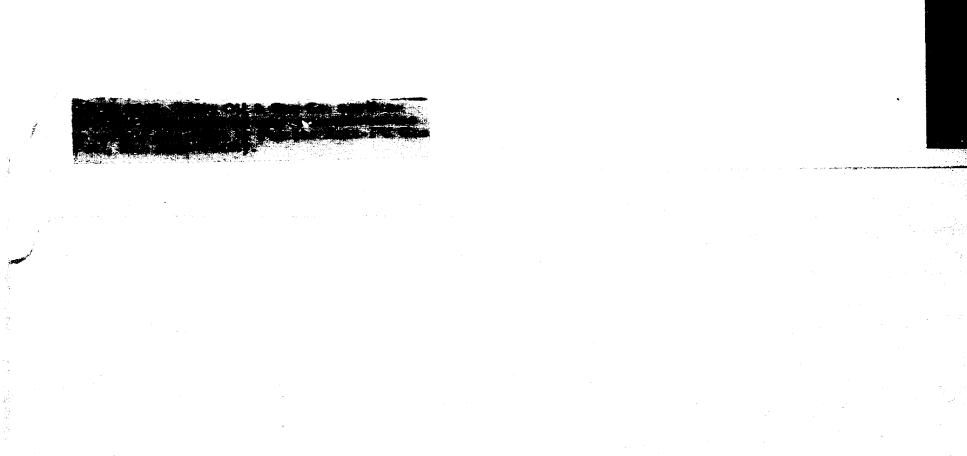
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1538

Application, Transcript, Small Exhibits, Etc.



BEFORE THE OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO

IN THE MATTER OF:

Case No. 1538

TRANSCRIPT OF HEARING

October 22, 1958

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LEFORE:

Elvie A. Utz, Examiner.

TRANSCRIPT OF HEARING

MM. UTZ: The next case will be 1538.

MM. FAYNE: Case 1538, "Application of Aztec Oil & Gas

Company for the austgnment of minimum allowables to certain gas Wells in the Fulcher Kutz-Pictured Cliffs Gas Pool, San Juan Country, New Mexico,"

MH: Linkwellyn: Mr. Examiner, Gordon L. Llewellyn representing

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the applicant, Aztec Oil & Gas Company.

MR. UTZ: Are there other appearances to be made in this case?

(No response).

MR. UTZ: You may proceed.

MR. LIEWELLYN: Mr. Examiner, Aztec in this application has requested that it be granted an exception to Rule 9 of the Commission's Order Number R-565-C as represented by Order Number R-967 by granting the applicant a minimum allowable for certain gas wells in the Fulcher Kutz-Pictured Cliffs gas pool in order to prevent premature abandonment.

At the time the application was made, the second well, which is the Cozzens Number 4 Well, was erroneously included in the application. That well is located on Section 20, Township 29 North, Range 11 West, and should be deleted from this hearing, Cozzens Number 4.

MR. UTZ: Is there objection to the deletion of this well from this application?

(No response).

MR. UTZ: If not, it will be deleted.

MR. LLEWELLYN: At this time, I will call Mr. Warren Mankin as Aztec's first and only witness in this case.

(Witness sworn in).

WARREN W. MANKIN

called as a witness, having been first duly sworn, testified as

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follows:

DIRECT EXAMINATION

BY MR. LIEWELLYN:

- Q Mr. Mankin, will you please state your full name?
- A Warren W. Mankin.
- Q Will you please state by whom you are employed and in what capacity and where you presently reside?
- A By Aztec Oil & Gas Company as its Chief Engineer and I reside at Dallas, Texas.
- Q Have you previously qualified before this Commission as an expert witness in the field of petroleum engineering?
 - A Yes sir, I have.
- MR. LIEWELLYN: Is the Examiner willing to accept Mr. Mankin as a witness?

- Q (By Mr. Llewellyn) Mr. Mankin, are you familiar with MR. UTZ: Yes, sir. Aztec's application requesting that it be granted minimum allowables, or if you please, special allowables, for certain wells in the Fulcher Kutz-Pictured Cliffs Gas Pool, San Juan County, New Mexico

 - Q You have before you there a list of five wells marked A Yes, I am. as Exhibit C giving the well name, the unit designation and status of the wells. Did you prepare this exhibit or was it prepared under your supervision?

A Yes sir, I prepared it.

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Q Will you please give us the name of each well shown on this exhibit?

A The five wells shown on this exhibit are Aztec Holder Number 1, Hart Number 1, Cornell Number 3, Cornell Number 4 and Cozzens Number 3.

Q Before getting into the details surrounding any of these individual wells, will you please state the nature of this application and generally give us the facts surrounding the drilling of each of these wells and the present problem resulting from the allowable formula of Rule 9?

A This application desires to obtain a minimum or special gas allowable to forestall premature abandonment of the five gas wells that I have just read. All five of these wells were drilled during the period from November, 1932 to January, 1948, which incidentally, is prior to issuance of Order 748 dated June 22, 1948.

At that time, all of these wells were drilled in what was known as the Old Fulcher Basin Pool. Since that time, it has come to be known as the Fulcher Kutz-Pictured Cliffs Pool. All of the wells in the immediate area which we are seeking were drilled prior to 1948 and they were drilled essentially on a 40-acre spacing pattern, which was then the legal and standard spacing for this area.

The northwestern part of the pool where most of these wells are located has essentially no more wells drilled today than

it did ten years ago or when Order 748 was promulgated. Most of the wells drilled in this area were drilled on a 40-acre pattern; therefore, these wells, even though they have fairly normal deliverability, the allowables are extremely low due to the small amount of acreage that may be attributed to the wells under the existing allocation factors of Rule 9 of Order R-565-C as amended by Order R-967.

Q You also have before you Applicant's Exhibit D. Was this exhibit prepared by you or under your supervision?

A It was prepared under my supervision.

Q This Exhibit D is a plat showing the wells that you have discussed, the offset wells and their allowable unit sizes and the minimum allowable, if any, which has been authorized by such offsets. Will you please discuss in detail this plat and the wells shown thereon?

A Well, all of the applicant's, or all of the five wells which we have requested are shown on this Exhibit D by a red border surrounding the five wells. Starting in the northwestern portion of the pool—and incidentally, this particular plat has outlined the pool limits that have been set out by the Commission and is shown by a cross dashed line surrounding the pool and if you will notice, this pool trends from northwest to southeast and this is the very extreme northwestern portion of the Fulcher Kutz-Pictured Cliffs Pool.

Q Pardon me, Mr. Mankin. Before going on, as you discuss

these wells, will you point out the number of acres involved in the present units and what the present allowable is, and in connection with that, the status of the well and the reason for such a status?

A All right, sir. Starting on this particular plat with the northmost well, which is our Holder Number 1 located in the southeast quarter northwest quarter, Section 29, Township 30 North, Range 12 West, this well was drilled on a 40-acre tract and still has the same 40 acres assigned to this well. In 1955, about the time proration started, this well was assigned a 40-acre unit by Administrative Order MWU-78. The present allowable is approximately 250 MCF per month. The well has been shut in for an extended period of time during the last 21 months and it has only produced 9 months of those 21 months due to the low allowables and over-production.

Surrounding this well are six wells that are outlined, having their unit outline in yellow. These six wells were granted a minimum allowable under Order R-212 during this present year.

Q What was the minimum allowable granted under Order 212?

A That minimum allowable was all the wells could produce or 1500 MCF per month, whichever was less. I might state at this point that in that particular order, there were eight wells. One of these wells was in the Pictured Cliffs Pool, which is not concerned here today in this application, but the remaining seven wells in the Fulcher Kutz-Pictured Cliffs Pool are shown on Exhibit D. Six of them are located on one group and the other one is separated on the same plat, Exhibit D.

Q Would you go ahead with the other wells, please?

A The next well coming southeast is the Hart Number 1. This particular well is located in the northwest quarter southwest quarter of Section 11, Township 29 North, Range 12 West. The well was drilled on a 40-acre unit and still retains that same 40-acre unit. It was approved in 1955 soon after proration began as a 40-acre unit under NWU-77. The present allowable for this well has been approximately 250 MCF per month and it has produced only five months out of the last 26 months due to over-production.

Again, as I have previously mentioned, the seven wells that have been granted a minimum allowable are just directly west of this well in Section 10. That has likewise been granted a minimum allowable and is shown in yellow color.

The next group of wells that are pictured together are the Cornell 3 and the Cornell 4. The Cornell 3 has been assigned to the south half southwest quarter of Section 12, Township 29 North, Range 12 West and the Cornell Number 4 has the north half southwest quarter of Section 12, Township 29 North, Range 12 West.

Q Were the --

A Both of these wells were initially drilled on 40-acre tracts, each of them on 40-acre tracts. During 1955, by the advent of proration, all of the possible acreage available was assigned to these wells which increased each of them to 80 acres. Well Number 3 was administratively assigned an 80-acre unit under NWU52 and Well Number 4 was assigned an 80-acre unit under NWU55.

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Concerning the allowables of these wells, the present allowable on both wells is approximately 500 MCF per month each well. The Cornell Number 3 has produced only token amounts of gas in four months of the last seven months due to prior overproduction. The well at the present time is about in balance, but only in balance because of the recent shut-in period and prior shut-in periods.

The Cornell Number 4 is presently either shut in or producing only small amounts of gas this month and for at least another month due to previous over-production.

I will indicate that the last well, which is in the extreme southeastern corner of this plat, which is the Cozzens Number 3, has been assigned to the west half northeast quarter of Section 20, Township 29 North, Range 11 West. This well was drilled on a 40-acre unit and with the advent of proration assigned all the possible acreage to it, which was an 80-acre unit assigned as NWU76 during 1955. During the past five months, this well has either been shut in or produced only token amounts, and for at least three of these five months, the well was definitely shut in due to prior over-production. The well is now in balance due to either shut-in periods or drastic curtailment of production.

Q Did you give us the present status on the Hart Number 1 Well?

A If I didn't, I might have by-passed it. The Hart

Number 1 Well is shut in and has been shut in for some--I thought

I said that it had been produced only five months out of the last twenty-six months and presently is shut in and we have every reason to believe that this well will be shut in for at least another eleven months under the current allowables.

I say this because we have a curtailment order from the New Mexico Oil Conservation Commission effective October 1st for indefinite shut-in. We have likewise received a smillar curtailment for the Holder Number 1 of the same date, October 1st, and we anticipate that they will be shut in for five or six months before either of these wells are in balance.

