

CASE 3278: Application of STANDARD  
OIL CO. OF TEXAS for special rules  
for STATELINE-ELLENBURGER POOL.

CASE NO.

3228

Application,  
TRANSCRIPTS,  
SMALL Exhibits  
ETC.

dearnley-meier reporting service, inc.

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BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
January 4, 1967

IN THE MATTER OF:

In the matter of Case No. 3278 being  
reopened pursuant to the provisions  
of Order No. R-2944, which order  
established 80-acre spacing units  
for the Stateline-Ellenburger Pool,  
Lea County, New Mexico, for a period  
of eighteen months.

Case No. 3278

IN THE MATTER OF:

In the matter of Case No. 3277 being  
reopened to consider the necessity  
for the continuance of the special  
allowables assigned to wells in the  
Stateline-Ellenburger Pool, Lea  
County, New Mexico.

Case No. 3277

BEFORE:

Daniel S. Nutter, Examiner

Transcript of Hearing

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MR. NUTTER: We will call next, Case 3278.

MR. HATCH: Case 3278: In the matter of Case No. 3278 being reopened pursuant to the provisions of Order No. R-2944, which order established 80-acre spacing units for the Stateline-Ellenburger Pool, Lea County, New Mexico, for a period of eighteen months.

MR. KELLAHIN: If the Examiner please, Jason Kellahin, Santa Fe, representing Standard of Texas. This is a case which is called on the motion of the Commission and Standard of Texas would like to offer some testimony in this and also in Case 3277 pertaining to the allowables in the same pool. Since the testimony would be repetitious, in the event the cases are handled separately we move that they be consolidated for purposes of testimony.

MR. NUTTER: We will also call Case 3277.

MR. HATCH: Case 3277: In the matter of Case No. 3277 being reopened to consider the necessity for the continuance of the special allowables assigned to wells in the Stateline-Ellenburger Pool, Lea County, New Mexico.

MR. NUTTER: Case 3277 and 3278 will be consolidated for purposes of testimony.

MR. KELLAHIN: I would like to call two witnesses.

(Witnesses sworn)

MR. KELLAHIN: I call as the first witness Mr. Bill



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Driscoll.

W.J. DRISCOLL, called as a witness, having been first duly sworn on oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A Bill Driscoll.

Q By whom are you employed and in what position?

A Standard Oil Company of Texas as a Production Geologist.

Q You have never testified in New Mexico, have you?

A No, I have not.

Q For the benefit of the Examiner, would you briefly outline your education and experience as an engineer or geologist?

A I attended Southern Methodist University from 1956 to 1961, during which time I received my B.S. and M.S. in Geology. In 1961 I was employed by Standard of Texas as an exploration geologist in Corpus Christi, Texas. In July 1965 I was transferred to Snyder, Texas where I am presently employed as a production geologist.

MR. KELLAHIN: Mr. Nutter, are the witness's qualifications acceptable?

MR. NUTTER: Yes, they are.

Q (By Mr. Kellahin) Have you prepared a structure map

of the area involved in Case No. 3278?

A I have.

(Whereupon, Applicant's  
Exhibit 1 marked for  
identification.)

Q Is that marked as Exhibit No. 1?

A Yes, sir.

Q Would you describe the Exhibit No. 1?

A Exhibit No. 1 is a structure map on top of the Ellenburger dolomite. The producing wells here are shown by circles which are colored red. The dry holes are circled wells uncolored. You will note that there are fourteen producing wells in the field, three in Texas and eleven in New Mexico.

Q Now, this structure, it does cross the state line, does it not?

A That's correct.

Q Was the identical map and subsequent exhibits to be offered here presented at the Texas Permanent Rules Hearing held in Austin on December 16, 1966?

A It was.

Q Are the productive limits of the pool defined?

A The productive limits are fairly well defined on the south end of the field by the oil-water contact which is in the vicinity of a minus eighty-nine fifty. To the north the

productive limits are somewhat undefined, particularly to the north of Section 32.

Q Do you anticipate there will be any further development in this field?

A Not at the present time, I know of no plans for further development at this time.

Q Would you personally recommend any further development at this time?

A No, I would not.

Q Now, the exhibit shows fault lines crossing the structure as shown on your contours. What is the basis for these?

A The most northwesterly fault you see in Section 32 in New Mexico is based on a fault cut observed in the Marathon No. 2 McDonald State. The southwesterly fault as the southerly fault are both based on seismic data. The fault which appears in the center of the map is based on regional geologic concepts which are not shown on this map, as well as seismic data and to a great extent on a pressure difference that is observed between the north block of the structure and the south block of the structure.

Q Well now, actually, the fault shows very little displacement through the center of the field, is that correct?

A That's correct.

Q In your opinion, does it interfere with communication through the center of the field or is it a sealing fault?

A Well, this fault is not a sealing fault by virtue of its throw but I feel that it is probably a sealing fault. You will note that we have shown this to be a sheer fault and a sheer fault occurring in a dolomite or limestone section will naturally be accompanied by a crushing action and that would be probably accompanied by a secondary mineralization which would, in my opinion, disrupt the continuity of the reservoir immediately adjacent to the fault here.

Q Is that reflected, in your opinion, by the pressure differential across the fault line?

A Yes, it is.

Q Is the location of the fault exactly known?

A We know the approximate location of the fault. We know that it falls between the group of wells to the north and the group of wells to the south but the strike of the fault naturally varies somewhat.

Q This is the best interpretation you can make on the basis of the information available?

A That's correct.

Q Was Exhibit No. 1 prepared by you or under your supervision?

A Yes, sir, it was.

Q What are the logs shown on the left-hand side of the exhibit?

A Well, this is a typical log. It shows a section above the Ellenburger and it shows the pay zone here at the bottom, being a dolomite section. It shows the mapping point here as top Ellenburger.

MR. KELLAHIN: At this time we will offer Exhibit No. 1.

MR. NUTTER: Applicant's Exhibit 1 will be admitted in evidence.

(Whereupon, Applicant's Exhibit 1 admitted in evidence,)

MR. KELLAHIN: That's all I have on direct examination.

MR. NUTTER: Are there any questions of Mr. Driscoll? He may be excused.

(Witness excused.)

MR. KELLAHIN: I call Mr. John Cameron.

MR. NUTTER: I would like to ask you one question. What was the date of that Texas hearing in Austin?

MR. DRISCOLL: December 16th.

MR. NUTTER: Thank you.

JOHN T. CAMERON, called as a witness, having been first duly sworn on oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A John T. Cameron.

Q By whom are you employed and in what position?

A Standard of Texas as Proration Engineer.

Q Have you previously testified in New Mexico?

A Yes, I have.

MR. KELLAHIN: Are the witness's qualifications acceptable?

MR. NUTTER: Yes, they are.

(Whereupon, Applicant's Exhibit 2 marked for identification)

Q (By Mr. Kellahin) Referring to what has been marked as Exhibit No. 2, is that a composite of a number of separate exhibits submitted in book form?

A Yes, it is. It's a composite of reservoir data sheet, production history, tabulation of current production rates, a pressure plot, results of material balance and some orders of both the Texas and the New Mexico Commission on this field.

Q Now, referring to the first sheet which is the reservoir data sheet, did Standard submit a reservoir data sheet at the temporary rules hearing on July 28, 1965?

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A Yes, we did.

Q Does this exhibit differ markedly from that exhibit?

A No, it does not. There are a few properties that have been revised somewhat as we have become more familiar with the field. For example, the porosity we called 3.3% we have changed that to 3.1%; water saturation from 37 to 40%, minor revisions of that magnitude are about the only revisions that are on the reservoir data sheet. Statistic data has been brought up to date on the second page. We have now decided that there is a partial water drive in the pool. At the time of the Temporary Rule Hearing we did not know the drive mechanism.

Q Are your recommendations for operating rules shown on the data sheet?

A Yes, they are. We recommend that the operating rules in both states be made permanent.

Q Now, these are the same rules that are presently in effect?

A Yes, sir.

Q You are not recommending any change at this time?

A No changes in the operating rules.

Q And you made the same recommendation in Texas?

A That's correct.

Q What allowable is in effect in this pool?

A In both Texas and New Mexico the Texas discovery allowable of 330 barrels is in effect.

Q What are your recommendations as to allowable for the future?

A We recommend that the allowables of wells in both Texas and New Mexico go on the New Mexico 80-acre yardstick upon the expiration of the Texas discovery allowable.

Q Now, the effect of the Texas discovery allowable by a change in their rules was extended, was it not?

A That's correct. It was changed from eighteen months to twenty-four months.

Q When will it expire?

A It's now due to expire May 7, 1967.

Q At which time you recommend that the pool go on New Mexico rules on allowable?

A That's correct.

Q Now, referring to what is shown as the production history, that exhibit is self-explanatory.

MR. PORTER: I would like to ask one question. Did you make this recommendation to the Texas Railroad Commission on December 16th?

A Yes, sir, we did.

MR. PORTER: Did that go on the New Mexico yardstick?

A Yes, sir, and that has been approved by the Texas



Commission.

MR. PORTER: That's all I had.

Q (By Mr. Kellahin) You agreed at that time to also make the same recommendation in New Mexico, did you not?

A I did.

Q You so stated to the Texas Commission?

A That's correct.

Q Exhibits shown as production history, I believe, would be self-explanatory?

A Yes, I believe it is.

Q Do you have any comment to add?

A No, I think it's self-explanatory.

Q Now, the exhibit on the next page showing current production rates, where did this information come from?

A These came in Texas. They came from the monthly production reports filed by the operators, Forms EB. In New Mexico they come from the monthly statistical report.

Q You are recommending a change to the New Mexico allowable orders on expiration of the Texas discovery allowable. How many wells will be able to take advantage of the increase that would be granted as a result of this?

A Well, there are five wells in New Mexico that are now producing top allowable. Some of these five wells will be able to take advantage of at least some of the increase. It's

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hard to say what their capacity is above the 330 barrels. The New Mexico yardstick will be 403 barrels for the month of December. I don't know what it will be in May, of course.

Q Is there any significant production of water or gas?

A No, sir, there is only one well that's making any appreciable amount of water and that's the Standard Howell No. 1 in Texas and it's making forty-eight barrels of water a day. It's been making this for quite sometime. It has not been increasing.

Q This is the information that indicates a partial water drive?

A No, sir, actually in this area I don't think there is a water drive. I think this well was completed low on structure and it has got poor permeability characteristics.

Q So it hasn't aided production in any way?

A No.

Q Is there any gas production of any quantity?

A All wells are producing essentially at their GOR with exception of this Howell with a relative permeability more than anything else. The others, we feel, are still above the bubble point and they are all producing in solution ratio.

Q Now, turning to the sheet marked, "Pressure History Plot," would you describe that?

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A This is a plot of all the bottomhole pressures that we have on the wells in the Stateline-Ellenburger field and it shows, to me, that the pressures grouped themselves into two areas which correspond to the map submitted as Exhibit 1 into the south area and the north area, separated by about 1,000 PSI.

Q Now, which wells are in the south area?

A Well, in the south area, the three Standard wells in Texas are in the south area along with the Sego-Crawford State Nos. 1 and 2 and the Tenneco State No. 1, the latter three wells being in New Mexico.

Q Are you proposing that the field be divided into two reservoirs for proration purposes?

A No, I am not.

Q What sort of pressure measurements are these that you are showing here?

A Well, in general they are either buildups or they are drillstem test pressures. The four pressures that I have indicated by Number 1, 2, 3, and 4, I think are particularly significant in that in my opinion, they indicate interference between wells on this 80-acre spacing. For example, No. 1 is a drillstem test in the Sego-Crawford State No. 1 which was made before any production from that well. This pressure was 4,177 PSIG, which was about 800 PSI less than initial pressure in

the south area. I feel that this shows that this pressure in this well was effected by production from some other well. It so happens that there was only one other well that produced prior to this time in the south area. That was the Southland Royalty Sixteen No. 1 Well across the state line about 1,500 feet apart. I conclude from this that the Southland Royalty Sixteen No. 1 Well was draining an area whose radius was about 1,500 feet. That is, of course, far in excess of 80 acres.

Q Does that indicate that one well will drain 80 acres?

A Yes, I think it does.

Q Now, there are two points on your plot that fall off the curve as shown by yellow triangles. What is the explanation of those?

A These are pressures in the Sego-Crawford State No. 3 Well and they don't fall on the curve of the north area. They fall about three to five hundred PSI higher. This could be due either to that well being in a separate fault block or more likely to me, that that well's pressure was effected by water influx in that particular area. The first of these two triangles had a pressure and this was an initial pressure in that well, by the way, of 4,547 PSIG which gives it a gradient of about .3977 GSI per foot. This seems to be considerably too low to be a merging reservoir pressure in

this area so I think this well was effected by prior production from other wells in the area and this was higher than the curve because of the water influx in that area.

Q Actually, the pressure decline on the well is consistent with the decline on the other wells, is it not?

A Yes, it is.

Q Now, turning to the material balance results in Exhibit No. 2, would you discuss those?

A These are results of a conventional material balance. It ran one on the north area and one on the south, using the pressure shown on the plot and the results of the calculations show an original oil in place for the total field of 6.7 million barrels. These same calculations show that the south area has had no appreciable water influx and it's a volumetric dry reservoir. The north area has had water influx and we call that a partial water drive. Taking these results a little further and calculated, an estimate reserve for the field, calculated to be 2.06 million barrels. If this is divided among the fourteen existing wells, it comes out to an average reserve per well of 147,000 barrels.

Q Now, what is the cost of drilling a well in this pool?

A \$226,000.

Q Are the existing wells marginal?

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A I consider them not too attractive economically for 147,000 barrels, more or less, to spend \$226,000.00 is not a real attractive proposition.

Q Would you recommend to your company that they drill any further wells?

A No, I do not.

Q Is the field now developed to an 80-acre spacing pattern?

A Yes, it is.

Q If the field were drilled to 40-acre density, in your opinion, would ultimate recovery be increased?

A No, sir, I do not believe it would.

Q Would wells drilled on a 40-acre spacing be economic?

A No, sir, they wouldn't because you would get about the same ultimate recovery from the field and would have twice as many wells and it would be about 74,000 barrels and these wells would not be economic for \$226,000.00 well cost.

Q Now, the Exhibit No. 2 also contains a copy of the Texas Temporary Rule Order, is that right?

A Yes, it does.

Q Has a new order been entered as yet by Texas?

A For permanent rules?

Q Yes, sir.

A No, a formal order has not been entered.

Q This is the order it is operating under now?

A That's correct.

Q Does the order cover the allowable in Texas?

A No, sir, it doesn't. The Texas allowable is controlled by a yardstick.

Q Does the order contain essentially the same rules as contained in the New Mexico order which is the next sheet?

A Yes, it does, essentially the same, spacing is a little different.

Q The end result is approximately the same, is that correct, as to spacing too?

A Yes, it is essentially.

Q It would be on 80-acre spacing in Texas for all practical purposes?

A That's correct.

Q What did the New Mexico order provide in respect to the allowables?

A New Mexico Order Number R-2043 set up an allowable of 330 barrels for the wells in New Mexico portion of the field to be continued as long as the discovery allowable is in effect in the Texas portion. Following that time they were to revert, they were to be determined in accordance with Rule 505.

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Q And this is what you recommend be done at this time, is that correct?

A Yes.

Q Have you heard anything from Texas in regard to the hearing held on December 16th?

A Yes, we have. We have a letter from R.H. Barbeck Chief Engineer of the Commission, signed by Bill I. Thomas which we have entered as Exhibit 3.

(Whereupon, Applicant's Exhibit 3 marked for identification.)

Q That is a copy of the letter directed to your company in regard to that hearing?

A That's correct.

Q Were exhibits contained in Exhibit No. 2 prepared by you or under your supervision?

A Yes, they were.

MR. KELLAHIN: I would like to offer in evidence Exhibits 2 and 3.

MR. NUTTER: Exhibits 2 and 3 will be admitted in evidence.

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

MR. KELLAHIN: That's all I have on direct examination.

BY MR. NUTTER:



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Q Referring to your chart showing those bottom pressures and the declines, you mentioned that the four pressure points labeled 1, 2, 3, and 4 were significant, then you went into detail on the point No. 1, Sego-Crawford State No. 1 pressure. I don't believe you went into detail on the other three. Would you elaborate on those pressure points?

A Yes, sir, I just omitted to do so. Well No. 2 Standard of Texas Southland Royalty Sixteen Number 2 also in the south area, that was an initial pressure from drillstem test of 3,179 pounds.

Q That was drillstem test pressure?

A That's correct, before any substantial production from that well and that was 1,700 pounds per square inch less than initial pressure in the south area. No. 3 is in the Standard of Texas State 32, Number 1 and that was a drillstem test, an initial pressure in that well and it was 800 PSI less than initial pressure in the north area. Number 4, --

Q Taken before production?

A Yes, sir. Well No. 4 was in the Standard of Texas State 32 No. 2. It was drillstem test, initial drillstem test in January of 1966 and it was 1,700 PSI less than initial pressure in the north area. I consider these all show substantial interference between wells.

