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BEFORE THE OIL AND GAS CONSERVATION COMMISSION  
OF THE STATE OF COLORADO

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RE NON-UNITIZED TRACT )  
NO. 81-B, ADENA FIELD )

CAUSE NO. 26

PURSUANT TO NOTICE to all parties in interest,  
the above-entitled matter came duly on for hearing at the  
Cosmopolitan Hotel, Denver, Colorado, at the hour of  
11:00 o'clock a.m., January 15, 1957.

BEFORE:

Mr. Warwick Downing, Chairman  
Mr. H. C. Bretschneider, Commissioner  
Mr. W. A. Dillon, Commissioner

Also present: F. M. Van Tuyl, Commissioner

APPEARANCES:

George Epperson, Esq., Fort Morgan, Colorado, for  
royalty owners, Tract 81-B;  
Earl Haffke, Esq., Fort Morgan, Colorado, pro se, and  
royalty owners, Tract 81-B;  
Frederic L. Kirgis, Esq., Denver, Colorado, for  
Petroleum, Inc.;  
Messrs. W. T. Butler and Ted P. Stockmar, Jr.,  
Denver, Colorado, for Pure Oil Company, Unit  
Operators, Adena Field;  
A. J. Jersin, Esq., Denver, Colorado, Director,  
Colorado Oil & Gas Conservation Commission;  
Messrs. James McKee, William Smith,  
and Frank Piro, Engineers, Colorado Oil & Gas  
Conservation Commission.

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<u>ROYALTY OWNER'S:</u>	<u>IDENT.</u>	<u>IN EVID.</u>
1	20	21
B	29	31
C	31	31
D	31	
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P R O C E E D I N G S

CHAIRMAN DOWNING: All right; now, that leaves Adena.

COMMISSIONER VAN TUYL: I will have to be disqualified on that, Judge.

CHAIRMAN DOWNING: Our very distinguished member, Dr. Van Tuyl, has to be disqualified; that leaves us with only two commissioners present. Mr. Dillon is expected to be here.

COMMISSIONER BRETSCHNEIDER: Here he is.

CHAIRMAN DOWNING: All right; tell us what it is about. Who is present here?

MR. EPPERSON: George Epperson, Fort Morgan. I represent the Goddard family, owners of half of the minerals in this particular tract of land. This is Mr. Earl Haffke of Fort Morgan. You might tell them who you represent, Earl.

MR. HAFFKE: I represent my two minor sons, my wife, myself, and Mr. Dolan, Mr. Delaney, who are also here, all of us being mineral and royalty owners under the east half of 26, 1 North, 58, which I believe for Adena purposes has been identified as Tract 81-B.

CHAIRMAN DOWNING: Is anyone else here?

MR. KIRGIS: Frederic L. Kirgis, representing

Petroleum, Inc.

CHAIRMAN DOWNING: Anyone else?

MR. STOCKMAR: Mr. W. T. Butler, counsel for Pure Oil Company, and Ted Stockmar of Denver, representing the unit operator and speaking in behalf of the parties to the unit agreement.

CHAIRMAN DOWNING: Anyone else? (No response.)  
All right, proceed.

MR. STOCKMAR: ---with the exception of Petroleum, Inc.

CHAIRMAN DOWNING: Make an opening statement.

MR. EPPERSON: Gentlemen, I will make a brief statement and tell you why we are here. This matter has been continued a number of times. I think it might be well to put the lower portion of this map so that you can see it, see what is involved here.

This 81-B, this east half of Section 26, which was originally in the Adena unit and is now out of the unit but still in the Adena Field (indicating). I think a brief statement as to the history of that particular tract of land might not be amiss so that you would know what sort of a problem we have involved here. This land, this half section, was originally under lease to the Lion Oil Company, with some other acreage, and when the



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field was originally defined the zero isopach line came  
someplace over east of this (indicating), and down to  
the south boundary of Sections 25 and 26. And then, of  
course, as the development came along, the lines changed  
and finally the zero isopach map showed just inside of  
Section 26. When the original Adena unit contract was  
sent out this particular tract, 81-B, had a tract factor  
of .00239 for primary recovery and .0036 for secondary  
recovery.

That would have meant, according to our calculations, that over the life of the field the amount of money that would have inurred to the royalty owners would be about \$600.00 for the primary production; that would be for the entire life of the field.

Well, as a result of that the royalty owners did not sign the unit agreement, and negotiations were carried on with the Lion Oil Company looking to a release of that particular lease, and our negotiations with Lion resulted in a release of this tract and also the rest of the land in Section 26, which is not involved here today, but this 160 and 40 acres was also released.

Now, there may be some disagreement concerning the details of that release. We were under the impression, of course, that we were released for all purposes,

but apparently that has not been true.

Now, we were assured that there was no production under that, no oil under that lease, and as late as January 3rd we had a letter that came to the royalty owners from over the signature of W. M. Peak, who is the Chairman of the Operator's Committee of the Adena "J" Sand Unit, in which he gives or states this language:

"This will advise you that as of December 22nd 1955 the Colorado Oil & Gas Commission following a hearing before the Commission on December 20th 1955 entered its order approving the Adena "J" Sand Unit consisting of all tracts shown on Exhibit A of the agreement, excluding tracts numbered 7, 14, 32, 63 81 and 83, -- 81-B, and 83.

"This lesser unit area was selected and approved by a vote of the operating parties December 7th 1955. Excluded tracts 7, 14, 62 and 83 are tracts operated by Petroleum, Inc., who declined to join the properties in the unit," and then he says, "Excluded tracts 82, 81-B"--which is the tract involved this morning--"and 83, are non-productive tracts in the 'J' sand."

Now, after that release was obtained in December

of 1955 the royalty owners and the mineral owners got together with Pet Inc. and a very favorable lease was executed to the Petroleum, Inc., we think favorable to both parties, at that time. And then a well was drilled in the southeast southeast of the northeast quarter, right here (indicating on map), and this well was completed in May of 1956. I have forgotten the date of the order of 26-30; I think it was July 30th 1956.

This well was completed and tested at 124 barrels, and then after the imposition of the order of 26-30 it was under the formula announced then by the Commission, and this well was reduced to nine barrels a day, and that is the production under the well at this time.

I might add also that the lease with Petroleum, Inc. is what we call a continuous drilling program. In other words, they drill forty acres and they have a certain length of time in which to drill the second lease. The well, of course, as we understand it, is a commercial well under the terms of our lease. We have not as yet forfeited any provision of the lease because we are here today asking for an exception to this flank acreage under the present formula that has been announced by this Commission for the production of oil in the Adena

Field.

Now, since the Order 26-30, and after Mr. Peak's letter advising of Petroleum, Inc.'s non-concurrence in the unit, they have joined the unit with their other producing properties. Now, we are not here today asking that you change your order or formula for the production in that field. We say that without prejudice to our rights at some future time, if it becomes necessary to question the order, but we are here asking for an exception to that order so that we might put this well on a profitable production and that Petroleum, Inc. can drill a second well.

Now, Mr. Haffke will take it from here and give you what our suggestions are and what the effect of this order has done to this particular well that is not in the unit.

MR. HAFFKE: Well, gentlemen---

CHAIRMAN DOWNING: Is yours a statement of fact?

MR. HAFFKE: I can state it as a fact or I can be sworn, either way.

CHAIRMAN DOWNING: All right.

(Mr. Haffke was duly sworn by the Chairman.)

CHAIRMAN DOWNING: I don't think that will

make it any more true, but I think maybe it complies with our rules.

MR. HAFKKE: I must admit my ineptness in appearing with so many experts here and being engaged in practice in a small community and representing people who thought they had value in minerals, as well as myself.

I can observe several things here that we can't comprehend. We can't help but feel that there has resulted here a terrific inequity that wasn't contemplated by your Order 26-30, and we believe might have been due to a lack of sufficient information or mention of this particular tract having been presented at the time this was considered.

Now, my comprehension is that the purpose of conservation, of which we are all in whole-hearted agreement, is to encourage exploration and development and then conserve the minerals, the natural resources of our state, through an orderly production when we know the reserves.

We are utterly confused from our previous experiences with Adena going through the isopach maps that from time to time have been distributed. We were at one time of the conviction that the east half of 26

wasn't involved at all. It was by coincidence included in the field and the field definition at a very early date, the first well, I think, having been brought in in the Adena Field some miles north in the fall of 1953. We were also discouraged by the hesitancy of the then leaseholders to even attempt to further develop, and it is a situation that is unfortunate, but the main part of Adena has been in production for two years or better before our acreage could have a producing well drilled on it.

Now, we think that it is the intent of the Commission, as it would be ours, that conservation measures, when you apply them to accomplish this result, will also protect the interests of the individual property owners. It is entirely difficult and very hard to comprehend how an order can take a well that has produced 124 barrels a day, apparently making no gas, and approximately twenty-five to twenty-seven percent water, and reduce it from an economic asset to an economic liability, from 124 barrels a day to a nine-barrel allowable.

As far as we are concerned, it has effectively condemned our mineral ownership. It is, in effect--and we are sure that isn't the intention of the Commission--

it has taken our property without any compensation, and perhaps not even by regular process.

There is another thing here, though, that also bothers us from an overall standpoint, and larger than a personal interest. In this particular area you will note that south, Mr. Downing, there are two very productive wells in Section 35 in what is defined as a Adena South Field. We have a large area through here that has never been tested (indicating). It has never been explored by drilling. I think there is better than a mile in between.

Now, I am not an expert; I can't question engineering, but I believe those two wells in 35 have between twenty and twenty-five feet of beautiful "J" pay sand. To me as a layman it is entirely possible and maybe within the realm of probability that there might be a connection or other mineral deposits beyond this particular adjacent area which has never been tested.

Now, gentlemen, we are confronted with this: I think, as anybody, as any prudent person would observe, from every person I have been able to discuss the matter with, in oil operations there are very few of them that are going to walk in and try to test an

undeveloped acreage when they are confronted with a losing economic proposition.

Now, as I am informed, and I think we will have some evidence, the cost of this type of well on a nine-barrel allowable becomes an increasing liability. Needless to say, the landowners when they are cut down from a royalty to less than a twelfth of what it was producing --but there is a greater situation here.

Had this order been imposed in March of 1955 there would have been at least three wells that would never have been drilled, and if I were to rely on the isopach map attached to the order of 26-30 I would say that from what I have been informed the field limits of the Adena Field would be coextensive with the zero rating on that isopach map.

It is indicated to me, and I would make it as a recommendation, that the prudent thing to do would be to redefine the Adena Field as coextensive with the engineering showing a zero rating on the isopach map. In this particular instance I think there are less than forty acres of the east half of 26 included within that zero rating. A re-definition of the Adena Field to include only the southeast of the northeast of 26 would adequately cover the existing oil.