- Q You mean an additional five to six months?
- A Yes sir, over and above what it has already experienced.
- Q Do you know whether or not any other wells in this area have been drilled subsequent to June 22, 1948, which was the date that Order Number 748 was promulgated?
- A To the best of my knowledge, all of these wells were drilled prior to that time.
- Q Mr. Mankin, is there any offset acreage to these five wells which is available at this time for pooling, whereby you could increase your unit size and thus increase your allowables for these wells?
- A Well, some of the wells, there is absolutely no acreage that can be pooled. As an example, the Cornell 3 and 4 are completely surrounded as shown by Exhibit D and in Section 12, 29 North, 11 West, all acreage is completely surrounded with either

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80 or 160-acre units. On the Cozzens Number 4, all the --

Q The Cozzens Number --

A I'm sorry, Cozzens Number 3 is assigned to the 80 acres and we are not aware of who is the owner of the east half of the northeast quarter of that same Section 20, 29 North, 11 West, but all of these wells are very old wells drilled many, many years ago and it is hard to determine any kind of pooling in this respect.

Q In other words, if you know who the offset owners are, you have indicated them on this plat?

A Yes, sir. To go further, in the Hart Number 1 in Section 11, that has 40 acres assigned to it. We are aware that A. E. McLain has the south half of the southwest quarter of Section 11, 29 North, 11 West. We cannot determine who has the northeast quarter of that same southwest quarter of Section 11, but that well was started drilling in 1932 and that was completed in 1933 and the equipment in the well is very indeterminate and it was drilled as a dry hole I think for Southern Union Gas and another operator then completed it.

In the Holder Number 1 in Section 29, Township 30 North, Range 11 West, it will be noted here that essentially most of the acreage around the well is either assigned to other wells or are wells that have recently been abandoned due to low allowable or some other problem involved. There is practically no acreage available to be assigned to this 40-acre unit and likewise it is an

extremely old well and one with a similar problem for equities involved.

Q What effect does this shut-in condition have upon these wells?

A Well, the primary effect it has on these wells is that the wells have a tendency to water up when they are shut in for an extended period or when their flow is drastically restricted for an extended period of time.

Q In your opinion, would this shut-in condition cause any additional operating expense?

- A Yes sir, it does.
- Q How much would you estimate?

A I would estimate the additional operating cost caused by watering up normally would be very small due to the necessity of having to flow the wells into the atmosphere or some other method, but primarily, it would require workovers to restore them to production. That would be the principal cost that would be experienced due to long periods of shut-in.

Q Before getting into that aspect, let me ask you this: What would you consider the normal operating expenses for these wells if they did not have to be shut in due to over-production?

A Based upon the company records that are available to me, normal operating expenses appear to be approximately twenty dollars per well per month.

Q Coming back to your statement as to additional workover

costs, what would you estimate to be the approximate expense involved in working one of these wells over where it has been shut in and watered up?

A That, of course, is a very, very hard thing to figure out, but what seems to be a fairly good average is approximately a thousand dollars per well. That could be slightly larger or it could be slightly less.

Q Well, if this minimum or special allowable that you are requesting is not granted, how often would you estimate that you would have to have workovers on these wells?

A From past experience on these wells, there has been very little workover expense providing that the wells were not shut in for periods of longer than six months at a time; however, as I have mentioned a while ago, we received indefinite shut-in notices for the Hart Number 1 and Holder Number 1 and therefore, we can expect that those wells will be shut in for periods of eleven months and five or six months respectively before they are in balance and we have every reason to believe that they will require workovers before we will be able to put those two wells back on the line.

How about the other three wells involved?

A These other three wells have been producing long periods of time but not as long as the other two. They have been producing anywhere from 12 to 17 years and as such, the pressures have declined to such a point that if these wells were shut in due

stimulate the production but if they are not shut in for periods as long as six months that I have mentioned, this would not have happened.

Q What would your solution be to prevent these shub-in periods then due to over-production?

A My suggestion would be to allow for some type of minimum or special allowable to such an extent that the wells would not need to be shut in for any length of time.

Q Well now, there are wells surrounding these five, some of which are on 160-acre spacing and would not have low allowables even though they have an acreage allocation factor of one. Keeping that in mind, would you feel that a minimum allowable for your wells would be unreasonable or unfair to these offset wells?

unfair request because if such other wells that you have mentioned have an acreage factor of one and their allowables are less than what our minimum might be, then the lesser allowable usually is caused by the low deliverability of the wells and have low allowables that might be assigned due to market demand, then they won't be facing essentially the same problem that we have since they probably have enough allowable to keep them from shut-in for any period of time.

Q In addition to the economics which you have discussed pertaining to the operating expenses and workovers, do you feel

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that there is an inequitable basis involved here for Azte: requesting a minimum allowable for these wells?

A Yes sir, there is.

Q Well, would you point out specifically the inequities, for example, in the Holder Number 1 Well?

A That's the first well that I mentioned on Exhibit D. The inequity of the present allowable as it effects this well is that this well has only been allowed to produce 9 months out of the last 21 months due to low allowables. It has actually produced only slightly less than 7234 MCF of gas in twelve months or an average of 343 MCF per month. The allowable during this period was a little over 7300 MCF for the same 21 months, which is an average allowable of only 349 MCF per month. You can see that the production was only slightly less than the allowable so there had to be tremendous amounts of shut-in time and restricted flow periods to keep it even in that balance. Part of this inequity arises since this is the only well on an 800-acre lease, only 40 acres of which are within s productive area. Therefore, we have been required to make minimum royalty payments to the Federal Government under the terms of this lease based upon a dollar an acre per year for the entire 800 acres and merely by paying this minimum royalty, it has increased the operating expense on any wells on this lease and of course this being the only well on the lease, the minimum royalty payments have been averaging as much as \$68.00 per month for this well. This shows, of course, that a minimum allowable would not only prevent

excessive workover costs and reduce operating expenses but would greatly reduce the amount of minimum royalty which we pay on this well.

- Q of course, it is unfortunate that you only have one well on an 800-acre lease, but although normally the payment of minimum royalty would not be a major factor, here it does present itself inequitably since the well was drilled on only 40 acres of land and thus it presented no obligation on the present allowable formula, is that right?
 - A Yes, sir.
 - Q Do you have any inequities surrounding the remaining wells?
- A On the next well, which I have previously mentioned, is the Hart Number 1. This well has been allowed to produce only five months out of the last 26 months due to low allowable. It actually produced only a little over 3600 MCF in that 26 months for a very low average production of 139 MCF per month. The allowable during this period was a little over 6800 MCF during that 26 months for an average of 264 MCF per month. You will note that the production has been essentially about half of the allowable due to prior over-production, so it has only been able to produce half of the allowable and it is still considerably over-produced. As I mentioned before, we can't start producing this well for another 11 months due to the present shut-in order of the Commission.
- Q You previously pointed out the wells in yellow were granted minimum allowables. Does the next well have as much drainage

as the Holder Number 1 Well?

A Yes sir, I believe it does. These wells having been granted the minimum allowable having essentially original acreage factors of 40 or 80 or as much as 160 acres, they now of course would have a minimum allowable which could not be tied down to any acreage or deliverability factors and the allowables that could be produced from those wells depending on the deliverability and the wells on this acreage were given similar relief.

Q Now, in addition to the economic basis and the equitable basis for your requesting this minimum allowable, do you feel that the problem of waste adequately presents itself?

A Yes.

Q Do you feel that if this minimum allowable is not granted, that it will most likely cause premature abandonment of the wells?

A Yes, sir.

Q Do you have any specific examples where wells in this immediate area have been prematurely abandoned because of the present low allowables?

A Yes sir, I have. The well that offsets our Holder

Number 1 which is the BNM Scott Number 1 located in the southwest

quarter of Section 29, Township 30 North, Range 12 West was

abandoned prematurely in this current year due to low allowables

even though it had been previously reported that its deliverability

was 172 MCF per day, thus, I believe leaving gas underground that is

not available to that particular operator.

- Q That's this well immediately to the west of the Holder Well, is that right?
 - A Yes, sir.
- Q You stated that you felt that the Aztec wells might likely be prematurely abandoned if this special allowable is not granted. Would you go into a little bit more detail as to how premature abandonment would constitute waste?

A I believe that premature abandonment, as we see it here in the pool, will not drain the well completely down to a point where there is no gas remaining. I believe that it leaves gas underground which would not be recoverable to a particular operator or concern. However, that gas might be produced if the allowable were great enough to allow the operator enough monetary returns to continue producing the well.

Q Do you know how much money has been spent on all of these wells due to workovers?

A From the records of the company that have been available to me, it appears that at lease \$8,000.00 has been spent on these five wells for workovers.

- Q And you stated previously that the operating cost had been approximately \$20.00 per month per well?
 - A Yes, sir.
- Q Do you feel then the minimum allowable would minimize the necessity for workovers it is were granted within a reasonable

length of time?

A Yes sir, I believe it would. The way the pipeline is to operate this area—and incidentally, the two pipelines in the area are Southern Union Gas Company, which is connected to all of our wells, and El Paso Natural Gas Company, which is connected to some of the other offset wells. The way the two pipelines have to operate with the market and the condition of the pressure of the wells, it makes it rather difficult for them with the fluctuating market demand so it would certainly minimaze these workovers if that could be granted very shortly.

Q Even though it would minimize the necessity of a workover, there is still the strong possibility that they could be shut in and workovers would not entirely be eliminated, would they?

A Yes, that's true but it certainly would minimize that possibility, though.

- Q You have before you there Exhibit E, one through five?
- A Yes, sir.
- Q Did you prepare this exhibit or was it prepared under your supervision?
- A I prepared the exhibit and under my supervision, this draft was made, reproduced.
- Q Now, this Exhibit E, one through five, individually shows the curve for each well, monthly well production, the allowable history and the deliverability curve during the past five

five years, is that correct?

A Yes sir, it does.

Q Would you discuss each one of these plats individually, please, for the Examiner?

A Well, as shown on each of these five plats for each of the wells concerned, it is attempted to show the monthly well production during the last five years shown with a solid line with a small circle indicating the individual monthly well production and joined by the solid line. The dotted line is the monthly allowable figure since proration started on March 1st, 1955, and incidentally, all five wells have been constantly under proration since that time. The third curve at the top of each of these exhibits under E is a dashed and solid line showing the deliverability curve, and what has been done here is take the deliverability test and in the TDT shown on each of these curves, it shows the deliverability curve at the particular time of year in which it was taken and you will note that it gives the time that the deliverability went into effect.

Q With reference to these dates here when you get into the exhibit, I take it 1954 begins prior to the line under which it is written, is that correct?

A Yes, sir. Actually, on the extreme left of the curve under production, the production there would be slightly less than 1500 MCF per month as shown in the figure for January, 1954, then each of these circles would correspond to a month so you would

have twelve circles inside those twenty lines shown under 1954 TDT year's production shown by the monthly production.

Q Thank you.

A The deliverability covers -- as I started to say -- there is a figure at the top of each curve, such as 83 on Exhibit E-3. The first deliverability test is shown and the next deliverability test is --

Q E-3?

