Case Number

4715

Application

Trascripts

Small Exhibits

ETC.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
CONFERENCE HALL, STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO
May 17, 1972

EXAMINER HEARING

IN THE MATTER OF:

The Application of Glen D. Aaron and James C. Whitten for an unorthodox well location, Eddy County, New Mexico.

CASE NO. 4715

BEFORE: RICHARD L. STAMETS
Examiner

TRANSCRIPT OF HEARING

MR. STAMETS: Case 4715.

MR. HATCH: Application of Glen D. Aaron and James C. Whitten for an unorthodox well location, Eddy County, New Mexico.

MR. KELLAHIN: Jason Kellahin and W. Thomas Kellahin, appearing on behalf of the Applicant. We have one witness we would like to be sworn in Case 4715.

MR. STAMETS: Any other appearances?

MR. MORRIS: Dick Morris of Montgomery, Federici, Andrews, Hannahs and Morris, appearing on behalf of Mobil Oil Corporation.

MR. STAMETS: Will you have a witness?

MR. MORRIS: Yes.

(Whereupon, two witnesses were sworn by Mr. Hatch.)

MR. STAMETS: Mr. Kellahin, you may proceed.

* * * * *

JAMES C. WHITTEN,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A James C. Whitten.

Q Are you one of the Applicants in Case 4715 presently before the Commissioner?

A I am.
Q Have you testified before the Oil Conservation Commission or one of its Examiners and made your qualifications a matter of record?
A Yes, I have.
Q In connection with your work with Aaron and Whitten have you done any work in the area involved in the Application?
A Yes.

MR. KELLAHIN: Are the witness' qualifications acceptable?

MR. STAMETS: Have you qualified him as an engineer or as a partner?

THE WITNESS: I am a graduate petroleum geologist. I was graduated from the University of Texas at Austin.

MR. KELLAHIN: Are the witness' qualifications acceptable?

MR. STAMETS: They are accepted, yes.

Q (By Mr. Kellahin) Mr. Witten, what is proposed by the Applicant in Case 4715?
A We wish to drill an unorthodox well location in the Atoka-Pennsylvanian Gas Pool.
Q Referring you to what has been marked as Applicant's Exhibit 1, would you identify that Exhibit?
A Yes, Exhibit 1 is a plat and shows the lease information

as outlined in yellow. The proration unit and the location proposed are also outlined.

Q Now, there are some red circles, what are those?

A Atoka-Pennsylvanian Gas Wells.

Q And your proposed location is the blue dot?

A That is correct.

Q There is an area circled in red in the north portion of the area and it says: "New Mexico Oil Conservation Commission - 4715"; what is the significance of that?

A This is the Case we are appearing on now and this is an Exhibit in this Case.

Q Now, in the lower portion there is an area circled in yellow with blue dots; what is that?

A The proration unit that will be involved in the drilling of the well.

Q Referring to what has been marked as Exhibit Number 2, discuss that Exhibit.

A Exhibit 2 is a structure map of the top of the Morrow Formation and it is in heavy blue line.

An overlay superimposed upon the structure map in red line is an isopach of the net pay sand for this field.

I have not mapped the whole field, but structurally this section of the field makes it very difficult to project any possibility of production using structure

alone, other than getting above any gas-water contact.

The main approach we have made in exploration for the Morrow Sand is to isopach the pay interval. The pay is composed of quartz sand and thins laterally up and down dip with the main thickness part of the section shown as the shaded area in the Exhibit.

Q In preparing the isopach of the net pay, how did you arrive at what constituted the net pay?

A The net pay was picked from the logs that were run on the wells in the field.

I also have a cross-section which will show you some of my pay picks.

Q Is it based on porosity and development?

A That is correct. And the actual net pay and the pay that should be perforated.

Q Have you anything else in connection with that Exhibit?

A No, not at this time.

Q Referring you to what has been marked Applicant's Exhibit 3, will you discuss the information that is shown on that Exhibit?

A This is a cumulative production rate for the field in this area and is contoured in billion cubic feet recovered as of 1/1/72.

Q Now, all these wells were not completed at the same time, were they?

A No, sir, they were not. But, the field was shut-in for a good,long while and essentially the wells all started producing at the same time.

Q The production history was accumulated at approximately the same time for each well?

A Approximately. Some wells were drilled afterwards, but essentially that is true.

Q Now, does that support your testimony in connection with Exhibit 2 as to what constitutes the main portion of the pool?

A There are some irregularities that you will notice, but on the whole, I think that the production map will bear out my testimony that the most recoverable reserves will come from the thickest section.

Q Is that one reason for the proposed location sought by the Applicant in this Case?

A It certainly is.

Q The line of the cross-section is also shown on that Exhibit; is it not?

A It is.

Q Will you refer to Exhibit Number 4 and identify that Exhibit?

A This is a cross-section with five wells on it. It is not significant at this time to consider the Humble Well Number 1.

I had already prepared the cross-section and that well is not significant in this Case. We are merely concerned with the four other wells and the locations we propose.

The upper part of the cross-section shows the electric logs which are the only datum,structural datum. These show the structural relationship between these wells.

The section below is the only porosity log available on these wells and it shows the top of the Morrow which shows something of the porosity. The purpose of this Exhibit is to show what I have labeled as the net pay.

Also, to bring up another point, the reason for us wanting to drill this well in the SW/4 of this Section is that there is an additional section in the Standard Oil of Texas Number 2 Paul Terry unit located at 8,900 feet.

This zone, which has porosity, and the other two wells, the Standard Oil of Texas Number 1 Martin and the Standard Oil of Texas Number 1 Everest were not tested, but there is sand and it does have porosity, that is the Standard Oil of Texas Number 2 Paul Terry.

I think there is a good possibility for it to be

productive and the Examiner should note the SP on this zone which to me is very significant and we feel that we will have a better chance of encountering this zone and it being productive because of the three wells that I have mentioned.

In other words, we are drilling the well in the SW/4 of the Section to get the thickest pay and also in an attempt to get additional pay in this Section.

Q In your opinion, based on your examination of this area, would a well located at the proposed site by the applicant effectively and economically drain the unit to be dedicated to it?

A It will.

Q In your opinion, is all the area productive of gas in the Atoka-Pennsylvanian formation?

A Yes, so far as I can tell.

Q Before we go on to Exhibit 5, would you turn back to Exhibit 3 for a moment and tell us the status of the wells that are shown in the Exhibit, particularly in the vicinity of the proposed location?

A In Section 27, the Tom L. Ingram Well has been worked over and it is not a very big producer. It only produces about one million a month.

In Section 22, the Pan American Number 1 Flint has watered out.

In Section 23 the Pan American Number 3 Martin, I don't know the Case on that, but it didn't produce very long. It did not have a significant amount of pay.

In Section 14 the Standard Oil of Texas Number 1 Everest watered out last August. They attempted to work it over and it still is shut-in.

Q Are the two wells shown in Section 15 still producing?

A They are.

Q And in Section 11, the Mobil Well Number 1 is producing?

A It is, even though the other wells have watered out.

Q The other wells being particularly --

A The Standard Oil of Texas Everest and the Pan American Flint.

Q Would that indicate to you that water is encroaching to the south then?

A I think it is from the south and upstructure.

Q Now, have you made pressure tests on the wells in this pool?

A Yes, I have.

Q Referring to Exhibit Number 5, would you discuss the information shown on that Exhibit?

A Yes. I have, on the basis of available information, there was not any pressure information prior to 1963 available, but on the basis of the pressure information,

and these are shut-in pressures obtained from the New Mexico Oil and Gas and Engineering Committee, the pressure in all the wells excepting the Mobil Number 1 Brainard, show a decline in some cases.

Rather than a drastic decline, the Mobil Number 1 Brainard has shown a decline as you can see, on the curve, but in the last two or three years, the pressure has not declined.

Q What is the significance of that, Mr. Whitten?

A The significance to me is the fact that if we are to drill this location here, I do not think that the well will cause any injury or cause any drainage from the Mobil Number 1 Brainard, because I think it is somehow located in a separate reservoir from what the pressure indicates.

Q What is the nature of this reservoir, generally?

A The nature of the reservoir is lenticular sand and if you will note on Exhibit Number 2, I have isopached the thickness, or the thickest part of the sand.

Now, this is a combination of all of the sand in the Mobil Number 1 Brainard Unit and there is 20 feet of pay. This is significant because it is on the edge of the thicker part of the sand, however, the pressure indicates to me that the Mobil Number 1 Brainard Unit is not in the main reservoir and it has not

lost the pressure as shown by the other wells.

Q On the basis of that, it is your conclusion that a well located as proposed by the Applicant will not drain the Mobil Brainard Unit Number 1 Well?

A It is.

Q Do you have anything to add in connection with Exhibit Number 5?

A No, sir.

Q Now, in your opinion, is it necessary to so locate your well in order to obtain the greatest ultimate recovery of gas underlying your tract?

A It is.

Q If you do not so locate your well, will gas be left in the reservoir that otherwise will be recovered?

A I think we will not recover gas from those sands unless we encounter them in the well bore. I am referring to the sands where the thickest development occurs.

Q I believe you already testified that, in your opinion, all the acreage is productive from the Atoka-Pennsylvanian Pool?

A Yes.

Q In summary, will you attain any advantage over your offset operators by so locating your well?

A No, sir.

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

A Yes, sir.

MR. KELLAHIN: I would like to offer in evidence Applicant's Exhibits 1 through 5 inclusive.

MR. STAMETS: Are there any objections to the admission of Exhibits 1 through 5?

(No response.)

MR. STAMETS: They will be admitted in evidence.

(Whereupon Applicant's Exhibits 1 through 5 were admitted in evidence.)

MR. KELLAHIN: That completes my direct examination.

MR. STAMETS: Are there any questions of the witness?

* * * * *

CROSS-EXAMINATION

BY MR. MORRIS:

Q Mr. Whitten, did you prepare Exhibit Number 2, your isopach?

A Yes, I did.

Q This was prepared with reference to the top of the Morrow?

A That is correct.

Q In this pool, Mr. Whitten, how many members are there in the Pennsylvanian that contribute to the production

or the net pay, let's say, that you have depicted on your isopach?

A Well, there are many over the entire field.

Q In this area are there three main sand structures that contribute to the production?

A Well, I have the cross-section and if you will look at the Standard Oil of Texas Number 2, you might consider that four different sands.

Q Would you point out from your Exhibit the intervals of net pay that you have shown on your cross-section?

A The net pay that I have shown colored in red?

Q Yes, starting from the top.

A All right. It would be 8958 to 8964; 8970 to 8972; 8974 to 8978; 8980 to 8982.

Q Now, are those intervals that you have just named from the Terry Well, are they correlative through the pay zone of most of the producing wells in the field?

A No, you can't separate them.

Q You can't separate them at all?

A No. You see, it is a sand body and some wells, such as the Number 1 Martin, which has very thick pay, unfortunately the well does not have uniform porosity, whereas the other wells of the zone, the Standard Oil of Texas Everest has three particular zones; the Number 2 Terry has four.

Q Are there some distinguishable markers on these logs from which you can do your mapping other than the top of the Morrow?

A In the Morrow section itself?

Q Yes.

A There are some.

Q Are there some in the pay zones themselves?

A There may be some with one or two wells, but I would say over the field, or over this area involved, I would question the correlation that you could make between any two wells on any small interval. These sands are lenticular and they intermingle quite a bit and it would be very difficult to trace each separate little porosity zone from one well to another.

Q On your cross-section, would you refer to the Terry Well at the 8980 foot marker?

A Yes.

Q Is there a distinguishable marker on your log there at that depth of 8990?

A You might consider that the base part of the sand body that is in this local area although you are not talking about the bottom of the pay because there is pay lower than that.

Q Is that particular marker which you have characterized as the basal sand marker, a distinguishing marker in

the logs of the wells in this portion of the field?

A It would become a matter of each individual pay.

Q That particular marker that you have referred to would be at the bottom of the main producing formation in the Terry Well; is that correct?

A Yes, but in some of the other wells there are pays below it.

Q Now, the marker that you have used for the purpose of preparing your Exhibit Number 2, how far is that above the producing horizon in this Terry Well?

A The well marker is at 8630.

Q So how far above the production would that be?

A The main pay?

Q Yes, sir.

A The main pay is at approximately 8958, 328 feet above it.

