[illegible] S. ANTHILL FOR AN
[illegible] LOCATION AND SIMUL-
[illegible] LOCATION, EDDY COUNTY, NEW
MEXICO

Case No.

6964

Application

Transcripts

Small Exhibits

ETC

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 6964
Order No. R-6468

APPLICATION OF MORRIS R. ANTWEIL
FOR AN UNORTHODOX WELL LOCATION
AND SIMULTANEOUS DEDICATION,
EDDY COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on July 9, 1980, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 10th day of September, 1980, the Division Director, 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 Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Morris R. Antweil, seeks approval of an unorthodox gas well location for his Rio Com Well No. 2 to be drilled at a point 660 feet from the North line and 660 feet from the West line of Section 29, Township 18 South, Range 25 East, NMPM, Penasco Draw-Morrow Gas Pool, Eddy County, New Mexico.

(3) That the applicant further seeks to simultaneously dedicate the N/2 of said Section 29 to the above-described well and to his Rio Com. Well No. 1, located in Unit G of said Section 29.

(4) That the proposed unorthodox location and simultaneous dedication were opposed by Gulf Oil Corporation, which operates two Morrow gas wells in Section 19 of Township 18 South, Range 25 East, immediately to the Northwest of the proposed location.

(5) That this matter was the subject of Case No. 6213, heard by a Division Examiner on May 17, 1978, whereupon Order No. R-5856 was entered, and of a de novo hearing on January 24, 1979, whereupon Order No. R-5856-A was entered.

(6) That the applicant in this case, who was also the applicant in the previous Case No. 6213, upon filing for hearing in the instant case, stated that, "Applicant's request that the Division consider this matter again....is based on the belief and contention that the production and depletion of surrounding Morrow wells has significantly changed the considerations in regard to the protection of correlative rights."

(7) That at the hearing of the instant case, Gulf requested dismissal of the case on the grounds that it is res judicata.

(8) That no ruling was made on Gulf's motion at the hearing and evidence was taken both from the applicant and from Gulf concerning the proposed location.

(9) That while to some extent the matter is res judicata, conditions in the reservoir have changed since the matter was first heard, and in the interest of obtaining all the facts in this particular case and rendering a decision based on current conditions, Gulf's motion for dismissal should be denied.

(10) That at the hearing of the instant case it was ruled that the Division would take administrative notice of the record in the previous hearings on this matter.

(11) That there are gas reserves in the NW/4 of Section 29 which the applicant will apparently be unable to produce through his existing well in the NE/4 of Section 29.

(12) That in order to produce his just and equitable share of the reserves in the pool, particularly those reserves underlying the NW/4 of Section 29, the applicant should be permitted to drill a well thereon and simultaneously dedicate the N/2 of said section to the new well and to his Rio Com. Well No. 1.

(13) That said Rio Com. Well No. 1 is apparently draining only a very limited area probably confined to the SW/4 NE/4 of Section 29, and in all probability is not affecting the Gulf acreage in Section 19.

(14) That a well at the proposed location for applicant's Rio Com Well No. 2, being 660 feet from the North line and 660 feet from the West line of Section 29, is at a standard location relative to the North and South lines of said Section 29.

(15) That a well at the proposed location is 67 percent closer to theWest line of said Section 29 than permitted by Division Rules and Regulations.

(16) That a well at the proposed location will have an area of drainage in the Morrow formation which extends 67.2 net acres outside Section 29, an amount of acreage equivalent to 21 percent of a standard proration unit in said pool.

(17) That to offset the advantage gained over the offset operators resulting from the drilling of a well at the proposed unorthodox location, production from the N/2 of said Section 29 should be limited from the Morrow formation.

(18) That such limitation should be based upon the variation of the location from a standard location and the 67.2 net-acre encroachment described in Finding No. (15) above, and may best be accomplished by assigning the proration unit an allowable limitation factor of 0.71 (100 percent North/South factor plus 33 percent East/West factor plus 79 percent net-acre factor, divided by 3).

(19) That in the absence of any special rules and regulations for the prorationing of production from said Penasco Draw-Morrow Gas Pool, the aforesaid production limitation factor should be applied against the proration unit's ability to produce into the pipeline as determined by periodic well tests.

(20) That considering the risks involved in drilling to the Morrow formation, each proration unit should have a reasonable minimum calculated allowable.

(21) That at a sustained flowing rate of 500,000 cubic feet per day, a Morrow well in this area would pay-out in approximately 2.5 years.

(22) That 2.5 years is a reasonable pay-out period for a Morrow well in this area.

(23) That the minimum calculated allowable for the subject proration unit should be 500,000 cubic feet of gas per day.

(24) That approval of the subject application subject to the above provisions and limitations and to the Special Rules and Regulations for the Application of a "Production Limitation Factor" hereinafter set forth will afford the applicant the opportunity to produce its just and equitable share of the gas in the subject pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That an unorthodox gas well location for the Morrow formation is hereby approved for the Morris R. Antwell Rio Well No. 2 to be located at a point 660 feet from the North line and 660 feet from the West line of Section 29, Township 18 South, Range 25 East, NMPM, Penasco Draw-Morrow Gas Pool, Eddy County, New Mexico.

(2) That a 320-acre proration unit consisting of the N/2 of said Section 29 shall be simultaneously dedicated to the above-described well and to the Rio Well No. 1 located in Unit G of said Section 29.

(3) That said proration unit is hereby assigned a Production Limitation Factor in the Morrow Formation of 0.71.

(4) That in the absence of any Special Rules and Regulations prorating gas production in said Penasco Draw-Morrow Gas Pool, the Special Rules hereinafter promulgated shall apply.

(5) That the following Special Rules and Regulations for a non-prorated gas well at an unorthodox location shall apply to the subject well or wells:

SPECIAL RULES AND REGULATIONS
FOR THE
APPLICATION OF A "PRODUCTION LIMITATION FACTOR"
TO A NON-PRORATED GAS WELL OR WELLS

APPLICATION OF RULES

RULE 1.(A) These rules shall apply to the proration unit consisting of the N/2 of Section 29, Township 18 South, Range 25 East, Eddy County, New Mexico, upon completion and connection as a Morrow formation producing well of the Morris R.

Antweil Rio Well No. 2 located 660 feet from the North line and 660 feet from the West line of said Section 29.

RULE 1.(B) A Production Limitation Factor of 0.71 shall be applied to the proration unit's deliverability (as determined by the hereinafter set forth procedure) to determine its maximum allowable rate of production.

RULE 1.(C) Any deliverability determined by any of the hereinafter described procedures shall be the total deliverability of any Morrow producing wells on such proration unit as determined by adding such deliverabilities.

ALLOWABLE PERIOD

RULE 2. The allowable period for the subject unit shall be six months.

RULE 3. The year shall be divided into two allowable periods commencing at 7:00 o'clock a.m. on January 1 and July 1.

DETERMINATION OF DELIVERY CAPACITY

RULE 4. Immediately upon connection of the Rio Well No. 2 the operator shall determine the open flow capacity of producing wells on the proration unit in accordance with the Division "Manual for Back-Pressure Testing of Natural Gas Wells" then current, and the well's or wells' initial deliverability shall be calculated against average pipeline pressure.

RULE 5. The well's or wells' "subsequent deliverability" shall be determined twice a year, and shall be equal to its or their highest single day's production during the months of April and May or October and November, whichever is applicable. Said subsequent deliverability, certified by the pipeline, shall be submitted to the appropriate District Office of the Division not later than June 15 and December 15 of each year.

RULE 6. The Division Director may authorize special deliverability tests to be conducted upon a showing that the well or wells have been worked over or that the subsequent deliverability determined under Rule 5 above is erroneous. Any such special test shall be conducted in accordance with Rule 4 above.

RULE 7. The operator shall notify the appropriate district office of the Division and all offset operators of the date and time of initial or special deliverability tests in order that the Division or any such operator may at their option witness such tests.

CALCULATION AND ASSIGNMENT OF ALLOWABLES

RULE 8. The unit's allowable as determined by these rules shall commence upon the date of connection to a pipeline of said Rio Well No. 2 and when the operator has complied with all appropriate filing requirements of the Rules and Regulations and any special rules and regulations.

RULE 9. The unit's allowable during its first allowable period shall be determined by multiplying its initial deliverability by its production limitation factor.

RULE 10. The unit's allowable during all ensuing allowable periods shall be determined by multiplying its latest subsequent deliverability, as determined under provisions of Rule 5, by its production limitation factor. If the unit shall not have been producing under these rules for at least 60 days prior to the end of its first allowable period, the allowable for the second allowable period shall be determined in accordance with Rule 9.

RULE 11. Revision of allowable based upon special well tests shall become effective upon the date of such test provided the results of such test are filed with the Division's district office within 30 days after the date of the test; otherwise the date shall be the date the test report is received in said office.

RULE 12. Revised allowables based on special well tests shall remain effective until the beginning of the next allowable period.

RULE 13. In no event shall the unit receive an allowable of less than 500,000 cubic feet of gas per day.

BALANCING OF PRODUCTION

RULE 14. January 1 and July 1 of each year shall be known as the balancing dates.

RULE 15. If the unit has an underproduced status at the end of a six-month allowable period, it shall be allowed to carry such underproduction forward into the next period and may

produce such underproduction in addition to its regularly assigned allowable. Any underproduction carried forward into any allowable period which remains unperfected at the end of the period shall be cancelled.

RULE 16. Production during any one month of an allowable period in excess of the monthly allowable assigned to the unit shall be applied against the underproduction carried into the period in determining the amount of allowable, if any, to be cancelled.

RULE 17. If the unit has an overproduced status at the end of a six-month allowable period, it shall be shut in until such overproduction is made up.

RULE 18. If, during any month, it is discovered that the unit is overproduced in an amount exceeding three times its average monthly allowable, it shall be shut in during that month and during each succeeding month until it is overproduced in an amount three times or less its monthly allowable, as determined hereinabove.

RULE 19. The Director of the Division shall have authority to permit the unit, if it is subject to shut-in pursuant to Rules 17 and 18 above, to produce up to 500 MCF of gas per month upon proper showing to the Director that complete shut-in would cause undue hardship, provided however, such permission shall be rescinded for the unit if it has produced in excess of the monthly rate authorized by the Director.

RULE 20. The Division may allow overproduction to be made up at a lesser rate than permitted under Rules 17, 18, or 19 above upon a showing at public hearing that the same is necessary to avoid material damage to the well or wells.

GENERAL

RULE 21. Failure to comply with the provisions of this order or the rules contained herein or the Rules and Regulations of the Division shall result in the cancellation of allowable assigned to the unit. No further allowable shall be assigned to the unit until all rules and regulations are complied with. The Division shall notify the operator of the unit and the purchaser, in writing, of the date of allowable cancellation and the reason therefor.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY
Director

SEAL

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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
9 July 1980

EXAMINER HEARING

IN THE MATTER OF:

Application of Morris R. Antweil for an unorthodox gas well location and simultaneous dedication, Eddy County, New Mexico.

CASE 6964

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant: Donald G. Stevens, Esq.
P. O. Box 2203
Roswell, New Mexico

I N D E X

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E X H I B I T S

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M. NUTTER: We'll call next Case Number 6964.

MR. PADILLA: Application of Morris R. Antweil for an unorthodox gas well location and simultaneous dedication, Eddy County, New Mexico.

MR. STEVENS: Mr. Examiner, I'm Don Stevens, from Roswell, New Mexico, representing the applicant in this case.

We have one witness to be sworn.

I would also like to make an opening statement at your convenience.

MR. NUTTER: Are there other appearances?

MR. KASTLER: Yes. I'm Bill Kastler, representing Gulf Oil Corporation, and at this time I would like to move that this case be dismissed on the grounds that it is res judicata.

These same facts were heard previously in Case Number 6213 on May 17th, 1978, which resulted in Order No. R-5856, dated 11-9-1978, and yet there was following that a de novo hearing in Case Number 6215, held January 24, 1979, resulting in Order R-5856-A, dated March 7, 1979.

Now, we contend that the same facts, or just an extrapolation of the matter, does not create grounds to continue to bring this case on for hearing.

And therefor, I move to dismiss.

MR. NUTTER: Mr. Stevens?

MR. STEVENS: Mr. Examiner, these facts were pointed out in the application for this hearing. The facts as regarding the case and the rehearing and the de novo hearing are correct.

This case was asked for on the basis, however, that there is a change of facts concerning the application herein, whereby additional reservoir information is available that was not available at the original hearing, whereby the Commission could have a different decision based upon these new facts.

Two years have passed since the initiation of this action. Much production history has occurred. The contention of the applicant herein is that there is gas underlying this tract which is unrecoverable under the rule of the other case.

The well is considered too risky by the applicant in that case to be drilled. As a consequence, that gas is unrecoverable.

The applicant herein proposes to prove that there is no damage to Gulf's correlative rights since there is no drainage underlying these wells and a well in this particular area.

Or, in the alternative, if drainage has occurred, that Gulf has not been affected by that drainage; in

fact, has counter-drained more than might have affected Gulf otherwise.

For this reason, based on the new facts, which will be presented at the hearing, we request the motion be denied.

MR. NUTTER: Now, what new facts are available, Mr. Stevens?

MR. STEVENS: The new facts are the production history of the wells between the initial hearings and now, showing, in effect, that there is no draining; or, if there is draining, counter-drainage has been accomplished by Gulf.

MR. NUTTER: Have there been new wells drilled?

MR. STEVENS: No, sir.

MR. NUTTER: Just production history is all that you have --

MR. STEVENS: Yes. The original evidence was based upon volumetric calculations and not based upon production.

We feel that the volumetric calculations are of no moment when you have actual production history from which drainage patterns can be more easily determined.

MR. NUTTER: Well now, the volumetric data was available at the time of the first hearing but these

production decline estimates of reserves, and so forth, were not. Is that what you're saying?

MR. STEVENS: Were not, yes, sir.

MR. NUTTER: Mr. Kastler?

MR. KASTLER: Well, Gulf's response is that Gulf has and does point out that the applicant has not been prevented from drilling. He could have drilled in an orthodox location and recovered just practically as much reserves as he would at the unorthodox location he is applying for.

MR. NUTTER: But as to -- do you dispute the fact that he has estimates of reserves now based on production history that were not available at the time of the first hearing?

MR. KASTLER: Well, I think they could be extrapolated at the time of the first hearing; certainly at the time of the rehearing.

MR. NUTTER: Well, the well's hadn't been on production very long at that time.

MR. KASTLER: Well, very well, I will make an alternative motion here.

MR. NUTTER: Let's hear your alternative motion, before we rule on the first motion.

MR. KASTLER: Our alternative motion is that the Examiner take administrative notice of the record

in the original case and the rehearing and the original order and the modified order that have been previously entered in Case 6213.

MR. NUTTER: We will adopt your second motion there. We will take administrative notice of all previous cases involving this application and this same land. And we're going to reserve ruling on your first motion until after we see what his evidence is and see whether it is in fact evidence that was not available to him in 1978.

MR. KASTLER: Thank you. In that event, our witness in reserve, should he need to be put on, will be Mr. Kalteyer.

MR. NUTTER: Okay.

MR. STEVENS: Mr. Examiner, we would object to administrative notice, not that we certainly want to keep the Commission from examining any of it. We feel our conditions are changes sufficiently that the conclusions drawn from the evidence submitted at that time would be invalid at the present time.

MR. NUTTER: Well, we can't make comparisons as to whether your data is data that was -- that is available now but was not available then unless we can look at what was available then, so we're going to have to overrule you on that.

MR. STEVENS: We accept that.

MR. NUTTER: Will you proceed, please?

MR. STEVENS: Yes, sir.

(Witnesses sworn.)

R. M. WILLIAMS

being called as a witness and having been duly sworn previously upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. STEVENS:

Q All right, Mr. Williams, would you state your name, residence, occupation, and relationship to the applicant?

A I'm R. M. Williams from Hobbs, New Mexico. I'm an engineer for Morris R. Antweil.

Q Have you previously testified before this Commission and had your qualifications accepted by them?

A Yes, I have.

MR. STEVENS: Mr. Examiner, are the witness' qualifications acceptable?

MR. NUTTER: Yes, they are.

Q State, please, what the applicant seeks in this case, Mr. Williams.

A Yes. We seek approval of an unorthodox

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location for the drilling of our Rio Com Well No. 2, to be drilled 660 feet from the north line and 660 feet from the west line of Section 29, Township 18 South, Range 25 East, in the Penasco Draw-Morrow Gas Pool, to be simultaneously dedicated with its Rio Com Well No. 1 in Unit G, to the north half of said Section 29.

Q. Referring to what has been marked as Exhibit Number One, would you explain it, please?

A. Yes. Exhibit Number One is a land map in the vicinity of the application. The proposed location is indicated by the open circle. The successful Morrow gas completions in the area are indicated by the red circles. The dry or noncommercial Morrow tests in the area are indicated by the blue dots, and the proposed gas spacing proration unit to be simultaneously dedicated to our existing Rio No. 1 well and the proposed well is colored yellow, being the north half of Section 29.

Q. What would a standard location be in this north half of Section 29, Mr. Williams?

A. A standard location could be 660 from the north line, 1980 from the west, or 1980 from the north and 1980 from the west. Or 660 from the north, 1980 from the east.

Q. Referring to what has been marked as Exhibit Number Two, will you explain that, please?

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A. Exhibit Number Two is a tabulation of the offset operators to the applicant.

Q. Exhibit Number Three, please, sir?

A. Exhibit Number Three is a map to show the exact locations of the wells in the vicinity of the proposed location, and then at the bottom of the plat is a calculation of the distances from the proposed location to the four wells closest to that location. It shows that the distance is 2640 feet from the Yates Petroleum Company's No. 4 Federal "AB" in Section 30, and is 2952 feet from the Antweil No. 1 Rio, the Antweil No. 1 Penasco, and the Gulf No. 1 Eddy "GK" State.

Q. Generally could you state that the well is located near the center of the surrounding wells?

A. That's correct.

Q. Referring then to Exhibit Number Four, would you explain that, please?

A. Exhibit Number Four is a structure map in the vicinity of the location. It's contoured on a Morrow marker, 100 foot contours, and shows the generally regional dip from the northwest to the southeast.

Q. Referring to Exhibit Number Five, would you explain it?

A. Exhibit Number Five is a net pay Isopach map of the Morrow pay in this vicinity. It shows the center

of the pay development, Morrow pay development, to be in the vicinity of our Penasco and Rio Well, the south half of Section 20 and the north half of Section 29, and a northwest to southeast trend of that sand development.

Q. Do you plan to refer to this and the previous exhibit and the next exhibit as a unit in subsequent testimony?

A. Yes.

Q. Refer, then, if you will, to Exhibit Number Six and briefly explain it.

A. Exhibit Number Six is a correlation section, including four of the wells in the immediate area. From the lefthand side to the right we show here the Yates Petroleum Corporation Federal "AB" No. 4 Well in Section 30, the Gulf well, Eddy "GK" State Well No. 1 in Section 19, Morris Antweil Penasco No. 1 in Section 20, and the Morris Antweil No. 1 Rio Well in Section 29.

It is intended to show correlation that these wells all encountered and are, in fact, completed in what appears to be correlative sand member of the Morrow section.

Q. Referring then to Exhibit Number Seven, would you explain that, please?

A. Exhibit Number Seven is the production performance that -- that has been experienced in the wells

in the immediate vicinity of the application.

Shown are the Antweil Penasco No. 1 Well, the Antweil Rio No. 1 Well, the Gulf State "GK" 1, the Gulf State "GK" 2, both those wells are located in Section 19, and the Yates Federal "AB" No. 4 Well, located in Section 30.

You notice the cumulative productions of these wells through 1 May 1980, the Antweil Penasco well has recovered 3,905,421,000 cubic feet of gas. These figures are in Mcfs.

The Rio -- Antweil No. 1 Rio Well has recovered 444,846,000.

The Gulf "GK" State Well has recovered 633,951,000 feet of gas.

The Gulf "GK" 2 Well, 724,946,000.

And the Yates Federal "AB" 4 has recovered 1,432,568,000 feet of gas.

This is submitted to show the production performance and also the present productivity of these wells. You'll notice the April production figures, the Penasco Well was still producing over 100-million feet of gas a month; the Rio Well approximately 6-million a month; the Gulf "GK" No. 1, 3-million a month; Gulf "GK" No. 2, 6-million a month, and the Yates Federal Well, approximately 25-million a month. It would appear that the Yates well was recently put on a compressor there in January of 1980.

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I'd like to call your attention, then, to a comparison of this production data and the indicated recoveries we've had to date of these wells, say, to our structure map, which was Exhibit Four, and I think it's quite apparent that there's no relationship between the structure and the recovery that these wells have actually experienced.

Also, if we compare the production data to the Isopach map, Exhibit Five, why, the Isopach map fairly well defines the area where successful wells have been able to be completed, there's no exact relationship between the Isopach figures that have been picked from the log analysis and the recoveries that have actually been experienced.

