SUN OIL COMPANY 901 W. WALL, POST OFFICE BOX 1861, MIDLAND, TEXAS 79701 (915) 682-8271

July 30, 1974

RECEIVED
AUG - 2 1974
OIL CONSERVATION COMM
Santa Fe

Case 5-302

N. M. OIL CONSERVATION COMMISSION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Attn: Mr. Carl Ulvog

RE: APPLICATION FOR MULTIPLE COMPLETION
Walter Lynch Lease Wells #1 & #3

Gentlemen:

Attached is Sun Oil Company's Application for Multiple Completion and required data for the above wells.

We have requested waivers from the appropriate offset operators listed below, and have sent request via certified mail.

Electrical logs for each well have been mailed to Mr. Joe Ramey, and said logs have been marked as to formation tops and perforations.

If additional information is required, please advise.

Very truly yours,
SUN OIL COMPANY

Charles Gray
Proration Analyst

OFFSET OPERATORS:	CERTIFIED MAIL NO.
Exxon Company, U.S.A.	#783235
Gulf Oil Company - US	#783236
John H. Hendrix	#783237
Marathon Oil Company	#783238
Sohio Petroleum Company	#783239

CG/g
cc: NMOCC - Hobbs

Mr. Nutter

call

Jack Andrews

Sun Oil Co.

Midland

(915) 682-8271

Sulfur

.32 BO DR

DR

148 BO

286 MCF

GOR 1932

Case 5302

OIL CONSERVATION COMMISSION
HOBBS DISTRICT

OIL CONSERVATION COMMISSION
BOX 2088
SANTA FE, NEW MEXICO

DATE August 2, 1974

RE: Proposed MC X
Proposed DHC
Proposed NSL
Proposed SWD
Proposed WFX
Proposed PMX

Gentlemen:

I have examined the application dated July 30, 1974

for the Sun Oil Company (Operator) Walter Lynch #3-M (Lease and Well No.) 1-22-37 (Unit, S-T-R)

and my recommendations are as follows:

O.K. ----- JDR

O.K. ---- JWR

Yours very truly,

Joe D. Ramey

OIL CONSERVATION COMMISSION
Hobbs DISTRICT

Case 5302

OIL CONSERVATION COMMISSION
BOX 2088
SANTA FE, NEW MEXICO

DATE August 2, 1974

RE: Proposed MC X
Proposed DHC
Proposed NSL
Proposed SWD
Proposed WFX
Proposed PMX

Gentlemen:

I have examined the application dated July 30, 1974

for the Sun Oil Company (Operator) Walter Lynch #1-K (Lease and Well No.) 1-22-37 (Unit, S-T-R)

and my recommendations are as follows:

O.K. --- JDR

O.K. --- JWR

Yours very truly,

NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
APPLICATION FOR MULTIPLE COMPLETION

Form C-107
5-1-61

Case 5302

Operator		County	Date
Sun Oil Company		Lea	7-30-74
Address		**Lease**	**Well No.**
P. O. Box 1861, Midland, Texas 79701		Walter Lynch	1
Location of Well	**Unit**	**Section**	**Township**	**Range**
	K	1	22-S	37-E

1. Has the New Mexico Oil Conservation Commission heretofore authorized the multiple completion of a well in these or other
zones within one mile of the subject well? YES X NO
2. If answer is yes, identify one such instance: Order No. R-4656 ; Operator Lease, and Well No.: Sun - A. Christmas #1

3. The following facts are submitted:	Upper Zone	Intermediate Zone	Lower Zone
a. Name of Pool and Formation	Drinkard		Wantz Granite Wash
b. Top and Bottom of Pay Section (Perforations)	6840 6935		7442 7444
c. Type of production (Oil or Gas)	Oil		Oil
d. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing

4. The following are attached. (Please check YES or NO)

Yes	No	
X		a. Diagrammatic Sketch of the Multiple Completion, showing all casing strings, including diameters and setting depths, centralizers and/or turbolizers and location thereof, quantities used and top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.
X		b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.
X		c. Waivers consenting to such multiple completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.*
X		d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed it shall be submitted as provided by Rule 112-A.)