Q In preparing an isopach map, Mr. Whitten, isn't it desirable to contour as close to the pay as possible if it is your intention to accurately show the structure on your isopach of the main pay zone itself?

A In the Morrow section it is very difficult to determine anything about the pay based on the structural lines unless there is oil-water or gas-water contact. I have mapped above this interval all the way through the Glorieta.

Normally speaking, I would say yes, you should map right on the pay except that these sands are lenticular and they do not lend themselves to being very good structural markers.

The base of the sand does not lend itself to be a good structural marker and this is the reason why I don't feel it would be significant to map right at the pay interval.

Q Why would the base of the sand be, in your opinion, an erratic marker?

A The sands throughout the Morrow section, even in the areas or zones that look like shale, and they are shale, but they are sandy. I think this particular surface was in existence in the erosion zone and the sands were cleaned up and piled up on this surface and I don't think it would be significant or would show much significance for structure unless there was a gas-water contact.

Q But if you wanted to show the nature of that eroded surface upon which the sand was deposited, you would have to map on the base of the sand; wouldn't you?

A Yes.

Q You have shown your proposed location on the 40 foot contour of your isopach, how much additional net pay would you realize at that location compared to the

most favorable location you would have if you drilled the well in conformity with the pool rules?

A I think we have approximately ten feet of pay in the location, the most favorable location according to pool rules.

Q Well, we didn't have the location as permitted by pool rules, actually shown on your Exhibit 2, but just figuring as best I can, I think I would argue with you a little bit.

It looks like the best location would be about a 20 foot contour line rather than 30.

A It would be 990 feet from the east line of the proration unit and I would show the line straight up there, 990 feet from the north line of the section.

It will be between 10 and 15 feet.

Q Do you mean on the 10 to 15 foot interval?

A Yes.

Q If it's on the 10 to 15 foot interval and you subtract that from the 40 foot contour line on which your proposed location is to be located, you are actually gaining about 25 feet of net pay; is that right?

A 25 to 30 feet, right.

Q That is quite an advantage in this particular area assuming the accuracy of your Exhibit Number 2?

A Because of the riskiness in drilling these type wells, we felt like we had to get on the thickest sand interval.

Q How much structure are you gaining at your proposed location compared to your structural position at the location in accordance with pool rules?

A Approximately 40 to 50 feet. We would be structurally lower and this is the hazard.

Q Now, on your isopach map, you have your contours bunched up pretty closely there from 10 to 40 feet as it runs by your proposed location and then it spreads out, your zero line spreads out, so it almost includes the entire proration unit within the zero foot contour; what control do you have for that zero contour line?

A That is compatible with what we see in the area to the south were you have good control. As you can see, the Standard Oil of Texas Number 2 Terry has 12 feet of pay and the Standard Oil of Texas Number 1 Martin has 60 feet.

This is the reason for this thicker sand development being carried on to the north. The zero line is there because of the Standard Oil of Texas Number 1 Terry unit having three feet and I think the zero line as presented is well located in reference to this well.

The Yates Number 1 Unit in Section 16 had 7 feet, I believe, and the zero line is compatible with that well.

I have simply carried the zero to 10 foot contour intervals right on up through here (indicating).

Q You have no control on the zero contour line up to the north of this proposed location; do you?

A Since 1963, when the Mobil Number 1 Brainard Unit was drilled, there has been no development to the north.

MR. MORRIS: May I have just a moment, Mr. Examiner?

MR. STAMETS: Yes.

Q (By Mr. Morris) Mr. Whitten, if you will refer to your Exhibit Number 5, please.

A Yes, sir.

Q Will you review for me again the significance that you attached to the change in slope of the curve on the Mobil Well which you have designated as Number 12?

A I have drawn on this graph all the wells located on this map in the Atoka-Pennsylvanian pool, and have depicted from the information available, the shut-in pressures reported on all the wells.

All of the wells have declined rather drastically and the Number 12, which is the Mobil Well, declined,

but actually, it came in at a lower pressure than some of the wells shown -- it was initially produced at a lower pressure than some of the wells and had declined somewhat and, in the last two or three years, it has not declined, it has broken this trend of decline, and I think this is significant and shows that is is probably not associated with these other wells in the field.

I think it is probably part of another sand body which is not connected with the main part of the field.

Q Now, looking at your graph on Exhibit Number 5, actually, there are very few wells that have shown a consistent decline in this field; isn't that correct?

A That is not correct.

Q Well, let's look at, for instance, Well Number 7 that you have shown here, the Mallard Number 1, now where is that located in the field?

A Section 28.

Q Would you say that well was in the main body of the field?

A Yes, sir.

Q Has its pressure decline been consistent with the decline that you would speak of on the other wells in this field?

A It certainly has.

Q Just looking at the graph, it would appear to be somewhat erratic.

A I will explain that. The pipeline pressure is approximately 700 pounds, and this well has declined -- well, in 1971 it was 748 pounds, and I think the only reason it declined is because in 1971 it only produced 12 million MCF and that is 1 million a month, and that is the reason for the change in the curve.

Q If you look at Well Number 10, that is a rather steady decline, but then it suddenly turns upwards; do you have any explanation for that?

A This is conjecture on my part, but if the well was shut-in a couple of weeks before the pressure was taken, it might -- it could conceivably be higher than the previous pressure taken.

Q The Number 1 Well, as shown here, shows a rather steady decline and all of a sudden it just levels off; can you give some explanation on that?

A No, I cannot. This was the only year that this had been done and there had been a steady decline until last year.

Q I am somewhat confused. What does your graph show on Number 11, does it show that it was shut-in and then the pressure built back up?

A No, it was shut-in and plugged.

Q What is the line going upwards from the figure 110 on your Exhibit?

A That was the pressure plot of the well during the time it produced prior to being shut-in.

Q Well, I'm sorry, I don't mean to belabor the point, but it seems to me that it declined down to the figure shown as 11 and then started to increase again, it seems to have gone up and connected with the graph of Well Number 6. I don't understand this.

A This is actually Number 6 on the plot (indicating). I'm sorry, it is not too clear, but you see Number 11 comes on down and I have a dash line and then the other line goes up.

Q Have you made any attempt to relate the pressure decline to cumulative production?

A Yes, I did. I have plotted or worked several of these pressures versus the production that is shown and the amount of pressure drop per MCF produced.

You are dealing with such small figures that I didn't think it would show this as a true picture of what was really happening.

Q But, the extent of the pressure decline, or the manner in which the pressure has declined, is found on your cumulative production?

Q And all of these wells have not produced the same accumulative?

A No, but I would say all of the wells -- all of the operators produced as much as they could out of each well. I don't think anybody's holding back.

Q Would the differences shown here be attributable to differences in permeability for the respective wells?

MR. MORRIS: I think that is all I have, Mr. Examiner.

* * * * *

CROSS-EXAMINATION

BY MR. STAMETS:

Q Mr. Whitten, on Exhibit Number 4, are the wells shown there, at least the ones in the Atoka-Pennsylvanian, do you actually feel they are horizonally correlative in the Morrow pay zone?

A Horizonally correlative?

Q Yes. Let's take the first one, the C. R. Martin, you have a pay zone identified by perforation and red coloring?

A Yes, sir.

Q Then we move immediately to the right to the Standard Oil of Texas Everest Number 1, do you feel that is in the same pay zone?

A Yes.

Q And top and bottom is more or less correlative?
A Yes.
Q Then we move further to the right to the Standard Oil Number 2, it would appear that that zone is correlative and has been shaled out and is not productive?
A That is not necessarily correct. This is a surface in which the sand was deposited, was deposited on the surface, and this could be -- could very well be the same zone; in fact, I think it is.

And the erosional surface could be developed along the surface and I think this is correlative even though it might be higher or lower.

Q If I understand you correctly, your location is based primarily on the pay thickness rather than anything else?
A On the thickness of the interval and the possibility of getting this other sand pay above the other pay.
Q And you also indicated that even though the Brainard Well is located relatively low in the Section, it has not watered out. I wasn't clear on your explanation as to why that hasn't happened?
A I don't know why it hasn't happened. Actually, it is about even with the Everest well.
Q Well, actually, it is lower than the Number 1 Everest.

A The Ingram Well is low, it was the lowest well and it watered out in 1968.

The Pan American Flint Well and the Number 1 Everest both watered out last year.

The Mobil Brainard unit is still going and it has not indicated any water that I know of.

Q Has your isopach taken off the sum total of all the Morrow pay zones?

A Yes, sir.

Q And you feel that the Mobil Brainard is somehow separated from the rest of the pool?

A If it was not for the pressure, you couldn't tell whether it was separated or not, but the pressure indicates to me that it is separated.

Q Do you have any hard evidence to indicate it would be separated from the well drilled in the SW/4 of Section 11, whether it might or might not be, when the well was completed?

A No.

Q How would you determine whether or not this well was separated from the Mobil Brainard Well?

A I think the pressure that was first obtained on the Mobil Well would show this.

Q If such a test showed that the Mobil Brainard and your well were located in the same reservoir and that there

could be drainage between wells, would you feel any sort of penalty would be appropriate?

A I wouldn't volunteer that.

MR. STAMETS: Are there any other questions of this witness?

(No response.)

MR. STAMETS: If not, he may be excused.

(Witness excused.)

MR. STAMETS: Have you offered your Exhibits, Mr. Kellahin?

MR. KELLAHIN: I did.

MR. STAMETS: Are there other witnesses in this Case?

MR. MORRIS: Yes, Mr. Examiner, we would like to offer some evidence if Mr. Kellahin is through.

MR. STAMETS: Let's take about a fifteen minute recess at this time.

(Whereupon, a recess was taken.)

* * * * *

(Hearing continues.)

MR. STAMETS: The Hearing will come to order, please.

MR. MORRIS: You may proceed.

* * * * *

VICTOR ENMON,

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

DIRECT EXAMINATION

BY MR. MORRIS:

Q You have previously been sworn in this Case?

A Yes, I have.

Q Please state your name and where you reside.

A Victor Enmon, Senior Production Geologist for the Mobil Oil Corporation, Midland, Texas.

Q Have you previously testified before the Commission or one of its Examiners and had your qualifications as a geologist established and accepted as a matter of record?

A Yes, I have.

MR. MORRIS: Are the witness' qualifications acceptable?

MR. STAMETS: They are.

Q (By Mr. Morris) Have you made a study of the area involved in the Application in Case 4715 and have you prepared some Exhibits in respect to that Application?

A Yes, I have.

Q Would you please refer to what has been marked as Exhibit 1 in this case, Mobil's Exhibit 1, and briefly

explain what the Exhibit is and what it shows?

A I better explain the colors so you will be oriented on that.

Q Please.

A The yellow acreage is Mobil acreage. The acreage outlined in green, Mobil has an override on. The wells colored in red are Atoka-Pennsylvanian producers. The wells colored in blue are dry holes.

Q Are all the wells colored in red presently producing?

A No, sir, some of them have been plugged and abandoned or shut-in and these have been designated by the synbols, p.a. or s.i.

Q Some of the wells designated in red are not producing or have not produced?

A That's right.

Q The Exhibit also shows some contours, what do those represent?

A These contours show the structure on the base of what I call the middle Atoka-Pennsylvanian producing sand zone. They show the structure of this zone is a generally northeast-southwest except for the local reentrance and nosing.

Q We'll go into that on your Exhibit Number 3, your cross-section. Would you briefly state what the producing formations and the intervals are in this

field and where you have marked your structure with relation to those producing intervals?

A I have broken down the producing sand intervals, or the producing sand, into three zones, an upper zone, a middle zone, and a lower zone. On this structure map, I have mapped the base of the middle zone so it is between the upper and lower zone.

Q Why have you chosen that particular point at which to show the structure of this pool?

A By mapping on the base of the middle sand zone, the middle sand zone is the principal producing sand in the field, so I mapped on the base of it because it would show the structure more accurately -- show the structure of that producing sand zone which would be very significant.

Q Does Exhibit 1 also show the proposed location and the location that would be permissible under field rules?

A Yes, sir. The proposed location is in the SW/4 of Section 11 and is shown by a small open circle and the possible proposed locations are shown by the four crosses in the NW/4.

Q We will come back to Exhibit Number 1 in a few minutes. If you will go on to your Exhibit Number 2 which is designated as a net pay map of the Atoka-Pennsylvanian

Gas Pool, will you explain the information shown on this Exhibit?

A You will note beside each well there is a "um" or "al". In some cases this means upper sand zone, middle sand zone, or lower sand zone. In some cases the sand zone will not be shown which means it has no pay.