You'll note in particular the Gulf "GK" State No. 1 has an indicated 16 feet of net pay and the Yates Federal "AB" 4 has an indicated 14 feet of net pay, approximately the same. The Yates Well has actually a little less; however, the Yates Well has recovered over twice as much gas.

Also the same comparison is apparent by comparing the Antweil Penasco Well and the Antweil Rio Well, approximately the same indicated pay. The Penasco Well has recovered nearly ten times the volume of gas.

So the net pay indicated from the logs has not been a good indicator of the amount of gas that can be expected to be recovered from these wells.

You look also at the comparative production data to the correlation section, Exhibit Number Six. Compare there again Yates Federal "AB" 4 and the Gulf "GK" State No. 1. Looking at the correlation section Gulf Well has a thicker section, would look like it would definitely, from analysis of the log, be expected to recover more gas, but it in fact did not recover half the gas that the Yates Well with the poorer looking section was able to recover.

The same comparison could be made between the Antweil Penasco and Antweil Rio Wells. These sections, when we originally drilled the wells we thought that they looked like they were identical, and on the logs they looked very identical. The production performance shows them to be quite different.

The Penasco Well has recovered nearly 4-billion feet of gas; still making 100-million a month; has a flowing tubing pressure of 1050 pounds.

The Rio Well recovered 440-million feet of gas; is currently producing 6-million a month; is on a compressor and has a flowing tubing pressure of 60 pounds.

So I think we can see that the normal geologic data, structure, the net pay Isopach, the log data, do not represent what can be expected to be recovered at any given location or from any well that has been drilled, and actually there are -- is another controlling factor that is

determining the recovery or actually determining the available drainage area for any of these wells that have been drilled in this reservoir. We feel that this is particularly obvious by comparing our Penasco and Rio Well. The Rio Well with some permeability restriction, permeability barrier, has been limited in the area that it effectively drain and is essentially depleted.

The Gulf Well, where,the Gulf "CK" State Well, where it has obviously drained a larger area than the-- than our Rio Well, is still a restricted area, and now is also approaching depletion and has recovered -- with recovery of about 633-million feet of gas.

So this permeability factor appears to be controlling in the recoveries, is what prompted us to seek the -- an application for an additional well on this proration unit, and in seeking to drill an additional well, we would seek to drill at what we would consider the most advantageous postion to permit us to recover the gas that's -- that we still -- we feel remains on our 320-acre proration unit and has not been recovered.

So we sought the location 660 feet from the north line, 660 feet from the west line in an attempt to be as far away from our No. 1 Rio Well and avoid that permeability restriction, permeability barrier, that's obviously limiting its -- its drainage area and recovery.

MR. STEVENS: We have two other exhibits that might be worth introducing, Mr. Examiner.

Q. Referring then to Exhibits Numbers Eight and Nine, would you explain them, Mr. Williams?

A. Yes. These are calculations of the drainage -- apparent drainage area of a couple of these wells that we believe are significant to this consideration.

The first, the estimated radius of drainage for the Gulf "GK" State No. 1 Well, using the thickness, porosity figures, downhole pressure figures, that were available for the well, a recovery factor of 10,350,000 feet of gas per acre was determined using an 80 percent recovery factor.

If we consider an ultimate recovery of this well of 650 Mcf -- 650,000 Mcf, or 650-million, based on the 633-million feet of gas the well has presently recovered, this would give us a drainage area of 62.8 acres. If that is assumed to be a circular drainage area, it would have a radius of drainage of 933 feet. Point that 933 feet out in comparison to our requested location, which is 2952 feet from this well.

So we do not feel that there would be interference created between this location, this well, and our proposed location.

Also, example of why we seek this locatio

on the 320-acre proration unit, Exhibit Nine, the estimated radius of drainage from our Number 1 Rio Well, the same type calculations have been made. The apparent drainage area has been calculated to be 25.1 acres. If this is assumed to be a circular area, it would have a radius of 590 feet.

Our contention is that there is considerable gas reserves on our lease, on the lease of our mineral owner; that we have not been afforded the opportunity to recover, and this is why we seek the application for the unorthodox location and simultaneous dedication of this acreage to the two wells.

Q. is it your consideration, then, that this production information available now, which was not available previously, is sufficient to show that Gulf's correlative rights would not be affected by this application?

A. Yes, I think the productio history and the production data say, as the Gulf State "GK" Well, "GK" No. 1 Well, in particular, indicates the well to be at or near depletion and regardless of the limits of accuracy of this radius of drainage calculation that is made, if the well has drained somewhere in the order of 933-foot radius, a well 2952 feet away from that location is not going to affect their drainage, their recovery or certainly not their ultimate recovery, which they have practically in hand.

Q. Mr. Williams, in the alternative, if one

makes the presumption that there is greater drainage than you calculate here, what would be the effect on Gulf's correlative rights in granting this application?

A. Yes. I would think that if Gulf's contention is that there is drainage across these property lines then it would appear at this point that Gulf has had the best of it in that they've had two -- a two year head start by the results of the previous hearings that were held in this case.

Q. Would this constitute, if there were such drainage, would this constitute a term called counter-drainage, in your opinion?

A. Yes, it would.

Q. You've had the opportunity, the applicant has, Mr. Williams, of drilling this well these past two years. What was your reason for not so doing?

A. Our alternatives of drilling the well with the slight penalty factors that -- that resulted from the last hearing, or drilling the well at a standard location we did not consider either of those alternatives to offer us sufficient economic benefit to compensate for the risk of drilling an additional Morrow well. We feel that there are two risk factors to be considered in this. One, the risk of encountering a limited drainage area or a complete, say, permeability barrier, as has been exhibited to exist by

our No. 1 Rio Well. Or, if the other contention is held that there is considerable drainage in the area, then we at any location in the northwest quarter of Section 29, might well encounter the depleted reservoir pressure and limited recovery and both these factors we feel pose considerable risk on drilling in this area, and to justify the drilling we feel that we should be granted the unorthodox location, the unorthodox location without penalty, to afford us the opportunity to recover the gas that we consider is left in the northeast -- northwest quarter of Section 29 under our lease.

Q. Has this order previously entered in this area giving a penalty to any proposed well you might drill, resulted in your opinion, in damage to Antweil's correlative rights?

A. Well, we feel it has because it prevented us from -- from drilling the well that we originally wanted to drill two years ago.

Q. Do you have any other statements regarding these exhibits or other statements regarding this case, Mr. Williams, at this time?

A. Nope.

Q. Were Exhibits One through Nine prepared by you or under your direction?

A. Yes, they were.

MR. STEVENS: We tender these exhibits,

Mr. Examiner, and have no further questions at this time.

MR. NUTTER: Antweil Exhibits One through Nine will be admitted in evidence.

Are there any questions of Mr. Williams?

MR. KASTLER: Yes, Mr. Examiner.

CROSS EXAMINATION

BY MR. KASTLER:

Q. Mr. Williams, what new evidence do you have now to show where the barrier is around Rio Com No. 1 Well?

A. We have no new evidence to show where the barrier is.

Q. Well, you seem to have come up with some new evidence, or proclaimed new evidence as to the fact there is a barrier somewhere between Gulf's "GK" No. 1 and the Rio Com Well No. 1.

A. I think the production history that -- that was introduced through our Exhibit Number Seven and the two calculations, Exhibit Number Eight and Exhibit Number Nine, show that the Gulf "GK" State No. 1 Well and our No. 1 Rio Well have experienced limited areas of drainage, and -- and experienced depletion. So I think this is ample indication of some sort of permeability or barrier or barrier to the effective drainage of these wells.

Q Well, with this new evidence, wouldn't you calculate that a well drilled 1920 feet from the west line and 660 from the north line of Section 29 would establish a better drainage pattern, drainage area, because of its proximity to the Penasco No. 1 Well than would the well you're applying for now?

A Well, I think that's a two-way sword as we see it. We'd love to have another well like our No. 1 Penasco Well, but to -- to move in that direction, we're also moving towards the No. 1 Rio Well, and which has experienced very limited drainage area. And it would appear to me to be a 50-50 situation, and I can't see how you say that would be a better location. We actually feel to control the risk to acceptable levels, it's -- we would prefer to be as far away from the No. 1 Rio Well as we can.

Q If it was a 50-50 --

A We, obviously, consider the risk of that standard location too great to drill or we'd have drilled it two years ago. We could have drilled it any time we wanted to.

Q And you don't really mean it's a 50-50 proposition, the drainage patterns, do you, --

A I -- I don't --

Q -- drilling a well at one location over another?

A. With the data we have and realizing that both these wells indicate, or are looking only at a small sample of the reservoir, when you're equidistant from a good well and a bad well, I don't see how you can put anything but 50-50 on it, and -- but my point is that's not acceptable for us to take the risk of drilling that well, and which is obvious, we haven't drilled it.

Q. Well then you find yourself between a rock and a hard place, but actually, you're not prevented from drilling the well at this orthodox location of 1920 from the west line?

A. Not legally prevented, but to our evaluation, we feel that we're economically prevented.

Q. I see. What other calculations have you made about the drainage areas in your Antweil Penasco No. 1 Well?

A. I have not made one.

Q. Why wouldn't you have made that?

A. I didn't think it significant, but that could be made easy enough.

Q. Have you made one for Yates Federal "AB" Com No. 4?

A. Yeah, I did.

Q. And what did you come up with there?

A. A similar type calculation, assuming that

they're going to recover 1.5 billion feet of gas, which is reasonable, I think, would indicate 155 acres of drainage area with a drainage radius, assuming that was round, which is a questionable assumption, but it would indicate 1467 feet radius.

Q. That's the Yates Federal "AB" No. 4?

A. Yes.

Q. How many acres?

A. 155 acres, and 1467 radius.

Q. Do you believe the proposed new well at the now unorthodox location could drain an area as large as 320 acres?

A. No, not from the experience of the average well that we've seen in the area. I think the drainage patterns that these wells are exhibiting, the drainage patterns are much less than 320 acres.

Q. You have replied to a question from Mr. Stevens earlier that you thought that, if anything, it would be fair and just to benefit by some counter-drainage, is that correct?

A. I don't --

Q. That was earlier in your testimony. The term "counter-drainage" was brought up.

A. That's right, that was applied to Gulf, not to us, that -- that if the reservoir can -- the point, I think, Mr. Stevens and myself were making through a question

and answer, was the point that -- was that if the reservoir conditions, the permeability, the porosity, conditions are such that drainage could occur between the "GK" 1, Gulf "GK" 1 Well and our proposed location, and our contention is that the reservoir conditions do not permit this, that if the conditions were such that drainage could occur, the counter-drainage to our application --

Q. Which means what?

A. The flow from -- from our lease toward the Gulf lease --

Q. Draining across lease lines.

A. -- would certainly have been well establi by Gulf's two years of production before we're proposing to drill this location.

Q. Gulf's well is not situated or located in any sense in an unorthodox location, is it?

A. No.

Q. If the Rio Com No. 1 is only draining 20 or 25 acres, which you testified quite some time ago, how much productive acreage is left under the north half of Section 29?

A. It depends, of course, on what type of drainage area -- pattern that you choose to select. If you select a circular pattern of 25 acres, then you just subtract 25 from 320 and you come out with 295.

Q Yes.

MR. NUTTER: That would be 295 regardless of the pattern, wouldn't it, Mr. Williams?

A The pattern doesn't necessarily have to be circular and --

MR. NUTTER: Well, I mean --

A -- could wells extended off that proration unit if it wasn't circular.

MR. NUTTER: It would have to be awful narrow to reach the 1980 feet.

A Well, could have extended to the south, you know, this is a possibility.

But assuming that this is round, or nearly round, then you'd have 295 acres is apparently undrained by that well, and this is what we seek to have an opportunity to recover, a portion of that.

Q If a well were drilled at the proposed location, what would be the approximate radius of drainage if that well would drain the eastern half of the north half of Section 29?

A I don't understand your question.

Q If a well were drilled at the proposed location, what would be the approximate radius of drainage of that well?

A We have no way of telling. This was one

of the points were were trying to make by our testimony, that the geologic data that we've seen, the structure, the net pay Isopach, or the net pay selections from the logs, are not an indication of,or a controlling factor, in the drainage area that becomes available to any given well, and until this well is drilled and produced its effective drainage area, we do not believe can be determined.

Q. Well, I'm told I must read the question again.

MR. KALTEYER: No, no.

Q. All right. If a well was drilled at the proposed location, what would be the approximate radius of drainage if the well would drain the eastern edge of the north half of Section 29?

A. Would you define in the eastern edge of the north half?

Q. Well, you're trying to drain all of the acreage under your lease, are you not?

A. Well, all that we feel is drainable. We feel that the Rio No. 1 has established that there is some permeability barrier in there and that there is probably some of it that's undrainable.

MR. KALTEYER: Let me take hold of it just a second, if I may.

MR. NUTTER: You're going to try to ex-

plain the question, is that it?

MR. KALTEYER: Yes.

MR. NUTTER: Okay.

MR. KALTEYER: All it says is, if you drilled at your proposed location and you are going to drain to the eastern edge of your proration unit, what is that distance?

A. Oh.

MR. KALTEYER: If you were going to drain to the edge of it, that's all it says.

A. Okay, well, that would be -- that would be 2640 less 660, is that what you're trying to say?

MR. KALTEYER: Yes, right.

A. Oh, what is that?

MR. NUTTER: 4280 less 660.

A. Yeah, less 660.

MR. STEVENS: 4800 and something.

A. 4620.

Yes, well, our proposed location is 4620 feet from the eastern boundary of the 320-acre proration unit, I would not anticipate in any way that a well could be expected to drain an area of that magnitude from the production history we obtained from the majority of the wells in this field.

Q. Well, now, you've testified more or less

that your -- the area between these wells is not necessarily in communication because each well has a separate drainage area, is that correct?

A. This is what we feel that the -- that the data shows; that the, say, our No. 1 Penasco and our No. 1 Rio Wells are not in the same reservoir.

Q. And so you can expect --

A. They're in separate reservoirs. There's some barrier, permeability barrier between them. We think that there's evidence also that your No. 1 "GK" 1 and the Yates "AB" 4 are actually in separate reservoirs, because there's a permeability barrier that has apparently separated those wells and limited the radius of drainage of your "GK" No. 1 Well.

Q. Now extend that fact to this conclusion, wouldn't you say that the reservoir situation you would encounter at your proposed location would be almost a virginal reservoir pressure?

A. We think it could well be and we hope it will be.

Q. Yet you won't take an oath to the effect that this could drain as much as 4620 acres.

A. No.

Q. Feet, 4620 feet.

A. No, definitely not. The wells in the

reservoir have not exhibited that that's possible; the production history of those wells.

Q. Well, have you checked -- we will put on evidence later to the drainage pattern of the Penasco, but if you were to hypothetically assume that the Penasco would drain 455 acres, which our witness will testify to, could you possibly expect to encounter such a well in your Rio Com No. 2, your proposed well here?

A. No. I don't think so. You're saying 455?

Q. 455 acres. That evidence has been introduced, incidentally, in a previous hearing in this case.

A. I don't think that's been introduced at all, but okay, assuming that, we wouldn't expect it because that's really an exception.

Q. Yes.

A. The well undoubtedly an excellent well, which we admit that. We don't expect that you could anticipate another well of that -- of that magnitude. We would think that more of an average well for the reservoir would be encountered and that the drainage area would be limited, much less than 320 acres, because that's been the pattern through the field. How much, there's no way of saying.

When you start talking about two wells, like the Penasco and this proposed location, both having, say,

455 acres of drainage area, then you obviously have a conflict.

Q. Yes.

A. Between those wells, and a second well cannot establish that kind of drainage area.

Q. Yes, sir.

A. If the Penasco has actually established that type of drainage area, then the pressure gradient from the edge of that drainage area is established towards the Penasco Well. To change that and recapture that, a second well is at considerable disadvantage.

Q. If I understand you correctly, what you're saying is that the drainage area transcends lease lines.

A. Yes, there's nothing we can do to prevent that.

Q. That's correct.

A. If they extend to them.

Q. Yes, if they extend --

A. The evidence that we've introduced so far has indicated that the majority of these wells are having a difficult time even extending to the lease lines, or proration unit lines.

Q. You wouldn't drill your Rio Com No. 2 if you expected to get the same completion that you got -- or the same deliverability that you've experienced in the Rio Com

No. 1, would you?

A. You have to be careful how you say that.

Q. How would you state it?

A. If you gave me a guarantee that I'd get a well as good as the Rio Well, then that would be like going down to the bank and getting some interest. It would be a low interest -- Rio 1 Well would be economic, but barely economic. We wouldn't intentionally drill under the general Morrow risk factor considerations; we wouldn't intentionally drill to get a well of that quality, because of the risks involved of getting a worse well.

The potential, we feel,has to be better than our Rio 1 Well to justify drilling a well.

Q. That's coming from a drainage area which transcends your lease line.

A. I didn't say that. We don't believe that's correct, necessarily, but we don't feel that it affects any of the other wells in the area.

Q. Do you agree with this statement: That Mr. Antweil should be entitled to a reasonable opportunity to recover the reserves under his lease?

A. Yeah, I think that's statutory.

MR. KASTLER: That's all.

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

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Did you have anything else, Mr. Stevens?

MR. STEVENS: No, sir.

MR. NUTTER: Mr. Kastler, do you have a witness?

MR. KASTLER: I would request a ruling on my first initial motion as to dismiss because of res judicata.

MR. NUTTER: Well, I don't know if it is yet or not.

MR. KASTLER: All right.

MR. NUTTER: As a matter of fact, I'm not going to know until I read the transcript, so I'm not going to make any ruling today. It will come out in the order.

So we'll go ahead and hear the case.

MR. KASTLER: All right. In that case, Mr. Kalteyer should take the stand.

CHARLES F. KALTEYER

being called as a witness and having been duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KASTLER:

Q. Mr. Charles F. Kalteyer, as Chief Prorati Engineer, Southwest District, of Gulf Oil Corporation, have

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you previously appeared and testified before the New Mexico OCD, and been accepted as an expert witness?

A. Yes, sir, I have.

MR. KASTLER: Are the witness' qualifications acceptable?

MR. NUTTER: Yes, they are.

Q. Mr. Kalteyer, have you prepared for this hearing an Exhibit Number One?

A. Yes, sir, I have.

Q. Would you please make reference to Exhibit Number One, explain what it is and what it shows that's pertinent to the issue?

A. All right, Gulf's Exhibit Number One is a plat of the area, showing the proposed location in yellow of the Rio 2, and shows the producing wells in the immediate area in pink or red.

Q. Would you now refer to what you have prepared as Exhibit Number Two and explain what it shows that's pertinent to this hearing?

A. Gulf's Exhibit Number Two is the production data sheet for the Penasco Draw Morrow Pool wells. We have data up to April 1st, cumulative data, that we were able to get from engineering records, and we have unconfirmed production reports from El Paso for April/May, so we have for

the most part, two cum figures for each of the wells.

The -- by looking to the second page you can see the cums at the lower portion of the page of the Yates Federal "AB" 4, cum as of April 1,'80, 1.3 Bcf -- 1.34 Bcf as of April 1, '80, and 1.39 Bcf as of 6-1-80.

The Antweil Penasco No. 1 has a cum as of April 1 of 3.83 Bcf, and as of June 1, 4.03 Bcf.

The Rio Com No. 1 shows approximately .46 Bcf as of April 1, '80, and .47 Bcf as of 6-1-80.

The Bennett and Ryan Well has not been of significance to the hearing, but it is carried in the Penasco Draw Pool with .117 Bcf.

The Gulf "GK" No. 1 as of April 1, .63 Bcf, and as of June 1, .64, approximately.

And the "GK" 2, .71 Bcf as of April 1, '80, and .73 as of 6-1-80.

Q. Have you prepared an Exhibit Number Three? Or were you through? Beg your pardon.

A. The other wells that are listed on the last page are the Lincoln State Com No. 1, Mesa's well in Section 24, which is pretty much out of the picture, and their Rio State No. 1 and 2 in Section 36, which are probably in a new or in a separate pool, and the Yates Scout "EH" 4, which apparently has just been placed on production, and the Scout "JM" just placed on production.

Q. Are you now ready to testify you prepared an Exhibit Number Three and what it shows?

A. Gulf's Exhibit Number Three is a plat of the north half of Section 29, which is the proration unit assigned to the Rio Com.

On it we have indicated the four areas of standard -- of standard locations that can be drilled, or orthodox locations can be drilled.

The No. 1 Well is drilled at a standard location 660 from the south and 1980 from the east of the north half of Section 29.

The -- we have made a calculation of the drainage area of the Rio Com No. 1 and it falls right in line with the data that was presented by Mr. Williams. We have indicated approximately 24 acres drainage, and in order to encompass 24 acres in a radial fashion, we would come up with 577 -- a 577 foot radius, and the red circle there would indicate the approximate circular area of a 24-acre drainage pattern.