5. List all offset operators to the lease on which this well is located together with their correct mailing address.

Exxon Company, U.S.A., P. O. Box 1600, Midland, Texas 79701

Gulf Oil Company -- U.S., P. O. Box 1150, Midland, Texas 79701

John H. Hendrix, 403 Wall Towers West, Midland, Texas 79701

Marathon Oil Company, P. O. Box 552, Midland, Texas 79701

Sohio Petroleum Company, P. O. Box 3167, Midland, Texas 79701

6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES X NO . If answer is yes, give date of such notification 7-30-74 .

CERTIFICATE: I, the undersigned, state that I am the Proration Analyst of the Sun Oil Company (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Charles Gray
Signature

*Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.

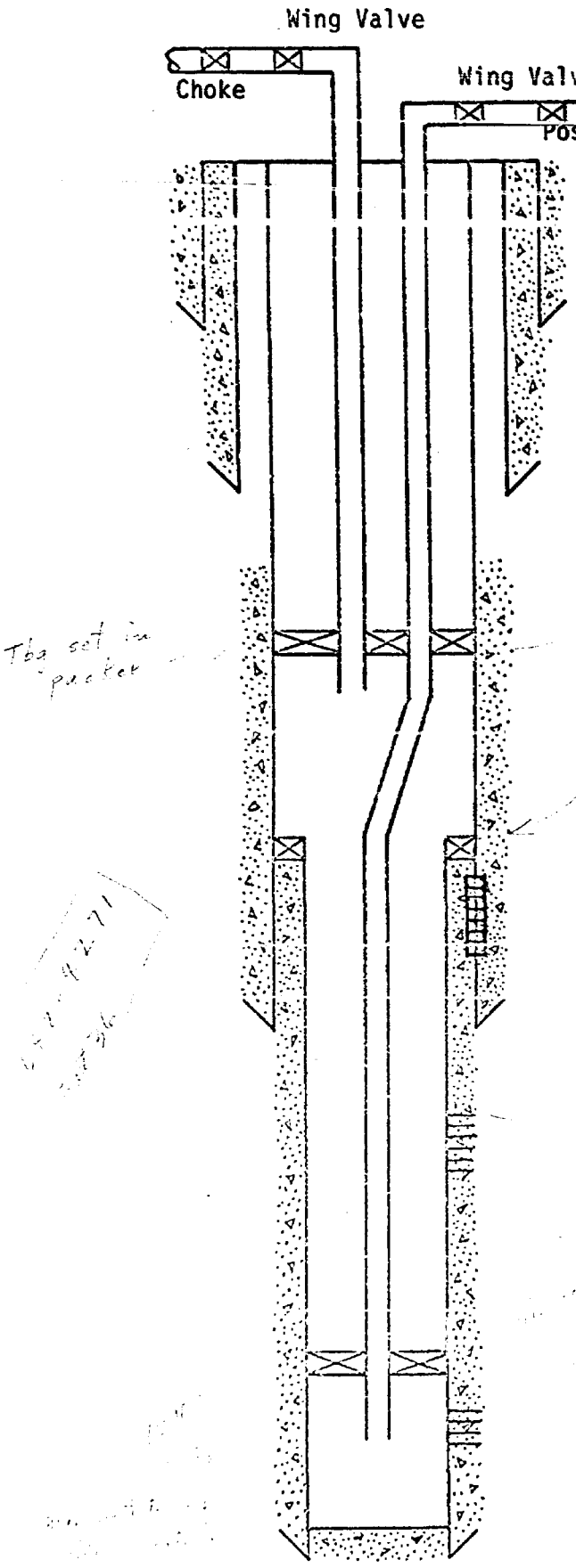
NOTE: If the proposed multiple completion will result in an unorthodox well location and/or a non-standard proration unit in one or more of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

Case 5302

DIAGRAMMATIC SKETCH

SUN OIL COMPANY
WALTER LYNCH No. 1
SEC. 1, T-22-S, R-37-E

Unit K



13-3/8", 40# @ 326' w/350 sx.

9-5/8", 36# @ 2848 w/2500 sx.