I attributed the net pay immediately to the right of that zone and you will see the net pay footage. If you have a p after that, that is the perforated productive interval.

Q Just for an example, how would that designation work for the Chevron-Terry well in the NE/4 of Section 15?

A In the Terry well, the upper Pennsylvanian sand zone I have given 16 feet of new pay; the middle sand zone 15 feet of net pay, and that is the producing zone. If you add those two up, it comes to 31 feet which is the larger letter beside the well.

Q Does this map, as well as Exhibit Number 1 also, show the line of cross-section?

A Yes, it does.

Q And is that cross-section shown then as your Exhibit Number 3?

A Yes, sir.

Q We will come back to Exhibit Number 2 in just a few

minutes. Let's go on to Exhibit Number 3. Would you explain the Exhibit?

A This Exhibit is shown on the net pay and structure maps and it goes from two wells in the northern part of Section 15, and it goes eastward into two wells in Section 14. Now, in the center of the Mobil Brainard Unit Well, which is projected into the Section to show its relation to the other wells, and it was projected in on the basis of its structural conformity to the wells.

Q Now, your two heavy lines that you show going across the cross-section are the points of separation of your upper, middle and lower sand designations; is that right?

A Yes, sir, those are the designations shown.

Q The lower of those two lines, that line separating the middle sand zone from the lower sand zone, that is the point that you have used for mapping the structure as shown on Exhibit 1?

A Yes, sir.

Q Would you point out the marker that you have used for mapping the structure as shown here on this cross-section?

A In the well on the left, the Chevron Number 1 Terry, it is a dry hole and the mapping point was from about

8965 to about 8970, somewhere in there.

Q That is a dry hole and you did not have significant development in that well; is that correct?

A No, sir, there was no significant sand development. In fact, I believe I gave it something like 3 feet of pay, net pay.

Q Moving across your cross-section to the Terry Number 2, would you point out the marker that you have used?

A The structure marker would be 8980.

Q Does that marker also show up on your Mobil Brainard Number 1?

A Yes, at about 9080.

Q Is it also present in the Chevron Everest Number 1?

A Yes, it is about 9105.

Q Now, the Chevron Everest Number 2, the well on the right side of this Exhibit, that well was a dry hole; is that correct?

A Yes, sir.

Q Did you have development of this middle sand in that well?

A Yes, it is identifiable by the st curve on the left-hand side of the log and by the correlation below it.

Q What is your opinion as to the relative desirability of using the marker that you have used here in mapping

datum as opposed to some other marker further up the hole?

A Well, as you get uphole, you are going to get local thickening and thinning of the of the Section more likely and mapping a structural marker uphole will not represent the structure at the producing horizon.

Q Would the mapping of this datum reflect the erosional surface upon which this formation was deposited?

A Yes, if you consider that erosional surface, it would reflect it.

Q Is that a significant factor in evaluating the structure in this particular area?

A Yes, because you can follow the gas-water contact very closely and the productive limits of the field structurally.

By mapping on this point, you can define the field by the structural position of this particular horizon.

Q In your opinion, is that the optimum point in which to map the structure of this field in order to show the structure of the main producing body?

A Yes, sir.

Q How is the reflection of the structure significant in the development of your isopach?

A If you compare the net pay map and the structure map -- first, I will point it out on the structure map and you

can see that the downdip limits of production falls between the 5800 and 5850 contour line. In the two producers, they did recover salt water so that establishes the downdip limits of production according to the structure.

The updip limits of production fall between 5600 and 5650 feet and probably close to the Chevron Number 1 Terry Well, the dry hole.

Now, there appears to be one exception in the SE/4 of Section 16. There we have a producer that appears to fall outside of the updip of the 5600 contour, but that well produced from 6 feet of the lower sand zone, which is the most erratic sand of the three throughout the field. That 6 feet is shown on the net pay map, but the main producing sand body is the middle one.

The upper zones were dry, so actually, you could say that the 5600 and 5650 contour still fits the main sand zone and this is reflected on the contour map reflecting this upper and lower limit of the field as shown on the structure map.

Q Referring to your Exhibit Number 2, what conclusions can you draw as to the ability of the well that would be drilled in accordance with the field rules, that is a well drilled at the orthodox location as compared

to a well drilled at the proposed location?

A On the structure map you can see that a well drilled at an orthodox location, 1650 feet from the north and 1650 feet from the west, falls almost on the same countour as a well drilled at your unorthodox location.

The net pay in a well drilled at that orthodox location would be within the limits of the field according to the structure map and would have 20 feet or more, say up to 30 feet of pay, whereas in the unorthodox location, it would possibly have a little more.

Q In your opinion, would you expect a well drilled at the orthodox location to be approximately of the same quality as a well drilled at the proposed unorthodox location?

A If by quality, you mean having the same production capacity --

Q Yes.

A Yes, they should have. I would imagine they would probably produce what the allowable in the field is according to the proration units.

Q According to your testimony, they would enjoy some small amount of additional net pay, but could still at the orthodox location enjoy up to 30 feet of net pay?

A Yes, sir.

Q If this acreage that is proposed in this Application were being operated by Mobil, would you have any hesitancy in recommending to your management that a well be drilled at the orthodox location in the west half of Section 11?

A No, I would recommend a well there. If you look at the Chevron Number 2 Terry, this is why I am convinced that the structure map shows the limits of the field.

You can expect 20 feet or more of pay at the orthodox location and then if you come down and look at the Chevron Number 2 Terry, you will see 15 feet of pay in the middle zone, perforated and producing, Now, if you look at the structure map, the accumulative production is almost two and one half million MCF, and the last report I looked at, it was making one million MCF a day or more. There is no doubt in my mind that this well will ultimately have a primary recovery of three billion cubic feet.

Now, if you compare this well right there with 15 feet of pay and three billion cubic feet, it will give you one billion cubic feet for approximately every 5 feet of net pay.

If you expect three billion cubic feet from 15 feet

of net pay, you could probably expect a little more gas in the unorthodox location, but I think three billion cubic feet of gas would make it a profitable well.

MR. STAMETS: Did I understand you to say one billion cubic feet for every five feet of net pay?

THE WITNESS: Yes, using the Number 2 Terry.

Q (By Mr. Morris) So, under your interpretation if a well was drilled at the southeasterlymost point of the location permissible under field rules with 30 feet of net pay, you could expect somewhere in the neighborhood of six billion cubic feet of ultimate primary production?

A Yes, sir.

Q Would the drilling of a well in the NW/4 of Section 11, that is at a location in accordance with field rules, help to encourage and implement the further development of this field?

A Yes, I believe it would because if a well was drilled at the unorthodox location, it would just, by its position alone, hamper further development of the field to the north, whereas in an orthodox location it would aid in the development of the field to the north.

Q If a well should be drilled at the proposed location

what would be the effect upon the correlative rights of Mobil with respect to its acreage?

A Well, I can't say, I'm not an engineer so I can't say. But, from the standpoint of just looking at it, from a logical standpoint, the well is closer to the Mobil Well and I suppose of you made a 320 degree arc from the well, that part of the arc would fall on Mobil acreage and to the south in Section 14 and probably leave the north part of the NW/4 of Section 11 out of the arc.

Q Do you have an opinion as to whether the granting of this location, of the proposed location, would adversely affect Mobil's correlative rights?

A Oh, yes, I do believe it.

MR. MORRIS: Mr. Examiner, at this point we offer into evidence Mobil's Exhibits 1 through 3.

MR. STAMETS: Any objections to the admission of these Exhibits?

(No response.)

MR. STAMETS: They will be admitted.

(Whereupon Mobil's Exhibits 1 through 3 were admitted in evidence.)

MR. MORRIS: That's all I have on direct Examination.

MR. STAMETS: Are there any questions of this

witness?

* * * * *

CROSS-EXAMINATION

BY MR. KELLAHIN:

Q Throughout your testimony you have referred to structure in discussing the development of this pool, we are talking about the Morrow formation, are we not?

A The Morrow formation?

Q Yes.

Q Yes, I believe that technically it is the Morrow formation -- the sand is in the Morrow formation.

A Yes.

Q How thick is the Morrow formation?

A Well, I really don't know.

Q Several hundred feet thick?

A Right, several hundred feet thick. I'd say four or five hundred.

Q We are really talking about sand development or porosity development within this formation rather than structure; are we not?

A Right, we are talking about zone porosity.

Q Porosity of the zones within this formation?

A Right.

Q Isn't that what you have mapped rather than structure?

A No.

Q Did I misunderstand you? Is your map not based on your analysis of net pay as taken from your cross-section?

A It is mapped on the base of the sand?

Q Mapped on the base of the sand?

A On the base of the producing sand which to me is the structure.

Q So you are carrying that structure on up into the Morrow in your interpretation?

A I am just carrying it to the top of the Morrow which has no relation to the productive sand.

Q But the base of the Morrow does.

A The base of the sand, the producing sand.

Q Is not your structure map that you have prepared actually a topography map of the base of the sand?

A Yes, it is the structure at the base of that sand.

Q Now, the real significance of the structure is the gas-water contact; isn't it?

A I don't understand.

Q What is the gas-water contact?

A What is the gas-water contact?

Q Yes, sir, what do you say it is?

A Somewhere between 5800 and 5850.

Q Is that based on the Chevron Everest 2 Well in Section 14?

A That is a dry hole.

Q But is it the basis of your interpretation of the water contact?

A No, it is based on the water in the wells, in the two producing wells to the south.

Q Well, there was water in the Chevron Well; wasn't there?

A Not as far as I know.

Q You are talking then about the Amoco Well in Section 23, and the Ingram Well in Section 27; do they make water?

A Well, there was water at one perforation.

Q Well, the Ingram well is still producing and it has water contact according to your interpretation?

A Yes.

Q Now, the Amoco Fling Number 1 Well in Section 22, falls between 5800 and 5850 and it is making water or or has watered out; has it not?

A I don't know whether it has.

Q You don't know why it is plugged and abandoned?

A No.

Q Did you investigate and attempt to find out whether it has watered out?

A We had the annual monthly production on it for the previous years, but that's all.

Q Would your testimony be the same in regard to the Chevron Everest Number 1?

A The Chevron Everest Number 1?

Q Yes, sir.

A I don't know what happened on that well because it was producing over a million a day and within one month it went to nothing.

Q It watered out; didn't it?

A Yes.

Q That's just about as flat as your Brainard Well, is that right?

A That's right.

Q Are you producing the Brainard at capacity?

A I believe so.

Q Just as a matter of curiosity, what acreage is dedicated to the Brainard Well?

A I think the east half of Section 11.

Q Then you have communitized that acreage and you don't show Mobil owns all that acreage?

A Yes, that's right.

Q It is a standard unit, to your knowledge, though?

A To my knowledge, yes.

Q Now, you stated that a well at the orthodox location in the west half of Section 11 would encounter approximately 20 feet of net pay?

A Yes.
Q Would it encounter that upper stringer which is productive in some areas?
A Yes, I think it could.
Q You think it could?
A Yes, in fact, I am pretty sure it would.
Q On your Exhibit Number 3, the cross-section on the Chevron Paul Terry Number 2 Well, you show a net pay area in the upper sand zone as not being tested; do you consider that pay?
A Yes, I do.
Q Did you look at the gammaray neutron log on that well?
A Yes.
Q And it shows it as being a dirty (spelled phonetically) zone; doesn't it?
A Not necessarily, it could be partially radioactive sand.
Q Have you contoured it as a partially radioactive sand area?
A Yes, sir.
Q Isn't that one of the hazards in interpreting logs in that area?
A Yes.
Q You testified that if this Application is approved, it would discourage further development to the north,

in your opinion is that productive acreage to the north, say in Section 2?

A I would say according to the evidence that I have that it could be favorable.

Q Have you recommended to your management that they purchase the acreage in Section 2?

MR. MORRIS: If the Examiner please, we are getting pretty far afield into matters that are traditionally trade secrets and privileged information. I would object to the question on those grounds.

MR. KELLAHIN: If the Examiner please, the question was asked on direct examination as to whether he would make recommendations to his management to drill to the north and I am trying to find out if he would recommend that they drill even farther north.

MR. STAMETS: Your question is a hypothetical question.

MR. KELLAHIN: I will rephrase the question then.

Q (By Mr. Kellahin) Will you recommend to your management to drill in the south portion of Section 2?