A E-1. As shown, that 83 means the deliverability was 83, or 83 MCF per day. That was multiplied by 30 to arrive at a possible productivity or deliverability if it was not in excess of production or allowables. That was filled across each of the times that the deliverability test was taken on the State form and these came out of that particular test. The test is not shown for 1958, only the date is shown there. That was not available and will be put into effect the 1st of February, 1959.

Starting with Exhibit E-1, it will be sufficient to state there that there were considerable periods of shut in on the Holder Number 1 due to low allowables. The deliverability in all cases has been considerably in excess of this production. It is also shown on there that dated October 1st, 1958, by the New Mexico Oil Commission -- I mean, Shut-in Order 443, the well was declared shut in indefinitely and possibly over an extended period of time to get it back on production.

On Exhibit E-2, a similar situation involved itself in that

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there was even more shut-in time on the Hart Number 1 than was shown previously on the one for the Holder Number 1. And again, Shut-in Notice Number 442 was effective October 1st and it will be indefinitely shut in for quite a number of months to come.

Q I note the production is very erratic in this --

A Normally the deliverability test is taken when there has been no shut-in period and on the deliverability test during those periods, normally there is quite a bit of gas production into the line to allow for taking this test. And in cases, you will note, for example, on Exhibit E-2 that the well had been practically shut in for months at a time when the deliverability was taken during 1957 and at the time we had a very large production which was occasioned by the deliverability test.

Q These deliverability tests are required by the State?

A Yes, sir. There are a few other peak periods, but those are primarily market demand peak periods and not always tied in with the particular deliverability test.

On Exhibit E-3, we have the Cornell Number 3 again somewhat erratic of considerable gains. We had eighty acres assigned to this well almost since the advent of proration. It will be noted on Exhibit E-3 that there is no production figure carried from 1954 as at that time the production from Wells 3 and 4 was carried together and was not segregated. That likewise reflects itself on Exhibit E-4 where it is shown that the 1954 production was not segregated.

On Exhibit E-4, it is somewhat the same problem of initial low allowables, but again it was an (-acre unit elmost since the advent of propation. The deliverability curve seems to be extended tremely erratic on this curve, particularly back in 1955. It could be that that was an error because in most cases the production was almost up to the deliverability.

C Is this the Cornell 4?

A On the Cornell 4. The deliverability test that was taken during 1955, it appears that the deliverability test was possibly more nearly 100 MCP per day than 82 MCF per day.

On the last Exhibit Number E-5 for the Cozzens 3, again this is an 80-acre well. The production is shown for the last five-year period and the allowables again are lower, considerably lower than production. However, there were not too many shut-in periods but there was a holding back due to lower allowables in this 80-acre unit.

of 1958 or are those all based upon --

A They are individual monthly production and monthly allowables. You have to amend that for what the allowables might be for November and December, although I understand for November they will be up considerably.

Q What would you consider, Mr. Mankin, as a necessary minimum allowable in order to prevent shut in due to over-production?

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A I would recommend a special allowable of 1500 MCF per month per well.

Q Would you point out the deliverability for each of these wells and if it is able tomake this requested 1500 MCF per month per well?

A I won't endeavor to elaborate too much on this because I believe that Exhibit E, one through five, carries this information, but essentially all five wells have deliverabilities ranging from--present deliverability--from 62, 82, 108,118 and 88, that's MCF per day. And if that is further projected on a 30-day basis, it would mean that the range of the possible deliverability would be from 1850 MCF per month to a maximum of around 3500 MCF per month, so all five wells are above the requested special minimum allowable.

Q Now, we can reasonably foresee the necessity of workovers on some of these wells. Keeping that in mind, is this
requested minimum allowable enough to take care of those workover
costs and the possibility of future workover costs on the other
wells, even though the allowable might be granted?

A Yes.

MR. LLEWELLYN: Mr. Examiner, I have had Exhibits A and B marked, Exhibit A being a copy of Order Number 748, Exhibit B being a copy of Rule 9 of R-565-C. If you would like to have these exhibits, I will enter them, otherwise, I will only enter Exhibits C through E.

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MR. UTZ: The Examiner is aware of the existence of these orders; however, if you care to enter them as exhibits, they will

MR. LLEWELLYN: All right, then at this time I will enter be accepted. Exhibits A through E respectively.

WR. UTZ: In the absence of any objection, they will be accepted.

MR. LIEWELLYN: I have no further questions of Mr. Mankin.

MR. UTZ: Are there questions of the witness?

CROSS EXAMINATION

Q Mr. Mankin, if you had to work these wells over, then BY MR. FISCHER: in the process of working them over, it would be necessary to kill each well, is that right?

A Well, it is not much of a problem to kill the wells. The wells have extremely low pressures, they vary at the present time from 145 pounds to 165 pounds.

- Q Would killing the wells injure the wells in any way, do you think?
 - A Well, it certainly wouldn't help them.
 - Q What kind of fluid would you kill them with, if you

A Well, the wells, of course, possibly would have to be did? worked over with the possibility that there would be water. The wells, of course, then normally would be worked over and would

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possibly be water-fraced. Practically none of these wells have ever been fractured.

MR. FISCHER: Thank you.

A That again is a problem on fracturing these wells because in this particular area in this old type portion of the Fulcher Kutz pool are there is water immediately above the Pictured Cliffs endangering any possibility of much pressure being put on these wells.

MR. UTZ: Any other questions of the witness?

CROSS EXAMINATION

BY MR. COOLEY:

Q To have a profitable operation, couldn't you combine the Cornell 3 and the Cornell 4 and rework the other one and produce a 160-acre allowable out of the remaining well?

A Weil, again those two wells incidentally have deliverabilities respectively of 118 and 108. Either one of those, of course, would be almost up to what a normal 160-acre well would deliver. I will not recommend that these wells--which incidentally, were drilled in early 1942, some 17 and a half years ago--I would not recommend very much workover to try to stimulate the growth of the production from these wells due to the casing that we normally find might get holes in it and it also might further aggravate the water situation. I would rather see this left alone and just stimulated and cleaned out and worked over and casing set wherever necessary aside from

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lines put in and so on.

Q I am not sure you answered my question. Wouldn't it just cut your operating cost for this quarter section in half by plugging one of them and producing en a 160-acre allowable on the other?

A Again, that is an extremely low pressure area as I mentioned previously. These wells originally came in with pressures of 476 pounds to 592 pounds and now they are in the neighborhood of 150 or 60 pounds and with wells with pressures like this, there is always the possibility that at some future time, unless the pipeline pressures go down that you may not be able to get into the line with these pressures without a lot of workover.

- Q Do you think you would get more gas from the reservoir if you produced from both wells than if you produced from one of these?
 - A Yes, sir.
 - Q A substantial quantity?
 - A What do you mean by substantial?
 - Q I mean compared with what remains to be produced there.
 - A ! have not recently considered just what reserves are remaining there but this again is on the edge of these pools. Durability is very small, not only on our wells but other wells and I would not think that we should try to get it out of one well, I think that it would be better to try to get it out of two wells at the present time. We don't know whether these eighty

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acres will actually drain the wells. Of course, they have been going for a tremendous number of years and produced a tremendous amount of gas.

Q How much allowable would you say this well with the 118 MCF have on a 160-acre unit?

A I won't stop to figure it out, I will just take another well that has a deliverability something similar to that. This well has a deliverability of 115 and would have an October allowable of 1260 MCF per month, slightly less than what we are requesting.

Q That's a 160-acre well?

A Yes, sir. That's what you asked me, I believe.

MR. UTZ: Subsequent months would be higher than, that, wouldn't they?

A Yes, sir. Of course, August and September were at an all-time low and it started back up in October and we are anticipating an increase in November, December and January, so these wells on a 160-acre allowable would have considerably more allowable than what I have shown here.

MR. COOLEY: That's all, thank you.

MR. UTZ: Mr. Mankin, are all of the five wells in question here shut in?

A No, I think I mentioned that at least two of them are in balance. The other three are either shut in for slight periods or will be shut in for quite a number of months. I have before me now the books on this particular well, the Holder Number 1.

Through September, it was over-produced 1159 MCF and the gas
allowable for October was 291. As yet, of course, I do not have
the October production but we have, however, had it shut in effective
October 1st, so that it will be, of course, decisased in that
amount, so 940 MCF possibly will be the status as of the end of
October.

The Hart Number 1 at the end of September was over-produced 3205. The allowable for October--of course, this well again is shut in for the entire month of October--the allowable was 253. Subtract 253 from 3205 and it will give you approximately 2948, I believe, which will be the over-produced status as of October 31.

The Cornell Number 3 was practically in balance at the end of September. It was actually only 8 MCF over-produced. The allowable for October is 604. I don't know, of course, what the production will be for October, so its been throttled back tremendously through these last several months so it could be that it will still be in balance or will be over-produced some more with those low allowables.

The Cornell Number 4 at the end of September was overproduced 763 MCF and the October allowable is 641; therefore, it
likewise has been throttled back some more and at the end of
October it will be quite a bit more over-produced

We only are producing some of those wells one, two or three days a month and apparently the Southern Union pipeline

did not hook up the Cozzens Number 3 and it was on an under-produced status and apparently the pipeline d'd not notice it and
it was shut in all during the month of August and the first part
of September and the well at the end of September was under-produced 242 MCF with an allowable for October of 528, but very
likely that allowable will be made up during the month of October.
It easily is capable of considerably more than that as are the
other four wells.

MR. UTZ: Thank you.

MR. FISCHER: Mr. Mankin, your Holder Number 1 and your Hart Number 1, how long does it take for them to stabilize after being shut in?

A Well, the wells have been produced so little that it is pretty hard to say if they ever stabilize. The Hart Number 1 only produced two days in two months in 1958. That is when the deliverability test was taken and then shut in. It has been shut in all of 1958.

MR. FISCHER: I am talking about a stabilized shut-in.

A I am not aware of that particular -- I have the deliverability test with me taken on those wells taken this year and every year from then back but I have not looked at that to see.

Q What I am getting at is, have you noticed any change in decrease of your pressure, maximum shut-in pressure from your wells that have been shut in?

A Of course, there has been a gradual decline of pressure

from the maximum 500 to the present 150 but I couldn't say if this is during shut-in periods. I have not seen those particular graphs.

MR. UTZ: Any other questions of the witness?

MR. LLEWELLYN: I have a couple of questions, please.

REDIRECT EXAMINATION

BY MR. LIEWELLYN:

Q On this problem of the wells being in balance at the present time, was that balance arrived at because of the shut-in condition?

A Well, these wells that are in balance are either wells that have been shut in or have been knocked back to practically no production, so really its been a restriction on our part and the purchasing companies.

Q This throttling back has a detremental effect because the wells have a tendency to water up?

A Yes sir, these wells are maybe produced one or two or three days a month.

