

Case No.

861 rehearing

Application, Transcript,
Small Exhibits, Etc.

CASE 861: (REHEARING) El Paso Natl.
Application concerning site of
standard drilling & production units,
Crosby-Devonian Gas Pool.

BEFORE THE
Oil Conservation Commission
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE NO. 861

TRANSCRIPT OF PROCEEDINGS

ADA DEARNLEY AND ASSOCIATES
COURT REPORTERS
ROOMS 105, 106, 107 EL CORTEZ BUILDING
TELEPHONE 7-9546
ALBUQUERQUE, NEW MEXICO

BEFORE THE
OIL CONSERVATION COMMISSION
STATE OF NEW MEXICO
Santa Fe, New Mexico

April 20, 1955

IN THE MATTER OF:

Application of the Commission upon its own
motion for an order (a) creating the Crosby-
Devonian Gas Pool in Lea County, New Mexico,
described as:

TOWNSHIP 25 SOUTH, RANGE 37 EAST
All of Section 28

(to embrace the common source of supply dis-
covered in the Anderson-Prichard Oil Corp.,
No. 1 Amer. Republics-Federal Well, NE/4 SW/4
28-25S-37E); and (b) establishing pool rules,
drilling units, well spacing, casing programs
and other related matters in the above-de-
scribed area.

Case 861
Contd.

Before: E. S. (Johnny) Walker and William B. Macey.

TRANSCRIPT OF HEARING

MR. MACEY: The next case on the docket is Case 861, con-
tinued from last month.

MR. MALONE: If it please the Commission, Ross Malone for
Anderson - Prichard. We would like to present some testimony in
Case 861.

MR. MACEY: Do you have some witnesses?

MR. MALONE: Yes.

D. V. P A T T Y
having first been duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. MALONE:

Q Will you state your name to the Commission?

A Duncan V. Patty.

Q Where do you live, Mr. Patty? A In Oklahoma City.

Q You are employed by Anderson - Prichard Oil Corporation?

A That is correct, as their chief reservoir engineer.

Q Have you ever testified before the New Mexico Commission before?

A I have not.

Q Will you state your education as a petroleum engineer?

A I obtained a master's degree in petroleum engineering from Stanford University in 1947.

Q Have you been engaged since that time as a petroleum engineer?

A I have. I worked for Stanolind for approximately five years and for Anderson - Prichard for approximately two and a half years.

Q Are you a registered professional engineer in any state?

A In the State of Oklahoma I am.

Q Are you a member of any professional societies?

A A.M.A.I.M.E.

Q Have you testified before any other Oil Conservation Commission?

A I have testified before the Oklahoma Conservation Commission and the Texas Railroad Commission.

MR. MALONE: Are the witness's qualifications satisfactory?

MR. MACEY: They are.

Q In your capacity as chief reservoir engineer for Anderson - Prichard Oil Corporation, Mr. Patty, were you familiar with the events in connection with the drilling of the Anderson-Prichard Oil Corporation American Republics-Federal Well No. 1?

A Yes, sir.

Q Where was that well located?

A Located in Lea County, New Mexico in Section 28, Township 25 south, Range 37 east.

Q Do you know on what geological or other formation this well was drilled originally?

A Yes, sir, it was drilled on a Yates subsurface high. Insofar as I know there was no other geological basis for the drilling of the well.

Q Do you have before you a structure map on the top of the Yates in that area?

A I do.

Q Which was the basis for the well drilled?

A That is correct.

Q That is a copy of the record from the records of your company?

A This is a reproduction from our map, yes, sir.

Q Will you state the history of the American Republics-Federal Well No. 1 and date it was spudded?

A The well was spudded on April 14, 1954, completed on January 18, 1955.

Q To what horizons was it projected?

A It was projected to the Devonian and Ellenburger. We topped the Devonian, and shortly thereafter on June 23, the well blew out. It was wild for seventeen days. We finally killed it on July 10th, the condition of the hole was such that it was necessary to whipstock it and redrilled the Devonian and carry it down to the Ellenburger.

Q Was it productive in the Ellenburger?

A It was not. The Ellenburger was dry. We plugged back and completed this well as a dry gas well through Devonian perforation from 8270 to 8290.

Q Did you core the Devonian formation in this well?

A No, sir, we did not.

Q For what reason?

A Because of the difficulty we had previously encountered, and being in a whipstock hole, we did not core.

Q What was the thickness of the Devonian formation as determined by you?

A The gross Devonian section is approximately 200 feet.

Q You perforated how many feet?

A We perforated 120 feet.

Q That was at what depth? A From 8270 to 8390.

Q Do you have an electric log of the well?

A I do. These logs were prepared as an exhibit for the use of the Commission, posted thereon on the principal geologic tops, all drillstem tests and completion data.

(Marked Anderson-Prichard Exhibits
Nos. 1, 2 and 3, for identification.)

Q Go ahead with your statement, Mr. Patty.

A I might explain that this consists of two electric logs, one a Schlumberger, the second a microlog which covers just portions of the well.

Q On the basis of the information obtained from these logs, have you made an effort to estimate the porosity of the Devonian section?

A Well, we have made some preliminary calculations based jointly on the microlog and on visual inspection of the samples we

estimate the porosity to be of the order of ten percent, possibly lower.

Q I assume that you would consider a core analysis a preferable way of arriving at that if cores were available?

A That is true.

Q Do you know the total cost of this well to Anderson-Prichard, Mr. Patty?

A We don't have in hand the final cost, but it will be of the order of half a million dollars, about five hundred thirty thousand dollars.

Q Is any portion of that attributable to the continuing of the well down to the Ellenburger formation which was dry?

A Yes, we estimate that approximately \$125,000 of that can be attributed the Ellenburger.

Q The cost of completing the well in the Devonian formation would not be the normal cost of drilling a well to that formation?

A No, the cost of blowout was.

Q Based on your, the experience of your company in completing wells in Lea County, can you estimate the cost of completing a field well to this location?

A We believe that future wells will cost between \$275,000 and \$300,000.

Q I believe Anderson-Prichard filed a C-122 with the New Mexico Oil Conservation Commission on the basis of a shutin pressure test of this well on January 17, 1955, did it not?

A That is correct.

Q Was it subsequently determined that there was an error in the completion of that form?

A Yes, sir, it was. That test was taken and the form prepared before the well was actually on the line. Through an error on the part of our field engineers, it is erroneous.

Q Will you state the error which you believe occurred and the manner in which it came to your attention?

A Yes, sir. The form as filed, reflects a shutin casing of 3233 pounds absolute. This was measured with a dead weight gauge. We now believe they miscounted the weights on the dead weight tester. It is definitely too high and our subsequent pressure tests prove it is wrong.

Q Would an error in the counting of the weight on the dead weight tester be a possible manner of accounting for the discrepancy that you feel here exists?

A Yes, sir, it would, it is an unusual thing. It doesn't happen often, we can find no explanation.

Q What open ^{flow} hole potential did you arrive at there?

A Absolute open flow of sixty-seven and a half million.

Q What was it that brought to your attention first the fact that an error had apparently occurred in computing that data?

A Subsequent to last month's hearing, Sinclair, El Paso Natural and Anderson-Prichard conducted a second open flow potential test at which time we took some additional shutin casing pressures. This time we had a shutin casing pressure of 2,999 pounds absolute with a very small increment of production in the interim period.

Q That was a reduction of your figures for January 17?

A 234 pounds.

Q On what date was that test taken?

A The open flow potential gauges were taken on March 25, the

actual shutin pressure was taken a few days before that.

Q What production, if any, had intervened? Do you have those figures available?

A In the period between the shutin pressure and the open flow potential?

Q Yes.

A It would be approximately 20,000,000 cubic feet.

Q Will you state then the shutin pressure and the potential computed on the basis of the tests that were made in March?

A Yes, sir. Our calculations indicate an absolute open flow potential in light of this revised pressure data of 30,000,000 cubic feet per day.

Q Do you propose to file a revised form C-122 with the Commission to correct the error that occurred in the original one?

A We do. In fact, we would like to introduce this revised copy as an exhibit.

MR. MALONE: Will the reporter mark it as --

(Marked Anderson-Prichard Exhibit
No. 4, for identification.)

A We --

Q (Interrupting) Mr. Patty, did you make some further tests in an effort to either corroborate or disprove your conclusion that an error had occurred in that original computation?

A We certainly did. We were very much disturbed. On March the 31st we obtained a second shutin casing pressure of 2998 P.S.I.A. On April 15, just a few days ago, we obtained another shutin casing pressure which this time reflected a value of 2999 P.S.I.A. In other words, we have had no appreciable pressure drawdown.

Q That was during the period from March 19 to April 15?

A That is correct. During which time we produced approximately 130,000,000 cubic feet of gas.

Q In order that the record may be perfectly clear, will you again state the shutin casing pressures that you obtained on March 19, March 31, and April 15?

A Yes, sir. They were respectively in pounds per square inch absolute, 2999, 2998 and 2999.

Q Is it your opinion, based on a study and performance of this well, that the figures are correct and that the original figure filed on the basis of a January test was incorrect?

A That is true.

Q Do I correctly understand you that there has been no measurable decrease in shutin casing pressures during the period that this 130,000,000 cubic feet of gas was being produced?

A That is correct.

Q Does your company have available any pressure information for the period prior to the blowout on the well?

A No, sir. With the exception of the shutin pressure obtained on January 17 which we believe to be erroneous.

Q Mr. Patty, have you made a study of the information which is available from the performance of this well and from the electric log and microlog in an effort to form an opinion as to the aerial extent of the common source of supply with which you are dealing here?

A Yes, sir, insofar as we can do it with the limited data at hand, and I firmly believe that the area productive and being drained by this well is in excess of 640 acres.

Q Have you, in connection with the study which you have made,

formed an opinion as to the desirable size of the proration units which might be established in the Crosby-Devonian Pool?

A I have.

Q Do you have a recommendation which you wish to make to the Commission as to the size of the proration units which, in the opinion of your company, should be established in this pool?

A Yes, sir.

Q What is the size of the units you recommend?

A 320 acres.

Q On what do you base the recommendation of a 320 acre unit for the Crosby-Devonian Pool?

A I base that on several factors which must be considered jointly. First I believe that one well will adequately drain 320 acres. Second, the cost of the Devonian wells will be of the order of \$200,000. Hence the elimination of any unnecessary drilling should be a consideration in fixing the size of the unit. Third, we have to take into account the very practical matter of the mechanics and the difficulties incident to the formation of a drilling and spacing unit in accordance with whatever order the Commission may adopt. The Crosby-Devonian Pool is in an area which has been productive of oil and gas from shallower horizons for many years. As a result, the mineral and leasehold ownership is diversified. From this I believe the 320 acres to be the practical unit size.

A fourth consideration is the structure. We believe that the Crosby-Devonian structure will have rather steep dips on the flanks. Development on spacing in excess of 320 acres will necessitate step out drilling at such distances that the risk of dry holes will be

materially increased. Furthermore, spacing in excess of 320 acres per well will increase the amount of non-productive acreage which might ultimately be included in some producing unit. I consider those four factors as a whole in a group in basing my recommendation.

Q In arriving at your recommendation, did you consider the possible desirability of units of 160 or 640?

A Yes, we did.

Q It is your conclusion that the 320 acre unit is preferable for the reasons you have stated? A That is my opinion.

Q I take it from your statement that you have arrived at that conclusion not on any one of the four bases that you mentioned, but by consideration of all of them? A That is true.

Q I believe in answer to my question as to your opinion as to the aerial extent of the Crosby-Devonian Pool, or at least the common source of supply from which you are producing, that you expressed the view that a well would drain up to 640 acres. Do you have any opinion as to the aerial extent of the source of supply as distinguished from the amount that a single well might drain?

A Only that it is in excess of 640 acres. In fact our production cumulative production data, all the different well completions, and other figures which enter into such figures of aerial extent are very limited. We can't say that the actual aerial extent is.

Q I take it that you do feel that the maintenance of pressures that in excess of the common source of supply less than 640 acres is desirable.

A That is true. It is inconceivable to me that it could be smaller than 640 acres.

Q Have you caused an ownership plat of the acreage included in this proposed pool and adjacent acreage to be prepared from the records of your company?

A I have.

(Marked Anderson-Prichard Exhibit No. 5,
for identification.)

Q That is the plat which has been identified as Anderson-Prichard Exhibit No. 5?

A That is true.

Q Will you state to the Commission the present state of development in Section 28 which is the area included in the call for Case No. 861?

A At the present time there is one completed and producing Devonian well, that being Anderson-Prichard American Republics-Federal No. 1. It is our understanding that Sinclair has established a location and is getting ready to start drilling a Devonian test in the northwest quarter of Section 28. We further understand that a well which was recently drilling, a Phillips well in the southeast quarter of Section 28 has now been completed as a shallow oil well. In other words there is now one completed well and one projected well to the Devonian.

Q The completed Devonian well is in the south half, the projected well in the north half, of Section 28?

A That is correct.

Q You have recommended to the Commission a proration unit of 320, do you have any recommendation to make as to the portion of the section which shall compose those units?

A Yes, sir, in view of the present development pattern I believe that the unit should consist of the north and south halves of each Governmental section respectively.

Q Do you arrive at that recommendation on the basis of any

engineering or geological information, Mr. Patty?

A No, sir. Just strictly on the development pattern.

Q Strictly on the development pattern that has evolved?

A Yes.

Q In your opinion does the Sinclair location in the north half of Section 28 make impractical the selection of the east and west halves of the section as the proration unit?

A Yes, sir. In the event the Commission went that route we would end up with two wells on the west half of Section 28.

Q Do you have any recommendation to make to the Commission, Mr. Patty, ~~Anderson-Prichard~~ *El Paso* with reference to the casing of wells which produce from the Crosby, or drill to the Crosby-Devonian Pool?

A I have. It conforms essentially to the ~~Anderson-Prichard~~ *El Paso* recommendation of last month. We would recommend that surface pipe be set at sufficient depth to protect the fresh water sands in the Santa Rosa formation which would be approximately 500 feet. We would recommend that intermediate casing be set between the San Andros and be cemented to protect the Seven Rivers, Queens and also the salt zone present in the Salado formation at approximately 1200 feet. We would further recommend that the production string be set not higher than the top of the Devonian.

Q Do you have any recommendation as to the orthodox location of wells within the proposed 320 acre proration units?

A We believe that such wells should be drilled not less than 600 feet from any lease line, and that the minimum distance between wells should be at least 1320 feet.

Q Do you have any other statement or recommendation, Mr. Patty, that you would like to make to the Commission with reference

to the subject of the hearing?

A At the moment I don't think of it if I do.

MR. MALONE: That is all.

MR. MACEY: Any questions of the witness?

MR. HARBIN: Yes, I would like to ask a couple of questions.

MR. MACEY: Would you identify yourself to the reporter?

MR. HARBIN: Nat Harbin, H-a-r-b-i-n. Attorney for Sinclair Oil and Gas Company.

CROSS EXAMINATION

By MR. HARBIN:

Q Mr. Patty, as I understand your testimony, you base your recommendation of 320 acre unit principally upon the fact that there has been no drop in pressure in your well, is that correct?

A No, sir, you misunderstand me. I base it on a joint consideration of the four factors which I mentioned a few moments ago. The pressure, cumulative production history being one of the factors.

Q That is the principal factor which you took into consideration though, wasn't it?

A Well, I would say that indicates to us that our well is probably draining an area larger than 320 acres.

Q In arriving at your conclusion, you gave more weight to the fact that there had not been a drop in pressure than you gave to the factors which you took into consideration, did you not?

A Well, I would not say that I gave it more weight. I would say that is a very important factor which needs to be taken into consideration in the spacing of any gas reservoir.

Q Do you have any information or data to arrive at a conclusion as to whether or not this reservoir has a water drive?

A No, sir, we have not. As I stated previously, we know

relatively little about the reservoir. We have in hand simply the information which I have presented. Now, other engineers may draw other conclusions. I have stated my opinion.

Q Wouldn't that be a rather important factor in determining the proration unit, the size of the unit, as to whether or not the reservoir had a water drive?

A Well, at such time as that factor can definitely be determined, I suppose we should take it into account. At the present time it is one of the unknown factors over which we have no control.

Q Mr. Patty, don't you believe that if we had more time, if the well was produced for sometime yet several months and more data and information accumulated, that the Commission would be in a better position to establish the proration units than at the present time with the small amount of data which we have in reference to the reservoir?

A That is possible. As time goes by we will undoubtedly know a great deal more about this reservoir. Meantime you have to have some kind of a spacing development program to orderly develop the field.

Q In six months from now there probably would be available a great deal more data which would enable the Commission to better determine the size of the proration units, wouldn't it?

A There may or may not. As you know, last month we requested the continuance so we could get some actual cumulative data. We now have in hand such data covering a production increment of approximately 130,000,000 cubic feet. We now believe that is sufficient to go ahead and base our recommendation. Admittedly it is a rather small increment compared to the total gas in place in the

reservoir.

Q If another well is drilled in the northwest quarter of that section, that would furnish considerably more data in reference to the reservoir, wouldn't it?

A Yes, sir. The drilling of every additional well will help us definitely improve our understanding of it.

Q Would you be willing to recommend that the Commission postpone the establishing of the size of the proration unit for a few months until another well is drilled in the northwest quarter of that section?

A No, sir, I don't believe I would. Not at the present time.

Q You may have testified to this, I couldn't hear all the testimony back here, but did you testify as to whether or not your well is making any water or fluid of any kind?

A It is making no recoverable fluids on the lease. It is not making any water, it is not making any recoverable condensate. I found out just a couple of days ago that El Paso, I believe they can correct me on this if I am in error, is recovering some natural gasoline. A very small amount from the gas as it comes into their plant.

Q I believe you stated that the probabilities are that this will be a small pool, cover a small area?

A No, sir.

Q And that it --

A (Interrupting) I did not state that.

Q You do not?

A No, sir.

Q I beg your pardon, I could not hear all the testimony here. I believe you did testify that the probabilities are that the

formation will have steep dips on the flanks?

A We believe that to be true, yes, sir.

Q If proration units of 320 acres should be established rather than 160 acres, there would be more probability that there would be considerable non-productive acreage included in the 320 acres in some cases?

A Than in what size unit?

Q Than in the 160.

A That is a possibility. It is one of the factors governing the size of the unit that has to be taken into consideration. We have taken that into consideration in our recommendation.

Q Have you given any consideration as to whether or not there might be oil production under the gas or oil, an oil rim after some of the gas is drawn off?

A Yes, sir, we have. We sincerely hope there is. At the present time there is no means of determining whether or not there is.

Q In that event if there should be, then 160 acre unit would be more desireable than 320?

A I wouldn't say that particularly. In the event that you have an oil rim it may be desireable to shut in the gas cap entirely, in which event the fewer gas wells you have the better off everybody will be.

MR. HARBIN: I believe that is all.

MR. MACEY: Anyone else have any questions of the witness?
Mr. Campbell.

MR. CAMPBELL: Mr. Campbell. I have already entered an appearance in the previous month.

By MR. CAMPBELL:

Q Mr. Patty, I believe you stated that you had measureable gas production from your well of 130,000,000 cubic feet between March 19 and April 15, is that correct?

A That is right. I said approximately 130, we can't tie it down exactly.

Q Is that all the gas that has been produced into the line from that well?

A No, sir. In the period between March 8 and March 19 I believe it was 57,000,000. We produced approximately 57,000,000 cubic feet in that period, but that is of not any particular significance in our valuation because we don't have any accurate pressure data covering that production increment.

Q Is there any way, or have you been able to make any estimate whatsoever on the amount of gas loss due to the blowout?

A That particular factor would be strictly an estimate. There was no means available of measuring the gas at the time.

Q I realize that. Has your company as of yet arrived at any estimate?

A We haven't been too interested in arriving at it. It is estimates that appeared on our drilling reports and around and by the people who worked on the well, which as you know are visual estimates ranged from 15 to 100,000,000 cubic feet a day. I wouldn't attempt to testify as to what it was. I wasn't there and I have no reliable data to base such an estimate on.

Q In your recommendation for 320 acre, north half, south half units, one of your reasons for 320 acres instead of 640 or 160 I assume, was that the ownership is somewhat diversified and you think 320 acre units would simplify the operating practices

in the pool. Now, from your map that you have presented, isn't it true that you would have less complications if you were pooling on 160 acres than if you were pooling on 320 acres?

A In an area such as this that is badly divided and mineral leasehold ownership, of course the smaller the units the easier the mechanics of putting together. That is only one factor we took into consideration.

Q As to that factor, you were referring only to the difference between 320 and 640 units I take it?

A I was referring to the size of unit that I thought would be practical to attempt to form following the order of the Commission.

Q The most practical one from that point of view would be the smaller unit.

A From that particular point of view it would be easier to form the unit. I wouldn't say it is entirely the most practical unit.

Q You also gave as one of your reasons that the distance which you must step out from well to well on 640 acres would involve a risk that operators would hesitate to take to develop edge acreage or acreage away from actual production. On your recommendation of north half and south half units, any operator desiring to drill a well in Section 29 or 27 would have to step out approximately one mile and a half and dig an offset well, would he not?

A No, they have to step out approximately one half mile which is the same distance that they would have to step out in the event of 160 spacing unit.

Q You don't intend to have any uniformity of 320 acre units as far as the spacing of the wells are concerned?

A I don't quite see what you are driving at. Could you rephrase the question?

Q If you drill a well at the northwest quarter of Section 28 which is now contemplated, is it your idea that the next well would be in the northeast quarter of Section 29?

A If the operator so desired, yes.

Q Then your purpose in asking for 320 acre units is not to create a uniform pattern of development of this reservoir, but to enable you to hold 320 acres with 160 acre location, is it not?

A No, sir. I wouldn't say that at all. It is an attempt to develop this reservoir in an orderly fashion and in a reasonable manner. We have taken into account in our recommendation, the four separate factors which I have previously explained.

Q You stated, I believe, that there was one well completed, your well, and one well drilling to the deeper horizon in this area. Are you acquainted with the well that Phillips is drilling in the southeast quarter of Section 28?

A I would have to rely on Phillips for testimony with regard to the details. I only know it has been completed as a shallow oil well. That is all I know.

Q As a shallow oil well? A Yes, sir.

Q Do you know whether Phillips' application for drilling that well was an application to drill a deep well?

A I do not know. I know they had a small rig on it.

Q Do you know whether or not the application of Phillips to this Commission for an emergency order for unorthodox location was based on drainage from your well in the Devonian formation?

A It was my understanding that they had an expiring lease and

had to get on it. That is the extent of my knowledge.

Q You stated that you wouldn't recommend any postponement of decision in this case until after Sinclair has completed their well in the northwest quarter of Section 28. Why would you not recommend such a postponement?

A Well, I now believe that we have sufficient data in hand to make the recommendation which we have made. Thirty days ago we did not have. We had literally nothing upon which to base it.

Q The only information you have obtained since that time is information that the well isn't as good as you thought it was?

A No, sir, the information that we have obtained leads us to believe that the well is draining a wide area. Something in excess of 320 acres.

Q I believe you testified that the only data you had, you don't have any permeability data do you?

A I have made no attempt to calculate permeabilities from the data we have at hand.

Q You have no cores so that would be rather difficult to do?

A It can be done if you have sufficient information. I don't have it.

Q You estimated that the porosity was ten percent?

A Yes, sir.

Q You consider that to be high or low?

A Oh, that is a reasonable estimate. In my personal opinion if anything it is probably a little high.

Q Do you think for purposes of producing any gas through this gas reservoir that ten percent porosity indicates a large drainage area?

A The actual porosity as such has no bearing on the drainage area.

Q What do you base your estimate?

A What do you want me to tell you, the estimate of gas in place?

Q Estimate drainage area.

A I base it on the consideration of the cumulative pressure data, my opinion of the gas in place per acre, and the total gas being affected by this present well.

MR. MACEY: Anyone else? Mr. Harbin.

By MR. HARBIN:

Q Did you testify as to your estimate of gas in place?

A No, sir, I did not.

Q Could you give us that information please?

A In a very rough fashion it is approximately 100,000,000 cubic feet per acre.

Q One hundred eighty what? A One hundred million.

Q One hundred million cubic feet per acre?

A Yes, sir.

Q How much gas have you produced so far from the well?

A We have produced approximately 187,000,000 cubic feet.

That is produced and sold since El Paso connected.

Q You have produced less than two acres of the gas in place?

A That is true.

MR. HARBIN: That is all. Thank you.

MR. MACEY: Anyone else have a question of the witness?

If not the witness may be excused. We will take a short recess.

Recess.

(Witness excused.)

MR. MACEY: Mr. Malone.

MR. MALONE: I would like to offer in evidence Anderson-Prichard Exhibits one through five inclusive.

MR. MACEY: Without objection they will be received in evidence.

MR. MALONE: That concludes the evidence. We would like to make a statement at the conclusion of the case.

MR. KELAHLIN: Jason Kelahin, representing Phillips. We have been prepared to offer some geological testimony. However, it was adequately covered by Anderson-Prichard. We will restrict our testimony to the economics. I would like to call Mr. Washburn as a witness.

E. N. W A S H B U R N

having first been duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. KELAHLIN:

Q State your name please. A E. N. Washburn.

Q By whom employed?

A Phillips Petroleum Company.

Q What position?

A Reservoir engineer over in the West Texas-New Mexico area.

Q Have you previously testified before this Commission as an expert in reservoir engineering, and had your qualifications accepted? A Yes, sir.

MR. KELAHLIN: Are the witness's qualifications accepted?

MR. MACEY: They are.

MR. CAMPBELL: I would like to make an objection for the record only at this time. It is my understanding that the witness

is to testify solely on the question of economics. For the record I would like to enter an objection to such testimony on the ground that this is not a hearing to determine the size of proration units, but a hearing to determine the spacing of wells. The only authority of the Commission with reference to determination of spacing of the wells must be based upon prevention of waste.

MR. MACEY: The record will show your objection, Mr. Campbell.

MR. KELAHER: I believe it is within the call of the hearing since it does call for the establishment of drilling units, which upon the institution of proration, would become proration units. I don't think there would be any question, there is no reason for establishing a drilling unit for any other purpose. If it is confined solely to spacing as Mr. Campbell contends, the Commission would not consider units in connection with such a consideration.