A When?

Q At any time on the basis of what you know now.

A I would, I can't see anything wrong with it at all, it looks pretty good.

MR. KELLAHIN: I have no further questions.

MR. MORRIS: I have no further questions.

* * * * *

CROSS EXAMINATION

BY MR. STAMETS:

Q Are there other wells in this pool at nonstandard locations?

A Yes. The Chevron Number 2 Terry in Section 15 was drilled at a nonstandard location after the Chevron Number 1 Terry was dry, the one located just west of it.

The Fikes-Cleveland "B" is on an unorthodox location.

The rest of the wells in the field were either at orthodox locations or were drilled before the field rules of May 25, 1961, went into effect.

I believe there may be some more unorthodox locations to the west of this map.

Q Could you just offhand give us a count on the number of nonstandard locations, currently in this pool? Just your estimate looking at the map there.

A Right here (indicating)?

Q Yes, that would be fine, either Exhibit Number 1 or Exhibit Number 2 would be fine.

A The Chevron Number 1 Everest in the SW/4 of Section 14. The Chevron Number 2 Terry in the NE/4 of Section 15.

The Yates Number 1 Dayton in Section 21. The Mallard Number 1 Meyer in the SW/4 of Section 28. The Vicks-Cleveland 1-B in the NE/4 of Section 33.

Q So there would be a total of about four producing wells?

A Yes, of which three were probably drilled before the present rules went into effect.

Q I noticed on some of your Exhibits here, that you indicated net pay which was not perforated; do you know of any particular reason for this? Is it likely that these will be perforated at some later date?

A Yes, sir. The procedure used with the net pay is if there is a microlog, I used it because I figured it was more definitive and it also indicated permeability and you would have porosity if you had permeability. In conjunction with that, I used the sp curve primarily and also the sonic log if it was available and I calculated the net pay from that. If the microlog was not available from there, I went to the neutron log which I considered less reliable in calculating the net pay.

If I had nothing but the neutron log then I had to use the sp curve. I went through them in that sequence in preparing to establish net pay for each of these sand zones.

Q What I am getting at is, if this is net pay, why wasn't it perforated?

A The only thing I can think of is that everyone looked at the main objective and then they probably will perforate it later.

Q Do you recall Applicant's Exhibit 5 which was the Exhibit concerning the pressures?

A Yes.

Q Are you more or less in agreement on the pressure on the Mobil Well?

A Well, I feel --

Q Assuming, for the moment, that you agree with Applicant's Exhibit 5, why do you think the Mobil Well exhibits such high pressure at this stage?

A There could possibly be two reasons; the Chevron Number 1 Everest, when it was shut-in -- let's see, -- well, anyway it can be noticed that I don't know personally, but the pressure in the last test that was taken in the Everest, the pressure was higher than it was during the previous tests taken -- pardon me, the Brainard, the Brainard, the last pressure test was higher than the previous one so it could have been because the Chevron Number 1 Everest in Section 14 was shut-in during that period.

Q Looking at the Exhibit, it appears to be at least 200

pounds in excess of any other well in the field, the Number 2 Paul Terry is the closest well and there is nearly a 200 pound pressure differential across there.

A The only thing I would know is either the Brainard Well has lower permeability and therefore maybe it isn't in contact -- it hasn't made contact with the rest of the reservoir as yet, because of the low productivity of the well, or maybe there has been formation damage, which I guess would come out to the same thing.

Q You don't suppose that gas is draining across from that good prospect in Section 2, do you?

A From what?

Q That good prospect in Section 2.

A (No response.)

Q Did you propose a formula for working out a penalty factor if this well should be drilled in the SW/4 of Section 11?

A No, sir. I am strictly a geologist and I don't know anything about formulas.

Q Do you feel a formula for a penalty factor should be assessed if a well were drilled in the south half of Section 11?

A In the south half?

Q The SW/4.
A Definitely.
Q But you have no recommendation at all on what type of formula?
A No.

MR. MORRIS: I will proceed with the statement I intended to make at the close of the Hearing and just briefly tell you that it is Mobil's position in this Case that the Application should be denied and that the Commission should not grant the Application with a penalty.

The Application should be denied as other cases of this sort have been denied on the grounds that a well can be drilled at an orthodox location and can be expected to produce in a quantity that would make it desirable to drill in accordance with field rules. That is Mobil's position in the Case and that is why we are not recommending that you consider a penalty.

MR. STAMETS: That was my last question. Are there other questions of this witness?

(No respose.)

MR. STAMETS: Do ycu have any additional witnesses?

MR. MORRIS: No, sir.

(Witness excused.)

MR. STAMETS: Are there any other people to be heard in this case?

(No response.)

MR. STAMETS: I will accept closing statements -- have the Exhibits been admitted?

MR. MORRIS: Yes, sir.

MR. STAMETS: I will accept closing statements.

MR. MORRIS: Mr. Examiner, I really just made my closing statement, however, the Commission in the past has flatly denied Applications of this sort where it has been shown that a well can be drilled and can be expected to produce in a paying quantity at an orthodox location in accordance with field rules, and we believe that has been shown by the evidence that has been presented by Mobil in this Case.

We recognize, of course, that the Applicant has presented evidence to the contrary, but in weighing the two cases we submit to the Examiner that we think that the question has been conclusively shown that the structure map and isopach presented by Mobil is more representative and is more likely to be accurate and is more plausible than the evidence that has been submitted by the Applicant in this Case because of the datum upon which these Exhibits were prepared, that is at the base of the producing formation rather than 300 to 350 feet above the producing formation.

We believe that this is the significant difference between the two cases as presented by the Applicant and by

Mobil and that it is the distinguishing factor which should lead the Commission to deny the Application without the consideration of granting the Application with an applicable penalty.

I would also like to point out that the evidence as presented by Mobil and by the Applicant in this Case certainly does not show that the Mobil well is in a different reservoir.

Even in the Applicant's structure map and isopach map, it shows that the Mobil Well is in the same source of supply. There are various speculations that could be made as to why there is some difference in pressure, but nothing conclusive has been shown here as to why there is a difference in pressure and we might as well assume that it is due to the permeability difference.

It must be recognized that a well at the proposed location would be draining producing gas from the same reservoir as the Mobil Well is producing from and Mobil's correlative rights will be jeopardized.

I think it is very significant that Mobil's witness has testified that further development in this field will be aided by a denial of this Application and a requirement that the Applicant in this Case proceed with the drilling of a well in accordance with the field rules that are in effect.

That's all I have.

MR. KELLAHIN: If the Examiner please, in connection with the last statement made by Mr. Morris, I think that chances are, if this well isn't drilled in the proposed location, it won't be drilled. Anyway, that is speculative and you can't consider that.

But, neither can you consider the north being developed as being a factor in this Case. I think one of the significant things in this Case is the question of pressure which Mobil has attempted to discount. But, you have a 200 pound difference in pressure differential between wells in the same reservoir, all of which have been produced substantially over the same period of time.

Our witness showed that this must be of some significance. In response to a question by the Examiner, Mobil's witness made the observation with which we agree heartily with, that the Brainard Well has probably not made contact with the rest of the reservoir. That is exactly what we said throughout our testimony. That is the reason there is the pressure differential and that is the reason we say they will not be affected by a well drilled in the main part of the reservoir.

They have made a great deal of to-do about the importance of the structure in relationship to the presentation of our Case. Structure, as our witness showed, has no

bearing whatsoever on sand development or porosity development. Who is high or who is low on the structure makes no difference, really. The only bearing the structure has on this is where the gas-water contact is and the structure is merely a reflection of the underlying stratum on which the sand deposit was made and sand development will fluctuate on the basis of the underlying formation.

Now, in connection with penalizing the well, we have not sought a penalty factor because we don't think a penalty factor is appropriate under the circumstances in this particular Case.

But, I will point out there are two penalized wells in this pool, one is the Chevron Number 2 Terry and the other is the Antweil Well in the southwestern portion which is not shown on any of the maps here which is likewise penalized.

We submit that if we are going to attain the greatest ultimate recovery of gas from the reservoir and if we are going to protect the correlative rights of the Applicant, giving him an opportunity to produce his just and fair share of the gas underlying his land, that the development of the unorthodox location is necessary.

Thank you, sir.

MR. STAMETS: Are there any other statements in this Case?

(No response.)

MR. STAMETS: If not, the Case will be taken under advisement.

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

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

Richard E. McCormick
CERTIFIED SHORTHAND REPORTER

I do hereby certify that the [illegible] a complete record of the proceedings in the Examiner Hearing of Case No. 4715, heard by me on May 17, 1972

Richard L. Stamets, Examiner
New Mexico Oil Conservation Commission

I N D E X

E X H I B I T S

OIL CONSERVATION COMMISSION

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

May 24, 1972

GOVERNOR
BRUCE KING
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER

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

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

Re: Case No. 4715
Order No. R-4310
Applicant:
Glen D. Aaron & James C. Whitten

Dear Sir:

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

Very truly yours,

A. L. Porter, Jr.

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x
Artesia OCC x
Aztec OCC

Other Mr. Richard S. Morris

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE NO. 4715
Order No. R-4310

APPLICATION OF GLEN D. AARON
AND JAMES C. WHITTEN FOR AN
UNORTHODOX WELL LOCATION,
EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 17, 1972, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 24th day of May, 1972, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicants, Glen D. Aaron and James C. Whitten, seek an exception to the well location requirements of the special rules and regulations for the Atoka-Pennsylvanian Gas Pool to drill a gas well in said pool at an unorthodox gas well location 990 feet from the South line and 1650 feet from the West line of Section 11, Township 18 South, Range 26 East, NMPM, Eddy County, New Mexico; that the W/2 of said Section 11 would be dedicated to said well.

(3) That a standard location for the subject pool would require the well to be located in the NW/4 of the section and no nearer than 990 feet to the outer boundary of the quarter section nor closer than 330 feet to any quarter-quarter section or subdivision inner boundary.

(4) That the evidence indicates that the entire W/2 of said Section 11 is productive of gas from the Atoka-Pennsylvanian Gas Pool.

(5) That the entire W/2 of said Section 11 can be efficiently and economically drained and developed by the subject well.

(6) That there is evidence that a well at the proposed unorthodox location would penetrate a thicker pay section than a well at an orthodox location.

(7) That due to the unorthodox location of the above-described well, the correlative rights of other producers in the pool will be impaired if unrestricted production by the subject well is permitted.

(8) That to offset the advantage to be gained over other producers in the pool, the subject well to be drilled at an unorthodox location in the W/2 of Section 11 should be assigned an acreage factor of 78 percent in the Atoka-Pennsylvanian Gas Pool.

(9) That approval of the subject application will afford the applicant the opportunity to produce his just and equitable share of the gas in the Atoka-Pennsylvanian Gas Pool, will prevent the augmentation of risk arising from the drilling of an excessive number of wells, and will otherwise prevent waste and protect correlative rights, provided the above-described acreage factor is assigned to the subject well.

IT IS THEREFORE ORDERED:

(1) That the applicants, Glen D. Aaron and James C. Whitten, are hereby granted an exception to the well location requirements of the special rules and regulations of the Atoka-Pennsylvanian Gas Pool and are hereby authorized to drill a gas well in the Atoka-Pennsylvanian Gas Pool at an unorthodox gas well location 990 feet from the South line and 1650 feet from the West line of Section 11, Township 18 South, Range 26 East, NMPM, Eddy County, New Mexico, to be dedicated to a standard unit comprising the W/2 of said Section 11.

PROVIDED HOWEVER, that said well shall be assigned an acreage factor of 0.78 in the subject pool for proration purposes.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

BRUCE KING, Chairman

ALEX J. ARMIJO, Member

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

dr/

Case 4713 continued from page 1

7. An 80-acre unit comprising Lot 1 and the NE/4 NW/4 of Section 19, Township 17 North, Range 8 West, to be dedicated to Well No. 26;

8. An 80-acre unit comprising the N/2 NW/4 of Section 24, Township 17 North, Range 9 West, to be dedicated to Well No. 28.

Applicant further seeks a procedure whereby other non-standard proration units may be established administratively.

CASE 4714: Application of Thunderbird Oil Corporation for an unorthodox well location and amendment of Order No. R-1145, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a producing oil well at an unorthodox location 2635 feet from the North line and 1315 feet from the West line of Section 8, Township 13 South, Range 32 East, in the North Caprock-Queen Unit Waterflood Project, Lea County, New Mexico, authorized by Order No. R-1145. Applicant further seeks a procedure whereby additional production and injection wells at orthodox and unorthodox locations may be approved administratively.