On this plat we've also indicated the distances from the Rio Com 1 to other areas, the remote areas that would still give orthodox locations.

Q. What conclusions are you able to draw referring now to Exhibit Number Three?

A. It would indicate that there are ample

areas for them to drill at standard locations, or orthodox locations, and still avoid what area, the limited area, that the Rio Com appears to be draining. They are requesting that they drill some 2952 feet away from the No. 1, when its probable radius of drainage to its permeability barrier is only 577 feet.

Q. In your opinion would the drilling of a well at an orthodox location provide as much gas under this lease of Morris Antweil as would drilling at another location, the location they have proposed, which is in the unorthodox location?

A. The chances are still good that they would recover more reserves from one of the standard locations than the unorthodox location that they have proposed. They have no criteria as to -- either in their exhibits on Isopach or any delineation of a barrier, so they may still recover more reserves from a standard location, or regular location, than they would at the unorthodox location they propose.

Q. Would the drilling of a well at the proposed unorthodox location provide -- or protect correlative rights in the field?

A. I don't believe it would. It wouldn't protect ours necessarily.

Q. By what do you reason -- by what reason do you draw that conclusion?

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A. Well, I would like to comment on the calculations I've made on some other wells within the field, as far as the areal extent of their possible drainage.

As I said, the Rio Com, based on its production, we've estimated 24 acres of drainage.

The "AB" Federal 4, we've estimated 118 acres.

The "GK" 1, we've estimated 52 acres.

And the "GK" 2, we've estimated 67 acres.

And the Penasco 1 we've indicated -- calculated 455 acres.

And if we assume radial drainage, we come up with 577 feet for the Rio Com; for the "AB" Federal 4, 1279 feet; for the "GK" 1, 849; the "GK" 2, 963; and for the Penasco, 2512 feet.

MR. NUTTER: How many acres were you attributing to the "GK" 1, Mr. Kalteyer?

A. 52 acres.

MR. NUTTER: And 67 to the No. 2, correct?

A. Yes, sir.

MR. NUTTER: Okay.

Q. Would you contend that if a well were to be permitted at the unorthodox location proposed, that there should be a penalty factor imposed to protect correlative rights?

A. Yes, sir. I would.

Q. Would you care to name what penalty factor should be imposed?

A. Well, my first recommendation, of course, would be that the application be denied, for the unorthodox location.

He's entitled to recover the reserves under his lease and he's not attempting to recover the reserves under his lease; he's trying to recover reserves closer to the edge of the lease or off of the lease, than he is under his own lease. He would do a better job of attempting to recover the reserves under his lease if he did move toward an orthodox location.

Q. Would Gulf be inclined to seek a similar unorthodox location to perhaps offset its "GK" Well No. 1 in Section 19 if this unorthodox location were allowed?

A. If this location were allowed, then it's very possible that to further protect our correlative rights we would be forced to drill a well in the southeast quarter of the southeast quarter, and we would be willing to live up to such production limitation factor as the OCD would apply.

Q. If two such wells were drilled, would you consider that would constitute economic waste?

A. Yes, sir, I think it would.

Q. Would you abdicate imposing any penalty

at all if Mr. Antweil were to drill, apply for and drill, his second well, or his supplemental well, at an orthodox location?

A. No, sir, I would recommend no penalty if he drilled at an orthodox location; the second well at an orthodox location.

Q. Do you have any other conclusions to draw or any other statements to make in this case?

A. I just would like to point out, based on the data of the drainage areas and the radiuses that I did calculate, that the Penasco Well, which has been a very fine well, has indicated that it probably can drain, or is draining up to 2512 feet, which would, if this application is allowed, were that an equivacally good well, or even approaching that, the -- that it would be draining reserves from off the lease, from off the Rio Com lease.

Q. That is, Rio Com No. 2 Well would be draining reserves from off its lease?

A. The Rio Com lease, yes.

Q. All right. Do you have anything further to add?

A. I believe that's it.

CROSS EXAMINATION

BY MR. NUTTER:

Q. Mr. Kalteyer, Mr. Kastler asked you if

you had a recommendation as to penalty. Did you ever get to that?

A. Oh, yes. In regards to a production limitation factor, I would have no objection to the application of a .71 production limit factor for the two wells, since the Well No. 1 is apparently draining only something like 25 acres and its radius of drainage is probably not extending off the lease.

Q. .71, you say?

A. Which is the factor that was assigned in the prior hearing for the drilling of the well if they shut-in Well No. 2.

Q. And you wouldn't have objection to the retention of that same factor but with the contingent production of the Rio Com No. 1?

A. Of the No. 2 -- I mean No, 1, yes, sir.

MR. NUTTER: Did you have anything further, Mr. Kastler?

MR. KASTLER: Nothing further, no, sir.

MR. NUTTER: Does anyone have any questions of Mr. Kalteyer? Mr. Stevens?

CROSS EXAMINATION

BY MR. STEVENS:

Q. Mr. Kalteyer, Gulf's two wells in

19 apparently have east half/west half proration units, based upon your Exhibit One?

A. Yes, sir.

Q. If those proration units were north half/south half, and your No. 1 were in the south half, would it be in an unorthodox location?

A. Yes, sir, it would, if those units were in the other direction.

Q. Is there any magic in running it north/south versus east/west?

A. Is there any magic?

Q. Yes, sir, flying term, I apologize. Is there any --

A. Oh, I --

Q. -- good reason why it should be north/south versus east/west?

A. No, sir, I do not know why we applied for it in that particular direction.

Q. Based upon your Exhibit Number One, your No. 1 "GK" at 660 feet, I'm presuming, from the Antweil lease line in Section 20, what is the distance of the proposed location from the Gulf lease line in Section 19, the Antweil proposed location in Section 29?

A. I think that sentence was a little long for me there, or question, rather, was long.

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Q. What is the distance of the Antweil location from the Gulf lease line in the southeast corner of Section 19? The proposed location being the northwest/northwest of Section 29?

A. It would be that diagonal of the 660.

Q. Would that be a greater distance than Gulf's No. 1 "GK" is from the Antweil lease in Section 20?

A. Would it be farther?

Q. Yes, sir.

A. Yes, it would be farther.

Q. If there is drainage between lease lines in this reservoir, would Gulf have drained more gas from Antweil than Antweil might drain from Gulf in Section 29?

A. We don't know what kind of well -- we know that our well is poor, and we don't know whether this is going to be another Penasco Well with a 2500-foot drainage radius, or it's going to be like the "GK", which is only 800, and of course, the "GK" was drilled as a -- at a standard location under the rules of the Commission, and of course, its radius of drainage under the standard rules of 320-acres would provide for 2100-foot radius, 2100+ foot radius from the wellbore.

Q. Was Gulf penalized on this "GK" 1 because it was drilled within 660 feet of the Antweil lease in Section 20?

A. No, it's a standard location.

Q. Does Gulf --

A. Provided for in the rules, statewide rules.

Q. Does Gulf use risk factors, reserves, allowable, and deliverability to determine whether it should drill any well in any particular place?

A. Risk factors, yes; reserves.

Q. Reserves, allowables, and deliverability, possible deliverability of well?

A. Yes.

Q. Is this, in your mind, a reasonable practice for Antweil to use?

A. Sure.

Q. Antweil did not drill at a standard location in Section 29 under its parameters, using those factors, would you consider that it made a reasonable exercise in making that determination that it could not drill?

A. Well, for which well, now? I'm missing your question.

Q. For a possible location, standard location in the north half of Section 29?

A. Do I know whether they calculated that?

Q. Do you know whether it would be a reasonable thing for them to do, sir?

A. To cal -- reasonable to calculate, they'll have to make their own decision.

Q. If they made such a decision not to drill, based upon -- appropriate and based in the northwest/northwest, and based upon the possibility of getting a dry hole or a poor well, is this a reasonable exercise, in your opinion?

A. That's up to them to decide to the best of their ability.

Q. If under this decision they decided not to drill based upon deliverability and risk of permeability loss, do you think they may be leaving gas underneath the northwest quarter and the west half of the northwest of Section 29 they are entitled to?

A. I'm sure they're going to leave a bunch of gas if they're only draining 25 acres out of that 320. They could drill on the east side of that well, too, and probably recover reserves that would be left there, too.

Q. Do you think it's reasonable that Antweil should have the opportunity to recover that oil and gas under the west half of the northwest northwest of Section 29?

A. He should have a reasonable opportunity to recover the recoverable reserves under the north half of Section 29, not just under that one 40-acre tract. If he wants to drill the thing on 40 acres, then maybe we need to have him call a field rule hearing and we'll start drilling

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on 40 acres, then.

Q. Mr. Kalteyer, you just testified the standard locations in the north half of Section 29 were as good as the proposed location, yet did you give any evidence of where a permeability barrier might be in the north half of Section 29?

A. No, sir, I did not, nor did your witness.

Q. If there is no evidence, then would it be reasonable to presume the farther away from a low permeability well you can get, the better off -- chance you would have of recovering reserves under the tract might be?

A. Not necessarily, no. Just by getting further away you might go out of production.

Q. Well, on that basis, then, do you think it's better to get closer to a low permeability well?

A. Well, it's -- we have two factors involved. One is recovery of reserves and the other -- and prevention of waste, and the other is protection of correlative rights, and I think -- we're not trying to keep him from drilling a well. We just don't want them over there draining reserves out from under another lease.

Q. Have you given any evidence that such reserves would be drained out from under your lease?

A. I gave evidence that a well could drain one of the wells in the field, which he chose not to calculate

any drainage area on. He calculated on three others, but he didn't on that one. It will drain 2500 feet, over 2500 feet, by my calculation, and possibly it could drain reserves from under our tract.

Q. If this well were an average of all the producing wells in the field, would it affect your "GK" 1, Gulf "GK" 1?

A. An average well there, apparently, out of those that I calculated, or the five wells that I calculated for the average areal extent, was 143 acres.

Q. Distances from lease lines, as you testified, vary from 577 to 2512. Four of those wells -- or radius of drainage. Four of those wells were less than 963 feet; one was above it. On that basis would any of those four wells affect Gulf's "GK" 1?

A. Well, the "AB" Federal was 1279 and the Penasco was 2500. The "GK" 2 is in the middle with 963, and then we have the "GK" 1 with 849 and the Rio Com with 577.

Q. Yes, sir, that was your testimony.

A. So the average well out of that, out of those radiuses would affect -- could reach to over under Gulf's lease. The average one.

Q. Would it affect the "GK" 1? That was my question.

A. Would it affect the "GK" 1?

Q Probably not, unless the "GK" 1 area of drainage was in an unusual shape and not radial, and extended down into that southeast corner of the section.

MR. STEVENS: No further questions, Mr. Examiner.

MR. NUTTER: Do you have any further questions?

MR. KASTLER: None on redirect.

MR. NUTTER: Does that concludeyour case, Mr. Kastler?

MR. KASTLER: Yes, it does.

MR. NUTTER: Okay, we'll call for closing statements.

Mr. Stevens, as applicant you may go last. Did you want to make a closing statement, Mr. Kastler?

MR. KASTLER: Yes, I would. I'd like to argue that the applicant has failed to show why he could not drill at one of the three other regular locations on the north half of Section 29.

The applicant has failed to show why the unorthodox location picked was necessary to recover the reserves under his lease, or how it could reasonably be expected to recover the reserves under his lease.

Furthermore, we argue that he failed to show that more reserves would be recovered by a well drilled

at the unorthodox location than vice versa. In other words, I don't believe his evidence has shown that the unorthodox location is preferred for the recovery of reserves, but it's more likely that it's preferred for the recovery of some of Gulf's reserves in a counter-drainage manner.

I recommend that this application be denied.

MR. NUTTER: Thank you. Mr. Stevens?

MR. STEVENS: Mr. Examiner, the principal thing that Gulf brought out is they admitted that this unorthodox location would not hurt the well covering the proration unit which it would offset if it were drilled. That would show, obviously, there is some sort of permeability barrier in the area. The position is unknown and the greater distance one would get to the well exhibiting that is a greater chance of getting a commercial well, therefor making it worthwhile drilling. In fact, the well was not drilled for, let's say, at least (inaudible) because of the penalty factor asserted against the well, which when coupled with the risk of the well made it uneconomic in the opinion of the operator to drill it. The result was that for two years the operator has been denied the right to recover the gas underlying his tract, which is, again, a statutory right.

If there is an affect on Gulf's correlative rights, I believe that certainly Gulf's two years should

have taken care of this correlative rights problem by counter-drainage at least, and in the opinion of the applicant, there is no drainage that would affect Gulf's correlative rights, or if there were, the counter-drainage would counter-balance the loss of correlative rights.

MR. NUTTER: Thank you. Gentlemen, we'll take the case under advisement.

We still have the motion of Mr. Kastler that the case be dismissed as res judicata. We'll consider that motion. It will be included in whatever order comes out either granting or denying the motion, Mr. Kastler.

MR. KASTLER: Thank you. Okay.

MR. NUTTER: As I see it, we've got three alternatives here. We can grant the application with or without penalty; we can deny the application; or we can dismiss the case. In the case of a denial or dismissal, I would presume the original order would still stand in the case.

So we'll study it and make a recommendation.

The case is taken under advisement and the hearing is adjourned.

(Hearing concluded.)

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C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd C.S.R.

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I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. _____, heard by me on _____ 19____.

_____, Examiner
Oil Conservation Division

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
9 July 1980

EXAMINER HEARING

IN THE MATTER OF:

Application of Morris R. Antweil for an unorthodox gas well location and simultaneous dedication, Eddy County, New Mexico.

CASE 6964

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

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M. NUTTER: We'll call next Case Number 6964.

MR. PADILLA: Application of Morris R. Antweil for an unorthodox gas well location and simultaneous dedication, Eddy County, New Mexico.

MR STEVENS: Mr. Examiner, I'm Don Stevens, from Roswell, New Mexico, representing the applicant in this case.

We have one witness to be sworn.

I would also like to make an opening statement at your convenience.

MR. NUTTER: Are there other appearances?

MR. KASTLER: Yes. I'm Bill Kastler, representing Gulf Oil Corporation, and at this time I would like to move that this case be dismissed on the grounds that it is res judicata.

These same facts were heard previously in Case Number 6213 on May 17th, 1978, which resulted in Order No. R-5856, dated 11-9-1978, and yet there was following that a de novo hearing in Case Number 6215, held January 24, 1979, resulting in Order R-5856-A, dated March 7, 1979.

Now, we contend that the same facts, or just an extrapolation of the matter, does not create grounds to continue to bring this case on for hearing.

And therefor, I move to dismiss.

MR. HUTTER: Mr. Stevens?

MR. STEVENS: Mr. Examiner, these facts were pointed out in the application for this hearing. The facts as regarding the case and the rehearing and the de novo hearing are correct.

This case was asked for on the basis, however, that there is a change of facts concerning the application herein, whereby additional reservoir information is available that was not available at the original hearing, whereby the Commission could have a different decision based upon these new facts.

Two years have passed since the initiation of this action. Much production history has occurred. The contention of the applicant herein is that there is gas underlying this tract which is unrecoverable under the rule of the other case.

The well is considered too risky by the applicant in that case to be drilled. As a consequence, that gas is unrecoverable.

The applicant herein proposes to prove that there is no damage to Gulf's correlative rights since there is no drainage underlying these wells and a well in this particular area.

Or, in the alternative, if drainage has occurred, that Gulf has not been affected by that drainage; in

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fact, has counter-drained more than might have affected Gulf otherwise.

For this reason, based on the new facts, which will be presented at the hearing, we request the motion be denied.

MR. NUTTER: Now, what new facts are available, Mr. Stevens?

MR. STEVENS: The new facts are the production history of the wells between the initial hearings and now, showing, in effect, that there is no draining; or, if there is draining, counter-drainage has been accomplished by Gulf.

MR. NUTTER: Have there been new wells drilled?

MR. STEVENS: No, sir.

MR. NUTTER: Just production history is all that you have --

MR. STEVENS: Yes. The original evidence was based upon volumetric calculations and not based upon production.

We feel that the volumetric calculations are of no moment when you have actual production history from which drainage patterns can be more easily determined.

MR. NUTTER: Well now, the volumetric data was available at the time of the first hearing but these

production decline estimates of reserves, and so forth, were not. Is that what you're saying?

MR. STEVENS: Were not, yes, sir.

MR. NUTTER: Mr. Kastler?

MR. KASTLER: Well, Gulf's response is that Gulf has and does point out that the applicant has not been prevented from drilling. He could have drilled in an orthodox location and recovered just practically as much reserves as he would at the unorthodox location he is applying for.

MR. NUTTER: But as to -- do you dispute the fact that he has estimates of reserves now based on production history that were not available at the time of the first hearing?

MR. KASTLER: Well, I think they could be extrapolated at the time of the first hearing; certainly at the time of the rehearing.

MR. NUTTER: Well, the well's hadn't been on production very long at that time.

MR. KASTLER: Well, very well, I will make an alternative motion here.

MR. NUTTER: Let's hear your alternative motion, before we rule on the first motion.

MR. KASTLER: Our alternative motion is that the Examiner take administrative notice of the record

in the original case and the rehearing and the original order and the modified order that have been previously entered in Case 6213.

MR NUTTER: We will adopt your second motion there. We will take administrative notice of all previous cases involving this application and this same land. And we're going to reserve ruling on your first motion until after we see what his evidence is and see whether it is in fact evidence that was not available to him in 1978.

MR. KASTLER: Thank you. In that event, our witness in reserve, should he need to be put on, will be Mr. Kaltayer.

MR. NUTTER: Okay.

MR. STEVENS: Mr. Examiner, we would object to administrative notice, not that we certainly want to keep the Commission from examining any of it. We feel our conditions are changes sufficiently that the conclusions drawn from the evidence submitted at that time would be invalid at the present time.

MR. NUTTER: Well, we can't make comparisons as to whether your data is data that was -- that is available now but was not available then unless we can look at what was available then, so we're going to have to overrule you on that.

MR. STEVENS: We accept that.

MR. NUTTER. Will you proceed, please?

MR. STEVENS: Yes, sir.

(Witnesses sworn.)

R. M. WILLIAMS

being called as a witness and having been duly sworn previously upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. STEVENS:

Q All right, Mr. Williams, would you state your name, residence, occupation, and relationship to the applicant?

A I'm R. M. Williams from Hobbs, New Mexico. I'm an engineer for Morris R. Antweil.

Q Have you previously testified before this Commission and had your qualifications accepted by them?

A Yes, I have.

MR. STEVENS: Mr. Examiner, are the witness' qualifications acceptable?

MR. NUTTER: Yes, they are.

Q State, please, what the applicant seeks in this case, Mr. Williams.

A Yes. We seek approval of an unorthodox

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location for the drilling of our Rio Com Well No. 2, to be drilled 660 feet from the north line and 660 feet from the west line of Section 29, Township 18 South, Range 25 East, in the Penasco Draw-Morrow Gas Pool, to be simultaneously dedicated with its Rio Com Well No. 1 in Unit G, to the north half of said Section 29.

Q. Referring to what has been marked as Exhibit Number One, would you explain it, please?

A. Yes. Exhibit Number One is a land map in the vicinity of the application. The proposed location is indicated by the open circle. The successful Morrow gas completions in the area are indicated by the red circles. The dry or noncommercial Morrow tests in the area are indicated by the blue dots, and the proposed gas spacing proration unit to be simultaneously dedicated to our existing Rio No. 1 Well and the proposed well is colored yellow, being the north half of Section 29.

Q. What would a standard location be in this north half of Section 29, Mr. Williams?

A. A standard location could be 660 from the north line, 1980 from the west, or 1980 from the north and 1980 from the west. Or 660 from the north, 1980 from the east.

Q. Referring to what has been marked as Exhibit Number Two, will you explain that, please?

A. Exhibit Number Two is a tabulation of the offset operators to the applicant.

Q. Exhibit Number Three, please, sir?

A. Exhibit Number Three is a map to show the exact locations of the wells in the vicinity of the proposed location, and then at the bottom of the plat is a calculation of the distances from the proposed location to the four wells closest to that location. It shows that the distance is 2640 feet from the Yates Petroleum Company's No. 4 Federal "AB" in Section 30, and is 2952 feet from the Antweil No. 1 Rio, the Antweil No. 1 Penasco, and the Gulf No. 1 Eddy "GK" State.

Q. Generally could you state that the well is located near the center of the surrounding wells?

A. That's correct.

Q. Referring then to Exhibit Number Four, would you explain that, please?

A. Exhibit Number Four is a structure map in the vicinity of the location. It's contoured on a Morrow marker, 100 foot contours, and shows the generally regional dip from the northwest to the southeast.