MR. MACEY: Go ahead, Mr. Kelahin.

MR. KELAHER: Did you note his objection?

MR. MACEY: The record will show that he objected to the introduction of any testimony pertaining to economics in connection with the establishment of drilling units.

MR. KELAHER: Yes, sir, yes, sir.

Q Mr. Washburn, have you made a study of the payout of wells to be located in the proposed Crosby-Devonian Pool?

A Yes, sir, I have.

Q Before we go into that, you heard Mr. Patty testify. Do you agree with the basic information which was offered by Mr. Patty?

A Essentially the data I had was the same. I have one

exception. Where he used ten percent porosity, my calculations based on electric logs was 8.2 percent.

Q Will you proceed with your testimony?

A Using electric log, and in my study I want to give the well all the benefit I could possibly give, I read it high. I gave it a net pay of 120 feet. Water saturation was 25 percent based on electric log. The porosity, 8.2 percent. Using a volumetric equation, I came out with 67,000,000 cubic feet per acre of recoverable gas. That is based on an initial pressure of 3765 pounds absolute bottom hole pressure.

Now, in assigning an allowable for a unit with 67,000,000 cubic feet per acre, I used the rule of thumb of one million per day per ten million reserves, which would give a well with 160 acres a daily allowable of 1,080,000 M.C.F. or 32.8 million per month. Allowable for 320 acres would be twice that and for 640 would be four times 160. For value of the product, I based it on some of our revenue, we are making, and from the present until the first of 1959 I used 9.7 cents per M.C.F. from 1959 to 1964, 10.8 cents; 1964 to 1969, 11.1; and after 1969 I used 12.8 cents.

For operating expenses I kept it down to \$52.00 per month, or \$624.00 a year, recognizing that is very low for income tax, I also have my well at \$152,000. I fully concur with Mr. Patty's belief that it will actually run from \$175,000 to \$200,000. But in some of the wells Phillips have drilled in this area, we have drilled a well that deep for \$152,000. No trouble was encountered. For that \$152,000 well I estimated the intangibles at \$155,000 and capital expenditure as \$47,000. I retired the capital expenditure at \$3,000 per year. The depletion allowance was 27½, but not over

fifty percent of the net revenue and the income tax rate was fifty two percent.

Using those values, I find that 160 acre unit would have a fifty-seven month payout. A 320 acre would have a thirty-two month payout. 640 acre unit would have a seventeen month payout. From that data it is my belief that the unit in this area should not be less than 320 acres.

Q Mr. Washburn, using the figures which you have used, would you consider anything on less than 320 acres a reasonable risk?

A 160 acre unit with a fifty-seven month payout, does not appear attractive.

Q In arriving at that figure, you are using the well cost of the market figures and --

A (Interrupting) With a greatening well cost, your revenue would be somewhat less.

Q And the payout would be longer?

A It would be a tendency to extend that payout, yes, sir.

Q In connection with your study, did you make any analysis of the area that one well would possibly drain?

A Our information is too meager to be definite. But from past experience in a reservoir with a well having a rapid buildup as they have experienced with this one, I believe the well will drain at least 320 acres.

Q In that respect you concur with Mr. Patty's statement?

A Yes, I do.

Q You heard Mr. Patty's recommendation as to a casing program.

Do you concur in those recommendations?

A Yes, we concur with those with one exception. We believe

that an intermediate string set on the base of the Queens at around 3600 feet would be adequate and would protect all the possible oil and gas zones. *instead of the San Antonio*

Q Have you any other recommendation on that?

A No.

Q Do you have anything further to add?

A No, sir.

MR. MACEY: Any questions of the witness?

MR. CAMPBELL: Mr. Commissioner.

MR. MACEY: Mr. Campbell.

CROSS EXAMINATION

By MR. CAMPBELL:

Q Mr. Washburn, are you acquainted with the well that Phillips is drilling, or has drilled, or intending to drill, offsetting the Anderson-Prichard well?

A I followed it on the drilling report.

Q Do you know whether that well was projected originally to the Devonian formation?

A I believe the application was to that effect.

Q Do you know whether it is correct that 8-5ths inch has been set to 3605 feet which is the total depth of that well?

A I believe that is correct.

Q When did you decide not to drill that to the Devonian, do you know?

MR. KELAHIN: There is nothing in here to show that Phillips has decided whether to drill to the Devonian-Ellensburg or what they have decided to drill to. I think it is pretty obvious that we are interested in establishing some rules under which we can drill.

MR. CAMPBELL: You are objecting to this?

MR. KELAHER: Yes, I am objecting to the question.

MR. CAMPBELL: Application was filed before this Commission by Phillips Petroleum Company for emergency order to drill a well 1320 feet east of the Anderson-Prichard well because of the threat of possible drainage of the lease from the Anderson-Prichard well. It is our information that drilling is shut down on this well and that Phillips takes the position that the well is a completed oil well. This case involves the rights of various types of owners in this area. I believe it is material and fair and reasonable that people who have the lessors interest under any tracts in this area that may be involved in any order in this Commission, be furnished with complete information as to the status of any wells that are being drilled, particularly when the location was obtained on the statement they would be drilled to the producing formation in the Devonian.

If this well is completed to the Devonian, it will quite obviously not fit in with the 320 acre spacing pattern that Phillips is now advocating.

MR. KELAHER: The application of Phillips for an emergency order does not necessarily commit them to drill a well to the Devonian. It is based on the fact that they had an expiration date on the lease. At the time this case was heard, I believe the Commission can look at its own order and determine there was nothing saying they would drill to the Devonian. The application and order speak for themselves. They are in the Commission's files. I also have a further objection that this witness has testified that his knowledge as to this well is limited to the well, is to the fact

he has followed it on the drilling reports.

MR. MACEY: Your objection is overruled, Mr. Kelahin. If the witness is able to answer the question, we would appreciate it if he would do so.

A Will he please state the question again?

Q I asked you to furnish me with what information you have within your knowledge as to the present status of that well.

MR. KELAHLIN: I believe the question was when did the Phillips decide not to drill to the Devonian.

MR. CAMPBELL: It has been so long I can't remember. The question is essentially the same.

A Will you please state it as you did last?

(Question read.)

A No, I don't know.

Q Do you know why it is not now drilling?

A They had a show in the Queens, a part of the Queens. It was acidized and tested and potential about eleven barrels, and it is now being produced. I believe it is being produced as an oil well with an intermitter, making six or seven barrels a day. There has been no final decision that that has quit as far as I know.

Q Mr. Washburn, have you calculated the approximate payout of that well?

A No, I didn't.

Q Well, doesn't it seem as if your company has decided to take the risk of fifty-seven month payout when they obtained the location and commenced the drilling of that well, 1320 feet from the Anderson-Prichard well?

A There were other things besides the fifty-seven months involved here.

Q What was involved?

A A lease expiring.

Q Then, isn't it correct, Mr. Phillips, that your reason for seeking 320 more units from the Commission at this time, in the light of the order of the Commission that our application which states, "there is a risk of drainage of Anderson-Prichard well in the Devonian", that your purpose here is to protect yourself against your lessors on the Phillips' obligations?

MR. KELLER: If the Commission please, obviously Phillips is trying to protect their lessors, not protect themselves against their lessors. We came here last month in order to present this information and Mr. Campbell asked that it be continued.

Mr. Campbell requested, if the Commission please, that we stay with the statewide 160 spacing pattern for gas reservoirs, with which we are fully satisfied. This is an application of Phillips for an exception.

(Question read.)

A You will have to rephrase that. I am an engineer.

Q If you can't answer the question, just say so.

A I don't gather your question.

Q Just one more question. Is it your statement that this word of Phillips is now certain and settled?

A Yes, it is now settled. It is not reported as being in doubt or not produced by intervention.

Q That is all.

A Yes, that is all.

THE COURT:

Now, the Commission, I think, is going to grant the application for 320 more units, and the Phillips' application for an exception to the statewide 160 spacing pattern for gas reservoirs.

testified would have a payout of approximately thirty-two months?

A Yes, sir.

Q You are basing that, are you not, upon the entire 320 acres being productive?

A Yes, sir.

Q In the event that only a part of that 320 acres would not be productive of gas, why then you would have a different figure, wouldn't you?

A I believe so, that in New Mexico allowables based on acreage only, and if we have a 320 acre unit, we would have an allowable of so many regardless of what was productive and what wasn't.

Q But if the Commission sets 160 acres, there would be more likelihood that the entire 160 acres would be productive than there would be if they set 320, wouldn't there?

A It would depend upon the location of the wells, each well with respect to the structure. I can place a 320 acre on the structure that would all be productive.

Q By the way, were you here last time at this hearing?

A Yes, sir.

Q At that time were you recommending the drilling units to consist of 320 acres consisting of the east half of the west half of each section?

A I don't believe we made a statement last time.

Q You drilled your well, you found it running low, didn't you, as compared to the other shallow wells in the area?

A I am not familiar with it.

Q You didn't obtain that material before you came here to testify?

A I never came to testify on the shallow well, no, sir.

Q Then you don't know whether it was running low or not?

A No, sir.

MR. HARBIN: That is all.

MR. MACEY: Anyone else? Mr. Ridy.

By MR. RIDY:

Q Mr. Washburn, would you not think, assuming a 320 acre unit, that it would be conducive to more equitable drainage to locate such a well 660, 1980 and to alternate the locations in a standard 320 acre spacing pattern? I mean from a drainage standpoint.

A If you were just thinking only of that drainage, that is probably right.

Q It would be more equitable? A Yes, sir.

Q Your information is entirely based on the Anderson-Prichard Federal No. 1? A Yes, sir.

Q No other information?

A I compared what I got with the experience of the core analysis of other Devonian fields, and found it was reasonable.

Q But that is all?

A I based my answers on what I got off the electric log of the Anderson-Prichard well.

Q Off the one well? A Yes.

MR. RIDY: Thank you.

MR. MACEY: Mr. Nutter.

By MR. NUTTER:

Q Are you producing that well through a test separator at the present time, or just how are you producing it?

MR. MACEY: Which well are you referring to?

Q This oil well, making eleven barrels per day.

A I don't know. I assume there is test equipment on the lease.

Q Do you know whether Phillips has formulated plans or is formulating plans, for the construction of a tank battery on that lease?

A No, sir, I don't.

MR. MACEY: Mr. Howell.

MR. HOWELL: Ben Howell, representing El Paso Natural.

By MR. HOWELL:

Q With reference to your string of intermediate casing, if that is set at your recommended depth of 3600 feet, that would not constitute any protection against the San Andres, would it?

A No, sir.

Q There is sulphur and water and porosity in the San Andres that would be encountered below that depth?

A Yes, sir.

MR. HOWELL: That is all.

MR. CAMPBELL: If this is the only witness of Phillips, I have one question I would like to ask if he can answer it.

MR. MACEY: Proceed.

By MR. CAMPBELL:

Q Is it correct that the interest of Phillips in this area is limited to a three-fourths interest under a 60 acre lease?

A I believe that is right.

MR. CAMPBELL: That is all.

MR. MACEY: Anyone else?

By MR. MACEY:

Q Mr. Washburn, in connection with your estimated payout, you use a figure of one million eighty?

A 1080 M.C.F. . .

Q What did you base that figure on?

A That I had 160 acre unit, I had 10.8 billion cubic feet of reserves, recoverable reserves, which was calculated from these porosity figures that I gave you; 10.8. My one to ten, that would mean he could produce 1080 M.C.F. per day for 160 acre unit.

Q Have you discussed the possible takes from any wells drilled in that area with any transmission company?

A I have briefly discussed it with the El Paso man, the intermission, and he would not take any exception to that he said. It is a rule of thumb. No one knows, I don't think, what the withdrawal would be.

MR. MACEY: Anyone else? The witness may be excused.

(Witness excused.)

MR. KELAHIN: That is all at this time. We would like to make a statement at the close of the hearing.

MR. MACEY: Any further testimony or evidence to give in this case?

MR. HARBIN: Sinclair has some testimony to offer after the proponent of the application has finished.

MR. MACEY: Do you wish to make your statement?

MR. MALONE: Is the case going to be closed today?

MR. HARBIN: We will only take a few minutes in putting in the testimony if the other side is finished.

MR. MALONE: I would like to reserve my statement until all the testimony is in.

MR. MACEY: Mr. Harbin, would you go ahead and proceed?

H. A. MERRILL

having first been duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. HARBIN:

Q What is your name? A H. A. Merrill.

Q Where do you live, Mr. Merrill?

A Roswell.

Q By whom are you employed?

A Sinclair Oil and Gas.

Q In what capacity? A I am district geologist.

Q Have you testified before this Commission before?

A I have not.

Q Tell us about your education, Mr. Merrill, where did you go to school?

A I graduated from the University of Oklahoma, 1948.

Q What degree did you receive?

A Bachelor of Science in geology.

Q By whom have you been employed since you graduated from the University of Oklahoma?

A Sinclair Oil and Gas Company.

Q At all times since your graduation from school?

A Full time.

Q Where have you worked, Mr. Merrill?

A Wichita Falls, Midland, and Hobbs.

Q As a geologist for Sinclair during that period of time?

A Yes.

Q How long have you been working in the New Mexico area?

A A full two years.

Q How long have you been making a study or having to do with Devonian production in New Mexico or Texas, or elsewhere?

A Essentially six years.

Q Speak louder.

A About six years.

Q Have you had occasion to make any study or become familiar with the area which is the subject of this hearing here?

A In our normal work we find that these Devonian structures closely reflect the Yates closure.

Q I believe my question was had you had an occasion to make a study of this area here which is the subject of this hearing.

A I have.

MR. HARBIN: Is the Commission satisfied with his qualification?

MR. MACEY: Yes, sir.

Q Mr. Merrill, have you formed an opinion as to the productive area of this gas reservoir which is the subject of this hearing?

A I have.

Q In what area, in your opinion, will the reservoir be productive?

A Pretty hard to say with the limited control. Generally it will be limited to the west half of Section 28 with the present vertical gas limits.

Q Section 28?

A Yes.

Q West half?

A West half.

Q Would there be any area south of that section, or north of it, which might be productive?

A It will extend slightly north and south in the limits of the structure which trends northwest and southeast.

Q So it is your opinion that the producing area will be small?

A Very small.

Q What do you base that opinion on? On what information or data?

A By comparison to other pre-permian structures which show that the Yates very closely ties in with the Devonian closure.

Q What is the comparison between a Devonian reservoir and a Yates reservoir? That is, is the Devonian usually a large reservoir or smaller?

A Ordinarily it is smaller.

Q Have you formed an opinion as to whether or not the Devonian reservoir will have sharp dips on the flanks or not?

A Well, by comparison to known structures, it will be four to six times as steep as the Yates structure.

Q Four to six times as steep? A Yes.

Q Do you feel that there is sufficient information and material available so as to outline the productive area with any degree of definiteness at the present time?

A None whatsoever.

Q Mr. Merrill, what recommendation do you have, if any, to make in reference to the casing program of this reservoir?

A I believe surface casing would be satisfactory at five hundred feet and intermediate casing approximately 3700 feet, just into the top of the San Andres.

Q And the producing string to be set where?

A Either on top or through the pay, the Devonian pay.

Q You feel that would protect all the necessary formations?

A That is standard throughout the permian basin, I believe.

MR. HARBIN: That is all I have of this witness.

MR. MACEY: Any questions of the witness? Mr. Malone.

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CROSS EXAMINATION

By MR. MALONE:

Q Mr. Merrill, did I correctly understand to ask you whether or not on the basis of information now available it would be possible to outline the productive area with any degree of definiteness, and your answer to be "none whatsoever"? A Yes.

Q That same answer would be applicable, would it not, to the extent of the common source of supply insofar as the delineation of the exterior boundaries is concerned?

A Yes.

Q You would not tell the Commission on the basis of the information now available, with any degree of certainty, that the west half of 28 is all that is going to produce from this reservoir?

A From that known feet of known pay.

Q You feel that we should limit the pool on west half, even though you cannot be certain of limiting the exterior boundaries?

A Until further drilling.

Q It is true until we get further development the extent of the reservoir is not going to be established.

A That is right.

Q It is a reservoir that is a common source of supply now available and it is true that the west half of 28 is all that is going to produce from this reservoir, is it not?

A That is right.

Q It is a common source of supply, is it not?

A That is right.

Q It is a common source of supply, is it not?

A That is right.

reservoir?

A Possibly, yes.

Q If that be true, until such time as it is developed that we are in error, it would be reasonable to predicate a drilling pattern and proration units on that basis, wouldn't it?

A Yes.

MR. MALONE: That is all.

MR. MACEY: Anyone else? Mr. Montgomery.

By MR. MONTGOMERY:

Q Mr. Merrill, do you have any opinion as to the size of the proration unit?

A Not with the present information we have on the thickness of the pay.

Q The question I was getting, we have heard testimony that possibly the proration unit should be restricted to the north half and south half. You have testified that the Devonian is a very steep dip. Would it be possible that if the operator dedicated the north half, that possibly 160 acres of that would be below the water table and not productive of gas. Therefore the operator would not be able to dedicate any part of the south half, so therefore he would have to drill an extra well?

A Did you state that the northeast quarter wouldn't be productive?

Q Take the hypothetical situation in Section 27 was the section in mind, and only the west half was productive of gas. If you drilled a well in the northwest quarter of Section 27, if you could only dedicate the north half of that section to that well, then in order to get the gas under the southwest quarter another well would have to be drilled. Whereas if the party, company

dedicated the west half, then one less well would have to be drilled in the reservoir?

A It is possible.

MR. MONTGOMERY: Thank you.

MR. MACEY: Anyone else? Mr. Reiden.

By MR. REIDER:

Q Mr. Merrill, basically I think you would agree that with the information available at the present time, that the extent possible to predict accurately the size that this field will take?

A That is right.

Q Or for that matter the extent that it will go to?

A That is our belief, yes.

Q Without further information, it would be extremely difficult to describe the field or the drainage therein?

A That is right.

MR. REIDER: Thank you.

MR. MACEY: Anyone else?

MR. CAMPBELL: One question.

By MR. CAMPBELL:

Q Based on the information that you have available, would you recommend to your company that they step out over a 160 acre quarter section and establish a location and drill a Devonian well on this field?

A I would not.

MR. CAMPBELL: That is all.

MR. MACEY: Anyone else? If not --

MR. HARBIN: May I ask another question or two?

RE-DIRECT EXAMINATION

By MR. HARBIN:

Q Will you give us your opinion as to the possibility of oil

being produced from the Devonian formation in this reservoir?

A Well, there is some possibility with that one limited well to guess on, it would be pretty hard to say. There is a possibility of a gas-oil contact and an oil-water contact.

Q Sometimes known as an oil rim? A I believe so.

Q In other words, there is a possibility of the production of oil from the same formation, but with the present information you have you can't state an opinion on it?

A That is right.

Q By the way, do you know whether or not Sinclair Oil and Gas Company has established a location in the northwest quarter of Section 28?

A We have.

Q Is it the intention of Sinclair to drill that well immediately, do you know?

A Yes, it is.

MR. HARBIN: That is all.

MR. MACEY: Anyone else? Mr. Reiden.

By MR. REIDER:

Q What is the location of that well?

A I believe that is 990 feet from the south and east lines of the northwest quarter.

MR. MACEY: That would be 1650 from the north and west?

A Yes, it would.

MR. MACEY: Anyone else? The witness may be excused.

(Witness excused.)

MR. HARBIN: I would like to call Mr. C. D. Gains.

C. D. G A I N S

having first been duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. HARBIN:

Q What is your name? A C. D. Gains.

Q By whom are you employed?

A Sinclair Oil and Gas Company.

Q In what capacity?

A Assistant division engineer.

Q Have you testified before this Commission before?

A Yes, sir, I have.

Q Mr. Gains, are you acquainted with the Anderson-Prichard well which is the subject of this hearing here, and the reservoir from which it is producing?

A Yes, sir, I am.

Q What information have you obtained in reference to the area or number of acres which a well drilled into the Devonian formation in that reservoir will drain, do you know? Do you have any information upon which to base an opinion yet?

A We do have the information that Mr. Patty submitted to the Commission this morning which indicates pressure performance of one well completed in the reservoir. I do not think that it is a question of how much the well will drain as to whether you could safely assign 320 acres to a well and be assured that that well would be productive when you have only one well in that reservoir. So to that extent I believe that you could not make the statement that a well would drain 320 acres at this time.

Q Have you had available all of the information which Mr. Patty testified that he based his opinions on?

A We did have the bulk of that information, yes, sir.

Q In your opinion is there sufficient information available upon which to recommend to this Commission the size of the drilling units in that reservoir?

A I think there is very little known to date about the size of this reservoir even particularly from the pressure standpoint that was mentioned this morning. Even though there has been no visible pressure drop, with the cumulative withdrawals, I believe according to the reserve estimates made which our estimates following very closely in line with those made by Phillips and Anderson-Prichard, in fact they fall between the two figures, that for 320 acre unit the volume withdrawn to date would represent something less than one-half of one percent of the gas in place. We do not know whether a water drive might exist in this reservoir. That would tend to maintain even if one did not with only less than one-half percent of the in place withdrawals made at this time, you would not expect much of a pressure drop. It might be that it would be very slight if it did exist, and with two pressure points to go on I seriously doubt that you could establish the size of the reservoir on the pressure information that is at hand at this time.

Q What recommendation do you have to make to the Commission in reference to this hearing, the establishment of a drilling unit?

A It would be my recommendation that drilling units not be established until more information is available, at which time more information would be available to the Commission to make their decision.

Q Within six months from this date will the Sinclair well have been drilled in your opinion, in the northwest quarter of Section 28?

A If we do not encounter any trouble, why it should be completed within six months.

Q Will that furnish further data and information upon which to

base the drilling units?

A I believe we would have just about twice as much data as we have now.

Q Do you recommend to the Commission that the drilling units not be established for a period of six months until further information can be obtained?

A Yes, sir, that would be my recommendation.

MR. HARBIN: That is all.

MR. MACEY: Anyone have any questions of the witness?

MR. MALONE: If it please the Commission.

CROSS EXAMINATION

By MR. MALONE:

Q Mr. Gains, did I correctly understand your testimony to be that it is your opinion that at this time no competent engineer can make a statement that one well would drain 320 acres in this reservoir?

A No, sir, I don't believe I said that no competent engineer could make that recommendation. I would say that I do not feel that I can make the statement at this time.

Q Would you categorically state that in your opinion one well would not drain 320 acres in this reservoir?

A No, sir, I would not make that statement.

Q The fact is that the great likelihood is that it would drain 320 acres, would it not?

A I think the great likelihood is that it would, yes, sir.

Q So when you qualify your answer to that question by the information now available, it isn't that the present information doesn't indicate that to be correct, but merely that you would like to have some more information before you go on the line?

A No, sir, I believe my statement there concerning that, said there would be a greater question as to whether you could assign 320 acres that would be productive rather than the fact that a well would not drill 320 acres.

Q I misunderstood your question. Your testimony now is the question in your mind is whether a particular 320 acres would all be productive and not whether or not a single well would drain 320 acres?

A Yes, sir, that would be a much greater question in my mind.

Q You would agree ~~then~~ with Mr. Patty's statement that one well in this reservoir would drain 320 acres?

A Yes, sir, if all the acreage in the 320 was productive, based upon the information from one well, I would say that.

Q My question is without reference to a particular 320, but an area of 320 acres could be drained by a single well, having in mind the thickness of the producing horizon, the porosity indicated by the microlog and so forth?

A Yes, sir.

Q With reference to your recommendation that no drilling units be established for six months, it is true that at the time that the Commission met last month there was available to the Commission should it decide on 320 acre units, either the west half and east half or south half or north half as possible drilling units should they be established at 320 acres?

A I do not believe that was the application for the hearing. I believe that the application involved, the east and the west halves of the sections.

Q I believe you will find that there was no application, that the hearing was called by the Commission for a recommendation, and

that no recommendation was made with reference to either east and west or north and south.

A However, there was a well drilling in the east half at that time. It was recognized that that would be, the most likely units would be the east half of the west half.

Q It is true, however, is it not, that by the establishing of the well in the northwest quarter by Sinclair since the last meeting of the Commission, the Commission is in effect deprived of the opportunity to create 320 consisting of east half and west half, because the unit would have two wells already drilled on it, or drilling?

A That would not affect the Commission's decision as to desirable unit, I wouldn't think.

Q It is also true that if a drilling, as to the drilling units, is postponed for six months, the possibility of what has happened in the last thirty days being multiplied by six, does exist, doesn't it?

A Yes, sir.

MR. MALONE: That is all.

MR. MACEY: Anyone else? Mr. Nutter.

By MR. NUTTER:

Q With reference to your recommendation that the proration unit determination be postponed for a period of six months, how much of that time do you think would be actually required to drill and complete the well?

A Three and four months from this date.

Q Two or three months for testing and obtaining production data?

A Yes.

MR. MACEY: Anyone else? If not the witness may be excused.
(Witness excused.)

MR. HARBIN: No, sir. That is all the testimony that Sinclair has to offer. We would like to make a statement at the conclusion of the hearing.

MR. MACEY: Is there any further testimony?

MR. CAMPBELL: I don't know whether testimony will be required on this. I will state what I had to offer. I have talked this over with Mr. Malone. I haven't mentioned it to Mr. Kelahin. We have only another map showing what the take-off from the county records in Lea County reflect as to lease ownership on deep rights. We have been advised by Mr. Malone that the map that they put in contains some information on the shallow rights which is not accurate as to this particular reservoir. We do not offer this as a title opinion statement of mineral ownership, but offer it as a take-off the best we could obtain from the county records, and would like to offer it in evidence. We have the man here who made the take-off and we will put him on the stand if it is required, but with the qualification that I have made that we are offering it on that basis and for what it may be worth in conjunction with the other map, I thought we could limit the necessity of the exhibit. The other exhibit was obtained in the same manner and is a statement of the mineral ownership in the area involved here.

The purpose of that exhibit is, of course, in connection with the complications that have been referred to here that might arise in event of the necessity of pooling into larger proration units. This was obtained in the same manner by the same man and he would simply identify it and offer it for what it may be worth in that respect. Counsel does not want to stipulate, I will be glad to put him on as a witness.