Q On this stabilization, particularly on the Holder 1 and the Hart 1 where we can foresee an additional amount of time where it will be necessary for workovers, could you tell whether or not those wells would stabilize without having a workover?

A No. Of course, normally when these wells are shut in for any period of time, it will take a while before they clean themselves of liquids that have accumulated and an awful lot of water that has accumulated in these wells, so I don't believe that I could.

MR. LIEWELLYN: I have no more questions.

MR. UTZ: Mr. Mankin, with reference to your Cornell 3 and 4, the deliverability of these wells is virtually the same, is it not?

A Yes, sir.

MR. UTZ: So if you dedicated 160 acres to either one of those wells, the allowable would be very comparable to the allowables that they have received, both 80's have received over the past—well, since proration, would they not?

A Yes sir, but again we would not like to produce only one well. We would prefer to drill the two wells again as this is a very tight section there and we are not at all certain that one well could completely drain all the acreage in the field, and if we were to abandon one well, the equipment in the well would be practically nil that we could get out.

MR. UTZ: The Cornell 3 and 4 could be put on a 160-acre allowable?

A Yes, sir.

MR. UTZ: It would be squeezing it, though?

A It would squeeze them, yes sir, at the present time, and the allowable that we are requesting up there, each could not quite make the 160-acre allowable that might be assigned to a 160-acre unit.

MR. UTZ: Any other questions of the witness?

If not, the witness may be excused.

Any other statements to be made in this case?

MR. PAYNE: We received a statement from Pan American Petroleum Corporation which reads as follows:

"Pan American Petroleum Corporation wishes to enter a statement in Case 1538 which is scheduled to be heard at the October 22, 1958 Examiner Hearing. We request that the following statement be read into the record of this case:

Pan American Petroleum Corporation is operator of 44 wells in the Fulcher Kutz Pictured Cliffs Pool. We recognize that under certain circumstances increased allowables may be necessary for economic reasons to prevent premature abandonment of certain wells which were drilled on short spacing prior to June 22, 1948. Pan American is opposed to the granting of any increased allowables for these wells if other wells were drilled after that time in the same immediate vicinity at locations which would preclude the assignment of additional acreage to form standard size units for the previously existing wells. We also oppose the granting of increased allowables if additional acreage can be assigned to these wells and no valid attempt has been made to do so. We further believe that increased allowables should only be granted for wells that would qualify under the provisions of the Statutes after examining the economic factors concerning each individual well and then only in the amount necessary to prevent premature abandonment.

Signed, C. L. Kelley."

MR. UTZ: Are there any other statements to be made in this case?

If not, the case will be taken under advisement.

STATE OF NEW MEXICO) : s: COUNTY OF MERNALILLO)

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

WITNESS my Hand and Seal this 27th day of October, 1958, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Notary Public

My Commission Expires: January 24, 1962

I do hereby certify that the foregoing is a complete record of the presentings in the Thanker accring of the No. 153 (heard by me on 153).

New Marico Oil Conservation Commission

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

November 7, 1958

Mr. Gordon Lewellywn Aztec Oil & Gas Company 920 Mercantile Securities Bldg. Dallas 1, Texas

Dear Mr. Lewellywn:

We enclose two copies of Order R-1280 issued November 5, 1958, by the Oil Conservation Commission in Case 1538, which was heard on October 22nd at Santa Fe before an examiner.

Very truly yours,

A. L. Porter, Jr. Secretary - Director

OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY TEX GIL COMSERVATION COMMISSION OF NEW MEXICO FOR THE PURPOSE OF CONSIDERING:

> CASE NO. 1538 Order No. R-1280

APPLICATION OF AZTEC OIL & GAS COMPANY FOR AN ORDER GRANTING SPECIAL ALLOVABLES FOR CERTAIN WELLS IN THE FULCERR KUTZ-PYCTURED CLIFFS POOL IN SAN JUAN COUNTY, NEW MEXICO, IN EXCEPTION TO THE SPECIAL RULES AND REGULATIONS FOR SAID POOL

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on October 22, 1958, at Sunta Pe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Bules and Regulations.

MOV, on this ______ day of Movember, 1958, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Astec Oil & Gas Company, is the owner and operator of the following-described wells:

Holder Well No. 1	SE/4 NY/4	Sec. 29	T-30-N,	E-12-W
Hart Well No. 1	HW/4 SW/4	Sec. 11	T-29-H,	R-12-W
Cormell Well No. 3	8/2 SW/4		T-29-H,	
Cornell Well No. 4	X/2 SY/4		T-29-H,	
Consess Well No. 3	W/2 NR/4		T-29-H.	

all in San Juan County, New Mexico.

(3) That all of the above-described wells were drilled prior to June 22, 1948, on which date Order No. 748 was entered by the Commission changing the drilling and spacing units for gas wells from 40 acres to 160 acres.

-2-Case No. 1528 Order No. R-1280

- (4) That the applicant seeks as order granting each of the above-described wells a special allowable of 15G3 MCF per mouth in exception to the Special Rules and Regulations for the Pulcher Kuts-Pictured Cliffs Pool on the ground that said wells will be prenaturely abandoned unless such special allowables are assigned thereto.
- (5) That the preponderance of the evidence presented in this case indicates that the above-described wells will be prematurely abandoned, thereby causing waste, unless they are granted an exception to the proration formula set forth in the Special Rules and Regulations for the Fulcher Kuts-Pictured Cliffs Pool.
- (6) That is order to prevent pressure abandonment and resulting waste, the above-described wells should be assigned as allowable equal to their capacity to produce or 1800 MCF per month, whichever is loss.

IT IS TERREPORE ORDERED:

That the following-described wells shall be assigned as allowable equal to their capacity to produce or 1500 MCF per month, whichever is less, effective November 1, 1956:

Molder Well No. 1	SE/4 WW/4	Sec. 29, T-30-N, R-12-W
Hart Well No. 1	WW/4 8W/4	Sec. 11, T-29-N, R-12-W
Cornell Well No. 3	8/2 SW/4	Sec. 12, T-29-M, R-12-W
Cornell Well Mo. 4	1/2 SW/4	Sec. 12, T-29-N, R-12-W
Conzens Well No. 3	W/2 ME/4	Sec. 20, T-29-H, R-11-W

all in San Juan County, New Mexico.

DOME at Santa Pe, New Mexico, on the day and year herein-above designated.

1r/

STATE OF NEW MEXICO OIL COMSERVATION COMMISSION

EDWIN L. MECHEM, Chairman

MURRAY E. MORGAN Samber

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

OIL CONSERVATION COMMISSION SANTA FE, NEW MEXICO

	Date 10-24-58
CASE NO.	1535. HEARING DATE 10-22-56
My recon	amendations for an order in the above numbered case(s) are
1. L	amendations for an order in the above numbered case(s) are ows: aut experioral 7 a 1500 McF/M. allowable aut ex
to	agter as Exibit
<i>a</i> (Like June
^ '	# "C".
3.	# "C". Make order effective Movembe 1, 1958.

Staff Member

PAN AMERICAN PETROLEUM CORPORATION

MALI OFFICE COC Roswall, New Mexico October 20, 1958

1977 (日 福 3<u>1.19</u> File:

F-677-986.510

Subject: NMOCC Case 1538 Minimum Allowables

Fulcher Kutz Pictured Cliffs Field

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

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

Gentlemen:

Pan American Petroleum Corporation wishes to enter a statement in Case 1538 which is scheduled to be heard at the October 22, 1958 Examiner Hearing. We request that the following statement be read into the record of this case:

Pan American Petroleum Corporation is operator of 44 wells in the Fulcher Kutz Pictured Cliffs Pool. We recognize that under certain circumstances increased allowables may be necessary for economic reasons to prevent premature abandonment of certain wells which were drilled on short spacing prior to June 22, 1948. Pan American is opposed to the granting of any increased allowables for these wells if other wells were drilled after that time in the same immediate vicinity at locations which would preclude the assignment of additional acreage to form standard size units for the previously existing wells. We also oppose the granting of increased allowables if additional acreage can be assigned to these wells and no valid attempt has been made to do so. We further believe that increased allowables should only be granted for wells that would qualify under the provisions of the Statutes after examining the economic factors concerning each individual well and then only in the amount necessary to prevent premature abandonment.

Yours very truly,

PAN AMERICAN PETROLEUM CORPORATION

Relley

District Superintendent

Case 1538

AZTEC DIL & GAS COMPANY

MAN DE TO SEG MERCANTILE SECURITIES SLOS.

DALLAS 1, TEXAS

1205年2月111105

September 26, 1958

J 38

REGISTERED MAIL RETURN RECEIPT REQUESTED

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

> Re: Application of Aztec Oil & Gas Company for an Examiner Hearing before the Oil Conservation Commission for the Granting of an Exception to Rule 9 of Order No.R-565-C, as amended by Order No. R-967, allowing Applicant a Minimum Allowable for Certain Gas Wells in the Fulcher Kutz-Pictured Cliffs Gas Pool, San Juan County, New Mexico to Permit Production at a Rate Sufficient to Prevent the Premature Abandonment of Such Wells:

Gentlemen:

Aztec Oil & Gas Company, hereinafter referred to as "Applicant" hereby submits, in triplicate, its application for an Examiner Hearing before the Oil Conservation Commission of New Mexico to consider the granting of an exception to Rule 9 of Order No. R-565-C, as amended by Order No. R-967, which rule provides the gas allocation formula for the Fulcher Kutz-Picturea Cliffs Gas Pool, in San Juan County, New Mexico, to provide for and grant to Applicant a Minimum Allowable, as provided for under Article 65-3-14(d) N.M.S.A., for certain wells in said gas pool. In support of this application, Applicant respectfully states and shows the following:

Dod's So Do

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That Applicant is the owner and Operator of the following described natural gas wells all of which are capable of producing natural gas from the Pictured Cliffs Formation.

uraı	sas from one	Picture	ed Cillis Formation.		والمعادين والمساحد الم
Well	Name		Designated Unit	No. Acres	had brout.
(I)	Cozzens #3	βK	$\frac{\text{T-29-N, R-11-W}}{\text{Sec. 20: } W_{2}^{1} \text{NE}_{4}^{1}}$	80.00 33	APR. 1/67
- (5) -	Cozzens #1	15	T-29-N, R-11-W Sec. 20: $SW_{4}^{-}NW_{4}^{-}$, $E_{2}^{-}NW_{4}^{-}$	120.00 137	1918,3524
-(3)	Hart #1	FK	T-29-N, R-12-W Sec. 11: $NW_{4}^{T}SW_{4}^{1}$		MAY 458
(4)	Holder #1	FK	T-30-N, R-12-W Sec. 29: SF 1NW 1	40.00 62	APR. 630 250KH
(5)	Cornell #3	FK	T-29-N, R-12-W Sec. 12: $S_2^{\frac{1}{2}}SW_4^{\frac{1}{4}}$	80.00 /18	500411
4 6)	Cornell #4	FΚ	T-29-N, R-12-W Sec. 12: N ₂ SW ₁	80.00 //3	APR 1543
				·	

2.