Now, gentlemen, here is the thing that bothers us beyond our own personal interest: I have never been able to find, and maybe there are such people, experts that say you can positively tell whether there are minerals under a piece of land without actually drilling for them. I have talked to them; they may have well-educated persons with respect to that, but most of them will concede, or at least have to me, that the actual proof is if it is developed by drilling.

Now, in this sort of a situation when you have adjacent acreage and the operation or exploration activity is so discouraged as to practically destroy any interest in developing it, you create a situation which not only hurts the royalty owners, but I think is also contrary to the best interests of true conservation to find out what we do have. It also has the possibility of making a situation which may create monopolies.

Now, in this instance, if they can define by their isopach and so discourage adjacent acreage from testing, you will never know what is there; in this instance, it might be the operator's--it might be to the operator's benefit by the ruling. In another area in the Julesburg Basin they have flank or adjacent

acreage that is untested and they may be just in the opposite position.

Now then, our thinking is that when an operator has ventured and when the mineral owners own the minerals and you do have a flank or adjacent acreage, the effective way of accomplishing what this Commission has apparently attempted to do in this particular type of order, is to make an exception which will warrant and encourage the development, at least the exploration and testing of flank acreage.

We don't know; I mean, you gentlemen are probably in a better position to tell us what is economically correct if you were in the same position that will allow and induce the exploration and allow a fair return.

Now, I heard much testimony today on fair return of investment. I think our evidence will show here that the cost of this original well was in the neighborhood of \$62,000. I think it will also show that it is nearly impossible for them to expect to recover even their original investment.

(Chairman Downing withdrew from the room.)

MR. HAFFKE: We were wondering if we should recess until there is a quorum.

COMMISSIONER BRETSCHNEIDER: There is a quorum here.

COMMISSIONER VAN TUYL: I am disqualified.

COMMISSIONER BRETSCHNEIDER: I don't think you need to, but if you want to recess---

MR. JERSIN: Mr. Haffke, you are making this as a statement; I know you are under oath. It is up to you.

MR. HAFFKE: A statement and testimony.

MR. JERSIN: Will it be up to him, Mr. Bretschneider, as to whether or not---

COMMISSIONER DILLON: Unless someone has an objection, you may proceed.

MR. EPPERSON: Counsel just asked whether we should do that.

MR. STOCKMAR: We will waive any objection to the absence of Mr. Downing temporarily.

COMMISSIONER BRETSCHNEIDER: Go ahead; he will be back in a few minutes.

MR. HAFFKE: And from the standpoint of this economic situation as royalty owners we might comprehend a reduction of fifty percent over what the production of the well is, but it is exceedingly difficult for us to know and comprehend a production allowable that reduces

an asset to a liability.

Now, also from such studies as we have been able to make it appears that in every instance that we have been able to find where there has been allowables or allocations there has also been exceptions made. I think that the experience of this Commission in different areas where it has been considered on maybe not the exactly similar situation, but exceptions have been made. I believe Rangely has a number of those, or at least some where economic feasibility and practicality has been considered for making an exception.

If we knew what our minerals were here, and the only way we think we can know is by drilling, we might be among the first to want to go into a unit; but, until we do know we are dealing from a complete lack of knowledge and ignorance, and the only way we think that we can know is by testing of our reserves; development for the better conservation of the State's minerals and natural resources can be handled by flank or adjacent acreage of known production, which has not been tested.

An exception must be made to make economically feasible for the operator to cover the expense that he has on existing wells in accordance with established good

oil field practices, and also that he should have the right to be encouraged that if he is willing to gamble his money to go further to test for these reserves, that should he find it he will be allowed to at least have an economic operation.

Now, gentlemen, our recommendations, I think, can be summed up in this: For the promotion of true conservation, for the benefit of the state, and for the individuals, in this particular instance the Adena Field should probably be re-defined to be coextensive only with the zero isopach line on the map that was last submitted to the Commission, and if you go by Government surveys that would only include the southeast quarter of the northeast quarter of 26, 1 North, 58, and exclude the rest of the acreage; two, that an economic exception should be made with respect to the existing well so that recovery can be had in conformance with good oil field operating practices, and that the operator be allowed to produce under that exception to recover his cost plus a reasonable return on the investment.

I might say advisedly, I have not had an opportunity to check every place, but as far as I know most oil and gas commissions, comparable bodies, have made exceptions in other states. The amount seems to be

varied from time to time on the basis of the development of production, and we are prepared to show what Kansas does. Maybe sixty barrels is wrong, I don't know, but it is our belief that from what we have been able to learn under an economic exception an allowable of no less than forty barrels a day is justified. Thank you.

CHAIRMAN DOWNING: Is there any testimony?

MR. EPPERSON: Yes, we have some testimony.

D  
GEORGE DOLL

called as a witness in behalf of the mineral interest holders, Tract 81-B, being first duly sworn according to law, upon his oath testified as follows:

DIRECT EXAMINATION

BY MR. EPPERSON:

Q Will you state your name, residence, and occupation, Mr. Doll?

A George A. Doll, Fort Morgan, Colorado. I am a retired lawyer and a retired Angus breeder.

CHAIRMAN DOWNING: Retired what?

THE WITNESS: Retired lawyer and a retired Angus breeder, and I am tired.

COMMISSIONER BRETSCHNEIDER: You are completely tired.

MR. STOCKMAR: Since Mr. Haffke elected to be

sworn, may I reserve the right to ask a few questions later on?

MR. EPPERSON: You may do it now, if you like.

MR. STOCKMAR: We may be able to avoid it.

Q (By Mr. Epperson) Mr. Doll, do you have an interest in this east half of Section 26, 1, 58?

A Yes, I have an interest.

Q And how did that interest derive, would you tell the Commission?

A I purchased that half section and considerable other land adjacent to it from a Mr. Matt Goddard, I think, about nine years ago, something like that. When Mr. Goddard sold it to me he reserved one-half of the minerals on the entire tract which he owned, and a few years ago I sold this particular half section--in fact, a total of 1,300 acres--to Mr. and Mrs. Harold F. Delaney, and again I reserved one-half of the minerals which I owned. Then later I disposed of a part of my interest in the minerals in this half section to my daughter and her two sons, our two grandsons. Now, I don't know, did I include you in that?

MR. HAFFKE: No.

A I just gave it to my daughter.

Q Mr. Doll, were you present at any of the

negotiations at the time you were being solicited to sign the Adena unit agreement?

A Oh, yes.

Q And with the Lion Oil Company people who at that time had a lease on this land?

A That's correct.

Q Now, what was your understanding after we were able to secure a release of this particular tract about the effect of such a release?

A Well, I was naive' enough to believe that when this land was excluded from the Adena unit and when Lion agreed to release it from their lease, which I had foolishly signed some years before in putting too much land in the lease, that that eliminated the thing from the so-called Adena Field, and left us entirely free to proceed to obtain a new lease and to develop any oil that might be under this half section, which the Lion people had claimed was practically non-existent.

Q Subsequent events proved you wrong in your assumption?

A That's right.

Q Now, I hand you Royalty Owner's Exhibit 1 and ask you if that is a photostatic copy of the lease which you and the other royalty owners signed granting leasehold



rights to Petroleum, Inc.?

A Yes, it is.

MR. EPPERSON: Do you gentlemen care to examine this lease?

MR. STOCKMAR: Is that your only copy?

MR. EPPERSON: It's the only copy that we have. Do you care to examine Mr. Doll?

MR. STOCKMAR: No, I believe not.

MR. EPPERSON: I ask that Exhibit 1 be admitted in evidence.

CHAIRMAN DOWNING: If there is no objection, it will be admitted.

(Royalty Owner's Exhibit 1 was received in evidence.)

MR. EPPERSON: That's all, Mr. Doll.

(Witness excused.)

H. F. DELANEY

called as a witness in behalf of the mineral interest holders, Tract 81-B, being first duly sworn according to law, upon his oath testified as follows:

DIRECT EXAMINATION

BY MR. EPPERSON:

Q State your name and your residence and occupation.

A My name is H. F. Delaney, or Harold F. Delaney, and my address is South Star Route, Fort Morgan, Colorado, and at the present time I don't really have an occupation; I am not very well, and I don't work very much anymore.

Q Harold, would you speak a little louder? These gentlemen in the back can't hear you.

A Yes, I will.

Q And will you tell the Commission what your interest is in this Tract 81-B?

A I bought this 320 acres including some other land from Mr. Doll and at that time he owned a one-half interest in the royalty or mineral rights under that half section, and he assigned to me one-half of his interests, so I own one-fourth of the mineral interests under the 120 acres.

Q And you are still the owner of the surface in addition thereto?

A Yes, I am.

Q Now, Mr. Delaney, did you participate in any of the discussions with the Lion Oil Company looking to the release of this particular tract of land?

A Yes, I did.

Q Were you given any assurance as to whether or

not this land overlaid any oil and gas?

A Well, I was assured that it did not.

Q Did not; and what was your understanding when the release of the oil and gas was obtained?

A My understanding was that when the release on the land was given to us that the particular tract was no longer included in the Adena Field and was no longer included in any possible extension of the unit, that we were free to do with it as we chose; if we could get someone to drill it and develop it, and if we were fortunate enough to get some production on it that it was ours; that we would not be interfered with.

Of course, that was just an assumption on my part, which I found out later was wrong.

Q Mr. Delaney, did you receive any run checks from this well prior to July 31st 1956?

A Yes, I did.

Q And can you tell the Commission the difference between the amount of the checks that you received before and after the imposition of 26-30?

A The checks that were received after the order was put into effect reducing the well to nine barrels a day were approximately one-tenth of what they were previous to that time.

Q I also hand you Exhibit 1 and ask you if that is a photostatic copy of the oil and gas lease which you and the other royalty owners executed to Petroleum, Inc.?

A Yes, this is a copy of the lease.

Q Have you been advised whether anybody else will develop this property under the existing order, field rule?

A Petroleum, Inc. still has that lease.

Q Well, will they develop it?

A They will develop it if we can get some kind of an adjustment or an exception to this nine-barrel a day order so that it will be economically feasible.

Q Will they develop it under the nine-barrel production?

A Well, I presume not.

MR. EPPERSON: Do you have any questions of Mr. Delaney?

#### CROSS EXAMINATION

BY MR. STOCKMAR:

XX Q I noticed in the lease which you and Mr. Doll and the other royalty owners signed that there is a continuous drilling requirement upon the lessee?

A That is correct.

Q Now, the fact that only one well has apparently

been drilled and much more than ninety days has passed since the completion of that well, it is obvious that either they have not complied with the terms of the lease or that the landowners have excused performance.. May we inquire as to what your position is with respect to the failure to move along with the continuous drilling program?