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Q Now, according to your calculations here, you indicate that you have got about two million barrels of recoverable oil in the pool and then we turn to the production history and we find that 1,100,000 barrels has been produced. In other words, you consider that this pool is more than 50% depleted?

A Yes, sir, I do.

Q Do you think there would be any probability of any secondary recovery in this pool?

A It's possible, if this water drive does not come along a good bit stronger, I am sure it will be looked into.

Q Particularly in the one area there is no water drive indicated at all in that one area.

MR. PORTER: What is the recovery factor?

A For the south area without water drive is 25.4%; in the north area, and I will admit that this is an assumed figure, it's 35%.

MR. NUTTER: Are there any other questions of Mr. Cameron? He may be excused.

(Witness excused)

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

MR. KELLAHIN: That's all.

MR. NUTTER: Does anyone have anything they wish

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to offer in Cases 3277 and 3278. Mr. Lyon?

MR. LYON: Victor Lyon with Continental Oil Company. Continental Oil Company would like to concur with Standard of Texas' recommendation that the temporary field rules in the Stateline-Ellenburger Pool be made permanent and we have no objection to the order which has been entered as to the allowable.

MR. NUTTER: Thank you, Mr. Lyon. Does anyone else have anything to offer?

MR. HATCH: Telegrams from Humble Oil and Refining Company and from Skelly in support of the Applicant.

MR. NUTTER: Thank you. Is there anything further? We will take these cases under advisement and recess the hearing until 1:15.

(Recess)

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STATE OF NEW MEXICO )  
 ) ss  
COUNTY OF BERNALILLO )

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

*Kay Embree*  
Court Reporter

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. **3278-3277** heard by me on **6-4**, 19 **69**

*[Signature]* Examiner  
New Mexico Oil Conservation Commission

COMMISSIONERS  
BEN RAMSEY  
Chairman  
BYRON TUNNELL  
JIM C. LANGDON

Railroad Commission of Texas  
OIL AND GAS DIVISION



AUSTIN, TEXAS  
December 27, 1966

ARTHUR H. BARBECK  
Chief Engineer

Standard Oil Company of Texas  
P. O. Box 1249  
Houston, Texas

ATTN: Mr. John T. Cameron

In Re: Docket No. 8-56,985  
Commission-called Hearing to  
Review Temporary Rules for the  
Stateline (Ellenburger) Field  
Andrews County, Texas

Gentlemen:

The Commission at conference December 22, 1966, approved your recommendation that the temporary rules presently in effect shall be continued as "permanent" rules for the subject field. Further, the Commission approved your recommendation that upon termination of the discovery allowable the MER shall be established equivalent to the current New Mexico prorated allowable applicable to the subject field.

A formal order will be forthcoming.

Yours very truly,

*B. D. Thomas*  
for Arthur H. Barbeck  
Chief Engineer

BDT:lmj

cc: Standard Oil Company of Texas - Snyder  
Standard Oil Company of Texas - Midland  
Mr. Jim Walker  
Mr. Bob Cook

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. <u>3</u>
CASE NO. <u>3277-3278</u>

Railroad Commission of Texas

OIL AND GAS DIVISION

COMMISSIONERS  
BEN RAMSEY  
Chairman  
BYRON TUNNELL  
JIM C. LANGDON

ARTHUR H. BARBECK  
Chief Engineer



AUSTIN, TEXAS

December 27, 1966

Standard Oil Company of Texas  
P. O. Box 1249  
Houston, Texas

ATTN: Mr. John T. Cameron

In Re: Docket No. 8-56,985  
Commission-called Hearing to  
Review Temporary Rules for the  
Stateline (Ellenburger) Field  
Andrews County, Texas

Gentlemen:

The Commission at conference December 22, 1966, approved your recommendation that the temporary rules presently in effect shall be continued as "permanent" rules for the subject field. Further, the Commission approved your recommendation that upon termination of the discovery allowable the MER shall be established equivalent to the current New Mexico prorated allowable applicable to the subject field.

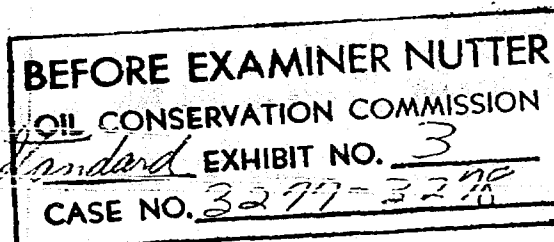
A formal order will be forthcoming.

Yours very truly,

*B. D. Thomas*  
for Arthur H. Barbeck  
Chief Engineer

BDT:lmf

cc: Standard Oil Company of Texas - Snyder  
Standard Oil Company of Texas - Midland  
Mr. Jim Walker  
Mr. Bob Cook



**RESERVOIR DATA SHEET**  
**STATELINE (ELLENBURGER) FIELD**

**1. Rock Properties**

a. Average Porosity	3.1%
b. Effective Permeability	33.9 md to 191 md
c. Average Interstitial Water Saturation	40%

**2. Structural Features**

a. Structure Map	Submitted
b. Oil-Water Contact	-8950 feet (Estimated)
c. Gas Cap Volume	None
d. Average Pay Thickness	52 Feet

**3. Fluid Characteristics**

a. Oil Gravity	43.3° API
b. Water Salinity	87,500 ppm
c. Original Formation Volume Factor	1.27
d. Solubility	437 CFPS
e. Oil Viscosity	0.71 cp
f. Saturation Pressure	1,555 psig

**4. Pressures and Temperatures**

a. Original Reservoir Pressure at 12,224 Feet	4,993 psig
b. Reservoir Temperature	168° F

**5. Statistical Data**

	<u>Texas</u> Standard of Texas- Southland Roy. 16 No. 1 May 3, 1965	<u>New Mexico</u> Standard of Texas- Cont. State No. 1 July 12, 1965
a. <del>Discovery Well</del>	12,172'	12,086'
b. Discovery Date	3	11
c. Depth		
d. Number of Wells		
e. Current (Sep.) Oil Rate	349 bpd	2713 bpd
f. Current (Sep.) Water Rate	56 bpd	9 bpd
g. Current Gas-Oil Ratio	460 cfpb	347 cfpb

6. Reservoir Drive Mechanism

Partial Water Drive

7. Recommendations

a. Rules

Continue present temporary rules in effect as permanent rules in both states.

b. Top Allowable

New Mexico:

New Mexico 80-acre yardstick. For December 1966, this would be (52) (7.75) = 403 bbls. per calendar day.

Texas:

Same as New Mexico. For ease of administration, recommend a capacity exempt allowable set by the operator's nomination up to a maximum equal to the current New Mexico top allowable.

*Texes directory (above)  
330 bbls. now  
in effect  
changed from 18 mms  
to 24 mms.  
May 7, 1967*



**PRODUCTION HISTORY  
STATELINE (ELLENBURGER) FIELD**

Month	Texas		New Mexico		Total	
	Oil Production (Bbls)	No. Wells	Oil Production (Bbls)	No. Wells	Oil Production (Bbls)	No. Wells
<b>1965</b>						
May	8,710	1			8,710	1
June	9,450	1			9,450	1
July	10,428	1			15,770	2
August	10,311	1	5,350	1	21,495	2
September	10,989	2	11,184	1	30,023	4
October	16,667	2	19,034	2	54,835	7
November	11,420	2	38,168	5	52,951	7
December	12,762	2	41,531	5	68,039	7
1965 Total	90,737	3	55,277	7	261,281	10
			170,544			
<b>1966</b>						
January	17,268	3	59,661	10	76,929	13
February	16,232	3	65,229	11	81,461	14
March	14,959	3	82,324	11	97,283	14
April	14,576	3	88,280	11	102,856	14
May	14,595	3	90,995	11	105,590	14
June	10,605	3	86,398	11	97,003	14
July	13,692	3	85,449	11	99,141	14
August	12,613	3	78,834	11	91,447	14
September	10,470	3	81,393	11	91,863	14
1966 Total	125,010		718,563		843,573	
Cumulative	215,747		889,107		1,104,854	

*St. Howell #1  
in Texas  
Mudrow 48 BOPD  
only 2000 making 14 bbls  
5 wells in  
N.M. Top above  
well prod at  
MAR*

**CURRENT PRODUCTION RATES  
STATELINE (ELLENBURGER) FIELD  
SEPTEMBER, 1966**

<u>Well</u>	<u>Oil Rate (BPD)</u>	<u>Water Rate (BPD)</u>	<u>GOR (cf/b)</u>	<u>Remarks</u>
<b><u>TEXAS</u></b>				
Standard-Rovell No. 1	10	48	3720	Capacity
Standard-Southland Royalty 16 No. 1	236	7	232	Capacity
Standard-Southland Royalty 16 No. 2	<u>103</u>	<u>1</u>	<u>657</u>	Capacity
Total Texas	349	56	460	
<b><u>NEW MEXICO</u></b>				
Continental-State A No. 1	330		378	Top Allowable
Continental-State A No. 2	330		347	Top Allowable
Marathon-McDonald St. No. 1	317		407	Top Allowable
Marathon-McDonald St. No. 2	398		352	Top Allowable
Seco-Crawford State No. 1	54		392	Capacity
Seco-Crawford State No. 2	99		355	Capacity
Seco-Crawford State No. 3	101		355	Capacity
Standard-Cent. State No. 1	328	4	238	Top Allowable
Standard-State 32 No. 1	234		348	Capacity
Standard-State 32 No. 2	315	5	331	Capacity
Tranaco-State No. 1	<u>207</u>	<u>—</u>	<u>364</u>	Capacity
Total New Mexico	2,713	9	347	
Total Field	3,062	65	359	

CLEARPRINT PAPER CO. NO. 5250 TWO YEARS BY MONTHLY & 100 DIVISION

SECO - CRAWFORD STATE NO. 1

SECO - CRAWFORD STATE NO. 3

CONTINENTAL - STATE A NO. 1

CONTINENTAL - STATE A NO. 2

MARATHON - McDONALD STATE NO. 1

STANDARD - SOUTHLAND ROYALTY 16 NO. 1

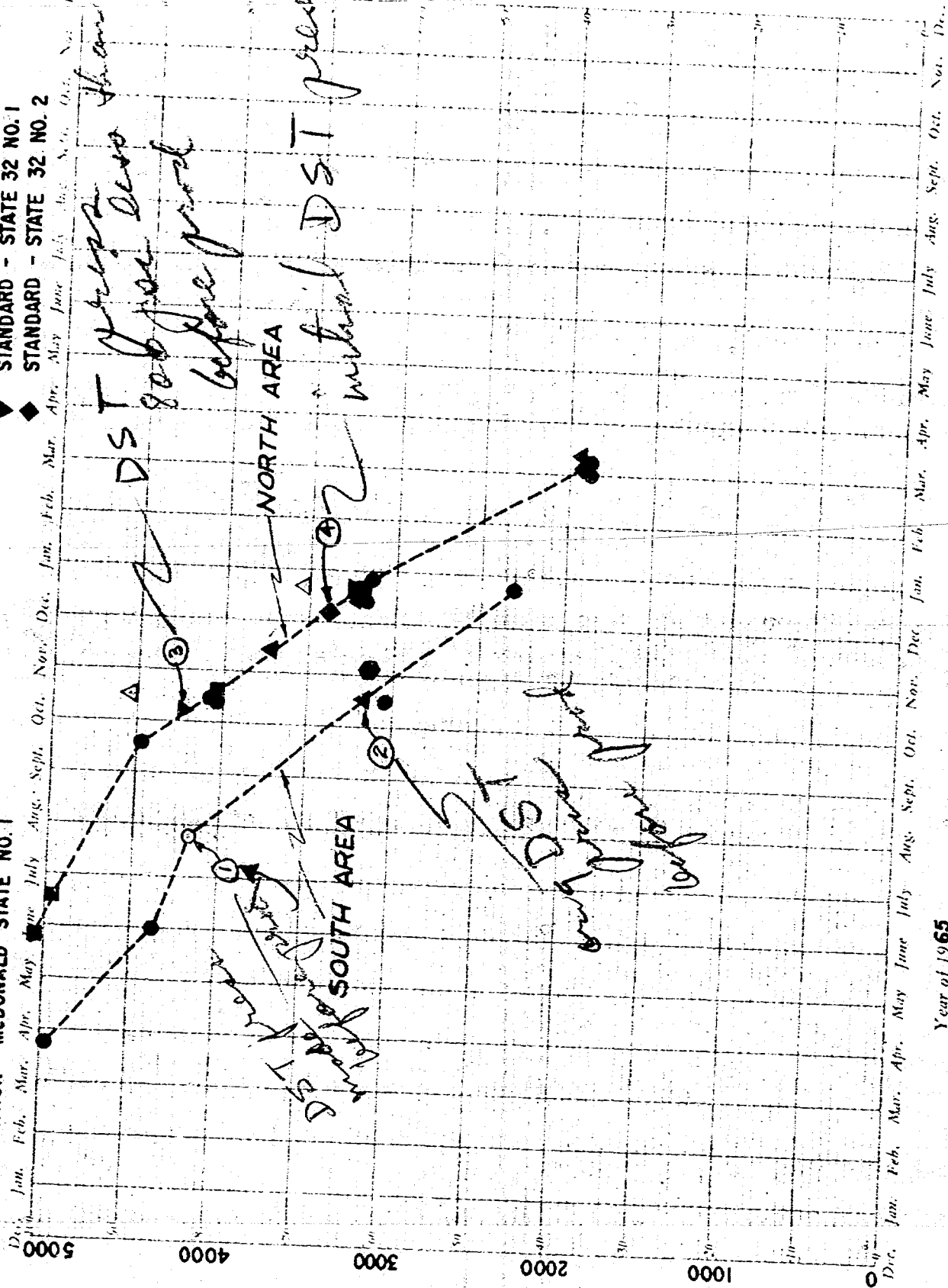
STANDARD - SOUTHLAND ROYALTY 16 NO. 2

STANDARD - BESSIE HOWELL NO. 1

STANDARD - CONTINENTAL STATE NO. 1

STANDARD - STATE 32 NO. 1

STANDARD - STATE 32 NO. 2



Year of 1965

Year of 1966

**MATERIAL BALANCE RESULTS  
STATELINE (ELLENBURGER) FIELD**

	<u>North Area</u>	<u>South Area</u>	<u>Total</u>
Original Oil in Place (MM Bbls) (Calculated from material balance (equation $N = \frac{N_p B_o}{C_o - P} B_{oi}$ ))	3.8	2.9	6.7
Drive Mechanism	Partial Water	Volumetric	-
Recovery Factor (% of N) (South Area calculated, North Area assumed)	35	25.4	30.8
Recoverable Reserves (MM Bbls)	1.33	0.73	2.06
Number of Wells	8	6	14
Reserves Per Well (Bbls)	166,000	122,000	147,000

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION ON ITS OWN MOTION TO CONSIDER THE CREATION OF A NEW POOL FOR ELLENBURGER PRODUCTION IN SECTIONS 4 AND 5, TOWNSHIP 24 SOUTH, RANGE 38 EAST, NMPM, LEA COUNTY, NEW MEXICO, SAID POOL TO BE DESIGNATED THE STATELINE-ELLENBURGER POOL; FURTHER TO CONSIDER THE ESTABLISHMENT OF A PROCEDURE WHEREBY ALLOWABLES FOR WELLS IN SAID POOL MAY BE ASSIGNED ON AN EQUI-TABLE BASIS WITH ALLOWABLES ASSIGNED TO WELLS IN THE SAME COMMON SOURCE OF SUPPLY IN THE STATE OF TEXAS.

CASE No. 3277  
Order No. R-2943  
NOMENCLATURE

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on July 28, 1965, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 6th day of August, 1965, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, 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 Standard Oil Company of Texas Continental State Well No. 1, located in Unit B of Section 5, Township 24 South, Range 38 East, NMPM, Lea County, New Mexico, has discovered a separate common source of supply in New Mexico which should be designated the Stateline-Ellenburger Pool with vertical limits comprising the Ellenburger formation and horizontal limits comprising all of Section 4 and the NE/4 of Section 5, Township 24 South, Range 38 East, NMPM, Lea County, New Mexico.
- (3) That the Standard Oil Company of Texas Continental State Well No. 1 was completed July 18, 1965, with the top of the perforations at 12,086 feet.

CASE No. 3277  
Order No. R-2943

(4) That said pool constitutes a common source of supply with the Stateline (Ellenburger) Pool in Andrews County, Texas.

(5) That the Texas portion of the pool was discovered by the Standard Oil Company of Texas Southland Royalty Company Well No. 1, located in Unit E of Section 16, Block A-51, Andrews County, Texas, and completed May 4, 1965.

(6) That wells in the Stateline (Ellenburger) Pool in Andrews County, Texas, are presently receiving a discovery allowable of 330 barrels of oil per calendar day which exceeds top unit allowable for wells of similar depth in New Mexico.

(7) That in order to afford the operators in the New Mexico portion of the pool the opportunity to produce their just and equitable share of the oil, and otherwise prevent waste and protect correlative rights, effective August 1, 1965, the top unit allowable for wells on a standard proration unit in New Mexico should be 330 barrels of oil per day and said allowable should continue so long as wells in the Texas portion of the pool are receiving a discovery allowable.