MR. MALONE: May we inquire whether there are copies available?

MR. CAMPBELL: I have only one copy of each. We would be glad to prepare copies and furnish them. The mineral ownership is quite extensive, but we would certainly do that after the hearing.

MR. MALONE: Anderson-Prichard would have no objection to the introduction if we would be furnished with copies. I would like to clarify the record in regard to the plat offered by Anderson-Prichard. It was complete information as given to Anderson-Prichard concerning the ownership of deep rights. We did learn that it was in error in at least one case, and showed the ownership of shallow rather than deep rights. We have no objection.

MR. MACEY: You are referring to Anderson-Prichard Exhibit 5?

MR. MALONE: That is correct.

MR. KELAHIN: We would have no objection to the exhibit being offered without any testimony. We would also like to have a copy of it.

MR. MACEY: Have you identified the exhibits?

MR. CAMPBELL: I have numbered them Leonard Exhibit No. 1 and Leonard Exhibit No. 2.

MR. MACEY: Without objection they will be received in evidence.

Anyone have anything further in this case?

MR. WEIR: W. W. Weir, Woodley Petroleum Company. We concur with the recommendations of Mr. Patty.

MR. MACEY: Anyone else?

MR. HINKLE: Clarence Hinkle, Hervey, Dow and Hinkle, representing Humble Oil and Refining Company. The Humble is interested

in this case to the extent that it owns the lease covering forty acres, being the northeast quarter of the northeast quarter of Section 28. It also owns leases covering 200 acres in the adjoining section to the north. The evidence indicates in this case that this well, this discovery is indicative of probably a major Devonian discovery which could be of larger than the normal Devonian discovery, which has heretofore taken place in Lea County. Under the call, as we see it, the Commission should establish, particularly in the new area of this kind, the largest unit possible that is supported by the evidence.

Under the law the Commission should establish that unit which one well will effectively and efficiently and economically drain. We believe that the evidence in this case would support a finding by the Commission that this one well will drain 640 acres and that at least for the time being, until the outlines of the field are pretty definitely established by further drilling, that 640 acres should be the standard unit.

In that connection Humble is willing to pool or communitize the acreage which it has in Section 28 to form such a unit, and would later, if the further drilling indicates that the acreage to the north is productive, would be willing to pool its acreage there to form likewise a 640 acre unit.

Now, if the Commission should see fit to establish a unit less than 640 acres, and we feel in any event it should not be less than 320, then the Humble would be willing to go ahead and pool and communitize its acreage in Section 28. And if further drilling justified it in the adjoining section to the 29, to form 320 acre units. We believe, however, that in the adoption of any rules in

connection with this particular field, that it should not prohibit the formation of 640 acre proration units where the further drilling shows that the establishment of such units are justified.

MR. MACEY: Mr. Woodruff.

MR. WOODRUFF: Norman Woodruff, representing El Paso Natural Gas Company. At the last hearing, El Paso offered casing rules. It has been my understanding that I either misstated or the record shows erroneously, the depth at which we recommended our intermediate string to be set. We indicate 4800 feet, which we consider to be adequate to protect against the highly porous sulphur bearing zones which we have found to occur in this general area in the San Andres formation. It is our understanding that it has been testified to here today, that the pressures taken on this Anderson-Prichard well being discussed, built up to a maximum in fifteen minutes. That being the case, then it would be our opinion that it indicates there is communication in the area being drained and indicative of a wide draining area.

El Paso concurs with the recommendation of Mr. Patty for Anderson-Prichard. We think it very important that the Commission take under consideration and act immediately upon a spacing, upon an acreage allocation for spacing purposes. Whether it be for proration or for spacing short of proration, a pipeline company takes into consideration acreage in the volume of gas which it takes from a well. Under proration, a similar condition will exist. I think the operator and the royalty owner and Commission alike should take cognizance of the fact that a well on 160 acres will get less production than a well on 320. In an area where one well will drain 320 or more, that the drilling of the extra well on 160 is unnecessary.

It would be a wasteful practice. We think that income to the royalty owner would not be greater. Of course it would be less to the operator with the additional well.

Our experience in the only other Devonian gas pool in which we were connected to has been that the rule was too late. That in an area of 1100 acres, six wells were drilled. Three of the wells were on 40 acre spacing. Somewhat similar characteristics are indicated in this Crosby-Devonian Pool, rapid buildup and wide drainage area. We think that the Commission should rapidly institute rules to prevent the drilling of unnecessary wells.

MR. MACEY: Anyone else?

MR. WALKER: Don Walker with Gulf. As stated last month, Gulf does not know definitely whether this reservoir is large enough to be under our property in the area which consists of all of Section 32 and the northeast quarter of Section 33. However, we are still hopeful this might be the case. It goes without saying that smaller units could be made from larger ones than the other side of the road. We would recommend the adoption that the Commission adopt proration units that would prevent unnecessary drilling of Turner wells and 640 units.

MR. WALKER: For Phillips Petroleum. We realize this is a new pool and that the information that is available is somewhat scanty at this time. However, we do feel that enough information has been obtained to show that one well will adequately, economically develop 320 acres. If experience should later show that closer spacing is necessary, that is a matter which can easily be handled. In the interest of orderly development of the pool, we feel that the Commission should immediately adopt rules

setting drilling and proration units as soon as possible and not wait until a closer spacing pattern has been established. A further reason for immediate action is the nature of the mineral ownership in the formations involved, which makes it difficult to obtain pooling agreements and obtain the drilling unit or proration unit without the Commissions having adopted any rules.

Until that is done, the operator is at a loss to know which way to turn.

We further feel that the economic picture we have presented shows that there can be an adequate payout in a reasonable time on a well on a 320 acre unit, whereas it would be extremely doubtful on a well located on a 160 acre unit. For that reason we urge the Commission to take some immediate action to adopt a unit. We would prefer a 320 acre unit.

MR. CAMPBELL: If the Commission please, I would like to make a statement. First I would like to point out under the statewide rules of the Commission, there is a spacing plan in this field. 160 acres is the drilling unit in defined gas pools in New Mexico in Lea County, southeastern New Mexico in the absence of the granting of an exception as provided by rule 104 of the Commission. The sole question here is whether the circumstances justify an exception to the existing spacing pattern and drilling units in this particular reservoir.

It is our position that the lessee under oil and gas leases when he purchases those leases, assumes some of the risk involved in the length of payout and in his obligations to drill wells under the terms of the leases. It has been testified here that there is no intention to set up a uniform 320 acre spacing pattern. If a

uniform 320 acre spacing pattern were planned, then obviously Section 28 with the drilling of the Sinclair well, is off the pattern whichever way you term the units, because they should be drilled on diagonal 160 acre tracts in order to have a uniform spacing pattern.

The obvious purpose here, it seems to me, is to not drill on a uniform plan but to attribute 320 acres to each lease. I don't think it behooves the Commission to establish any rules short of prevention of waste, which will have any effect upon the obligation of the lessee under his contracts. I don't believe it makes any actual difference whether the Commission sets 160 acres, 320 or 640 insofar as the obligations of the lessee under his contract are concerned, because if 160 acres remains, the standard proration unit in this pool and the drilling of an offset well on 160 acres is not economic, and a prudent operator would not undertake it, then the royalty owner has no recourse under his contract. The only thing that 320 acre spacing will do, it will work the other way around. If the royalty owner thinks he is entitled to 160 acre offset, then with the established drilling unit that the Commission sets up he will obviously be unable to obtain his offset to which he may be entitled. At least he is entitled to his day in court.

There is the further point I would like to make that was brought out by the Sinclair witnesses, that the limited information available, it is entirely possible that the drilling of wells on 320 acre drilling units will result in non-productive acreage being attributed to particular wells. The fact that we may go on proration in this pool since we do not have statewide proration. If we do go on proration, the equities depend on whether the well will

make its full allowable and for how long a period of time, not entirely upon the proposition that all the acreage gets the allowable. It may not all be productive acreage, it may not all make the allowable. We feel there is not sufficient information available to justify 320 acre units if 640 acre units were established now or 320.

We believe that would be the end of the drilling in this field. Because the testimony indicates, and some people think it is a small reservoir. Quite obviously if people have to step out a mile and a half, or mile, to maintain a uniform drilling pattern, no prudent operator is going to do it under these circumstances. That is the end of the development, that is why the royalty owners are concerned with the establishment of 320 acre spacing program in this field at this time.

MR. MACEY: Mr. Malone.

MR. MALONE: May it please the Commission, by way of concluding Anderson-Prichard's case, we would like first to commend the Commission if it is within our power to do so, for having shown a realization of the importance of an orderly development of this first Devonian gas pool in New Mexico. I don't know that it was in the mind of the Commission, but I can imagine that it was, that it has heard evidence several different times recently on the question of proration units and drilling patterns which was based on the fact that a pool was already developed, so it was too late to establish a larger proration unit even though it might have been desirable to do so, if it had been done at the outset. But the Commission had withheld action too long and now its hands were tied in putting into effect a plan which it was generally agreed might

be of value.

I think the Commission, in acting promptly with reference to this reservoir, has prevented that argument being made and is now in a position to consider the development of this reservoir and the establishment of drilling units and proration units in the light of the public policy of the state as it has been declared by the legislature of New Mexico. It seems to me we are getting a little bit out of perspective when the argument is made which the Commission has just heard, with reference to action or non-action by the Commission as it relates to the obligation or lack of obligation to the lessee or leasor, the legislature didn't create the Commission for the purpose of determining or effecting as a prime consideration, the rights which might exist between a leasor and lessees admittedly in the execution of the public policy of the state to avoid waste, to protect correlative rights. It is necessary for this Commission to make orders which are going to affect the rights between leasor and lessee. It certainly is not a primary consideration and should not be a primary consideration insofar as action taken by this Commission is concerned. Any action taken on that basis would certainly be fatal on attack.

It has been demonstrated that this is the first Devonian gas pool in New Mexico. That because it is early in the day as far as the development is concerned, we are going to have additional information in the future, it would appear to Anderson-Prichard to be good judgment for the Commission to put itself in a position to take advantage of the new information as it comes in. It is perfectly apparent that if 160 acre units are established, we are committed for time immemorial and the Commission can take no advantage

of the information that may be developed by future drilling. Whereas, if 320 acres are established and it should, as some of the witnesses feel may be the case, develop that we are dealing with a small reservoir, then the Commission will be in a position to act in accordance with that information when it is presented.

We, therefore, recommend to the Commission the establishment of 320 acre unit consisting of the south half and the north half of the respective sections as recommended by Mr. Patty.

MR. MACEY: Anyone have anything further? Mr. Harbin.

MR. HARBIN: May it please the Commission, Sinclair Oil and Gas Company takes the position that there is not enough information and data available upon which to base the 320 or 160 acre units at the present time. We have a new well and a new reservoir which has been drilled. A very small amount of gas produced as compared to the reserve. We think that that is not of sufficient information to justify the Commission in setting the unit based upon 320 acres at this time. Sinclair is in the position that its royalty owners will not voluntarily unitize with more than 160 acres. It must drill its well in order to protect its leasehold rights on the northwest quarter of Section 28, and which it proposes to do, and is proceeding to do at the present time.

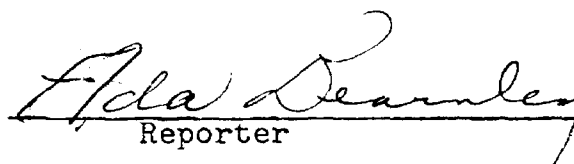
We feel that when that well has been drilled, that there will be available a great deal more information. We know not now which way this formation is going to dip. We do not know whether it will be a very small reservoir covering one or two sections, or a big reservoir. Therefore we think that the Commission should postpone its determination for a period of four or six months until further information is obtained. But we also recommend that in the event

the Commission feels that it must at this time establish the drilling units, that they establish 160 acres instead of 320 or 640. We recommend the decision be postponed.

MR. MACEY: Anyone else? If not we will take the case under advisement. We will recess until 1:15.

C E R T I F I C A T E

I, ADA DEARNLEY, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings in the matter of Case No. 861, were taken by me on April 20, 1955, that the same is a true and correct record to the best of my knowledge, skill and ability.


Reporter

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE NO. 861
Order No. R-639-B

APPLICATION OF EL PASO NATURAL
GAS COMPANY FOR AN ORDER
PREMULATING POOL RULES AND
INSTITUTING GAS PRORATIONING
FOR THE CROSBY-DEVONIAN GAS POOL
IN LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION FOR REHEARING

BY THE COMMISSION:

This cause came on for consideration upon the petition of
El Paso Natural Gas Company for rehearing on Case 861, Order
R-639-A heretofore entered by the Commission on December 28, 1956.

NOW, on this 14th day of January, 1957, the Commission,
a quorum being present, having considered the application,

HEREBY ORDERS:

That the above-styled cause be reopened and a rehearing
be held at 9:00 o'clock a.m. on February 14, 1957, at Mabry Hall,
State Capitol, Santa Fe, New Mexico, at which time and place all
interested parties may appear.

IT IS FURTHER ORDERED:

That the testimony on rehearing shall be limited to new
evidence upon the issues raised in the petition for rehearing.

IT IS FURTHER ORDERED:

That Order R-639-A shall remain in full force and effect
pending the issuance of any further order.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

Edwin L. Mechem
EDWIN L. MECHEM, Chairman

Murray E. Morgan
MURRAY E. MORGAN, Member

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



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. 861
Order No. R-639-A

APPLICATION OF EL PASO NATURAL GAS
COMPANY FOR AN ORDER PROMULGATING
POOL RULES AND INSTITUTING GAS PRORA-
TIONING FOR THE CROSBY-DEVONIAN GAS
POOL IN LEA COUNTY, NEW MEXICO.

APPLICATION FOR REHEARING

Your applicant, El Paso Natural Gas Company, applies for rehearing in the above styled and numbered cause and states:

1. That it is the owner of interests in the West Half (W/2) and Southeast Quarter (SE/4) of Section 33, Township 25 South, Range 37 East, N.M.P.M., Lea County, New Mexico, and is a party affected by Order No. R-639-A, entered by the Commission on December 28, 1956.

2. That, upon rehearing, your applicant would show the Commission that its Order No. R-639-A is erroneous in the following respects:

(a.) The Commission's Finding No. 7 that a proration unit of more than 160 acres in the probable areal extent of Crosby-Devonian common source of supply could cause the inclusion in units of acreage that cannot reasonably be assumed to be productive of gas is not supported by the evidence, is contrary to the evidence, and states a legal impossibility under the statutes of the State and the Commission's own rules and regulations.

(b.) The Commission's Finding No. 8 that one well will efficiently and economically drain 160 acres in the Crosby-Devonian Pool is not supported by the evidence and is contrary to the law and the evidence.

(c.) Rule 3 of said Order establishing 160 acre drilling units in the Crosby-Devonian Pool is not supported by the Commission's findings of fact and is contrary to the law and evidence.

(d.) Rule 5 of said Order establishing 160 acre proration units in the Crosby-Devonian Pool is not supported by the Commission's findings of fact and is contrary to the law and the evidence.

3. That, pursuant to the Rule 1208 of the Commission's Rules and Regulations, copies of this application for rehearing have been mailed by registered mail to the adverse parties and parties entering appearances in the original hearing the above styled and numbered cause at their respective addresses, as shown on the attached Exhibit "A".

WHEREFORE, your applicant respectfully requests the Commission to grant a rehearing in the above styled and numbered cause and to hear such further evidence as may be material and to reconsider its Order R-639-A entered in said cause.

Respectfully submitted,

EL PASO NATURAL GAS COMPANY

By 
Its Attorney

JAW:jw

EXHIBIT "A"

INTERESTED PARTIES

1. Phillips Petroleum Company
P. O. Box 1751
Amarillo, Texas
Attention: E. H. Foster
2. Anderson-Prichard Oil Corp.
Liberty Bank Bldg.
Oklahoma City 2, Oklahoma
Attention: C. T. McClure
3. Amerada Petroleum Corp.
P. O. Box 2040
Tulsa, Oklahoma
Attention: R. S. Christie
4. Humble Oil & Refining Company
Box 1600
Midland, Texas
Attention: Grieg
5. Gulf Oil Corporation
P. O. Box 1290
Fort Worth, Texas
Attention: Don Walker
6. Norman Olsen
c/o W. G. Girand
Attorney at Law
Hobbs, New Mexico
7. Sinclair Oil & Gas Company
901 Fair Bldg.
Fort Worth, Texas
Attention: Nat Harbin
8. William Wells
c/o E. H. Foster
First National Building
Amarillo, Texas
9. Sun Oil Company
Box 2880
Rio Grande Building
Dallas, Texas
10. Harry Leonard
c/o Jack Campbell
J. P. White Building
Roswell, New Mexico
11. John Kelly
803 East 2nd
Box 5671
Roswell, New Mexico

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
March 14, 1957

TRANSCRIPT OF HEARING

Case No. 861

DEARNLEY-MEIER AND ASSOCIATES
COURT REPORTERS
605 SIMMS BUILDING
TELEPHONE 3-6691
ALBUQUERQUE, NEW MEXICO

(Rehearing) Application of El Paso Natural Gas Company for rehearing on Case 861, Order R-639-A. Applicant, in the above-styled cause, seeks a rehearing in Case 861, Order R-639-A, on those matters concerning the size of a standard drilling and production unit in the Crosby-Devonian Gas Pool, Lea County, New Mexico

Case No. 861

Honorable Edwin L. Macheson
Mr. A. L. Porter
Mr. Murray Morgan

MR. PORTER: The next case on the docket will be 861.

MR. COOLEY: Case 861. (Rehearing) Application of El

MR. COOLEY: Case 861. (Rehearing) Application of El Paso Natural Gas Company for rehearing on Case 861, Order R-639-A.

MR. WOODWARD: John Woodward appearing for El Paso Natural Gas Company as applicant in Cases 861 and Case 1204, which cases we have asked to be consolidated, at least for the purposes of presentation. El Paso requests an indefinite continuance of both cases for the reason it is seeking to make arrangements for the drilling of a well in the south half of the structure on which the Crosby-Devonian Pool is located, probably in the southeast quarter of Section 33, Township 25 south, Range 37 east. The drilling of

3
such a way, we feel will provide additional data for the Commission and the industry.

MR. PORTER: Mr. Harbin.

MR. HARBIN: Met Harbin with Sinclair Oil and Gas Company. We have no objection to the requested continuance. I assume that in the event the cases should be, in the future be placed on the docket for hearing, that we would have ample advance notice of the hearing.

MR. PORTER: I think so, Mr. Harbin. You would receive the usual notice.

Is there any objection to the counsel's motion for an indefinite continuance of these two cases?

Does anyone have objection to counsel's proposal for indefinite continuance? The Commission will continue the cases indefinitely and when it is brought up for hearing it will be advertised.

4

C E R T I F I C A T E

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO) SS

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

IN WITNESS WHEREOF I have affixed my hand and notarial seal
this 28th day of March 1957.

Ada Dearnley
Notary Public-Court Reporter

My commission expires:

June 19, 1959.

OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

February 5, 1957

C
O
P
Y

El Paso Natural Gas Company
P.O. Box 1492
El Paso, Texas

ATTENTION: John A. Woodward

Gentlemen:

This is to acknowledge receipt of your request for continuance in Case 861 (Rehearing of Application of El Paso Natural Gas Company for Promulgation of Pool Rules for the Crosby-Devonian Gas Pool) and Case 1204 (Application of El Paso Natural Gas Company for an Order Amending the Horizontal Limits of the Crosby-Devonian Gas Pool).

It is the decision of the Commission to grant the continuance as requested and to set the above-referenced cases for hearing at 9:00 o'clock a.m. on March 14, 1957, at Mabry Hall, Santa Fe, New Mexico.

Yours very truly,

A. L. Porter, Jr.
Secretary - Director

ALP:WJC:bp

68-Jack Campbell, Box 782, Roswell, New Mexico
 B. H. Gregg, Shell Oil & Refining Co., Box 2180, Houston, Texas
 Ben Walker, Gulf Oil Corporation, P.O. Box 1870, Ft. Worth, Texas
 C. T. Williams, Anderson-Weichard, Liberty Bank Bldg., Oklahoma City
 W. B. Stewart, Box 270, Hobbs, New Mexico
 H. G. Abbott, American Petroleum Corporation, Hummer, New Mexico
 George Selinger, Shell Oil Company, Box 1400, Tulsa, Okla.
 Nat. Martin, Standard Oil & Gas Co., 1145 Fair Bldg., Ft. Worth
 C. L. Bailey, Standard Oil & Gas Co., Box 629, Roswell, New Mexico
 W. B. Tomlinson, Atlantic Refining Co., Box 871, Midland, Texas
 E. H. Foster, Phillips Petroleum Company, Box 1751, Amarillo, Texas
 Gilbertson & Irwin, Box 2472, Midland, Texas
 Sun Oil Company, Rio Grand Natl. Bldg., Dallas 2, Texas

PETROLEUM LIFE
BUILDING

E. A. CULBERTSON & WALLACE W. IRWIN

-- OIL --
MIDLAND, TEXAS

TELEPHONES: 2-1601
2-1602
P. O. BOX 1071

March 11, 1957

car file

New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Re: Case No. 861 and
Case No. 1204

Gentlemen:

Referring to Case No. 861 (rehearing of application of El Paso Natural Gas Company for promulgation of Pool Rules for Crosby-Devonian Gas Pool) and Case No. 1204 (application of El Paso Natural Gas Company for an order amending the horizontal limits of the Crosby-Devonian Gas Pool):

We herewith inform the Commission that we are opposed to any change in the present 160-acre proration unit for the same reasons as previously outlined and which are set forth in Commission Order R-639-A.

We are also opposed to any extension of the horizontal limits of this pool until such extension has been proven productive by the actual drilling of a test well.

Yours very truly,

E. A. CULBERTSON & WALLACE W. IRWIN

By

Wallace W. Irwin

WWI:dcf

Copy 861

The LEVERS COMPANY

209 EAST 2ND STREET
P. O. Box 784 • ROSWELL, NEW MEXICO

March 11, 1957.

New Mexico Oil Conservation Commission
Sant Fe, New Mexico.

Gentlemen:

We understand that a hearing will be held in your office March 14th in regard to the spacing of oil and gas wells to be drilled in the Jal gas area. We are mineral owners under lands covered by this application and particularly under the Sam W. Dabbs and George Dabbs leases in Sections 34 and 35 Twp. 25 S Range 37 East. We desire to protest any changes in the present spacing of wells in this area and ask that the application of the El Paso Natural Gas Co. be denied.

Yours very truly

The Levers Co.,

By *Forest Levers*

F.L.S

BEFORE THE
Oil Conservation Commission
SANTA FE, NEW MEXICO
March 16, 1944

IN THE MATTER OF:

CASE NO. 861 - Regular Hearing

TRANSCRIPT OF PROCEEDINGS

ADA DEARNLEY AND ASSOCIATES
COURT REPORTERS
ROOMS 105, 106, 107 EL CORTEZ BUILDING
TELEPHONE 7-9546
ALBUQUERQUE, NEW MEXICO

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
March 16, 1955

IN THE MATTER OF:

The application of the Oil Conservation
Commission upon its own motion for an
order:

(a) Creating the Crosby-Devonian Gas
Pool in Lea County, New Mexico, for pro-
duction of gas from the Devonian formation
described as:

Twp. 25 South, Rge. 37 East
All of Section 28

Case No. 861

said pool to embrace the common source of
supply discovered in the Anderson-Prichard
Oil Corporation No. 1 American Republics-
Federal Well, NE/4 SW/4 Section 28, Town-
ship 25 South, Range 37 East, Lea County,
New Mexico.

(b) Establishing pool rules, drilling
units, well spacing, casing programs and
other related matters in the above-
described areas.

BEFORE:

Honorable John F. Simms
Mr. E. S. (Johnny) Walker
Mr. William B. Nacey

TRANSCRIPT OF HEARING

MR. NACEY: The next case on the docket is Case 861.

Mr. Malone?

MR. MALONE: Rosa Malone, representing Anderson-Prichard
Oil Corporation. Anderson-Prichard is familiar with the practice
of the Commission of receiving statements at the conclusion of a
hearing, but because of the rather unusual circumstance that it is

the owner and operator of the only well now producing from the proposed Crosby-Devonian Gas Pool, and because of the further fact that it does not propose to present testimony at this hearing. We would like to make a brief statement.

Anderson-Prichard recognizes its obligation as the operator of the only completed well in this pool, to recommend to the Commission, pool rules including drilling units, well spacing, casing programs and other regulations to govern the development of this pool. However, the single producing well has been on the line less than a week. Anderson-Prichard now has in progress, certain studies on the basis of which it proposes to make recommendations to the Commission as to the size of the unit and the other matters which will be covered by the rules to be promulgated.

It feels that observation of the well and its performance will have an important bearing on the recommendations to be made. Such observation, while desirable for at least a 60-day period, is almost essential for almost 30 days. For that reason, Anderson-Prichard will request the Commission to place Case 861 on the docket of the April hearing and that if testimony be received in that case at this hearing, the witnesses who are presented, be available for cross examination next month in the light of the information which may be disclosed in the interim.

MR. HADLEY: Mr. Kellahan?

MR. KELLAHAN: Jason Kellahan. If the Commission please, Jason Kellahan representing Phillips Petroleum Company. We are going to want to offer testimony at this hearing and also to ask the Commission not to continue this case. I believe if the

Commission is going to receive testimony it would be well for us

to reserve the statement until the conclusion of our presentation. However, I would like to know if the Commission is going to go ahead and receive testimony at this time. We are prepared to present it.

MR. CAMPBELL: If the Commission please, Campbell and Russell of Roswell. We represent Harry Leonard individually, and the Leonard Oil Company and the H. P. Saunders Estate, who together are the Harry Leonard and Saunders Estate, each own a fourth mineral interest under the northwest quarter of Section 26 and the southeast quarter of Section 26, and Harry Leonard owns various mineral interests under the south half of Section 21 and the east half of the southeast quarter of Section 20. We also represent Mr. Art Yaeger of Midland, who owns a mineral interest under the south half of Section 21. Leonard Oil Company owns working interest under the east half of northwest quarter of Section 21 and the west half of northeast quarter of Section 21, and other working interests in the general area.