A The only thing I can say to that, Mr. Stockmar, is that under the terms of the lease we presumed that any well that was a commercial well that was strong enough to produce enough oil to pay out, if the well was completed of that sort, then the Petroleum, Inc. would go ahead and drill another well; but, under this existing order of nine barrels a day we felt that we should go along with Petroleum, Inc. and endeavor to get an exception from the Oil & Gas Commission because they were fair enough to take this lease after it had somewhat been condemned and drill a well on it with the hope and expectation of getting a well on it.

Q You have not demanded of Petroleum, Inc. that they drill a second well then?

A As of now, no.

Q Do you recognize, Mr. Delaney, that should an additional well be drilled which demonstrates an engineering

basis for changing the isopach lines or altering the thickness or the oil in place determinations, that the nine barrels could quite appropriately be raised?

A I understand that, Mr. Stockmar, but I would also like to ask you a question---

Q Well, I think I will decline to answer it before I hear it.

MR. EPPERSON: You may make a statement, Mr. Delaney.

THE WITNESS: Well, the statement wouldn't quite cover the question I wanted to ask Mr. Stockmar, but I will make this statement: that Pure Oil Company or any other oil company or any independent, no matter how optimistic they might be or how willing to spend their money they might be, would not under this existing order go ahead and drill another well on that particular acreage, and that even if Petroleum, Inc. released back to us that acreage we could not as of now under this existing order with the situation that we have to face here, we could not get any other company to come in there and take that acreage and drill a well.

In other words, we are condemned as of the present time on any further development on that acreage.

BY MR. JERSIN:

Q Have you approached other operators or other people that might be interested in drilling, Mr. Delaney?

A No, I haven't. I am basing my statement on my own particular experiences with those kind of things. I have had more than just this one experience.

CHAIRMAN DOWNING: Any further questions?

BY MR. STOCKMAR:

Q To clear that point, I gather you have not approached anyone specifically to determine whether or not they would be willing to drill a well?

A No, I haven't. I will say this, that I have talked to some people that were with other oil companies about the situation, not with a view to try to negotiate another lease; but to find out their reaction on it; and they all throw up their hands and say, "Oh, my goodness, no, we wouldn't touch it." I think that answers that question.

COMMISSIONER BRETSCHNEIDER: Is it a fact that you are not in a position to make a deal with someone else? You already are bound by your lease with Petroleum, Inc., aren't you?

THE WITNESS: No, I suppose not. I presume-- I would rather have Mr. Epperson answer that question

as an attorney. I feel that we are not bound if we wish to go ahead and force them out, but I would rather you would ask---

MR. EPPERSON: There might be some question whether the lease is forfeited or not, because of some of the terms that are contained in it. I wouldn't say that we are completely free to lease to anybody else.

COMMISSIONER BRETSCHNEIDER: That's what I would suspect.

CHAIRMAN DOWNING: Any other questions?  
(No response.)

(Witness excused.)

CHAIRMAN DOWNING: Any further testimony, Mr. Epperson?

MR. EPPERSON: Yes, Mr. Shivel.

CHAIRMAN DOWNING: Is this testimony purely cumulative?

MR. EPPERSON: No, sir, this is financial testimony that we are going to get into now.

PAUL B. SHIVEL

called as a witness in behalf of the mineral interest holders, Tract 81-B, being first duly sworn according to law, upon his oath testified as follows:



## DIRECT EXAMINATION

BY MR. EPPERSON:

THE WITNESS: Paul B. Shivel, vice-president of production, Petroleum, Inc.

Q You gave your title with Petroleum, Inc., didn't you?

A Vice-president of production.

Q Now, Mr. Shivel, you are familiar with this Delaney No. 1 which is the oil well in question in the southeast of the southeast of the northeast of 16, 1, 58?

A I am, yes, sir.

Q Have you accumulated any cost analysis of this particular well?

A We have a record of the development costs up to the present time.

X (Royalty Owner's Exhibit B was marked for identification.)

MR. EPPERSON: Would you gentlemen all like copies of this oil and gas lease? If you do we would be glad to furnish them.

CHAIRMAN DOWNING: I don't think we do, Mr. Epperson.

Q I hand you Royalty Owner's Exhibit B, Mr. Shivel, and will you tell the Commission what that is?

A That contains the total cost spent in the drilling and development and equipping of the Delaney No. 1, which expenses are complete, and this is as of July 31st 1956, which represents a complete cost.

Q And what is the completed cost?

A The completed cost was \$61,969.43, representing an average per foot drilled cost of \$10.54.

Q Now, Mr. Shivel, have you made any computation as to the cost of the operation of your wells in Colorado?

A Yes, we have defined cost on operations in Colorado.

Q And can you give that cost per well, the average cost per well?

A We would limit that only in the manner of wells excluded from the unit, and taking the most recent six months, the last six months of operation, up to December 31st for the ten wells that we have operated of the unit operation we have an experience of \$354.25 per well per month, which covers no unusual expenditures.

Now, this figure may not be precisely right; it may be somewhat low due to the proximity to the unit of three wells included in this list of ten, so our average cost per well per month is excluding taxes, and

that is \$354.25.

Q Do you have a statement made up showing that average?

A This is the statement, yes (indicating).

(Royalty Owner's Exhibit C was marked for identification.)

Q This statement is Exhibit C?

A Yes.

MR. EPPERSON: I now offer in evidence Exhibits B and C.

CHAIRMAN DOWNING: If there is no objection, they will be received.

(Royalty Owner's Exhibits B and C were received in evidence.)

Q Now, Mr. Shivel, have you made any calculation as to what the pay-out would be on this particular well, assuming that you continued to produce it at nine barrels of oil per day?

A Yes, sir, we have made a calculation on that.

(Royalty Owner's Exhibit D was marked for identification.)

Q Will you explain that computation to the Commission now?

A Petroleum, Inc.'s net interest in this Delaney

lease is 79.5 percent. We took the new posted price for crude oil, applicable to this gravity, which presently is \$3.08 per barrel; we considered \$354.25 per month, which is our average cost of operation over ten wells in the area. Taxes we estimated on a nine-barrel well would average \$16.34 per month. We have an invested cost in the property, drilling, completion and equipping and so forth, an expense of \$61,969.43, which gives us something in the order of 17.5-year pay-out on a nine-barrel well, without considering federal income taxes.

Q Now, you did not capitalize your investment in this? You didn't capitalize your investment at six percent?

A We have considered six percent as an interest figure.

Q Did you take that into consideration in this computation?

A Yes.

Q And how many years would it take you to pay tout on that basis?

A Approximately 17.5 years.

Q Do you know, Mr. Shivel, whether this well will last 17.5 years at nine barrels?

A It would be an assumption I could not make; 17.5 years is too far down the road.

Q Is it possible that you would never get your money back on that basis?

A On that basis I seriously doubt we ever would.

Q Now, have you made any other computations on allowables on this particular well, say at twenty-five and forty barrels per day?

A We have made other calculations to determine it.

(Royalty Owner's Exhibits E and F were marked for identification.)

Q All right; now, I hand you Exhibit F and ask you what that is, Mr. Shivel?

A That reveals a calculation concerning a pay-out on twenty-five barrels of oil per well per day, and using the same figures as previously used, with the exception of the return on twenty-five barrels per day we find a net pay-out in 276 days of the fourth year, nearly a four-year pay-out, on twenty-five barrels per day.

Q Now, that is before federal income taxes?

A Yes.

Q Now, will you take your next exhibit, which is

Exhibit E, and I will ask you what that is?

A That is a return calculated on the basis of forty barrels of oil per day and based on the same determinations of costs it results in a pay-out of twenty-four days in the third year.

Q On forty barrels?

A On forty barrels per day.

(Royalty Owner's Exhibit G was marked for identification.)

Q Now, will you explain Exhibit G to the Commission?

A Exhibit G reveals the pay-out calculated for sixty barrels of oil per day and uses the same comparative figures as the other rates of production, and we find it nets a pay-out in 105 days of the second year, one year plus 105 days.

Q Mr. Shivel, what do you feel in this type of drilling your company, for instance, feels this type of drilling should have a pay-out in how long a period?

A I believe the accepted pay-out in the midcontinent area, I think any oil people will consider three years as an average pay-out. You are reluctant to accept less; we are in a hazardous business.

Q As short a time as you can get it?

A As short a time as you can get it.

Q And have you made any computations as to exceptions that are made in Kansas?

A Yes, we are more familiar with Kansas than any other area.

(Royalty Owner's Exhibit H was marked for identification.)

Q I hand you Exhibit H and I wish you would explain to the Commission what that exhibit contains?

A This contains the use in Kansas of the minimum well allowable for oil wells based on depth, and carried to 6,000 feet. In the zero to 4,500 foot depth in Kansas the statutory allowable is twenty-five barrels per day. From 4,500 to 5,000 feet, by Commission order, a minimum allowable is established of thirty-seven barrels per day. On the 5,000 to 5,500 foot depth the Commission order establishes 4,400 barrels per day as a minimum.

MR. HAFFKE: Forty-four.

THE WITNESS: Forty-four. On the 5,500 to 6,000 foot depth a forty-seven barrel allowable is established, minimum.

We compared drilling costs on these depths. We took twelve wells drilled in the last six months,

which is a comparable period for the drilling of the Delaney, and we found a completed cost of drilling, completion and equipping one well with a battery was \$10.42 per foot, which is about an average for the zero to 4,500 foot level. We have fourteen wells drilled and completed in the same period representing the 4,500 to 5,000 foot level, which averaged \$11.89 per foot, costing \$53,050 per well. We assume that the cost of the 5,000 to 5,500 foot depth of \$11.89 would apply, equalling that or exceeding it, as in Kansas experience I am sure it would.

We had no experience on the 5,500 to 6,000 foot level. The Delaney well, which is at 5,880 feet depth, cost us \$10.54 per foot, which is \$61,000.

Q On this tabulation I would take it that using the Kansas formula as a basis of comparison it would be something around forty-seven barrels per day that would be the minimum allowable in Kansas, is that correct?

A Based on depth that is true, but realistically I would say that it should probably apply on invested cost, which is comparable to the 5,000 and 5,500 foot well in Kansas, and I would assume that Kansas allowables, the depth figure was used in lieu of costs; but, I would say here that realistically probably the



forty-four barrel per day allowable would apply to a well of this depth and cost in Colorado.

Q Do you have anything else to tell the Commission, Mr. Shivel, concerning this matter? Let me go back to those exhibits (looking through documents). Mr. Shivel, there may be some confusion on this. You did not consider the six percent on your investment in this particular calculation?

A We did in all calculations.

Q No, you didn't in this one, I think, Mr. Shivel, but you did in the subsequent ones, isn't that right?

A I am sorry; to put the six percent figure in there eliminated any possible pay-out in this seventeen year pay-out. I was in error. It would run on forever.

Q I just wanted the Commission to understand. Do you have anything else that you might help the Commission on this matter today, Mr. Shivel?