IT IS THEREFORE ORDERED:

(1) That a new pool in Lea County, New Mexico, classified as an oil pool for Ellenburger production, is hereby created and designated the Stateline-Ellenburger Pool with vertical limits comprising the Ellenburger formation and horizontal limits comprising all of Section 4 and the NE/4 of Section 5, Township 24 South, Range 38 East, NMPM, Lea County, New Mexico.

(2) That, effective August 1, 1965, the top unit allowable for wells on a standard proration unit in the Stateline-Ellenburger Pool, Lea County, New Mexico, shall be 330 barrels of oil per day and said allowable shall continue so long as a discovery allowable is in effect in the Texas portion of the pool.

(3) That upon discontinuance of the discovery allowable in the Texas portion of the pool, the top unit allowable for wells in the Stateline-Ellenburger Pool, Lea County, New Mexico, shall be determined in accordance with Rule 505 of the Commission Rules and Regulations.

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CASE No. 3277  
Order No. R-2943

(4) 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

JACK M. CAMPBELL, Chairman

GUYTON B. HAYS, Member

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

S E A L

esr/

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. 3278  
Order No. R-2944

APPLICATION OF STANDARD OIL COMPANY  
OF TEXAS FOR SPECIAL RULES FOR THE  
STATELINE-ELLENBURGER POOL, LEA COUNTY,  
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on July 28, 1965, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 6th day of August, 1965, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, 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, Standard Oil Company of Texas, seeks the promulgation of temporary special rules and regulations for the Stateline-Ellenburger Pool in Sections 4 and 5, Township 24 South, Range 38 East, NMPM, Lea County, New Mexico, including a provision for 80-acre spacing units.

(3) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, temporary special rules and regulations



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CASE No. 3278  
Order No. R-2944

providing for 80-acre spacing units should be promulgated for the Stateline-Ellenburger Pool.

(4) That the temporary special rules and regulations should provide for limited well locations in order to assure orderly development of the pool and protect correlative rights.

(5) That the promulgation of temporary special rules and regulations providing for 80-acre spacing units should enable the operators in the subject pool to gather reservoir information to establish the area that can be efficiently and economically drained and developed by one well.

(6) That this case should be reopened at an examiner hearing in January, 1967, at which time the operators in the subject pool should be prepared to appear and show cause why the Stateline-Ellenburger Pool should not be developed on 40-acre spacing units.

IT IS THEREFORE ORDERED:

That temporary Special Rules and Regulations for the Stateline-Ellenburger Pool are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS  
FOR THE  
STATELINE-ELLENBURGER POOL

RULE 1. Each well completed or recompleted in the Stateline-Ellenburger Pool or in the Ellenburger formation within one mile thereof, and not nearer to or within the limits of another designated Ellenburger oil pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. Each well shall be located on a standard unit containing 80 acres, more or less, consisting of the N/2, S/2, E/2, or W/2 of a governmental quarter section; provided, however, that nothing contained herein shall be construed as prohibiting the drilling of a well on each of the quarter-quarter sections in the unit.

RULE 3. The Secretary-Director of the Commission may grant an exception to the requirements of Rule 2 without notice and

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CASE No. 3278  
Order No. R-2944

hearing when an application has been filed for a non-standard unit comprising a governmental quarter-quarter section or lot or the unorthodox size or shape of the tract is due to a variation in the legal subdivision of the U. S. Public Lands Survey. All operators offsetting the proposed non-standard unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all offset operators or if no offset operator has entered an objection to the formation of the non-standard unit within 30 days after the Secretary-Director has received the application.

RULE 4. Each well shall be located within 150 feet of the center of a governmental quarter-quarter section or lot.

RULE 5. The Secretary-Director may grant an exception to the requirements of Rule 4 without notice and hearing when an application has been filed for an unorthodox location necessitated by topographical conditions or the recompletion of a well previously drilled to another horizon. All operators offsetting the proposed location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all operators offsetting the proposed location or if no objection to the unorthodox location has been entered within 20 days after the Secretary-Director has received the application.

RULE 6. Each well shall be assigned an allowable in accordance with Order No. R-2943. In the event there is more than one well on an 80-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion. The allowable assigned to a non-standard proration unit shall bear the same ratio to a standard allowable as the acreage in such non-standard unit bears to 80 acres.

IT IS FURTHER ORDERED:

(1) That the locations of all wells presently drilling to or completed in the Stateline-Ellenburger Pool or in the Ellenburger formation within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall

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CASE No. 3278  
Order No. R-2944

notify the Hobbs District Office of the Commission in writing of the name and location of the well on or before September 1, 1965.

(2) That each well presently drilling to or completed in the Stateline-Ellenburger Pool or in the Ellenburger formation within one mile thereof shall receive a 40-acre allowable until a Form C-102 dedicating 80 acres to the well has been filed with the Commission.

(3) That this case shall be reopened at an examiner hearing in January, 1967, at which time the operators in the subject pool may appear and show cause why the Stateline-Ellenburger Pool should not be developed on 40-acre spacing units.

(4) 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

JACK M. CAMPBELL, Chairman

GUYTON B. HAYS, Member

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

SEAL

esr/

RULE 6. Each well completed in the Stateline-Ellenburger Pool, Lea County, New Mexico, is hereby assigned an allowable of 330 barrels per day, continuing until the first day of the month following the expiration of the discovery allowable status in the Stateline (Ellenburger) Field, Andrews County, Texas. Thereafter, each well completed in the Stateline-Ellenburger Pool, Lea County, New Mexico, will be assigned an allowable in accordance with Rule 7 for so long as these rules are in effect.

RULE 7. After the period provided for in Rule 6, an 80-acre proration unit (79 through 81 acres) in the Stateline-Ellenburger Pool shall be assigned an 80-acre proportional factor of 7.75 for allowable purposes, and in the event there is more than one well on an 80-acre proration unit, the operator may produce the allowable assigned to the unit from said wells in any proportion. The allowable assigned to any non-standard proration unit shall bear the same ratio to a standard allowable as the acreage in the non-standard unit bears to 80 acres.



PROPOSED RULES  
STATELINE-ELLENBURGER POOL  
LEA COUNTY, NEW MEXICO

RULE 1. Each well completed in the Stateline-Ellenburger Pool or in the Ellenburger formation within one mile of the Stateline-Ellenburger Pool and not nearer to nor within the limits of another designated Ellenburger pool shall be spaced, drilled, operated, and prorated in accordance with the rules hereinafter set forth.

RULE 2. Each well completed or recompleted in the Stateline-Ellenburger Pool shall be located on a unit containing 80 acres, more or less, which consists of any two contiguous quarter-quarter sections of a single governmental quarter section; provided, however, that nothing contained herein shall be construed as prohibiting the drilling of a well on each of the quarter-quarter sections in the unit.

RULE 3. All wells projected to or completed in the Stateline-Ellenburger Pool shall be located within 150 feet of the center of either quarter-quarter section in the unit.

RULE 4. For good cause shown, the Secretary-Director may grant an exception to Rule 2 without notice and hearing where an application has been filed in due form and where:

1. The non-standard unit comprises less than 80 acres or the unorthodox size or shape of the tract is due to a variation in the legal subdivision of the U. S. Public Lands Survey.
2. The non-standard unit may be reasonably presumed productive.
3. The applicant presents waivers from all offset operators, or proof of notification of offset operators (in which case 20 days delay required).

RULE 5. For topographic reasons, the Secretary-Director may grant an exception to Rule 3 without notice and hearing upon presentation of waivers or proof of notification (after 20 days delay).

BEFORE EXAMINER NUTTER	
presentation of waivers or proof	
OIL CONSERVATION COMMISSION	
apd	EXHIBIT NO. 5
CASE NO. 3278	

CALCULATION OF THEORETICAL PRESSURE BEHAVIOR  
AT 80-ACRE DRAINAGE RADIUS DUE TO PRODUCTION  
OF CONTINENTAL STATE NO. 1 AT 330 BPD RATE  
STATELINE-ELLENBURGER POOL

Reference: Guerrero, E. T., "How to Find Pressure Distribution for Unsteady-State Flow Conditions for Finite External Boundary", Oil and Gas Journal, October 21, 1963.

$$P_i - P_r = \frac{Q\mu B}{14.16 Kh} \left[ E_i\left(-\frac{x}{t}\right) - Y\left(\frac{x}{t}\right) \right]$$

$P_i$  = Initial reservoir pressure = 4927 psig  
 $P_r$  = Pressure at 80-acre radius after producing time  $t$   
 $Q$  = Flow rate = 330 BPD  
 $\mu$  = Viscosity = 0.71 cp  
 $B$  = Volume factor = 1.27 bbls./bbl.  
 $K$  = Effective permeability = 191 md.  
 $h$  = Thickness = 251 feet  
 $x = \frac{r^2 \phi S_o \mu C_e}{25.31 K} = 0.132$

$r$  = Radius of 80-acre circle = 1054 feet  
 $\phi$  = Porosity = 3.9%  
 $S_o$  = Oil saturation = 65%  
 $C_e$  = Effective compressibility =  $32 \times 10^{-6}$

$$P_i - P_r = \frac{(330)(0.71)(1.27)}{14.16(0.191)(251)} \left[ E_i\left(-\frac{0.132}{t}\right) - Y\left(\frac{0.132}{t}\right) \right]$$

$$= -0.439 \left[ E_i\left(-\frac{0.132}{t}\right) - Y\left(\frac{0.132}{t}\right) \right]$$

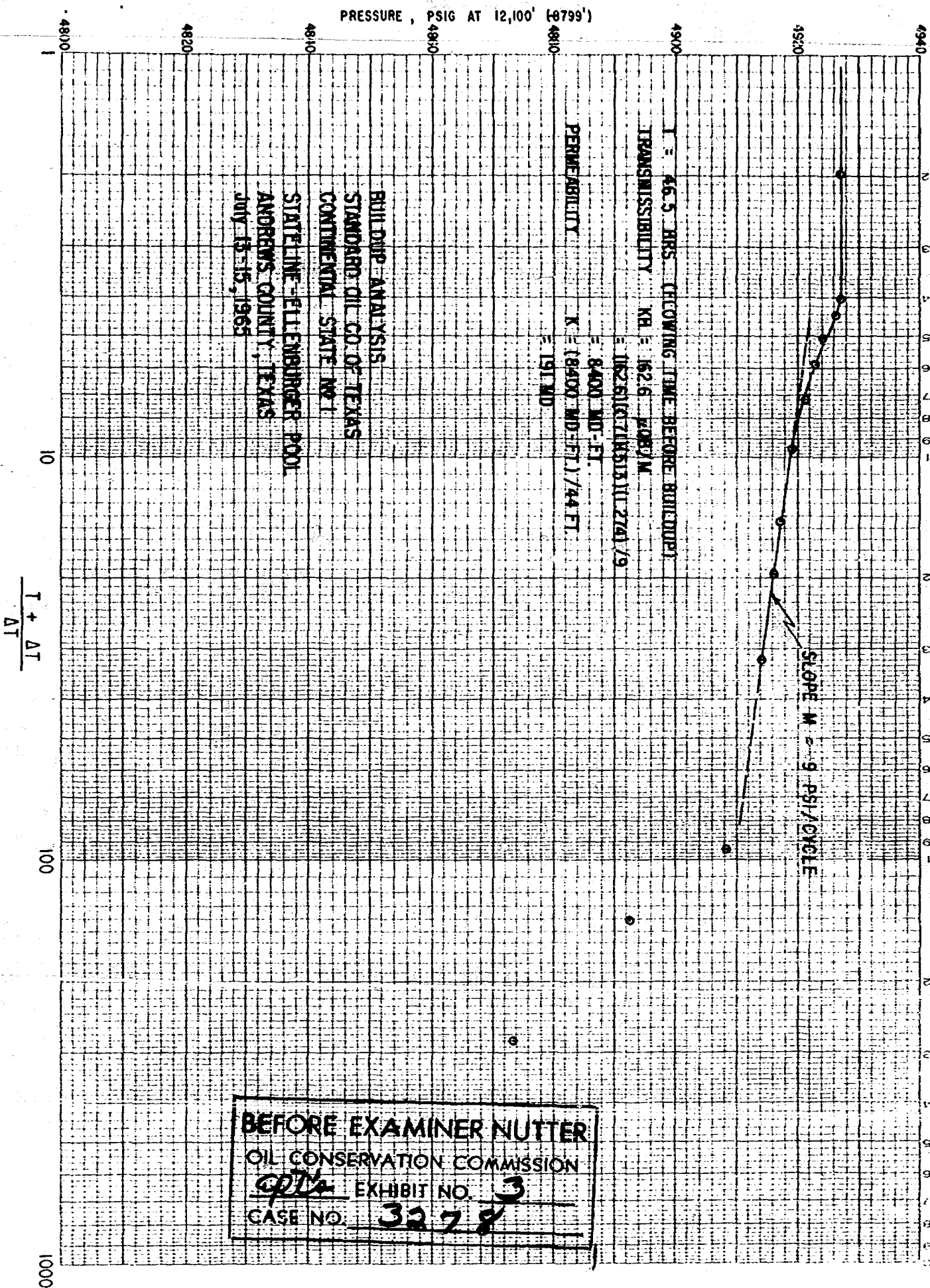
$t$ Days	$\frac{0.132}{t}$	$E_i\left(-\frac{0.132}{t}\right)$	$-Y\left(\frac{0.132}{t}\right)$	$P_i - P_r$ psi	$P_r$ psig
10	0.01320	-3.8	.75	35	4892
30	0.00440	-4.8	.221	99	4828
60	0.00220	-5.6	.447	199	4728
90	0.00147	-6.0	.673	298	4629
365	0.00036	-7.6	.2772	1220	3707

Thus, if an 80-acre interference test had been taken, a pressure drop of 35, 99, 199, 298, and 1220 psi would be expected in the observation well after producing the producing well for 10, 30, 60, 90, and 365 days. These substantial drops in pressure at the extremity of an 80-acre drainage area indicate efficient drainage of the area.

BEFORE EXAMINER NUTTER  
OIL CONSERVATION COMMISSION  
*apls* EXHIBIT NO. *4*  
CASE NO. **3278**

NO. 340P-LLOYD DIETZGEN GRAPH PAPER  
SEMI-LOGARITHMIC  
3 CYCLES X 10 DIVISIONS PER INCH

EUGENE DIETZGEN CO.  
MADE IN U. S. A.





COST OF DEVELOPING 640 ACRES  
STATELINE-ELLENBURGER POOL

Area Considered: One Section

640 Acres

Number of Wells Required:

40-Acre Spacing  
80-Acre Spacing

16  
8

Well Investment: (\$226,000 Per Well)

40-Acre Spacing (16 x \$226,000)  
80-Acre Spacing (8 x \$226,000)

\$3,616,000  
\$1,808,000

Savings by Development on 80-Acre Spacing:

\$1,808,000

BEFORE EXAMINER NUTTER  
OIL CONSERVATION COMMISSION  
*aprb* EXHIBIT NO. 2  
CASE NO. 3278



**RESERVOIR DATA SHEET**  
**STATELINE-ELLENBURGER POOL**

**1. Rock Properties**

- a. Average Porosity
- b. Effective Permeability
- c. Average Interstitial Water Saturation

3.3%  
33.9 md to 191 md  
37%

**2. Structural Features**

- a. Structure Map
- b. Oil-Water Contact
- c. Gas Cap Volume
- d. Average Pay Thickness

Submitted  
-9,000 Feet (Estimated)  
None  
215 Feet

**3. Fluid Characteristics**

- a. Oil Gravity
- b. Water Salinity
- c. Original Formation Volume Factor
- d. Solubility
- e. Oil Viscosity
- f. Saturation Pressure

43.3° API  
87,500 ppm  
1.27  
437 CFPB  
0.71 cp  
1,555 psig

**BEFORE EXAMINER NUTT**  
**OIL CONSERVATION COMMISSION**  
**EXHIBIT NO. 1**  
**CASE NO. 3278**

**4. Pressures and Temperatures**

- a. Original Reservoir Pressure at 12,224 Feet
- b. Reservoir Temperature
- c. Buildup Analysis

4,993 psig  
168° F  
Submitted

**5. Statistical Data**

- a. Discovery Well
- b. Discovery Date
- c. Oil Production (to June 30, 1965)
- d. Gas Production (to June 30, 1965)
- e. Water Production
- f. Number of Wells

Standard Oil Company of Texas  
Southland Royalty 16 No. 1  
May 3, 1965  
18,159 Barrels  
9,989 MCF  
None  
Two

**6. Individual Well Problems**

None

**7. Reservoir Drive Mechanism**

Unknown

**8. Recommendations**

- a. Rules
- b. MER

Submitted  
330 BPD until Texas discovery allowable expires, New Mexico 80-acre yardstick thereafter

Note: Porosity, water saturation, and pay thickness are weighted averages of two wells.