We feel that time is certainly premature for establishing any pool rules in this area, for spacing or drilling units and if testimony is to be offered we certainly object to what we understand is the anticipated request of 320-acre units in this area. We are owners of half interest in the minerals underlying the Phillips well, which is a direct east offset to the Anderson-Prichard well, Phillips well is not yet completed and we feel that certainly the Commission should withhold hearing any evidence looking toward the establishment of pool rules in this area until such time as additional information is available.

~~In the meantime, of course, we expect that the working interest~~

owners will comply with their lease contracts and drill the offsets that may be required by the developments in the field. We will join in the request for continuation without evidence, at this time.

MR. WALKER: Don Walker with Gulf. We have some acreage which we hope will be in this pool. We are certainly interested in any rule that might be established. However, the first that we knew of any proposed rules was when the docket came out about ten days ago. We certainly think a continuation should be granted so this can be looked into a little more thoroughly for all concerned.

MR. MACEY: Mr. Kellahin, in connection with your statement and the other statements that have been made here, I realize that we are probably a little premature in requesting pool rules on short notice, knowing at the time that we made the advertisement that the well was not even connected to the transmission line. We will continue the case until April. If you would like to put your testimony on now and be available next month, all well and good. If you prefer to defer the testimony to next month, well and good, the choice is up to you.

MR. KELLAHIN: In the first place, I cannot agree with the Commission statement. I dislike to be disagreeing with the Commission. I do not think the Commission was premature in calling this case for this hearing, particularly in view of Mr. Campbell's statement that they would expect the leaseholders, the holders of the operating interest to meet their lease obligation. That is merely saying that pending that time, we are going to have 160-acre spacing, if there is going to be any opportunity for establishing an orderly spacing pattern in this pool and achieving an orderly development, then certainly the Commission should set a case down

for hearing as soon as possible, and then if they have to look back at a future date and revise that on the basis of other information, that is the time to do it.

We are prepared to go ahead and present our testimony at this time. I don't see what necessity there might be for having the witnesses back next month to cross examine. Certainly the persons who are present will have every opportunity to cross examine at this time.

MR. MACEY: You want to put your evidence on, or anything you want to put on?

MR. KELLAHIN: In view of the Commission's Ruling that this case is going to be continued, we will not present testimony at this time, but will present it next month. However, we do make this request. I think it is a perfectly proper request, that pending the hearing and final determination of this matter, that the Commission enter an interim order, which would, in effect, prevent the drilling of this area on 160-acre spacing until such time as a final determination has been made as to what the spacing order should be.

MR. MALONE: May it please the Commission --

MR. MACEY: Mr. Hinkle?

MR. HINKLE: Clarence Hinkle, representing Humble Oil and Refining Company. The Humble is interested in this case to the extent that they own the lease covering the northeast quarter of the northeast quarter of Section 28, Township 25 South, Range 37 East. We concur in the request made by Mr. Kellahin that an interim order be entered preventing the development of the area on 160-acre spacing until the case can be heard.

MR. MALONE: On behalf of Anderson-Prichard, I would like to express the view that the Commission has the inherent authority to refuse applications to drill in order to protect the Commission in the exercise of its power to set up proration units and a spacing pattern. While that is under consideration, certainly in the absence of any lease expiration problems that do not exist, that the Commission has the power to protect itself and hold the matter in status quo until the determination is made.

MR. CAMPBELL: I wish to go on record against this moratorium. The lease contracts were entered into in good faith. If there is a good faith, why they cannot be complied with, they are fully protected under the lease contracts. I don't believe this Commission should put itself into a position of entering interim orders to get between the working interest and royalty owners, anymore than they should enter spacing orders to do the same thing.

There is nothing to prevent the people from drilling wherever they want to, so long as the royalty owners don't sue them. The business of asking the Commission to come between them and the people they have contracts with would be extremely bad precedent to set. If they have lease expirations, they had better get on, dig them just like Phillips did, in offsetting the Anderson-Prichard Well, or give the lease back. I object to any moratorium.

MR. DUTY: Cletus Duty, representing Woodley Petroleum, owner of the lease covering the south one hundred acres of the southeast quarter. We would like to join in the request for the restraining of any drilling on 160-acre units.

MR. GAINES: C. D. Gaines, Sinclair Oil and Gas Company. Sinclair will join in the objection to any such order by the

Commission. We feel that the company has its leases to protect. Sinclair is willing to develop their acreage on lesser spacing, and we see no reason at this time why any restriction should be made on a company developing their acreage.

MR. MACEY: We will take a five minute recess.

(Recess.)

MR. MACEY: In connection with Case 861, the Commission will continue the case to the April hearing, regular hearing the month of April, and we will not enter an interim order.

Does anyone have anything further they would like to say in connection with the case?

MR. WOODRUFF: Norman Woodruff, representing El Paso Natural Gas Company, we are interested both as a purchaser of gas from the well that is being produced, and also as owners of the Camp in the vicinity of the well, taking water from the fresh water sands. We have a multiplicity of interests. We feel there are certain rules for a pool which have nothing to do with the spacing, such rules are the casing rule.

We have prepared a series of rules which we think will adequately protect the fresh water sands and which we believe may be necessary to protect against blowouts during the drilling of wells. If the Commission is receptive to hearing and receiving our proposals on that, we would be happy to give it to them. We think these factors are important and which have no connection whatsoever with the acreage allocation.

MR. MACEY: It is all right with us.

MR. WOODRUFF: Are you interested in receiving or having me briefly

MR. MACEY: Do you have a proposed set of rules?

MR. WOODRUFF: Yes.

MR. MACEY: I think it would be all right for you to introduce the rules and outline them.

MR. WOODRUFF: Did you say you wanted me to outline them?

MR. MACEY: Yes.

MR. WOODRUFF: We are recommending three strings of casing. The surface casing, which would be adequate to protect the fresh water bearing sands found in the Santa Rosa Formation; we are recommending an intermediate string which would be through the San Andres Formation, that formation being both a lost circulation formation and also a presence of considerable salt water. A third string would be a string to the top of the Devonian pay.

Most important of the rules that we propose for cement would be that of the intermediate string. We believe it is important in cementing the intermediate string to protect the known producing horizons presently existing in this area, which would be the Yates, Seven Rivers and Queens Formations. We also think it necessary to protect against the encroachment of water from the Salado Formation which occurs at approximately 1,100 to 1,200 feet.

The program which we propose here would adequately, we believe, provide for such protection. I will be happy to answer any questions.

MR. MACEY: Does anyone want to ask Mr. Woodruff any questions?

MR. PARSONS: On the intermediate string on the San Andres, is that entirely through the San Andres?

MR. WOODRUFF: That is correct, we are recommending to a

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the hearing
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depth of 1,400 feet which we believe would protect against the San Andres Formation.

MR. MACGY: Anyone else? We will continue the case then until the regular hearing in April.

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO) SS.

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

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 18th day of March, 1955.

Ada Dearnley
Notary Public, Court Reporter

My Commission Expires:
June 19, 1955

BEFORE THE
Oil Conservation Commission
SANTA FE, NEW MEXICO
February 14, 1957

IN THE MATTER OF:

CASE NOS. 861 & 1204 (Cont.)

TRANSCRIPT OF PROCEEDINGS

ADA DEARNLEY AND ASSOCIATES
COURT REPORTERS
605 SIMMS BUILDING
TELEPHONE 3-6691
ALBUQUERQUE, NEW MEXICO

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
February 14, 1957

IN THE MATTER OF:

(Rehearing) Application of El Paso Natural
Gas Company for rehearing on Case 861,
Order R-639-A. Applicant, in the above-
styled cause, seeks a rehearing in Case
801, Order R-639-A, on those matters
concerning the size of a standard drilling
and proration unit in the Crosby-Devonian
Gas Pool, Lea County, New Mexico.

Case No. 861

Application of El Paso Natural Gas Company
to amend the horizontal limits of the
Crosby-Devonian Gas Pool, Lea County, New
Mexico, as established in Commission Order
R-639-A. Applicant, in the above-styled
cause, seeks an order extending the hori-
zontal limits of the Crosby-Devonian Gas
Pool to include the S/2 of Section 33,
Township 25 South, Range 37 East, and to
exclude all acreage lying north and east
of a fault running Northwest - Southeast
through Section 28 of said Township and
Range.

Case No. 1204

BEFORE:

Honorable Edwin L. Mechem
Mr. A. L. Porter
Mr. Murray Morgan

TRANSCRIPT OF HEARING

MR. PORTER: In regard to the next two cases listed on
the docket, Case 861, which is an application for rehearing, and
Case 1204, which is a nomenclature case, the Commission received
written application from the applicant, El Paso Natural Gas Company

for continuation of these cases, and we granted the continuance by letter on February 5th, sending a copy of the letter granting the continuance to all of the parties who entered an appearance when Case 861 was first called.

So, let the record show that Cases 861 and 1204 will be continued to the regular March hearing.

STATE OF NEW MEXICO)
 : SS.
 COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached statement of proceedings before the New Mexico Oil Conservation Commission was reported by me in stenotype and reduced to typewritten transcript under my personal supervision, and that the same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS MY HAND AND SEAL this, the 18th day of February, 1957, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

 Notary Public

My Commission Expires:
 June 19, 1959

BEFORE THE
Oil Conservation Commission
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE NO. _____

TRANSCRIPT OF PROCEEDINGS

ADA DEARNLEY AND ASSOCIATES
COURT REPORTERS
605 SIMMS BUILDING
TELEPHONE 3-6691
ALBUQUERQUE, NEW MEXICO

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

January 14, 1957

**El Paso Natural Gas Company
P.O. Box 1492
El Paso, Texas**

ATTENTION: Mr. John Woodward

**Re: Application for Rehearing in
Case 861, Order R-639-A**

Gentlemen:

Receipt of your application for rehearing in the above captioned case is hereby acknowledged.

It is the decision of the Commission to grant the rehearing at the regular hearing on February 14, 1957. The testimony at the rehearing will be restricted to new evidence on the issues raised in the application for rehearing. A formal order to this effect will be written in the next few days and a copy will be forwarded to your office.

Very truly yours,

A. L. Porter, Jr.
Secretary - Director

ALP/WJC:bp

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El Paso Natural Gas Company

El Paso, Texas

February 4, 1957

New Mexico Oil Conservation Commission
Post Office Box 871
Santa Fe, New Mexico

Attention: Mr. A. L. Porter, Jr.
Secretary Director

Gentlemen:

As applicant for rehearing in Case No. 861, El Paso Natural Gas Company hereby requests the Commission issue an order continuing this Case to the regular March statewide hearing date.

Heretofore the Commission has issued its Order R-639-B granting rehearing in Case No. 861 on February 14, 1957, for the presentation of new evidence on the issues raised in the original rehearing.

Upon receipt of Order R-639-B, El Paso commenced and has diligently prosecuted a number of studies and surveys with respect to the Crosby-Devonian Pool which it has been advised cannot be completed prior to the February hearing date.

As an accomodation to all interested parties, whose names and addresses are set forth in the exhibit attached to El Paso's Application for Rehearing, we request that any order issued by the Commission continuing this case be sent to such parties as soon as possible.

Respectfully submitted,

EL PASO NATURAL GAS
COMPANY

By John A. Woodward
Attorney for Applicant

JAW:jw

GOVERNOR JOHN F. SIMMS
CHAIRMAN

New Mexico
OIL CONSERVATION COMMISSION

LAND COMMISSIONER E. S. WALKER
MEMBER

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



P. O. Box 578
SANTA FE, NEW MEXICO

Mailed 1-8-51

Copies of Case 861 to the following :

Jack Campbell <i>representing</i>	Leonard Oil Company
D.H. Mr. Gregg <i>Box 180, Dallas</i>	Humble Oil and Refining - <i>Houston</i>
Don Walker <i>Box 107, Dallas</i>	Gulf Oil Corporation
C.T. C. G. McClure <i>Liberty Bank Bldg.</i>	Anderson-Prichard - <i>El Paso City</i>
W. D. Girard <i>" Box 278</i>	R. Olsen
W. G. Abbott <i>"</i>	Amerada Petroleum
George Selinger <i>Box 107, Dallas</i>	Skelly Oil Company
Nat Harbin <i>1103 Fair Bldg., Ft. Worth</i>	Sinclair Oil and Gas Co.
C. L. Kelley <i>Box 24, Rowlett</i>	Stanolind Oil and Gas
W. B. Tomlinson <i>" " "</i>	Atlantice Refining Co.
Judge Foster <i>Box 1751, " "</i>	Phillips Petroleum Company

Objecting by letter as follows:

Culbertson and Iwrin *Wallace, W. B. Box 1071, Midland*
Sun Oil Company *A.H. Baller, 1000 de Mill Bldg., Dallas 2*

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

January 17, 1957

Mr. John A. Woodward
El Paso Natural Gas Company
P.O. Box 1492
El Paso, Texas

Dear Sir:

We enclose a copy of Order R-639-B, Order for Rehearing,
issued January 16th by the Oil Conservation Commission in Case
861.

Very truly yours,

A. L. Porter, Jr.
Secretary - Director

bp
Encl.

C
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Y

CROSBY (DEVONIAN) FIELD
LEA COUNTY, NEW MEXICO
WELL COMPLETION DATA SHEET

EXHIBIT NO. 11
SPONSORED BY EPNG
WITNESS 11/15/04

OPERATOR Lease	Well No.	Location			Comp. Date	Elev.	Total Depth	Top of Devonian	Comp. Interval	AOF	
		Qtr.	S	T - R						Mcf	S. I. P. psig
ANDERSON-PRICHARD / Amer. Republ. Fed. 2 Coll 7 Lanehart	1	SW	28-25-37		1-18-55	3023	8498	8230	8270-8390	67,500	2996
	1	NE	29-25-37		1-4-56	3029	8743	8530	8555-8682	23,500	2913
	1	NE	28-25-37		4-12-56	3026	9165	9112	P & A		
EL PASO NAT. GAS CO. 3 Gregory Federal	2-X	NW	33-25-37		7-19-56	3013	8170	7933	7980-8090	102,000	2786
GULF OIL CORP. G. W. Shahan	2	NE	33-25-37		--	3020	8248	8090	8126-8246	Not available	
HUMBLE OIL & REF. CO. Chas. Bates	1	NW	29-25-37		--	3034	9134	9054	Not productive in Devonian		
R. OLSEN, ET AL Gutman	1-D	SE	29-25-37		2-20-56	3011	8607	8456	8450-8490	67,000	2912
PHILLIPS PET. CO. Copper	1	SE	28-25-37		1-16-56	3021	8603	8355	8376-8522	32,500	3000
SINCLAIR OIL & GAS CO. J. T. Lanehart	1	NW	28-25-37		10-9-55	3017	8597	8410	8434-8597	58,000	2912

"D"

PRODUCTION CROSBY DEVONIAN GAS POOL
LEA COUNTY, NEW MEXICO

BEFORE THE
OIL COMMISSION
El Paso
CASE 861

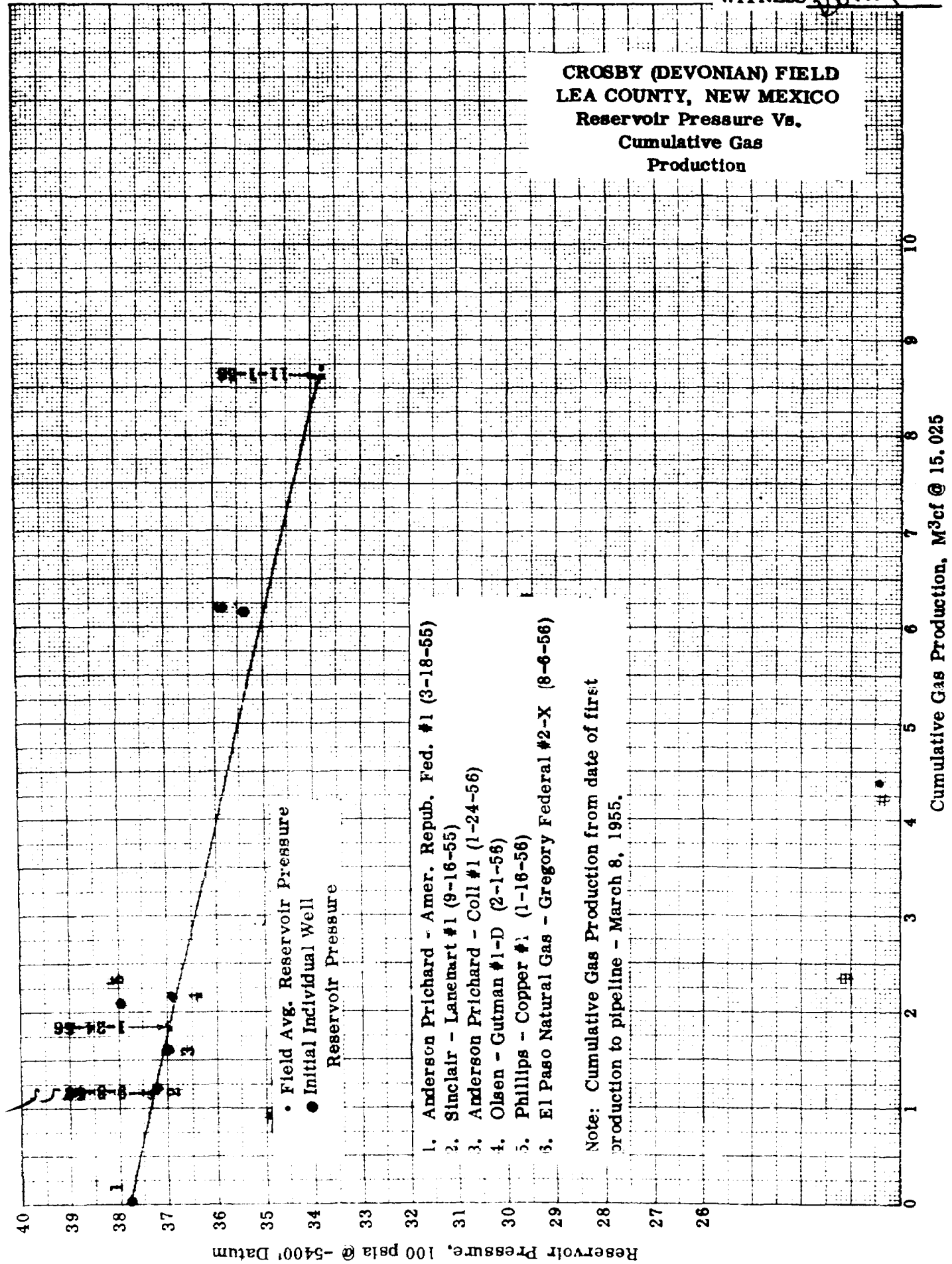
	El Paso Natural Gas Co. Gregory Federal 2-X	Phillips Petroleum Company Cooper #1	Anderson Prichard American Republics Federal #1	Sinclair Oil & Gas Company Lanehart #1	Anderson Prichard Coll #1	R. Olsen Gutman 1-D	Total Field
1955							
January							
February							
March			117,177				117,177
April			132,841				132,841
May			213,899				213,899
June			254,368				254,368
July			224,770				224,770
August			234,373				234,373
September			89,348				89,348
October			132,770				132,770
November			81,537				81,537
December			125,745				125,745
1955 Total			1,606,828				1,606,828
1956							
January			140,606	71,197		33,962	245,765
February			164,483	198,028	165,237	174,154	701,902
March			156,075	241,730	213,148	216,404	827,357
April		210,555	163,745	227,939	161,763	208,216	972,218
May		203,577	88,056	95,767	95,912	88,664	571,976
June		87,937	102,609	96,936	81,877	100,376	469,735
July	19,028	112,162	131,418	147,703	158,000	116,907	685,218
August	184,402	131,648	145,100	87,633	177,640	127,374	853,797
September	268,303	102,616	111,401	90,437	142,348	143,439	858,546
October	195,055	115,575	138,577	107,346	147,582	153,030	857,165
Cumulative Total	666,788	964,070	2,948,898	1,364,718	1,343,507	1,362,526	8,650,507

NOTE: All Volumes MCF @ 15.025 psia.

Proration Department
November 9, 1956

EXHIBIT NO. F
 SPONSORED BY EPNG
 WITNESS g n n n n

**CROSBY (DEVONIAN) FIELD
 LEA COUNTY, NEW MEXICO
 Reservoir Pressure Vs.
 Cumulative Gas
 Production**



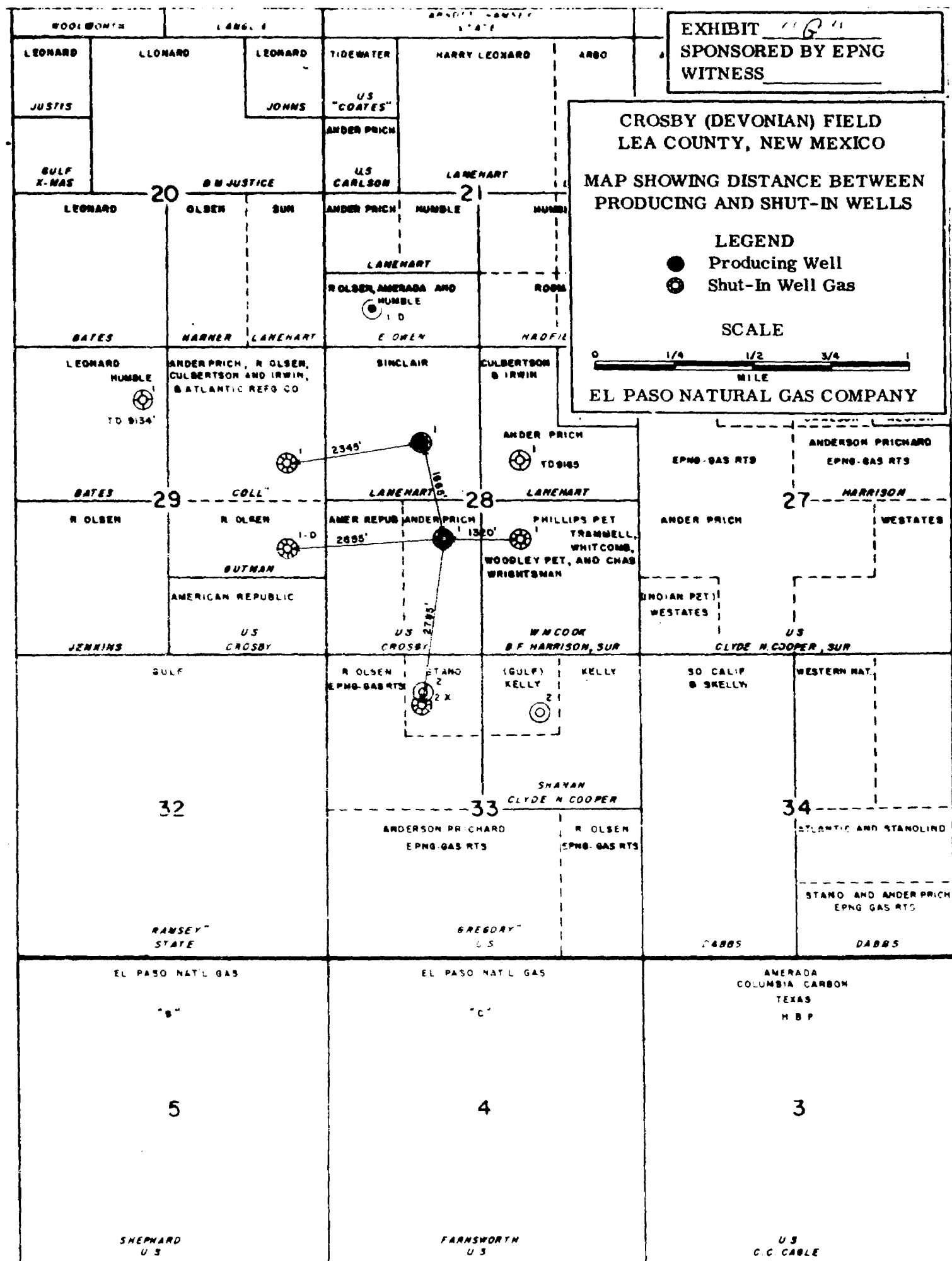
Reservoir Pressure, 100 psia @ -5400' Datum

Cumulative Gas Production, M³cf @ 15.025

EXHIBIT NO. 17
SPONSORED BY EPNG
WITNESS D. J. M. M.

CROSBY (DEVONIAN) FIELD
LEA COUNTY, NEW MEXICO
PRESSURE BUILD-UP AND WELL INTERFERENCE TESTS
November 1956

Operator -	Anderson Prichard	Anderson Prichard	R. Olsen	Sinclair	Phillips	E. Paso Nat. Gas
Well -	Amer. Rep. Fed. #1	Coll #1	Gutman #1	Lanehart #1	Copper #1	Gregory Fed. #2-X
Date	Time	S.I.W.H.P.	Time	S.I.W.H.P.	Time	S.I.W.H.P.
Nov. 1, 1956	9:00a	S. I.	8:30a	S. I.	9:00a	S. I.
Nov. 2, 1956	8:55a	2664	8:20a	2667	8:40a	2667
Nov. 3, 1956	8:55a	2665	8:20a	2665	8:40a	2668
Nov. 4, 1956	8:55a	2666	8:20a	2667	8:45a	2666
	11:00a	2589	11:30a	2668	11:10a	2645
	9, 550 Mcf/D			7, 820 Mcf/D		11:40a
	4:45p	2598	4:25p	2666	4:40p	2645
	9, 532 Mcf/D			5:00p		4:15p
				7, 520 Mcf/D		2670
Nov. 5, 1956	8:20a	2699	8:00a	2667	8:25a	2649
	9, 503 Mcf/D			8:15a		7:50a
				8, 002 Mcf/D		2666
	2:45p	2699	2:25p	2666	2:55p	2642
	9, 737 Mcf/D			2:40p		2:20p
				7, 979 Mcf/D		2665
Nov. 6, 1956	7:35a	2699	7:10a	2666	7:40a	2641
	9, 566 Mcf/D			7:25a		7:05a
				7, 928 Mcf/D		2664
Nov. 7, 1956	8:35a	2699	8:00a	2666	8:45a	2642
	9, 526 Mcf/D			8:25a		7:45a
				8, 190 Mcf/D		2665
Nov. 8, 1956	8:35a	2300	8:00a	2663	8:45a	2643
	9, 485 Mcf/D			8:25a		7:45a
				8, 099 Mcf/D		2664



"H" 4/1/56
Mittner - Woodruff

PROPOSED SPECIAL RULES AND REGULATIONS FOR THE CROSBY DEVONIAN GAS POOL

WELL SPACING AND ACREAGE REQUIREMENTS FOR DRILLING TRACTS

Rule 1. Any well drilled a distance of one mile or more outside the boundary of the Crosby Devonian Gas Pool shall be classified as a wildcat well. Any well drilled less than one mile outside the boundary of the Crosby Devonian Gas Pool shall be spaced, drilled, operated and prorated in accordance with the regulations in effect in the Crosby Devonian Gas Pool.