Top of Cement 3700'

5004' 7" x 2-1/2" x 1-1/2" Otis 23 RDH Hyd. Packer

5116' TIW Type J Hanger & Type L Packer

5070-5090
5123-5146 } Squeezed w/200 sx.
5185-5215

7", 23# @ 5255 w/350 sx

6840-6906
6935-6956 Drinkard Perfs

7139' 5" x 2-3/8" Otis Perma Latch Packer

7442-44 Wantz Granite Wash Perfs

7480 FC
7523 5", 15# w/200 sx.
7525 TD

Case 5-302

T 21 S — R 37 E

T21 S-R38E

Called: S 89° 59'E - 5280'

EXXON

24-J, 25-N

13-A

EXXON

14-D

MARATHON

GULF

(39.77 AC.)

(39.84 AC.)

(39.90AC.)

(39.97AC.)

Called: N 0° 04'E - 5271.42'

SUN OIL CO.

31-1

660'

1320'

120 AC.

WALTER LYNCH

1980'

SUN OIL CO.

1320'

660'

Called: S - 5280'

STATE

A. CHRISTMAS

E. J. PADDOCK, EST.

Called: N 89° 54'W - 5291.88'

EXXON

57-A

MARATHON WELLS NO'S. 10-D, 11-F, 12-H

TEXAS PACIFIC OIL CO.

1-D

U.S.A.

SOHIO OIL CO.

11-F

WHITAKER, ETAL

J. H HENDRIX

1-B

2-A

T 22 S — R 37 E

T22S-R38E

SOHIO OIL CO

3-E

2-M

3-N

J.H. HENDRIX WELLS

LEGEND

- DRINKARD PRODUCERS
- GRANITE WASH PRODUCERS
- PADDOCK PRODUCERS
- PRESENTLY PADDOCK PRODUCER SCHEDULED TO BE RECOMPLETED AS PADDOCK-DRINKARD DUAL

SUN OIL COMPANY

WALTER LYNCH - 120 AC. LSE.

OUT OF

SW/4 SEC. 1, T22S - R37E

LEA CO., NEW MEXICO

SCALE: 1" = 1000'

NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Form C-107
5-1-61

APPLICATION FOR MULTIPLE COMPLETION

Case 5302

AUG - 5 1974
OIL CONSERVATION COMM
Santa Fe

Operator	County	Date
Sun Oil Company	Lea	7-30-74
Address	**Lease**	**Well No.**
P. O. Box 1861, Midland, Texas 79701	Williams Ranch	1

Location of Well	Unit	Section	Township	Range
	K	1	22-S	37-E

1. Has the New Mexico Oil Conservation Commission heretofore authorized the multiple completion of a well in these same pools or in the same zones within one mile of the subject well? YES X NO _____

2. If answer is yes, identify one such instance: Order No. R-4656 ; Operator Lease, and Well No.: Sun - A. Christmas #1

3. The following facts are submitted:	Upper Zone	Intermediate Zone	Lower Zone
a. Name of Pool and Formation	Drinkard		Wantz Granite Wash
b. Top and Bottom of Pay Section (Perforations)	6840 6935		7442 7444
c. Type of production (Oil or Gas)	Oil		Oil
d. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing

4. The following are attached. (Please check YES or NO)

Yes	No	
X		a. Diagrammatic Sketch of the Multiple Completion, showing all casing strings, including diameters and setting depths, centralizers and/or turbolizers and location thereof, quantities used and top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.
X		b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.
X		c. Waivers consenting to such multiple completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.*
X		d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed it shall be submitted as provided by Rule 112-A.)

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Exxon Company, U.S.A., P. O. Box 1600, Midland, Texas 79701

Gulf Oil Company - U.S., P. O. Box 1150, Midland, Texas 79701

John H. Hendrix, 403 Will Towers West, Midland, Texas 79701

Marathon Oil Company, P. O. Box 552, Midland, Texas 79701

Mohio Petroleum Company, P. O. Box 3167, Midland, Texas 79701

6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES X NO _____. If answer is yes, give date of such notification 7-30-74.

CERTIFICATE: I, the undersigned, state that I am the Proration Analyst of the Sun Oil Company (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

Charles Gray
Signature

Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.