Q. Referring to Exhibit Number Five, would you explain it?

A. Exhibit Number Five is a net pay Isopach map of the Morrow pay in this vicinity. It shows the center

or the pay development, Morrow pay development, to be in the vicinity of our Penasco and Rio Well, the south half of Section 20 and the north half of Section 29, and a northwest to southeast trend of that sand development.

Q. Do you plan to refer to this and the previous exhibit and the next exhibit as a unit in subsequent testimony?

A. Yes.

Q. Refer, then, if you will, to Exhibit Number Six and briefly explain it.

A. Exhibit Number Six is a correlation section, including four of the wells in the immediate area. From the lefthand side to the right we show here the Yates Petroleum Corporation Federal "AB" No. 4 Well in Section 30, the Gulf well, Eddy "GK" State Well No. 1 in Section 19, Morris Antweil Penasco No. 1 in Section 20, and the Morris Antweil No. 1 Rio Well in Section 29.

It is intended to show correlation that these wells all encountered and are, in fact, completed in what appears to be correlative sand member of the Morrow section.

Q. Referring then to Exhibit Number Seven, would you explain that, please?

A. Exhibit Number Seven is the production performance that -- that has been experienced in the wells

in the immediate vicinity of the application.

Shown are the Antweil Penasco No. 1 Well, the Antweil Rio No. 1 Well, the Gulf State "GK" 1, the Gulf State "GK" 2, both those wells are located in Section 19, and the Yates Federal "AB" No. 4 Well, located in Section 30.

You notice the cumulative productions of these wells through 1 May 1980, the Antweil Penasco Well has recovered 3,905,421,000 cubic feet of gas. These figures are in Mcfs.

The Rio -- Antweil No. 1 Rio Well has recovered 444,846,000.

The Gulf "GK" State Well has recovered 633,951,000 feet of gas.

The Gulf "GK" 2 Well, 724,946,000.

And the Yates Federal "AB" 4 has recovered 1,432,568,000 feet of gas.

This is submitted to show the production performance and also the present productivity of these wells. You'll notice the April production figures, the Penasco Well was still producing over 100-million feet of gas a month; the Rio Well approximately 6-million a month; the Gulf "GK" No. 1, 3-million a month; Gulf "GK" No. 2, 6-million a month, and the Yates Federal Well, approximately 25-million a month. It would appear that the Yates well was recently put on a compressor there in January of 1980.

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I'd like to call your attention, then, to a comparison of this production data and the indicated recoveries we've had to date of these wells, say, to our structure map, which was Exhibit Four, and I think it's quite apparent that there's no relationship between the structure and the recovery that these wells have actually experienced.

Also, if we compare the production data to the Isopach map, Exhibit Five, why, the Isopach map fairly well defines the area where successful wells have been able to be completed, there's no exact relationship between the Isopach figures that have been picked from the log analysis and the recoveries that have actually been experienced.

You'll note in particular the Gulf "GK" State No. 1 has an indicated 16 feet of net pay and the Yates Federal "AB" 4 has an indicated 14 feet of net pay, approximately the same. The Yates Well has actually a little less; however, the Yates Well has recovered over twice as much gas.

Also the same comparison is apparent by comparing the Antweil Penasco Well and the Antweil Rio Well, approximately the same indicated pay. The Penasco Well has recovered nearly ten times the volume of gas.

So the net pay indicated from the logs has not been a good indicator of the amount of gas that can be expected to be recovered from these wells.

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You look also at the comparative production data to the correlation section, Exhibit Number Six. Compare there again Yates Federal "AB" 4 and the Gulf "GK" State No. 1. Looking at the correlation section Gulf Well has a thicker section, would look like it would definitely, from analysis of the log, be expected to recover more gas, but it in fact did not recover half the gas that the Yates Well with the poorer looking section was able to recover.

The same comparison could be made between the Antweil Penasco and Antweil Rio Wells. These sections, when we originally drilled the wells we thought that they looked like they were identical, and on the logs they looked very identical. The production performance shows them to be quite different.

The Penasco Well has recovered nearly 4-billion feet of gas; still making 100-million a month; has a flowing tubing pressure of 1050 pounds.

The Rio Well recovered 440-million feet of gas; is currently producing 6-million a month; is on a compressor and has a flowing tubing pressure of 60 pounds.

So I think we can see that the normal geologic data, structure, the net pay Isopach, the log data, do not represent what can be expected to be recovered at any given location or from any well that has been drilled, and actually there are -- is another controlling factor that is

determining the recovery or actually determining the available drainage area for any of these wells that have been drilled in this reservoir. We feel that this is particularly obvious by comparing our Penasco and Rio Well. The Rio Well with some permeability restriction, permeability barrier, has been limited in the area that it effectively drain and is essentially depleted.

The Gulf Well, where,the Gulf "GK" State Well, where it has obviously drained a larger area than the-- than our Rio Well, is still a restricted area, and now is also approaching depletion and has recovered -- with recovery of about 633-million feet of gas.

So this permeability factor appears to be controlling in the recoveries, is what prompted us to seek the -- an application for an additional well on this proration unit, and in seeking to drill an additional well, we would seek to drill at what we would consider the most advantageous postion to permit us to recover the gas that's -- that we still -- we feel remains on our 320-acre proration unit and has not been recovered.

So we sought the location 660 feet from the north line, 660 feet from the west line in an attempt to be as far away from our No. 1 Rio Well and avoid that permeability restriction, permeability barrier, that's obviously limiting its -- its drainage area and recovery.

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MR. STEVENS: We have two other exhibits that might be worth introducing, Mr. Examiner.

Q Referring then to Exhibits Numbers Eight and Nine, would you explain them, Mr. Williams?

A Yes. These are calculations of the drainage -- apparent drainage area of a couple of these wells that we believe are significant to this consideration.

The first, the estimated radius of drainage for the Gulf "GK" State No. 1 Well, using the thickness, porosity figures, downhole pressure figures, that were available for the well, a recovery factor of 10,350,000 feet of gas per acre was determined using an 80 percent recovery factor.

If we consider an ultimate recovery of this well of 650 Mcf -- 650,000 Mcf, or 650-million, based on the 633-million feet of gas the well has presently recovered, this would give us a drainage area of 62.8 acres. If that is assumed to be a circular drainage area, it would have a radius of drainage of 933 feet. Point that 933 feet out in comparison to our requested location, which is 2952 feet from this well.

So we do not feel that there would be interference created between this location, this well, and our proposed location.

Also, example of why we seek this location

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on the 320-acre proration unit, Exhibit Nine, the estimated radius of drainage from our Number 1 Rio Well, the same type calculations have been made. The apparent drainage area has been calculated to be 25.1 acres. If this is assumed to be a circular area, it would have a radius of 590 feet.

Our contention is that there is considerable gas reserves on our lease, on the lease of our mineral owner; that we have not been afforded the opportunity to recover, and this is why we seek the application for the unorthodox location and simultaneous dedication of this acreage to the two wells.

Q. Is it your consideration, then, that this production information available now, which was not available previously, is sufficient to show that Gulf's correlative rights would not be affected by this application?

A. Yes, I think the productio history and the production data say, as the Gulf State "GK" Well, "GK" No. 1 Well, in particular, indicates the well to be at or near depletion and regardless of the limits of accuracy of this radius of drainage calculation that is made, if the well has drained somewhere in the order of 933-foot radius, a well 2952 feet away from that location is not going to affect their drainage, their recovery or certainly not their ultimate recovery, which they have practically in hand.

Q. Mr. Williams, in the alternative, if one

makes the presumption that there is greater drainage than you calculate here, what would be the effect on Gulf's correlative rights in granting this application?

A. Yes. I would think that if Gulf's contention is that there is drainage across these property lines then it would appear at this point that Gulf has had the best of it in that they've had two -- a two year head start by the results of the previous hearings that were held in this case.

Q. Would this constitute, if there were such drainage, would this constitute a term called counter-drainage, in your opinion?

A. Yes, it would.

Q. You've had the opportunity, the applicant has, Mr. Williams, of drilling this well these past two years. What was your reason for not so doing?

A. Our alternatives of drilling the well with the slight penalty factors that -- that resulted from the last hearing, or drilling the well at a standard location we did not consider either of those alternatives to offer us sufficient economic benefit to compensate for the risk of drilling an additional Morrow well. We feel that there are two risk factors to be considered in this. One, the risk of encountering a limited drainage area or a complete, say, permeability barrier, as has been exhibited to exist by

our No. 1 Rio Well. Or, if the other contention is held that there is considerable drainage in the area, then we at any location in the northwest quarter of Section 29, might well encounter the depleted reservoir pressure and limited recovery, and both these factors we feel pose considerable risk on drilling in this area, and to justify the drilling we feel that we should be granted the unorthodox location, the unorthodox location without penalty, to afford us the opportunity to recover the gas that we consider is left in the northeast -- northwest quarter of Section 29 under our lease.

Q. Has this order previously entered in this area giving a penalty to any proposed well you might drill, resulted in your opinion, in damage to Antweil's correlative rights?

A. Well, we feel it has because it prevented us from -- from drilling the well that we originally wanted to drill two years ago.

Q. Do you have any other statements regarding these exhibits or other statements regarding this case, Mr. Williams, at this time?

A. Nope.

Q. Were Exhibits One through Nine prepared by you or under your direction?

A. Yes, they were.

MR. STEVENS: We tender these exhibits,

Mr. Examiner, and have no further questions at this time.

MR. NUTTER: Antweil Exhibits One through Nine will be admitted in evidence.

Are there any questions of Mr. Williams?

MR. KASTLER: Yes, Mr. Examiner.

CROSS EXAMINATION

BY MR. KASTLER:

Q. Mr. Williams, what new evidence do you have now to show where the barrier is around Rio Com No. 1 Well?

A. We have no new evidence to show where the barrier is.

Q. Well, you seem to have come up with some new evidence, or proclaimed new evidence as to the fact there is a barrier somewhere between Gulf's "GK" No. 1 and the Rio Com Well No. 1.

A. I think the production history that -- that was introduced through our Exhibit Number Seven and the two calculations, Exhibit Number Eight and Exhibit Number Nine, show that the Gulf "GK" State No. 1 Well and our No. 1 Rio Well have experienced limited areas of drainage, and -- and experienced depletion. So I think this is ample indication of some sort of permeability or barrier or barrier to the effective drainage of these wells.

Q Well, with this new evidence, wouldn't you calculate that a well drilled 1920 feet from the west line and 660 from the north line of Section 29 would establish a better drainage pattern, drainage area, because of its proximity to the Penasco No. 1 Well than would the well you're applying for now?

A Well, I think that's a two-way sword as we see it. We'd love to have another well like our No. 1 Penasco Well, but to -- to move in that direction, we're also moving towards the No. 1 Rio Well, and which has experienced very limited drainage area. And it would appear tc me to be a 50-50 situation, and I can't see how you say that would be a better location. We actually feel to control the risk to acceptable levels, it's -- we would prefer to be as far away from the No. 1 Rio Well as we can.

Q If it was a 50-50 --

A We, obviously, consider the risk of that standard location too great to drill or we'd have drilled it two years ago. We could have drilled it any time we wanted to.

Q And you don't really mean it's a 50-50 proposition, the drainage patterns, do you, --

A I -- I don't --

Q -- drilling a well at one location over another?

A. With the data we have and realizing that both these wells indicate, or are looking only at a small sample of the reservoir, when you're equidistant from a good well and a bad well, I don't see how you can put anything but 50-50 on it, and -- but my point is that's not acceptable for us to take the risk of drilling that well, and which is obvious, we haven't drilled it.

Q. Well then you find yourself between a rock and a hard place, but actually, you're not prevented from drilling the well at this orthodox location of 1920 from the west line?

A. Not legally prevented, but to our evaluation, we feel that we're economically prevented.

Q. I see. What other calculations have you made about the drainage areas in your Antweil Penasco No. 1 Well?

A. I have not made one.

Q. Why wouldn't you have made that?

A. I didn't think it significant, but that could be made easy enough.

Q. Have you made one for Yates Federal "AB" Com No. 4?

A. Yeah, I did.

Q. And what did you come up with there?

A. A similar type calculation, assuming that

they're going to recover 1.5 billion feet of gas, which is reasonable, I think, would indicate 155 acres of drainage area with a drainage radius, assuming that was round, which is a questionable assumption, but it would indicate 1467 feet radius.

Q. That's the Yates Federal "AB" No. 4?

A. Yes.

Q. How many acres?

A. 155 acres, and 1467 radius.

Q. Do you believe the proposed new well at the now unorthodox location could drain an area as large as 320 acres?

A. No, not from the experience of the average well that we've seen in the area. I think the drainage patterns that these wells are exhibiting, the drainage patterns are much less than 320 acres.

Q. You have replied to a question from Mr. Stevens earlier that you thought that, if anything, it would be fair and just to benefit by some counter-drainage, is that correct?

A. I don't --

Q. That was earlier in your testimony. The term "counter-drainage" was brought up.

A. That's right, that was applied to Gulf, not to us, that -- that if the reservoir can -- the point, I think, Mr. Stevens and myself were making through a question

and answer, was the point that -- was that if the reservoir conditions, the permeability, the porosity, conditions are such that drainage could occur between the "GK" 1, Gulf "GK" 1 Well and our proposed location, and our contention is that the reservoir conditions do not permit this, that if the conditions were such that drainage could occur, the counter-drainage to our application --

Q. Which means what?

A. The flow from -- from our lease toward the Gulf lease --

Q. Draining across lease lines.

A. -- would certainly have been well established by Gulf's two years of production before we're proposing to drill this location.

Q. Gulf's well is not situated or located in any sense in an unorthodox location, is it?

A. No.

Q. If the Rio Com No. 1 is only draining 20 or 25 acres, which you testified quite some time ago, how much productive acreage is left under the north half of Section 29?

A. It depends, of course, on what type of drainage area -- pattern that you choose to select. If you select a circular pattern of 25 acres, then you just subtract 25 from 320 and you come out with 295.

Q. Yes.

MR. NUTTER: That would be 295 regardless of the pattern, wouldn't it, Mr. Williams?

A. The pattern doesn't necessarily have to be circular and --

MR. NUTTER: Well, I mean --

A. -- could wells extended off that proration unit if it wasn't circular.

MR. NUTTER: It would have to be awful narrow to reach the 1980 feet.

A. Well, could have extended to the south, you know, this is a possibility.

But assuming that this is round, or nearly round, then you'd have 295 acres is apparently undrained by that well, and this is what we seek to have an opportunity to recover, a portion of that.

Q. If a well were drilled at the proposed location, what would be the approximate radius of drainage if that well would drain the eastern half of the north half of Section 29?

A. I don't understand your question.

Q. If a well were drilled at the proposed location, what would be the approximate radius of drainage of that well?

A. We have no way of telling. This was one

of the points were were trying to make by our testimony, that the geologic data that we've seen, the structure, the net pay Isopach, or the net pay selections from the logs, are not an indication of,or a controlling factor, in the drainage area that becomes available to any given well, and until this well is drilled and produced its effective drainage area, we do not believe can be determined.

Q Well, I'm told I must read the question again.

MR. KALTEYER: No, no.

Q All right. If a well was drilled at the proposed location, what would be the approximate radius of drainage if the well would drain the eastern edge of the north half of Section 29?

A Would you define in the eastern edge of the north half?

Q Well, you're trying to drain all of the acreage under your lease, are you not?

A Well, all that we feel is drainable. We feel that the Rio No. 1 has established that there is some permeability barrier in there and that there is probably some of it that's undrainable.

MR. KALTEYER: Let me take hold of it just a second, if I may.

MR. NUTTER: You're going to try to ex-

plain the question, is that it?

MR. KALTEYER: Yes.

MR. NUTTER: Okay.

MR. KALTEYER: All it says is, if you drilled at your proposed location and you are going to drain to the eastern edge of your proration unit, what is that distance?

A. Oh.

MR. KALTEYER: If you were going to drain to the edge of it, that's all it says.

A. Okay, well, that would be -- that would be 2640 less 660, is that what you're trying to say?

MR. KALTEYER: Yes, right.

A. Oh, what is that?

MR. NUTTER: 1280 less 660.

A. Yeah, less 660.

MR. STEVENS: 4800 and something.

A. 4620.

Yes, well, our proposed location is 4620 feet from the eastern boundary of the 320-acre proration unit. I would not anticipate in any way that a well could be expected to drain an area of that magnitude from the production history we obtained from the majority of the wells in this field.

Q. Well, now, you've testified more or less

that your -- the area between these wells is not necessarily in communication because each well has a separate drainage area, is that correct?

A. This is what we feel that the -- that the data shows; that the, say, our No. 1 Penasco and our No. 1 Rio Wells are not in the same reservoir.

Q. And so you can expect --

A. They're in separate reservoirs. There's some barrier, permeability barrier between them. We think that there's evidence also that your No. 1 "GK" 1 and the Yates "AB" 4 are actually in separate reservoirs, because there's a permeability barrier that has apparently separated those wells and limited the radius of drainage of your "GK" No. 1 Well.

Q. Now extend that fact to this conclusion, wouldn't you say that the reservoir situation you would encounter at your proposed location would be almost a virginal reservoir pressure?

A. We think it could well be and we hope it will be.

Q. Yet you won't take an oath to the effect that this could drain as much as 4620 acres.

A. No.

Q. Feet, 4620 feet.

A. No, definitely not. The wells in the

reservoir have not exhibited that that's possible, the production history of those wells.

Q. Well, have you checked -- we will put on evidence later to the drainage pattern of the Penasco, but if you were to hypothetically assume that the Penasco would drain 455 acres, which our witness will testify to, could you possibly expect to encounter such a well in your Rio Com No. 2, your proposed well here?

A. No. I don't think so. You're saying 455?

Q. 455 acres. That evidence has been introduced, incidentally, in a previous hearing in this case.

A. I don't think that's been introduced at all, but okay, assuming that, we wouldn't expect it because that's really an exception.

Q. Yes.

A. The well undoubtedly an excellent well, which we admit that. We don't expect that you could anticipate another well of that -- of that magnitude. We would think that more of an average well for the reservoir would be encountered and that the drainage area would be limited, much less than 320 acres, because that's been the pattern through the field. How much, there's no way of saying.

When you start talking about two wells, like the Penasco and this proposed location, both having, say

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455 acres of drainage area, then you obviously have a conflict.

Q. Yes.

A. Between those wells, and a second well cannot establish that kind of drainage area.

Q. Yes, sir.

A. If the Penasco has actually established that type of drainage area, then the pressure gradient from the edge of that drainage area is established towards the Penasco Well. To change that and recapture that, a second well is at considerable disadvantage.

Q. If I understand you correctly, what you're saying is that the drainage area transcends lease lines.

A. Yes, there's nothing we can do to prevent that.

Q. That's correct.

A. If they extend to them.

Q. Yes, if they extend --

A. The evidence that we've introduced so far has indicated that the majority of these wells are having a difficult time even extending to the lease lines, or proration unit lines.

Q. You wouldn't drill your Rio Com No. 2 if you expected to get the same completion that you got -- or the same deliverability that you've experienced in the Rio Com

No. 1, would you?

A. You have to be careful how you say that.

Q. How would you state it?

A. If you gave me a guarantee that I'd get a well as good as the Rio Well, then that would be like going down to the bank and getting some interest. It would be a low interest -- Rio 1 Well would be economic, but barely economic. We wouldn't intentionally drill under the general Morrow risk factor considerations; we wouldn't intentionally drill to get a well of that quality, because of the risks involved of getting a worse well.

The potential, we feel, has to be better than our Rio 1 Well to justify drilling a well.

Q. That's coming from a drainage area which transcends your lease line.

A. I didn't say that. We don't believe that's correct, necessarily, but we don't feel that it affects any of the other wells in the area.

Q. Do you agree with this statement: That Mr. Antweil should be entitled to a reasonable opportunity to recover the reserves under his lease?

A. Yeah, I think that's statutory.

MR. KASTLER: That's all.

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

Did you have anything else, Mr. Stevens?

MR. STEVENS: No, sir.

MR. NUTTER: Mr. Kastler, do you have a witness?

MR. KASTLER: I would request a ruling on my first initial motion as to dismiss because of res judicata.

MR. NUTTER: Well, I don't know if it is yet or not.

MR. KASTLER: All right.

MR. NUTTER: As a matter of fact, I'm not going to know until I read the transcript, so I'm not going to make any ruling today. It will come out in the order.

So we'll go ahead and hear the case.

MR. KASTLER: All right. In that case, Mr. Kalteyer should take the stand.

CHARLES F. KALTEYER

being called as a witness and having been duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KASTLER:

Q Mr. Charles F. Kalteyer, as Chief Proration Engineer, Southwest District, of Gulf Oil Corporation, have

you previously appeared and testified before the New Mexico OCD, and been accepted as an expert witness?

A. Yes, sir, I have.

MR. KASTLER: Are the witness' qualifications acceptable?

MR. NUTTER: Yes, they are.