Rule 2. Each well drilled or recompleted within the Crosby Devonian Gas Pool on a standard proration unit after the effective date of this rule shall be drilled not closer than 990 feet to any boundary line of the tract or section line nor closer than 330 feet to a quarter-quarter section line or subdivision inner boundary line. Any well drilled to and producing from the Crosby Devonian Gas Pool prior to the effective date of this order at a location conforming to the spacing requirements effective at the time said well was drilled shall be considered to be located in conformance with this rule.

Rule 3. The Secretary of the Commission shall have authority to grant exception to the requirements of Rule 2 without notice and hearing where application has been filed in due form and the necessity for the unorthodox location is based on topographical conditions or is occasioned by the recompletion of a well previously drilled to another horizon.

Applicants shall furnish all operators within a 1980-foot radius of the subject well a copy of the application to the Commission, and applicant shall include with his application a list of names and addresses of all operators within such radius, together with evidence that proper notice has been given said operator at the addresses given. The Secretary of the Commission shall wait at least 20 days before approving any such unorthodox location, and shall approve such unorthodox location only in the absence of objection of any offset operators. In the event an operator objects to the unorthodox location, the Commission shall consider the matter only after proper notice and hearing.

Rule 4. The provisions of Statewide Rule 104, Paragraph (k), shall not apply to the Crosby Devonian Gas Pool Located in Lea County, New Mexico.

GAS PRORATION

Rule 5. (A) The acreage allocated to a gas well for proration purposes shall be known as the gas proration unit for that well. For the purpose of gas allocation in the Crosby Devonian Gas Pool, a standard proration unit shall consist of between 632 and 648 contiguous surface acres substantially in the form of a square which shall be a legal subdivision (section) of the U. S. Public Land Survey; provided, however, that a non-standard gas proration unit may be formed after notice and hearing by the Commission, or under the provisions of Paragraph (B) of this Rule.

In establishing a non-standard gas proration unit the location of the well with respect to the two nearest boundary lines thereof shall govern the maximum amount of acreage that may be assigned to the well for the purposes of gas proration; provided, however, that any well drilled to and producing from the Crosby Devonian Gas Pool, as defined herein, prior to the effective date of this order at a location conforming with the spacing requirements effective at the time said well was drilled shall be granted a tolerance not exceeding 330 feet with respect to the required distances from the boundary lines.

(B) The Director of the Commission shall have authority to establish a non-standard gas proration unit by administrative action (without notice and hearing) where application has been filed in due form and where all the following facts exist and all the following provisions are complied with.

1. The non-standard proration unit will consist of contiguous quarter-quarter sections and/or lots, with a common side between any two adjacent quarter-quarter sections and/or lots.

2. The non-standard proration unit will lie wholly within a single governmental section.
3. The entire non-standard proration unit may be reasonably assumed to be productive of gas from the Crosby Devonian Gas Pool.
4. The length or width of the non-standard gas proration unit will not exceed 5280 feet.
5. The applicant presents written consent in the form of waivers from:
 - (a) All operators owning interests in the section in which the non-standard gas proration unit is to be situated, which interest is not included in the proposed non-standard gas proration unit.
 - (b) All operators owning interests within 1980 feet of the well to which such non-standard gas proration unit is to be dedicated.
6. In lieu of the provisions of subparagraph 5 under Paragraph (b) of this rule, applicant may furnish proof of the fact that said offset operators were notified by registered mail of his intent to form such non-standard gas proration unit. The Director of the Commission may approve such application for administrative approval of a non-standard gas proration unit if, after a period of 30 days following the mailing of said notice, no operator has entered an objection to the formation of such non-standard gas proration unit.

Crosby Devonian
Rule 6. Acreage dedicated to a gas well in the Crosby Devonian Gas Pool shall not be simultaneously dedicated to an oil well completed in the same pool.

Rule 7. In the event an oil well completed within the limits of the Crosby Devonian Gas Pool is reclassified as a gas well, the operator of such well will be afforded the opportunity to form a non-standard proration unit for the well; provided, however, that until such unit is formed, the well shall be allocated a gas allowable commensurate with the acreage contained in the unit formerly dedicated to the oil well.

In the event such reclassification shall cause the occurrence of two Devonian gas wells producing from a single proration unit, the sum of the allowables allocated to the two wells shall be equivalent to that volume of gas allocated to a single proration unit calculated on the basis of the 72-hour shut-in wellhead pressure of the original well on the unit; however, the operator of such wells shall have the option to determine the proration of the assigned allowable to be produced by each well except that not more than 50% of the allowable may be produced by any well not in conformance with the spacing rules as provided in Rule 5 (A).

Rule 8. (A) The Commission after notice and hearing, shall consider the nominations of gas purchasers from the Crosby Devonian Gas Pool and other relevant data and shall fix the allowable production of gas from the Crosby Devonian Gas Pool.

(B) After deducting the allowables of all marginal wells, the balance of the allowable for the pool shall be allocated to each non-marginal well in the proportion that the number of acres contained in the gas proration unit for the well multiplied by its wellhead pressure, determined in accordance with Rule 17, bears to the sum of such product for all non-marginal wells in the pool.

Rule 9. At least 30 days prior to the beginning of each gas proration period, the Commission shall hold a hearing after due notice has been given. The Commission shall cause to be submitted by each gas purchaser "Preliminary Nominations" of the amount of gas which each in good faith actually desires to purchase within the ensuing proration period, by months, from the Crosby Devonian Gas Pool. The Commission shall consider the "Preliminary Nominations" of purchasers, actual production, and such other factors as may be deemed applicable in determining the amount of gas that may be produced without waste within the ensuing proration period. "Preliminary Nominations" shall be submitted on Form C-121-A.

Rule 10. In the event a gas purchaser's market shall have increased or decreased, he may file with the Commission prior to the 10th day of the month a "supplemental" nomination, showing his revised estimate of the amount of gas he actually in good faith desires to purchase during the ensuing proration month from the Crosby Devonian Gas Pool. The Commission shall hold a public hearing between the 13th and 20th days of each month to determine the reasonable market demand for gas for the ensuing proration month, and shall issue a proration schedule setting out the amount of gas which each well may produce during the ensuing proration month. "Supplemental Nominations" shall be submitted on the form prescribed by the Commission.

(A) Shown on the monthly proration schedule shall be sufficient information to enable the operator to efficiently produce his well in conformance with the rules and regulations of the Commission.

(B) The Commission shall include in the Proration Schedule the gas wells in the Crosby Devonian Gas Pool delivering to a gas transportation facility, and shall also include in the proration schedule of the Crosby Devonian Gas Pool any well which it finds is being unreasonably discriminated against through denial of access to a gas transportation facility which is reasonably capable of handling the type of gas produced by such well.

(C) The total allowable to be allocated to the pool each month shall be equal to the sum of the preliminary or supplemental nominations (whichever is applicable) together with any adjustment which the Commission deems advisable.

(D) If during a proration month the acreage assigned a well is increased, the operator shall notify the Proration Manager in writing (Box 2045, Hobbs, New Mexico) of such increase. The increased allowable assigned the gas proration unit for the well shall be effective on the first day of the month following receipt of the notification by the Proration Manager.

BALANCING OF PRODUCTION

Rule 11. The dates 7:00 a.m., January 1, and 7:00 a.m., July 1, shall be known as balancing dates and the periods of time bounded by these dates shall be known as gas proration periods.

(A) Underproduction: The amount of gas allowable remaining unproduced at the end of each proration period shall be carried forward to and may be produced during the next succeeding proration period in addition to the normal gas allowable for such succeeding period. Any overproduction accrued during any one month in said succeeding proration period shall be applied against the underproduction carried into that proration period. Whatever amount thereof is not made up within the first succeeding proration period shall be cancelled.

If it appears that such continued underproduction has resulted from the inability of the well to produce its allowable, it may be classified as a marginal well and its allowable will be set at the maximum monthly volume produced in the preceeding six months and its ~~adjusted~~ allowable shall be equal to its production. If at the end of a proration period

a marginal well has produced more than the total allowable assigned to a corresponding non-marginal unit or has produced more than six times its preliminary marginal allowable, the marginal well shall have its status reviewed and may be classified as a non-marginal well.

All wells which the Commission classifies as marginal at the beginning of a proration period shall remain marginal during the succeeding proration periods except in instances where the production of the well indicates that the marginal classification is erroneous, in which case the Commission shall reclassify the well as non-marginal.

If during the proration period a marginal well is reworked or recompleted in such a manner that its productive capacity is increased to the extent that it should be reclassified as a non-marginal well, the reclassification shall be effective on the first day of the proration month following the date of recompletion. The Commission may reclassify a well from a marginal to non-marginal category or vice versa at any time that their records indicate that the existing category of the well is in error.

(B) Overproduction: The operator of a well which has produced a greater amount of gas than was allowed during a given proration period shall reduce that well's production for the first succeeding proration period by the amount of such overproduction and such overproduction shall be made up within the first succeeding proration period. Any underproduction accrued during any one month during said first succeeding proration period shall be applied against the overproduction carried into that proration period. Any allowable accrued to a well at the end of a proration period due to the cancellation of underage and redistribution thereof, shall be applied against the overproduction carried into said proration period.

If at the end of the first succeeding proration period the well is still overproduced and has not been in balance since the end of the preceeding proration period, then it shall be shut in and its current monthly allowable charged against said overproduction until the well is in balance. If at any time a well is overproduced an amount equal to 6 times the most recently calculated monthly ~~allowable~~ allowable, it shall be shut in for the current month.

The Commission may allow overproduction to be made up at a lesser rate than would be the case if the well were completely shut in upon a showing at public hearing after due notice that complete shut in of the well would result in material damage to the well.

GRANTING OF ALLOWABLES

Rule 12. No gas well shall be given an allowable until the operator has filed Form C-104, C-110 together with a plat showing acreage attributed to said well and the locations of all wells on the lease and Form C-125.

Rule 13. Allowables to newly completed gas wells shall commence on the date of connection to a gas transportatic facility, as determined from an affidavit furnished to the Commission (Box 2045, Hobbs, New Mexico) by the purchaser, or the date of filing of Form C-104, Form C-110 and the plat described above and Form C-125 whichever date is the later.

REPORTING OF PRODUCTION

Rule 14. The monthly gas production from each well shall be metered separately and the gas produced therefrom shall be reported to the Commission by each purchaser or taker of gas in the Crosby Devonian Gas Pool on Form C-111 or Form C-114 (whichever is applicable) with the

wells being listed in approximately the same order as they appear on the proration schedule. These forms shall be submitted so as to reach the Commission on or before the 15th day of the month next succeeding the month in which the gas was purchased or taken. These forms shall be submitted in duplicate, the original being sent to the Commission at Box 871, Santa Fe, New Mexico, and the first carbon being sent to Box 2045, Hobbs, New Mexico. The full production of gas from each well shall be charged against the well's allowable regardless of what disposition has been made of the gas; provided, however, that gas used on the lease for consumption in lease houses, treaters, compressors, combustion engines and other similar lease equipment shall not be charged against the well's allowable.

DEFINITIONS

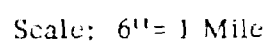
Rule 15. The term "gas purchaser" as used in these rules, shall mean any "taker" of gas either at the wellhead or at any point on the lease where connection is made for gas transportation or utilization. It shall be the responsibility of said "taker" to submit a nomination.

Rule 16. No gas, produced from the Crosby Devonian Gas Pool shall be flared or vented unless specifically authorized by order of the Commission after notice and hearing.

Rule 17. Shut-in wellhead pressure shall be taken on a dead-weight tester after the well has been shut-in consecutively between 68 and 76 hours. These tests shall be conducted semi-annually during the months of April and October on all gas wells within the horizontal limits of the Crosby Devonian Gas Pool as hereinafter set out in Exhibit "A". Results of such tests will be reported to the Commission on Form C-125 on or before the 15th day of May and the 15th day of November for each calendar year. New wells shall be tested in conformance with the above method and shall be reported to the Commission on Form C-125 in conformance with Rule 13 before an allowable will be granted.

Rule 18. Horizontal limits of the Crosby Devonian Gas Pool shall be those limits set forth in Exhibit "A" attached hereto and made a part hereof.

PLAT SHOWING ALLOWED LOCATIONS
UNDER PROPOSED POOL RULES
CROSBY DEVONIAN GAS POOL



(11/9)
SUN OIL COMPANY

S. M. GLADNEY
MANAGER
T. F. HILL
ASSISTANT MANAGER

SOUTHWEST DIVISION
RIO GRANDE NATIONAL BUILDING
DALLAS 2, TEXAS

A. S. RHEA
SUPT. OPERATING DEPT.

November 9, 1956

Mr. A. L. Porter
New Mexico Oil
Conservation Commission
Santa Fe, New Mexico

Dear Sir:

In Re: New Mexico Commission
Case No. 861

Sun Oil Company has been advised of New Mexico Oil Conservation Commission Case No. 861, which is on the Docket for hearing November 13, 1956, in Santa Fe, New Mexico. We have a copy of the rules which will be proposed by El Paso Natural Gas Company at the hearing. It is our understanding that these rules follow the wording of existing rules for the Jalmat Pool which underlies the same area, with some changes recommended by El Paso. Sun Oil Company has the following suggestions regarding these changes.

Sun Oil Company has no objection to changed Rule 5 (b) - paragraph 5 as suggested by El Paso.

Sun Oil Company objects to using a shut-in wellhead pressure in the allocation formula and feels that this Crosby Devonian Gas Pool should be allocated solely on the basis of acreage as is done for Jalmat.

Sun Oil Company feels that the other changes requested by El Paso will require the filing of additional reports which are unnecessary if the field is operated under the same rules as are in effect in Jalmat Pool and have been satisfactory to all producers, and we object to any change.

We shall appreciate your making this letter a part of the record of the hearing which will be held on the 13th.

Very truly yours,

A. S. Rhea

ARB:oms

cc: Mr. F. Norman Woodruff
El Paso Natural Gas Company
El Paso, Texas

100-100000
PETROLEUM LIFE
BUILDING

E. A. CULBERTSON & WALLACE W. IRWIN

MAIN OFFICE 600 -- OIL --
MIDLAND, TEXAS

TELEPHONES: 2-1601
2-602
P. O. BOX 1071

November 9, 1956

New Mexico Oil Conservation Commission
P. O. Box 371
Santa Fe, New Mexico

Re: Crosby-Devonian Gas Pool

Gentlemen:

Referring to Case No. 861, the application of El Paso Natural Gas Company for an order amending the spacing and drilling unit provision of Commission Order R-639:

We herewith inform the Commission that we object to any change in the size of the present 160-acre proration unit adopted in the Commission Order R-639 for the same reasons as set out in said order. We believe that subsequent development confirms original data that the areal extent of the common source of supply is limited and as a result thereof a proration unit of more than 160 acres could cause the inclusion in units of acreage that cannot reasonably be assumed to be productive of gas. Furthermore, we are of the opinion that one well will not adequately drain a larger unit.

Yours very truly,

E. A. CULBERTSON & WALLACE W. IRWIN

By

Wallace W. Irwin

WWI:dcf

Copy

SOUTHERN CALIFORNIA PETROLEUM CORPORATION

MAIN OFFICE 000
SUITE 905 PETROLEUM LIFE BUILDING . . . MIDLAND, TEXAS

PHONE 4-8044

RECEIVED BY MAIL 9:52

November 9, 1956

No Paid of the Record
Jan 2

RE: Crosby-Devonian Gas Pool

New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Gentlemen:

With reference to Case No. 861, which is application of El Paso Natural Gas Company for an order amending the spacing and drilling unit provision of commission order R-639.

We herewith inform the Commission that we object to any change in the size of the present 160 acre proration unit adopted in commission order R-639, for the same reasons as set out in said order. We believe that subsequent development confirms the original data that the areal extent of the common source of supply is limited, and as a result thereof, a proration unit of more than 160 acres could cause the inclusion in units of acreage that cannot reasonably be assumed to be productive of gas. Furthermore, we are of the opinion that one well will not adequately drain a larger unit.

Mr. C. T. McClure, attorney for Anderson-Prichard Corporation, will attend the hearing, and we wish to advise you that we have authorized Mr. McClure to represent Southern California Petroleum Corporation at said hearing.

Yours very truly,

SOUTHERN CALIFORNIA PETROLEUM CORP.,

By

W. A. Lyons

W. A. Lyons, Division Manager

cc-Mr. C. T. McClure
c/o Anderson-Prichard Corporation
Liberty Bank Bldg.,
Oklahoma City, Okla.

**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. 861
Order No. R-639-A**

**APPLICATION OF EL PASO NATURAL
GAS COMPANY FOR AN ORDER PROMULGATING
POOL RULES AND INSTITUTING GAS PRO-
PORTIONING FOR THE CROSBY DEVONIAN
GAS POOL IN LEA COUNTY, NEW MEXICO.**

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on November 13, 1956, at Santa Fe, New Mexico, before the Oil Conservation Commission, hereinafter referred to as the "Commission".

NOW, on this 28th day of December, 1956, the Commission, a quorum being present, having considered the record and testimony adduced, and being fully advised in the premises,

FINDS:

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

(2) That Anderson-Prichard Oil Corporation did complete its American Republics-Federal No. 1 discovery well in the NE/4 SW/4 of Section 28, Township 25 South, Range 37 East, NMPM, Lea County, New Mexico on or about January 18, 1955.

(3) That said well potentialed 30,000 MCF of gas per day on an absolute open flow test from the Devonian formation in the depth interval of 8270 to 8390 feet.

(4) That said well discovered a new common source of supply in this area.

(5) That under date of May 27, 1955, the Commission issued its Order No. R-639 creating the Crosby-Devonian Pool. That Order R-789 and R-914 has extended the horizontal limits of the Crosby-Devonian gas pool.

(6) That the pool has already been developed to the extent that a 640-acre drilling and proration unit could not now be formed within the probable productive limits of the pool as evidenced by seismic surveys and geological information taken from existing wells.

(7) That the probable areal extent of the common source of supply is limited, and as a result thereof a proration unit of more than 160 acres could cause the inclusion in units of acreage that cannot reasonably be assumed to be productive of gas.

(8) That one well will efficiently and economically drain 160 acres of the said common source of supply.

(9) That in order to provide for the orderly development of the common source of supply, and to prevent waste, drilling units of 160 acres, well-spacing regulations, a casing program and the allocation and proration of gas production should be established for said common source of supply.

(10) That the producing capacity of the gas wells in the Crosby-Devonian Gas Pool is greater than the market demand for gas from such pool and the pool should therefore be prorated.

(11) That a proration formula based on 100% acreage would provide a just and equitable allocation of the gas from the Crosby-Devonian gas pool, and that nothing further would be accomplished by the incorporation of a pressure factor in the proration formula.

(12) That for the prevention of waste a "no-flare" rule should be adopted to prohibit the flaring, venting, or wasting of casinghead gas or any other type of gas in any of the gas or oil pools referred to and affected by this order.

IT IS THEREFORE ORDERED:

(1) That Order R-639, Order 787 and R-914 be and the same are hereby superseded.

(2) That the horizontal limits of the Crosby-Devonian Gas Pool shall be the area as described in Exhibit "A" attached hereto and made a part hereof. That the vertical limits shall include all the formations that can reasonably be considered to be of Devonian age.

(3) That no gas, either dry gas or casinghead gas shall be flared or vented in the Crosby-Devonian gas pool unless specifically authorized by order of the Commission after notice and hearing.

(4) That within 15 days after the date of this order, operators of all wells in the Crosby-Devonian gas pool shall comply with the provisions of Rule 1107, pertaining to Form C-104; Rule 1109, pertaining to Form C-110; and Rule 1127, pertaining to Form C-128; of the Commission Rules and Regulations.

CASING PROGRAM REQUIREMENTS:

RULE 1. The casing program for the field shall include three strings of casing set in accordance with the following plan:

Case No. 861
Order No. R-638-A

(a) The surface string shall be new or reconditioned pipe with a mill test of not less than two thousand (2,000) pounds per square inch and shall be set and cemented at a depth of approximately five hundred (500) feet, such depth being sufficient to protect the fresh water bearing sands of the Santa Rosa formation.

Cementing shall be by the pump-and-plug method, and sufficient cement shall be used to fill the annular space back of the pipe to the surface of the ground or the bottom of the cellar. Cement shall stand a minimum of sixteen (16) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating pressure tests. Before drilling the plug, this string shall be tested by the application of at least one thousand (1,000) pounds per square inch and, if at the end of thirty (30) minutes the pressure shows a drop of one hundred fifty (150) pounds per square inch or more, the cementing job shall be condemned. After corrective measures have been taken, the pipe shall again be tested in the same manner.

(b) The intermediate string shall consist of new or reconditioned pipe that has been tested to two thousand (2,000) pounds per square inch and shall be set at approximately thirty-six hundred (3,600) feet. Cementing shall be by the pump-and-plug method, and sufficient cement shall be used to fill the annular space back of the pipe to a point one hundred (100) feet above the top of the Santa Rosa formation. The cement shall stand a minimum of twenty-four (24) hours under pressure and a total of thirty (30) hours before drilling plug or initiating tests. This string shall be tested by the application of at least one thousand (1,000) pounds per square inch and, if at the end of thirty (30) minutes, the pump pressure shows a drop of one hundred (100) pounds per square inch or more, the cementing job shall be condemned. After corrective measures have been taken, the pipe shall again be tested in the same manner.

(c) The casing string shall be new or reconditioned pipe that has been tested to two thousand (2,000) pounds per square inch and shall be set at a depth not less than the top of the Santa Rosa formation. Cementing shall be with a minimum of three hundred fifty (350) sacks of cement and shall be by the pump and plug method and shall stand a minimum of twenty four (24) hours

under pressure and a total of forty eight (48) hours before drilling the plug or initiating tests. After cementing, the casing shall be tested by pump pressure of at least fifteen hundred (1,500) pounds per square inch for a period of at least thirty (30) minutes. If, at the end of 30 minutes the pressure shows a drop of one hundred (100) pounds per square inch or more, the cementing job shall be condemned. After corrective measures have been taken, the pipe shall again be tested in the same manner.

WELL SPACING AND ACREAGE REQUIREMENTS FOR DRILLING AND PRORATION UNITS.

RULE 2. Any gas well drilled to the Devonian formation within one mile of the horizontal limits of the Crosby-Devonian Gas Pool shall be spaced, drilled, operated, and prorated in accordance with the rules and regulations in effect in the said Crosby-Devonian Gas Pool.

RULE 3. No well shall be drilled, completed or recompleted, and no Notice of Intention to Drill or drilling permit shall be approved, unless,

(a) Such well be located on a designated drilling unit of 160 acres of land, more or less, said acreage to be substantially in the form of a square conforming to a legal sub-division (quarter-section) of the U. S. Public Lands Survey, in which unit all the interests are consolidated by pooling agreement or otherwise, and on which unit no other well is completed or approved for completion in the pool.

(b) Such well shall be located not closer than 660 feet from any outer boundary line of the tract, nor closer than 330 feet from any quarter-quarter section or sub-division inner boundary, nor closer than 1320 feet from a well drilling to or capable of producing from the pool.

(c) The Secretary of the Commission shall have authority to grant an exception to the well location requirements of sub-paragraph (b) above without notice and hearing where application has been filed in due form and

1. The necessity for the unorthodox location is based on topographical conditions, and

Case No. 861
Order No. R-639-A

2. (a) The ownership of all oil and gas leases within a radius of 660 feet of the proposed location is common with the ownership of the oil and gas leases under the proposed location, or

(b) All owners of oil and gas leases within such radius consent in writing to the proposed location.

(c) In lieu of sub-paragraph 2 (a) and (b) of this rule the applicant may furnish proof of the fact that said offset operators were notified by registered mail of his intent to drill an unorthodox location. The Secretary-Director of the Commission may approve the application if, after a period of twenty days following the mailing of said notice, no operator has made objection to the drilling of the unorthodox location.

RULE 4. The provisions of Paragraph (k) of Commission Rule 164 shall not apply to the Crosby-Devonian Gas Pool located in Lea County, New Mexico.

RULE 5. The acreage allocated to a gas well for proration purposes shall be known as the gas proration unit for that well. For the purpose of gas allocation in the Crosby-Devonian Gas Pool, a standard proration unit shall consist of between 158 and 162 contiguous surface acres substantially in the form of a square which shall be a legal subdivision (quarter-section) of the U. S. Public Land Surveys with a well located at least 660 feet from the nearest property lines.

The allowable production from any non-standard gas proration unit as compared with the allowable production therefrom if such tract were a standard unit shall be in the ratio that the area of such non-standard proration unit bears to 160 acres. Any gas proration unit containing between 158 and 162 acres shall be considered to contain 160 acres for the purpose of computing allowances.

If during a proration month the acreage assigned a well is increased the operator shall notify the Proration Manager in writing (Box 2045, Hobbs, New Mexico) of such increase. The increased allowable assigned the gas proration unit for the well shall be effective on the first day of the month following receipt of the notification by the Proration Manager.

DETERMINING POOL ALLOWABLE.

RULE 6. At least 30 days prior to the beginning of each gas proration period the Commission shall hold a hearing after due notice has been given. The Commission shall cause to be submitted by each purchaser its "Preliminary Nominations" of the amount of gas which each in good faith actually desires to purchase within the ensuing proration period, by months, from the Crosby-Devonian Gas Pool. The Commission shall consider the "Preliminary Nominations" of purchasers, actual production, and such other factors as may be deemed applicable in determining the amount of gas that may be produced without waste within the ensuing proration period. "Preliminary Nominations" shall be submitted on Commission Form C-121-A.