That at the date of this application all of such wells are shut-in for the purpose of making up overproduction previously incurred.

3.

That Commission Order No. 48, dated June 22, 1948, established drilling and spacing units of 160 acres for the area involved in this application.

4.

That all of the above described wells were drilled prior to Order No. 748 at which time it was legal and customary to drill such wells upon 40 acre tracts; therefore, Applicant contends that since Rule 9

of Order No. R-565-C, as amended by Order R-967, does not contain a provision for a minimum allowable co prevent premature abandonment of wells, it is prejudicial to Applicant's interest, and that the Commission cannot and should not penalize Applicant by virtue of the acreage attribution factor in the proration formula since the subject wells were drilled prior to the promulgation of Order No. 748 establishing the present 100 acre spacing.

That under the equitable relief provided in Article 65-3-14 N.M.S.A., Applicant is entitled to an exception to Rule 9 of Order No. R-565-C, as amended by Order No. R-967, by allowing Appricant a Minimum Allowable under said rule for each of the above described wells in order to prevent the premature abandonment thereof.

6.

That attached hereto as Exhibit "A" is, to the best of Applicant's knowledge, a list of the owners of oil and gas leases which offset the above described wells.

WHEREFORE, Aztec Oil & Gas Company respectfully requests that an Examiner Hearing at Santa Fe, New Mexico, be set as early as possible in October, 1958; that due notice thereof be given in accordance with the laws of the State of New Mexico and the Rules and Regulations of the Oil Conservation Commission; and, that upon such hearing, Applicant be granted an exception to Rule 9 of Order No. R-565-C, as amended by Order No. R-967, to provide for and grant to Applicant a Minimum Allowable under said rule for each of the wells hereinabove described.

Respectfully submitted,

AZTEC OIL & GAS COMPANY

Quilman B. Davis Its Attorney

APPROVED النجيا .0.2

New Mexico Oil Conservation Commission Santa Fe, New Mexico

Page 4 September 25, 1958

STATE OF TEXAS)
COUNTY OF DALLAS)

Quilman B. Davis, being first duly sworn, hereby states that he is General Attorney of Aztec Oil & Gas Company, the applicant in the foregoing application; that he has executed said application on behalf of Aztec Oil & Gas Company; that he has read said application and, to the best of his knowledge, information and belief, all statements of fact therein contained are true and correct.

Duilman & Sava Quilman B. Davis

Sworn to and subscribed before me, the undersigned authority, this 26th day of September, 1958.

My Commission Expires:

June 1, 1959

Notary Public in and for Dallas County, Texas

EXHIBIT "A"

OFFSET OPERATORS:

- (1) B.M.N.S. Company Attention: L. G. Stearns Star Route Farmington, New Mexico
- (2) T. F. Harrigan 3400 Northwestern Street Oklahoma City, Oklahoma
- (3) El Paso Natural Cas Company P. O. Box 997 Farmington, New Mexico
- (4) A. E. McClane 1900 Mercantile Dallas Building Dallas, Texas
- (5) Producing Royalty, Inc. 1401 Great Plains Life Building Lubbock, Texas
- (6) Summit Oil Company 1104 Burt Building Dallas, Texas
- (7) Southern Union Gas Company 1104 Burt Building Dallas, Texas

DOCKET: EXAMINER HEARING OCTOLOR 22, 1958

Cil Conservation Commission 9 a.m. Mabry Hall, State Capitel, Santa Fe

The following cases will be heard before Elvis A. Utz, Examiner:

- Application of Humble Oil & Refining Company for the amondment of a unit agreement. Applicant, in the above-styled cause, seeks an order amending the South Four Lakes Unit Agreement approved by Order R-710 to enlarge the unit area to include the N/2 SW/4 of Section 1, Township 12 South, Range 34 East, Lea County, New Mexico.
- Application of Tennessee Gas Transmission Company for permission to commingle the oil produced from two separate eil poels. Applicant, in the above-styled cause, seeks an order authorizing it to commingle the oil produced from its State A. A. Kemnitz "B" Well No. 5, located in the SW/4 NW/4 of Section 25, Township 16 South, Range 33 East, Les County, New Mexico, from the Kemnitz-Wolfcamp Pool and an undesignated Pennsylvanian (Cisco) pool. Applicant proposes to separately meter the production from each zone prior to commingling.
- CASE 1528:

 Application of Tennessee Gas Transmission Company to commingle the production from two separate oil pools from three of its state leases. Applicant, in the above-styled cause, seeks an order authorizing it to commingle the oil produced from the Kemnitz-Wolfcamp and Kemnitz-Cisco Pools from the wells on its State "B", State "C" and State "D" Leases located in Sections 21 and 28, Township 16 South, Range 34 East, Lea County, New Mexico.
- Application of Kersey & Company for permission to commingle production from two separate oil pools. Applicant, in the above-styled cause, seeks an order authorizing it to commingle the production from the Grayburg-Jackson Pool and the Fren Pool from two wells located on the SE/4 SW/4 of Section 16, Township 17 South, Range 31 East, Eddy County, New Mexico. Applicant does not propose to meter the production from each nool.
- CASE 1530:

 Application of Rice Engineering & Operating, Inc. for an order authorizing a salt water disposal well. Applicant, in the above-styled cause, seeks an order authorizing the disposal of produced salt water through its E-M-E SWD Well No. A-32 to be located 1320 feet from the North and East lines of Section 32, Township 21 South, Range 36 East, Lea County, New Mexico. Applicant proposes to inject the produced salt water into the San Andres formation in the interval from 4250 feet to 4600 feet.

Application of Rice Engineering & Operating, Inc. for an order authorizing a salt water disposal well. Applicant, in the above-styled cause, seeks an order authorizing the disposal of produced salt water through Amerada Petroleum Corporation's Adkins Well No. 2, located 990 feet from the South line and 330 feet from the West line of Section 5, Township 20 South, Range 37 East, Lea County, New Mexico. Applicant proposes to inject the produced salt water into the San Andres formation in the interval from 4490 feet to 4950

Application of Sunray Mid-Continent Oil Company for an order authorizing a salt water disposal well. Applicant, in the above-styled cause, meeks an order authorizing the disposal of preduced salt water through its Hobbs "G" Well No. 1, located 1980 feet from the North and West lines of Section 36, Township 9 South, Range 33 East, Lea County, New Mexico. Applicant proposes to inject the produced salt water through the well bore into the Pennsylvanian formation in the interval from 9834 feet to 9865 feet.

CASE 1533: Application of El Paso Natural Gas Products Company for a dual completion. Applicant, in the above-styled cause, seeks an order authorizing it to dually complete its Frontier No. 1-B Well, located 890 feet from the South line and 890 feet from the East line of Section 9, Towns ip 27 North, Range li West, San Juan County, New Mexico, in such a manner as to permit the production of oil from an undesignated Gallup oil pool and the production of gas from an undesignated Dakota gas pool through parallel strings of tubing.

CASE 1534:

Application of Zapata Petroleum Corporation for permission to commingle production from nine non-contiguous state leases. Applicant, in the above-styled cause, seeks an order authorizing it to commingle the production from nine separate state leases in the Vacuum Pool, all in Townships 17 and 18 South, Range 35 East, Lea County, New Mexico.

CASE 1535:

Application of Carper Drilling Company for permission to commingle the oil produced from two separate oil pools.

Applicant, in the above-styled cause, seeks an order authorizing it to commingle the production from three wells completed in the Corbin Pool and one well completed in the Maljamar Pool, all on its Wyatt lease in Sections 33 and 34, Township 17 South, Range 33 East, and Section 5, Township 18 South, Range 33 East, Lea County, New Mexico, and to ascertain the production from each well by means of periodic tests.

Application of Shell Oil Company for permission to commingle the oil produced from four separate leases. Applicant, in the above-styled cause, seeks an order authorizing it to commingle the production from four separate state leases in Sections 8 and 9, Township 16 South, Range 34 East, Hume-Queen Pool, Lea County, New Mexico.

Jocket No. 28-58

CASE 1537:

Application of Pure Cil Company for a dual completion. Applicant, in the above-styled cause, seeks an order authorising it to dually complete its South Vacuum Unit No. 2-35 Well, located 1980 feet from the South line and 660 feet from the East line of Section 35, Township 18 South, Range 35 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the South Vacuum-Devonian Pool and gas from an undesignated McKee gas pool through parallel strings of tubing.

CASE 1538:

Application of Aztec Oil & Gas Company for the assignment of minimum allowables to certain gas wells in the Fulcher Kutz-Pictured Cliffs Gas Pool, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order assigning minimum allowables to the following described gas wells in the Fulcher Kutz-Pictured Cliffs Gas Pool in order to prevent premature abandonment of said wells:

Commens No. 3 and No. 4 Wells, both in Section 20, Township 29 North, Range 11 West; Hart No. 1 Well, Section 11, Township 29 North, Range 12 West; Holder No. 1 Well, Section 29, Township 30 North, Range 12 West; Cornell No. 3 and No. 4 Wells, both in Section 12, Township 29 North, Range 12 West;

all in San Juan County, New Mexico.

CASE 1539:

Application of T. J. Sivley for an exception to the casing requirements for the potash-oil area in Eddy and Lea Counties, New Mexico. Applicant, in the above-styled cause, seeks an order authorizing an exception to the casing requirements for the potash-oil area as set forth in Order R-III-A for its Federal-Silver No. 1, an exploratory well to be located 1980 feet from the South and East lines of Section 28, Town-20 South, Range 34 East, Lea County, New Mexico. Applicant proposes to drill with cable tools to the Yates formation. The casing program of applicant is as follows:

13-3/8" Casing in top of red bed at approximately 70 feet.

10-3/4" Casing as cave string to about 700 feet.

8-5/8" Casing, this being the water shutoff string to approximately 1250', but in any event below water.

5-i/2" Casing to he set at a point selected by operator above pay zone expected to be encountered at 3625', but in no event to exceed a depth greater than 600 feet below the base of salt. That the applicant should be permitted to pull all casing except the 5-i/2" production string in the event that commercial oil or gas is found.

-4-Docket No. 28-58

CASE 1540:

Application of E. P. Campbell for an exception to the commission Rules and Regulations. Applicant, the above-styled cause, seeks an order granting an exception Rule 505 of the Commission Rules and Regulations and assigning an allowable proportional factor of 1.33 for the oil pool in the Abo formation discovered by applicant's Cockerham No. 1 Well, NE/4 NE/4 Section 34, Township 18 South, Range 26 East, Eddy County, New Mexico, even though the depth of the casing shoe is 4205 feet. The top of the Abo pay is at approximately 5280 feet in the above-described well.