Case 3278

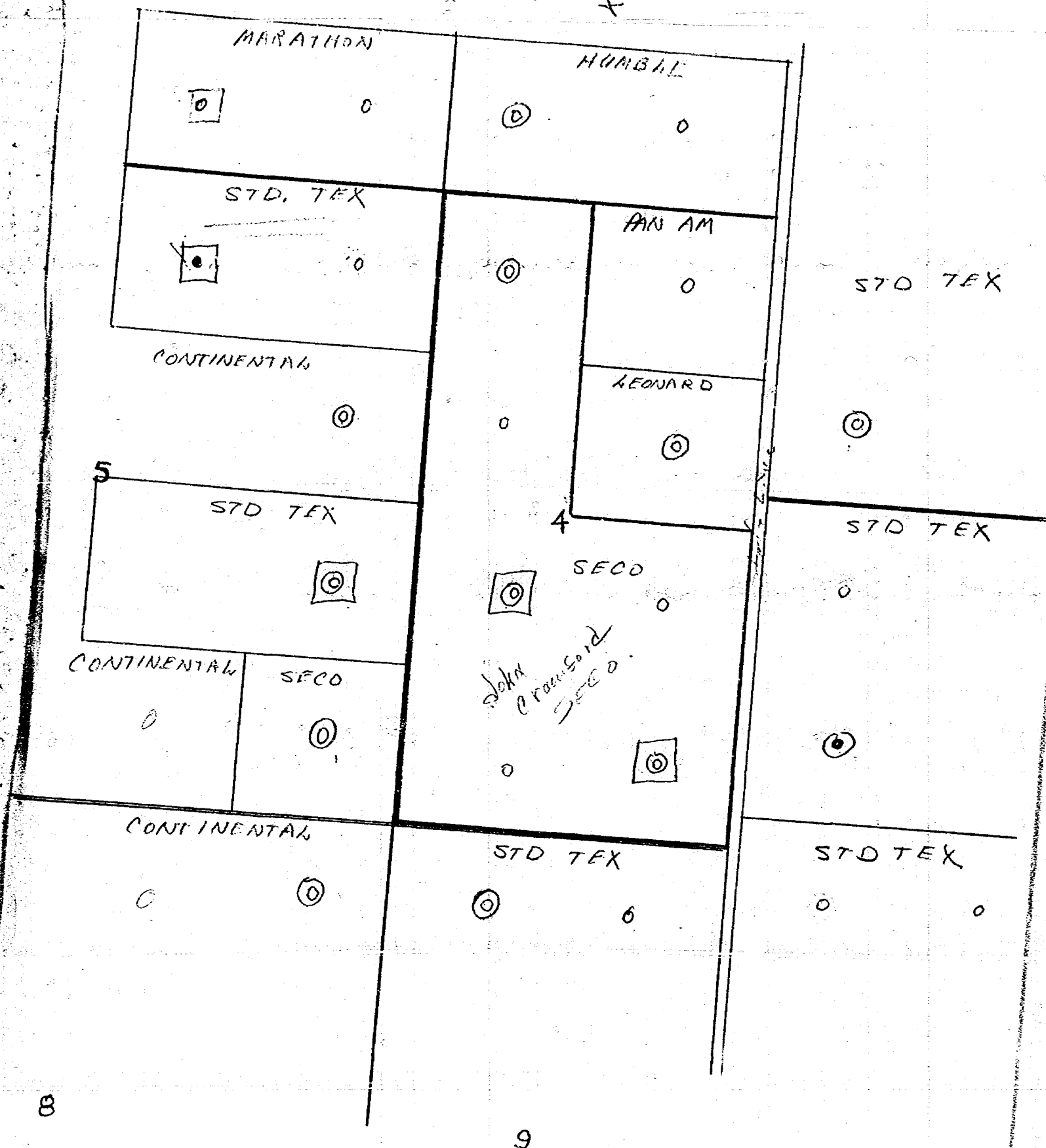
Wells or locations not within 150 feet of center of 40 acre tract.

Standard Oil Company of Texas  
Continental State #1-B Section 5, T24S, R38E  
Located 860 feet from north line and 1980 feet from east line.

Seco Production Company  
Crawford-State #1-N Section 4, T24S, R38E  
Located 660 feet from south line and 2213 feet from west line.

Seco Production Company  
Crawford-State #2-L Section 4, T24S, R38E  
Located 1980 feet from south line and 890 feet from west line.

- - 40 acre locations
- - 80 acre locations - flexible pattern
- - completed or drilling



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SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

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PAGE 1

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
July 28, 1965

EXAMINER HEARING

IN THE MATTER OF:

Application of Standard Oil Company  
of Texas for special rules for the  
Stateline-Ellenburger Pool, Lea  
County, New Mexico.

Case No. 3278

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

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SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

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PAGE 2

MR. NUTTER: We will call next Case 3278.

MR. DURRETT: Application of Standard Oil Company of Texas for special rules for the Stateline-Ellenburger Pool, Lea County, New Mexico.

MR. KELLAHIN: Jason Kellahin, Kellahin and Fox, Santa Fe, representing the applicant. We will have two witnesses, the same two who appeared in case 3277. I ask that the record show these witnesses have been sworn.

MR. NUTTER: The record will so show.

MR. KELLAHIN: At this time I would like to --

MR. JENNINGS: Would you like to have any other appearances at this time or later?

MR. NUTTER: Yes, we will call for appearances in 3278.

MR. JENNINGS: I am James T. Jennings, appearing on behalf of Mr. John Crawford. I would like to enter an appearance for John F. Russell of Roswell on behalf of Leonard Oil Company. Mr. Russell didn't get notice of the hearing until last week and he's involved in a trial in Roswell and it is not possible for him to be here. Mr. Leonard of Leonard Oil Company is here and might possibly would want to make a statement. We will have one witness and you may wish to swear him at this time or later.

MR. NUTTER: We will wait until the time that

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SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS  
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Mr. Crawford is going to testify, if he does.

MR. MALONE: Charles Malone of Atwood and Malone, Roswell, for Marathon Oil Company.

MR. NUTTER: Any other appearances? Would you proceed, Mr. Kellahin?

MR. KELLAHIN: If the Examiner please, I would like to offer, subject to any cross examination that may be indicated, the testimony and exhibits that were offered in Case 3277.

MR. NUTTER: Is there objection to the incorporation by reference of the testimony and exhibits in Case 3277 in the record of Case 3278?

MR. JENNINGS: There would be no objection other than to this letter that was introduced, and I don't think that would be proper testimony. It's not the order and I think it was a letter to Standard of Texas from --

MR. KELLAHIN: There it is.

MR. NUTTER: This particular letter may in all probability be more adaptable to the second case than it is to the first case. I have some extra copies if you want to keep a copy or two and introduce it in the next case.

MR. KELLAHIN: Do you object to this?

MR. JENNINGS: I think the best evidence would be the order itself.

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MR. KELLAHIN: The order hasn't yet been received and, of course, if the Commission desires we will submit a certified copy at that time. Will you stipulate that such an order has been entered or are you going to put us to the burden of proving it?

MR. JENNINGS: Let me look at your letter. I don't think I could stipulate that such an order has been entered because it says here "A formal order will be forthcoming," and it may be entered based upon this letter. I don't think this is binding on what the Commission in Texas will do. I think it's just what they might do.

MR. NUTTER: The letter has been accepted as an exhibit in Case No. 3277. I think it will be adopted into the record of this Case 3278 for what it is, it's a letter from Mac Coker, Senior Examiner of the Railroad Commission advising that at a formal conference held July 21, 1965, the Commission adopted certain rules, and that an order regarding these rules will be forthcoming. So we'll accept it for what it's worth, the letter dated July 22.

MR. KELLAHIN: We will call our first witness.

Mr. Cribb.

R. E. CRIBB

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Mr. Cribb, you are the same Mr. Cribb who testified in Case 3277?

A That's correct.

Q You've heard the testimony offered by Mr. Ramey in the same case, did you not?

A Yes, I did.

Q Did you hear his statement that he assumed your structure map was based on seismic work, is that a correct statement?

A It was based on a subsurface data and seismic data.

Q Was the subsurface data available from the wells that have been drilled?

A That is correct.

Q And that was utilized as well as with the information from seismic information by you?

A That is correct.

Q In connection with your geological study of this pool did you find any indication that one well would not drain at least 80 acres?

A We did not.

Q Did you find any indication that one well would



drain in excess of 80 acres?

A We believe that this is possible, due to the widespread nature of the reservoir and the type of permeability and porosity we have.

Q The type of permeability and porosity in the reservoir is adaptable to 80-acre spacing, is that your testimony here?

A Yes.

MR. KELLAHIN: I believe that's all I have on direct examination.

MR. NUTTER: Are there any questions of Mr. Cribb?

MR. JENNINGS: I would like to ask Mr. Cribb a few questions.

MR. NUTTER: Go ahead, Mr. Jennings.

CROSS EXAMINATION

BY MR. JENNINGS:

Q Was it your testimony that it is possible that one well will drain 80 acres, Mr. Cribb?

A Yes, it will drain 80 acres.

Q Will it drain 160 acres?

A In all probability, in time.

Q Well, what is the time compared -- have you made any study to determine the nature of the time as between 40 acres, 80 acres and 160 acres?

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A No, sir.

Q Has any study been made by anyone in your organization concerning that?

A No, sir.

Q What test have you run to enable you to make this decision that one well will drain 80 acres?

A I believe this was brought out in Mr. Hull's testimony.

MR. KELLAHIN: If the Examiner please, the witness's testimony as stated was based on the lithology, the characteristics of the reservoir rock and it had nothing to do with the engineering tests which would be applicable in a case of this kind. He is a geologist.

MR. JENNINGS: I'm sorry. No further questions.

BY MR. NUTTER:

Q Do you know of other Ellenburger reservoirs in which it has been established that one well will adequately drain 80 acres and if you do, how do the characteristics of the reservoir in those pools compare with the characteristics that you know in this reservoir?

A We have, actually in our portion of Texas, we have very few Ellenburger pools. I believe, I can't say for certain, we have just acquired New Mexico, of course, and we do not have Ellenburger pools there except this one; actually

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I'm not qualified to answer your question.

Q As of now you don't know of any Ellenburger reservoirs that can drain 80 which have characteristics similar to these?

A That's correct.

Q And primarily the testimony that you are offering today is that you don't see anything that will prevent it from draining 80 acres?

A That's correct.

Q But also you don't know of anything that would cause it to drain 80 acres?

A That's correct.

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

MR. KELLAHIN: May I clarify?

REDIRECT EXAMINATION

BY MR. KELLAHIN:

Q In response to the last question you stated that you didn't know of anything that would permit one well to drain 80 acres and you said "That is correct." In answering that did you take into consideration the reservoir characteristics of the rock?

A What I'm trying to say is that I think that one well will drain 80 acres due to the reservoir characteristics, the fractured nature, the widespread nature of the Ellenburger,

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the porosity and permeability as found in these two wells.

MR. NUTTER: Were any cores taken in either of the two wells that have been completed so far?

A The Continental State. The porosity, permeability, I believe, was obtained from these cores.

MR. NUTTER: I had understood Mr. Hull to say that the porosity was calculated from the sonic log and that the permeability was also calculated, or were those measured from cores?

MR. HULL: The porosities that we entered into the record were calculated from the sonic log after we had compared the sonic log in the Continental State to the core data in the Continental State. We did not core the entire Ellenburger interval; it happens that the cored interval has a higher porosity than some of the remainder.

MR. NUTTER: So this is your calculated porosity and permeability for the entire section?

MR. HULL: That's right.

MR. NUTTER: All of which was not cored?

A The porosity was for the entire section. The permeability was calculated from pressure buildup curves and is for the interval of the pressure buildup test. We don't have any logs that will allow us to extrapolate permeability from the measured information.

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MR. NUTTER: Are there any other questions of Mr. Cribb? He may be excused.

(Witness excused.)

MR. KELLAHIN: I'll call my next witness. Mr. Hull.

PAUL HULL

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Will you state your name, please?

A Paul Hull.

Q Are you the same Mr. Hull who testified in Case 3277?

A Yes, sir.

Q Mr. Hull, in connection with Case 3277 you offered evidence in regards to the characteristics of the reservoir. Do you have some additional data at this time to offer the Commission?

A Yes, sir, I do. We have several data, pieces of data information that we have stapled together. We would like to offer each sheet as a separate exhibit.

Q Mr. Hull, you are familiar with the application of Standard Oil Company of Texas in Case 3278, are you not?

A Yes, sir.

Q Will you state briefly what Standard proposes in

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this application?

A Yes, sir. Standard would propose the adoption of rules for the proposed Stateline-Ellenburger field which would provide for units of 80 acres, more or less, consisting of two contiguous quarter-quarter sections of a single governmental quarter section; and we would propose that the wells be located within 150 feet of the center of either quarter-quarter section, and, of course, that for good cause shown the Oil Conservation Commission could grant an exception to these locations or to non-standard units of less than 80 acres, or where the unorthodox size or shape of the tract is due to a variation in the legal subdivision; and we would propose that after this period that we discussed in the previous hearing where we recommended that the New Mexico wells have an allowable of 330 barrels, that after that period they revert to the 80-acre proportional factor of 7.75; and we would recommend that any non-standard unit would have an allowable in the same proportion as his acreage bears to 80 acres.

(Whereupon, Standard's  
Exhibit No. 1 in Case 3278  
was marked for identification.)

Q Now, referring to what has been marked as Exhibit No. 1 in Case 3278, would you discuss that information on that exhibit?

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A All right. This is data that has been taken from one or the other of the two completed wells in the pool, or in some cases it represents the average data where averages are applicable. I would like to highlight a few of these, the first one being average porosity, 3.3%, as I mentioned in the previous hearing. This represents information that was compiled from the sonic log.

In the Southland Royalty well the average porosity was 2.4% and in the Continental State Well, 3.9%. In the cored interval in the Stateline well, which we cored 91 feet and recovered 90, the average porosity I believe was 5.2%, but the sonic log indicated this to be the better portion of the section. The effective permeability, as I testified in the previous hearing, was calculated from the pressure buildup test in the two wells, being 33.9 in the Southland Royalty well and 191 millidarcies in the Continental State well.

An oil-water contact has not been definitely established in this field. We are using for the purposes of our calculations where this type of information is required, an oil-water contact at a subsea of 9,000 feet. This is based on the fact that our Southland Royalty well is completed with its bottom pressure at 8944 and drill stem test 13 in the same well recovered some heavily salt water cut mud on drill stem test, the bottom of which was at 9109, I believe; so

this would indicate an oil-water contact somewhere in between.

There's a, in the Southland Royalty well, at any rate, there is a rather thick, tight portion of the reservoir between those two depths, so it would be a little different. The logs just do not help in pinning it down any closer. The average pay thickness from the top of the Ellenburger to a minus 9,000 feet is 215 feet, this being 178 in the Southland Royalty, 251 in the Continental State.

A fluid study has been made by Core Laboratories, which has provided us with several of the characteristics of the oil, the saturation pressure being noteworthy at 1,555 psig. As pointed out in the previous hearing, the original reservoir pressure at 12,224 feet was 4,993 psig. The reservoir drive mechanism at this time early in the life of the field is, of course, unknown. Based on the other Ellenburger fields I think it's reasonable to assume that the Stateline Pool will have at least a partial water drive.

(Whereupon, Standard's Exhibit No. 2 in Case 3278 was marked for identification.)

Q Now, referring to what has been marked as Exhibit No. 2, would you discuss that exhibit?

A All right. Our Exhibit No. 2 is a comparison of the cost of developing a 640-acre section in the Stateline- Ellenburger Pool on 40-acre spacing versus 80-acre spacing.



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Obviously this would require 16 wells compared to 8, and at a well investment of \$226,000 per well this would require the expenditure of \$3,616,000 to develop on 40-acre spacing against \$1,808,000 to develop it on 80-acre spacing. This, of course, would indicate then a savings of \$1,808,000.

Q What's your well cost figure based on?

A This is based on the cost of our two wells that have been completed, and these are the numbers that we are submitting on our AFE's to drill.

Q Those are actual well costs then?

A Yes.

(Whereupon, Standard's Exhibit No. 3 in Case No. 3278 was marked for identification.)

Q Now, referring to what has been marked as Exhibit No. 3, would you please state what that exhibit shows?

A Yes, sir, this is a typical pressure buildup curve using the Horner method. It was prepared to determine transmissibility or permeability to be used in helping us determine whether or not a well would drain 80 acres. This is a slightly unusual curve. I wouldn't say unusual, but it isn't a simple curve.

The three data points to the far right indicate the formation damage around the well bore. The next four data points which you see fall in a straight line represent the

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permeability of the, or the contribution of the fracture system in the Ellenburger. Then the remaining points up to the first one at 4927 reflect the contribution of the matrix porosity, which is not only appreciably lower than the permeability of the fractures, but is probably not uniform.

You'll notice that that part of the curve is, in fact, a curve rather than a straight line. As far as drainage is concerned, the fractures are the controlling factor and you can see that the slope of that portion of the curve is nine psi per cycle. This gives us a transmissibility then of 8400 millidarcy feet.

This pressure buildup test was run over an interval of 44 feet and if we assume that that was the only portion of the reservoir contributing to this, it would provide permeability of 191 millidarcies, an effective permeability of 191. We will not quibble with the fact that probably more section than this was actually contributing, which, of course, would reduce the permeability proportionately, but the important item here is the transmissibility of 8400 millidarcy feet, which is quite high, and would lead one to very readily assume that this well will in fact drain 80 acres.