A Nothing other than what constitutes the definition of a minimum well, and as compared to what other oil companies of considerable experience have adopted and, of course, Kansas' experiences, oh, roughly, we will say, from 1925 on--about thirty-odd years, slightly

over thirty years in Western Kansas--and, of course, the adoption of a minimum well figure is based then on considerable experience over a given area, which is roughly thirty years in Western Kansas, and they have evidently reached the conclusion that costs increase in depth and greater allowables are required in order to give some adequate return of pay-out.

These pay-outs, of course, include nothing for our effort other than--no profit at all. These are simply pay-out figures.

COMMISSIONER BRETSCHNEIDER: How long is this pay-out in Kansas allowed to run?

THE WITNESS: Those are permanent by order.

COMMISSIONER BRETSCHNEIDER: Permanent?

THE WITNESS: Yes, for the life of the property.

COMMISSIONER BRETSCHNEIDER: After the pay-out you don't have to conform to the regular allowable of twenty-five barrels per well?

THE WITNESS: No, because we have added cost for depth in producing.

BY MR. EPPERSON:

Q Mr. Shivel, what is this Delaney No. 1 well producing? I don't think that is in evidence yet.

A Well, originally it was 124 barrels a day and it rapidly climbed to twenty-seven percent water and stabilized.

Q Stabilized at twenty-seven percent water?

A Yes; the well is approximately good for 125 barrels a day.

CHAIRMAN DOWNING: What is its present production or last production?

THE WITNESS: Nine barrels per day.

CHAIRMAN DOWNING: I mean before?

COMMISSIONER BRETSCHNEIDER: 125 barrels.

CHAIRMAN DOWNING: Originally 125?

THE WITNESS: 125, and then reduced to 85 until the order was applicable.

CHAIRMAN DOWNING: At the time of the order it was producing 85?

THE WITNESS: That's right, yes, sir; that would be restricted production, for it was capable of producing somewhat more.

CHAIRMAN DOWNING: Any further question?  
(No response.) If not, you are excused.

MR. STOCKMAR: Pardon me.

COMMISSIONER BRETSCHNEIDER: Mr. Stockmar wants to ask a question.

MR. STOCKMAR: Gentlemen, this matter is extremely important from two distinct viewpoints; one, whatever is done here could have a very substantial impact on the operation of the Adena unit; secondly, what is being sought here is the establishment of what may be a very far-reaching precedent in this state. I, therefore, intend to devote a substantial amount of time to the cross examination of this witness.

It being 12:00 o'clock, I wanted to call that to your attention and suggest an adjournment until after lunch; however, we are ready to proceed.

CHAIRMAN DOWNING: How much longer will this take? You want to examine him at length?

MR. STOCKMAR: I want to examine him at length, yes, sir.

CHAIRMAN DOWNING: And what about your case, the defense?

MR. STOCKMAR: We are prepared.

CHAIRMAN DOWNING: How long will it take?

MR. STOCKMAR: We did not expect to have to come here and put on evidence with respect to other states in the union and so forth. We are prepared to put on a case, if it is needed. Most of the testimony to date, however, has not related to engineering as

such. It has been argumentative testimony, and we may be able to develop an argument on cross examination plus a closing statement which will do.

We do have evidence that we will submit, if it seems necessary.

CHAIRMAN DOWNING: Well, I imagine this will take an hour or two longer, won't it?

COMMISSIONER BRETSCHNEIDER: Do you think it will take that much time?

MR. STOCKMAR: I intend to make a thorough cross examination, yes, sir.

CHAIRMAN DOWNING: Well, let's adjourn then until what time, 1:30?

COMMISSIONER BRETSCHNEIDER: I would rather go ahead, but I will have to conform with the majority.

MR. STOCKMAR: I will say that if I can shape my questioning over the lunch hour I can save some time. If I am compelled to feel my way it may go more slowly than otherwise.

COMMISSIONER DILLON: We could get back by 1:00.

CHAIRMAN DOWNING: Can you get back by 1:00 o'clock?

MR. STOCKMAR: Yes, sir.

CHAIRMAN DOWNING: All right; then we will adjourn until 1:00 o'clock.

(Whereupon, the hearing was adjourned until 1:05 o'clock p.m., the same day, at which time the following proceedings were had:)

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AFTERNOON SESSION, JANUARY 15, 1957, 1:05 P.M.

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MR. STOCKMAR: I should say, gentlemen, that some of the laborious sliderule work we were able to do over lunch may be able to enable us to abbreviate this hearing.

CHAIRMAN DOWNING: All right.

CROSS EXAMINATION

BY MR. STOCKMAR:

Q Mr. Shivel, to commence your cross examination here we would like to hear your views as the lessee with respect to your plans for additional drilling under the present order as it exists, and also under some other unrestricted situation under which there was no limitation on the amount you would produce?

A Under the present order we wouldn't be disposed to drill another well; it isn't economical; we couldn't afford it.

Q If there were no restriction on production at all would you drill another well?

A We would drill one more well; that is, one at a time. We would drill another well; let's put it that way.

Q In your testimony you did not actually get into

any engineering features, but made this presentation as seeking an economic exception only. May we infer from that that you are not rebutting the vast volume of prior engineering testimony that is in the record on this field?

A Not at all, sir.

Q Not at all; and, in effect, are accepting the engineering determinations that have previously been made with respect to Tract 81-B?

A That's right.

Q You recognize that a suitable time for disagreeing with the factors which we have with respect to oil in place under Tract 81-B is now---

MR. EPPERSON: Now, just a minute. Would you read that question again, please?

(The last question was read by the Reporter.)

MR. EPPERSON: I think that's a conclusion. The question calls for a conclusion of this witness and he may not be competent to answer it.

MR. STOCKMAR: I am really asking if he recognizes that this is an appropriate unit.

CHAIRMAN DOWNING: I think this is just preliminary; answer it.

MR. STOCKMAR: I am merely seeking to find out



if we need expect rebuttal of the engineering testimony that has gone heretofor in this field at this moment.

MR. EPPERSON: Don't answer the question if you can't, Mr. Shivel.

THE WITNESS: I did not qualify myself as an engineer.

Q (By Mr. Stockmar) Do you recall, Mr. Shivel, that the work which has gone heretofor resulted in a determination that Tract 81-B had reservoir barrels in place of 116,700?

A I don't recall the precise figure, but I would accept that, if that was the figure.

MR. STOCKMAR: I direct the Commission's attention to its own order presently in existence which does set that figure for it.

Q Mr. Shivel, if your lease was permitted to produce for a period of fifteen years as a hypothetical time, at the rate of fifteen barrels per day, how much actual stock-tank oil would be produced?

A I don't believe--like I say, I did not qualify myself for reservoir engineering. I doubt that that is a calculation that could be given at this time. I don't believe that a precise determination as that could be answered by people that are competent.

Q Well, this is a simple mathematical matter of fifteen barrels times 365.

A That's right; how far down the line that well would produce at fifteen barrels a day would be unknown. I would say it would be indefinite.

Q Mr. Shivel, how much oil was produced from Tract 81-B prior to the effective date of the existing order?

A That would be to July 31st now?

Q 1956, yes.

A That would be approximately, in round figures, 8,000 barrels; somewhat less, about 7,600 probably.

Q At a value of \$2.83 a barrel?

A \$2.83.

Q Then giving in round figures approximately \$22,000 that has already been recovered prior to the effective date of this order?

A I can't give you that exact figure; however, presently the well has produced about 8,900 barrels, and we are about twenty-six percent paid out.

Q But prior to the effective date of this order you actually did recover in the neighborhood of \$22,000?

A No; no, it has never produced to us over \$19,000 total net dollars.

Q You are speaking of yourself as the lessee?

A That's right.

Q Then downgrading it, approximately \$19,000?

A That's right.

Q Recovered to this time?

A That is in stock-tank barrels, yes; not depleting from that the operating costs now. For operating costs it is reduced to about \$17,000.

Q At \$350 a month it is roughly a thousand dollars?

A It is reduced to about \$17,000.

Q Then looking at your own exhibits here with respect to the Exhibit D, which is the calculation for nine barrels per day you have not taken into account in this preparation that you have returned on your investment \$17,000?

A That's right, for the reason that those were not essentially prepared for ourselves. They were prepared at the behest of the Delaney interests, so we were asked to prepare for them a pay-out based on 9, 25, 40, 60 barrels per day. We presented exactly what we were requested to prepare.

Q You have testified that we are speaking of an exception that you are seeking for this particular well, that you are seeking economic relief with respect to

this particular well?

A In so far as regards the drilling of another well.

Q And your exhibits D through G do not take into account the fact that you have already recovered \$17,000?

A No, they were not designed for that. I explained what that was for; they were simply to give a pay-out on wells in Colorado at this time at a given rate of production per day.

Q Mr. Shivel, you testified with respect to the situation in Kansas. There are two or three questions I would like to ask about that. The paper which you presented showing the minimum well allowables for oil in Kansas disturbed me a little. Is that a minimum allowable or is that the allowable established for wells whether they be marginal wells or field wells?

A No, that's the minimum well allowable established by statute in the State of Kansas. The twenty-five barrels, that's a minimum allowable established by statute.

Q Can you refer me to the section of the statute which does that?

A I am sorry, I can't do that, no.

Q Are other wells permitted---

MR. KIRGIS: Ted, would you like to have us give the answer to that? 55-604.

MR. STOCKMAR: May I have it again?

MR. KIRGIS: 55-604 of the 1935 General Statutes.

Q Does the Kansas statute permit the Corporation Commission of Kansas to consider economics?

A I presume it would for the order has been issued which concerns economics which relates added allowable consideration to be given wells of depth greater than 4,500 feet.

Q I will withdraw the question if you wish, sir. We have had a lot of testimony on what is permitted in Kansas here.

COMMISSIONER DILLON: That is just a question of law and it is in the statute.

Q Mr. Shivel, if there is no disagreement on the engineering work which has gone heretofor, will an increase in the amount of oil which is permitted to be taken from this tract result in drainage from the unit area?

A That probably should be referred to competent engineering counsel. That is a flank well, an outside

well, and it would be doubtful that that would result in drainage from the unit area. It would be doubtful it would be.

MR. STOCKMAR: I think we will excuse the witness.

MR. EPPERSON: Just a minute, Mr. Shivel.

REDIRECT EXAMINATION

BY MR. EPPERSON:

Q Those exhibits of the 9, 25, 40 and 60 barrels were based upon a new well drilled at the same cost as this past well, isn't that correct?

A They were based on new wells drilled during the same period of time. We just took--in order to use competent figures--we took wells that were drilled in the last half of 1956.

Q And the exception we are asking for here is not only for this well, the Delaney No. 1, but it is so we can go ahead and drill another well, too, isn't that correct?

A We would be unable to drill a second well unless it was accorded the allowable to be granted this well.

Q For the Delaney No. 1?

A There would have to be a comparable allowable.



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CHAIRMAN DOWNING: Any other questions? Any questions from the Commission?