CASE 4715: Application of Glen D. Aaron and James C. Whitten for an unorthodox well location, Eddy County, New Mexico. Applicants, in the above-styled cause seek approval for an unorthodox gas well location for their well to be drilled 990 feet from the South line and 1650 feet from the West line of Section 11, Township 18 South, Range 26 East, Atoka-Pennsylvanian Gas Pool, Eddy County, New Mexico, with the W/2 of said Section 11 to be dedicated to the well.

CASE 4716: Application of Union Oil Company of California for directional drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to directionally drill its Owens Well No. 2, having a surface location in Unit I of Section 34, Township 14 South, Range 35 East, Morton-Wolfcamp Pool, Lea County, New Mexico. Applicant proposes to set a whipstock at approximately 7200 feet and to directionally drill to bottom the well in the Wolfcamp formation within 100 feet of a point in Unit H 1730 feet from the North line and 560 feet from the East line of said Section 34. Applicant proposes to dedicate the S/2 NE/4 of Section 34 to the well.

CASE 4717: Application of Sohio Petroleum Company for a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-stylad cause, seeks approval of a 160-acre non-standard unit in an undesignated San Andres gas pool comprising the S/2 SE/4 of Section 7 and the W/2 SW/4 of Section 8, Township 21 South, Range 37 East, Lea County, New Mexico, to be dedicated to its well located 660 feet from the South line and 660 feet from the West line of said Section 8.

CASE 4718: Application of E. B. White, Jr. for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Phantom Banks Unit Area comprising 7680 acres, more or less, of federal, state, and fee lands in Township 26 South, Range 31 East, Eddy County, New Mexico.

Docket No. 11-72

DOCKET: EXAMINER HEARING - WEDNESDAY - MAY 17, 1972

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

The following cases will be heard before Richard L. Stamets, Examiner, or Daniel S. Nutter, Alternate Examiner:

ALLOWABLE: (1) Consideration of the allowable production of gas for June, 1972, from fifteen prorated pools in Lea, Eddy, Roosevelt and Chaves Counties, New Mexico; also presentation of purchaser's nominations for said pools for the six-month period beginning July 1, 1972;

(2) Consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba and Sandoval Counties, New Mexico, for June, 1972.

CASE 4712: Application of Texaco Inc. for multiple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to complete its Lockhart (NCT-1) Well No. 3 located in Unit O of Section 18, Township 22 South, Range 38 East, Lea County, New Mexico, in such a manner as to produce oil from the Paddock and Blinebry Oil Pools through a single string of tubing and gas from the Tubb Gas Pool through the casing-tubing annulus.

CASE 4713: Application of Tenneco Oil Company for non-standard proration units, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of the following-described non-standard proration units in the Lone Pine-Dakota "D" Oil Pool, McKinley County, New Mexico.

1. An 80-acre unit comprising the SE/4 NE/4 and the NE/4 SE/4 of Section 7, Township 17 North, Range 8 West, to be dedicated to Well No. 2;

2. An 80-acre unit comprising the SW/4 NE/4 and NW/4 SE/4 of Section 7, Township 17 North, Range 8 West, to be dedicated to Well No. 3;

3. A 91.66-acre unit comprising Lots 7 and 8 and SW/4 SE/4 of Section 12, Township 17 North, Range 9 West, to be dedicated to Well No. 5.

4. A 91.59-acre unit comprising Lots 1 and 2 and NW/4 NE/4 Section 13, Township 17 North, Range 9 West, to be dedicated to Well No. 12;

5. A 91.56-acre unit comprising Lots 3 and 4 and SW/4 NE/4 of Section 13, Township 17 North, Range 9 West, to be dedicated to Well No. 14;

6. An 80-acre unit comprising the SW/4 NW/4 and NW/4 SW/4 of Section 17, Township 17 North, Range 8 West, to be dedicated to Well No. 17;

Case No. 4724 continued from page 3

(a) Create a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated as the South Empire-Morrow Gas Pool. The discovery well is the Midwest Oil Corporation South Empire Deep Unit No. 1 located in Unit F of Section 6, Township 18 South, Range 29 East, NMPM. Said pool would comprise:

TOWNSHIP 18 SOUTH, RANGE 29 EAST, NMPM
SECTION 6: N/2

(b) Create a new pool in Lea County, New Mexico, classified as an oil pool for Strawn production and designated as the Humble City-Strawn Pool. The discovery well is the Harding Oil Company Shipp No. 1 located in Unit K of Section 11, Township 17 South, Range 37 East, NMPM. Said pool would comprise:

TOWNSHIP 17 SOUTH, RANGE 37 EAST, NMPM
SECTION 11: SW/4

(c) Create a new pool in Chaves County, New Mexico, classified as an oil pool for Abo production and designated as the Many Gates-Abo Pool. The discovery well is the Jack Phillips Isler Federal No. 1 located in Unit A of Section 31, Township 9 South, Range 30 East, NMPM. Said pool would comprise:

TOWNSHIP 9 SOUTH, RANGE 30 EAST, NMPM
SECTION 31: NE/4

(d) Create a new pool in Roosevelt County, New Mexico, classified as a gas pool for Pennsylvanian production and designated as the Peterson-Pennsylvanian Gas Pool. The discovery well is the Amoco Production Company Peterson "A" Gas Com No. 1 located in Unit B of Section 19, Township 5 South, Range 33 East, NMPM. Said pool would comprise:

TOWNSHIP 5 SOUTH, RANGE 33 EAST, NMPM
SECTION 19: All

(e) Abolish Loco Hills-Queen Pool in Eddy County, New Mexico, described as:

TOWNSHIP 17 SOUTH, RANGE 30 EAST, NMPM
SECTION 29: SW/4
SECTION 31: SE/4 NE/4 and NE/4 SE/4
SECTION 32: NW/4

CASE 4719: Application of Gulf Oil Corporation for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its G.C. Matthews Well No. 5 located in Unit J of Section 6, Township 20 South, Range 37 East, Lea County, New Mexico, in such a manner as to produce oil from the Eunice-Monument and Monument-Paddock Pools through parallel strings of tubing.

CASE 4720: Application of Rotary Oil & Gas Company for an unorthodox location and non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a non-standard gas proration unit in the Osudo-Devonian Gas Pool comprising the NE/4 of Section 32 and the NW/4 of Section 33, Township 20 South, Range 36 East, Lea County, New Mexico, to be dedicated to a well to be drilled at an unorthodox location 660 feet from the North line and 1980 feet from the East line of said Section 32.

CASE 4721: Application of C. W. Trainer for a non-standard gas unit, Lea County, New Mexico. Applicant in the above-styled cause, seeks approval of a 316.9-acre non-standard gas spacing unit comprising Lots 1 and 2 and E/2 W/2 of Section 31, Township 24 South, Range 37 East, and Lots 2 and 3 of Section 6, Township 25 South, Range 37 East, undesignated Fusselman and Devonian gas pools, Lea County, New Mexico, to be dedicated to his Sherrell Well No. 1 located 660 feet from the South line and 1590 feet from the West line of said Section 31.

CASE 4722: Application of C. W. Trainer for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Devonian, Fusselman and Ellenburger formations underlying Lots 1 and 2 and E/2 W/2 of Section 31, Township 24 South, Range 37 East, and Lots 2 and 3 of Section 6, Township 25 South, Range 37 East, Custer Field, Lea County, New Mexico, to form a 316.9-acre non-standard spacing unit for the production of gas from said formations, to be dedicated to his Sherrell Well No. 1 located 660 feet from the South line and 1590 feet from the West line of said Section 31.

CASE 4723: Application of Black River Corporation for pool abolishment, creation of two new gas pools, and a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the abolishment of the Washington Ranch-Morrow Gas Pool, Eddy County, New Mexico, and the creation of the Washington Ranch-Upper Morrow and Washington Ranch-Lower Morrow Gas Pools for the production of gas from the upper and lower Morrow formations. Applicant further seeks approval of the dual completion (conventional) of its Cities 3 Federal Well No. 1 located in Unit F of Section 3, Township 26 South, Range 24 East, to produce the lower Morrow through tubing and the upper Morrow through the casing-tubing annulus.

CASE 4724: Southeastern New Mexico nomenclature case calling for an order for the creation, extension, abolishment and contraction of certain pools in Lea, Eddy, Chaves and Roosevelt Counties, New Mexico.

Case No. 4724 continued - (i)

TOWNSHIP 11 SOUTH, RANGE 37 EAST, NMPM
SECTION 2: All
SECTION 3: Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, and 16
SECTION 4: Lots 1, 3, 4, 5, 6, 8, 11, 12, 13, 14, and 15
SECTION 11: E/2 and NW/4
SECTION 12: All
SECTION 13: All
SECTION 14: E/2
SECTION 24: All
SECTION 30: NW/4

(j) Contract the Bagley-Lower Pennsylvanian Gas Pool in Lea County, New Mexico, by the deletion of the following described area:

TOWNSHIP 11 SOUTH, RANGE 33 EAST, NMPM
SECTION 33: SE/4
SECTION 34: W/2 SW/4

TOWNSHIP 12 SOUTH, RANGE 33 EAST, NMPM
SECTION 3: NE/4

(k) Contract the Bagley-Upper Pennsylvanian Gas Pool in Lea County, New Mexico, by the deletion of the following described area:

TOWNSHIP 11 SOUTH, RANGE 33 EAST, NMPM
SECTION 33: N/2 and SE/4
SECTION 34: W/2 and SE/4

TOWNSHIP 12 SOUTH, RANGE 33 EAST, NMPM
SECTION 3: SE/4
SECTION 4: N/2
SECTION 5: N/2 and SW/4
SECTION 10: NE/4

(l) Contract the Bagley-Pennsylvanian Pool in Lea County, New Mexico, by the deletion of the following described area:

TOWNSHIP 11 SOUTH, RANGE 33 EAST, NMPM
SECTION 34: N/2 NE/4 and W/2 SW/4

TOWNSHIP 12 SOUTH, RANGE 33 EAST, NMPM
SECTION 3: S/2 SW/4
SECTION 4: S/2
SECTION 5: S/2

Case No. 4724 continued from page 4

(f) Abolish the Sand Tank-Queen Pool in Eddy County, New Mexico, described as:

TOWNSHIP 18 SOUTH, RANGE 30 EAST, NMPM
SECTION 7: NE/4 SE/4

(g) Extend the vertical limits of the Loco Hills Grayburg-San Andres Pool in Eddy County, New Mexico, to include the Queen formation and redesignate said pool to Loco Hills Queen Grayburg-San Andres Pool.