Q Will it drain in excess of 80 acres?

A Yes, sir, it would.

Q Then do you recommend that this pool be developed

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on the basis of 80-acre spacing?

A Yes, sir, I do.

Q You have discussed the economics from the operator's point of view. What advantages are there to the Commission in placing this pool on 80-acre spacing?

A Well, from the Commission standpoint, drilling this well on 80-acre spacing would prevent the drilling of unnecessary wells, which in turn would, of course, prevent economic waste. In addition, the money saved by drilling on 80 acres would release this drilling money for exploratory drilling and would provide the opportunity for the discovery of new reserves, which in turn would prevent the waste of oil resources that we haven't yet found, but which we perhaps could find with this money.

Q In the event this pool were developed on 40-acre spacing, in your opinion would that result in the production of oil that would not be produced on 80-acre spacing?

A No, sir, not in significant quantity. We feel that this field in all likelihood will prove to be water drive and the 80-acre wells properly located could recover the same oil as 40-acre wells.

Q Have you made any interference tests?

(Whereupon, Standard's Exhibit No. 4 in Case 3278 was marked for identification.)

A No, sir, these wells are too far apart for the short period of production to permit an interference test to

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be run. We have made a theoretical calculation that provides a suggestion of what an interference test would indicate if one could be run. This theoretical calculation is based on a paper by Dr. Guerrero, University of Tulsa, who in turn based his paper on the work of Horner, and Herr Van Aderdean, and we feel it has a sound petroleum engineering basis.

The situation that we set up here in this theoretical determination is that of an 80-acre finite reservoir surrounding the Continental State well. In other words, we assume here that no fluid will cross this 80-acre boundary and we make the further assumption, of course, since this is a finite boundary, a water drive would be of no influence. This is strictly from solution gas. This does not detract from the validity of this theoretical calculation, however, because the purpose of this is to see whether or not the matrix characteristics of the rock and the initial pressure of the reservoir are such that the well would drain the 80 acres.

Going on down to the data at the bottom where we have time in days running from ten days to three hundred sixty-five, and over on the right-hand side we have  $P_i - P_r$  in psi and  $P_r$  psig is the pressure drop that would be reflected by an observation well located on the 80-acre boundary, and the  $P_r$ , of course, would be the pressure recorded in that well.

You can see that in 365 days this well would reflect a

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pressure drop of 1220 pounds at the 80-acre boundary, and we believe this to be a definite indication, theoretical proof that one well will easily drain in excess of 80 acres.

Q As a matter of fact, in this particular pool would you anticipate this much of a pressure drop?

A No, we would not, because this is not a finite 80-acre pool and we believe that water drive will play a major part here.

Q In your opinion would the formula approved by Mr. Guerrero be --

A Yes, sir.

Q -- for the purpose of determining draining radius?

A Right.

Q And it is used by petroleum engineers for that purpose?

A Yes.

Q Have you prepared some proposed rules for the operation of this pool?

A We have, and these have been submitted as our Exhibit No. 5.

(Whereupon, Standard's Exhibit No. 5 in Case 3278 was marked for identification.)

Q Are there any of these rules you would like to discuss in particular?

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A The rules, I believe, are rather typical of a good number of the 80-acre spaced pools in New Mexico. We examined the rules of some 60 pools in New Mexico with 80-acre spacing and there is nothing in these that is inconsistent with a goodly number of those pools.

Q This would call for well locations on either 40 of the 80 acres, is this correct?

A Yes, sir.

Q Is there any particular advantage to this in a pool of this type?

A Yes, sir, there are several advantages. From a strictly engineering viewpoint, if this pool does prove to be water drive, as we have every reason to believe that it will, then it will be most efficiently drained by having the wells located at the highest structural position. We believe that each operator should have the opportunity to locate his wells at what he believes to be his best structural position. In addition to this I'm sure that every operator has their own geologic picture of this field and we believe that they should be allowed to drill what they feel to be the best location from that standpoint.

Q Well, would a spacing pattern with flexible well locations provide for adequate drainage of this pool?

A Yes, sir.

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Q Would it impair correlative rights to permit this type of location?

A No, sir.

Q Would any of the wells be offset by more wells than would be a normal situation?

A There certainly could result, this could result in a case where a specific well might be offset by more wells than on a fixed pattern, but if that well is located on a fairly large lease there will undoubtedly be other portions of that lease that enjoys a comparable benefit.

Q If it is a small lease would the offset well situation result regardless of the spacing?

A Yes, sir.

Q Are there any wells to which 80 acres cannot be dedicated in this pool?

A There are a few leases of less than 80 acres but there appears to be no reason why they could not be pooled either with each other or with a portion of a large lease to form an 80-acre unit.

Q Do you recommend one hundred percent acreage allocation?

A Yes, sir, we do.

Q What do you recommend as to the surface casing?

A We would, although we do not have a surface casing

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rule in our rules here, apparently through an oversight, we would recommend 450 feet of surface casing or -- excuse me, we would recommend 1400 feet of surface casing or 450 feet with a multi-stage tool set and cemented at 1400 feet.

Q Would that adequately protect the other horizons?

A That would adequately protect all the known water zones and would be comparable to the rule in Texas.

Q There was a hearing on this same pool in Texas?

A Yes.

Q Did you appear at that hearing?

A Yes.

Q Have you been advised as to whether any order has been entered or will be entered on that?

A I have been advised by a letter which was introduced in the previous hearing that at a formal conference held on July 21, 1965, the Commission adopted the following temporary rules for eighteen months for the subject field.

Q Does that include 80-acre spacing?

A Yes, sir, it does.

Q Does it include flexible well locations?

A The Texas rules for spacing are somewhat different from those in New Mexico. In Texas the rules, the spacing rules are directed toward the individual lease rather than toward the pool as a whole, so that the wording of the Texas



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rule will have the effect of requiring that no well be located nearer than 660 feet to a lease line and no nearer than 1700 feet to another well on the same lease.

Q Well, as between leases then, would that provide a flexible well location pattern?

A Yes, sir.

Q And a flexible well location pattern is what you are recommending in New Mexico?

A Yes, sir.

Q Do you know of any other Ellenburger reservoirs which are on 80-acre spacing?

A Yes, sir, just to the south of the Stateline field in Texas, and I believe it may also be a Stateline field, I mean being in both Texas and New Mexico, is the Dollarhide field which was developed on 40-acre spacing. Subsequent to that development the East Dollarhide field was discovered and is at a depth comparable to the Stateline field, and it was developed on an 80-acre spacing, and I think we can presume since many of the same operators operate in both fields they base their decision to develop on 80 acres on the basis of their experience in the Dollarhide field.

Q Do you think that the two reservoirs are comparable?

A Yes, sir, East Dollarhide and Stateline.

Q Are the reservoir characteristics similar?

A Quite similar.

Q Do you know anything of the rock characteristics of the Dollarhide?

A It is typical Ellenburger, which has very uniform characteristics over quite wide areas. I have not examined the lithology in these individual wells. I know of no reason why it would be expected to be different.

Q Are you recommending the proposed rules on a permanent basis?

A No, sir. We recommend that these rules be adopted on a temporary basis for a period of some eighteen months comparable to the Texas Rules, at which time we would anticipate a hearing to consider permanent rules.

Q Were Exhibits 1 through 5 prepared by you or under your supervision?

A They were prepared under my supervision.

MR. KELLAHIN: At this time I would like to offer in evidence Exhibits 1 through 5 inclusive.

MR. NUTTER: Standard's Exhibits 1 through 5 will be admitted in evidence.

(Whereupon, Standard's Exhibits 1 through 5 were offered and admitted in evidence.)

Q Do you have anything further to offer at this time, Mr. Hull?

A Yes, sir. We would like to--

(Whereupon, Standard's Exhibit No. 6 in Case 3278 was marked for identification.)

Q Now, referring to what has been marked as Exhibit No. 6, what do you propose to show by that exhibit?

A First I would like to say that this exhibit was not prepared under my supervision. This exhibit was, in fact, prepared prior to our Texas hearing, although I was not aware of it at that time. I would like to -- well, first the exhibit indicates our proposed rig moves for the development of the Stateline Pool in New Mexico, the Stateline field in Texas. This was prepared primarily so that our management could budget the monies that would be required for this.

I think that everyone will recognize that these rig moves could be changed after the drilling of each and every well; certainly our locations will be dictated by any new geological information that is furnished by the wells as they are drilled. I believe it does show two or three things, one is that in general Standard believes in spacing their wells rather widely where there is no reason why an off pattern location should be drilled. On the other hand we certainly would want to reserve, we would like to have the right under the rules to locate our wells where we believe they will most efficiently drain this reservoir and prevent the occurrence

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of waste.

Q Is this a firm commitment on Standard's part that these wells will be drilled in that order and at those locations?

A No, sir.

Q It is subject to changes?

A Yes, sir.

MR. KELLAHIN: At this time I would like to offer in evidence Exhibit No. 6.

MR. NUTTER: Standard's Exhibit No. 6 will be admitted in evidence.

(Whereupon, Standard's Exhibit No. 6 was offered and admitted in evidence.)

MR. KELLAHIN: That's all I have on direct examination.

MR. NUTTER: Are there any questions of Mr. Hull?

MR. JENNINGS: I would like to ask a few questions.

MR. NUTTER: Mr. Jennings.

CROSS EXAMINATION

BY MR. JENNINGS:

Q I believe you just stated, Mr. Hull, that it was Standard's policy to establish wide spacing?

A Yes, sir.

Q What dictated your policy in locating the well

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located in the Northeast Quarter of the Southeast Quarter of Section 5?

A Well, I am ordinarily not included in the group that locates these locations. However, it would be my opinion that this well was located here because this was only the third well to be, well, only two wells had been completed in the field and we were interested in drilling as close to a direct line as we could get between those two wells.

Q Do you feel that based upon the two wells that you have ample engineering data for the decision for 80-acre spacing?

A We feel that we have ample data for recommending temporary 80-acre spacing.

Q When was it first determined by you that this field could be developed on an 80-acre spacing basis?

A After we had run a buildup, pressure buildup test on our Southland Royalty No. 1.

Q When was that run?

A May 5th to 8th, 1965, sometime subsequent to that. That's when the test, the actual test was run. These data were calculated during the latter part of the week prior to June 19th when we presented this buildup curve on the Southland Royalty well at the hearing in Texas, so I would say, oh, between July 15 and 17.

Q When was this location made, do you know, that we've talked about?

A No, sir, one of our other people here may know that.

Q Do you know when the location was made that is located, oh, roughly in the Northeast Quarter, Northeast Quarter of Section 9? It's not that, but it's Northeast Quarter of the Northwest Quarter of Section 9.

A Section 9?

Q Yes, sir, this location here.

MR. CRIBB: This location hasn't been staked. That is a possible location.

MR. JENNINGS: Yes.

Q (By Mr. Jennings) Mr. Hull, I believe that it is your testimony that one well will efficiently drain 80 acres. Will it drain 160 acres?

A We did not make that calculation. My opinion, based on the data that we did calculate, and on Ellenburger reservoirs in general, is that it would.

Q Well, would your cost be reduced proportionately in accordance with Exhibit 2 and halved again if this was developed on 160-acre spacing?

A The drilling cost would be halved, yes, sir.

Q Are there other costs to be considered that you didn't mention in the cost of development there?

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A Well, the well battery cost would be more or less the same regardless of what spacing we used; the operating costs, of course, would be higher on the smaller spacing. There are some other factors to be considered, but the drilling costs are the bulk of the expenditures.

Q Well, why would it not be feasible then to develop this on 160-acre spacing?

A To be rather candid, we didn't think we could get 160-acre spacing.

Q The same economics would apply?

A Yes, sir.

Q Was it your testimony, Mr. Hull, that you do not feel that this would in any way impair correlative rights of any of the other lease owners in the pool by allowing this 80-acre spacing and allowing the operator to select a location under your proposed rule?

A Essentially that was my testimony, yes.

Q Would you refer to Exhibit 6?

A Yes, sir.

Q And referring to Section 4 in particular to what has been marked the John Crawford lease, 111774 --

A Yes, sir.

Q -- would you state how many possible offset locations there could be to that lease under your proposed

rules?

A Ten, including the diagonals.

Q In making your calculation, did you take into consideration the 40 acres that Mr. Crawford has in Section 5?

A Yes, sir.

Q Is it possible that that will happen?

A No, sir.

Q Why?

A Because our management has already stated internally and we have relayed this information to Mr. Crawford, that if 80-acre units are adopted in this field we will not drill two offsetting locations in the Northeast Quarter of Section 9.

Q Then that would reduce the possibility to nine?

A Yes, sir.

Q If there are nine offsetting wells drilled up against Mr. Crawford's 280-acre tract, do you feel that would impair his correlative rights?

A No more than any isolated tract. It always has more offsetting wells around it than it is able to drill itself, if you count the diagonal offsets.

Q How many diagonal offsets is that, counting just one?

A Two. It's counting one in the Northeast Quarter



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of Section 8 and one over in the Southwest Quarter of Section 15 in Texas, and also -- no, the Leonard offset is a direct offset.

Q Wouldn't there be two possibilities in the North Half in the Northeast Quarter of Section 8, a direct and a diagonal?

A Well, now, wait a minute. We were talking about John Crawford's L-shaped lease I though. Are we throwing this other 40 acres in there?

Q Yes, sir.

A We throw the other 40 acres in there, yes, sir. there could be another diagonal and obviously another direct, if that well is drilled only on 40 acres; but I would assume that if 80 acres are adopted, that that 40-acre tract would be unitized with the 40-acre tract to the west so that there couldn't be an offset there.

Q Your well, which is not numbered, but which is located in the Northeast Quarter, Southeast Quarter of Section 5 is off pattern?

A Yes, sir.

Q By the same token --

A Wait a minute, it's off pattern, assuming that we have fixed locations.

Q That's right.

A It is not off pattern under our proposed rules.

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Q But if there was a fixed location such as they have proposed in Texas, your well would then be off pattern?

A Not under the Texas rules.

Q Why?

A Because the Texas rules require that the well be no closer than 660 feet from the lease line and no closer than 1700 feet to another well on the same lease, and that one is not closer than 1700 feet to another well on the same lease.

Q Isn't all the lease on Section 5 the same lease?

A This might be the subject of some legal discussion, but engineering wise we consider that we have two 80-acre tracts on there and Continental has some other acreage. Any other interpretation I think would put Standard and Continental at each other's throats, which maybe this doesn't preclude what would probably happen.

Q But basically it is the same state lease?

A Yes, sir.

MR. NUTTER: Even assuming it's the same lease? Is it more than 1700 feet from the other well on that lease?

A Yes, sir.

Q (By Mr. Jennings) To clarify that, it's more than 1700 feet from the No. 1 well but the well that would be drilled as an offset to the Crawford acreage would be less than 1700 feet from it. It would be 1330 feet from the proper location

there.

MR. NUTTER: From a well in the South Half of the Northeast Quarter, is that right?

MR. JENNINGS: That's right, Southeast, Northeast Quarter.

MR. KELLAHIN: That's on the assumption this is one basic lease. There's been an assignment made of the lease. It is not the same basic lease even though it may have come out of the same lease.

Q Has there been an assignment of this lease or just the operating rights?

A I don't know whether it has been made yet or not. It may not be made until after we complete this well, but an assignment will be made.

Q (By Mr. Jennings) Again referring to your Exhibit 6, based upon the Texas rules, your proposed location, located in Section 9 in actually the North Half, Northwest Quarter, would again be off pattern, wouldn't it?

A Yes, sir. No, sir, no, no, not based on Texas rules. No, sir, it's not within 1700 feet of any other well on that lease.

Q But it would be a direct offset to the drilling Crawford well?

A There's nothing that precludes that under the

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Texas rules.

Q Have you made any studies to determine the economics of a 40-acre development as against an 80-acre development of this property?

A Well, I submitted as one of our exhibits the investment difference.

Q There's nothing considered in there except possibly the cost of drilling the well and the cost of the tank battery?

A That's right. That's all.

Q Has there been any discount figure applied thereto?

A No, sir.

Q Do you ever do that in developing the economics of this well?

A Yes, for internal purposes. I didn't think it was particularly pertinent to this.

Q You spoke of your being able to develop, do other exploratory work by saving this money. Do you feel that everybody in this area is similarly situated to the Chevron Oil Company?

A How do you mean that?

Q That they would want to do other exploratory work rather than exploring this particular lease.

A I believe this is a safe assumption as far as the majors is concerned. My conversations with people in other

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major oil companies indicates that they all have more or less so much money for drilling and this is the way it goes.

Q Are there others than majors involved in this?

A There are other majors involved here.

Q Are there others than majors involved here?

A Yes, yes.

Q Mr. Crawford?

A Yes.

Q And Leonard Oil Company?

A Yes, sir, Leonard.

Q Where, roughly, from your evaluation, where does the Crawford acreage lie with respect to the high portion of the structure?

A Very good.

Q Is that true of the Leonard acreage too?