Q. Mr. Kalteyer, have you prepared for this hearing an Exhibit Number One?

A. Yes, sir, I have.

Q. Would you please make reference to Exhibit Number One, explain what it is and what it shows that's pertinent to the issue?

A. All right. Gulf's Exhibit Number One is a plat of the area, showing the proposed location in yellow of the Rio 2, and shows the producing wells in the immediate area in pink or red.

Q. Would you now refer to what you have prepared as Exhibit Number Two and explain what it shows that's pertinent to this hearing?

A. Gulf's Exhibit Number Two is the production data sheet for the Penasco Draw Morrow Pool wells. We have data up to April 1st, cumulative data, that we were able to get from engineering records, and we have unconfirmed production reports from El Paso for April/May, so we have for

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the most part, two cum figures for each of the wells.

The -- by looking to the second page you can see the cums at the lower portion of the page of the Yates Federal "AB" 4, cum as of April 1,'80, 1.3 Bcf -- 1.34 Bcf as of April 1, '80, and 1.39 Bcf as of 6-1-80.

The Antweil Penasco No. 1 has a cum as of April 1 of 3.83 Bcf, and as of June 1, 4.03 Bcf.

The Rio Com No. 1 shows approximately .46 Bcf as of April 1, '80, and .47 Bcf as of 6-1-80.

The Bennett and Ryan Well has not been of significance to the hearing, but it is carried in the Penasco Draw Pool with .117 Bcf.

The Gulf "GK" No. 1 as of April 1, .63 Bcf, and as of June 1, .64, approximately.

And the "GK" 2, .71 Bcf as of April 1, '80, and .73 as of 6-1-80.

Q Have you prepared an Exhibit Number Three? Or were you through? Beg your pardon.

A The other wells that are listed on the last page are the Lincoln State Com No. 1, Mesa's well in Section 24, which is pretty much out of the picture, and their Rio State No. 1 and 2 in Section 36, which are probably in a new or in a separate pool, and the Yates Scout "EH" 4, which apparently has just been placed on production, and the Scout "JM" just placed on production.

Q. Are you now ready to testify you prepared an Exhibit Number Three and what it shows?

A. Gulf's Exhibit Number Three is a plat of the north half of Section 29, which is the proration unit assigned to the Rio Com.

On it we have indicated the four areas of standard -- of standard locations that can be drilled, or orthodox locations can be drilled.

The No. 1 Well is drilled at a standard location 660 from the south and 1980 from the east of the north half of Section 29.

The -- we have made a calculation of the drainage area of the Rio Com No. 1 and it falls right in line with the data that was presented by Mr. Williams. We have indicated approximately 24 acres drainage, and in order to encompass 24 acres in a radial fashion, we would come up with 577 -- a 577 foot radius, and the red circle there would indicate the approximate circular area of a 24-acre drainage pattern.

On this plat we've also indicated the distances from the Rio Com 1 to other areas, the remote areas that would still give orthodox locations.

Q. What conclusions are you able to draw referring now to Exhibit Number Three?

A. It would indicate that there are ample

areas for them to drill at standard locations, or orthodox locations, and still avoid what area, the limited area, that the Rio Com appears to be draining. They are requesting that they drill some 2952 feet away from the No. 1, when its probable radius of drainage to its permeability barrier is only 577 feet.

Q. In your opinion would the drilling of a well at an orthodox location provide as much gas under this lease of Morris Antweil as would drilling at another location, the location they have proposed, which is in the unorthodox location?

A. The chances are still good that they would recover more reserves from one of the standard locations than the unorthodox location that they have proposed. They have no criteria as to -- either in their exhibits on Isopach or any delineation of a barrier, so they may still recover more reserves from a standard location, or regular location, than they would at the unorthodox location they propose.

Q. Would the drilling of a well at the proposed unorthodox location provide -- or protect correlative rights in the field?

A. I don't believe it would. It wouldn't protect ours necessarily.

Q. By what do you reason -- by what reason do you draw that conclusion?

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A. Well, I would like to comment on the calculations I've made on some other wells within the field, as far as the areal extent of their possible drainage.

As I said, the Rio Com, based on its production, we've estimated 24 acres of drainage.

The "AB" Federal 4, we've estimated 118 acres.

The "GK" 1, we've estimated 52 acres.

And the "GK" 2, we've estimated 67 acres.

And the Penasco 1 we've indicated -- calculated 455 acres.

And if we assume radial drainage, we come up with 577 feet for the Rio Com; for the "AB" Federal 4, 1279 feet; for the "GK" 1, 849; the "GK" 2, 963; and for the Penasco, 2512 feet.

MR. NUTTER: How many acres were you attributing to the "GK" 1, Mr. Kalteyer?

A. 52 acres.

MR. NUTTER: And 67 to the No. 2, correct?

A. Yes, sir.

MR NUTTER: Okay.

Q. Would you contend that if a well were to be permitted at the unorthodox location proposed, that there should be a penalty factor imposed to protect correlative rights?

A. Yes, sir, I would.

Q. Would you care to name what penalty factor should be imposed?

A. Well, my first recommendation, of course, would be that the application be denied, for the unorthodox location.

He's entitled to recover the reserves under his lease and he's not attempting to recover the reserves under his lease; he's trying to recover reserves closer to the edge of the lease or off of the lease, than he is under his own lease. He would do a better job of attempting to recover the reserves under his lease if he did move toward an orthodox location.

Q. Would Gulf be inclined to seek a similar unorthodox location to perhaps offset its "GK" Well No. 1 in Section 19 if this unorthodox location were allowed?

A. If this location were allowed, then it's very possible that to further protect our correlative rights we would be forced to drill a well in the southeast quarter of the southeast quarter, and we would be willing to live up to such production limitation factor as the OCD would apply.

Q. If two such wells were drilled, would you consider that would constitute economic waste?

A. Yes, sir, I think it would.

Q. Would you abdicate imposing any penalty

at all if Mr. Antweil were to drill, apply for and drill, his second well, or his supplemental well, at an orthodox location?

A. No, sir, I would recommend no penalty if he drilled at an orthodox location; the second well at an orthodox location.

Q. Do you have any other conclusions to draw or any other statements to make in this case?

A. I just would like to point out, based on the data of the drainage areas and the radiuses that I did calculate, that the Penasco Well, which has been a very fine well, has indicated that it probably can drain, or is draining, up to 2512 feet, which would, if this application is allowed, were that an equivacally good well, or even approaching that, the -- that it would be draining reserves from off the lease, from off the Rio Com lease.

Q. That is, Rio Com No. 2 Well would be draining reserves from off its lease?

A. The Rio Com lease, yes.

Q. All right. Do you have anything further to add?

A. I believe that's it.

CROSS EXAMINATION

BY MR. NUTTER:

Q. Mr. Kalteyer, Mr. Kastler asked you if

you had a recommendation as to penalty. Did you ever get to that?

A Oh, yes. In regards to a production limitation factor, I would have no objection to the application of a .71 production limit factor for the two wells, since the Well No. 1 is apparently draining only something like 25 acres, and its radius of drainage is probably not extending off the lease.

Q .71, you say?

A Which is the factor that was assigned in the prior hearing for the drilling of the well if they shut-in Well No. 2.

Q And you wouldn't have objection to the retention of that same factor but with the contingent production of the Rio Com No. 1?

A Of the No. 2 -- I mean No, 1, yes, sir.

MR. NUTTER: Did you have anything further, Mr. Kastler?

MR. KASTLER: Nothing further, no, sir.

MR. NUTTER: Does anyone have any questions of Mr. Kalteyer? Mr. Stevens?

CROSS EXAMINATION

BY MR. STEVENS:

Q Mr. Kalteyer, Gulf's two wells in Section

19 apparently have east half/west half proration units, based upon your Exhibit One?

A. Yes, sir.

Q. If those proration units were north half/south half, and your No. 1 were in the south half, would it be in an unorthodox location?

A. Yes, sir, it would, if those units were in the other direction.

Q. Is there any magic in running it north/south versus east/west?

A. Is there any magic?

Q. Yes, sir, flying term, I apologize. Is there any --

A. Oh, I --

Q. -- good reason why it should be north/south versus east/west?

A. No, sir, I do not know why we applied for it in that particular direction.

Q. Based upon your Exhibit Number One, your No. 1 "GK" at 660 feet, I'm presuming, from the Antweil lease line in Section 20, what is the distance of the proposed location from the Gulf lease line in Section 19, the Antweil proposed location in Section 29?

A. I think that sentence was a little long for me there, or question, rather, was long.

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Q What is the distance of the Antweil location from the Gulf lease line in the southeast corner of Section 19? The proposed location being the northwest/northwest of Section 29?

A It would be that diagonal of the 660.

Q Would that be a greater distance than Gulf's No. 1 "GK" is from the Antweil lease in Section 20?

A Would it be farther?

Q Yes, sir.

A Yes, it would be farther.

Q If there is drainage between lease lines in this reservoir, would Gulf have drained more gas from Antweil than Antweil might drain from Gulf in Section 29?

A We don't know what kind of well -- we know that our well is poor, and we don't know whether this is going to be another Penasco Well with a 2500-foot drainage radius, or it's going to be like the "GK", which is only 800, and of course, the "GK" was drilled as a -- at a standard location under the rules of the Commission, and of course, its radius of drainage under the standard rules of 320-acres would provide for 2100-foot radius, 2100+ foot radius from the wellbore.

Q Was Gulf penalized on this "GK" 1 because it was drilled within 660 feet of the Antweil lease in Section 20?

A No, it's a standard location.

Q Does Gulf --

A Provided for in the rules, statewide rules.

Q Does Gulf use risk factors, reserves, allowable, and deliverability to determine whether it should drill any well in any particular place?

A Risk factors, yes; reserves.

Q Reserves, allowables, and deliverability, possible deliverability of well?

A Yes.

Q Is this, in your mind, a reasonable practice for Antweil to use?

A Sure.

Q Antweil did not drill at a standard location in Section 29 under its parameters, using those factors, would you consider that it made a reasonable exercise in making that determination that it could not drill?

A Well, for which well, now? I'm missing your question.

Q For a possible location, standard location in the north half of Section 29?

A Do I know whether they calculated that?

Q Do you know whether it would be a reasonable thing for them to do, sir?

A. To call -- reasonable to calculate, they'll have to make their own decision.

Q. If they made such a decision not to drill, based upon -- appropriate and based in the northwest/northwest and based upon the possibility of getting a dry hole or a poor well, is this a reasonable exercise, in your opinion?

A. That's up to them to decide to the best of their ability.

Q. If under this decision they decided not to drill based upon deliverability and risk of permeability loss, do you think they may be leaving gas underneath the northwest quarter and the west half of the northwest of Section 29 they are entitled to?

A. I'm sure they're going to leave a bunch of gas if they're only draining 25 acres out of that 320. They could drill on the east side of that well, too, and probably recover reserves that would be left there, too.

Q. Do you think it's reasonable that Antweil should have the opportunity to recover that oil and gas under the west half of the northwest northwest of Section 29?

A. He should have a reasonable opportunity to recover the recoverable reserves under the north half of Section 29, not just under that one 40-acre tract. If he wants to drill the thing on 40 acres, then maybe we need to have him call a field rule hearing and we'll start drilling

on 40 acres, then.

Q. Mr. Kalteyer, you just testified the standard locations in the north half of Section 29 were as good as the proposed location, yet did you give any evidence of where a permeability barrier might be in the north half of Section 29?

A. No, sir, I did not, nor did your witness.

Q. If there is no evidence, then would it be reasonable to presume the farther away from a low permeability well you can get, the better off -- chance you would have of recovering reserves under the tract might be?

A. Not necessarily, no. Just by getting further away you might go out of production.

Q. Well, on that basis, then, do you think it's better to get closer to a low permeability well?

A. Well, it's -- we have two factors involved. One is recovery of reserves and the other -- and prevention of waste, and the other is protection of correlative rights, and I think -- we're not trying to keep him from drilling a well. We just don't want them over there draining reserves out from under another lease.

Q. Have you given any evidence that such reserves would be drained out from under your lease?

A. I gave evidence that a well could drain one of the wells in the field, which he chose not to calculat

any drainage area on. He calculated on three others, but he didn't on that one. It will drain 2500 feet, over 2500 feet, by my calculation, and possibly it could drain reserves from under our tract.

Q. If this well were an average of all the producing wells in the field, would it affect your "GK" 1, Gulf "GK" 1?

A. An average well there, apparently, out of those that I calculated, or the five wells that I calculated for the average areal extent, was 143 acres.

Q. Distances from lease lines, as you testified, vary from 577 to 2512. Four of those wells -- or radius of drainage. Four of those wells were less than 963 feet; one was above it. On that basis would any of those four wells affect Gulf's "GK" 1?

A. Well, the "AB" Federal was 1279 and the Penasco was 2500. The "GK" 2 is in the middle with 963, and then we have the "GK" 1 with 849 and the Rio Com with 577.

Q. Yes, sir, that was your testimony.

A. So the average well out of that, out of those radiuses would affect -- could reach to over under Gulf's lease. The average one.

Q. Would it affect the "GK" 1? That was my question.

A. Would it affect the "GK" 1?

Q Probably not, unless the "GK" 1 area of drainage was in an unusual shape and not radial, and extended down into that southeast corner of the section.

MR. STEVENS: No further questions, Mr. Examiner.

MR. NUTTER: Do you have any further questions?

MR. KASTLER: None on redirect.

MR. NUTTER: Does that concludeyour case, Mr. Kastler?

MR. KASTLER: Yes, it does.

MR. NUTTER: Okay, we'll call for closing statements.

Mr. Stevens, as applicant you may go last. Did you want to make a closing statement, Mr. Kastler?

MR. KASTLER: Yes, I would. I'd like to argue that the applicant has failed to show why he could not drill at one of the three other regular locations on the north half of Section 29.

The applicant has failed to show why the unorthodox location picked was necessary to recover the reserves under his lease, or how it could reasonably be expected to recover the reserves under his lease.

Furthermore, we argue that he failed to show that more reserves would be recovered by a well drilled

at the unorthodox location than vice versa. In other words, I don't believe his evidence has shown that the unorthodox location is preferred for the recovery of reserves, but it's more likely that it's preferred for the recovery of some of Gulf's reserves in a counter-drainage manner.

I recommend that this application be denied.

MR. NUTTER: Thank you. Mr. Stevens?

MR. STEVENS: Mr. Examiner, the principal thing that Gulf brought out is they admitted that this unorthodox location would not hurt the well covering the proration unit which it would offset if it were drilled. That would show, obviously, there is some sort of permeability barrier in the area. The position is unknown and the greater distance one would get to the well exhibiting that is a greater chance of getting a commercial well, therefor making it worthwhile drilling. In fact, the well was not drilled for, let's say, at least (inaudible) because of the penalty factor asserted against the well, which when coupled with the risk of the well made it uneconomic in the opinion of the operator to drill it. The result was that for two years the operator has been denied the right to recover the gas underlying his tract, which is, again, a statutory right.

If there is an affect on Gulf's correlative rights, I believe that certainly Gulf's two years should

have taken care of this correlative rights problem by counter-drainage at least, and in the opinion of the applicant, there is no drainage that would affect Gulf's correlative rights, or if there were, the counter-drainage would counter-balance the loss of correlative rights.

MR. NUTTER: Thank you. Gentlemen, we'll take the case under advisement.

We still have the motion of Mr. Kastler that the case be dismissed as res judicata. We'll consider that motion. It will be included in whatever order comes out either granting or denying the motion, Mr. Kastler.

MR. KASTLER: Thank you. Okay.

MR. NUTTER: As I see it, we've got three alternatives here. We can grant the application with or without penalty; we can deny the application; or we can dismiss the case. In the case of a denial or dismissal, I would presume the original order would still stand in the case.

So we'll study it and make a recommendation.

The case is taken under advisement and the hearing is adjourned.

(Hearing concluded.)

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C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

_____

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. _____, heard by me on _____ 19____.

_____, Examiner
Oil Conservation Division

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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
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September 12, 1980

Re: CASE NO. ~~6964~~
ORDER NO. ~~R-6468~~

Mr. Donald Stevens
Attorney at Law
Post Office Box 2203
Roswell, New Mexico 88201

Applicant:

~~Morris R. Antwell~~

Dear Sir:

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

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCD x
Artesia OCD x
Aztec OCD

Other Bill Kastler

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
25 June 1980

EXAMINER HEARING

IN THE MATTER OF:

Application of Benson-Montin-Greer Drilling Corporation for a pressure maintenance project, Rio Arriba County, New Mexico.

CASE 6944

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

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MR. STAMETS: Call next Case 6944.

MR. PADILLA: Application of Benson-Montin-Greer Drilling Corporation for a pressure maintenance project, Rio Arriba County, New Mexico.

MR. STAMETS: At the request of the applicant this case will be continued to the July 9th Examiner Hearing.

(Hearing concluded.)

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C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 6944, heard by me on 6-25 1980.

Richard L. Stamets, Examiner
Oil Conservation Division

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Morris R. Antweil
OIL OPERATOR
P. O. Box 2010
Hobbs, New Mexico 88240

June 12, 1980

New Mexico Oil Conservation Division
Box 2088
Santa Fe, New Mexico 87501
ATTN: Mr. Joe D. Ramey

Case 6964

RE: Request for Unorthodox Location Hearing
N/2 Section 29-T18S-R25E
Eddy County, New Mexico

Penasco Draw - Morrow Gas Pool

Gentlemen:

Morris R. Antweil is the Operator of the Pennsylvanian Formation under the N/2 of Section 29-T18S-R25E, Eddy County, and proposes to drill the No. 2 Rio Com. well at a location 660' FNL & 660' FWL of said Section 29. Applicant seeks an exception to the well location requirements of Oil Conservation Division Rule 104-B-I-(a) to permit the drilling of a well at the above-mentioned unorthodox location to test the Morrow Formation in the Pennsylvanian Systems. Applicant proposes that the standard 320-acre gas spacing and proration unit comprising the N/2 of said Section 29 be dedicated to the proposed well. Applicant's No. 1 Rio Com., located 1980' FNL & 1980' FEL of said Section 29 is presently producing from said 320-acre proration unit; therefore, Applicant seeks the simultaneous dedication of said 320-acre proration unit to Applicant's No. 1 and No. 2 Rio Com. wells.

This matter was previously heard by the Division as Case No. 6213 at Examiner Hearing on 17 May 78 and in de novo hearing on 24 January 79 and ruled on by the Division by Order Nos. R-5856 and R-5856-A, respectively. Applicant's request that the Division consider this matter again at this time is based on the belief and contention that the production and depletion of surrounding Morrow wells has significantly changed the considerations in regard to the protection of correlative rights.

Morris R. Antweil therefore requests that this application be set for hearing before the duly appointed Examiner of the Oil Conservation Division on 9 July 80, that notice be given as required by law and the Rules of the Division, that the

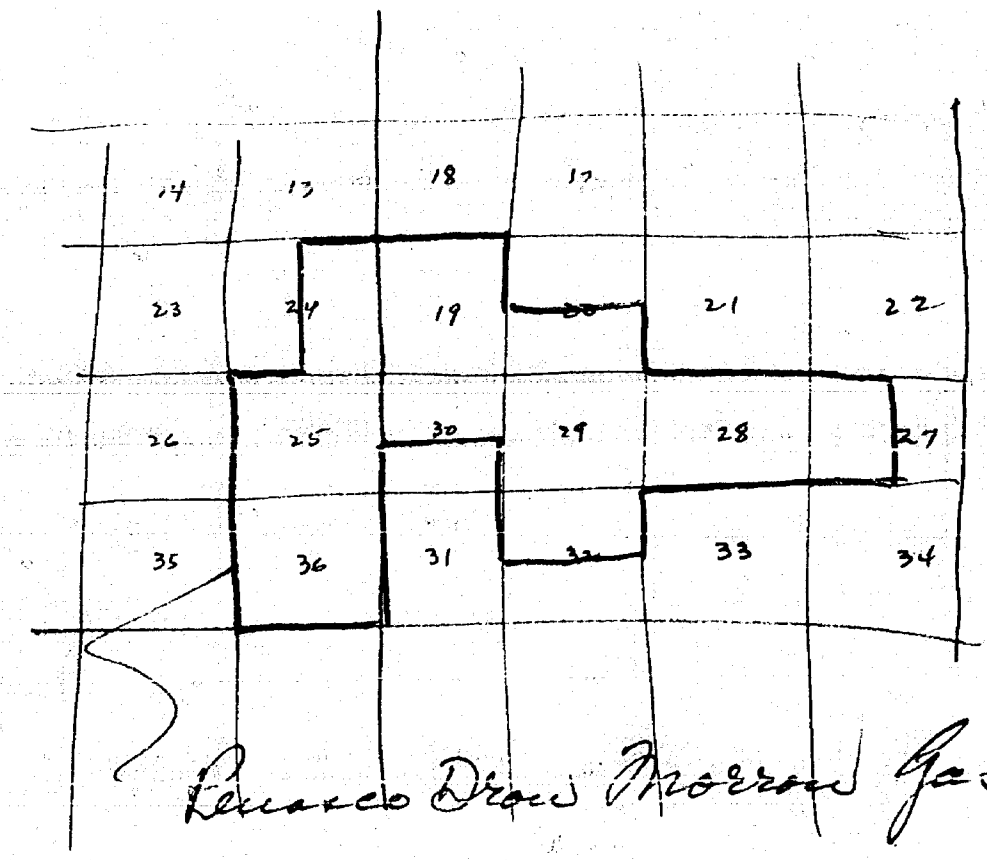
Division enter its Order granting the Applicant permission to drill its No. 2 Rio Com. well at a location 660' FNL & 660' FWL of said Section 29, and that the N/2 of said Section 29 be simultaneously dedicated to Applicant's No. 1 and No. 2 Rio Com. wells.