RULE 7. In the event a gas purchaser's market shall have increased or decreased, he may file with the Commission prior to the 10th day of the month a "Supplemental Nomination," showing the amount of gas he actually in good faith desires to purchase during the ensuing proration month from the Crosby-Devonian Gas Pool. The Commission shall hold a public hearing between the 13th and 20th days of each month to determine the reasonable market demand for gas for the ensuing proration month. "Supplemental Nominations" shall be submitted on a form prescribed by the Commission.

The total allowable to be allocated to the pool each month shall be equal to the preliminary or supplemental nominations (whichever is applicable) together with any adjustments which the Commission deems advisable.

DETERMINING WELL ALLOWABLES.

RULE 8. The Commission after determining the market demand for the pool, as set out in Rules 6 and 7, above, shall determine a monthly allowable for each well in the pool which is entitled to an allowable in accordance with the following procedure:

(a) Each well shall be assigned an acreage factor determined by dividing the acreage assigned to the well by 160 acres.

(b) The allowable to be assigned to each marginal well shall be equal to the maximum production during any month of the preceding 6 months gas proration period.

(c) The pool allowable remaining each month after deducting the total allowable assigned to marginal wells shall be allocated among the non-marginal wells entitled to an allowable in the proportion that each well's acreage factor bears to the total of the acreage factors for all non-marginal wells in the pool.

(d) The Commission may assign minimum allowables to prevent the premature abandonment of wells.

CLASSIFICATION OF WELLS.

RULE 9. (a) Effective January 1, 1958, and at the beginning of each subsequent gas proration period, any well which had an underproduced status at the beginning of the preceding gas proration period and which did not produce its allowable during at least one month of such preceding gas proration period may be classified as a marginal well unless prior to the end of said preceding gas proration period, the operator or other interested party presents satisfactory evidence to the Commission showing that the well should not be so classified.

However, a well which in any month of said proration period has demonstrated its ability to produce its allowable for said proration period shall not be classified as a marginal well.

(b) A well which has been reworked or recompleted shall be classified as a non-marginal well as of the day of re-connection to a pipeline until such time as production data, deliverability data, or other evidence as to producing ability indicates that the well is improperly classified.

(c) A marginal well shall not be permitted to accumulate underproduction, and any underproduction accrued to a well prior to its classification as a marginal well shall be cancelled.

(d) The director may reclassify a marginal or non-marginal well at any time the wells production data, deliverability data, or other evidence as to the wells producing ability justify such re-classification.

(e) If at the end of a proration period a marginal well has produced more than the total allowable assigned a non-marginal unit of corresponding size, the marginal well shall be reclassified as a non-marginal well and its allowable adjusted accordingly.

(f) All wells not classified as marginal wells shall be non-marginal wells.

BALANCING OF PRODUCTION.

RULE 10. The dates 7:00 a.m., January 1, and 7:00 a.m., July 1, shall be known as balancing dates and the periods of time between these dates shall be known as gas proration periods.

However, the first proration period for the Crosby-Devonian gas pool shall begin April 1, 1957 at 7:00 a.m., and shall continue until January 1, 1958 at 7:00 a.m.

RULE 11. Underproduction: Any non-marginal well which has an underproduced status at the end of a gas proration period shall be allowed to carry such underproduction forward into the next gas proration period and may produce such underproduction in addition to the allowable assigned during such succeeding period. Any allowable carried forward into a gas proration period and remaining unproduced at the end of such gas proration period shall be cancelled.

Production during any one month of a gas proration period in excess of the allowable assigned to a well for such month shall be applied against the under-production carried into such period in determining the amount of allowable, if any, to be cancelled.

RULE 12. Overproduction: Any well which has an overproduced status at the end of a gas proration period shall carry such overproduction forward into the next gas proration period, provided that such overproduction shall be made up during such succeeding period. Any well which has not made up the overproduction carried into a gas proration period by the end of such gas proration period shall be shut-in until such overproduction is made up. If, at any time, a well is overproduced an amount equaling six times its current monthly allowable it shall be shut-in during the current month.

Allowable assigned to a well during any one month of a gas proration period in excess of the production for such month shall be applied against any overproduction carried into such period in determining the amount of overproduction, if any, which has not been made up.

The Commission may allow overproduction to be made up at a lesser rate than would be the case if the well were completely shut-in upon a showing at public hearing after due notice that complete shut-in of the well would result in material damage to the well.

RULE 13. Any allowable accrued to a well at the end of a proration period due to the cancellation of underage and redistribution thereof, shall be applied against the overproduction carried into said proration period.

CONTENTS OF GAS PRORATION SCHEDULE.

RULE 14. (a) The Commission shall issue a proration schedule setting out the amount of gas which each well may produce during the ensuing proration month along with such other information as is necessary to show the allowable-production status of each non-marginal well on the schedule.

(b) The Commission shall include in the proration schedule the gas wells in the Crosby-Devonian Gas Pool delivering to a gas transportation facility, or lease gathering system, and shall include in the proration schedule of the said gas pool any well which it finds is being unreasonably discriminated against through denial of access to a gas transportation facility, which is reasonably capable of handling the type of gas produced by such well.

GRANTING OF ALLOWABLES.

RULE 15. No gas well shall be given an allowable until Form C-104 and Form C-110 have been filed together with Form C-128 showing acreage attributed to said well and the locations of all wells on the lease.

-9-

Case No. 861
Order No. R-839-A

RULE 16. Allowables to newly completed gas wells shall commence on the date of connection to a gas transportation facility, as determined from an affidavit furnished to the Commission (Box 2045, Hobbs, New Mexico) by the purchaser, or the date of filing of Form C-104, Form C-110 and Form C-120 or the approval of a non-standard proration unit or filing of an affidavit of communitization, whichever date is the later.

The date of first allowable for all gas wells which are within the Crosby-Devonian Gas Pool or within one mile thereof shall be April 1, 1957, provided the provisions of this rule and Rule 11 have been complied with.

RULE 17. The allowable revision for a well after workover or recompletion shall become effective:

(a) On the date of reconnection after workover, such date to be determined from Form C-104 as filed by the operators, or

(b) A date 15 days prior to the approval of Form C-104 by the Commission's office, (Box 2045, Hobbs, New Mexico); (Form C-104 shall specify the exact nature of the workover or remedial work; if the nature of the work cannot be explained on Form C-104, in that event, Form C-103 shall be also filed in accordance with Rule 1106 of the Commission's Statewide Rules and Regulations).

Whichever date is later.

REPORTING OF PRODUCTION.

RULE 18. The monthly gas production from each well shall be metered separately and the gas production therefrom shall be reported to the Commission on Form C-115 so as to reach the Commission on or before the 20th day of the month next succeeding the month in which the gas was produced. The operator shall show on such report what disposition has been made of the gas produced.

Each purchaser or taker of gas in the Crosby-Devonian Gas Pool shall submit a report to the Commission so as to reach the Commission on or before the 20th day of the month next succeeding the month in which the gas was purchased or taken.

Such report shall be filed on either Form C-111 or Form C-114, (whichever is applicable) with the wells being listed in approximately the same order as they are listed on the proration schedule.

Forms C-111 and C-114 referred to herein shall be submitted in duplicate, the original being sent to the Commission at Box 871, Santa Fe, New Mexico, the other copy being sent to Box 2045, Hobbs, New Mexico.

Form C-115 shall be submitted in accordance with Rule 1114 of the Commission's Rules and Regulations.

The full production of gas from each well shall be charged against the well's allowable regardless of what disposition has been made of the gas; provided, however, that gas used on the lease for consumption in lease houses, treaters, compressors, combustion engines and other similar lease equipment shall not be charged against the well's allowable.

DEFINITIONS.

PROVIDED FURTHER, After the effective date of this order no well shall be completed or recompleted in such a manner that the producing zone of the overlying gas pool and the producing zone of the underlying oil pool are both open in the same well bore unless specifically authorized by order of the Commission after notice and hearing. Dual completions may be effected in accordance with the provisions of Rule 112-A of the Commission's Rules and Regulations.

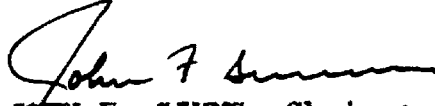
PROVIDED FURTHER, Gas-liquid ratio tests shall be taken in accordance with the provisions of Rule 301 of the Commission Rules and Regulations. Said tests shall be taken on all oil and gas wells within the Crosby-Devonian Gas Pool or within one mile thereof during the month of March, 1957, and annually, thereafter as scheduled by the Commission.

PROVIDED FURTHER, That in filing Form C-101 "Notice of Intention to Drill or Recomplete" all operators shall strictly comply with the provisions of Paragraph (e) of Rule 104.

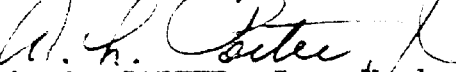
PROVIDED FURTHER, That failure to comply with the provisions of this order or the rules contained herein shall result in the cancellation of allowable assigned to the affected well. No further allowable shall be assigned to the affected well until all rules and regulations are complied with. The Proration Manager shall notify the operator of the well and the purchaser in writing of the date of allowable cancellation and the reason therefor.

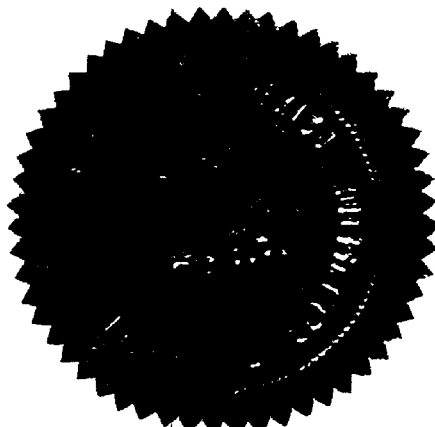
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


JOHN F. SIMMS, Chairman


E. S. WALKER, Member


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



-11-
Case No. 861
Order No. R-629-A

EXHIBIT "A"

The horizontal limits of the Crosby-Devonian shall be as follows:

TOWNSHIP 22 NORTH, RANGE 27 EAST, N30W
Section 22: All (from R-629)
Section 23: E/2 (from R-787)
Section 28: E/2 (from R-814)

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

*Sent copy to
Docket John Workman
on 10/29/52*

IN THE MATTER OF THE APPLICATION
OF EL PASO NATURAL GAS COMPANY
FOR AN ORDER AMENDING THE WELL
SPACING PROVISIONS OF THE COMMISSION'S ORDER NO. R-639 AND ESTABLISHING GAS PRORATION UNITS AND ALLOCATION OF GAS PRODUCTION IN THE CROSBY-DEVONIAN GAS POOL, LEA COUNTY, NEW MEXICO.

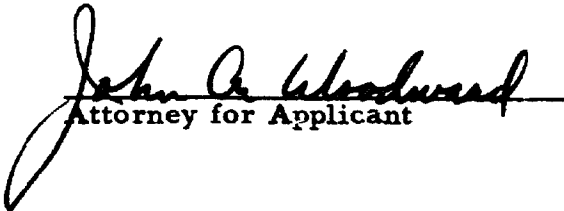
CASE NO. 861
ORDER NO.

APPLICATION

COMES NOW, El Paso Natural Gas Company and alleges and states:

1. That it is the owner of oil and gas leases in the Crosby-Devonian Gas Pool, as delineated by order of this Commission.
2. That one gas well in the Crosby-Devonian Gas Pool will efficiently and economically drain an area of not less than 640 acres in said Pool.
3. That standard gas proration units containing not less than 632 acres nor more than 648 acres, being a governmental section of land, or proration units of such other size and shape as the Commission shall deem necessary and proper, should be established in the Crosby-Devonian Gas Pool.
4. That Section 2 of the Commission's Order No. R-639 should be amended in its entirety to provide that no well hereafter drilled in said Pool shall be located closer than 990' to a section, tract, or lease line nor closer than 330' to a governmental quarter-quarter section line, or such other distances from section, tract, lease, and quarter-quarter lines as the Commission shall deem necessary and proper; and that, except as herein amended, all other provisions of said Order No. R-639 shall remain in force and effect.
5. That all gas wells heretofore drilled at locations other than those authorized under such well spacing rules as the Commission shall adopt should be recognized and permitted as exceptions thereto.
6. That the producing capacity of all gas wells in the Crosby-Devonian Gas Pool is in excess of the market demand for gas in said Pool and that the production of gas should be allocated to the wells and proration units in said Pool in the proportion that the acreage assigned to each well multiplied by its wellhead pressure after 72 hours shut-in bears to the sum of said product for all wells and proration units in the Crosby-Devonian Gas Pool, or in accordance with such other method for allocating production as the Commission shall deem necessary and proper.
7. That amendment of the well spacing provisions of the Commission's Order No. R-639 and establishment of gas proration units and allocation of production in the Crosby-Devonian Gas Pool is necessary for the prevention of waste and the protection of correlative rights.

WHEREFORE, Applicant respectfully requests this matter be set for hearing, as prescribed by law, and that upon notice and hearing the Commission issue its order amending Order No. R-639 and establishing gas proration units and allocation of production in the manner herein described, or in such other manner as the Commission shall deem necessary and proper.


Attorney for Applicant

Regular Reg
El Paso Natural Gas Company

on 11/13/56

El Paso, Texas

October 18, 1956

The Oil Conservation Commission
of the State of New Mexico
Mabry Hall, Capitol Building
Santa Fe, New Mexico

Re: IN THE MATTER OF THE APPLICATION
OF EL PASO NATURAL GAS COMPANY
FOR AN ORDER AMENDING THE WELL
SPACING PROVISIONS OF THE COMMIS-
SION'S ORDER NO. R-639 AND ESTAB-
LISHING GAS PRORATION UNITS AND
ALLOCATION OF GAS PRODUCTION IN
THE CROSBY-DEVONIAN GAS POOL,
LEA COUNTY, NEW MEXICO.

Gentlemen:

Attached are original and three (3) copies of El Paso's application
in captioned matter, which we ask the Commission to hear at the
next Statewide Hearing.

Yours very truly,

John A. Woodward
John A. Woodward

Attachments
JAW:jw

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

December 31, 1956

C
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P
Y

**Mr. John Woodward
El Paso Natural Gas Company
P. O. Box 1492
El Paso, Texas**

Dear Mr. Woodward:

**We enclose a copy of Order R-639-A issued in Case 861
which was heard on November 13, 1956, at Santa Fe, New Mexico.**

Very truly yours,

**A. L. Porter, Jr.
Secretary-Director**

**jh
encl.**

**CROSBY (DEVONIAN) FIELD
LEA COUNTY, NEW MEXICO
PRESSURE BUILD-UP AND WELL INTERFERENCE TESTS
November 1956**

EXHIBIT NO. 44
SPONSORED BY EPNG
WITNESSES

Operator	Anderson Pritchard	Anderson Pritchard	R. Olsen	Shuchter	Phillips	El Paso Nat. Gas
Well	Asper. Exp. Fed. #1	Coil #1	German "D" #1	Lambert #1	Copper #1	Gregory Fed. #2-X
Date	Time	Time	Time	Time	Time	Time
	E.L.W.H.P.	E.L.W.H.P.	E.L.W.H.P.	E.L.W.H.P.	E.L.W.H.P.	E.L.W.H.P.
Nov. 9, 1956	8:45a	8:30a	8:25a	8:40a	9:00a	8:15a
	9,494 Meq/D			7,637 Meq/D		
	2:40p	2:30p	2:25p	2:25p	2:45p	2:15p
	2601	2645	2655	2649	2646	2646
Nov. 10, 1956	10:30a	11:00a	11:00a	10:30a	10:05a	11:15a
	9,774 Meq/D			8,263 Meq/D		
		2644	2646	2646	2636	2646
Nov. 11, 1956	11:35a	11:40a	11:35a	11:45a	11:30a	11:30a
	9,731 Meq/D			8,325 Meq/D		
		2644	2646	2646	2636	2643
Nov. 12, 1956	8:05a	7:30a	7:45a	7:55a	8:10a	7:40a
	2662(20)	2644 ^A	2644 ^B	8,220 Meq/D	2639 ^C	2663
		5	A			

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. 861
Order No. R-639

THE APPLICATION OF THE OIL
CONSERVATION COMMISSION ON ITS
OWN MOTION FOR AN ORDER CREATING
AND DESIGNATING A NEW POOL TO BE
KNOWN AS THE CROSBY-DEVONIAN POOL
FOR THE PRODUCTION OF GAS FROM THE
DEVONIAN FORMATION, SUCH POOL TO
CONSIST OF ALL OF SECTION 28, TOWN-
SHIP 25 SOUTH, RANGE 37 EAST, NMPM,
LEA COUNTY, NEW MEXICO; AND FOR THE
ESTABLISHMENT OF POOL RULES, DRILLING
UNITS, WELL SPACING AND OTHER RELATED
MATTERS FOR SAID POOL.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. March 16, 1955, and was continued to April 20, 1955, at Santa Fe, New Mexico, before the Oil Conservation Commission, hereinafter referred to as the "Commission".

NOW, on this 27th day of May, 1955, the Commission, a quorum being present, having considered the record and testimony adduced, and being fully advised in the premises,

FINDS:

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

(2) That Anderson-Prichard Oil Corporation did complete its American Republics-Federal No. 1 discovery well in the NE/4 SW/4 of Section 28, Township 25 South, Range 37 East, NMPM, Lea County, New Mexico on or about January 18, 1955.

(3) That said well potentialed 30,000 MCF of gas per day on an absolute open flow test from the Devonian formation in the depth interval of 8270 to 8390 feet.

(4) That said well discovered a new common source of supply in this area.

(5) That sufficient evidence was presented to the Commission as to the probable areal extent and directional trend of the newly discovered common source of supply to justify the creation of the new pool as contemplated.

(6) That in conformity with the practices of the Commission, a pool should be created, defined and classified including such acreage as appears to cover the newly discovered source of supply.

(7) That the probable areal extent of the common source of supply is limited, and as a result thereof a proration unit of more than 160 acres could cause the inclusion in units of acreage that cannot reasonably be assumed to be productive of gas.

(8) That one well will efficiently and economically drain at least 160 acres of the said common source of supply.

(9) That in order to provide for the orderly development of the common source of supply, and to prevent waste, drilling units of 160 acres, well-spacing regulations, and a casing program should be established for said common source of supply.

IT IS THEREFORE ORDERED:

(1) That the Crosby-Devonian Gas Pool is hereby created, and that said pool shall consist of the following described acreage:

TOWNSHIP 25 SOUTH, RANGE 37 EAST, NMPM
All of Section 28

(2) That effective on the date of this order, the following Rules and Regulations shall apply to wells hereafter drilled, completed, or recompleted to the Devonian formation in the Crosby-Devonian Gas Pool area, as defined above, in addition to the Commission's applicable rules, regulations and orders heretofore or hereafter adopted, to the extent not to conflict herewith;

SPECIAL RULES AND REGULATIONS FOR
THE CROSBY-DEVONIAN POOL

SECTION 1. Any well drilled one mile or less from the outer horizontal boundary of the Crosby-Devonian Gas Pool, and drilled to the Devonian formation, shall be spaced, drilled, operated, and prorated in accordance with the rules and regulations in effect in the said Crosby-Devonian Gas Pool.

SECTION 2. No well shall be drilled, completed or recompleted, and no Notice of Intention to Drill or drilling permit shall be approved, unless,

- (a) Such well be located on a designated drilling unit of not less than 160 acres of land, more or less, said acreage to be substantially in the form of a square conforming to a legal sub-division (quarter-section) of the U. S. Public Lands Survey, in which unit all the interests are consolidated by pooling

agreement or otherwise, and on which unit no other well is completed or approved for completion in said pool.

- (b) Such well shall be located not closer than 660 feet to any outer boundary line of the tract, nor closer than 330 feet to any quarter-quarter section or subdivision inner boundary, nor closer than 1329 feet to a well drilling to or capable of producing from the same pool.
- (c) The pooling of properties or parts thereof shall be permitted, and if not agreed upon may be required in any case when and to the extent that the smallness or shape of a separately owned tract would, under the enforcement of a uniform spacing plan, deprive or tend to deprive the owner of such tract of the opportunity to recover its just and equitable share of the natural gas in said pool, provided that the owner of any tract that is smaller than a drilling unit established for the pool shall not be deprived of the right to drill on and produce from such tract if same can be done without waste; but in such case the allowable production from such tract, as compared with the allowable production therefrom if such tract were a full 160-acre unit area shall be in the ratio of the area of such non-standard proration unit expressed in acres to the area of the standard 160-acre proration unit.

SECTION 3. The casing program for the field shall include three strings of casing set in accordance with the following plan:

- (a) The surface string shall be new or reconditioned pipe with a mill test of not less than two thousand (2,000) pounds per square inch and shall be set and cemented at a depth of approximately five hundred (500) feet, such depth being sufficient to protect the fresh water bearing sands of the Santa Rosa Formation.

Cementing shall be by the pump-and-plug method, and sufficient cement shall be used to fill the annular space back of the pipe to the surface of the ground or the bottom of the cellar. Cement shall stand a minimum of sixteen (16) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating pressure tests. Before drilling the plug, this string shall be tested by the application of at least one thousand (1,000) pounds per square inch and, if at the end of thirty (30) minutes the pressure shows a drop of one hundred fifty (150) pounds per square inch or more, the cementing job shall be condemned. After corrective measures have been taken, the pipe shall again be tested in the same manner.

- (b) The intermediate string shall consist of new or reconditioned pipe that has been tested to two thousand (2,000) pounds per square inch and shall be set at approximately thirty-six hundred (3,600) feet. Cementing shall be by the pump-and plug method, and sufficient cement shall be used to fill the calculated annular space back of the pipe to a point one hundred (100) feet above the top of the Salado formation. The cement shall stand a minimum of twenty-four (24) hours under pressure and a total of thirty (30) hours before drilling plug or initiating tests. Casing shall be tested by the application of at least twelve hundred (1200) pounds per square inch pump pressure. If, at the end of thirty (30) minutes, the pump pressure shows a drop of one hundred (100) pounds per square inch or more, the cementing job shall be condemned. After corrective measures have been taken, the pipe shall again be tested in the same manner.
- (c) The producing or oil string shall be new or reconditioned casing that has been tested to four thousand (4,000) pounds per square inch and shall be set at a depth not less than the top of the Devonian formation. Cementing shall be with a minimum of three hundred fifty (350) sacks of cement applied by the pump and plug method and shall stand a minimum of twenty four (24) hours under pressure and a total of forty eight (48) hours before drilling the plug or initiating tests. After cementing, the casing shall be tested by pump pressure of at least fifteen hundred (1,500) pounds per square inch for a period of at least thirty (30) minutes. If, at the end of 30 minutes the pressure shows a drop of one hundred (100) pounds per square inch or more, the cementing job shall be condemned. After corrective measures have been taken, the pipe shall again be tested in the same manner.

SECTION 4. All additional lands located within one mile of any land in the pool defined above or as it may be extended shall conform to these Rules and Regulations; provided, that by order of the Commission the pool may be redesignated from time to time so as to embrace other lands in the vicinity which are believed to be capable of production from the Devonian formation, whether or not such land shall have been at one time included in another designated field or pool.

-5-

Order No. R-639

IT IS FURTHER ORDERED, that the Commission retains jurisdiction of this case for such other and further order or orders in the premises as may become necessary in order to make spacing and other adjustments to protect correlative rights and further prevention of waste.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

John F. Simms
JOHN F. SIMMS, Chairman

E. S. Walker
E. S. WALKER, Member

W. B. Macey
W. B. MACEY, Member and Secretary



/ir

CLASS OF SERVICE

This is a fast message unless its deferred character is indicated by the proper symbol.

WESTERN UNION TELEGRAM

W. P. MARSHALL, PRESIDENT

SYMBOLS

DL = Day Letter

NL = Night Letter

LT = International Letter Telegram

1201

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

LA12 DA063

1955 JUN 2 11 05

D LLE183 NL PD=DALLAS TEX 1=

E S WALKER, LAND COMMISSIONER CONSERVATION COMMISSION
STATE CAPITOL BLDG SANTAFE NMEX=

WOULD APPRECIATE YOUR FORWARDING AIR MAIL COPY OF
CONSERVATION COMMISSION SPACING ORDER FOR GAS WELLS
VICINITY ANDERSON PRITCHARD DISCOVERY NEAR JAL LEA
COUNTY SECTION 28 TOWNSHIP 25 SOUTH RANGE 37 EAST THANK
YOU=

RAYMOND WILLIAMS 5738 NORTH CENTRAL EXPRESS WAY=..

*Airmailed
6-2-55
NR*

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

C
O
P
Y

May 27, 1955

Mr. Ross Malone
ATWOOD AND MALONE
Roswell, New Mexico

Dear Sir:

In behalf of your client, Anderson-Prichard Oil Corporation, we enclose Order R-639 issued by the Commission in Case 861, heard on March 16 and April 20.

The order was signed and entered in our records as of this date, May 27.

Very truly yours,

WBM:nr

W. B. Macey
Secretary - Director

Encl.

C
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P
Y

June 2, 1955

Sinclair Oil and Gas Company
901 Fair Building
FORT WORTH, TEXAS

Attention: Mr. Harbin

Gentlemen:

We enclose a copy of Order R-639 issued in Case 861 relating to the Crosby-Devonian Gas Pool. The order was signed and entered into Commission records on May 27, 1955.

Very truly yours,

W. B. Macey
Secretary - Director

WBM:nr

OIL CONSERVATION COMMISSION
P. O. BOX 671
SANTA FE, NEW MEXICO

September 6, 1955

Mr. M. L. McMillan
Humble Oil & Refining Company
Midland, Texas

Dear Sir:

As requested in your letter of August 31, 1955, we enclose
three copies of Order No. R-639 issued May 27, 1955, in Case 861.

Very truly yours,

W. B. Macey
Secretary - Director

WBM:brp
Encls. 3

C
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Y

HUMBLE OIL & REFINING COMPANY
MIDLAND, TEXAS

August 31, 1955

Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Gentlemen:

Will you please furnish us with three copies of Order No. R-639 issued May 27, 1955, covering Rules and Regulations of the Crosby-Devonian Field, Lea County, New Mexico.