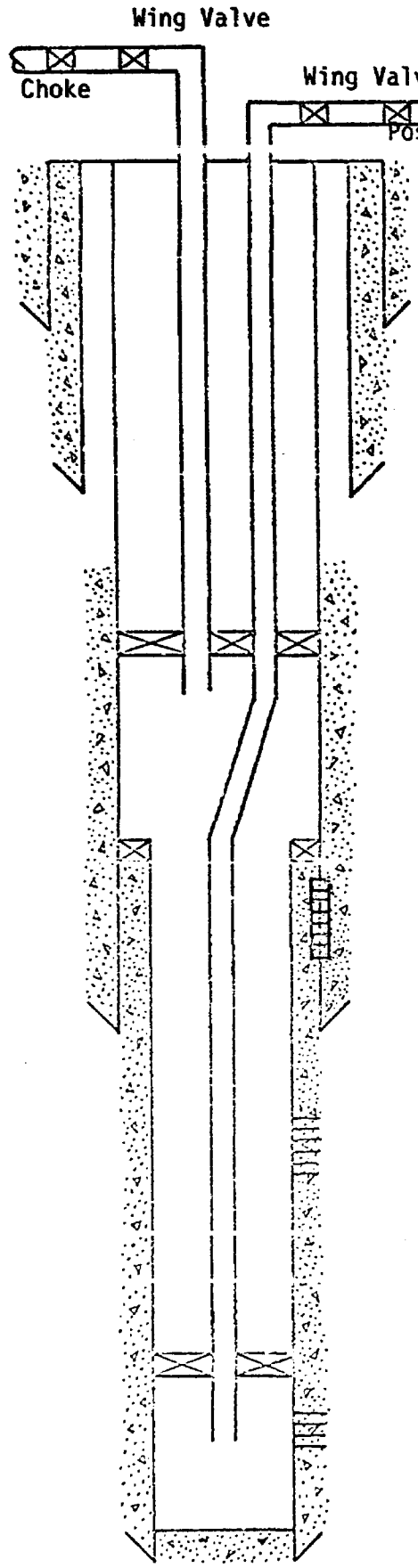
NOTE: If the proposed multiple completion will result in an unorthodox well location and/or a non-standard proration unit in one or more of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.

DIAGRAMMATIC SKETCH

SUN OIL COMPANY
WALTER LYNCH No. 1
SEC. 1, T-22-S, R-37-E

Unit K

Case 5302



13-3/8", 40# @ 326' w/350 sx.

9-5/8", 36# @ 2848 w/2500 sx.

Top of Cement 3700'

5004' 7" x 2-1/2" x 1-1/2" Otis 23 RDH Hyd. Packer

5116' TIW Type J Hanger & Type L Packer

5070-5090
5123-5146
5185-5215 } Squeezed w/200 sx.