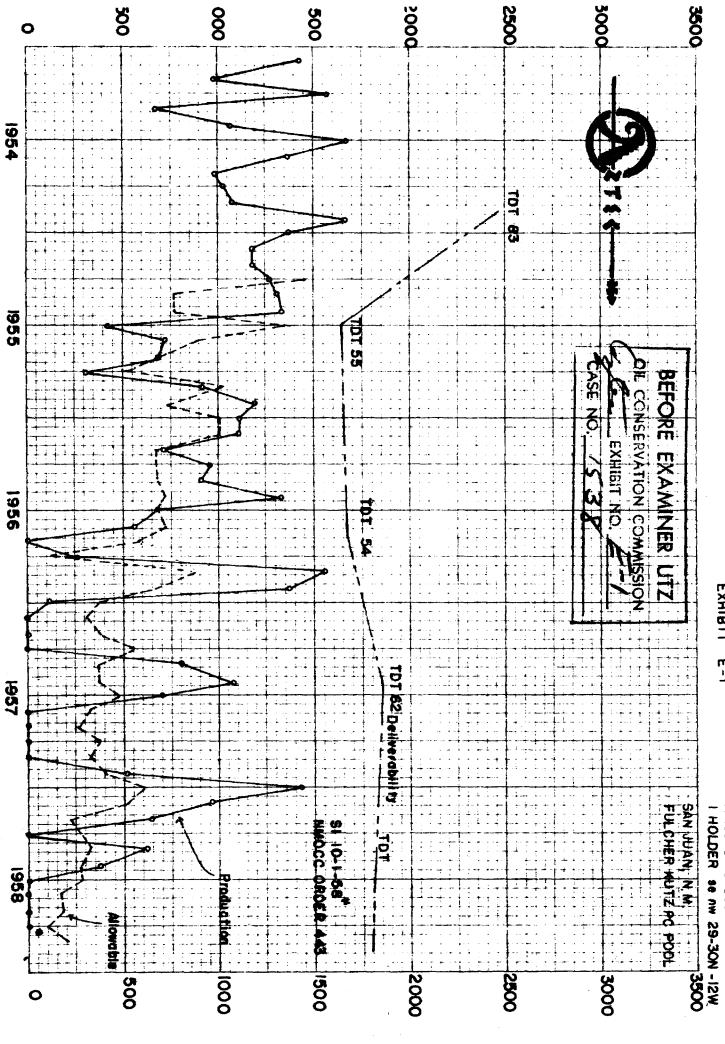
CONTINUED CASE

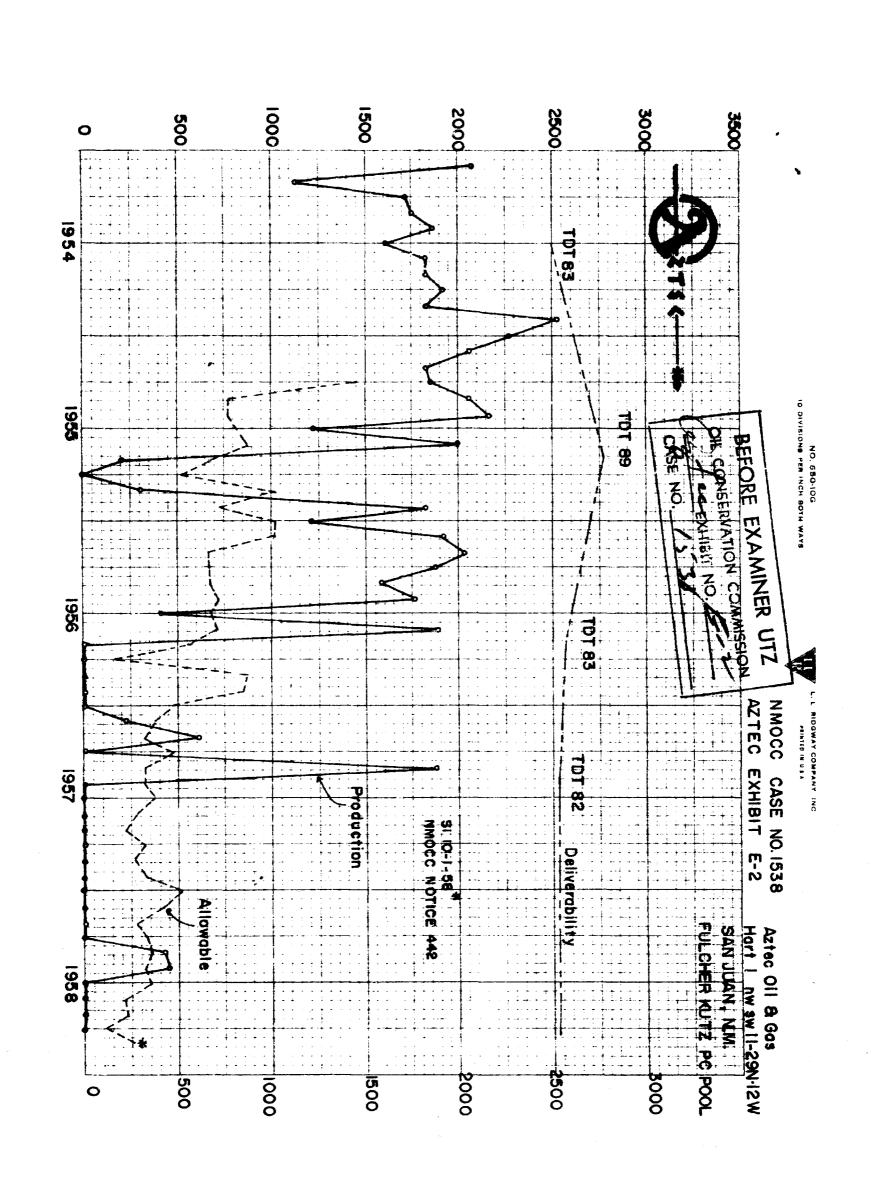
CASE 1516:

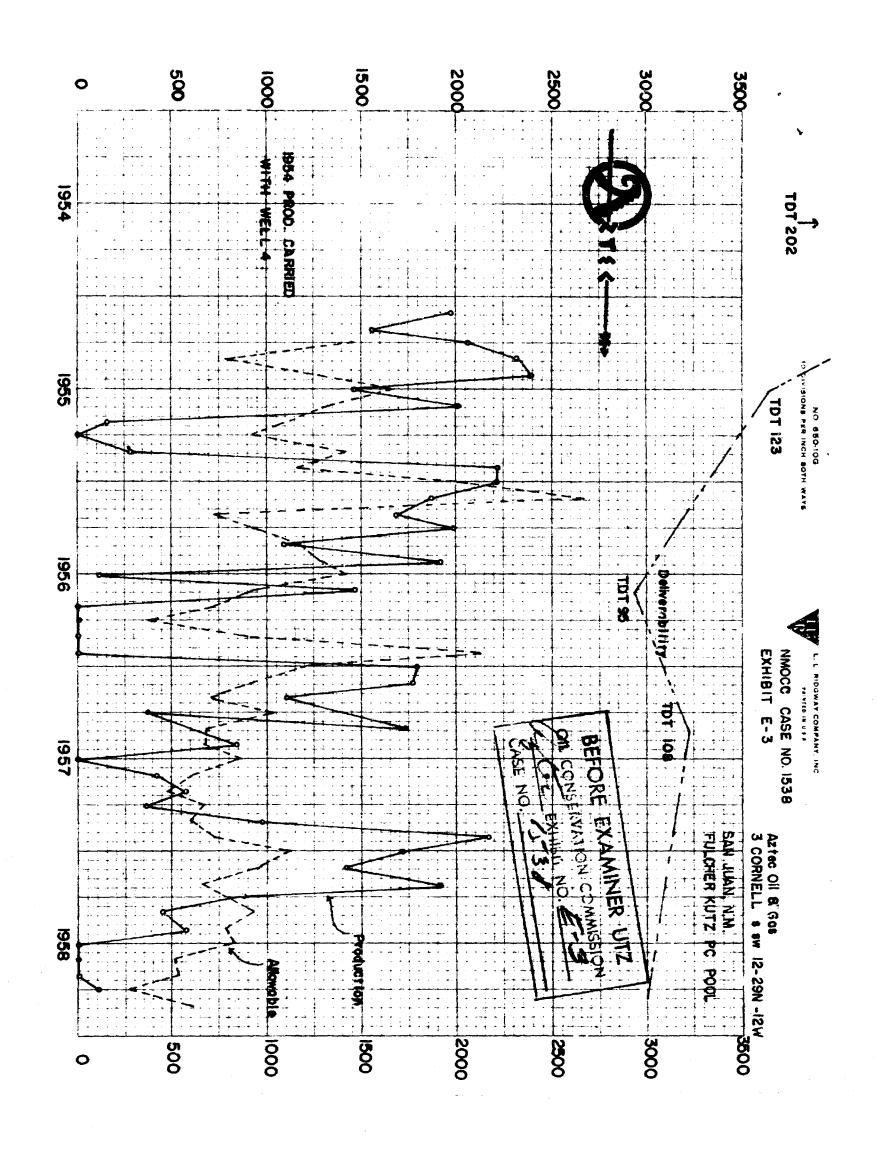
Application of El Paso Natural Gas Company for two nonstandard gas proration units and for the approval of one unorthedex gas well location. Applicant, in the abovestyled cause, seeks an order establishing a 120-acre nonstandard gas proration unit in the Jalmat Gas Pool consisting of the N/2 SW/4 and the SW/4 SW/4 of Section 4, Township 25 South, Range 37 East, said unit to be dedicated to the applicant's Wells Federal No. 3 Well located 1980 feet from the South and West lines of said Section 4. Applicant further seeks the establishment of a 200-acre non-standard gas proration unit in the Jalmat Gas Pool consisting of the SE/4 SW/4 of Section 4 and the NW/4 of Section 9, Township 25 South, Range 37 East, Lea County, New Mexico, said unit to be dedicated to the applicant's Wells Federal No. 11 Well located 430 feet from the South line and 2317 feet from the West line of said Section 4. Applicant further seeks approval of the unorthodox gas well location of the said Wells Federal No. 11 Well.