(h) Abolish the Terry-Blinebry Pool in Lea County, New Mexico, described as:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM
SECTION 32: SE/4
SECTION 33: S/2 and NE/4
SECTION 34: S/2 and NW/4
SECTION 35: S/2
SECTION 36: W/2

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM
SECTION 1: Lots 4, 5, 9, 10, 11, 12, 13, 14, 15, 16, and S/2
SECTION 2: All
SECTION 3: Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, and 16
SECTION 4: Lots 1, 3, 4, 5, 6, 8, 11, 12, 13, 14, and 15
SECTION 11: E/2 and NW/4
SECTION 12: All
SECTION 13: All
SECTION 14: E/2
SECTION 24: All

(i) Extend the Blinebry Oil Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM
SECTION 32: SE/4
SECTION 33: S/2 and NE/4
SECTION 34: S/2 and NW/4
SECTION 35: S/2
SECTION 36: W/2

TOWNSHIP 21 SOUTH, RANGE 36 EAST, NMPM
SECTION 25: NE/4

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM
SECTION 1: Lots 4, 5, 9, 10, 11, 12, 13, 14, 15, 16, and S/2

Case No. 4724 continued

(u) Extend the Garrett-Drinkard Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 38 EAST, NMPM
SECTION 28: NE/4

(v) Extend the Jenninge-Delaware Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 26 SOUTH, RANGE 32 EAST, NMPM
SECTION 4: NE/4

(w) Extend the Round Tank-Queen Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 15 SOUTH, RANGE 28 EAST, NMPM
SECTION 24: SE/4

(x) Extend the West Sawyer-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 37 EAST, NMPM
SECTION 27: SE/4

(y) Extend the Townsend-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 35 EAST, NMPM
SECTION 9: W/2 and SE/4
SECTION 10: S/2
SECTION 15: E/2

(z) Extend the North Vacuum-Abo Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM
SECTION 21: SE/4
SECTION 22: SW/4

TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM
SECTION 19: NE/4

(aa) Extend the Washington Ranch-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 25 SOUTH, RANGE 24 EAST, NMPM
SECTION 35: W/2

(bb) Extend the Osudo-Devonian Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 36 EAST, NMPM
SECTION 31: E/2

Case No. 4724 continued

(m) Extend the North Bagley-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 11 SOUTH, RANGE 33 EAST, NMPM
SECTION 34: N/2 NE/4 and W/2 SW/4

TOWNSHIP 12 SOUTH, RANGE 33 EAST, NMPM
SECTION 3: S/2 SW/4

(n) Extend the Allison-Abo Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 9 SOUTH, RANGE 36 EAST, NMPM
SECTION 11: SW/4

(o) Extend the Atoka-Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 26 EAST, NMPM
SECTION 11: All

(p) Extend the Boyd-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 25 EAST, NMPM
SECTION 9: All

(q) Extend the Chambers-Wolfcamp Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 15 SOUTH, RANGE 35 EAST, NMPM
SECTION 35: SW/4

(r) Extend the Dollarhide-Devonian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 38 EAST, NMPM
SECTION 30: SW/4

(s) Extend the Dollarhide-Ellenburger Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 38 EAST, NMPM
SECTION 31: E/2

(t) Extend the Double L-Queen Associated Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 15 SOUTH, RANGE 29 EAST, NMPM
SECTION 1: NW/4 NE/4
SECTION 12: E/2 NW/4

Case 4725 continued from page 9

(d) Create a new pool in San Juan County, New Mexico, classified as an oil pool for Paradox production, designated as the Cone-Paradox Oil Pool and described as:

TOWNSHIP 31 NORTH, RANGE 18 WEST, NMPM
SECTION 22: SE/4

(e) Create a new pool in San Juan County, New Mexico, classified as a gas pool for Mesaverde production, designated as the Crouch Mesa-Mesaverde Pool and described as:

TOWNSHIP 29 NORTH, RANGE 11 WEST, NMPM
SECTION 5: W/2
SECTION 6: N/2

TOWNSHIP 30 NORTH, RANGE 11 WEST, NMPM
SECTION 31: SW/4

(f) Create a new pool in San Juan County, New Mexico, classified as an oil pool for Mesaverde production, designated as the Cuervo-Mesaverde Oil Pool and described as:

TOWNSHIP 24 NORTH, RANGE 8 WEST, NMPM
SECTION 28: NE/4

(g) Create a new pool in Rio Arriba County, New Mexico, classified as an oil pool for Mesaverde production, designated as the Devils Fork-Mesaverde Oil Pool and described as:

TOWNSHIP 24 NORTH, RANGE 6 WEST, NMPM
Section 16: SW/4

(h) Create a new pool in San Juan County, New Mexico, classified as an oil pool for Dakota production, designated as the Dufers Point-Dakota Oil Pool and described as:

TOWNSHIP 25 NORTH, RANGE 8 WEST, NMPM
Section 17: E/2
Section 19: N/2 & SW/4
Section 20: N/2

(i) Create a new pool in San Juan County, New Mexico, classified as an oil pool for Dakota production, designated as the Escrito-Dakota Oil Pool and described as:

TOWNSHIP 24 NORTH, RANGE 8 WEST, NMPM
Section 1: W/2
Section 2: N/2
Section 12: W/2

TOWNSHIP 25 NORTH, RANGE 8 WEST, NMPM
Section 35: SW/4

CASE 4725: Northwest New Mexico nomenclature case calling for an order for the creation, extension and contraction of certain pools in San Juan and Rio Arriba Counties, New Mexico.

(a) Create a new pool in San Juan County, New Mexico, classified as an oil pool for Farmington production, designated as the Alamo-Farmington Oil Pool and described as:

TOWNSHIP 30 NORTH, RANGE 9 WEST, NMPM
SECTION 4: S/2
SECTION 9: NE/4
SECTION 10: W/2
SECTION 15: NW/4 & SW/4 NE/4

(b) Create a new pool in San Juan County, New Mexico, classified as an oil pool for Gallup production, designated as the Amarillo-Gallup Oil Pool and described as:

TOWNSHIP 28 NORTH, RANGE 13 WEST, NMPM
SECTION 33: SE/4 SE/4
SECTION 34: SW/4 & SE/4 NW/4

(c) Create a new pool in San Juan County, New Mexico, classified as a gas pool for Fruitland production, designated as the Blanco-Fruitland Pool and described as:

TOWNSHIP 29 NORTH, RANGE 9 WEST, NMPM
SECTION 2: W/2
SECTION 3: N/2
SECTION 4: NE/4
SECTION 11: NW/4

TOWNSHIP 30 NORTH, RANGE 8 WEST, NMPM
SECTION 29: S/2
SECTION 30: S/2

TOWNSHIP 30 NORTH, RANGE 9 WEST, NMPM
SECTION 8: N/2 & SE/4
SECTION 9: S/2
SECTION 16: E/2
SECTION 21: E/2
SECTION 25: S/2
SECTION 26: S/2
SECTION 27: S/2
SECTION 28: E/2
SECTION 33: N/2 & SE/4
SECTION 34: All
SECTION 35: W/2

Case No. 4725 continued from page 11

(o) Create a new pool in San Juan and Rio Arriba Counties, New Mexico, classified as a gas pool for Chacra production, designated as the Largo-Chacra Pool and described as:

TOWNSHIP 27 NORTH, RANGE 7 WEST, NMPM
SECTION 19: S/2

TOWNSHIP 27 NORTH, RANGE 8 WEST, NMPM
SECTION 23: S/2
SECTION 24: S/2
SECTION 26: W/2
SECTION 35: NW/4

(p) Create a new pool in Rio Arriba County, New Mexico, classified as a gas pool for Gallup production, designated as the Lindrith-Gallup Pool and described as:

TOWNSHIP 24 NORTH, RANGE 2 WEST, NMPM
SECTION 20: All
SECTION 21: All
SECTION 28: All
SECTION 29: All

(q) Create a new pool in San Juan County, New Mexico, classified as an oil pool for Gallup production, designated as the Meadows-Gallup Oil Pool and described as:

TOWNSHIP 30 NORTH, RANGE 15 WEST, NMPM
SECTION 33: S/2 & SW/4 NW/4
SECTION 34: SW/4

(r) Create a new pool in San Juan County, New Mexico, classified as an oil pool for Mesaverde production, designated as the Nenahnezad-Mesaverde Oil Pool and described as:

TOWNSHIP 29 NORTH, RANGE 15 WEST, NMPM
SECTION 10: SW/4

(s) Create a new pool in Rio Arriba County, New Mexico, classified as an oil pool for Dakota production, designated as the Ojito-Dakota Oil Pool and described as:

TOWNSHIP 25 NORTH, RANGE 3 WEST, NMPM
SECTION 17: SW/4
SECTION 18: SE/4
SECTION 19: NE/4

(t) Create a new pool in San Juan County, New Mexico, classified as a gas pool for Fruitland production, designated as the North Pinon-Gallup Pool and described as:

TOWNSHIP 29 NORTH, RANGE 12 WEST, NMPM
SECTION 28: SW/4

Case 4725 continued from page 10

(j) Create a new pool in San Juan County, New Mexico, classified as a gas pool for Gallup production, designated as the Flora Vista-Gallup Pool and described as:

TOWNSHIP 30 NORTH, RANGE 12 WEST, NMPM
SECTION 2: SW/4
SECTION 3: N/2 & SE/4
SECTION 4: N/2

(k) Create a new pool in Rio Arriba County, New Mexico, classified as a gas pool for Mesaverde production, designated as the Gonzales Mesa-Mesaverde Pool and described as:

TOWNSHIP 25 NORTH, RANGE 5 WEST, NMPM
SECTION 5: W/2
SECTION 6: All
SECTION 7: NE/4
SECTION 8: All

(l) Create a new pool in San Juan County, New Mexico, classified as a gas pool for Chacra production, designated as the Harris Mesa-Chacra Pool and described as:

TOWNSHIP 28 NORTH, RANGE 9 WEST, NMPM
SECTION 26: SW/4
SECTION 27: S/2
SECTION 28: S/2
SECTION 29: E/2

(m) Create a new pool in San Juan County, New Mexico, classified as a gas pool for Pictured Cliffs production, designated as the Huerfano-Pictured Cliffs Pool and described as:

TOWNSHIP 25 NORTH, RANGE 10 WEST, NMPM
SECTION 1: NE/4

TOWNSHIP 26 NORTH, RANGE 9 WEST, NMPM
SECTION 19: S/2

TOWNSHIP 26 NORTH, RANGE 10 WEST, NMPM
SECTION 24: SE/4
SECTION 25: E/2
SECTION 36: E/2

(n) Create a new pool in San Juan County, New Mexico, classified as an oil pool for Gallup production, designated as the Jewett Valley-Gallup Oil Pool and described as:

TOWNSHIP 29 NORTH, RANGE 16 WEST, NMPM
SECTION 3: W/2 & SE/4

Case No. 4725 continued from page 12

(u) Create a new pool in San Juan County, New Mexico, classified as a gas pool for Fruitland production, designated as the Pump Mesa-Fruitland Pool and described as:

TOWNSHIP 32 NORTH, RANGE 8 WEST, NMPM
SECTION 32: SW/4

(v) Create a new pool in San Juan County, New Mexico, classified as a gas pool for Pictured Cliffs production, designated as the Twin Mounds-Pictured Cliffs Pool and described as:

TOWNSHIP 30 NORTH, RANGE 14 WEST, NMPM
SECTION 31: SE/4
SECTION 32: S/2
SECTION 33: S/2

(w) Create a new pool in Rio Arriba County, New Mexico, classified as an oil pool for Dakota production, designated as the Wild Horse-Dakota Oil Pool and described as:

TOWNSHIP 26 NORTH, RANGE 4 WEST, NMPM
SECTION 26: NW/4 NW/4
SECTION 27: N/2 & NW/4 SW/4

(x) Contract the Gavilan-Pictured Cliffs Pool boundary in Rio Arriba County, New Mexico, by the deletion of the following described area:

TOWNSHIP 26 NORTH, RANGE 3 WEST, NMPM
SECTION 23: SE/4

(y) Create a new pool in Rio Arriba County, New Mexico, classified as an oil pool for Pictured Cliffs production, designated as the Sleeper-Pictured Cliffs Oil Pool and described as:

TOWNSHIP 26 NORTH, RANGE 3 WEST, NMPM
SECTION 23: S/2
SECTION 26: NE/4

(z) Extend the Tapacito-Gallup Associated Pool boundary in Rio Arriba County, New Mexico, to include therein:

TOWNSHIP 26 NORTH, RANGE 4 WEST, NMPM
SECTION 19: S/2
SECTION 20: SW/4
SECTION 29: NW/4

TOWNSHIP 26 NORTH, RANGE 5 WEST, NMPM
SECTION 24: S/2

Mobil Oil Corporation

P.O. BOX 633
MIDLAND, TEXAS 79701

May 11, 1972

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

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

GLEN D. AARON & JAMES C. WHITTEN'S APPLICATION FOR UNORTHODOX GAS WELL LOCATION--NEW MEXICO OIL CONSERVATION COMMISSION'S CASE NO. 4715
ATOKA-PENNSYLVANIAN GAS POOL
EDDY COUNTY, NEW MEXICO

Gentlemen:

Mobil Oil Corporation has been informed of the subject unorthodox gas well location application for a well to be drilled 990' FSL and 1650' FWL of Section 11, T18S, R26E, Eddy County, New Mexico. This location will be approximately 990' west of Mobil's Brainard Gas Com Lease, which consists of the east 320 acres of said Section 11. The Mobil Brainard Gas Com Well No. 1 is a regular location in Unit P, 990' from the south and east lines of said Section 11.

Mobil hereby gives notice of our opposition to this application and requests that a well drilled in the west 320 acres of Section 11, be drilled in accordance with the field rules.

Glen D. Aaron and James C. Whitten have been notified of our actions by a copy of this letter which confirms our phone call of May 10, 1972.