7", 23# @ 5255 w/350 sx

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6935-6956 Drinkard Perfs

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7480 FC
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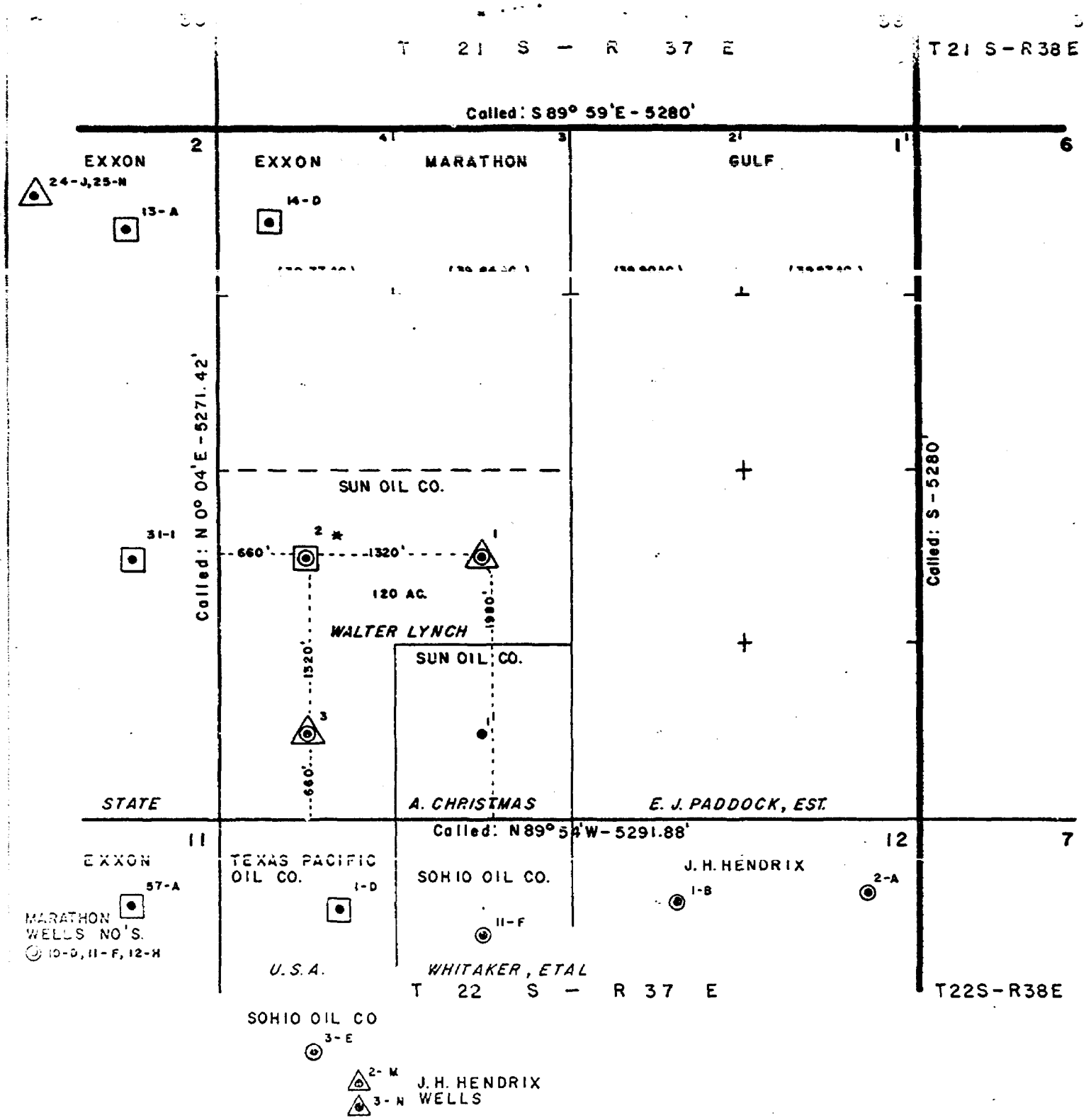
7525 TD



LEGEND

- DRINKARD PRODUCERS
- GRANITE WASH PRODUCERS
- PADDOCK PRODUCERS
- PRESENTLY PADDOCK PRODUCER SCHEDULED TO BE RECOMPLETED AS PADDOCK-DRINKARD DUAL

SUN OIL COMPANY

WALTER LYNCH - 120 AC. LSE.

OUT OF

SW/4 SEC. 1, T22S - R37E

LEA CO., NEW MEXICO

SCALE: 1" = 1000'

JASON W. KELLAHIN
ROBERT E. FOX
W. THOMAS KELLAHIN

KELLAHIN AND FOX
ATTORNEYS AT LAW
500 DON GASPAR AVENUE
POST OFFICE BOX 1769
SANTA FE, NEW MEXICO 87501

TELEPHONE 982-4315
AREA CODE 505

August 6, 1974

Case
5302

Mr. A. L. Porter
Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Dear Mr. Porter:

Enclosed is the application of Sun Oil Company for approval of the completion of two wells as an exception to the provisions of Rule 107 (d) (3) of the Commission's rules and regulations.

It is requested that this application be set for hearing before the Commission, at as early a date as is convenient to the Commission.

Yours very truly,

Jason W. Kellahin

Jason W. Kellahin

JWK:ks

Enclosure

cc: Mr. H. R. Huey

BEFORE THE OIL CONSERVATION COMMISSION

OF NEW MEXICO

Case 5302

IN THE MATTER OF THE APPLICATION OF SUN OIL COMPANY FOR AN EXCEPTION TO RULE 107 (d) (3), LEA COUNTY, NEW MEXICO

A P P L I C A T I O N

COMES NOW SUN OIL COMPANY and applies to the Oil Conservation Commission of New Mexico for an exception to the provisions of Commission Rule 107 (d) (3) for production from its Walter Lynch Wells Nos. 1 and 3, Lea County, New Mexico, and in support thereof would show the Commission:

1. The Lynch Well No. 1 is located in Unit K, Section 1, Township 22 South, Range 37 East, N.M.P.M., and the Lynch No. 3 is located in Unit M, Section 1, Township 22 South, Range 37 East, N.M.P.M.