BY MR. JERSIN:

Q Paul, I wonder if you can just elaborate a little bit more on this statement that you cannot afford to drill a well on properties which apparently from the present information are not within the Adena Field. There is quite an area involved in this lease that is being held. Have you contemplated releasing that portion not within the Adena Field as indicated by the Exhibit A of Order 26-30?

A Well, I think we would have to take it a step at a time, and the furthest projection we could make would be one well ahead, for it would serve to define what we might do at a later date; but, we would only contemplate one additional well.

Q And if this well that you are contemplating to drill--could you give us the location of that? I could give you this map (handing document to witness)?

A No, for the reason I think I should refer that to our geological department. Obviously it will be drilled in the proximity of the present location, but the precise location I don't think should be a matter of record from me. I think it should come from our

geological department. But, as I say, it would be in the proximity of the present producer.

Q I didn't know whether you had definitely determined a location.

A We have not; we would drill an additional well, for that is a lease obligation we have.

Q The formula that the unit has used for allocation distribution throughout the different interests in the field, apparently your company agrees with the principle of the formula, is that correct?

A Why, I believe that has been answered before, Art, that we did have a--we worked in some area of disagreement; we accepted unitization, however.

Q Well, Paul, I was just wondering, you realize that there would be an adjustment according to the formula adopted with more development in this area, and depending upon the increased development or extended development it would change the entire picture as far as the engineering and geological information we have now, possibly?

A Well, possibly.

Q Either change it or confirm it?

A Change it or confirm it, possibly, or deny an extended area of drainage to the reservoir.



Q Now, I have no idea of what is going on through the Commissioners' minds, but just as an assumption---

CHAIRMAN DOWNING: A little louder.

Q ---if the Commission would consider a temporary relief to allow further development in this area would you consider this development in the near future?

A I think you would have to define "temporary." We have dollars involved, venture dollars, which all oil people have, and in Colorado under very hazardous conditions, especially in the Basin.

Q If relief were granted until a development well were drilled would that--how soon after this relief were granted do you think you could drill, commence drilling the well?

A Well, Art, I should again ask you for what you mean by "relief"?

Q By increasing the allowable for this well to compensate for the apparent distress in monies received from this lease?

A By that you mean then I would presume that relief allowable would presume a permanent allowable assigned to this well and a subsequent well.

Q Relief to the point where development could be

continued to determine the formational information in this area?

A Well, obviously as oil people we wouldn't risk our dollars without having some definition as to whether we had a chance of recovering; there is no assurance of getting an additional well here. This is a hazardous venture, as all exploratory wells are. And this is exploratory. This is extending the pool.

MR. JERSIN: I believe that's all I have, Mr. Downing.

BY CHAIRMAN DOWNING:

Q As I understand it, this eighty acres is not in the unit, but it is within the lines of the pool?

A Yes.

Q The pool boundaries?

A As defined, the pool as defined.

Q Well, do you think the boundaries go beyond this pool, the boundaries of the field?

A I wouldn't know that.

Q Beyond this eighty acres?

A I wouldn't know that; it obviously takes an exploratory hole to determine that.

Q What effect would it be on it, in regard to drainage? Suppose we granted the relief, forty barrel

allowable. What effect would that have in draining your neighborhood?

A Our neighbors are the unit, and this is a flank well, and down-dip, and I think it would be questionable. There is a reasonable doubt that it would affect the unit in any degree.

Q Do you happen to recall what is the allowable on the up-dip next to you?

A That is distributed by the unit to their most advantageous position.

CHAIRMAN DOWNING: That's all.

BY MR. JERSIN:

Q Paul, if the minimum request of forty barrels per day were granted by the Commission what would be your action on development?

A We would drill another well.

Q How soon would that be after this?

A As soon as we had equipment available to do so, which would be within reasonable limits of travel of equipment, present commitments covering our tools, et cetera, which would be--I am sure it would be within a very reasonable length of time.

MR. JERSIN: That's all, Mr. Downing.

CHAIRMAN DOWNING: Any other questions?

MR. STOCKMAR: Not of this witness. We seem to be in need of engineering testimony, however. At the earliest opportunity I would like to call a witness for the unit.

CHAIRMAN DOWNING: You would like to call a witness of your own?

MR. STOCKMAR: If the applicants have finished their case.

MR. EPPERSON: Are you through with our witnesses?

CHAIRMAN DOWNING: Have you presented your case?

MR. STOCKMAR: Yes, sir.

MR. EPPERSON: I just asked Mr. Stockmar if he was through with our witnesses.

MR. STOCKMAR: Yes.

COMMISSIONER BRETSCHNEIDER: He is through with your witness; all of his witnesses?

MR. STOCKMAR: Yes, sir.

COMMISSIONER BRETSCHNEIDER: He is through with your witnesses.

CHAIRMAN DOWNING: All right; then you proceed.

(Witness excused.)

MR. STOCKMAR: I would like to call Mr. Weyler.

J. R. WEYLER

called as a witness in behalf of the unit operator, being first duly sworn according to law, upon his oath testified as follows:

DIRECT EXAMINATION

BY MR. STOCKMAR:

Q Will you state your name and occupation for the record, please, Mr. Weyler?

A J. R. Weyler, petroleum engineer, Pure Oil Company, Tulsa, Oklahoma.

MR. STOCKMAR: Gentlemen, Mr. Weyler has testified endless times before the Commission.

CHAIRMAN DOWNING: If there are no objections, you will be qualified.

MR. STOCKMAR: I would like to ask that he be so qualified.

Q Mr. Weyler, the existing order sets forth the reservoir barrels in place allocated to Tract 81-B. Will you tell us what that is?

A Well, the original oil in place under Tract 810B, which is a part of the Exhibit C to the field rules, is 116,700 reservoir barrels. Now, that is not stock-tank barrels, but reservoir barrels.

Q That is oil in place, reservoir barrels of oil in place?

A That was the original oil in place as determined by the Adena unit engineering-geological committee.

Q Prior to any production?

A Correct.

Q Will you convert that figure to stock-tank barrels of oil in place?

A The stock-tank barrels of oil in place would be 86,000 barrels under Tract 81-3.

Q Would a recovery factor of fifty percent be optimistic with respect to this tract?

A Yes, that's approximately the recovery factor with respect to the whole unit under secondary recovery operations.

Q Then what would be the recoverable stock-tank barrels of oil that you might expect to achieve from this tract?

A Tract 81-B recovered--if Tract 81-B recovered fifty percent of the original oil in place under this particular tract it would recover 43,000 barrels of stock-tank oil.

Q Now, at a permitted allowable-- First, may

I ask: what is your expectation in terms of years of the remaining producing life of the Adena Field?

A We expect the Adena oil production to last approximately fifteen more years.

Q Would it be your expectation that this tract as it is situated would also produce for that period of time?

A Yes, sir, we believe so.

Q At a figure of fifteen barrels per day for each year for fifteen years, how much oil would be recovered by this particular well?

A Well, if this particular well, the Delaney No. 1, recovered fifteen barrels of oil per day for fifteen years, cumulative oil production at the end of that time--that would be from today on--would be 82,500 barrels of stock-tank oil.

Q Adding to that the 9,000 already produced we have a figure which is approximately twice the recoverable oil which might be expected under the present order?

A Yes, and not only that, but more than originally was in place under the particular tract.

Q Could you give us the figures for similar determinations? That was for a permitted allowable of fifteen barrels a day. Would you give us the same

figures for 20, 25, 30, and a few other representative numbers?

A At 20 barrels a day for fifteen years the tract would produce an additional 109,000 barrels of oil; for 25 barrels a day it would produce an additional 137,000 barrels; and it is just a matter of multiplication; 30 barrels a day would be 184,000 barrels. That's about twice the original oil that was in place under the lease.

Q And the figure at forty barrels, please?

A At 40 barrels per day for fifteen years the well would produce an additional 219,000 barrels of oil.

Q Which is approximately how many times the expected recoverable oil from this tract?

A Well, it's about five times what you would think would be good recovery, or two and a half times the original oil in place.

Q Mr. Weyler, if this oil is not recoverable from under this tract it would have to come from some other source. What is your opinion as to where that oil would come from?

A Well, if the well is to recover any of these quantities of oil and it doesn't come from under the Delaney tract, why, it necessarily must come from under



the unit area, unless our geological information--which we trust is very accurate since the Delaney well has been drilled and we do have the data--the field does not extend to any great degree beyond the Delaney No. 1 well to the best of our knowledge.

Q Well, if there is oil, more oil under the Delaney tract than we have accounted for here, will additional drilling develop that oil?

A Additional drilling---

Q On the Delaney tract?

A ---on the Delaney tract could encounter---

Q I am assuming it is there.

A Yes.

Q Can that be known in any other way than the drilling of additional wells?

A No, no, it can't.

Q Should additional reserves be recovered will your company as the unit operator stand in the way of an enlargement of the reserve figures for this tract?

A No; in fact, we would certainly approach it the same way we did when the Delaney was drilled. We used the data that we had at hand before the Delaney was drilled, and we did have recoverable oil under the Delaney lease. When the Delaney well was drilled it

encountered a few more feet of pay than we had estimated, and we did some enlarging of the Delaney oil in place prior to the presentation of these rules to the Commission.

Q And under your understanding of the formula which is used to establish allocation, would not the discovery of additional oil in place result in an increase in the allowable permitted for the Delaney tract?

A Well, yes, it would. Any increase in the oil in place under the Delaney tract would increase the allowable for the Delaney lease.

Q Now, Mr. Weyler, looking at Exhibit D, I believe, which is a tabulation of a hypothetical payout of a nine barrel well, let us view that in the light of the existing well and briefly recast those figures to take into account production to date.

A Well, the production to August 1st, I think, has been---

Q Simplify it by taking the production to the effective date of the present order.

A Well, the production to the effective date of that order has netted Petroleum, Inc.'s interest, working interest, approximately \$16,000. I think, Paul,

that is roughly correct.

Q That is after deduction of royalty payments?

A After deduction of royalty, state income tax.

Q And operating costs?

A And operating costs, which leaves a net of approximately \$46,000 yet to be paid out as of August 1st 1956.

Q Then assuming the figures as the net expected return at nine barrels per day, I believe the figure was 9.69?

A Yes.

Q What is a fair approximation of the time from August 1st 1956 that the--that it will take to pay out this well?

A Thirteen years.

Q Which is within the contemplated lifetime of the field?

A Yes, sir.

Q Would you make the same analysis for the Exhibit E, which contemplates twenty-five barrels per day?

A On the basis of twenty-five barrels per day it would take approximately somewhere between two and three-quarters to three years from August 1st 1956.

CHAIRMAN DOWNING: How many years?

A Two and three-quarter years, two and three-quarter years to three years, sir.

Q Would you make the same calculation with respect to Exhibit F, please, which is the forty barrels?