Respectfully Submitted,

MORRIS R. ANTWEIL

R. M. Williams

RMW:pa



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
25 June 1980

EXAMINER HEARING

IN THE MATTER OF:

Application of Benson-Montin-Greer Drilling Corporation for a pressure maintenance project, Rio Arriba County, New Mexico.

CASE 6944

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

MR. STAMETS: Call next Case 6944.

MR. PADILLA: Application of Benson-Montin-Greer Drilling Corporation for a pressure maintenance project, Rio Arriba County, New Mexico.

MR. STAMETS: At the request of the applicant this case will be continued to the July 9th Examiner Hearing.

(Hearing concluded.)

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-D
Santa Fe, New Mexico 87501
Phone (505) 455-7409

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. _____, heard by me on _____ 19____.

_____, Examiner
Oil Conservation Division

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409

Dockets Nos. 22-80 and 23-80 are tentatively set for July 23 and August 6, 1980. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - JULY 9, 1980

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

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

CASE 6953: Application of Gulf Oil Corporation for an unorthodox location and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the simultaneous dedication of a previously approved 240-acre non-standard gas proration unit comprising the NE/4 and E/2 NW/4 of Section 17, Township 20 South, Range 37 East, Eumont Gas Pool, to its Theodore Anderson Well No. 4 located in Unit B, and its No. 7, at an unorthodox location 1980 feet from the North line and 660 feet from the East line of Section 17.

CASE 6954: Application of Harvey E. Yates Company for amendment of Order No. R-6303, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-6303 which authorized the directional drilling of a well, the surface location of which is 660 feet from the North line and 1980 feet from the West line of Section 32, Township 13 South, Range 36 East. Applicant seeks approval for the bottom hole location of the well at a point 654 feet from the North line and 2158 feet from the West line of said Section 32.

Cont 7/23

CASE 6921: (Readvertised)

Application of Harvey E. Yates Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp-Mississippian formations underlying the S/2 of Section 33, Township 13 South, Range 36 East, to be dedicated to a well to be drilled at an unorthodox location 660 feet from the South line and 990 feet from the East line of Section 33. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

Cont 7/23

CASE 6932: (Continued from June 25, 1980, Examiner Hearing)

Application of Yates Petroleum Corporation for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its State "JM" Well No. 2, a Morrow test to be drilled 660 feet from the South and East lines of Section 25, Township 18 South, Range 24 East, the S/2 of said Section 25 to be dedicated to the well.

CASE 6934: (Continued from June 25, 1980, Examiner Hearing)

Application of Coronado Exploration Corporation for three compulsory poolings, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the San Andres formation underlying three 40-acre proration units, being the NW/4 SE/4 of Section 6, the NE/4 SE/4 of Section 28, and the SW/4 NW/4 of Section 33, all in Township 11 South, Range 28 East, each to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said wells and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the wells, and a charge for risk involved in drilling said wells.

Dismissed

CASE 6955: Application of El Paso Natural Gas Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Tapacito-Pictured Cliffs and Blanco Mesaverde production in the wellbore of its San Juan 27-5 Unit Well No. 42 located in Unit M of Section 22, Township 27 North, Range 5 West.

CASE 6956: Application of Amoco Production Company for an NGPA determination, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a new onshore reservoir determination in the Morrow formation for its State "GH" Well No. 1 located in Unit F of Section 21, Township 16 South, Range 35 East.

Cont 8/6

CASE 6957: Application of Amoco Production Company for an NGPA determination, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a new onshore reservoir determination in the Morrow formation for its State HK Com Well No. 1 located in Unit L of Section 6, Township 24 South, Range 25 East.

Cont 8/6

CASE 6958: Application of Kenai Oil and Gas, Inc. for downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of undesignated [illegible] and Artesia Queen-Grayburg-San Andres production in the wellbore of its Gulf State Well No. 1 located in Unit K of Section 36, and its Cobb Federal Well No. 2 located in Unit H of Section 22, both in Township 18 South, Range 27 East, Artesia Pool. Applicant further seeks an administrative procedure whereby similar commingling could be approved for other wells to be drilled in the NE/4 and S/2 NW/4 of said Section 22.

CASE 6959: Application of Great Western Drilling Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying the S/2 of Section 19, Township 18 South, Range 27 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 6960: Application of Bass Enterprises Production Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests down to and including the Strawn formation underlying the S/2 SE/4 of Section 13, Township 16 South, Range 36 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

Cont 7/23

CASE 6950: (Continued from June 25, 1980, Examiner Hearing)

Application of Bass Enterprises Production Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a Morrow test well to be drilled 660 feet from the North line and 1980 feet from the East line of Section 4, Township 25 South, Range 31 East, the E/2 of said Section 4 to be dedicated to the well.

Cont 7/23

CASE 6961: Application of Conoco Inc. for a dual completion and unorthodox well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Meyer A-29 Well No. 11 to be drilled at an unorthodox location 990 feet from the North line and 660 feet from the East line of Section 29, Township 22 South, Range 36 East, to produce gas from the Langley-Devonian and -Ellenburger Pools thru parallel strings of tubing, the E/2 of said Section 29 to be dedicated to the well.

Cont 9/23

CASE 6962: Application of BTA Oil Producers for special pool rules and pool extension, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of Special Pool Rules for the North Bell Lake-Devonian Gas Pool to provide for 640-acre spacing and specified well locations. Applicant also seeks the extension of said pool to include all of Sections 6, 7, and 18, Township 23 South, Range 34 East.

CASE 6896: (Continued from June 25, 1980, Examiner Hearing)

Application of John E. Schalk for a non-standard gas proration unit ~~and an unorthodox gas well location~~ + std. location, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 160-acre non-standard Blanco Mesaverde gas proration unit comprising the NE/4 of Section 8, Township 25 North, Range 3 West, to be dedicated to his Gulf Well No. 2 to be drilled at an ~~unorthodox~~ location ~~1025~~ 140 feet from the North line and 790 feet from the East line of said Section 8,

CASE 6965: Application of Supron Energy Corporation for a non-standard gas proration unit, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 160-acre non-standard Mesaverde and Dakota gas proration unit comprising the SE/4 of Section 8, Township 25 North, Range 3 West, to be dedicated to a well to be drilled at a standard location thereon.

CASE 6966: Application of Reading & Bates Petroleum Co. for compulsory pooling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Gallup and Dakota formations underlying the NE/4 of Section 17, Township 24 North, Range 3 West, Chacon Field, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 6942: (Continued from June 25, 1980, Examiner Hearing)

Dismissed

Application of Benson-Montin-Greer Drilling Corporation for amendment of Order No. R-2565-B, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Rule 2 of the Special Pool Rules for the West Puerto Chiquito-Mancos Oil Pool as promulgated by Order No. R-2565-B to provide that all 320-acre spacing and proration units in said pool would comprise either the W/2 or the E/2 of a governmental section, provided however, that one injection well would have dedicated thereto the N/2 of Section 1, Township 24 North, Range 1 West, and also that the short 400-acre sections on the South side of Township 27 North, Range 1 West, would each comprise a single spacing unit.

CASE 6943: (Continued from June 25, 1980, Examiner Hearing)

Application of Benson-Montin-Greer Drilling Corporation for a unit agreement, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the East Puerto Chiquito-Mancos Unit Area, comprising 9,769 acres, more or less, of Federal, Indian, and fee lands in Townships 26 and 27 North, Ranges 1 East and 1 West.

CASE 6944: (Continued from June 25, 1980, Examiner Hearing)

Application of Benson-Montin-Greer Drilling Corporation for a pressure maintenance project, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pressure maintenance project by the injection of gas, air, LPG, water, or chemicals into the Mancos formation thru 7 wells on its East Puerto Chiquito-Mancos Unit Area.

CASE 6963: Application of Morris R. Antweil for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 660 feet from the North line and 1980 feet from the East line of Section 30, Township 19 South, Range 30 East, HC-Morrow Gas Pool, the E/2 of said Section 30 to be dedicated to the well.

CASE 6964: Application of Morris R. Antweil for an unorthodox gas well location and simultaneous dedication, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Rio Com. Well No. 2, to be drilled 660 feet from the North and West lines of Section 29, Township 18 South, Range 25 East, Penasco Draw-Morrow Gas Pool, to be simultaneously dedicatnd with its Rio Com. Well No. 1 in Unit G to the N/2 of said Section 29.

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Docket No. 21-80

DOCKET: EXAMINER HEARING - WEDNESDAY - JULY 16, 1980

9 A.M. - OIL CONSERVATION DIVISION 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 August, 1980, from fifteen prorated pools in Lea, Eddy, and Chaves Counties, New Mexico.

(2) Consideration of the allowable production of gas for August, 1980, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.

Docket No. 20-80

Dockets Nos. 22-80 and 23-80 are tentatively set for July 23 and August 6, 1980. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - JULY 9, 1980

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

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

CASE 6953: Application of Gulf Oil Corporation for an unorthodox location and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the simultaneous dedication of a previously approved 240-acre non-standard gas proration unit comprising the NE/4 and E/2 NW/4 of Section 17, Township 20 South, Range 37 East, Eumont Gas Pool, to its Theodore Anderson Well No. 4 located in Unit B, and its No. 7, at an unorthodox location 1980 feet from the North line and 660 feet from the East line of Section 17.

CASE 6954: Application of Harvey E. Yates Company for amendment of Order No. R-6303, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-6303 which authorized the directional drilling of a well, the surface location of which is 660 feet from the North line and 1980 feet from the West line of Section 32, Township 13 South, Range 36 East. Applicant seeks approval for the bottom hole location of the well at a point 654 feet from the North line and 2158 feet from the West line of said Section 32.

Continue to July 23

CASE 6921: (Readvertised)

Application of Harvey E. Yates Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp-Mississippian formations underlying the S/2 of Section 33, Township 13 South, Range 36 East, to be dedicated to a well to be drilled at an unorthodox location 660 feet from the South line and 990 feet from the East line of Section 33. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

Continue to July 23

CASE 6932: (Continued from June 25, 1980, Examiner Hearing)

Application of Yates Petroleum Corporation for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its State "JM" Well No. 2, a Morrow test to be drilled 660 feet from the South and East lines of Section 25, Township 18 South, Range 24 East, the S/2 of said Section 25 to be dedicated to the well.

CASE 6934: (Continued from June 25, 1980, Examiner Hearing)

Dismiss

Application of Coronado Exploration Corporation for three compulsory poolings, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the San Andres formation underlying three 40-acre proration units, being the NW/4 SE/4 of Section 6, the NE/4 SE/4 of Section 28, and the SW/4 NW/4 of Section 33, all in Township 11 South, Range 28 East, each to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said wells and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the wells, and a charge for risk involved in drilling said wells.

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CASE 6956: Application of Amoco Production Company for an NGPA determination, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a new onshore reservoir determination in the Morrow formation for its State "CH" Well No. 1 located in Unit F of Section 21, Township 16 South, Range 35 East.

Cont to Aug 6

CASE 6957: Application of Amoco Production Company for an NGPA determination, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a new onshore reservoir determination in the Morrow formation for its State HK Com Well No. 1 located in Unit L of Section 6, Township 24 South, Range 25 East.

Cont to Aug 6

CASE 6958: Application of Kenai Oil and Gas, Inc. for downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of undesignated Seven Rivers and Artesia Queen-Grayburg-San Andres production in the wellbore of its Gulf State Well No. 1 located in Unit K of Section 16, and its Cobb Federal Well No. 2 located in Unit H of Section 22, both in Township 18 South, Range 27 East, Artesia Pool. Applicant further seeks an administrative procedure whereby similar commingling could be approved for other wells to be drilled in the NE/4 and S/2 NW/4 of said Section 22.

CASE 6959: Application of Great Western Drilling Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying the S/2 of Section 19, Township 18 South, Range 27 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 6960: Application of Bass Enterprises Production Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests down to and including the Strawn formation underlying the S/2 SE/4 of Section 13, Township 16 South, Range 36 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

Continue to July 23

CASE 6950: (Continued from June 25, 1980, Examiner Hearing)

Application of Bass Enterprises Production Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a Morrow test well to be drilled 660 feet from the North line and 1980 feet from the East line of Section 4, Township 25 South, Range 31 East, the E/2 of said Section 4 to be dedicated to the well.

Continue to July 23

CASE 6961: Application of Conoco Inc. for a dual completion and unorthodox well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Meyer A-29 Well No. 11 to be drilled at an unorthodox location 990 feet from the North line and 660 feet from the East line of Section 29, Township 22 South, Range 36 East, to produce gas from the Langley-Devonian and -Ellenburger Pools thru parallel strings of tubing, the E/2 of said Section 29 to be dedicated to the well.

Cont to 7/23

CASE 6962: Application of BTA Oil Producers for special pool rules and pool extension, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of Special Pool Rules for the North Bell Lake-Devonian Gas Pool to provide for 640-acre spacing and specified well locations. Applicant also seeks the extension of said pool to include all of Sections 6, 7, and 18, Township 23 South, Range 34 East.

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Application of John E. Schalk for a non-standard gas proration unit and an unorthodox gas well location, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 160-acre non-standard Blanco Mesaverde gas proration unit comprising the NE/4 of Section 8, Township 25 North, Range 3 West, to be dedicated to his Gulf Well No. 2 to be drilled at an unorthodox location 1925 feet from the North line and 790 feet from the East line of said Section 8.

CASE 6965: Application of Supron Energy Corporation for a non-standard gas proration unit, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 160-acre non-standard Mesaverde and Dakota gas proration unit comprising the SE/4 of Section 8, Township 25 North, Range 3 West, to be dedicated to a well to be drilled at a standard location thereon.

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Application of Benson-Montin-Greer Drilling Corporation for amendment of Order No. R-2565-B, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Rule 2 of the Special Pool Rules for the West Puerto Chiquito-Mancos Oil Pool as promulgated by Order No. R-2565-B to provide that all 320-acre spacing and proration units in said pool would comprise either the W/2 or the E/2 of a governmental section, provided however, that one injection well would have dedicated thereto the N/2 of Section 1, Township 24 North, Range 1 West, and also that the short 400-acre sections on the South side of Township 27 North, Range 1 West, would each comprise a single spacing unit.

Dismiss

CASE 6943: (Continued from June 25, 1980, Examiner Hearing)

Application of Benson-Montin-Greer Drilling Corporation for a unit agreement, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the East Puerto Chiquito-Mancos Unit Area, comprising 9,769 acres, more or less, of Federal, Indian, and fee lands in Townships 26 and 27 North, Ranges 1 East and 1 West.

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CASE 6963: Application of Morris R. Antweil for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 660 feet from the North line and 1980 feet from the East line of Section 30, Township 19 South, Range 30 East, HC-Morrow Gas Pool, the E/2 of said Section 30 to be dedicated to the well.

CASE 6964: Application of Morris R. Antweil for an unorthodox gas well location and simultaneous dedication, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Rio Com. Well No. 2, to be drilled 660 feet from the North and West lines of Section 29, Township 18 South, Range 25 East, Penasco Draw-Morrow Gas Pool, to be simultaneously dedicated with its Rio Com. Well No. 1 in Unit G to the N/2 of said Section 29.

****

Docket No. 21-80

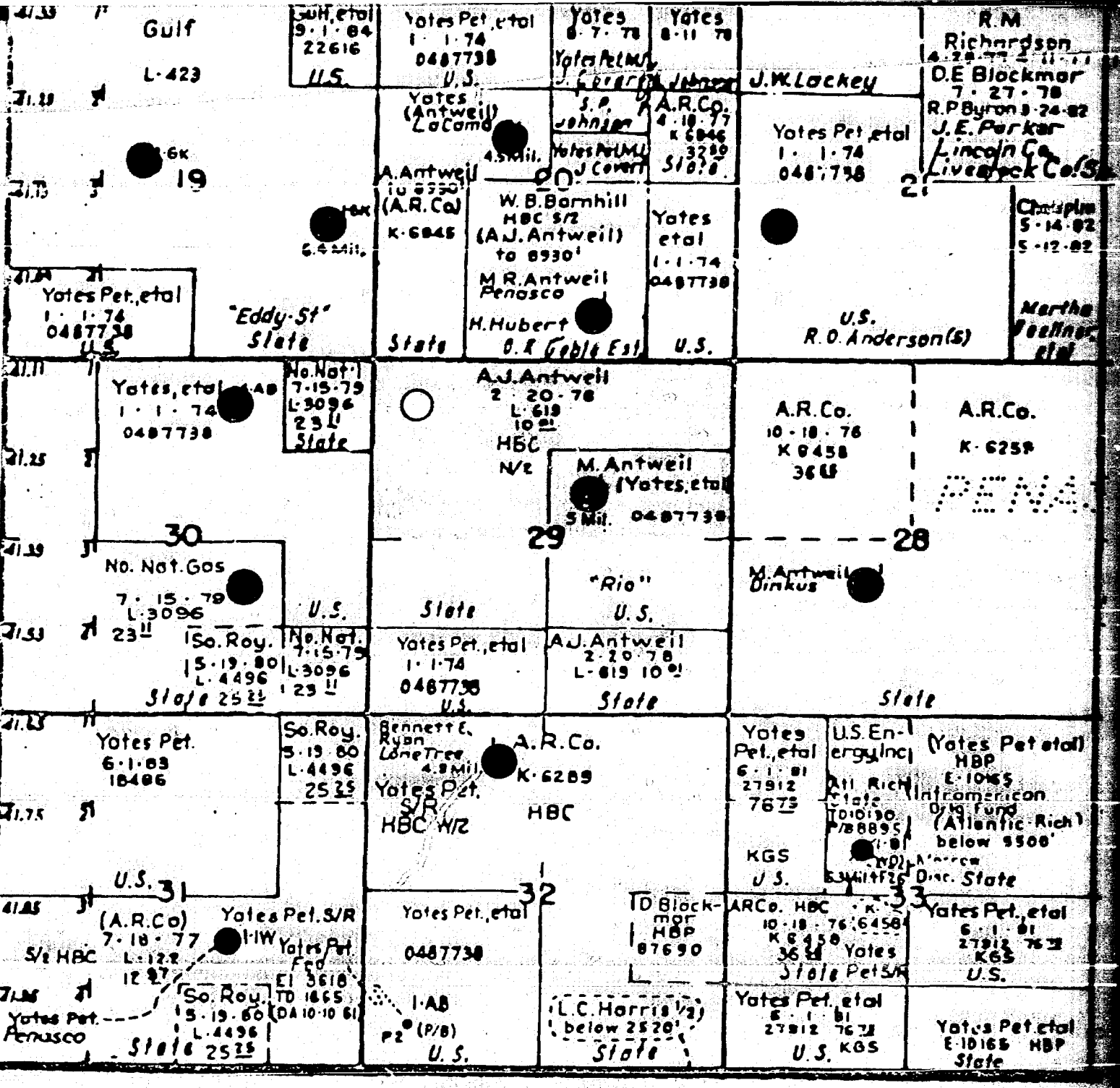
DOCKET: EXAMINER HEARING - WEDNESDAY - JULY 16, 1980

9 A.M. - OIL CONSERVATION DIVISION 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 August, 1980, from fifteen prorated pools in Lea, Eddy, and Chaves Counties, New Mexico.

(2) Consideration of the allowable production of gas for August, 1980, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.