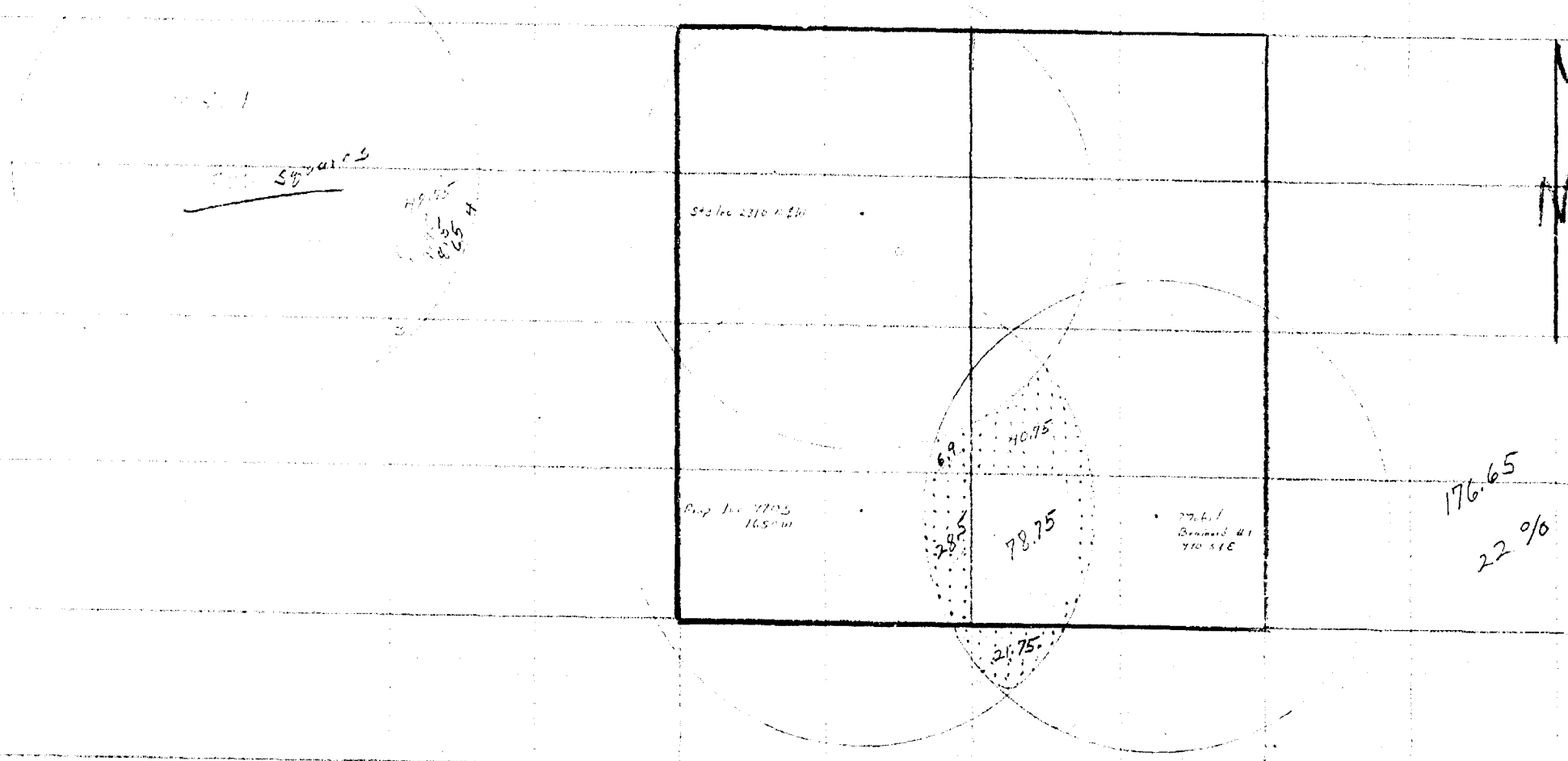
Yours very truly,

For: Ira B. Stitt
Division Operations Engineer

WBSimmons,jr/mw
cc:
Mr. Richard S. Morris, Attorney
P. O. Box 2307
Santa Fe, New Mexico 87501

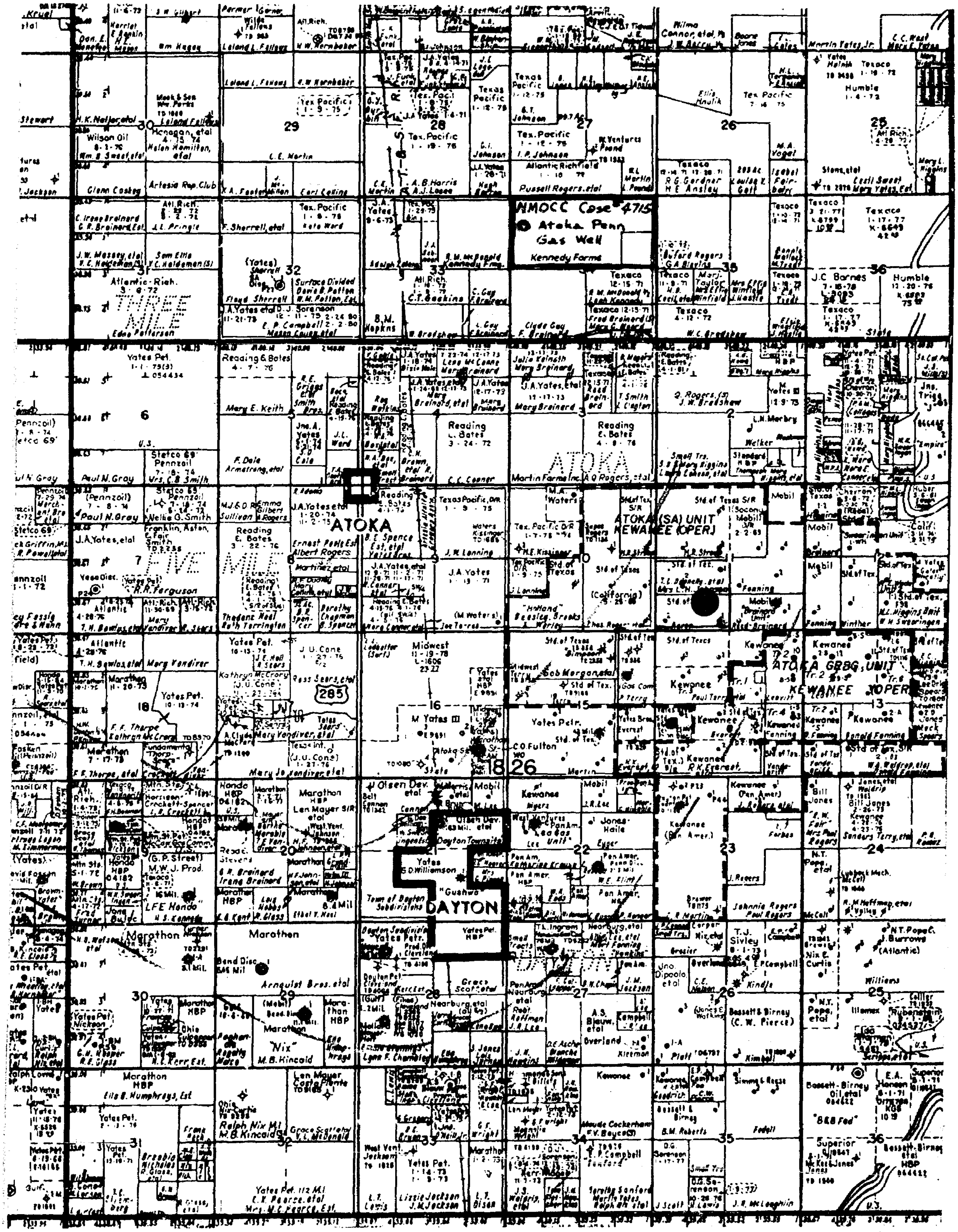
Mr. Glen D. Aaron
P. O. Box 1066
Midland, Texas 79701

Case 4715
Penalty calculation



176.65

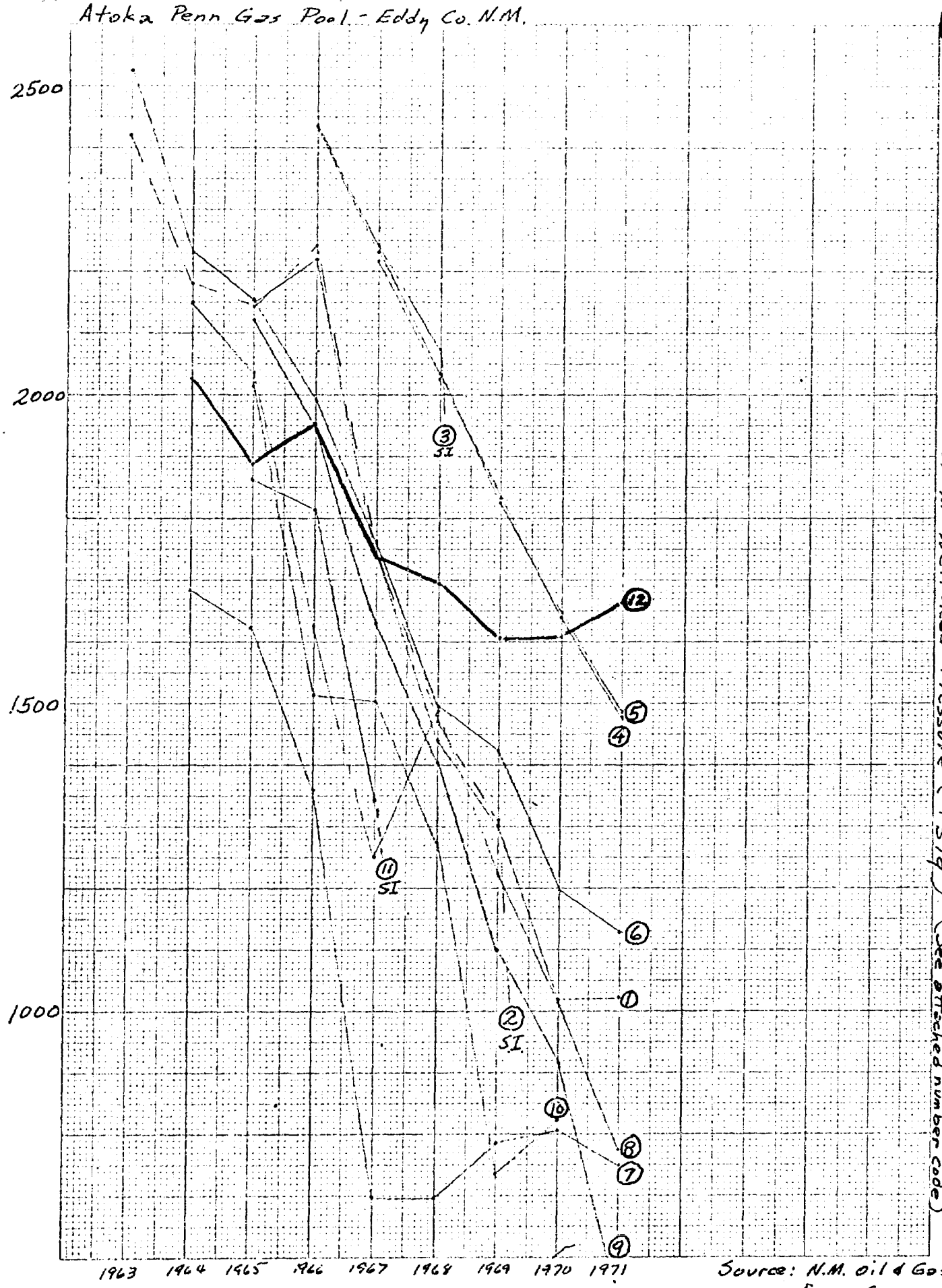
22 0/0


NMOCC Case #4715
Atoka Penn Gas Well
Kennedy Farms
ATOKA
DAYTON
ATOKA (SA) UNIT
KEWANEE (OPER)
ATOKA GRBG UNIT
KEWANEE (OPER)
THREE MILE
FIVE MILE
285
Texas Pacific
Tex. Pacific
Reading & Bates
Yates Pet.
Marathon
Kewanee
Humble
Texaco
Mobil
Std. of Texas
Atlantic Richfield
Pennzoil
Stetco 69
Paul N. Gray
J.A. Yates, etal
Mary Brainerd
Dayton Townsite
Town of Dayton Subdivisions
"Gushwa"
Nearburg, etal
Bassett & Birney
"B&B Fed"
Superior
Midwest
M Yates III
C.O. Fulton
Bend Disc.
"Nix"
M.B. Kincaid
Arnquist Bros. etal
Ella B. Humphreys, Est.
Yates Pet. 112 Mi
E.X. Pearce, etal
J.R. McLaughlin
Dorothy Sanford
Maude Cockerham
"Empire"
"Holland"
Williams
N.T. Pope & J. Burrows (Atlantic)
T.J. Sivley
Johnnie Rogers
Paul Rogers
Bill Jones
Sanders Terry, etal
Lubbock Mech.
Pan Amer.
Olsen Dev. etal
Len Mayer
Grace Scott etal
Wilson Oil
Artesia Rep. Club
Glenn Caskey
Atlantic-Rich.
Floyd Sherrell
C.E. Martin
Leland L. Fallows
Russell Rogers, etal
Mary E. Keith
Martin Farms Inc.
A.Q. Rogers, etal
U.S.
State

NMOCC Case # 4715

(5)

Atoka Penn Gas Pool - Eddy Co. N.M.