2. Both wells are completed with a 5-inch lower string of casing, and have been completed in the Drinkard formation, and the Wantz Granite Wash pool.

3. In order to dually complete the two wells, it is necessary to set the upper packer at approximately 5,004 feet, in the seven-inch casing, whereas the upper perforations in both wells are at approximately 6,840 feet.

4. Applicant proposes to complete the two wells with the upper packer set at approximately 5,004 feet, which completion will not comply with the provisions of Rule 107 (d) (3).

5. Completion of the Lynch Wells Nos. 1 and 3 in the manner proposed is in the interests of conservation, and will result in the production of oil and gas that would not otherwise be recovered, and waste will not occur.

WHEREFORE, applicant prays that this application be set for hearing before the Oil Conservation Commission at the earliest convenient date, and that after notice and hearing as required by law, the Commission enter its order approving the completion of the two wells as proposed.

Respectfully submitted,

SUN OIL COMPANY

By Jason W. Kellahin

KELLAHIN & FOX
P. O. Box 1769
Santa Fe, New Mexico 87501

ATTORNEYS FOR APPLICANT

DRAFT

dr/

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 5302

Order No. R-4857

APPLICATION OF SUN OIL COMPANY FOR
TWO DUAL COMPLETIONS AND EXCEPTIONS
TO RULE 107 D-3, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on August 27, 1974 at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this _____ day of September, 1974, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by Law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Sun Oil Company, is the operator of the Walter Lynch Wells Nos. 1 and 3 located in Units K and M of Section 1, Township 22 South, Range 37 East, NMPM, Lea County, New Mexico.

(3) That each of said wells is completed with a 5-inch lower string of casing in the Drinkard and the Wantz-Granite Wash Pools.

(4) That the upper perforations in the Drinkard Pool in the Walter Lynch Well No. 1 are at a depth of approximately 6840 feet and the upper perforations in the Wantz-Granite Wash Pool in said well are at a depth of approximately 7442 feet.

(5) That the applicant proposes to dually complete its Walter Lynch Well No. 1 by setting packers at approximately 5004 feet and 7139 feet to produce the Drinkard Pool through tubing set at 5004 feet and the Wantz-Granite Wash Pool through tubing set at 7139 feet.

(6) That in this proposed completion, the Drinkard tubing string is set approximately ~~1800~~ 1836 feet above the Drinkard perforations.

(7) That the upper perforations in the Drinkard Pool in the Walter Lynch Well No. 3 will be at a depth of approximately 6242 feet and the upper perforations in the Wantz-Granite Wash Pool in said well are at a depth of approximately 7165 feet.

(8) That the applicant proposes to dually complete its Walter Lynch Well No. 3 by setting packers at approximately 4900 feet and 7049 feet to produce the Drinkard Pool through tubing set at 4900 feet and the Wantz-Granite Wash Pool through tubing set at 7049 feet.

(9) That in this proposed completion, the Drinkard tubing string is set approximately ~~1300~~ 1342 feet above the Drinkard perforations.

(10) That the applicant further seeks an exception to Commission Rule 107-D-3 which requires inter alia that tubing shall not be set more than 250 feet above the top of the pay.

(11) That granting the application would authorize production of the ~~Devonian~~ Drinkard in the Walter Lynch Wells Nos. 1 and 3 through the casing-tubing annulus for distances in excess of ~~1800~~ 1800 feet and ~~1300~~ 1300 feet, respectively.

(12) That there is a danger that the production of oil ~~through~~ through the casing-tubing annulus as proposed in the subject application would be inefficient, result in underground waste, and impair correlative rights, ~~and that the subject application should, therefore, be denied.~~ shall

IT IS THEREFORE ORDERED:

(1) That the application of Sun Oil Company in Case 5302 be and the same is hereby denied.

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

(13) That the applicant failed to prove that the production of oil through the casing tubing annulus as proposed in the subject application would not be inefficient, result in underground waste, nor impair correlative rights, and that the subject application should, therefore, ~~should not~~ be denied.