MORRIS R. ANTWEIL
CASE NO. 6964

○ Proposed Location - 660 FNL & 660 FWL Sec. 29

● Morrow Gas Completion

● Dry or Non-Commercial Morrow Test

□ Spacing & Proration Unit

BEFORE EXAMINER PUTTER
OIL CONSERVATION DIVISION
Appl. EXHIBIT NO. 1
CASE NO. 6964

Exhibit 1

TABULATION OF OFFSET OPERATORS

Section 19	-	Gulf Energy & Minerals Company P. O. Box 670 Hobbs, New Mexico 88240
Section 30	-	Mesa Petroleum Co. 1000 Vaughn Building Midland, Texas 79701
Sections 20, 21, 29 & 30		Yates Petroleum Corp. 207 South 4th Artesia, New Mexico 88210

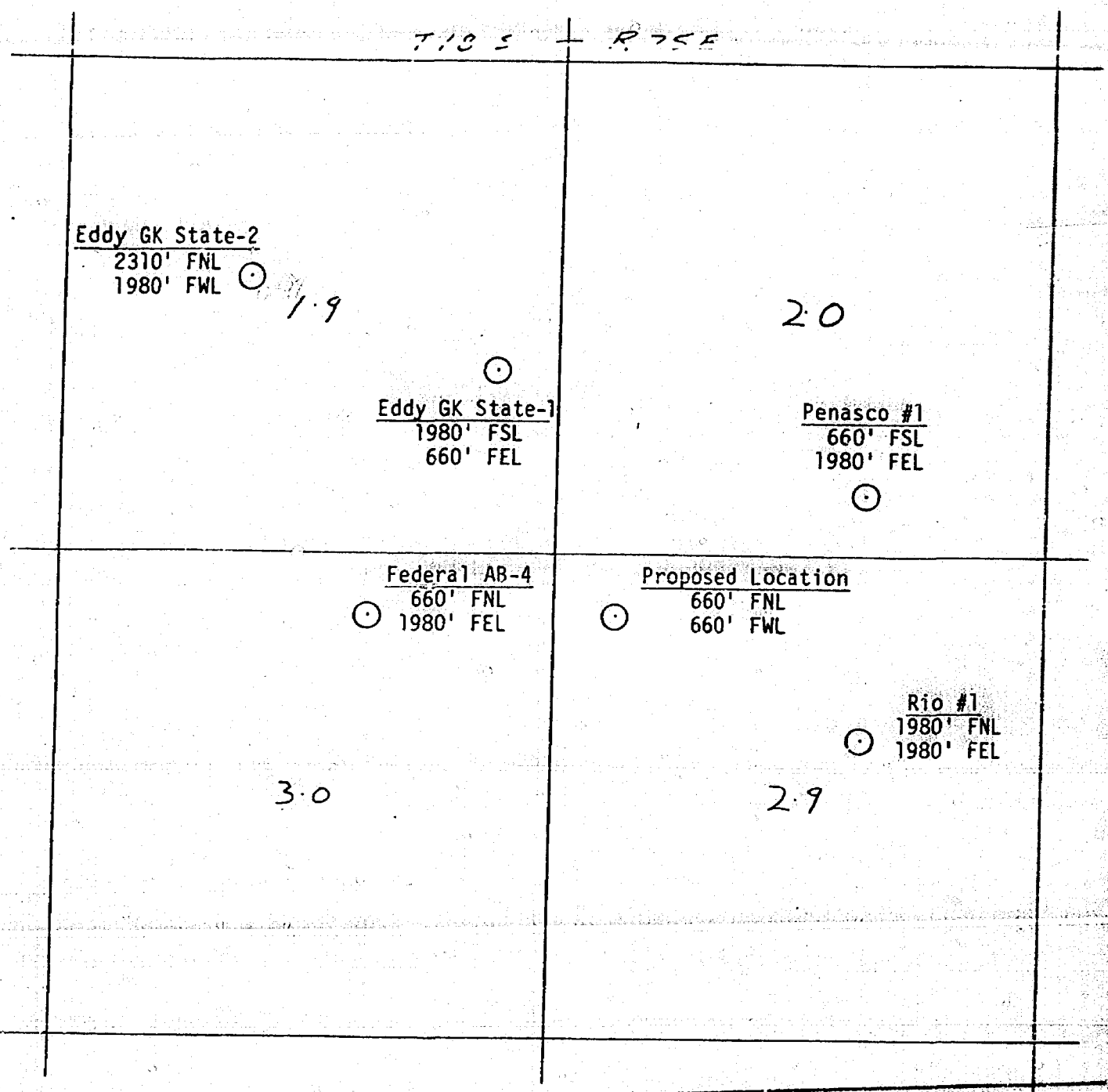
Note: The acreage in Sections 20, 28 & 29 shown to be leased to Atlantic Richfield, Huber, and Hanlad is operated by Morris R. Antweil.

MORRIS R. ANTWEIL
CASE NO. 6964
Exhibit No. 2

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
Appl. EXHIBIT NO. 2
CASE NO. 6964

MORRIS R. ANTWEIL

CASE NO. 6964

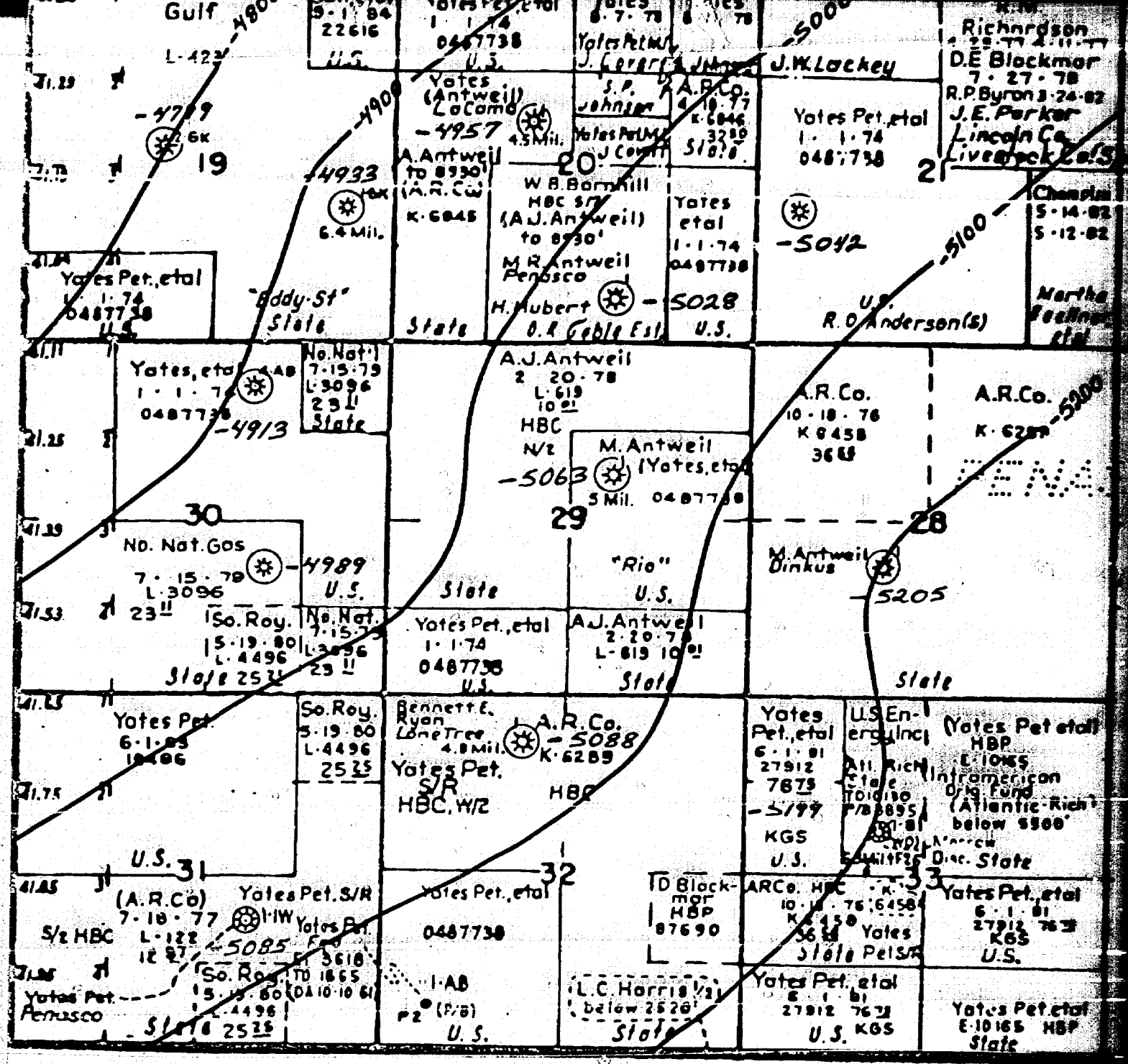


Distance from Proposed Location to:

Morris R. Antweil No. 1 Rio	-	2952'
Morris R. Antweil No. 1 Penasco	-	2952'
Yates Petroleum No. 4 Federal AB	-	2640'
Gulf Oil No. 1 Eddy GK State	-	2952'

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
Appl EXHIBIT NO. 3
CASE NO. 6964

Exhibit No. 3



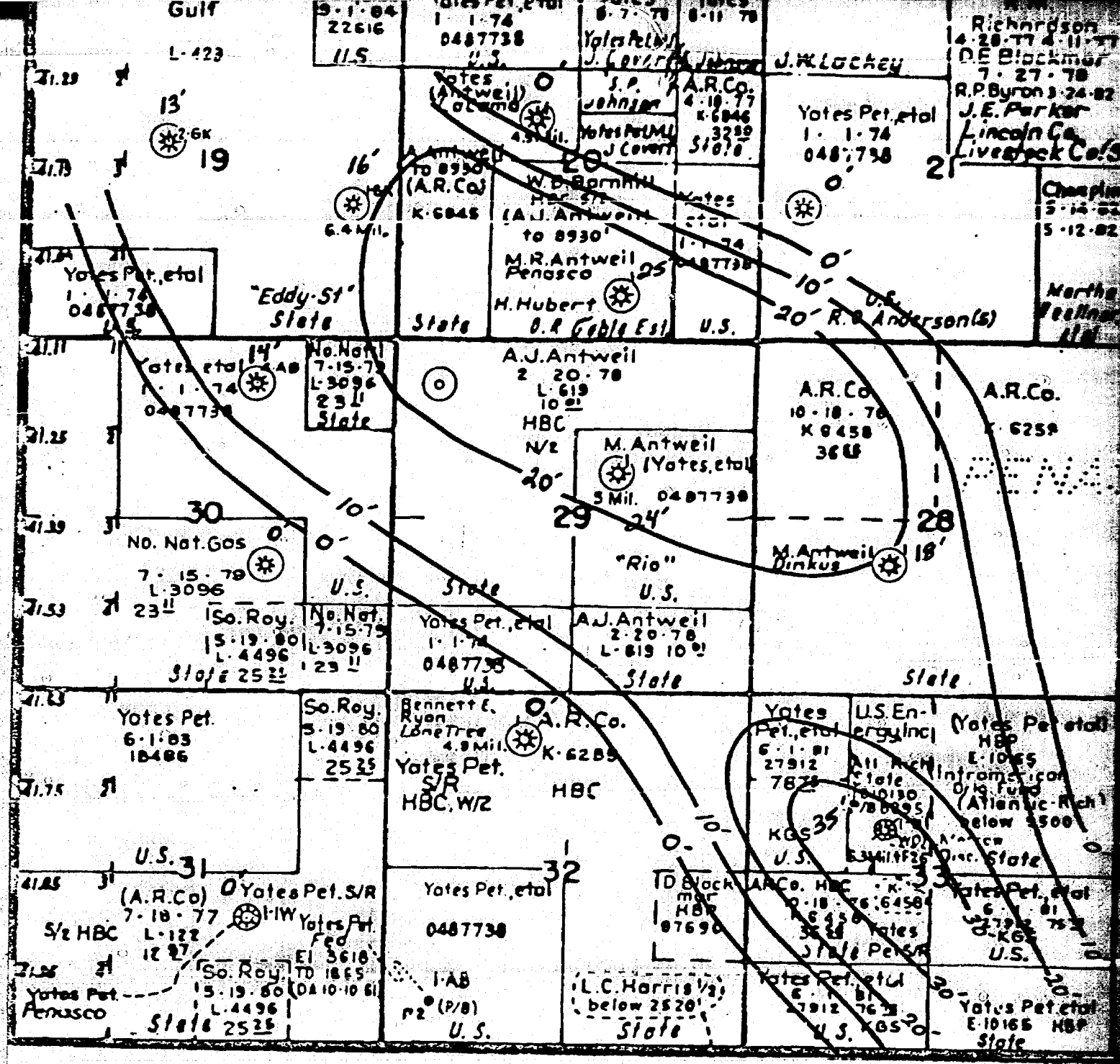
T18S-R25E

MORRIS R. ANTWEIL
CASE NO. 6964

STRUCTURE MAP
100-foot Contours - Morrow Marker

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
Appl. EXHIBIT NO. 4
CASE NO. 6964

Exhibit No. 4



T18S-R25E

MORRIS R. ANTWEIL
CASE NO. 6964

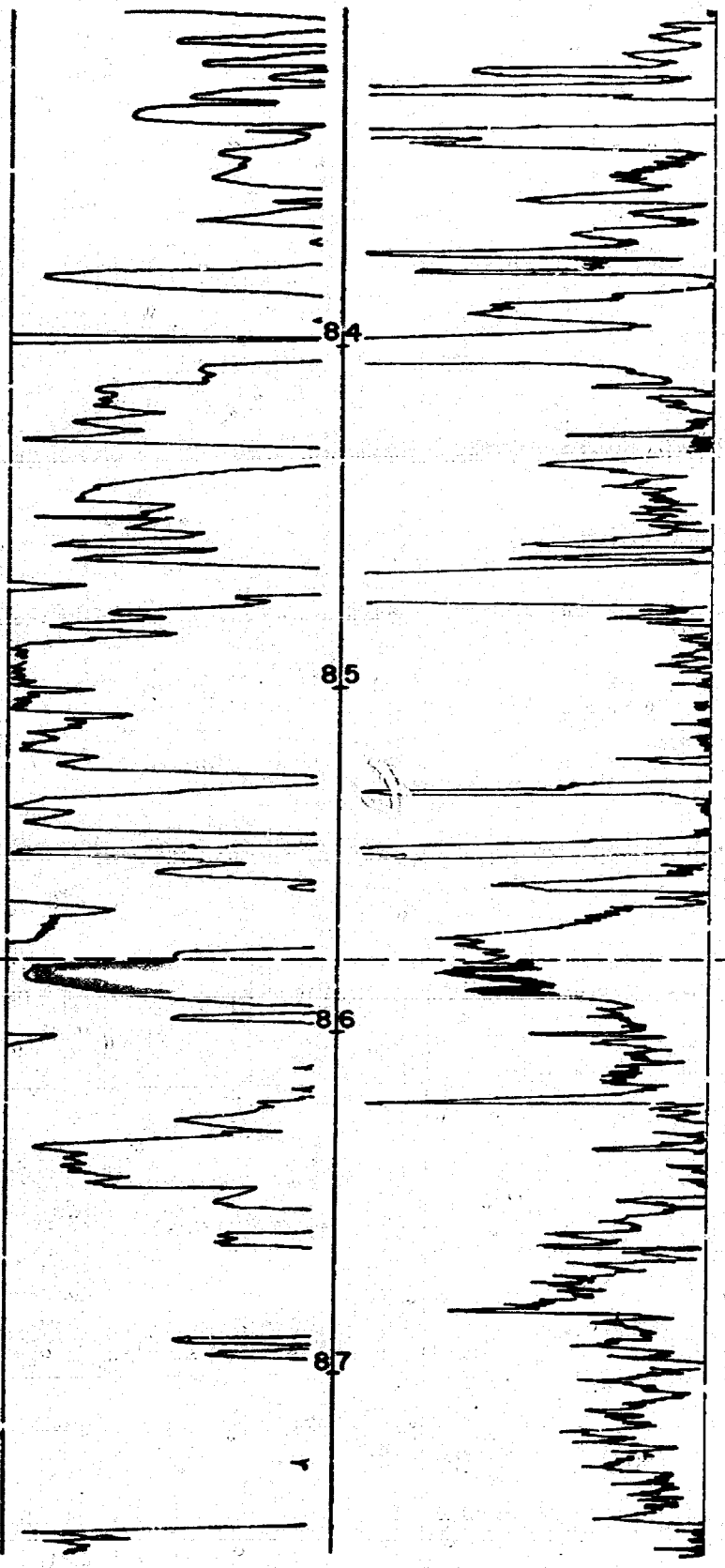
NET PAY ISOPAC MAP
MORROW PAY

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
Appl. EXHIBIT NO. 5
CASE NO. 6964

Exhibit No. 5

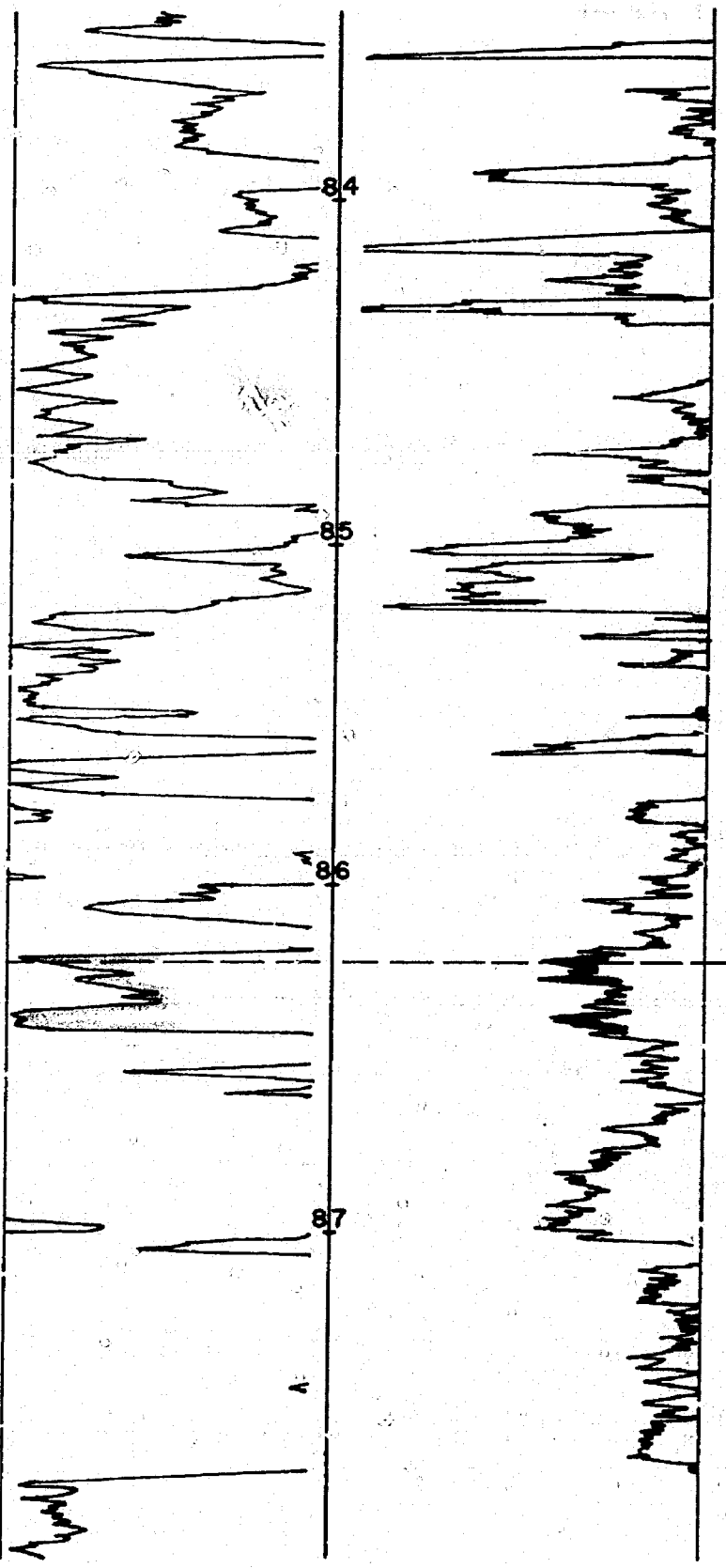
1

YATES PETROLEUM CORP.
FEDERAL "AB" #4
B-30-18-25
ELEV. 3630 KB



TD 8800'