A At the rate of forty barrels per day the well would have paid out the investment in a little over a year and a half from August 1st, between a year and a half and two years, from last August 1st.

Q Well, in summary, Mr. Weyler, relying upon your prior engineering testimony which has been accepted and adopted by this Commission, permitting any allowable in excess of the nine barrels per day which is presently permitted by the order will result in drainage from the unit area in the absence of concrete knowledge concerning oil under the Delaney tract?

MR. HAFFKE: Gentlemen, I object to the question. I don't know whether you are testifying, Ted; if you are I would like you sworn, too. I mean, I think you are just telling the witness what to testify to.

Q I simply wanted to emphasize the testimony which you gave before, Mr. Weyler. What will be the effect of any allocation of production to this well in

excess of nine barrels per day?

A Well, we still certainly believe as we did before, in that the rules that we presented to the Commission last year are some of the best rules that we have ever seen, and they do counteract and minimize drainage across property lines, and any excess of over nine barrels per day allowable on the Delaney well would result in the migration of oil from under the unit area onto the Delaney properties.

Q And what effect will this have upon the correlative rights of the owners of the unit?

A I believe, as we stated then at the last hearing, that the correlative rights would be impaired; the correlative rights of the unit owners, both royalty and working interests, of whom there are some four to five hundred.

Q Mr. Weyler, to permit an exception for this isolated flank situation, would that have any bearing upon the entire perimeter of the Adena Field?

A Well, yes; this situation isn't only a matter we should be concerned with only here on this one property. We have a perimeter all the way around that field which is pretty well tied down, but we have not drilled completely every location all the way around the

field, although we used all of the companies when we did the work of outlining the field. We sat down as a group and used the information that we had at hand and we feel this is as good as can be done with that information; but, if exceptions are allowed or the allowable order were to encompass only the productive limits as we know them now and nothing beyond, if someone were to drill a well beyond what we believe now are the productive limits and this well were not to come under this order, we would have a possibly very serious problem everywhere around the unit.

Q Would this impair your consideration of secondary operations?

A It certainly could. For instance, right now in the gas cap if someone would go in there and not be under any field rules or under this present order and drill a gas well and pop the gas cap, why, we would certainly have lost ultimate production.

MR. STOCKMAR: I would like to submit the witness to the Commission for its questioning.

CHAIRMAN DOWNING: Are there any questions?  
I might ask one question::

Q If this well was permitted to produce forty barrels a day, where would the oil come from and in what

proportion, have you any idea?

A Well, sir, it would create a low pressure area on the Delaney property and oil would migrate from the unit as we showed on our bottom hole pressure maps during the last summer's hearing. You would have a disproportionate volumetric withdrawal off of one property.

Q Could you guess at all how much of that oil would come from the unit property and how much from the property in question?

A Well, sir, if the well did produce for fifteen years at the rate of forty barrels per day and did produce over 200,000 barrels---

Q I got that, but I was just wondering at the present time what would be the result, if you know, if there is any way of telling? In other words, forty barrels a day comes out; where does it come from?

A Well, it would be about thirty-one barrels per day.

Q Would it come from the unit?

A Yes, sir.

CHAIRMAN DOWNING: That's all.

MR. STOCKMAR: Any other questions by the Commission?

CHAIRMAN DOWNING: Any other questions by the

Commission?

COMMISSIONER BRETSCHNEIDER: I would just like to make one observation on some of these figures which you give. You speak of twenty-five barrels and forty barrels a day for fifteen years, or any period for that matter, but I am sure no one expects the well, this well to last fifteen years and produce forty barrels a day each year.

MR. STOCKMAR: Well, in answer to that Mr. Weyler has testified that that is his belief and we can certainly develop that more with him.

COMMISSIONER BRETSCHNEIDER: That a well like this would produce forty barrels a day for fifteen years?

MR. STOCKMAR: Mr. Weyler, would you respond to that, taking into account the location of the well?

A Yes, sir. This area--and I think that some of the testimony of Mr. Shivel voiced this somewhat--now, this well is down in a very tight area. It is not offset, or the limits of the productive field are not necessarily--are not the oil-water contact as we know them in the rest of the field. It is tight.

Now, there is oil-saturated sand beyond what we call the productive limits of the field in this area, but production is limited due to tightness rather than



water-oil contact.

Now, there has been substantially no water encroachment of any extent in this area. Now, this Delaney well has produced more water than any of the other wells in that immediate area. All of our wells, like on the Scanlon right near there produce no water, and at the end of the productive limits is actually a permeability barrier in that area, and we are satisfied--in other words, that's the reason for the reservoir being there; it is blocked by permeability, and all around the southwest edge of the field the sand is very tight and impervious and the production must come from the east if it is going to come from anywhere.

BY MR. STOCKMAR:

Q Will not the preservation of our gas cap have some bearing upon the life of this particular well?

A Yes, sir.

Q The unit's preservation of the gas cap?

A The maintenance of pressure for this particular lease, if it is produced over the present daily rate must come from the unit area because that is where the permeability extends toward the unit, and not to the west.

MR. JERSIN: Jack, what is the pressure picture in this immediate area?

A In this immediate area it is---

Q (By Mr. Jersin) Is the Delaney well a higher or lower pressure than the offset wells in the unit?

A Well, on the last bottom hole pressure survey I don't believe the Delaney well itself was taken, Art. The pressure does decrease in this direction (indicating on map) slightly. We have, I think, three wells right along here; I believe you probably have that last map that was made.

Q Yes, we have it.

A But, the bottom hole pressure lines now that were taken in October extend in roughly this direction, which showed no material migration of pressure down there now, but it is lower in this area than it is, say, up here, a little bit lower.

COMMISSIONER DILLON: That's to the southwest?

A Yes, sir, but actually those sinks that we previously experienced, a lot of them have disappeared. Of course, where we have localized heavy production up in here (indicating) we have created our own pressure sink on our own property, but some of these that were originally shown on those previous maps are not so apparent.

CHAIRMAN DOWNING: Any further questions?

MR. KIRGIS: I have questions, Mr. Chairman, 1E

this is the appropriate time.

CROSS EXAMINATION

BY MR. KIRGIS:

Q Mr. Weyler, in line with what you have been saying, I am not sure that I understand fully. Let me ask this question: Do you anticipate that the Adena unit as we know it today will maintain its present rate of production for a fifteen-year period?

A The rate of production will depend a great deal, Mr. Kirgis, on the actual injection program that is initiated. Now, we are going to start meetings tomorrow to try to pick that injection program. As yet the Engineering Committee has not determined on which side of the field it will inject water, which will be the best, and that is what we are going to commence doing.

Q Let me break my question into two parts, which I should have done to start with: Under methods of primary recovery would you anticipate that production would be maintained steadily in the unit area over a fifteen-year period?

A Not under primary production, but neither will the unit nor the Delaney property be---

Q The answer to my question is "no," is that right?

A Not under primary production, no.

Q All right; now, I will ask you the second question. Even though your plans for secondary recovery are not yet complete, whatever those plans may be, would you expect production to be maintained constantly within the unit over a fifteen-year period?

A No, it will go both up and down.

Q At the end of the fifteen-year period would you expect it to approximate what it is the first day of your secondary recovery operations?

A The last day?

Q Yes.

A No, sir.

Q It will be much lower, won't it?

A It certainly will; the last day it will be zero.

Q I am saying the fifteen-year period?

A Yes, sir.

Q On what basis then can you justify your analysis of the behavior of the Delaney well and the additional production to be gotten out of it by taking such figures as fifteen barrels a day, twenty barrels a day, twenty-five barrels a day, and just multiplying it by fifteen without modification, by fifteen years?

A Well, Mr. Kirgis, I don't think we can come in and flood on your property, and the unit is going to be

shoving oil to the Delaney property during the full life of this pressure maintenance program, and if the Delaney tract is going to act like the rest of the wells who want to take our oil out of us, it is going to be the last one to go dry.

Q Are you suggesting that the unit cannot protect itself from the Delaney well by other offsets to that well now existing, not newly drilled?

A The only way we believe we can protect ourselves is a nine-barrel allowable.

Q Well, will you answer my question: Do you think the unit cannot protect itself through offset wells?

A Well, no, sir; actually we can't. With a higher rate of production we couldn't because we are not only going to flood oil--I mean, if at a higher rate of production you are creating a pressure sink on the Delaney property, why, oil is going to migrate to the Delaney well regardless of what we do.

Q Did I understand you correctly in the interrogation by the Commission and staff to say that the pressure differential is now away from the Delaney tract?

A No, sir, it is not away; the pressure lines are actually more or less coming in toward--in other words, although we didn't get the pressure on the Delaney

well itself, we have to use the other information that we have to get a picture. We don't actually know right across the line what it is, because we didn't get the pressure. I don't know whether you took it or not. Did you, Paul?

MR. SHIVEL: I don't think so.

Q Let me return then to my question of a moment ago. Assuming that some larger recoveries are permitted by this Commission as an exception to its rule, not a change in its rule, for the Delaney well, are the unit wells which adjoin the Delaney well so located that you could not protect yourselves against a transference of oil from the unit to the Delaney tract?

A That is my firm belief, yes, sir.

Q Why is that?

A Because if the unit is producing a certain rate of oil production--we are going to get off into engineering, I am afraid--but we had hoped to move the oil across the Adena Field in more or less of a line.

Now, we can't localize enough oil production down there in, say, our Scanlon and Goddard properties to prevent migration of oil when excessive withdrawals are being taken out of the Delaney wells.

Q What do you consider excessive?

A Ten?

Q Ten; I think that's a fine answer. What's wrong with your other wells that you talk about that they would not be adequate to protect you against a ten barrel well?

A Well, we are going into all that again. Do you remember in the last hearing we discussed the volume features of this order, which is the whole basis of it, and that if this proportionate volumetric withdrawals come off any one property the pressure is going to fall regardless? Now, these offset wells are on forty acre locations, and there is a lot of area in between the wells; regardless of what you try to take out of those wells you are going to get migration between them, and that can be proven on models theoretically.

Q How does it operate practically?

A The same way.

Q How many wells do you have which are in the unit and which constitute offsets to this Delaney well?

A Actually we only have, I guess one direct offset.

Q One direct and one or two diagonal offsets?

A I think two.

Q Two diagonals? In other words, you have a row of three wells which we might say isolate the unit from this renegade Delaney well, is that right?

A I think it is either two or three; I don't know. I would have to look at the map again, but one direct offset and one--at least one diagonal.

MR. JERSIN: Jack, would you like to refer to the attachment to our last order?

A One direct offset and one up on the Goddard tract which is quite a ways away.

Q Do you mean seriously for this Commission to understand that raising the allowable from nine to ten barrels is going to cause all of this difficulty in the operation of the unit?

A I didn't say that; you asked me how much I thought was excessive.

Q And you think ten barrels is excessive?

A Personally, Mr. Kirgis, I do, or I think it would be different in these rules.