A I'll take a look at our picture here. Yes, sir, both of those are located quite favorably on one of the twin peaks of that double high we have mapped there.

Q Then the natural tendency, if it was developed on 80 acres, would be to crowd their line, is that right?

A On our map I would say that that is right, qualified, of course, with our previous statement that we would drill only one location, only one of the two quarter-quarter locations directly offsetting Mr. Crawford's tract on

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our lease in Section 9. Which one of those we would drill, I don't know.

Q But that's not a firm commitment?

A Yes, sir.

Q Are you in a position to make that commitment?

A Yes, sir.

Q Now, Mr. Hull, this formula that you discussed, frankly it was a little beyond me. That's strictly theory, isn't it, the Guerrero?

A Yes, sir, that is theory; in Dr. Guerrero's papers, however, he used as an example a field in which sufficient production history is available to corroborate his theoretical findings.

Q No such tests have been made on this property?

A Oh, of course not.

Q Do you know, based upon your testimony that has been presented as to the proposed allowable, how long it would take to pay out a well located on a 40-acre spacing?

A I don't recall the exact number, but I believe it's something on the order of a year. I may have that. No, sir, I do not have payout calculation with me.

Q Would it, in your opinion, be less than a year?

A I prefer to stick to the approximately a year. I don't know. I do not recall.

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Q Do you have any other information which would lead you to believe that it would be uneconomic to develop this on a 40-acre than the normal 40-acre basis?

A Well, if you want to ask will a 40-acre well pay out, it certainly will, but I think any time we spend 1.8 million dollars a section unnecessarily developing a field, that this is uneconomic.

Q Well, doesn't Standard of Texas have large segments of acreage to the Northwest of your well, Continental well located in Section 5, and also large holdings in Texas?

A Yes, sir. We have several. We have four 80-acre tracts in Section 32 and we have a partial interest in the partial Section 33 and we have partial interest in a number of sections in Texas.

Q There would be nothing to prohibit you from voluntarily developing those tracts on an 80-acre basis?

A Except protection of correlative rights if the others develop on 40. I think our landowners would be screaming.

Q You mean the State of New Mexico?

A The State. I believe if everyone else developed on 40 and we had 40-acre rules they would not take very kindly to our developing on 80's.

Q The Section 32 and the rest of that section, is that

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owned by Marathon?

A Yes, sir.

Q Wouldn't a 40-acre development there create a cash flow that would really stimulate development?

A There's no question cash flow would be greater. I think there is plenty of reason to put a price on this cash flow and we believe that price is too high to develop it on 40's. I think this is definitely economic waste to do it.

Q What is the maximum that you feel can be produced from one of these wells without injuring the reservoir?

A Our Continental State well, for the last week, has produced at an average of 360 barrels a day. I feel this is without injury to the well. I can give you the tubing pressure on that, that's through 11/64 choke with a tubing pressure of 11,040 pounds.

Q Do you feel this could be continued indefinitely?

A Not indefinitely.

Q Well, for what period?

A Well, certainly for several months. We haven't made the calculations that would permit us to fix an exact date on it.

Q Could a well produce as much as 360 or 90 barrels without injuring the reservoir?

A For a short time. At least this well could.



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Q Well, for how short a time, for eighteen months it would be allowed in Texas?

A I wouldn't want to say that.

Q If a well were drilled I think, if the Crawford No. 1 State was allowed to produce its maximum allowable from that well, based upon your suggested allowable, might it not injure the reservoir if produced for eighteen months?

A If, of course, this proves to be a water drive reservoir I would say it would not injure the reservoir.

Q What if it does not prove to be that?

A Then I don't think it will make it.

Q Do you know what the allowable would be under your suggestion for that well?

A Well, it would be approximately 87-80's of 330 barrels.

Q Wouldn't it be 94-80's or 93-80's?

A Well, this would depend on which way you run your unit.

Q By the same token the Leonard Unit will have to be, if there is a unit, I believe that's what is marked there as a proposed Leonard well located in the Southeast Quarter, Northwest Quarter of Section 4?

A Right.

Q That would be approximately 24 acres allocated to that well?

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A If Leonard and Pan American form one. If Crawford, Leonard and Pan American form one it would be only 87. At 94 acres that would be 388 barrels per day. I would like to point out, if I may, that Texas is not going to have an allowable of 330 barrels for eighteen months; in all probability, based on our proposed drilling schedule, the sixth well in Texas will probably be completed early in 1966. So we're talking about six months.

Q Does the major portion of this field appear to be in New Mexico?

A Slightly more than half, according to our picture.

Q Have you made any test, Mr. Hull, to determine the effective pay zone in this, have you established the water table?

A We ran a series of drill stem tests in our Southland Royalty well that would provide the only data that we have as far as the effective zone is concerned.

Q In the Continental well you didn't drill through the pay?

A No, sir. We stayed -- we completed the well, well above what we thought was water.

Q How much more pay do you anticipate you have in that well?

A The total depth of that well is 12,158 according to Schlumberger. It has a Kelly bushing of 3301 plus 9,000

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subsea of the stimulated water table would be 12,301. This would be approximately 140 feet. That, by the way, is included, that 140 feet is included in our estimated -- we term that pay thickness on our Exhibit No. 1.

Q What 215?

A That's the average. In the Continental State we are using 251 feet, which is the 91 feet that was cored plus the approximately 140 feet from total depth to the estimated water.

MR. JENNINGS: That's all. No further questions.

MR. NUTTER: Are there any further questions of Mr. Hull?

MR. DURRETT: I have a question, please.

BY MR. DURRETT:

Q Mr. Hull, have you determined which of the wells in New Mexico, if any, would be non-standard locations if you are 150 feet from the center of either quarter-quarter were adopted by the Commission?

A I believe that the two Seco wells would fall in this category. This results in the little lot being on the east end of those 80's and the Seco No. 1, I believe, is located 660 from the state line, which makes it fall outside of the 150 feet radius from the center of that quarter-quarter section, if I am not mistaken.

MR. JENNINGS: I haven't measured it. I couldn't tell you.

Q (By Mr. Durrett) Both Seco wells then would be non-standard locations you feel?

A Well, I haven't actually measured it, I am just looking from where they are spotted on this map, but I believe that's right.

Q What about your Continental --

A Excuse me, yes, sir, our Continental State No. 1 is also -- excuse me, yes, that is 860 feet from the north line, which would make it fall outside.

Q So we would have three wells that would be on non-standard locations, and I presume that you would recommend that they be excepted from the rules?

A Yes, sir. I don't believe any of the other wells. Now, the Leonard location is staked on a non-standard location, if it is indeed where we have it plotted on our map.

Q How far would that well be off?

A I'm sure it's 660 feet from the state line and it's -- this scale is about 450 feet from the quarter-quarter line, which would mean it's about 200 feet from the center of the quarter-quarter section.

Q That would be about 50 feet off then, under your rules?

A Yes. That's approximately the distance that the others would be off too.

Q We would have four wells, we believe, that would be off pattern and they all would be off about 50 feet, something like that?

A Let's see, yes, sir.

MR. DURRETT: Thank you.

MR. JENNINGS: Just one question.

BY MR. JENNINGS:

Q Is the No. 2 Crawford well off?

A I believe that it is. I think it's staked 1900 some feet from the state line. I could be mistaken on this. This is just what we show on our map, which means it would be off by the same amount that the other well is off.

Q If the Crawford well is off it's by reason of the lots?

A Yes, sir. I might point out that our Continental State No. 1 was spudded, drilling to a shallower depth than the Ellenburger, and, of course, after it was decided to deepen to the Ellenburger we naturally didn't redrill the well.

MR. JENNINGS: That's all.

BY MR. DURRETT:

Q Mr. Hull, if the rules were 200 feet from the center, that would just about cure all of those, wouldn't it?

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A Yes, sir, and subsequent to preparing these we discussed within our company the advisability of asking for two hundred because of the topographic problems in the area, which I understand are rather severe. The new Marathon location they could not locate on the center, they're well removed from the exact center but within the 150 feet, but I think we can anticipate that if we do adopt 150 there are probably going to be several applications for exceptions for topographic reasons.

Q If the Commission would go to two hundred from the center, you think that would at least help?

A Yes, sir.

MR. DURRETT: Thank you.

BY MR. NUTTER:

Q Have any other formations proved productive in this area as yet?

A No, sir.

Q I noticed on a scout well, the Seco well has a drill stem test at 150 feet and recovered some oil or free oil or oil-cut mud. Do you know what information that was?

A I'm not familiar with that.

MR. CRIBB: I believe that was Wolfcamp.

MR. NUTTER: Are there any further questions of Mr. Hull? He may be excused.

(Witness excused.)

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

MR. KELLAHIN: That's all at this time, Mr. Nutter.

MR. NUTTER: Are you going to put a witness on?

MR. JENNINGS: I would like to put Mr. Crawford on.

MR. NUTTER: We will take a fifteen-minute recess.

(Whereupon, a recess was taken.)

MR. NUTTER: The hearing will come to order, please. Mr. Jennings, will you proceed with your case, please?

(Witness sworn.)

JOHN L. CRAWFORD

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

DIRECT EXAMINATION

BY MR. JENNINGS:

Q Would you state your name and occupation, please?

A John L. Crawford. I'm in the oil business.

Q Mr. Crawford, do you own a state lease located in Sections 4 and 5, Township 24 South, Range 38 East?

A Yes, sir.

Q When did you acquire this lease?

A Well, I acquired the one which covers acreage in Section 4 and the Southwest of Section 5 in November of 1964.

Q That's how many acres in that?

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A I believe there's three hundred and a fraction.

Q At what price?

A \$77,000.

Q I believe you stated that was a state lease?

A Yes.

Q Are you currently developing that lease, Mr. Crawford?

A Yes.

Q Have you made any calculations to determine the advisability of developing that lease on a 40-acre basis?

A Yes, I have some figures in mind and an opinion on the advisability as far as my personal circumstances are concerned.

Q You feel that it is economic to develop this acreage on a 40-acre basis?

A It's a very attractive proposition as far as I am personally concerned.

Q How long have you been in the oil business?

A Oh, to varying degrees for twenty years.

Q Upon what do you base your decision that this is an attractive proposition?

A Well, it will cost somewhere between two hundred twenty-five and two hundred fifty thousand dollars to drill and complete a well, and on an allowable of 250 barrels a day



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for thirty days, which is the state allowable, as I understand it, here in effect in New Mexico at this minute, that would throw off somewhere between twenty-five and twenty-five thousand dollars a month to the working interest, it would pay out in twelve months, and from then on I am counting the profit. That makes great sense to me.

Q To a man in your situation do you feel it's economically advisable to proceed on this basis?

A I would like to be free to proceed on that basis.

Q Mr. Crawford, you have heard the testimony introduced here this morning concerning the 80-acre spacing. How do you feel that such a proposal will affect your correlative rights?

A Well, I think it's inevitable that my acreage in Section 4 is going to be surrounded with eight or ten wells located 660 feet from a lease line, and under these rules I'm going to be issued three straws and expected to compete with my neighbors who have eight or ten straws in the reservoir, and it seems patent to me that's a fairly painful invasion of my correlative rights.

MR. JENNINGS: I have nothing further.

A I would like to make one other comment on the economics of this thing. According to my calculations, if I'm confined to three wells on the acreage in Section 4, I'll

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have about seventy-five thousand a month, if I have six wells and developing on 40, I have exactly twice that or \$150,000 a month. The wells pay out in twelve months over the next five years, which is about as far as I, an independent, project these things. I would have an excess cash flow on a 40-acre basis of 100,000 a year, which on the theory that the money you save here is kept for further development, I am going to have more money for further development by keeping my money and drilling it on 40 than drilling it on 80.

As far as economics to Crawford personally is concerned, I go home with a lot more on 40-acre spacing. It seems if they're going to ring me with eight to ten 660-foot offsets that I have a pretty good claim for some equitable relief.

MR. NUTTER: Are there any questions of Mr. Crawford?

MR. KELLAHIN: I have one.

MR. NUTTER: Go ahead.

CROSS EXAMINATION

BY MR. KELLAHIN:

Q Mr. Crawford, you say on 40-acre spacing you would have three wells?

A No, on 40 acres I would have six wells.

Q I mean on 80 you would have three wells.

A Yes, on the acreage in Section 4.

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Q You are not considering Section 5?

A No, the statement I made is confined to the acreage in Section 4.

Q How many wells would you be offset with, then, if they were drilled on 40's?

A You would have to count them up. That would not frighten me any, let me say if I were permitted to drill mine on 40, I'd have seven direct and one diagonal in New Mexico, isn't that right?

MR. HULL: I don't believe so.

A Well, I was not counting that acreage.

MR. HULL: Well, I think it would have to be counted.

A Altogether, well, if I have to count that, then I would have to revise my other statement too.

Q (By Mr. Kellahin) Then you can revise your other statement, because it's all your acreage.

A I guess it's ten, isn't it, in New Mexico?

MR. HULL: In New Mexico?

A Yes.

MR. HULL: Yes.

Q (By Mr. Kellahin) It would be ten, that would be correct. How would that afford you any better protection than if it were drilled on 80's?

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A You mean having ten wells drilled around me?

Q No, how would your drilling your acreage, drilling your acreage on 40 afford you any protection from being drained?

A Simply because if it's based on 80, under the rules now proposed I'm going to end up with seven direct offsets anyhow, and you are going to confine me to three wells on my tract.

Q Well, that would assume, of course, that you are going to get two wells on the acreage in the northeast of Section 5, is that correct, Pan American and Leonard Oil Company, you count two wells there, is that correct?

A Right.

Q Well, actually that would be more likely to be a unit, you would only have one well there which would be only six?

A I don't know. Mr. Leonard feels very strongly that he would like to drill that himself, I believe, but he can speak for himself.

Q But if it were drilled on an 80 it would be more logical to form a unit, wouldn't it?

A It wouldn't be logical to me if I had the Leonard acreage.

Q Even if an 80-acre order were entered by the

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Commission?

A The Pan American acreage on your geology is downdip. It would take a little trading with Pan American to adjust the inequities of throwing in that downdip acreage. That's the whole point of this thing. Everybody assumes that the crest of this thing is across there and the effort is to locate the structural high wells up against my line and tie in with it downdip less well-located acreage.

MR. KELLAHIN: That's all. Thank you, Mr. Crawford.

MR. NUTTER: Any other questions of Mr. Crawford?

MR. JENNINGS: No further questions.

MR. NUTTER: He may be excused. Do you have anything further, Mr. Jennings?

MR. JENNINGS: No, sir, we have nothing further. I think that Mr. Leonard, as I stated, would like to make a statement, and he is here.

MR. NUTTER: Mr. Leonard.

MR. LEONARD: With your permission, Robert J. Leonard, President of Leonard Oil Company, Roswell, New Mexico. We concur with Mr. Crawford in his position, and we would like to develop our acreage, which is 47 acres, on a 40-acre basis, simply because it's real good economics to us. Any time we can find a reservoir which we can drill a well and get our money back in twelve months or less, why we've made a good

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deal and we want to take this opportunity. We don't particularly care about having any partners just simply because of standard geology. We don't particularly want to invite anybody into the deal.

The only way we can protect ourselves is to drill and complete a well on this tract, and this is the kind of a situation that keeps the companies our size in the business, and we feel we have a bird in the hand on the ground and we would like your permission to drill 40-acre tracts.

MR. NUTTER: Has that well been spudded yet?

MR. LEONARD: No, it's been staked. It's in the center of the 47 acres.

MR. NUTTER: The center of the 47?

MR. LEONARD: Yes, sir.

MR. NUTTER: Any questions of Mr. Leonard?

MR. KELLAHIN: Is the 47 acres all you have in the pool, Mr. Leonard?

MR. LEONARD: Yes.

MR. KELLAHIN: On the basis of the geology you wouldn't be hurt by Crawford, would you?

MR. LEONARD: No, except we would just as soon to take care of our own business.

MR. KELLAHIN: I am talking about the geology and the engineering business.

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MR. LEONARD: Yes, we find that we take this stuff to the bank, that's the best geology and engineering.

MR. NUTTER: Does anyone have anything else to offer in Case 3278?

MR. MALONE: We have a statement from Marathon. Marathon Oil Company has a substantial amount of acreage within the proposed productive limits of the proposed Ellenburger Pool. Marathon has commenced the drilling of a well at a location of 560 feet from the South Line and 2,080 feet from the East Line of Section 32, 23, 38. Marathon recommends that temporary pool rules be adopted providing for 80-acre proration units consisting of any two contiguous quarter-quarter sections with the well located within 150 feet of the center of either of the quarter-quarter sections.

This recommendation is based on the information presently available, which strongly supports the conclusions that in this pool each operator should have the right to select the location of his well within the limits stated in order to have a fair opportunity to produce his fair share of the recoverable hydrocarbons in the pool.

The presently available information also strongly supports the conclusion that the adoption of 80-acre proration units in temporary rules will prevent drilling of unnecessary wells and that the proposed rules would prevent

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waste and protect correlative rights.

MR. NUTTER: Thank you, Mr. Malone.