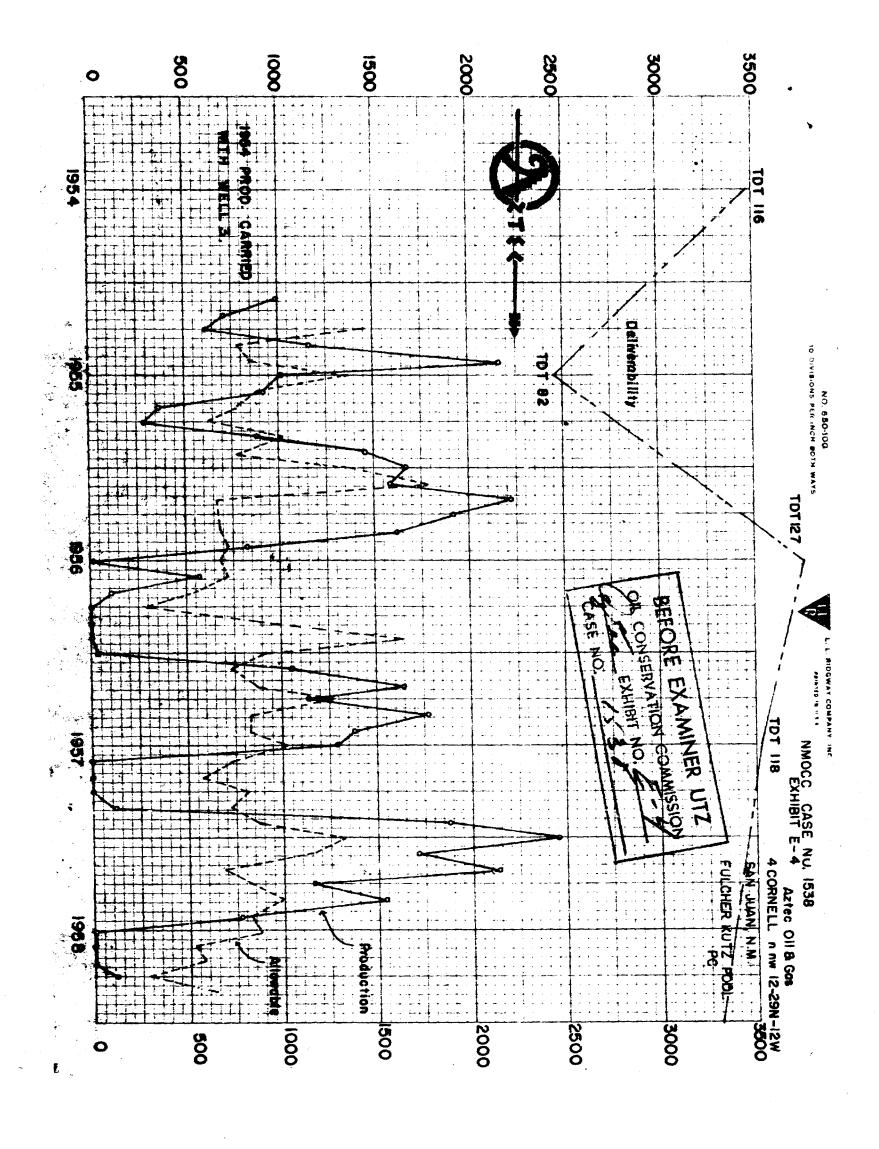


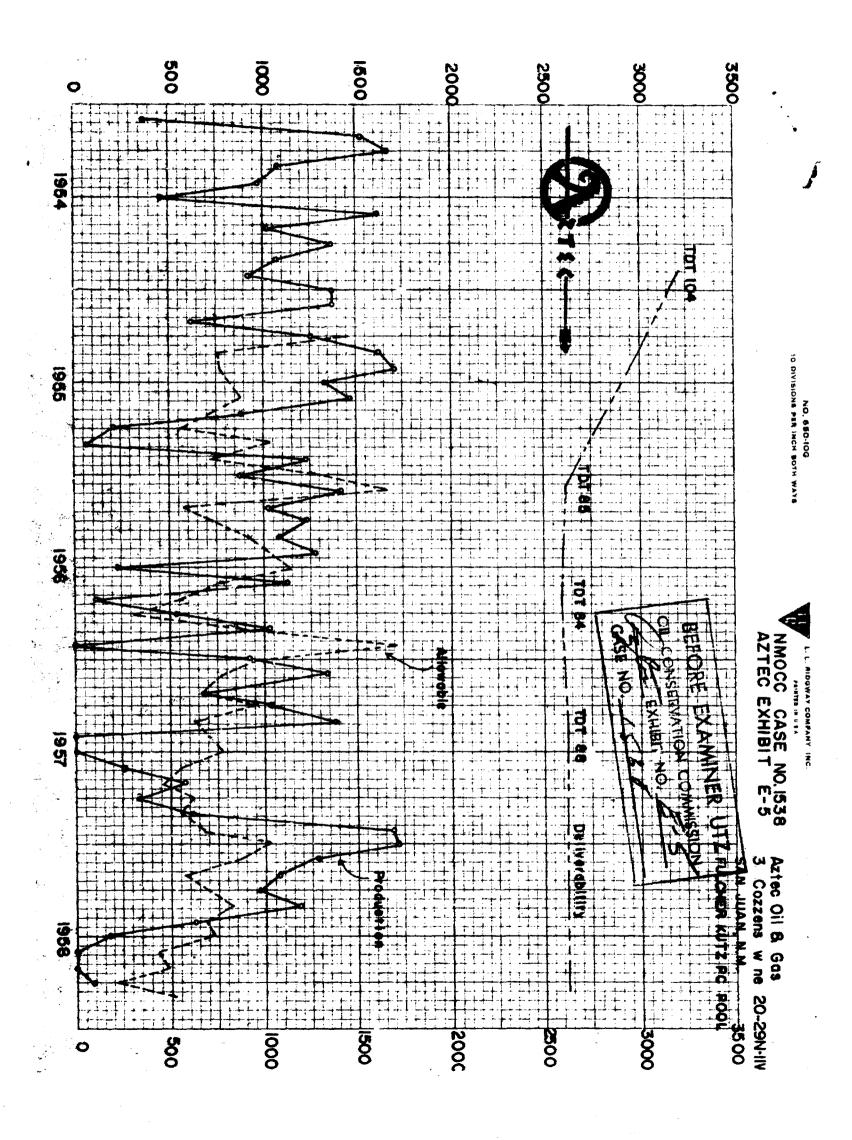












STATE OF HIS OFFICE OF THE STATE OF

IN THE MATTER OF A MARING CALLED BY THE OIL COMMENTATION CONCENSION OF THE STATE OF MAN MERICO FOR THE PURPOSE OF COMMINGENSION.

CASE NO. 126

IN THE NATTER OF THE PRITTION OF THE SOUTHERN UNION PRODUCTION COMPANY FOR AN ORDER PIXING THE SPACING OF WILLS IN THE EDITZ CANYON FULCION BASIN GAS FEXLES OF SAN JUAN COUNTY (AS THEY MAY BE EXTENDED) ON THE BASIS OF ONE WELL TO A DRILLING UNIT OF APPROXIMATELY 160 ACRES WITH SUITABLE PROVISIONS FOR ANY RELATED MATTERS, INCLUDING SPECIAL APPROVAL OF NONCOMPORNING WILL LOCATIONS WHERE NECESSARY.

ORDER OF THE COMMISSION

BY THE COMMISSION:

VHEREAS, after due notice as required by law the Commission held a public hearing in Santa Fe on February 17, 1943, to consider the petition of Southern Union Production Company for the adoption of an order fixing the spacing of wells hereafter drilled in the Entr Canyon-Fulcher Basin gas field, San Juan County, New Mexico, and related matters; and

WHEREAS, the Commission having considered the evidence adduced at such hearing, pertinent information otherwise available in the Commission's records, the statements and viewpoints expressed by interested parties at or in connection with such hearing.

FIEDS, from the evidence adduced:

- A. That the Kuts Canyon and Fulcher Besin gas pools are productive of natural gas from the Pictured Cliffs sandstone formation, that such pools are contiguous and from all information available to date appear to be one continuous gas producing area or pool in the Pictured Cliffs sandstone;
- B. That such pool has produced natural gas for more than 15 years, during which time the average of well-head pressures has declined approximately 200 P.S.I. gauge.
- C. That by reason of rules of this Commission previously applicable to the pool, of the general practices of certain operators in the area and of policies of the U.S. Geological Survey, a fairly uniform spaning of one well to 160 acres has heretofore prevailed throughout most of the pool;
- D. That one well will, in view of present evidence, economically and effectively drain the recoverable gas from at least 160 acres of the pool, and, accordingly, that more dense spacing in the pool may be conductive to waste and will unmecessarily increase the costs of development and production.
- F. That for wells hereafter drilled, a general spacing pattern of one centrally located well on a unit of 160 cores, substantially in the shape of a square, is required to protect the equities of those having interests in wells heretofore drilled on 160-acre tracts, for which general spacing pattern the pooling of properties should be encouraged when necessary;
- F. That the gas productive area of the pool is likely to be substantially more extensive than the presently coveloped portion thereof;

That, while the Euts Canyon-Prices from the State and Control of the Control of the Interest of all the operation or includers within the area during that period. In addition, properties, helding end/or leases of an undetermined number of small landowners or lease-holders, whose total acreage is either less than 160 acres or includes portions of 160 acres tracts, still exist within the pool-boundaries, as herein defined. The number of such holdings will be likely to increase as the pool boundaries are extended by subsequent drilling.

THEREFORD, IT IS ORDERED that, effective on the date of this order, the following rules and regulations shall apply to wells hereafter drilled or completed or recompleted to the Pictured Cliff pool in the Kutz Canyon-Fulcher Basin area, defined below; in addition to the Commission's applicable rules, regulations and orders heretofore or hereafter adopted to the extent not in conflict herewith:

Section 1. No well shall be drilled or completed or recompleted, and no Notice of Intention to Drill or drilling permit shall be approved, unless

- (a) such well be located on a designated drilling unit of not less than one hundred sixty (160) acres of land, more or less, according to legal subdivisions of the United States Land Surveys, in which unit all the interests are consolidated by pooling agreement or otherwise and on which no other well is completed, or approved for completion, in the pool;
- (b) such drilling unit be in the shape of a square except for normal variations in legal subdivisions of the United States Lands Surveys; and
- (c) such well be located on its arilling unit at a distance from the unit boundaries of not less than nine hundred ninety feet (990); provided, if such proposed new well is to be an offset to any then producing gas well completed in the pool, or the drilling of which has authorized prior to the effective date of this order, located on an adjoining unit in which the interests are not identical with those in the unit proposed to be drilled, such proposed well may be located and drilled offsetting the existing well and as close to the common unit boundary line as the well to be so offset.