Q In other words, you are--your answer is being predicated upon merely the blanket application of the engineering concept embodied in the rule, is that right?

A If I understand you properly, I assume that's correct.

Q Reference has been made to a letter from Mr. Peak dated January 3, 1956 addressed to all royalty owners in which there is the statement that, "Excluded tracts



32, 81-B, which is the one here in issue, 83 are non-productive tracts in the "J" sand."

Did you at that time approve of that letter and that statement?

A Yes, sir, they weren't producing, and that's what he meant; tracts 32, 81-B and 83 had no "J" sand producing wells on them, and that's what that refers to.

Q Would you say the same thing today then?

A No, sir, they are productive. They are producing.

MR. KIRGIS: That's all the cross examination I have.

#### REDIRECT EXAMINATION

BY MR. STOCKMAR:

Q Just one question, Mr. Weyler: It has been said before, but do you concur in the statement that a well produces from a pool?

A Yes, sir.

MR. HAFFKE: May I ask a question?

MR. STOCKMAR: Yes. Excuse me; I thought you were finished.

#### RECROSS EXAMINATION

BY MR. HAFFKE:

Q Mr. Weyler, I am probably going to show my ignorance because I don't understand a lot of this stuff,

but this Adena area was opened up in 1953, is that correct?

A Yes, sir.

Q And up until the Delaney well there was no production from the Delaney lease at all?

A Yes, sir.

Q Am I to understand you correctly then that based upon your theories here up until the time of this Delaney well, why, this Scanlon and these Goddard wells were in fact probably draining the Goddard lease, is that right?

A That's right.

Q So we have had a couple of years of drainage before these things went into effect, is that right?

A Right.

Q Now then, did I understand you correctly, when it gets right down to brass tacks, the only way you know whether or not there is any oil under the rest of the Delaney lease is when it is actually drilled?

A Yes if there is more than we think there is, yes.

Q So, if when we use a hypothetical question that this sand which apparently is so variable throughout the field, should in fact be greater on the other side, and we never know it, your assumption that it is only coming

from the Adena unit is incorrect, isn't it?

A Oh, yes.

Q It is coming from the Delaney unit, too, isn't it? In fact, it could come a whole lot more?

A It could if it extended further.

Q But, we don't know?

A From the information we have now we do have productive sand west of the Delaney well itself. It does extend on out.

Q You have projected it?

A Yes, sir.

Q Did you project the isopach maps they showed us in the spring of 1955?

A Our geological and engineering committee did, sir.

MR. STOCKMAR: Excuse me, Jack. Would you direct your voice a little more to the Commission here?

Q Do you recollect that the zero rating on those isopachs at that time was originally about in the middle of the west half of 25 and didn't touch 26?

A I think actually that the zero line on that original map went right about through the location of that Delaney well.

Q On the second one, but I am talking about that

real early one. I don't have a copy.

A You may be speaking of Core Lab's map, are you?

Q I couldn't identify it. The company presented them to us.

A The first one we used in unitization the zero line went approximately through the present location of the Delaney well.

Q Now then, as they have actually tested they have found a lot of their forecasts of the past have been proven erroneous, haven't they?

A Actually not materially. You see, in the Delaney well there are about eight of what we call productive feet. I think three of them are pretty good feet of sand with pretty good permeability, if my memory is right. Five of them, according to core analysis, were barely above the minimums that we use, which is this: we didn't believe that any foot was productive if it had less than two and a half millidarcies permeability. About five of the feet in this Delaney well ranged just over, say, I think in the neighborhood, between two and a half and ten millidarcies, which for an average in the field is very low; and so actually that is one of the biggest reasons that the Delaney recoverable oil was extended out.

Now, if about three of those feet had been under

the two and a half it would have been just about the way we predicted it originally.

Q It varies from time to time, but the only proof is when you put a well down?

A That's correct.

CHAIRMAN DOWNING: Any further questions?

COMMISSIONER DILLON: I have a question.

BY COMMISSIONER DILLON:

Q About when was the Delaney well drilled?

A I think it was completed in May of last year, around the 1st of May, isn't that right?

MR. EPPERSON: That's right.

Q When was the direct offset well drilled, about when?

A In '55 sometime.

Q When was the diagonal offset well drilled?

A The Goddard, '55; I think the latter part of-- yes, I know it was after March of '55.

Q What is the direct offset well capable of producing?

A Actually we are not producing a direct offset well at all at the present time because of high gas-oil ratio. We are taking the oil from other wells in the field. Now, we do expect that well to go back to low

gas-oil ratios as soon as we start pressure maintenance.

Q How about the diagonal offset well?

A It's not producing either. Actually on the Delaney tract, the Delaney tract itself has produced about a little over twelve percent of the original oil in place, which I think is favorable with the average of the unit. In other words, the relatively high production before these new rules went into effect did give it-- put it up to where its recovery is comparable percentage-wise with the unit. It has a capacity--it is shut-in. We are not producing it because of high gas-oil ratio at the present time.

BY MR. HAFFKE:

Q What is the capacity, though, Mr. Weyler?

A I don't know; Allen, has it been tested?

MR. ALLEN: I couldn't tell you what the last test is exactly.

A I don't know.

Q I heard one time it was about six, eight hundred barrels?

A Well, I really couldn't tell you. It is a flowing well. Those that we don't produce at all because of high ratio we often don't test, because they are not a producing well at the time, so actually we could look it

up but I don't know what the last test would be.

MR. KIRGIS: May I ask, I believe, just two more questions:

Q Mr. Weyler, you mentioned the high gas-oil ratio in the offset wells. Do you know approximately what the GOR is in the Delaney well?

A No, I don't.

Q If I should say it is about 600 to one would you accept that figure as approximately correct?

A I would judge that that would very likely be the case, yes.

Q You don't consider that a particularly high GOR, do you?

A No, no.

Q Does that indicate then that there is some barrier to the flow of liquid between that well and those in the unit?

A No, not necessarily. We have that case existing throughout the field. In fact, it is sometimes pretty surprising what two offsets will do. We have had one offset as low as 300 cubic feet per barrel, and the other one well over a thousand that we are offsetting.

Q Can that be explained wherever it may exist on any basis other than some peculiarity of permeability which

constitutes at least a partial block?

A Well, it could be due to a number of things. One of the things would be that it was further from any possible encroachment of gas. It could be due to completion practices. There are quite a number of things that it could be due to.

Q My question has made it clear that I am not an engineer, but let me make this inquiry: As far as the factor of distance from the source of gas, I presume you mean the gas cap in this instance?

A Yes, sir.

Q If you have shut-in your unit wells which lie between the Delaney well and this source of gas, and the Delaney well is being produced, wouldn't that naturally bring the gas down there in the basence of a block or obstacle?

A Well, no, sir, relatively it wouldn't if the Delaney well--if there was no drainage across the property line. There did happen to be on the Scanlon property originally a localized small gas cap, and a number of the wells on that particular piece of property--in fact, one of them was high initially, and it was kind of an anomaly. It was localized, very small, and we have had some high ratios right there, so we don't really think that



this particular gas is from the major portion of the gas cap.

Q Did I misunderstand you or not in your direct examination? I thought I understood you to say that there was some kind of a barrier by reason of change of permeability between this tract and the unit which would explain your statement that this tract might produce at a longer period of time, or at a higher level than the unit?

A No, sir; my testimony, I believe, was that there is a permeability barrier to the west of the Delaney properties. In other words, that the limit of the productive sand to the west, in other words, the other side of the unit, is a function of the sand being tight and impermeable rather than the true water level of the field.

Q Then you do not think there is a permeability barrier between the Delaney tract, and let us say, the two offset wells?

A No, sir, I don't believe so. I am pretty sure that when the original pressures on the Delaney well were taken right after it was drilled that they were comparable with those of the unit wells right in the same area; and if it was a localized reservoir, why, they would have been in the neighborhood of 1540 to 1600 pounds.

Q Well then, if that is true then there is no basis

for any suggestion that the Delaney well would maintain production over a long period of years at a better proportionate rate than the rest of the unit, isn't that correct?

A Well now, Mr. Kirgis, when we start water injection we will actually reduce the ratio on many, many gas wells, or high gas-oil ratio wells, and if we would happen to inject water along the gas-oil contact, which is a proposed plan--it is not necessarily the one we are going to use--we would move an oil bank to the west, and it would certainly reduce the ratio on every well.

Q But, here, pardon--I didn't mean to interrupt.

A I think that's all.

Q Now, in your answer you are assuming artificial conditions to be created at the will of the operator rather than natural conditions, are you not?

A Yes, that's right; that's what we unitized for.

CHAIRMAN DOWNING: Any further questions?

MR. KIRGIS: If I may just finish the question I started to ask him awhile ago, and then I will be through.

CHAIRMAN DOWNING: All right.

Q Mr. Weyler, you have stated that a well produces from a pool. Is the Delaney tract a part of the Adena Field, part of the same common source of supply?

A Yes, sir.

Q And it then produces from the entire reservoir?

A Yes, sir.

Q Then is there any way in which you can protect yourself or "insult" that particular tract, as we have heard comments here, by operations in wells nearby?

A No, sir, not unless you have a control over the rate of production of the particular well that we are discussing.

Q One more: Even though the total rate of production from the unit should decrease over the next fifteen years is it your judgment that wells similarly located to the Delaney well will be producing throughout that whole period?

A Yes, we believe they will.

MR. STOCKMAR: That's all the questions I have.

THE WITNESS: I would like to say one thing, Mr. Kirgis, or Mr. Stockmar: that we believe that the flank wells of the Adens Field will produce for fifteen years. We have had already in the north side of the field a few wells go to water. We don't believe that that will be the case in the south as it is in the north, because of permeability.

Our engineers at the present time estimate the

life of oil production at about 15.8 years, and that's why we said roughly fifteen. On the basis of this what we were concerned with, forty barrels per day for even seven and a half years, the wells would produce over a hundred thousand barrels of oil, and that's more than was under the property in the first place.

MR. STOCKMAR: Thank you, Mr. Weyler.

MR. HAFFKE: You raised one question, Mr. Weyler.

CHAIRMAN DOWNING: This will be the last.

MR. HAFFKE: What?

CHAIRMAN DOWNING: This will be the last one.

MR. HAFFKE: All right.

BY MR. HAFFKE:

Q You are talking about water. You recognize that this Delaney well already has twenty-seven percent water, don't you?

A Yes, sir.

Q All right.

A I think it had it initially right after the frak job.

CHAIRMAN DOWNING: Does anybody insist on more questions? (No response.) If not, the witness is excused.

(Witness excused.)

MR. STOCKMAR: No more questions, Judge Downing,

but for the record I would like to again express the situation of the unit with respect to the expansion of the unit.

We are always open to applications for tracts adjoining the unit which are within the productive limits of the field to seek admission to the unit. I just wanted to make that clear.