MR. LYON: V. T. Lyon with Continental Oil Company. Continental Oil Company owns acreage within the boundaries of the Stateline-Ellenburger Pool proposed by Mr. Ramey this morning. Continental is a strong advocate of temporary wide spacing in order that wells that may ultimately be shown to be unnecessary are not drilled. We supported Standard's application in Texas and we would like to support their application here in New Mexico also.

MR. NUTTER: Thank you, Mr. Lyon. Anyone else?

MR. DURRETT: If the Examiner please, I have a telegram that the Commission has received from Pan American Petroleum Corporation which reads as follows: "Pan American Petroleum Corporation, the owner of working interests in acreage within the apparent productive limits of the Stateline-Ellenburger Pool respectfully requests the adoption of temporary 80-acre proration units for the pool. The Texas portion of the Stateline-Ellenburger field is currently assigned to that discovery allowable of 330 barrels of oil per calendar day per well. Pan American respectfully requests that the Commission assign the New Mexico portion of the Stateline-Ellenburger Pool a top allowable of 330 barrels of oil per calendar day per well for wells located on 80-acre



proration units.

"The Pan American further recommends that temporary field rules include provision for having allowables of non-standard units greater than or less than 80-acre, but proportionately on one hundred percent acreage and 330 barrels of oil per day top allowable for an 80-acre unit."

MR. NUTTER: Thank you, Mr. Durrett. Is there anything further?

MR. KELLAHIN: If the Examiner please, I would like to make a brief statement, if I may. Standard Oil Company of Texas, of course, has submitted the proposed rules in line with the presentation made by them before the Texas Railroad Commission. It has been indicated by a letter, which is in the record here, that an order will be entered setting up 80-acre proration units in the State of Texas with 330 barrel a day allowable.

If we are to prevent the impairment of correlative rights by the Stateline situation, we will have to make some adjustment to the situation which now exists in the State of Texas, and the logical and correct solution in our opinion is to create the 80-acre proration units with the same allowable as assigned in Texas, pending the termination of the discovery allowable, after which the pool would revert to the regular 80-acre allowable under the New Mexico rules, and this will also, as testified by Mr. Hull, be proposed to the State of

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Texas.

The State of Texas has already been advised that this is what they will come back and ask for. In the presentation of the case in Texas it is my understanding that Mr. Crawford was represented there and made no effort to get the rules in that state on 40 acres. I assume this is because he has no acreage in Texas, but certainly he is strongly affected by the rules adopted in Texas since he's directly offset by lands in the Texas side of the pool. Certainly in talking about how many offsets he's going to have, he is counting the wells drilled in Texas. I stand corrected, on the 40's he did not count those in Texas. He did count them in determining how many offsets he would have on 80-acre development.

In many instances this Commission has adopted well locations in fixed 40's. As the testimony has been presented in this case, there is nothing that would justify such a fixed well location simply because of the nature of the reservoir as it has been determined up to the present time. If it is a water drive reservoir, as our engineers have testified they believe it to be, the logical manner to develop it will be on a flexible spacing pattern, which in turn will permit anyone in the pool to drill at the location they feel that is best under the circumstances.

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Now here again, we are only asking for a temporary order to terminate at the end of the effective rules in the State of Texas, which would be eighteen months. Normally this would be a year, but we think it should coincide with the rules in Texas, and this is one of the Stateline Pools that the Commission has faced this problem in the past and worked out rules compatible to those rules adopted in Texas.

We feel strongly that the same thing should be done in this case. The economics may be good for 40's from the point of view of producing oil from wells that will pay out in a short time, but from the point of view of sound economic practice, when you are spending twice as much money to get the same amount of oil, as our witnesses have testified, and that testimony has not been refuted, that is economic waste, and certainly the Commission should encourage the drilling of economic wells. The payout is not the only measure of an economic well.

The real economics of an oil well is what it will produce in the way of depleting the reservoir within the reasonable economic limit of time. We feel that 80-acre spacing proration units will adequately protect all of the operators in the pool and give them a fair return for their money.

MR. NUTTER: Mr. Jennings.

MR. JENNINGS: Well, I would just like to make a

very few observations. The first, it is our feeling that Standard, who was the original operator in there, broke the spacing pattern and now they're in there seeking to limit Crawford, and as Mr. Crawford well pointed out, he is going to have three straws in the wells and he's right in the center, and he's going to be ringed with these others. It's quite apparent from the pattern that has developed that everybody downdip is going to be pushing up against him.

Now, the Standard also has taken the good things out of Texas and wants to be freed from the things that might restrict him to some extent. They want to be free to put the wells wherever they want to on the 80 acres and they certainly didn't get this in Texas. They want the 80 acres, but on the other hand, they want Texas 80-acre spacing, but they don't want to be limited.

Now, it is our feeling that there's only two wells been drilled in there and there's five wells drilling at this time and it would seem to me that it would be a poor time to establish temporary rules until we have had an opportunity to look at the situation.

As the Commission well knows, there's very few Ellenburger pools that are on 80-acre spacing. Generally they have been developed on 40 acres and the Justis Pool to the south is on a 40-acre and been producing for many years, and

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what might be good economics to the Standard or the Marathon or Continental or Pan American are certainly not good economics to Leonard Oil Company or to Mr. Crawford. This is their opportunity. They have the acreage and they feel very strongly that they should be able to develop, and Mr. Crawford's situation is such that if he is ringed and not able to develop his acreage on the 40-acre basis, his correlative rights will certainly be impaired.

MR. NUTTER: Thank you. Is there anything further?

MR. KELLAHIN: I would like to answer a couple of things stated here by Mr. Jennings. It's a little difficult to see how we broke the spacing pattern when they drilled first. If anybody did break the spacing pattern it was Crawford when he staked his locations. We have no objection to that. There was no spacing pattern at the time the well was drilled in the first instance, so you can't say that anybody broke the spacing pattern up to the present time.

There are flexible spacing patterns in Texas simply because of the Texas rule, as testified by Mr. Hull, and you can drill practically any flexible pattern in New Mexico. Because of the way that the rules operate in Texas, certainly they give you footage location, but it's confined to the lease and you get on the next lease you start over again.

As to the 160-acre spacing, I would like to point out

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that the Southwest Midland field in the State of Texas is drilled and developed on 160-acre spacing in the Ellenburger Pool.

MR. NUTTER: If there's nothing further we will take the case under advisement.

STATE OF NEW MEXICO )  
COUNTY OF BERNALILLO ) ss

I, ADA DEARNLEY, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

Witness my Hand and Seal this 12th day of August, 1965.

Ada Dearnley  
NOTARY PUBLIC

My Commission Expires:

June 19, 1967.

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I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 3278  
heard by me on 7/28, 1965.

*[Signature]* Examiner  
New Mexico Oil Conservation Commission

OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

Date 7/29/65

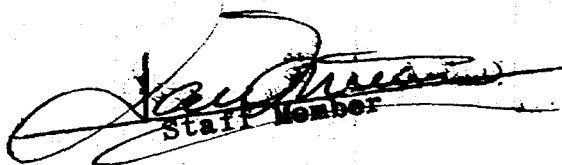
HEARING DATE 9am 7/28/65  
DSN @ SF

CASE NO. 3278

My recommendations for an order in the above numbered case(s) are as follows:

Enter an order providing for temporary 80-acre spacing & production units for the State Line Edenburger Pool in Sections 4 & 5, T24S R38E. Also pool rules set forth in applicants Exhibit 5 with the exception of Rules 6 and 7. Provide instead that the pool top unit acreage for the pool shall be determined in accordance with Order No R- (entered in Case 3277)

Provide that this case shall be called up for a show cause hearing during January, 1967.

  
Staff Member



AMERADA PETROLEUM CORPORATION  
P. O. BOX 2010  
TULSA 2, OKLA.

JUL 28  
MAIL  
1965

July 26, 1965

New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Re: Cases 3277 and 3278  
Hearing on July 28, 1965

Gentlemen:

Amerada Petroleum Corporation is a working interest owner in the Stateline Ellenburger Field in Texas but does not own any acreage in Sections 4 and 5, Township 24 South, Range 38 East, in New Mexico.

Amerada's position in Case 3277 is that allowables in Texas and New Mexico should be assigned on an equitable basis, an equal allowable per acre of proration unit.

Amerada's position in Case 3278 is that it supports that part of the application of Standard Oil Company of Texas for special pool rules which provide for 80-acre proration units, inasmuch as Texas has adopted this spacing

Very truly yours,

*R. L. Hocker*  
R. L. Hocker

RLH:dw

The following parties are believed to be interested in this application:

Continental Oil Company, P. O. Box 2197, Houston, Texas 77001  
Mr. John L. Crawford, P. O. Box 4723, Midland, Texas  
Humble Oil & Refining Co., P. O. Box 1600, Midland, Texas  
Leonard Oil Company, Security National Bank Bldg., Roswell, New Mexico  
Marathon Oil Company, P. O. Box 552, Midland, Texas  
Pan American Petroleum Corp., P. O. Box 1410, Fort Worth, Texas  
Southland Royalty Company, P. O. Box 1515, Midland, Texas

The applicant requests that this application be set for hearing on July 28, 1965, and that after notice and hearing as provided by law the Commission enter its order establishing 80-acre proration units for the Stateline-Ellenburger Pool, Lea County, New Mexico, and such other and further orders as may be proper.

Respectfully submitted,

STANDARD OIL COMPANY OF TEXAS  
A DIVISION OF CHEVRON OIL COMPANY

By

Paul Hull  
Paul Hull

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

By Jason W. Kellahin  
Attorneys for Applicant

MAIN OFFICE 000

'55 JUL 12 AM 10

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

APPLICATION OF STANDARD OIL COMPANY OF  
TEXAS, A DIVISION OF CHEVRON OIL COMPANY,  
FOR AN ORDER ESTABLISHING 80-ACRE  
PRORATION UNITS FOR THE STATELINE-  
ELLENBURGER POOL, LEA COUNTY, NEW MEXICO

Case No. 3278

APPLICATION

Standard Oil Company of Texas, a Division of Chevron Oil Company, hereby applies to the Oil Conservation Commission of the State of New Mexico for an order to provide for temporary establishment of 80-acre proration units, the units to consist of adjacent quarter-quarter sections of a single governmental quarter section with wells to be located within 150 feet of the center of either quarter-quarter section of the unit, and for such other and further orders as the Commission may deem proper.

In support of this application, the applicant would show the Commission:

1. The applicant has oil and gas leases in Sections 5 and 9, Township 24 South, Range 38 East, Lea County, New Mexico, within one mile of the designated boundaries of the Stateline-Ellenburger Pool.
2. That the applicant is the operator of the only well now completed in the Stateline-Ellenburger Pool.
3. That on the basis of information presently available, it is believed that an 80-acre proration unit can be efficiently and economically drained and developed by one well, and the establishment of 80-acre proration units is in the interest of conservation, would prevent economic loss caused by the drilling of unnecessary wells, would prevent waste, would avoid risks arising from the drilling of an excessive number of wells, and would protect correlative rights.

DOCKET MAILED

Date 7-15-65

*Pete  
This is the well  
that is completed in  
two parcels*

JOHN W. KELLAHIN  
ROBERT E. FOX

KELLAHIN AND FOX  
ATTORNEYS AT LAW  
54 1/2 EAST SAN FRANCISCO STREET  
POST OFFICE BOX 1769  
SANTA FE, NEW MEXICO 87501

TELEPHONES  
983-3396  
982-2991

July 7, 1963

*Case 3278*

Mr. P. T. McGrath  
United States Geological Survey  
P. O. Box 959  
Farmington, New Mexico

Re: Standard Oil Company of  
Texas Intex 5 #1 Well.

Dear Phil:

After talking to you, I contacted the Oil Conservation Commission; and they suggested it would be better to arrange to meet with you, Emory Arnold, and Pete Porter on July 29, following the hearing on July 28 in regard to the above well. If you are planning to be in Santa Fe for the July 28 hearing, it might be possible for us to arrange a meeting on the afternoon of that date, if that would better meet your schedule.

If this arrangement does not meet with your approval, would you please let me know.

Very truly yours,

KELLAHIN & FOX

Jason W. Kellahin

jwk/mas

cc: Mr. Paul Hull  
Mr. Emory Arnold  
Mr. J. M. Durrett ✓

C  
O  
P  
Y

DOCKET: EXAMINER HEARING - WEDNESDAY - JULY 28, 1965

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

The following cases will be heard before Daniel S. Nutter, Examiner, or  
Elvis A. Utz, Alternate Examiner:

CASE 3277: In the matter of the hearing called by the Oil Conservation Commission on its own motion to consider the creation of a new pool for Ellenburger production in Sections 4 and 5, Township 24 South, Range 38 East, Lea County, New Mexico, said pool to be designated the Stateline-Ellenburger Pool; further to consider the establishment of a procedure whereby allowables for wells in said pool may be assigned on an equitable basis with allowables assigned to wells in the same common source of supply in the State of Texas.

CASE 3278: Application of Standard Oil Company of Texas for special rules for the Stateline-Ellenburger Pool, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Stateline-Ellenburger Pool in Sections 4 and 5, Township 24 South, Range 38 East, Lea County, New Mexico, including a provision for 80-acre proration units.

CASE 3279: Application of Standard Oil Company of Texas for a non-standard unit and an unorthodox location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the approval of a 688-acre non-standard gas proration unit comprising all of the partial Sections 34 and 35, Township 20½ South, Range 23 East, Indian Basin-Upper Pennsylvanian Gas Pool, Eddy County, New Mexico, said unit to be dedicated to a well to be drilled at an unorthodox location 990 feet from the South and East lines of said Section 34.

CASE 3280: Application of Bolack-Greer, Inc. for an unorthodox location, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox oil well location 850 feet from the North line and 1030 feet from the East line of Section 16, Township 25 North, Range 1 West, Puerto Chiquito-Gallup Oil Pool, Rio Arriba County, New Mexico.

CASE 3281: Application of Samuel G. Dunn for a two-well proration unit and an unorthodox location, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill and produce the second well on the 160-acre oil proration unit comprising the SW/4 of Section 26, Township 26 North, Range 1 East, Puerto Chiquito-Gallup Oil Pool, Rio Arriba County, New Mexico, the 160-acre allowable to be produced from either well in any proportion. Said second well would be drilled at an unorthodox location 1720 feet from the South line and 460 feet from the West line of said Section 26. (The SW/4 of Section 26 is currently dedicated to a well in Unit M of said section). In the alternative, applicant seeks the creation of two non-standard 80-acre proration units comprising the N/2 SW/4 and S/2 SW/4 of said Section 26 to be dedicated to the proposed well and the existing well, respectively.

Examiner Hearing - 7-28-65

CASE 3282: Application of Continental Oil Company for a special allowable, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the assignment of a special allowable to wells on its Eaves "B" Lease in Section 31, Township 26 South, Range 37 East, Jalmat Pool, Lea County, New Mexico, which allowable would permit equalized per-acre withdrawal rates from applicant's wells (on 40-acre spacing) to the per-acre withdrawal rates from 20-acre wells located immediately south of said Eaves "B" Lease in the Scarborough Pool, Winkler County, Texas. In the alternative, applicant seeks the designation of a separate new pool for Yates production for said Section 31, and the establishment of a procedure whereby special pool allowables would be assigned to effect such equalized per-acre withdrawals.

CASE 3073 (Reopened):

In the matter of Case No. 3073 being reopened pursuant to the provisions of Order No. R-2758, which order, as amended by Orders Nos. R-2758-A and R-2758-B, established 160-acre oil well spacing and 320-acre gas well spacing for the Tocito Dome-Pennsylvanian "D" Oil Pool, San Juan County, New Mexico, for a period of one year. All interested parties may appear and show cause why said pool should not be developed on 40-acre oil well spacing and 160-acre gas well spacing, or such other spacing as may seem proper.

CASE 3112 (Reopened): Continued from the June 30th Examiner Hearing

In the matter of Case 3112 being reopened pursuant to the provisions of Order No. R-2824, which order authorized Gallup-Dakota commingling in the wellbore by means of a dual-flow downhole choke assembly in its Jicarilla 28 Well No. 1 located in Unit J of Section 28, Township 25 North, Range 4 West, Rio Arriba County, New Mexico. All interested parties may appear and show cause why the authority granted under this order should not be terminated.