Thanking you in advance for your cooperation in this matter, we are

Yours very truly,

HUMBLE OIL & REFINING COMPANY

By:

M. L. McMillan

M. L. McMillan

MLM/elw

Memo

From
I. R. TRUJILLO

To Harry Johnston.

7 ad 7 7 1

continued, July 8 -

Bill - Sam & I will like to be
allowed to come
to home on Thurs.

Admiral Ben Lloyd

4720

ATWOOD & MALONE
LAWYERS

JEFF D. ATWOOD
ROSS L. MALONE
CHARLES F. MALONE
E. KIRK NEWMAN
RUSSELL D. MANN

ROSWELL PETROLEUM BUILDING
ROSWELL, NEW MEXICO

June 14, 1955

Mr. William B. Macy, Secretary
Oil Conservation Commission
State Capitol
Santa Fe, New Mexico

Re: Case No. 861, Order No. R-639

Dear Bill:

I am enclosing herewith three copies of the Application of Anderson-Pritchard Oil Corporation for a rehearing in this case on the matter of the size of drilling and proration units. I hope that the Commission will find it possible to act favorably on this application.

With best wishes, I am,

Very truly yours,

Ross L. Malone
for ATWOOD & MALONE

RLM:bc
Encls.
cc: Anderson-Pritchard Oil Corp.

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. 861

THE APPLICATION OF THE OIL
CONSERVATION COMMISSION ON ITS
OWN MOTION FOR AN ORDER CREATING
AND DESIGNATING A NEW POOL TO BE
KNOWN AS THE CROSBY-DEVONIAN POOL
FOR THE PRODUCTION OF GAS FROM THE
DEVONIAN FORMATION, SUCH POOL TO
CONSIST OF ALL OF SECTION 28, TOWN-
SHIP 25 SOUTH, RANGE 37 EAST, NMPM,
LEA COUNTY, NEW MEXICO; AND FOR
THE ESTABLISHMENT OF POOL RULES,
DRILLING UNITS, WELL SPACING AND
OTHER RELATED MATTERS FOR SAID POOL.

APPLICATION FOR REHEARING

COMES NOW Anderson-Pritchard Oil Corporation and ap-
plies to the Commission for a rehearing in respect to that por-
tion of Order No. R-639 which establishes drilling and proration
units in the Crosby-Devonian Pool of 160 acres, and as grounds
therefor states:

1. That the size of the units so fixed is predicated
upon a finding by the Commission that the probable areal extent
of the common source of supply is so limited that the establish-
ment of drilling units in excess of 160 acres would cause the in-
clusion in such units of acreage that cannot reasonably be as-
sumed to be productive of gas.

2. It is believed that this finding of the Commission
is not supported by any substantial evidence introduced in Case
No. 861 for the following reasons:

(a) The only evidence introduced on the basis of
which a conclusion might be drawn as to the areal extent of the

Crosby-Devonian Pool was the performance record of Anderson-Pritchard's American Republics - Federal No. 1 discovery well. The performance record of said well disclosed no reduction in the shut-in casing pressure of said well during the period that it had produced 187,430 MCF into the pipe line prior to April 16, 1955.

(b) All evidence of probative value introduced in the case not only fails to establish a common source of supply of limited areal extent, but affirmatively supports the existence of a common source of supply of substantial areal extent contrary to the finding of the Commission on said subject.

3. Additional evidence of the performance of the discovery well, which would be beneficial to the Commission in reaching a conclusion as to the probable areal extent of the Crosby-Devonian Pool, is now available, and will be presented if a rehearing in this case is granted. Cumulative pipe line withdrawals of gas from said well to May 31, 1955, amount to 452,337 MCF of gas. Addition of estimated withdrawals between May 31, 1955, and June 14, 1955, make a total cumulative production into the pipe line of approximately 550,000 MCF of gas from said well. Notwithstanding such heavy withdrawals from the common source of supply, the shut-in casing pressure of the Anderson-Pritchard's American Republics - Federal Well No. 1 when tested on June 14, 1955, was 2,985 pounds per square inch, which is substantially identical with the first corrected shut-in casing pressure measurement made on said well of 2,999 pounds per square inch.

4. The only evidence presented at the hearing in Case No. 861, which tended to support the existence of a common source of supply of such a limited extent as to require 160 acre proration units, was the unsupported opinion of a single witness

that if the areal extent of the underlying Devonian structure conformed to the contours of the Yates structure above it, its extent would be limited to perhaps 320 acres. No evidence was presented to the Commission that the Devonian structure or the common source of supply constituting the Crosby-Devonian Pool in fact conformed to said Yates structure or necessarily would conform to it, whereas the performance of the well of this applicant clearly indicates a contrary conclusion.

5. The undisputed evidence before the Commission supports the proposition that a single well in the Crosby-Devonian gas pool will efficiently and economically drain in excess of 320 acres. The establishment of 160 acre proration units in said common source of supply will require Anderson-Pritchard Oil Corporation and other operators in said pool to drill more wells than are reasonably necessary to secure its proportionate part of the production of said pool in violation of the statutes of New Mexico and will result in waste as defined by the statutes of the State of New Mexico.

6. By reason of the matters and facts hereinbefore stated, Order No. R-639 entered in Case No. 861 is believed to be erroneous and contrary to law to the extent that it fixes drilling and proration units in the Crosby-Devonian Pool at 160 acres, and a rehearing of said case is believed to be in the interest of the Commission and all affected parties.

WHEREFORE, Petitioner prays that a rehearing be granted in Case No. 861 as to that portion of Order No. R-639 which fixes the size of drilling and proration units in the Crosby-Devonian field at 160 acres.

ANDERSON-PRITCHARD OIL CORPORATION

By: *Lee P. Malone*
of ATWOOD & MALONE
Roswell Petroleum Building
Roswell, New Mexico

Attorneys for Anderson-
Pritchard Oil Corporation

PROPOSED FIELD RULES FOR CROSBY DEVONIAN POOL
LEA COUNTY, NEW MEXICO

RULE 1:

The casing program for the field shall include three strings of casing set in accordance with the following plan:

- A. The surface string shall be new or reconditioned pipe with a mill test of not less than two thousand (2,000) pounds per square inch and shall be set and cemented at a depth of approximately five hundred (500) feet, such depth being sufficient to protect the fresh water bearing sands of the Santa Rosa Formation.

Cementing shall be by the pump and plug method and sufficient cement shall be used to fill the annular space back of the pipe to the surface of the ground or the bottom of the cellar. Cement shall stand a minimum of sixteen (16) hours under pressure and a total of twenty four (24) hours before drilling the plug or initiating pressure tests. Before drilling the plug, this string shall be tested by the application of at least one thousand (1,000) pounds per square inch and, if at the end of thirty (30) minutes the pressure shows a drop of one hundred fifty (150) pounds per square inch or more, the casing shall be condemned. After corrective measures have been taken, the pipe shall again be tested in the same manner.

- B. The intermediate string shall consist of new or reconditioned pipe that has been tested to two thousand (2,000) pounds per square inch and shall be set at approximately forty eight hundred (4,800) feet. Cementing shall be by the pump and plug method and sufficient cement shall be used to fill the calculated annular space back of the pipe to a point one hundred (100) feet above the top of the Yates formation. In addition, the intermediate string shall be cemented in such manner as to isolate or cover the salt section of the Salado formation either by circulating cement of sufficient volume to cover said section or by the use of multi-stage cementing methods. The cement shall stand a minimum of twenty four (24) hours under pressure and a total of thirty (30) hours before drilling plug or initiating tests. Casing shall be tested by the application of at least twelve hundred (1200) pounds per square inch pump pressure. If, at the end of thirty (30) minutes, the pump pressure shows a drop of one hundred (100) pounds per square inch or more, the cementing shall be condemned. After corrective measures have been taken, the pipe shall again be tested in the same manner.

Page 2 Cont'd. (Proposed Rules)

- C. The producing or oil string shall be new or reconditioned casing that has been tested to four thousand (4,000) pounds per square inch and shall be set at a depth not less than the top of the Devonian Formation. Cementing shall be with a minimum of three hundred fifty (350) sacks of cement applied by the pump and plug method and shall stand a minimum of twenty four (24) hours under pressure and a total of forty eight (48) hours before drilling the plug or initiating tests. After cementing, the casing shall be tested by pump pressure of at least fifteen hundred (1,500) pounds per square inch for a period of at least thirty (30) minutes. If, at the end of 30 minutes the pressure shows a drop of one hundred (100) pounds per square inch or more, the cementing job shall be condemned. After corrective measures have been taken, the pipe shall again be tested in the same manner.

RULE II:

- A. No gas well shall hereafter be drilled nearer than three thousand seven hundred thirty feet plus or minus two hundred (3700 \pm 200') to any well completed in or drilling to the same reservoir on the same lease, unitized tract or farm, and no well shall be drilled nearer than thirteen hundred twenty feet plus or minus two hundred feet (1320 \pm 200') to any property line, lease line, or subdivision line; provided, however, that the Commission will, in order to prevent waste or to prevent the confiscation of property, grant exceptions to permit drilling within shorter distances than herein prescribed whenever the Commission shall have determined that such exceptions are necessary either to prevent waste or to prevent the confiscation of property.

7. That from the evidence submitted, the Commission finds that the probable areal extent of the common source of supply is limited and dips steeply ^{and} ~~on the flanks~~ that as a result thereof a protection unit of more than 160 acres ^{could} ~~would~~ cause the possible ~~assignment to units of acreage that cannot be reasonably assumed to be productive of gas; that one well will efficiently and economically drain at least 160 acres of the common source of supply; and, that in view of the foregoing, and in the absence of evidence to the contrary, and in order to provide for the orderly development of the common source of supply, protection units of approximately 160 acres, well-spacing regulations, and a leasing program should be established for said common source of supply.~~

8. That one well will efficiently and economically drain at least 160 acres of the common source of supply.

9. That in order to develop the common source of the common source of supply, it is recommended that the common source of supply be developed by the establishment of a common source of supply, and that the common source of supply be developed by the establishment of a common source of supply.

(2) That the existing horizontal boundaries of said pool as herein established shall be subject to additions or deletions after notice and hearing as development and further information may direct or indicate.

(3) That the development of said pool shall be conducted under the existing rules and regulations of the Commission and that Statewide Rule 104, Paragraph (d) shall remain in full force and effect, all until further order of the Commission.

DONE, at C.F.N.M.....

OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

March 28, 1955

Mr. Cletus D. Duty
Woodley Petroleum Company
Box 2082
ADELPHI, TEXAS

Dear Sir: RE: Continuation of Case 861

We refer to your letter of March 23, 1955. This is to advise that the date of the regular April hearing to which the captioned case was continued is Wednesday, April 20. It will be called at 9 a.m., Mabry Hall, State Capitol, Santa Fe, New Mexico.

Very truly yours,

For W. B. Macey
Secretary - Director

WBM:mr

C
O
P
Y

WOODLEY PETROLEUM COMPANY

POST OFFICE BOX 1403
HOUSTON 1, TEXAS

March 23, 1955

ADDRESS REPLY TO
ROOM 33, BACON BUILDING
P. O. BOX 2082 PHONE 4-8181
ABILENE TEXAS

New Mexico Oil Conservation Commission
Mabry Hall
Santa Fe, New Mexico

Gentlemen:

We are interested in case #861 on your March 16, 1955 hearing docket which case was continued to the April hearing. It is noted that April 16, 1955 is a Saturday and it was my thought perhaps the hearing will be re-scheduled some date earlier or later in the month.

We would appreciate you advising us at the Abilene office as to the date this case will be heard.

Very truly yours,

WOODLEY PETROLEUM COMPANY

Cletus D. Duty
Cletus D. Duty

CDD/mlg

OK

STANLEY W. CROSBY
200 E. DEMING STREET
ROSWELL, NEW MEXICO

March 15, 1955

Re: Case 861
T. 25 S., R. 37 E.
Crosby-Devonian Gas
Pool, Lea County

Hon. John F. Simms, Chairman, N. M. Conservation
Santa Fe, N. M. Commission

Dear Governor Simms:

We the undersigned, wish to enter a protest, as royalty owners under more than 400 acres in this particular area, to any proposed spacing of one well to each 640 acre unit.

We do not question that at some future time such spacing could be economically advisable, however with only one well completed in this area we are extremely doubtful that any one now can determine the formation drainage extent of one well.

We are interested in Sections 21, 28 and 29 all in T. 25 S., R. 37 E. Lea County N. M.

Respectfully,

Sue Saunders Graham
Sue Saunders Graham

Sally Saunders Toles
Sally Saunders Toles

Stanley W. Crosby
Stanley W. Crosby

Sec. _____, Township 25-S, Range 37-E, Lea County, New Mex.

Form 103—8 Inch Section Plat—In Stock and For Sale by Gas Printing Co., Tulsa, Okla.

20 Anderson-Prichard	Sun Oil	Anderson-Prichard } $\frac{1}{2}$ Rosley $\frac{1}{2}$	Humble	21 Humble	Anderson-Prichard	22 Skelly Oil
		Anderson-Prichard $\frac{1}{8}$ Humble $\frac{1}{4}$ Olsen $\frac{3}{32}$				
Anderson-Prichard $\frac{83}{128}$ R. Olsen $\frac{34}{128}$ Culbertson-Irwin $\frac{11}{128}$		Sinclair $\frac{1}{2}$	Humble			
Anderson-Prichard $\frac{3}{4}$ Atlantic $\frac{1}{4}$		Sinclair	Anderson-Prichard			
28 R. Olsen $\frac{1}{2}$ L. Redman $\frac{1}{2}$		Anderson-Prichard	28 Phillips Pet. $\frac{3}{4}$ Wrightsman et al $\frac{1}{4}$	Anderson-Prichard	27 Anderson-Prichard	
American Republics			Wadley Pet. Co.			
Gulf		Stanolind	Gulf		Western Natural Gas Co	34
32		33				

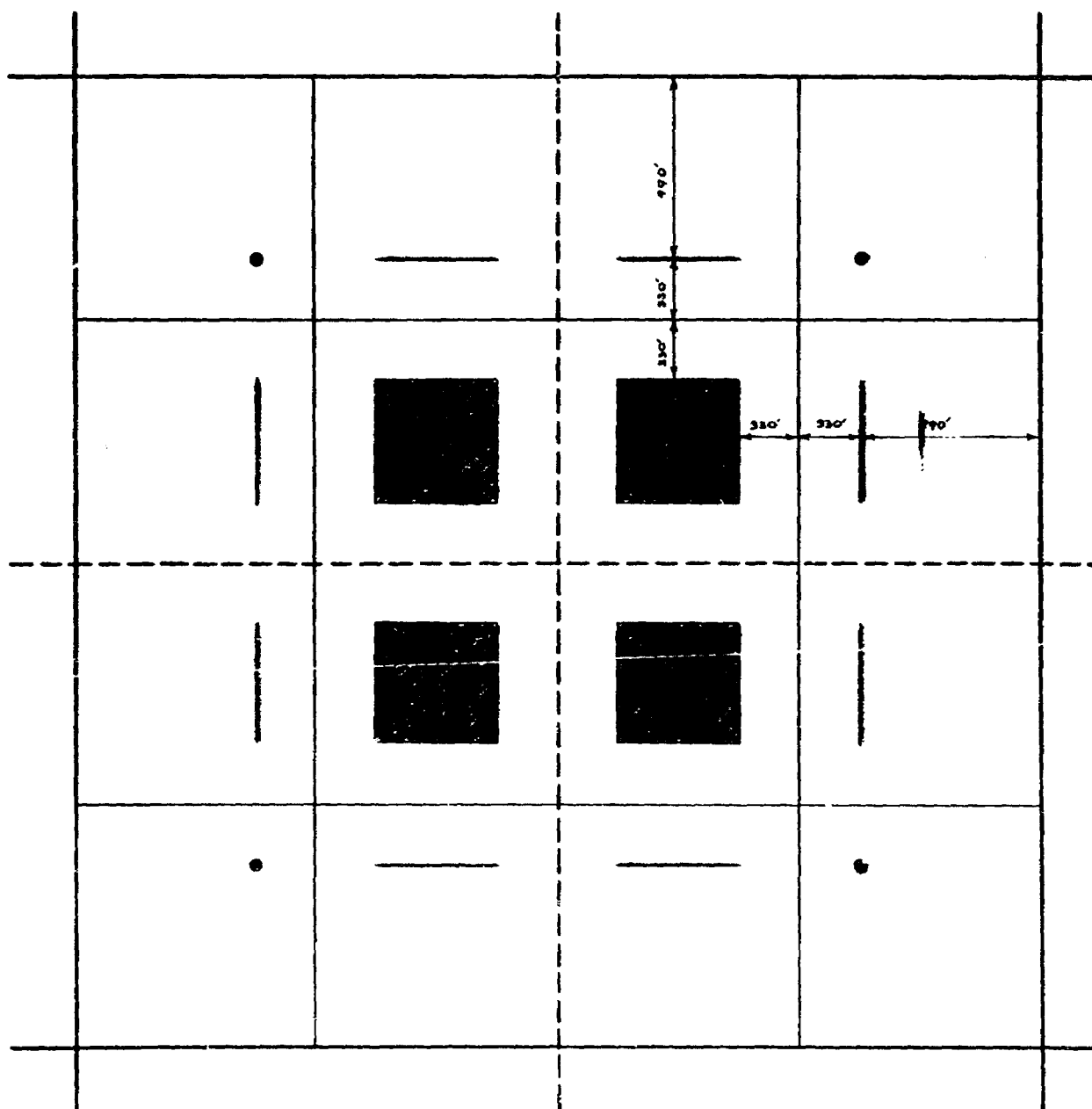
REMARKS Lease owners on deep rights only

James E. Brown #1

Dated 3-3-55

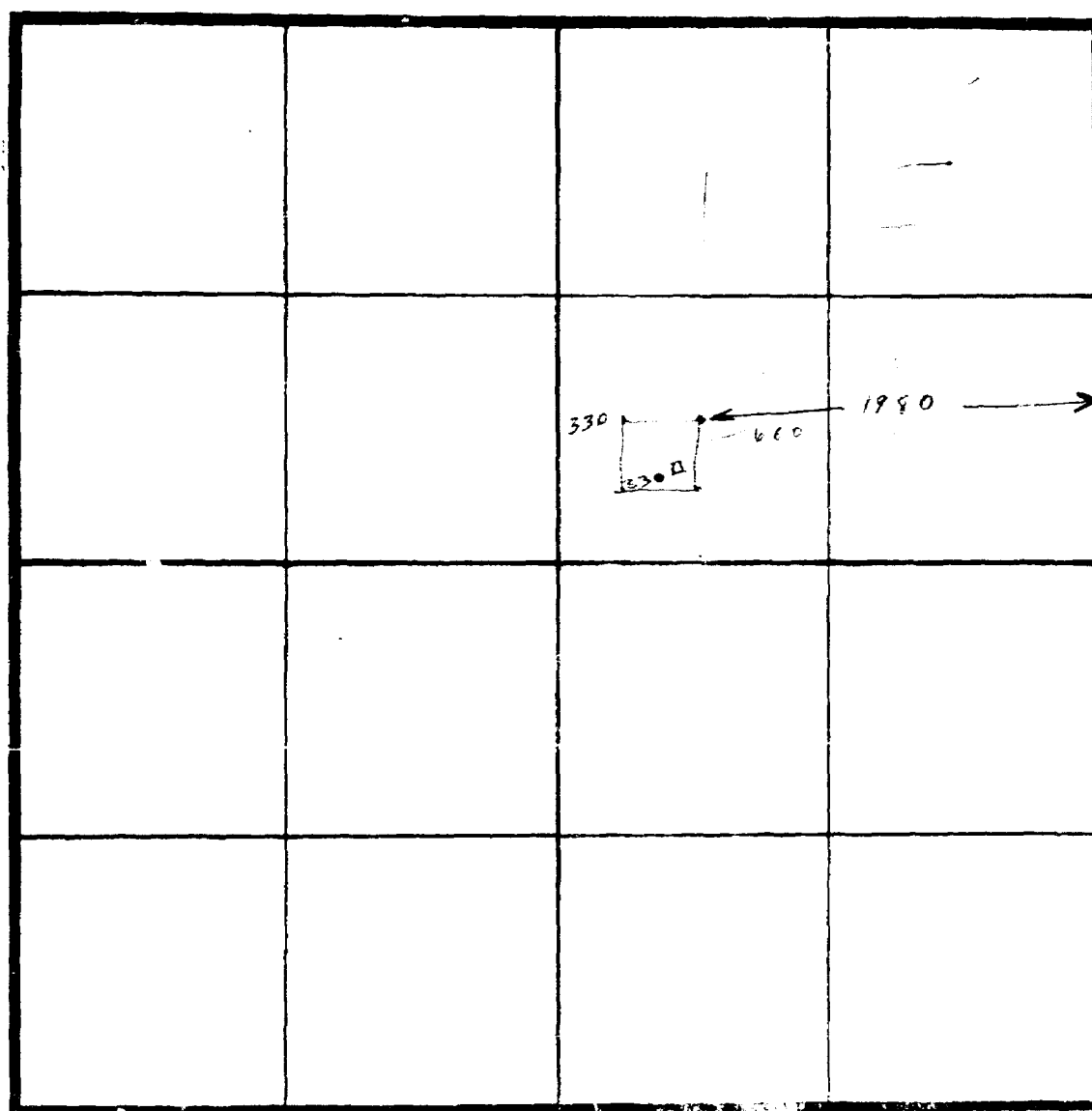
"I"

PLAT SHOWING ALLOWED LOCATIONS
UNDER PROPOSED POOL RULES
CROSBY DEVONIAN GAS POOL



Scale: 6" = 1 Mile

Sec _____ Township No. _____ of Range No. _____

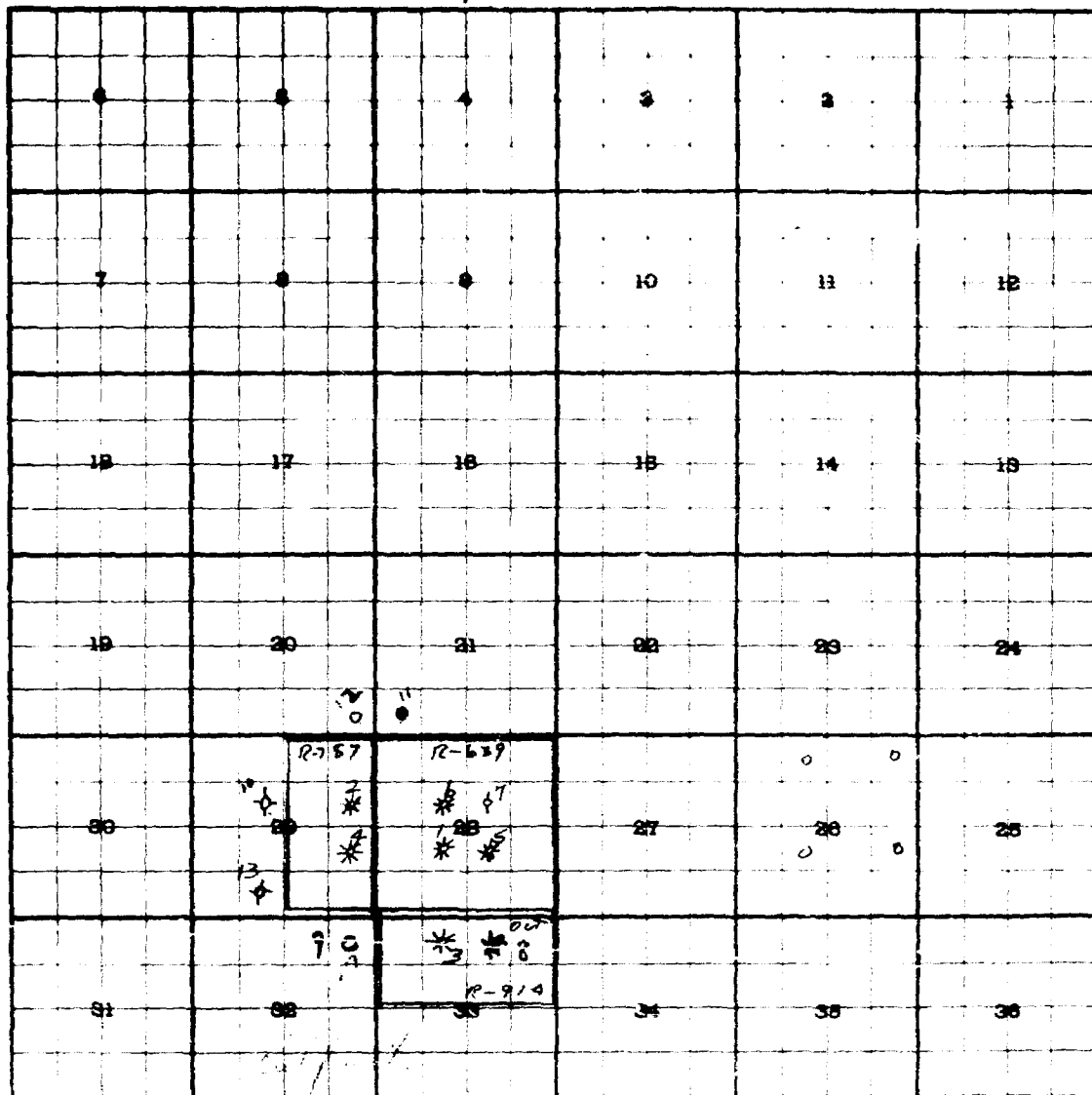


County Lincoln

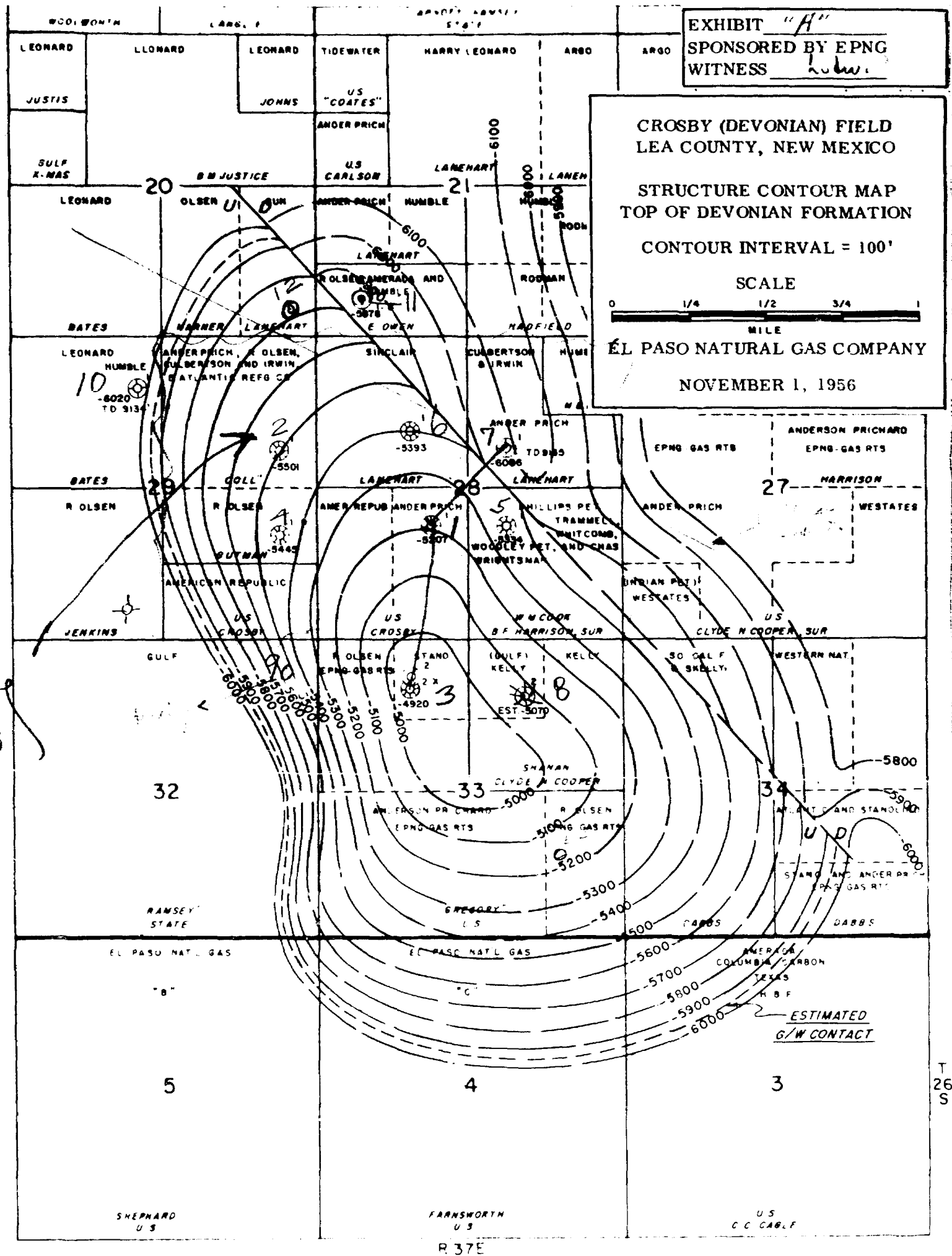
Pool De Sny - Dev. - Gas

TOWNSHIP 25 South, RANGE 37 East.