Then, summing up, it seems clear to me that the vast amount of engineering work and testimony that has gone into this thing makes it clear that the present order is entirely appropriate to handle this situation. To deviate from it now would cause drainage of the unit and abuse of correlative rights.

Now, in many cases problems relating to the production of oil fields can be handled by compromise agreements between the parties, and so forth. In this particular instance, however, we did not see how that could be accomplished without our usurping the function of the Commission, which is to establish the allowable. So in this instance we are not able to come to you and say, after the thousands of words we have said before, something else. So now all we can say is that this problem must rest squarely with the Commission. We believe that our testimony adequately and to this point supports the present

order without change.

That's all I have to say.

CHAIRMAN DOWNING: Is there any more testimony?

(No response.) If not, the hearing---

MR. KIRGIS: I would like to make a short closing statement, if I might.

CHAIRMAN DOWNING: All right, but let's see if there is any more testimony. All right, the case is closed, and we will be glad to hear arguments, but let me suggest this: Isn't there a way for you gentlemen to make a joint recommendation as to what our order should be?

MR. KIRGIS: Mr. Chairman---

CHAIRMAN DOWNING: In other words, it just strikes me that there is certainly merit in this application, and there is certainly merit in those who uphold the unit. It is a very difficult question, and I don't know. You gentlemen know more about it than we do. Your interests, I think, are the same as ours. Is it possible that you could make an agreement that you---I assume it would be along the line that this eighty acres would come into a unit in consideration of a certain percentage of the entire unit, of the entire production.

Now, is that feasible or possible?

MR. STOCKMAR: As I stated, Judge Downing, we are

entirely open to an application in the manner established in the unit agreement, which is certainly known to these parties.

MR. KIRGIS: Judge Downing---

CHAIRMAN DOWNING: How about it, Mr. Kirgis?

MR. KIRGIS: I think I can give the answer to that. The unit states, and correctly, that they are open to an application on the basis of the formula set, which is nine barrels.

CHAIRMAN DOWNING: I don't understand it.

MR. KIRGIS: We have presumed upon this Commission heretofore to continue this hearing on two occasions for the purpose of undertaking to come to some agreement and understanding with the unit operators on this point, and those negotiations broke down at a meeting of--what, some two weeks ago, maybe two and a half weeks ago now--by an inability for the parties to get together, and with the statement, well, by the unit committee, "We will take it to the Commission and let them tell us."

CHAIRMAN DOWNING: But that doesn't answer--have you a desire to make--if you made an application what would the nature of your application be?

MR. KIRGIS: For admission to the unit, and we are advised that we may be admitted to the unit on the

formula stated, which is nine barrels.

CHAIRMAN DOWNING: Well, that's what they would offer. What would you like as a compromise?

MR. KIRGIS: Forty.

CHAIRMAN DOWNING: What, forty?

MR. KIRGIS: Forty.

CHAIRMAN DOWNING: All right, proceed.

MR. KIRGIS: I will try to make it brief, Mr. Chairman. It has been stated in the opening argument on behalf of counsel for the royalty owners that the purpose here is not to attack the engineering phases or the technical phases of the Commission's order, but in so far as this hearing is concerned the purpose is to present the facts which show that there is justification here for an economic exception to the order on behalf of this one tract.

Consequently, the evidence has been produced showing what the economics are. You will note that the proponents here did not present engineering testimony at all. We see no need to because we are not attacking the engineering phases or features of the order.

Now, one thing was brought out, and that is that the various exhibits which show the number of years it will take for pay-out on the basis of nine barrels,



twenty-five, forty, and so on, should be reduced by the amount of oil already produced from the Delaney well.

We concede that that is correct as to the existing Delaney well. We point out that it is immaterial when thinking of the drilling of an additional well, a new well not now drilled. In that instance, the exhibits would have to be applied precisely as they are submitted to you and without reduction.

Now, it has also been the position of the royalty owners and Petroleum, Inc. believes that the royalty owners have a correct position in this respect: that it is in their interests certainly, and it is also in the interests of the State of Colorado to encourage or at least permit additional drilling to the extent necessary to determine the limits of this field down on this side where there seems to be some uncertainty has appeared. In other words, it has been changed from time to time, and in that connection Mr. Weyler himself in his direct testimony said that "you can get more reserves only by drilling more wells," and he also said that if an additional well is drilled and oil should be discovered then you would, of course, allocate additional oil in place to the tract and additional production to that tract.

He has admitted those two facts, which I believe

are obvious, in any event, and which actually are the keystone of this application before the Commission. The only way an additional well could be drilled down there, either for the benefit of these landowners or for the purpose of delimiting this field and finding out what there really is in this rather uncertain area is by making an exception to this order which will make it economically feasible for a well to be drilled.

Now, that well, if drilled, is going to be a wildcat. I think that the engineering testimony here makes that apparent. No one is going to drill a wildcat well, run the risk which is involved in that if he is going to see a seventeen-year pay-out without even interest on that money. Nobody is going to drill a well if he sees a five-year pay-out when it is a wildcat; not a development well, but a wildcat, and that's what this well will be.

Consequently, Pet Inc. has stated and it repeats that it is willing to drill this additional well for the purpose of determining whether this field, in fact, does go down further, whether there are or are not more reserves down there, which if there are they ought to be recovered by an additional well, and for the benefit of its lessors to whom it owes an obligation it is willing

to do that, but it has to see some possibility of a reasonable pay-out.

They are willing to do that on a two or three-year pay-out, if the oil is there; it may not be. It may be a dry hole, and that's that. If the oil is there they want to see the possibility of a two or three-year pay-out.

Now, Petroleum, Inc., actually we are not trying to act holier than thou, but actually they do feel some obligation to these lessors, and they feel an obligation to go ahead with the well. They are willing to do it, whereas actually if they did not have the lease they would prefer to walk off and leave the whole darned thing; but, in the circumstances which exist we are perfectly willing to go ahead and do it, but to do it we are going to have to have an allowable here which will give us some assurance if there is oil there at all in this wildcat that it can pay-out in two or three years.

The figures are here to show the economics of it. The Commission and its staff understand the economics of it. I have only one more thing to say, and that is that we have made a cursory review of all the orders of the Commission and we don't find that there have been any just like this or any exceptions requested which are exactly

parallel to the exception requested here; however, the nearest thing is the Rangely situation. You will recall that under the Rangely reinjection order there were some wells in the west side of the field which were one well leases, and which were not connected to the gasoline plant, and it wasn't economical to do it. The production of gas wasn't enough to justify bringing those into the gasoline plant, so it was a matter of poor economics.

The Commission granted exceptions to those unconnected single well leases, and they were exempted from operations, certain of the basic parts of the order. We think in theory this is a similar situation where the Commission is not doing violence to the order in any way. It is not attacking the sanctity of the engineering principles which underlie the order; it is merely being asked to recognize an economic necessity which if recognized will permit the drilling of an additional well for the benefit of everyone in the field, I think, by delimiting it further, or expanding it further in accordance with what is discovered in that well.

CHAIRMAN DOWNING: What other states have a rule similar to the Kansas rule?

COMMISSIONER BRETSCHNEIDER: Oklahoma.

CHAIRMAN DOWNING: With a minimum?

MR. KIRGIS: There is no statutory provision in Oklahoma, but there is an administrative practice in Oklahoma similar to that. In Texas there is a peculiar situation; I don't know exactly how to describe it. It doesn't work just this way, but it works instead that if under their complicated system of market demand proration it is necessary to pull wells down to a certain point, certain types of marginal wells shall not be pulled down below a certain point in order to allow them to continue to produce. The schedule there, I don't know that it has much significance because they are dealing with a different situation with their market demand proration, but a well of 2,000 to 4,000 feet should not apparently be taken below twenty barrels under their set-up; a well of 4,000 feet to 6,000 feet should not go under twenty-five barrels; 6,000 feet to 8,000 feet, not under thirty barrels, and so on.

MR. STOCKMAR: I only have one statement to make: One sentence.

CHAIRMAN DOWNING: Before you do that let me ask Mr. Jersin: Do you want to make any recommendation?

MR. JERSIN: I would like to investigate some of the facts in the office first, Mr. Downing.

MR. STOCKMAR: The persuasive part of the argument

which has been made here is that an inducement or assurance of additional money in hand is required before an additional well will be drilled. Now, that is put forth as an inducement to the Commission to give them that money. The only way I can understand that is that it is the unit that is being called upon to pay for that well, not the lessee, by diverting oil and income otherwise and properly belonging to the unit to the other party to make possible his drilling of a well which he does not feel able to drill at this time.

We disclaim any desire to contribute to the drilling of that well, and that is what is being sought here.

CHAIRMAN DOWNING: Any further argument?

MR. HAPFKE: Gentlemen, I would like to make this statement: I think we as mineral owners and as royalty owners came down here with the concept that there is no denying that the way it stands now it is an economic liability, even on the existing well. I don't think you or me or anyone else could continue to operate at an increasing debt.

Out thought was coming before the Commission, as we have a peculiar situation here. I believe I can fairly state that as fairly as we can evaluate the testimony

we don't know what is there. We won't know what is there until there is some production and some additional drilling.

Now, I feel that the Commission is here on my behalf as well as anyone else, and all we want to do is what is honest and fair, but when we don't get anything for the ownership of our minerals and our investment as laymen we just don't understand how that adds up; and I think that in this situation your investigation and what has been presented there is really a valid reason based on the engineering that has previously been submitted to redefine that field, to exclude this 320, except that 40, and to justify an allowable of forty barrels.

Now, gentlemen, what we want is fair; if it is not fair for both sides it is not fair for anybody, and we don't want to be in the position of taking anything from anyone, and by the same token we don't want it taken from us.

I would urge that a substantial allowable-- not even substantial, but I think a justifiable allowable of forty barrels should be granted. We don't know; that well may piddle out. If the experience in the Julesburg Basin is any criterion, it might not be there in three years; nobody actually knows. So on behalf of our owners

and our minerals and our royalty owners we are primarily seeking a fair, equitable solution, and I think I can honestly urge that forty barrels is proper. Thank you.

CHAIRMAN DOWNING: Thank you. Well, I want to express to the attorneys the thanks of this Commission for what seems to be a very fair and able presentation; but, perhaps one of the most difficult problems that has come before the Commission.

We will take it under advisement.

(Whereupon, the hearing was adjourned at 2:23 o'clock p.m.)

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REPORTER'S CERTIFICATE

I, Keith B. Watson, Certified Shorthand Reporter,  
do hereby certify that on the 15th day of January, 1957  
I reported the above-entitled matter in stenotype and  
that the foregoing, numbered pages 1 through 100, constitutes  
a full, true and correct transcript of my stenotype  
notes thereof.

Dated at Denver, Colorado this 22nd day of  
January, 1957.

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Keith B. Watson  
Certified Shorthand Reporter

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