GOVERNOR  
JACK M. CAMPBELL  
CHAIRMAN

State of New Mexico

Oil Conservation Commission



LAND COMMISSIONER  
GUYTON B. HAYS  
MEMBER

STATE GEOLOGIST  
A. L. PORTER, JR.  
SECRETARY - DIRECTOR

P. O. BOX 2088  
SANTA FE

August 6, 1965

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

Re: Case No. <sup>3277</sup>  
Order No. 3278 R-2943 & R-2944  
Applicant:  
OCC &  
Standard Oil Co. of Texas

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

ir/

Carbon copy of order also sent to:

Hobbs OCC   x  

Artesia OCC       

Aztec OCC       

OTHER Mr. Chas. Malone, Mr. Jim Jennings & Mr. Robert J. Leonard

DOCKET MAILED

*12-22-66*

*for 1-4-67 hearing*

- CASE 3510: Application of United States Smelting Refining and Mining Company for an unorthodox gas well location, Lea County, New Mexico. Applicant in the above-styled cause, seeks approval for its Federal Well No. 2 at an unorthodox location 760 feet from the South line and 2080 feet from the West line of Section 11, Township 20 South, Range 34 East, Lea-Pennsylvanian Gas Pool, Lea County, New Mexico.
- CASE 3511: Application of Thomas A. Dugan for an unorthodox gas well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Navajo Federal Well No. 1 completed in the Gallup formation at an unorthodox gas well location 660 feet from the North and West lines of Section 26, Township 28 North, Range 15 West, San Juan County, New Mexico, said well to be dedicated to the NW/4 of said Section 26.
- CASE 3512: Application of Pubco Petroleum Corporation for force-pooling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Basin-Dakota Gas Pool underlying the S/2 of Section 21, Township 26 North, Range 6 West, Rio Arriba County, New Mexico, and allocating well costs including a risk factor for a well to be drilled on said spacing unit.
- CASE 3513: Application of Midwest Oil Corporation for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Vada-Pennsylvanian Pool, Lea County, New Mexico, including a provision for 160-acre proration units.
- CASE 3514: In the matter of the hearing called by the Oil Conservation Commission on its own motion to consider suspending the scheduled cancellation of underproduction which accrued to certain wells in the Eumont Gas Pool during the first six months of 1966 and which was not made-up during the second six months period and was therefore subject to cancellation January 1, 1967. The underproduction being considered for suspension of cancellation accrued as a result of the sale of the connecting pipeline for said wells from an intra-state company to an inter-state company resulting in necessity for FPC approval of sales. The wells, which were shut-in and not produced during the period FPC approval was being obtained, are certain wells formerly connected to Southern Union Gas Company and owned by the following operators: North Central, Me-Tex, Penrose, Tidewater, Fields, Atlantic, Skelly, Clark & Christie, Aztec, and Great Western Drilling.



Docket No. 1-67

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(Case 3506 continued)

Sections 2, 3, 4, 8, 9, 10, 11, 14, and 15, Township 17 South, Range 32 East, Lea County, New Mexico.

CASE 3507: Application of Standard Oil Company of Texas for a waterflood expansion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its Maljamar-Grayburg Waterflood Project in its proposed Maljamar-Grayburg Unit Area by the injection of water into the Grayburg formation through thirteen additional injection wells. Applicant also seeks administrative procedure for further expansion of said project at a later date.

CASE 3508: Application of Phillips Petroleum Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the approval of the Vacuum Abo Unit Area, comprising 3640 acres, more or less, of State and Fee lands in Townships 17 and 18 South, Range 35 East, Lea County, New Mexico.

CASE 3509: Application of Phillips Petroleum Company for a pressure maintenance project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pressure maintenance project in its Vacuum-Abo Unit by the injection of gas into the Abo Reef formation through two wells located in Section 33, Township 17 South, Range 35 East, and Section 4, Township 18 South, Range 35 East, Vacuum-Abo Reef Pool, Lea County, New Mexico. Applicant further seeks the promulgation of special rules to govern operation of said pressure maintenance project.

CASE 3278 (Reopened)

In the matter of Case No. 3278 being reopened pursuant to the provisions of Order No. R-2944, which order established 80-acre spacing units for the Stateline-Ellenburger Pool, Lea County, New Mexico, for a period of eighteen months. All interested parties may appear and show cause why said pool should not be developed on 40-acre spacing units.

CASE 3277 (Reopened)

In the matter of Case No. 3277 being reopened to consider the necessity for the continuance of the special allowables assigned to wells in the Stateline-Ellenburger Pool, Lea County, New Mexico.

DOCKET: EXAMINER HEARING - WEDNESDAY JANUARY 1, 1967

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

The following cases will be heard before Daniel S. Nutter, Examiner, or  
Elvis A. Utz, Alternate Examiner:

CASE 3439: (This case continued from the October 11, 1966 examiner hearing  
and will be dismissed).

In the matter of the hearing called by the Oil Conservation  
Commission on its own motion to permit Scanlon and Shepard and  
all other interested parties to show cause why the following  
Scanlon and Shepard wells in Township 20 North, Range 9 West,  
McKinley County, New Mexico, should not be plugged and abandoned  
in accordance with a Commission-approved plugging program:  
Santa Fe Pacific Railroad Lease: Wells Nos. 1, 3, 4, 5, 7, and  
8, all in Unit P, No. 10 in Unit H, and No. 2 in Unit L, all in  
Section 21; Well No. 6 in Unit L and Nos. 9 and 12 in Unit M  
of Section 22 and Nos. 11 and 13 in Unit D of Section 27, Ray  
Well No. 1 in Unit C, State Wells Nos. 1 and 2 in Unit A, and  
State K-1883 No. 1 in Unit B, all in Section 28.

CASE 3440: (This case continued from the October 11, 1966, examiner  
hearing and will be dismissed).

In the matter of the hearing called by the Oil Conservation Com-  
mission on its own motion to permit Osborn & Weir, and all inter-  
ested parties, to show cause why the following Osborn & Weir  
wells in Township 20 North, Range 9 West, McKinley County, New  
Mexico, should not be plugged and abandoned in accordance with a  
Commission-approved plugging program: Scanlon Well No. 17 in Unit P  
of Section 21 and Nos. 14 and 18 in Unit M of Section 22, Scanlon  
Ray Wells No. 5 in Unit A and No. 6 in Unit C of Section 28.

CASE 3441: (This case continued from the October 11, 1966, examiner hearing  
and will be dismissed).

In the matter of the hearing called by the Oil Conservation  
Commission on its own motion to permit LaMar Trucking, Inc.,  
and all interested parties, to show cause why their State Well  
Well No. 1 located 495 feet from the North and West lines of  
Section 28, Township 20 North, Range 9 West, McKinley County,  
New Mexico, should not be plugged and abandoned in accordance  
with a Commission-approved plugging program.

CASE 3506: Application of Standard Oil Company of Texas for a unit agreement,  
Lea County, New Mexico. Applicant, in the above-styled cause,  
seeks approval of the Maljamar-Grayburg Unit Area comprising  
3,441 acres, more or less, of Federal, State and Fee lands in

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proper symbol.

# WESTERN UNION TELEGRAM

W. P. MARSHALL, PRESIDENT

1201 (4-00)

SYMBOLS	
DL	Day Letter
NL	Night Letter
LT	International Letter Telegram

The filing time shown in the date line on domestic telegrams is LOCAL TIME at point of origin. Time of receipt is LOCAL TIME at point of destination.

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A L PORTER JR, NEW MEXICO OIL CONSERVATION COMMISSION 1967 JAN 3 PM 12 34  
STATELAND OFFICE BLDG SANTA FE NMEX=

RE CASE 3277 AND 3278=

WE URGE COMMISSIONS CONTINUING APPROVAL OF  
80-ACRE SPACING UNITS STATE LINE ELLENBURGER POOL, LEA  
COUNTY, AND RESULTING SPECIAL ALLOWABLES THERETO=

SKELLY OIL CO GEORGE W SELINGER= MAIN OFFICE O

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

*Case 3277 144/67*  
1967 JAN 3 PM 1 06

CLASS OF SERVICE  
This is a fac message  
unless its deferred char-  
acter is indicated by the  
proper symbol.

# WESTERN UNION TELEGRAM

SYMBOLS  
DL=Day Letter  
NL=Night Letter  
LT=International  
Letter Telegram

The filing time shown in the date line on domestic telegrams is LOCAL TIME at point of origin. Time of receipt is LOCAL TIME at point of destination.

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NEW MEXICO OIL CONSERVATION COMMISSION, A L PORTER JR=  
STATE LAND OFFICE BLDG COLLEGE AVE SANTA FE NMEX=

HUMBLE AS AN OPERATOR OF ACREAGE WITHIN THE LIMITS  
OF THE STATE LINE-ELLENBURGER POOL LEA COUNTY NEW  
MEXICO RECOMMENDS EIGHTY ACRE SPACING FOR THIS POOL.  
CONTINUANCE OF THE SPECIAL ALLOWABLES ASSIGNED TO WELLS  
UNTIL DISCOVERY ALLOWABLES EXPIRE FOR THE TEXAS PORTION  
OF THE FIELD, AND UPON EXPIRATION OF DISCOVERY  
ALLOWABLES IN TEXAS THE ALLOWABLES BE DETERMINED IN  
ACCORDANCE WITH RULE 505 OF THE COMMISSION RULES AND  
REGULATIONS=  
L H BYRD DIVN PRODUCTION MANAGER HUMBLE OIL AND REFG CO=

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CASE No. 3278  
Order No. R-2944

notify the Hobbs District Office of the Commission in writing of the name and location of the well on or before September 1, 1965.

(2) That each well presently drilling to or completed in the Stateline-Ellenburger Pool or in the Ellenburger formation within one mile thereof shall receive a 40-acre allowable until a Form C-102 dedicating 80 acres to the well has been filed with the Commission.

(3) That this case shall be reopened at an examiner hearing in January, 1967, at which time the operators in the subject pool may appear and show cause why the Stateline-Ellenburger Pool should not be developed on 40-acre spacing units.

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

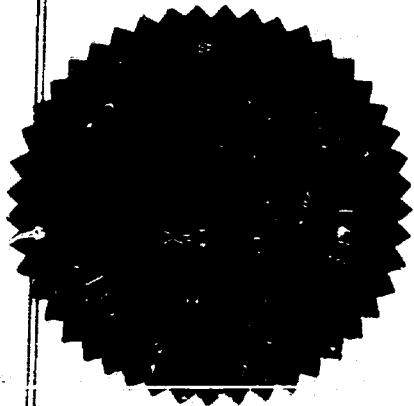
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

*Jack M. Campbell*  
JACK M. CAMPBELL, Chairman

*Guyton B. Hays*  
GUYTON B. HAYS, Member

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



esr/

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CASE No. 3278

Order No. R-2944

hearing when an application has been filed for a non-standard unit comprising a governmental quarter-quarter section or lot or the unorthodox size or shape of the tract is due to a variation in the legal subdivision of the U. S. Public Lands Survey. All operators offsetting the proposed non-standard unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all offset operators or if no offset operator has entered an objection to the formation of the non-standard unit within 30 days after the Secretary-Director has received the application.

RULE 4. Each well shall be located within 150 feet of the center of a governmental quarter-quarter section or lot.

RULE 5. The Secretary-Director may grant an exception to the requirements of Rule 4 without notice and hearing when an application has been filed for an unorthodox location necessitated by topographical conditions or the recompletion of a well previously drilled to another horizon. All operators offsetting the proposed location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all operators offsetting the proposed location or if no objection to the unorthodox location has been entered within 20 days after the Secretary-Director has received the application.

RULE 6. Each well shall be assigned an allowable in accordance with Order No. R-2943. In the event there is more than one well on an 80-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion. The allowable assigned to a non-standard proration unit shall bear the same ratio to a standard allowable as the acreage in such non-standard unit bears to 80 acres.

IT IS FURTHER ORDERED:

(1) That the locations of all wells presently drilling to or completed in the Stateline-Ellebarger Pool or in the Ellebarger formation within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall

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CASE No. 3278  
Order No. R-2944

providing for 80-acre spacing units should be promulgated for the Stateline-Ellenburger Pool.

(4) That the temporary special rules and regulations should provide for limited well locations in order to assure orderly development of the pool and protect correlative rights.

(5) That the promulgation of temporary special rules and regulations providing for 80-acre spacing units should enable the operators in the subject pool to gather reservoir information to establish the area that can be efficiently and economically drained and developed by one well.

(6) That this case should be reopened at an examiner hearing in January, 1967, at which time the operators in the subject pool should be prepared to appear and show cause why the Stateline-Ellenburger Pool should not be developed on 40-acre spacing units.

IT IS THEREFORE ORDERED:

That temporary Special Rules and Regulations for the Stateline-Ellenburger Pool are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS  
FOR THE  
STATELINE-ELLENBURGER POOL

RULE 1. Each well completed or recompleted in the Stateline-Ellenburger Pool or in the Ellenburger formation within one mile thereof, and not nearer to or within the limits of another designated Ellenburger oil pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. Each well shall be located on a standard unit containing 80 acres, more or less, consisting of the N/2, S/2, E/2, or W/2 of a governmental quarter section; provided, however, that nothing contained herein shall be construed as prohibiting the drilling of a well on each of the quarter-quarter sections in the unit.

RULE 3. The Secretary-Director of the Commission may grant an exception to the requirements of Rule 2 without notice and

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. 3278  
Order No. R-2944

APPLICATION OF STANDARD OIL COMPANY  
OF TEXAS FOR SPECIAL RULES FOR THE  
STATELINE-ELLENBURGER POOL, LEA COUNTY,  
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on July 28, 1965, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 6th day of August, 1965, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, 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, Standard Oil Company of Texas, seeks the promulgation of temporary special rules and regulations for the Stateline-Ellenburger Pool in Sections 4 and 5, Township 24 South, Range 38 East, NMPM, Lea County, New Mexico, including a provision for 80-acre spacing units.

(3) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, temporary special rules and regulations



OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

Date 1/19/67

CASE NO. 3278

HEARING DATE 9 am 1/4/67  
DSN @ SF

My recommendations for an order in the above numbered case(s) are as follows:

Enter an order continuing  
the special temporary rules  
for the Staehle Ellenburger  
Pool, as promulgated by  
Order No ~~R-2943-A~~. R-2944.  
Rule of the Order  
Order No 6 should refer to  
Order No R-2943-A

  
Staff member

GOVERNOR  
DAVID F. CARGO  
CHAIRMAN

State of New Mexico  
**Oil Conservation Commission**



LAND COMMISSIONER  
GUYTON B. HAYS  
MEMBER

P. O. BOX 2088  
SANTA FE

STATE GEOLOGIST  
A. L. PORTER, JR.  
SECRETARY - DIRECTOR

January 18, 1967

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

Re: Case No. 3278  
Order No. R-2944-A  
Applicant:  
STANDARD OIL COMPANY OF TEXAS

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

Carbon copy of order also sent to:

Hobbs OCC x  
Artesia OCC             
Aztec OCC             
Other Mr. Vic Lyon

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CASE No. 3278

Order No. R-2944-A

(2) That the Special Rules and Regulations governing the Stateline-Ellenburger Pool, Lea County, New Mexico, promulgated by Order No. R-2944, as amended by this order, are hereby continued in full force and effect until further order of the Commission.

(3) 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

  
*David P. Cargo*  
DAVID P. CARGO, Chairman

*Guyton B. Hays*  
GUYTON B. HAYS, Member

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

esr/

CASE No. 3278

Order No. R-2944-A

(6) That the allowable provisions of said Order No. R-2943 were continued in effect by Order No. R-2943-A until April 30, 1967.

(7) That Rule 6 of the Special Rules and Regulations governing the Stateline-Ellenburger Pool should be amended to read in its entirety as follows:

RULE 6. Each well shall be assigned an allowable in accordance with Order No. R-2943-A. In the event there is more than one well on an 80-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion. The allowable assigned to a non-standard proration unit shall bear the same ratio to a standard allowable as the acreage in such non-standard unit bears to 80 acres.

(8) That the Special Rules and Regulations promulgated by Order No. R-2944, as amended by this order, have afforded and will afford to the owner of each property in the pool the opportunity to produce his just and equitable share of the oil in the pool.

(9) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, the Special Rules and Regulations promulgated by Order No. R-2944, as amended by this order, should be continued in full force and effect until further order of the Commission.

IT IS THEREFORE ORDERED:

(1) That Rule 6 of the Special Rules and Regulations governing the Stateline-Ellenburger Pool, Lea County, New Mexico, promulgated by Order No. R-2944, is hereby amended to read in its entirety as follows:

RULE 6. Each well shall be assigned an allowable in accordance with Order No. R-2943-A. In the event there is more than one well on an 80-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion. The allowable assigned to a non-standard proration unit shall bear the same ratio to a standard allowable as the acreage in such non-standard unit bears to 80 acres.

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. 3278  
Order No. R-2944-A

APPLICATION OF STANDARD OIL COMPANY  
OF TEXAS FOR SPECIAL RULES FOR THE  
STATELINE-ELLENBURGER POOL, LEA COUNTY,  
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on January 4, 1967,  
at Santa Fe, New Mexico, before Examiner Daniel S. Mutter.

NOW, on this 18th day of January, 1967, the Commission, a  
quorum being present, having considered the testimony, the record,  
and the recommendations of the Examiner, 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 by Order No. R-2944, dated August 6, 1965, tempo-  
rary Special Rules and Regulations were promulgated for the  
Stateline-Ellenburger Pool, Lea County, New Mexico.

(3) That pursuant to the provisions of Order No. R-2944,  
this case was reopened to allow the operators in the subject pool  
to appear and show cause why the Stateline-Ellenburger Pool should  
not be developed on 40-acre spacing units.

(4) That the evidence establishes that one well in the  
Stateline-Ellenburger Pool can efficiently and economically  
drain and develop 80 acres.

(5) That Rule 6 of the Special Rules and Regulations govern-  
ing the Stateline-Ellenburger Pool provided that each well be  
assigned an allowable in accordance with Order No. R-2943.

CASE, file 3284