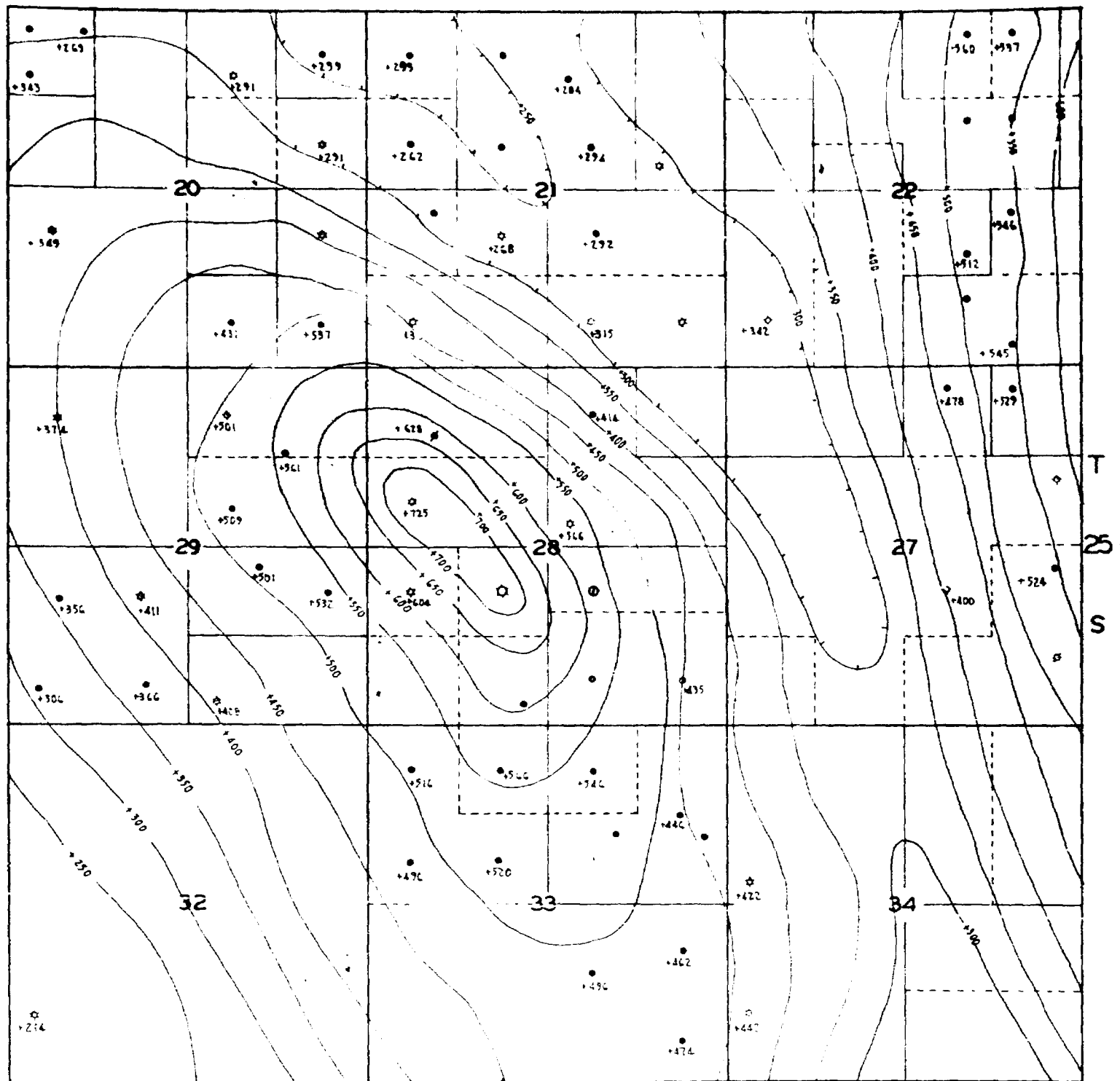
NEW MEXICO PRINCIPAL MERIDIAN



- | | | | |
|--------------------------------------|---|---------|------|
| ✓ 1. <u>De Sny - Dev. - Gas</u> | 1 | 175,100 | 0 |
| ✓ 2. <u>" - Coll</u> | 1 | 177,690 | 2278 |
| ✓ 3. <u>El Paso - Sup. 3 & 4</u> | 1 | 185,629 | 1902 |
| ✓ 4. <u>El Paso - Sup. 1</u> | 1 | 127,574 | 1798 |
| ✓ 5. <u>Phillips - Cooper</u> | 1 | 131,648 | 1735 |
| ✓ 6. <u>Phillips - Leach</u> | 1 | 17,633 | 1206 |
| ✓ 7. <u>Phillips - Leach</u> | 1 | 17,633 | 1206 |
| ✓ 8. <u>Phillips - Leach</u> | 1 | 17,633 | 1206 |
| ✓ 9. <u>Phillips - Leach</u> | 1 | 17,633 | 1206 |
| ✓ 10. <u>Phillips - Leach</u> | 1 | 17,633 | 1206 |
| ✓ 11. <u>Phillips - Leach</u> | 1 | 17,633 | 1206 |
| ✓ 12. <u>Phillips - Leach</u> | 1 | 17,633 | 1206 |
- ✓ 13. Phillips - Leach 1 17,633 1206
 ✓ 14. Phillips - Leach 1 17,633 1206
 ✓ 15. Phillips - Leach 1 17,633 1206
 ✓ 16. Phillips - Leach 1 17,633 1206
 ✓ 17. Phillips - Leach 1 17,633 1206
 ✓ 18. Phillips - Leach 1 17,633 1206
 ✓ 19. Phillips - Leach 1 17,633 1206
 ✓ 20. Phillips - Leach 1 17,633 1206
 ✓ 21. Phillips - Leach 1 17,633 1206
 ✓ 22. Phillips - Leach 1 17,633 1206
 ✓ 23. Phillips - Leach 1 17,633 1206
 ✓ 24. Phillips - Leach 1 17,633 1206
 ✓ 25. Phillips - Leach 1 17,633 1206
 ✓ 26. Phillips - Leach 1 17,633 1206
 ✓ 27. Phillips - Leach 1 17,633 1206
 ✓ 28. Phillips - Leach 1 17,633 1206
 ✓ 29. Phillips - Leach 1 17,633 1206
 ✓ 30. Phillips - Leach 1 17,633 1206
 ✓ 31. Phillips - Leach 1 17,633 1206
 ✓ 32. Phillips - Leach 1 17,633 1206
 ✓ 33. Phillips - Leach 1 17,633 1206
 ✓ 34. Phillips - Leach 1 17,633 1206
 ✓ 35. Phillips - Leach 1 17,633 1206
 ✓ 36. Phillips - Leach 1 17,633 1206



R - 37 - E



Crosbie (Devonian) Field
Lea County, New Mexico
Structure Map - Top of Yates Sand

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
EXHIBIT No. 1
CASE 561

NEW MEXICO
OIL CONSERVATION COMMISSION
Back Pressure Data Sheet

Form C-122

Pool: Wildcat Date: March 30, 1955

Company: Anderson-Prichard Oil Corp. Lease: American Republics Federal Well No. 1

County: Lea Sec. 28 Twp. 25S Rge. 37E Loc. 1930' FEL & FSL

1.892" ID casing set @ 8198' ; 1.995" ID tubing 2-3/8" OD tubing set @ 8130'

Pay zone from 8270' to 8370' ; Separator gas gr. 0.635 Barometer rdg. 13.2 psi

Reservoir temperature 126 °F Produced through: csg. _____ tbg. X

Average gas/liquid ratio during test: Dry Cu. ft. /bbl. gravity of liquid _____ ° API

Size of meter ~~xxxxxxxxxxxx~~ 6" x 2.75"

OBSERVED DATA

Wellhead shut-in pressure, P_w Casing 2929.2 Tubing 2983.2 PSIA

Run No.	Orifice Size	Orifice x Line	Meter Pressures		Coefficient C Flg. tap <u>X</u> Pipe tap _____	Wellhead Pr.		Flowing Temp.	
			Static P_m Abs.	Diff. h_w		Casing P_{wc} Abs.	Tubing P_{wc} Abs.	Meter °F	Wellhead
1	2.75"	6"	553.2	28	17.75	2904.2	2721.2	54	58°
2	2.75"	6"	561.2	23	17.75	2919.2	2776.2	57	53°
3	2.75"	6"	557.2	15	17.75	2943.2	2850.2	66	56°
4	2.75"	6"	553.2	8	17.75	2969.2	2913.2	87	67°

DATA FOR PLOTTING CURVE

Run No.	Delivery Rate in MCF per 24 hours (Q)	$P_f^2 - P_s^2$ (thousands)
1	6,013	700
2	5,584	640
3	4,434	449
4	3,143	195
5		

Absolute Open Flow 30,000 MCF

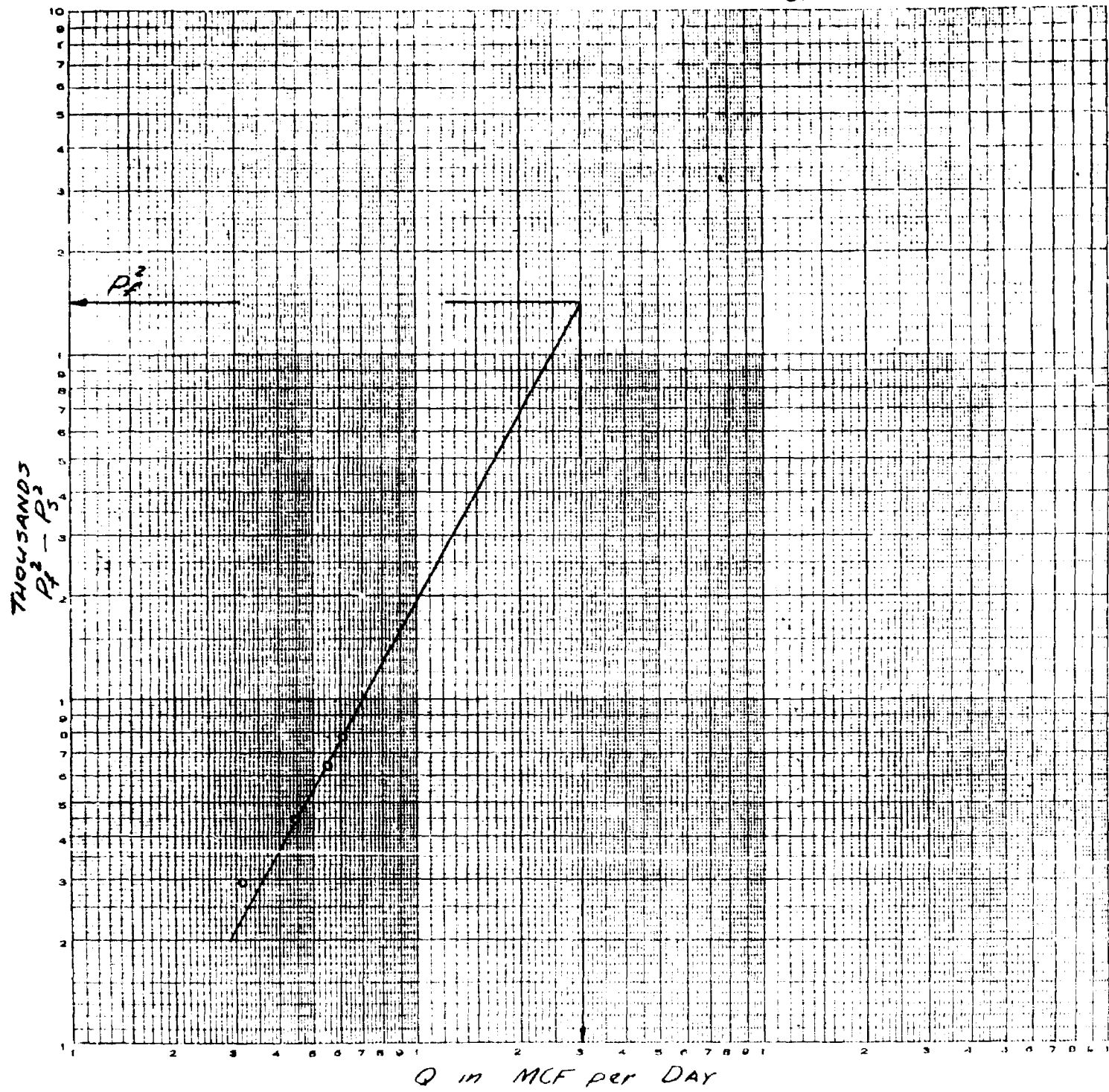
CERTIFICATION: I hereby swear or affirm that, to the best of my knowledge, the information given above is true and correct.

Name: Robert J. Loefer Position: Jr. Engineer

Company: Anderson-Prichard Oil Corp. Address: P. O. Box 2197, Hobbs, New Mexico

Please plot curve on back

61.0° $n = 0.553$



[illegible]

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE NEW MEXICO

EXHIBIT No. 2
CASE 867

W $\frac{1}{2}$ SE $\frac{1}{4}$ Section 20-25S-37E
Lea County, New Mexico

<u>MINERAL OWNER</u>	<u>INTEREST</u>
M. W. Coll	1/12
Southland Royalty Co.	1/4
Lillian Hinkle Coll	3/128
G. Frank Aldrich	5/256
Paul R. Dillar	9/128
Ilamae Forbes	7/1024
L. W. Biddick	7/1024
M. E. Tate & Inez Tate	7/1024
Velma Roring	7/1024
Smith Spradling	7/1024
H. L. Huffman	15/5720
Warren D. Anderson	15/2048
Jane Johnson Wilson	5/2560
Margaret R. Latrobe	7/5120
Pauline Lemon Buchanan	7/5120
Frances Trummer	7/6400
Rena Sims	7/5120
Samuel Roberts Noble Foundation, Inc.	91/1024
Ella M. Jones	7/1024

Leased to Anderson-Prichard (deep
Leased to E. Olsen to 4000'

HBP

E₂SE₄ Section 20-25S-37E
Lea County, New Mexico--

<u>MINERAL OWNER</u>	<u>INTEREST</u>
Johnson D. Hill	1/6
Southland Royalty Co.	1/6
Skelly Oil Company	1/6
H. P. Saunders, Jr. Estate	3/16
Harry Leonard	3/16
Smith Spradling Trustee	
Lloyd Noble Trust #1	7/384
" " " #2	7/384
" " " #3	7/384
Ilamae Forbes	7/1280
L. W. Biddick	7/1280
M. E. Tate & Inez Tate	7/1280
Velma Roring	7/1280
Smith Spradling	7/1280
H. L. Huffman	3/1280
Warren D. Anderson	3/512
Jane Johnson Wilson	1/640
Margaret R. Latrobe	7/6400
Pauline Lemon Buchanan	7/6400
Frances Trummer	7/6400
Rena Sims	7/6400
Samuel Roberts Noble Foundation, Inc.	21/1280

(Total 1.00366115)

Leased to Sun Oil Co. - HBP

NW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 21-25S-37E
Lea County, New Mexico---

MINERAL OWNER

INTEREST

D.R. Snow		1/32
Skelly Oil Company		1/12
Southland Royalty Co.		1/6
H. P. Saunders, Jr. Estate		1/16
Stanley Crosby		1/16
Harry Leonard		1/8
Lora Barnes		1/40
Dorothy Dow		1/40
Roy O. Neal		4/200
Marjorie Neal		1/200
Harry B. Neal	1/40 + 1/40 =	1/20
Mildred B. Grimes		1/40
Helen L. Grimes		1/40
Otho H. Grimes		3/40
K O P S Oil Co.		958.56/6400
Mrs. E. A. Kelly		203/6400
Suda Willis Oles		238.44/6400

NE¹/₄SW¹/₄ Section 21-25S-37E
Lea County, New Mexico

MINERAL OWNER

John T. Lanehart
D. R. Snow
Skelly Oil Company
Southland Royalty Co.
H. P. Saunders Estate
Stanley Crosby
Harry Leonard
K O P S Oil Co.
Mrs. E. A. Kelly
Suda Willis Oles

INTEREST

1/4
1/32
1/12
1/6
1/16
1/16
1/8
958.56/6400
203/6400
238.44/6400

S $\frac{1}{2}$ SW $\frac{1}{4}$ Section 21-25S-37E
Lea County, New Mexico

MINERAL OWNER

INTEREST

J. T. Lanehart
Skelly Oil Company
Southland Royalty Company
D. R. Snow
H. P. Saunders, Jr. Estate
Stanley Crosby
Harry Leonard
Sunray Oil Corporation
W. A. Yeager & J. M. Armstrong

1/4
1/12
1/6
1/32
1/16
1/16
1/16
1/16
7/32

SE $\frac{1}{4}$ Section 21-25S-37E
Lea County, New Mexico

MINERAL OWNER

INTEREST

M. D. Munsie
Joe Edgar
P. J. Mims
Peerless Oil & Gas Company
Mrs. Nina Rawls
H. P. Saunders, Jr. Estate
Harry Leonard
Katie V. Bushby
W. E. Kreps

1/
3/16
1/128
1/4
1/32
1/8
1/8
1/64
1/128

SW $\frac{1}{4}$ Section 22-25S-37E
Lea County, New Mexico

(U. S. MINERALS)

W₂¹ Section 27-25S-37E
Lea County, New Mexico

(U. S. MINERALS)

NE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 28-25S-37E
Lea County, New Mexico)

MINERAL OWNER

INTEREST

Grace B. Hadfield	1/8
P. J. Mims	1/128
Joe Edgar	3/16
Peerless Oil & Gas Co/	1/4
Mrs. Nina Rawls	1/32
Reginal H. Johnson	1/8
H. P. Saunders Estate	1/8
Harry Leonard	1/8
W. E. Kreps	1/128
Katie V. Bushby	1/64

(Total 1.000003)

Leased to Humble - Humble assigned to E. G. Rodman rights
to 3750' - HSP

W $\frac{1}{2}$ NE $\frac{1}{4}$ & SE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec. 28-25S-37E
Lea County, New Mexico

MINERAL OWNER

INTEREST

Clyde J. Lanehart	1/2
Lloyd Noble Estate	3/120
A. A. Kemnitz	1/12
The Samuel Roberts Noble Foundation, Inc.	47/120

Leased to Anderson Pritchard (deep)
Leased to Culbertson-Irwin, et al, rights to 4000'

HBP

SE $\frac{1}{4}$ Section 28-25S-37E
Lea County, New Mexico

<u>MINERAL OWNER</u>	<u>INTEREST</u>
Harry Leonard	1/14
S. M. Gloyd	3/8
H. P. Saunders Estate	1/8
* Standard of Kansas	1/4

*Standard of Kansas assigned all their interest to 63 different people in varying amounts from 1/42,972 to 40,117/42972

South 100 acres leased to Wadley Petroleum Co., who assigned rights to 4000' to C. E. Blound.

North 60 acres leased to: Phillips Petroleum Co. 3/4
C. B. Wrightsman, et al 1/4

N $\frac{1}{2}$ NW $\frac{1}{4}$ Section 28-25S-37E
Lea County, New Mexico

MINERAL OWNER

Peerless Oil & Gas Co.

H. P. Saunders, Jr.
Harry Leonard

INTEREST

1/2 - R. Olsen to 4050' - HBP
(deep rights open)

1/4)
1/4) Leased to Sinclair - HBP

S₂NW₄ Section 28-25S-37E
Lea County, New Mexico

MINERAL OWNER

INTEREST

H. B. Saunders, Jr.
Harry Leonard
Wallace W. Irwin
E. A. Culbertson

1/4
1/4
1/4
1/4

All sales to Sinclair - HUP

SW¹/₄ Section 28-25S-37E
Lea County, New Mexico

(U. S. MINERALS)

N $\frac{1}{2}$ NE $\frac{1}{4}$ Section 29-25S-37E
Lea County, New Mexico

MINERAL OWNER

INTEREST

W. T. Lanehart
M. W. Coll
Aaron Damron
Lillian Hinkle Coll
R. S. Anderson
Lloyd Noble Estate
John T. Lanehart

9/64
1/4
1/8
3/64
5/128
35/128
1/8

S $\frac{1}{2}$ NE $\frac{1}{4}$ Section 29-25S-37E
Lea County, New Mexico

MINERAL OWNER

INTEREST

Atlantic Oil & Refining Company		1/4
Southland Royalty Company	SE $\frac{1}{4}$ NE $\frac{1}{4}$	1/2
Culbertson & Irwin	SW $\frac{1}{4}$ NE $\frac{1}{4}$	1/2

N $\frac{1}{2}$ SE $\frac{1}{4}$ Section 29-258-37E
Lea County, New Mexico

MINERAL OWNER

INTEREST

Max Gutman Estate
Louis Gutman
Benjamin Gutman

1/3
1/3
1/3

S¹/₂SE¹/₄ Section 29-25S-37E
Lea County, New Mexico

(U. S. MINERALS)

NE $\frac{1}{4}$ Section 32-25S-37E
Lea County, New Mexico

(STATE MINERALS)

NW $\frac{1}{4}$ Section 33-25S-37E
Lea County, New Mexico

(U. S. MINERALS)

NE $\frac{1}{4}$ Section 33-25S-37E
Lea County, New Mexico

MINERAL OWNER

INTEREST

F. C. Norwood
C. H. Kyte
Peerless Oil & Gas Co.
Southland Royalty Co.
S. M. Gloyd
D. R. Snow
N. Central Texas Oil Co. Inc.

1/16
1/16
1/4
3/8
1/8
1/32
3/32

Leased to Gulf - HBP

Gulf assigned NE $\frac{1}{4}$ NE $\frac{1}{4}$ & S $\frac{1}{2}$ NE $\frac{1}{4}$ (to 3400') to John Kelly.

NW $\frac{1}{4}$ Section 34-25S-37E
Lea County, New Mexico

MINERAL OWNER

INTEREST

Sawn W. Dobbs	1/16
F. A. Rittenhouse	5/640
W. B. Hall	10/320
James A. Hall	10/320
Goldie Hall Gryden	10/320
B. T. Hall	1/32
C. H. Kyte	1/48
Skelly Oil Company	1/64
Hugh Corrigan	1/24
Southland Royalty Co.	1/32
W. A. Hyatt	7/640
Victor L. Glines	1/128
H. D. Schenck	1/160
Phillip C. Hays	1/640
Thelma Elston	1/640
L. A. Griffith	25/320
Geo. H. Coates	1/160
E. G. Godshalk	3/256
B. H. Blakney	1/64
R. V. Hyatt & P. J. Mims	1/64
J. B. Kennedy	1/16
Texas Royalty Co.	5/320
C. Schnurr	1/32
S. M. Gloyd	1/32
Harvie A. Garver	35/640
B. T. Gale	3/256
W. A. Yeager	1/64
Grace D. Gale	5/320
C. T. Seale	6/640
R. S. Magruder	1/128
Hattie Cone	1/32
Edward Galt	1/32
Junie W. Brown	15/640
Forest Levers, et al	55/640
Julia V. Dobbs Coe	

6.16492% of
 93.83508% of