Shut-in Wellhead Pressure (Psig) (See attached number code)

Source: N.M. Oil & Gas Engr. Comm.

NMOCC Case 4715

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

NO. 340R-20 DIETZGEN GRAPH PAPER
20 X 20 PER INCH

NMOCC Case # 4715

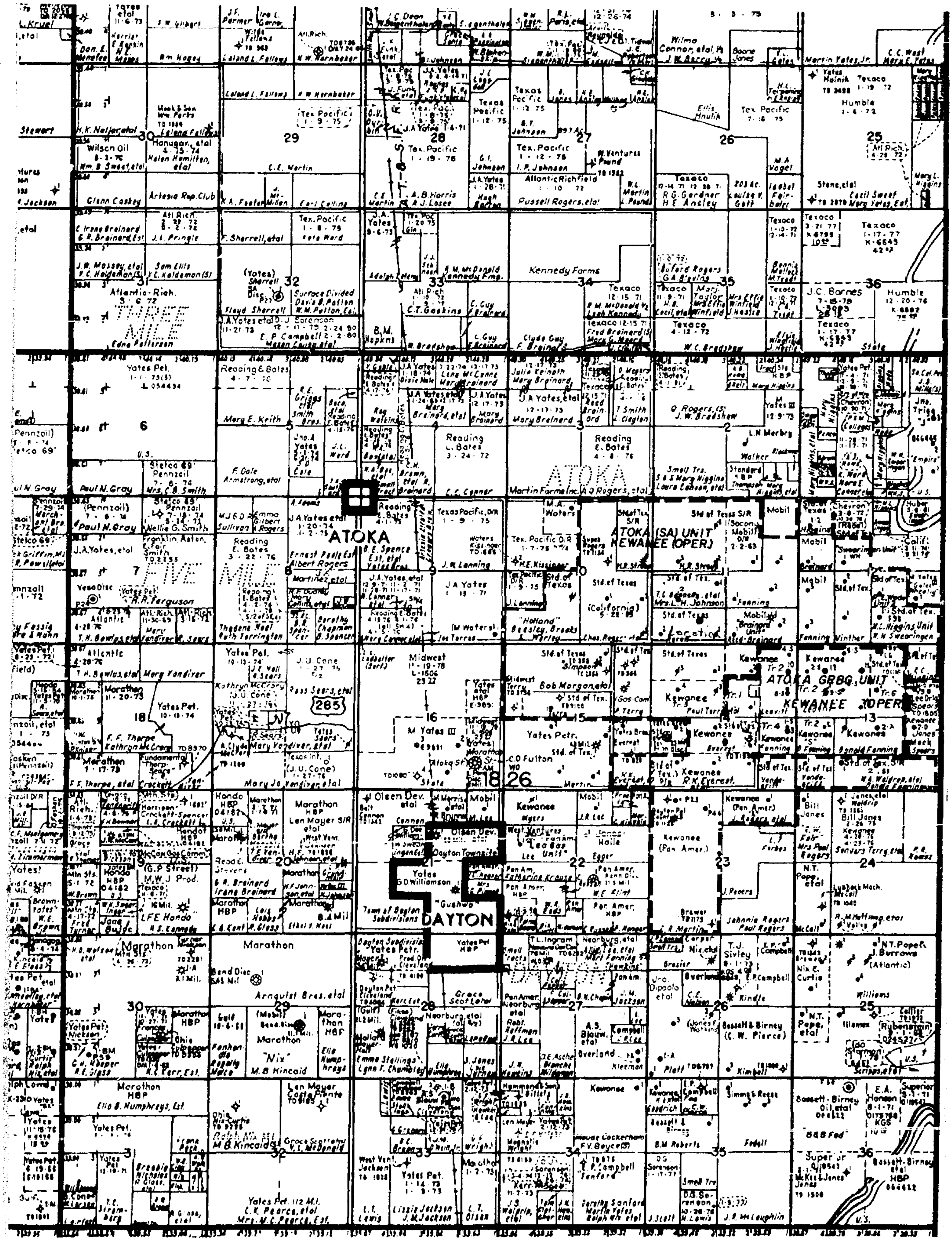
Atoka Pean Gas Pool Eddy Co. N.M.

Pressures in PSIG

Plotted Number	Well	1963	1964	1965	1966	1967	1968	1969	1970	1971	Production 1971 in MMCF
(1)	Amoco 1-C Lee Unit	2525	2230	2151	2220	1737	1440	1300	1019	1021	588
(2)	1 Flint	2420	2180	2142	2240	1738	1470	1310	Exempt	SI	0
(3)	Chevron 1 Everest	–	–	–	2437	2241	2076	Exempt	Exempt	SI	254
(4)	1 Martin	–	–	–	2433	2231	2033	1824	1640	1479	1013
(5)	2 Paul Terry Un.				–	2217	2027	1831	1647	1485	430
(6)	Ingram 2 Hawkins	–	2150	2039	1624	1250	1491	1425	1195	1130	10
(7)	Mallard 1 Mayer	–	1683	1622	1360	617	696	786	805	748	12
(8)	Yates 1 Dayton Townsite	–	–	2152	1991	1760	1484	1226	1016	775	461
(9)	1 Bob Gushwa	–	–	2120	1950	1678	1402	1097	914	562	308
(10)	1 Len Mayer	–	–	2113	1513	1502	1272	1022	736	821	366
(11)	1 Marathon 'AM'	–	–	1863	1813	1341	–				0
(12)	Mobil 1 Brainard Unit	–	2027	1887	1951	1732	1692	1607	1607	1666	178

Source: N.M. Oil & Gas Engr. Comm.

Pressures first available in 1963



ATOKA
DAYTON
"Gushwa"
ATOKA (SA) UNIT
KEWANEE (OPER.)
ATOKA GRBG. UNIT
KEWANEE (OPER)
285
THREE MILE
FIVE MILE
Kennedy Farms
Texaco
Tex. Pacific
Humble
Atlantic-Rich.
Yates Pet.
Reading & Bates
Marathon
Kewanee
Std. of Texas
Mobil
Midwest
Olsen Dev. etal
Dayton Townsite
Town of Dayton Subdivisions
Yates Petr.
Pan Amer.
Bassett & Birney (C. W. Pierce)
N.T. Pope & J. Burrows (Atlantic)
Martin Farms Inc.
Mary E. Keith
Paul N. Gray
J.A. Yates, etal
M.B Kincaid
Arnquist Bros. etal
Yates Pet. 112 M.I.
"B&B Fed"
U.S.
State

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

April 26, 1972

Case 4715

COPY

Glen D. Aaron
Petroleum Landman
Mid-America Building
P. O. Box 1066
Midland, Texas 79701

Re: An unorthodox well location
Atoka-Pennsylvanian Gas Pool
Eddy County, New Mexico

Gentlemen:

Your application has been set up for an examiner hearing on May 17, 1972. A copy of the docket will be mailed to you.

Very truly yours,

GEORGE M. HATCH
Attorney

GMH/dr

DOCKET MAILED
Date 5-5-72

GLEN D. AARON
PETROLEUM LANDMAN
MID-AMERICA BUILDING
PHONE: 915-684-4451

P. O. BOX 1066 — OIL PROPERTIES — MIDLAND, TEXAS 79701

Case 4715

April 24, 1972

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

Re: Atoka-Pennsylvanian Gas Pool
Eddy County, New Mexico

Attention: Mr. George Hatch

Gentlemen:

We hereby request an exception to Rule 2, Order R-1670-E in order to drill an unorthodox location 990' FSL & 1650'FWL of Section 11, T-18-S, R-26-E to form a 320 acre production unit, Eddy County, New Mexico.

It is our understanding that to request a hearing by April 27, 1972, it may be possible to be on the May 17, 1972, docket.

We enclose herewith a structure map for your information and convenience. Please let us know if you will be able to get us on the May 8, 1972, docket.

Thank you for your cooperation in this matter.

Yours very truly,

Glen D. Aaron

James C. Whitten

GDA:dt

Enc.

DRAFT

GMH/dr

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE No. 4715

Order No. R-4310

APPLICATION OF GLEN D. AARON
AND JAMES C. WHITTEN FOR AN
UNORTHODOX WELL LOCATION,
EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 17, 1972, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this _____ day of May, 1972, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicants, Glen D. Aaron and James C. Whitten, seek an exception ~~to Rule _____ of the Commission~~ to the well location requirements of the special rules and regulations for the Atoka-Pennsylvanian Gas Pool ~~Rules and Regulations~~ to drill a gas well in ~~the Atoka-Pennsylvanian Gas Pool~~ said pool, at an unorthodox gas well location 990 feet from the South line and 1650 feet from the West line of Section 11, Township 18 South, Range 26 East, NMPM, Eddy County, New Mexico; that the W/2 of said Section 11 would be dedicated to said well.

(3) That a standard location for the subject pool would ~~require the well to be no closer than 660 feet to the nearest side boundary of the dedicated tract nor closer than 1980 feet to the nearest end boundary~~ nor closer than 330 feet to any quarter-quarter section or subdivision inner boundary.

(4) That the evidence indicates that the entire W/2 of said Section 11 is productive of gas from the ~~Morrow~~ Atoka-Pennsylvanian Gas Pool ~~formation~~.

(5) That the entire W/2 of said Section 11 can be efficiently and economically drained and developed by the subject well.

(6) That there is evidence that a well at the proposed unorthodox location would penetrate a thicker pay section ~~and encounter it structurally higher~~ than a well at an orthodox location.

(7) That the evidence indicates that a well at the proposed unorthodox location should recover more gas than a well at an orthodox location.

(8) That due to the unorthodox location of the above-described well, the correlative rights of ~~some offset operators~~ other producers in the pool will be impaired if unrestricted production by the subject well is permitted.

(9) That to offset the advantage to be gained over ~~offset operators~~ other producers in the pool, the subject well to be drilled at an unorthodox location in the W/2 of Section 11 should be assigned ~~a ratable take~~ an acreage factor of 78 percent in the Atoka-Pennsylvanian Gas Pool.

(10) That approval of the subject application will afford the applicant the opportunity to produce his just and equitable share of the gas in the ~~subject~~ Atoka-Pennsylvanian Gas Pool, will prevent the augmentation of risk arising from the drilling

of an excessive number of wells, and will otherwise prevent waste and protect correlative rights, provided the above-described ~~ratable take~~ acreage factor is assigned to the subject well.

IT IS THEREFORE ORDERED:

(1) That the applicants, Glen D. Aaron and James C. Whitten, are hereby granted an exception to the well location requirements of the special rules and regulations of the Atoka-Pennsylvanian Gas ~~of the Commission Rules and Regulations~~ Pool and are hereby authorized to drill a gas well in the Atoka-Pennsylvanian Gas Pool at an unorthodox gas well location 990 feet from the South line and 1650 feet from the West line of Section 11, Township 18 South, Range 26 East, NMPM, Eddy County, New Mexico, to be dedicated to a standard unit comprising the W/2 of said Section 11.

PROVIDED HOWEVER, that said well shall be assigned an ~~a ratable take~~ acreage factor of 0.78 for proration purposes in the subject pool ~~for proration purposes~~.

PROVIDED FURTHER, that in the event said pool be prorated, the subject well shall be assigned an acreage factor for proration purposes of _____.

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

DONE at Santa Fe, New Mexico, on the day and year herein-above designated.