Section 2. Any provision herein to the contrary notwithstanding, the Commission may, and in proper cases will, on petition or on its own motion, by order entered after notice and hearing to the extent required by law, grant exceptions and permit drilling locations to become effective, thereby authorizing the drilling or completion of wells in the pool not conforming to the requirements of Section 1 above if the Commission shall find that the property sought to be drilled would be deprived of an opportunity to produce gas from the pool in the absence of such exception, and shall also find one or more of the following conditions to exist:

(a) that consolidation or pooling of the property equal to be drilled with necessary adjoining land, notwithstanding diligent efforts unde in good faith, is impossible or impractical;

(d) that by reason of the location of the property
to be drilled along the southwest or northeast
flank of the developed portion of the area, it
appears improbable that gas can be produced in
paying quantities if the well conforms to Section
1, in which case the Commission may modify the
requirements of Section 1 as to such well to the
extent it deems necessary.

Irrespective of such findings, if the Commission shall find that by reason of all direcumstances an exception is proper in the prevention of waste, or undue drainage between properties, or otherwise in the exercise by the Commission of its jurisdiction over the spacing of wells or its other powers conferred by law, express or implied.

IT IS FIRTHER ORIERED that, in accordance with recommendations of the Morthwestern New Mexico Momenclature Committee approved and adopted by this Commission, the Pictured Cliff gas producing pool in the Kutz Canyon-Filcher Basin area, to which this order applies, is defined to include the following described land in San Juan County, New Mexico:

Township 77 Worth, Range 10 West Sec. 3 V/2 All

Township 28 North, Bangs 10 West Secs. 7 & 8 All Sec. 15 W/2 Secs. 16,17,18,19 00,21 All Sec. 22 W/2 Sec. 27 W/2 Secs. 28,29,30,31, 32,33 All Sec. 34 W/2

Township 28 North, Benge 11 West Secs. 9,10,11,12,13 14,15,16,22,23,24,25,26 411

Township 29 North, Resign 11 Vest Beas 6,73,16,17,18, 19,20,21,32,26,27,28, 29,10,31,32,33,34,35, 36 All

Township '9 North, Range 12 West Spen, 1,2,5; 1,6,9, 10,11,12,11; 14,15,23,

Service Borts, Bases 11 Vent

Therefore and adopted by the Oll Conservables Securiorism that 22 day of June

all the state of Bolomore

Axtec Exhibit "1-1"

Order No. R-565-C

EXHIBIT NO. B-

Commission shall include it as provide achedule the pic wells in the Fulcher Kutz-Pictured Cliffs Pool delivering to a gas transportation facility, or lease gathering system, and shall include in the proration schedule of said pool any well which the Commission finds is being unreasonably discriminated against through denial of access to a gas transportation facility which is reasonably capable of handling the type of gas produced by such well. The total allowable to be allocated to said pool each month shall be equal to the sum of the preliminary or supplemental nominations, whichever is applicable, together with any adjustment which the Commission deems advisable.

If, during a proration month, the acrease assigned a well is increased, the operator shall notify the Secretary-Director in writing of such increase. The increased allowable assigned the gas proration unit for the well shall become effective on the first day of the month following receipt of the notification by the Director. All communications shall be mailed to the Director, at Box 871, Santa Fe, New Mexico.

RULE 9: The monthly gas allocation to the Fulcher Kutz-Pictured Cliffs Gas Pool shall be divided and allocated among the wells connected to a gas transportation facility in the following manner:

The product obtained by multiplying each well's acreage factor by the calculated deliverability (expressed as MCF per day) for that well shall be known as the "AD" factor for that well. The acreage factor shall be determined to the nearest hundredth of a unit by dividing the acreage within the proration unit by 160. The "AD" factor shall be computed to the nearest whole unit.

A tentative allocation shall be made by dividing seventy-five percent (75%) of the pool allocation among the wells in the proportion that each well's "AD" factor bears to the sum of the "AD" factors of all wells in the pool.

The remaining twenty-live percent (25%) of the pool allocation shall be divided among wells in the proportion that each well's acreage factor bears to the sum of the acreage factors of all wells in the pool.

When the tentative allowable received by a well is in excess of its known producing ability, the well shall be classed as a marginal well and its allowable limited to its known producing ability. The sum of the difference between the tentative allowables and the limited allowables of all marginal wells on the proration schedule shall be reallocated to the non-marginal wells by application of the same formula. If such reallocation shall result in placing any other well within the marginal classification, the difference between the tentative allowable and the limited allowable of such marginal well shall be redistributed by application of the same formula until no well has received an allowable in excess of its known producing ability.

Any well having a calculated allowable less than that of the largest allowable assigned a marginal well shall be assigned an allowable equal to the largest marginal allowable; provided that the allowable so assigned shall not be greater than the well's shally to produce. If the allowable so assigned is greater than the well's shill be limited to its

ability to produce. All wells with allowables so assigned that! he classified up marginal walls.

RULE 10: The calculated deliverability at the "deliverability pressure" shall be determined in accordance with the provisions of Order R-333-C.

Spiencing of Production:

RULE II: Underproduction: The hours of 7 o'clock a.m., M.S.T.
February I, and 7 o'clock a.m., M.S.T., August i, shall be known as balancing dates and the periods of time bound by these dates shall be known as gas proration periods. In order to effectively administer the prorationing of gas in the Fulcher Kutz-Pictured Cliffs Pool, it is advisable to have a portion of each proration period include both summer and winter months. Therefore, the first proration period shall commence on March 1, 1955, and shall continue for a period of eleven months until February 1, 1956. Future proration periods shall commence on the dates set out above. The amount of current gas allowable remaining unproduced at the end of each proration period shall be carried forward to and may be produced during the next succeeding proration period in addition to the normal gas allowable for such succeeding period; provided, however, that whatever amount thereof is not made up within the first succeeding proration period shall be cancelled.

If it appears that such continued underproduction has resulted from inability of the well to produce its allowable, it may be classified as a marginal well and its allowable reduced to the level of the well's ability to produce.

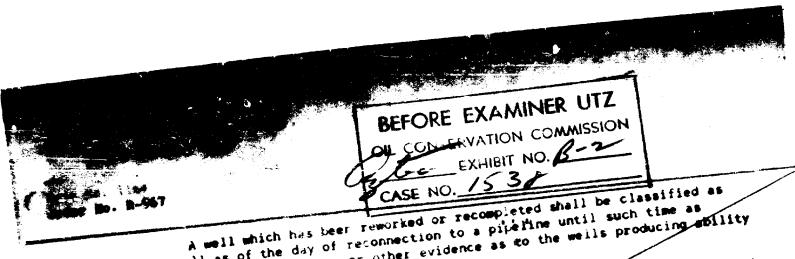
If, at the end of a proration period a marginal well has produced more than the total allowable assigned a non-marginal unit of corresponding size and deliverability, such marginal well shall be reclassified as a non-marginal well and its allowable prorated accordingly.

If, during a proration period a marginal well is reworked or recompleted in such a manner that its productive capacity is increased to an extent that said well should be reclassified as a non-marginal well, the reclassification shall be effective on the first day of the projection month following the date of recompletion.

The Secretary-Director may reclassify a well at any time if production data or deliverability seats recises the need for such reclassification.

RULE 12: Overproduction: A well which has produced a greater amount of gas than was allowed during a given proration period shall have its allowable for the first succeeding proration period reduced by the amount of such overproduction and such everproduction shall be made up within the first succeeding proration period. If, at any time, a well is overproduced an amount equivalent to six times its current monthly allowable, said well shall be shut-in during the current month.

The Commission may allow everproduction to be made up at a leaser rate than would be the case if the mail were completely abut-in if, upon public hearing after due notice. If it shows that complete shut-in at the well would result in material durage to said well.



a non-marginal well as of the day of reconnection to a pipeline until such time as production data, deliberability data or other evidence as so the wells producing ability indicates that the well is improperly classified.

If during a proration month the acreage assigned to a well is increased the operator shall notify the Director in writing (Box 871, Santa Fe, New Mexico) of such increase. The increased allowable assigned the gas crofation unit for the well shall be affective on the first day of the month following receipt of the notification. much increase. The increased allowable assigned the gas proportion unit for the well shall be effective on the first day of the month following receipt of the notification by the Director. The commission may assign management allowables in order to prevent the

If at the end a protection period a marginal well has produced more than the total allowable for the period assertion period a marginal well of like deliverability premature abandonment of weils. and acreage, the marginal well shall to reclassified as a non-marginal well and its allowable and net Status adjusted accordingly.

All wells not classified as marginal wells shall be classified as non-

unal wells.

The product obtained by multiplying each well's acreage factor by the RULE 9 - R-565-C, R-566-D, and R-846 calculated deliverability (expressed as MCF per day) for that well shall be known as the AD factor for that well. The acreage factor shall be datermined to the nearest hundredth of a unit by dividing the acreage within the proration unit by 160. The "AD

The allowable to be assigned to each marginal well shall be equal to the Factor shall be computed to the nearest whole units maximum production during any month (f the preceding gas promation period.

The pool allowable remaining each month after deducting the total allowable assigned to marginal wells shall be allocated among the non-marginal wells entitled to an allowable in the following manner.

- (1) Seventy-five percent (75%) of the pool allowable remaining to be allocated to non-marginal wells shall be allocated among Such wells in the proportion that each well's "AD Factor" bears to the total "AD Factor" for all non-marginal wells in the pool-
- (2) Twenty-five percent (25%) of the pool allowable remaining to be allocated to non-marginal wells shall be allocated enoug such wells in the proportion that each well's acreage factor bears to the total acreage factor for all non-marginal wells in the pool.

The calculated deliverability at the "deliverability pressure" shall be RITE 10 - R-365-C, R-566-D and R-846 ed in accordance with the partitions of Greet R-333-C and D.

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Aztec Oil & Gas Company's Wells

	Well Name	Designated Unit	Acres	Well Status
1	Holder No. 1	T-30-N, R-12-W Sec. 29: SELNWL	40.00	Due to over production, produced only 9 months out of last 21 months. Probably be shut in another 6 months due to low allowables and NMOCC SI notice.
	Hart No. 1	T-29-N, R-12-W Sec. 11: NW4SW4	40.00	Due to over production, produced only 5 months out of last 26 months. Probably be shut in another 11 months due to NMOCC SI notice.
	Cornell No. 3	T-29-N, R-12-W Sec. 12: S/25W4	80.00	Due to over production, produced only token amounts of gas in 4 months of last 7 months. Well almost in balance.
· 	Cornell No. 4	T-29-N, R-12-W Sec. 12: N/2 SW ¹ ₄	80.00	Due to over production, produced only token amounts of gas in 2 months of the last 5 months. Will be shut in about another month due to low allowables.
)	Cozzens No. 3	T-29-N, R-11-W Sec. 20: W/2 NE_{ij}^{1}	80.00	Due to overproduction, shut in July and August, 1958 and almost shut in in September, 1958. Well now in balance due to being shut in.

BEFORE EXAMINER UTZ

OND CONSERVATION COMMISSION

EXHIBIT NO.

CASE NO. 5 3 8

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MMOCC Case #1538 Aztec Exhibit "C"