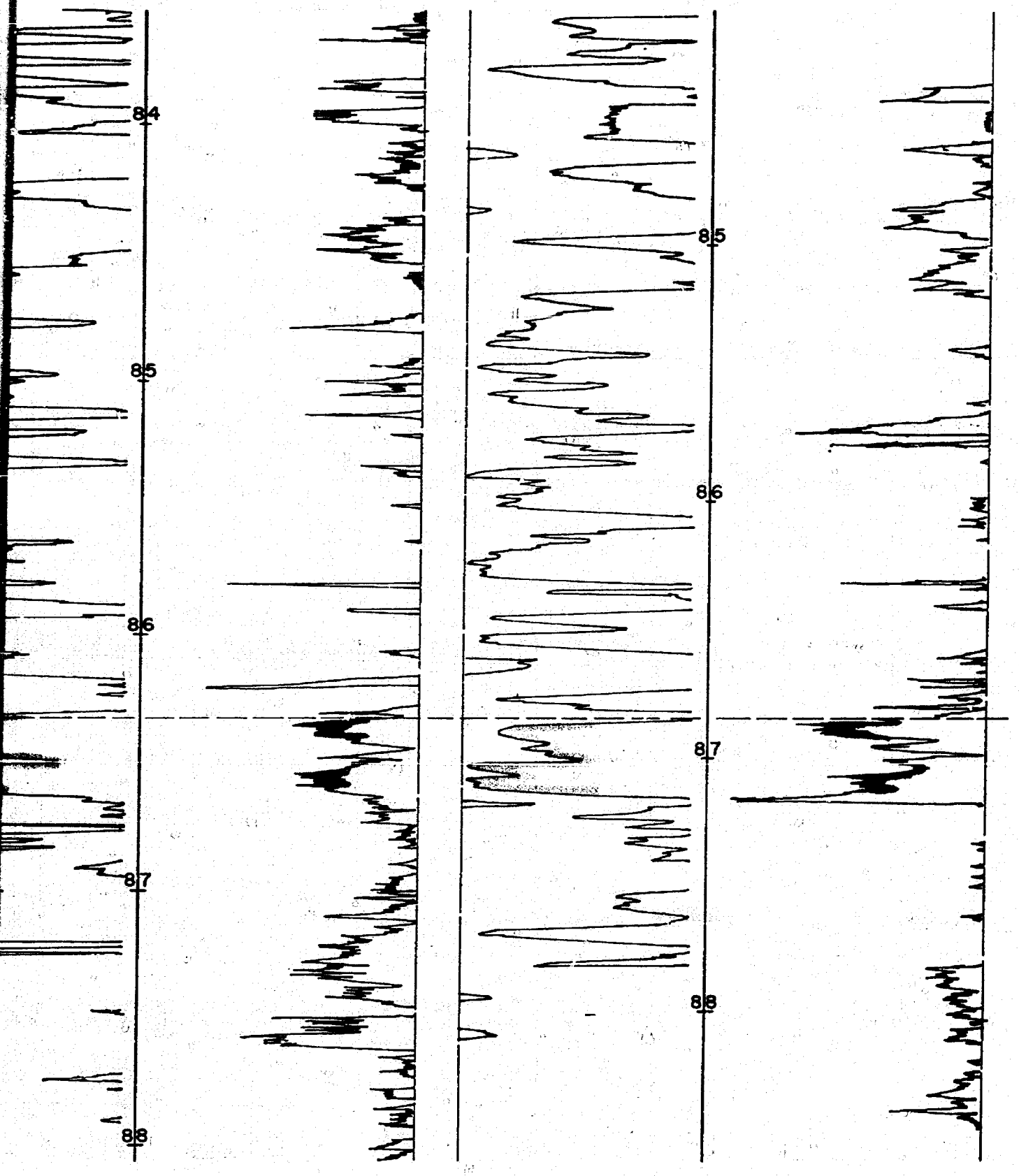
GULF ENERGY & MINERALS CO.
EDDY "GK" STATE COM. #1
I-19-18-25
ELEV. 3637 KB



TD 8825'

MORRIS R. ANTWEIL
PENASCO #1
0-20-18-25
ELEV. 3588 KB

MORRIS R. ANTWEIL
RIO #1
G-29-18-25
ELEV. 3596 KB



TD 8830'

TD 8868'

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
Appl. EXHIBIT NO. 6
CASE NO. 6964

MORRIS R. ANTWEIL

CASE NO. 6964

CORRELATION SECTION
MORROW PAY SAND

Exhibit No. 6

PRODUCTION PERFORMANCE
PENASCO DRAW - MORROW

	Antweil Penasco No. 1	Antweil Rio No. 1	Gulf State GK-1	Gulf State GK-2	Yates Federal AB-4
Sep '77	69 733	27 226			
Oct	183 897	47 260			
Nov	159 355	33 089			
Dec	151 703	29 460			
Jan '78	150 037	25 653	29 835		
Feb	126 387	19 708	62 867		
Mar	141 973	21 467	47 087		63 955
Apr	134 493	18 483	24 102	71 766	239 675
May	130 446	14 511	22 343	89 340	215 387
Jun	129 501	13 117	33 214	112 284	180 669
Jul	131 463	14 614	25 195	86 470	151 983
Aug	137 173	12 076	24 261	85 085	135 370
Sep	124 696	11 203	23 958	64 489	106 911
Oct	132 613	20 643	25 840	67 069	81 079
Nov	131 019	18 623	28 508	45 522	68 970
Dec	133 816	16 047	37 990	23 973	49 819
Jan '79	127 949	11 163	32 777	4 020	23 331
Feb	117 072	12 382	24 490	1 228	1 197
Mar	128 290	12 157	20 584	2 168	1 861
Apr	120 940	8 620	22 828	2 337	9 275
May	125 039	5 686	19 618	2 935	477
Jun	131 239	9 020	16 749	1 796	906
Jul	131 918	8 493	17 635	7 539	1 590
Aug	128 789	8 418	17 799	21 177	698
Sep	121 530	7 890	13 678	8 558	602
Oct	122 010	8 312	4 534	2 958	453
Nov	114 192	5 417	2 269	-	1 209
Dec	115 315	7 443	21 251	4 567	876
Jan '80	101 602	9 237	13 725	4 032	15 283
Feb	101 331	7 585	8 220	3 116	28 829
Mar	107 567	7 013	9 295	6 772	27 397
Apr	101 688	5 919	3 299	6 245	24 766
Cum. 1 May 80	3 905 421	444 846	633 951	724 946	1 432 568

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
Appl. EXHIBIT NO. 7
CASE NO. 6964

MORRIS R. ANTWEIL
CASE NO. 6964

Exhibit No. 7

ESTIMATED RADIUS OF DRAINAGE

GULF EDDY GK STATE 1

I-19-18S-25E

Conditions:

Ø	=	porosity = 11%
t	=	thickness = 16'
Sw	=	water saturation = 25%
P	=	initial BHP = 3190 psi
Bg	=	gas volume factor = 225 SCF/ft^3
R	=	recovery factor = 80%

Estimated Recovery per Acre:

$$Q = 43560 \times t \times \emptyset \times (1-Sw) \times Bg \times R$$

$$Q = 43560 \times 16 \times 0.11 \times 0.75 \times 225 \times 0.80$$

$$Q = 10350 \text{ MCF/acre}$$

Consider an Ultimate Recovery of 650,000 MCF.

Apparent Drainage Area:

$$A = 650,000/10350 = 62.8 \text{ acres}$$

Apparent Drainage Radius:

$$r = \sqrt{A/\pi} = \sqrt{\frac{62.8 \times 43560}{3.1416}} = \sqrt{870756}$$

$$r = 933 \text{ ft.}$$

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
Appl. EXHIBIT NO. 8
CASE NO. 6966

ESTIMATED RADIUS OF DRAINAGE

ANTWELL NO. 1 RIO

G-29-18S-25E

Conditions:

ϕ	=	porosity = 13%
t	=	thickness = 24'
Sw	=	water saturation = 25%
P	=	initial BHP = 2975 psi
Bg	=	gas volume factor = 220 SCF/ft^3
R	=	recovery factor = 80%

Estimated Recovery per Acre:

$$Q = 43560 \times t \times \phi \times (1-Sw) \times Bg \times R$$

$$Q = 43560 \times 24 \times 0.13 \times 0.75 \times 220 \times 0.80$$

$$Q = 17940 \text{ MCF/acre}$$

Consider an Ultimate Recovery of 450,000 MCF.

Apparent Drainage Area:

$$A = 450{,}000/17940 = 25.1 \text{ acres}$$

Apparent Drainage Radius:

$$r = \sqrt{A/\pi} = \sqrt{\frac{25.1 \times 43560}{3.1416}} = \sqrt{348025}$$

$$r = 590 \text{ ft.}$$

MORRIS R. ANTWEIL
CASE NO. 6964

○ Proposed Location - 660 FNL & 660 FWL Sec. 29

● Morrow Gas Completion

● Dry or Non-Commercial Morrow Test

□ Gas Spacing & Proration Unit

BEFORE EXAMINER PORTER
OIL CONSERVATION DIVISION
APPL EXHIBIT NO. 1
CASE NO. 6964

Exhibit 1

JSN

TABULATION OF OFFSET OPERATORS

Section 19	-	Gulf Energy & Minerals Company P. O. Box 670 Hobbs, New Mexico 88240
Section 30	-	Mesa Petroleum Co. 1000 Vaughn Building Midland, Texas 79701
Sections 20, 21, 29 & 30		Yates Petroleum Corp. 207 South 4th Artesia, New Mexico 88210

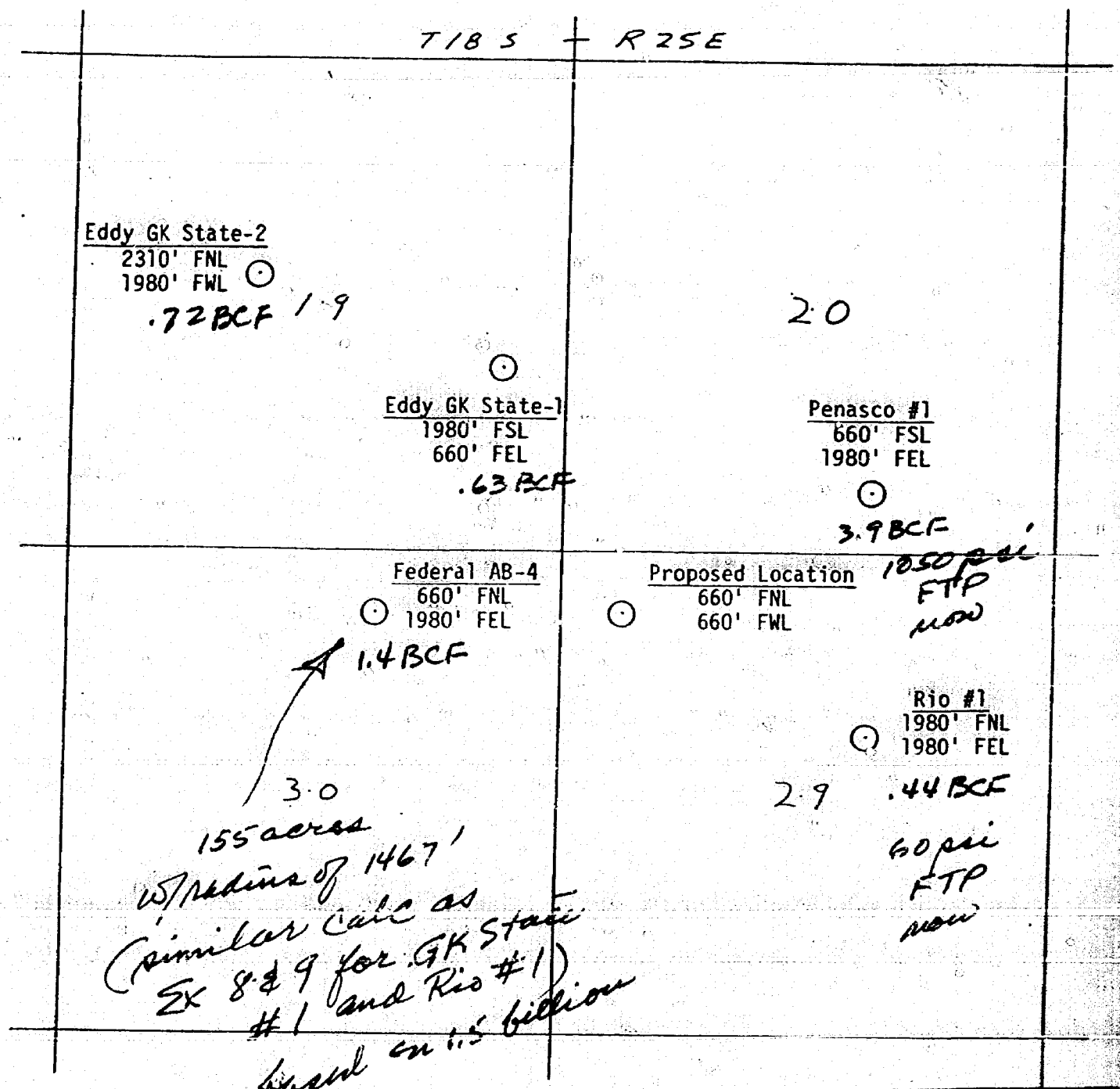
Note: The acreage in Sections 20, 28 & 29 shown to be leased to Atlantic Richfield, Huber, and Hanlad is operated by Morris R. Antweil.

MORRIS R. ANTWEIL
CASE NO. 6964
Exhibit No. 2

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
Appl. EXHIBIT NO. 2
CASE NO. 6964

MORRIS R. ANTWEIL

CASE NO. 6964

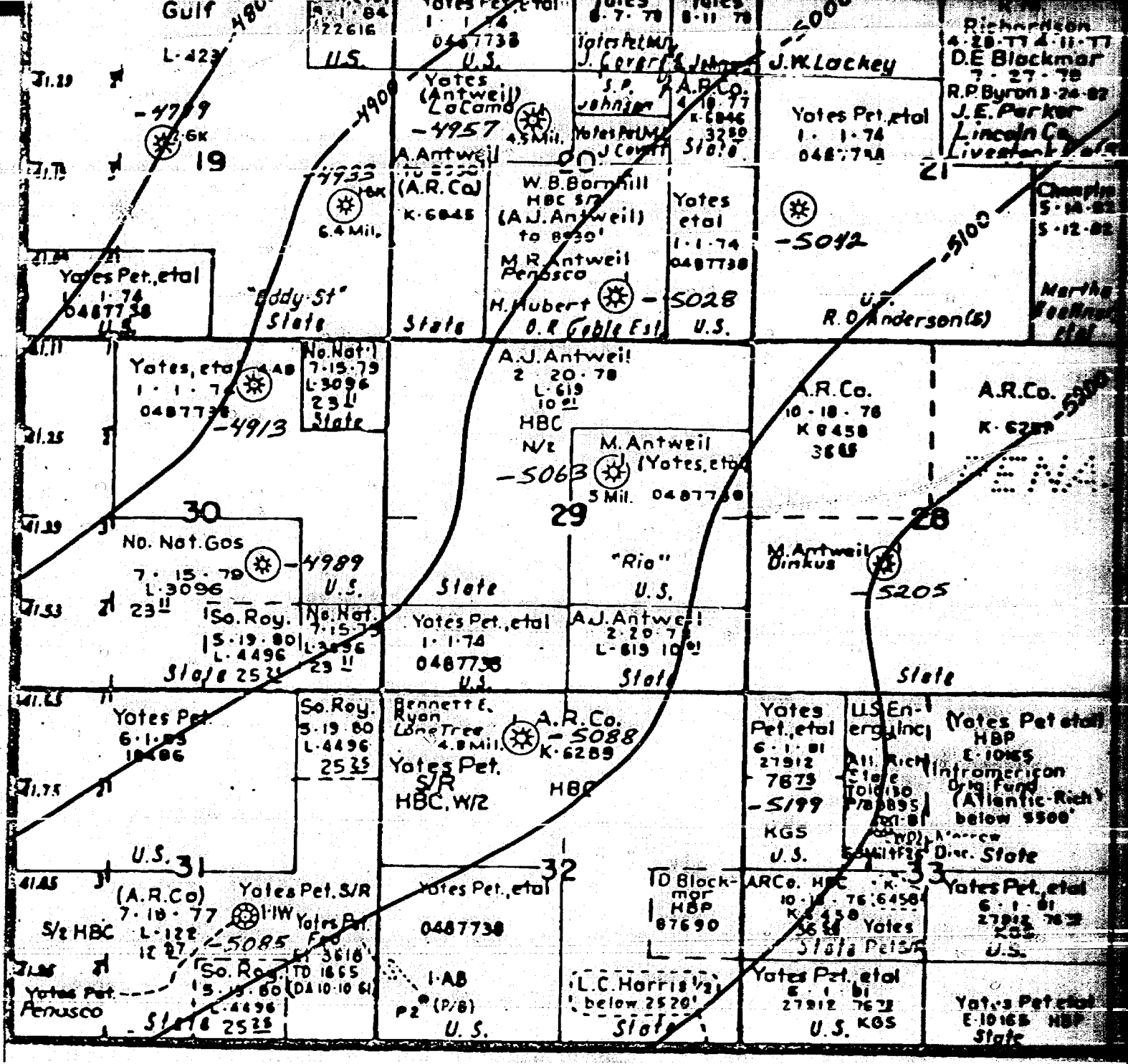


Distance from Proposed Location to:

Morris R. Antweil No. 1 Rio	-	2952'
Morris R. Antweil No. 1 Penasco	-	2952'
Yates Petroleum No. 4 Federal AB	-	2640'
Gulf Oil No. 1 Eddy GK State	-	2952'

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
Appl. EXHIBIT NO. 3
CASE NO. 6964

Exhibit No. 3



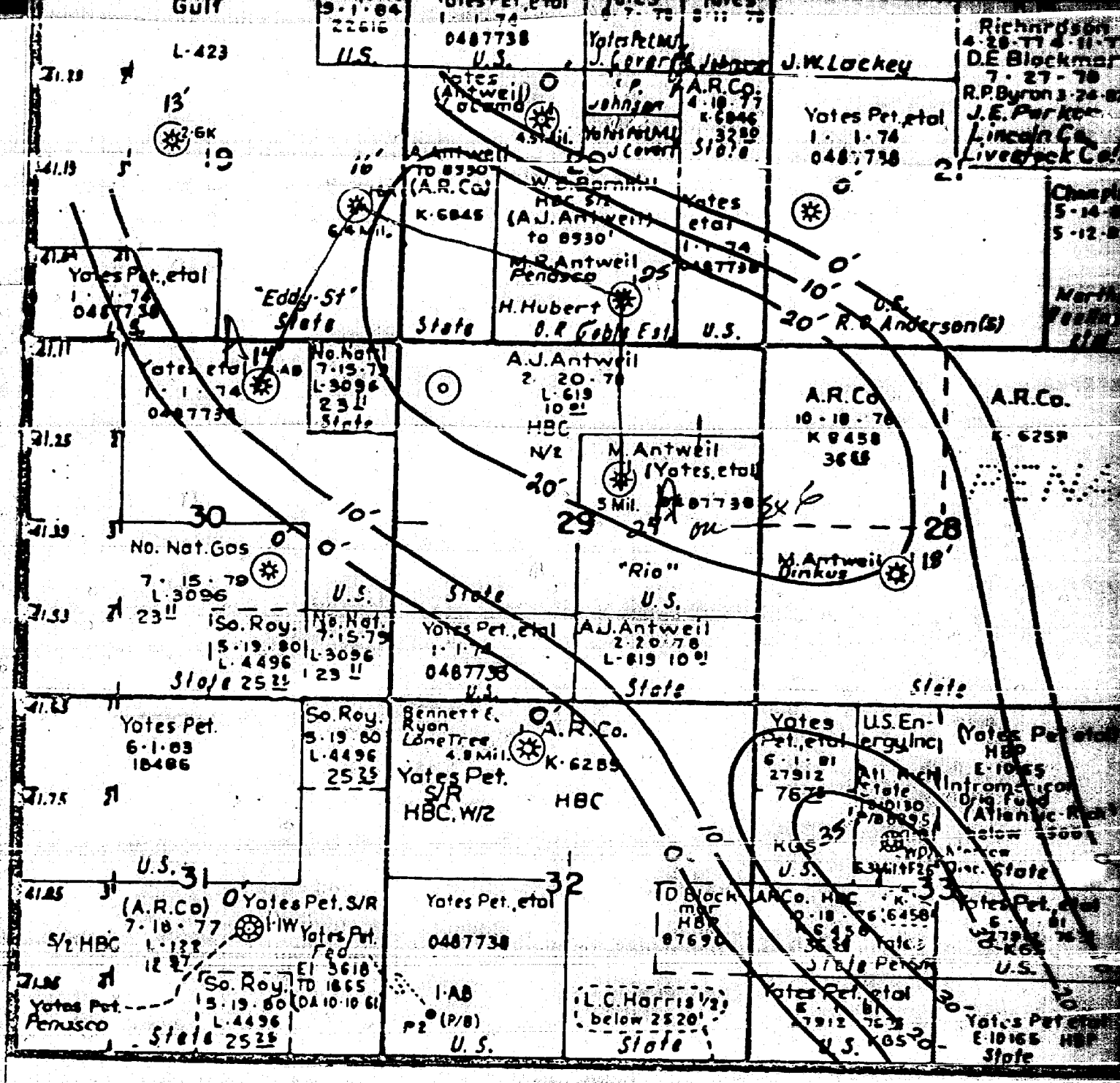
T18S-R25E

MORRIS R. ANTWEIL
CASE NO. 6964

STRUCTURE MAP
100-foot Contours - Morrow Marker

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
Appl. EXHIBIT NO. 4
CASE NO. 6964

Exhibit No. 4



T18S-R25E

MORRIS R. ANTWEIL
CASE NO. 6964

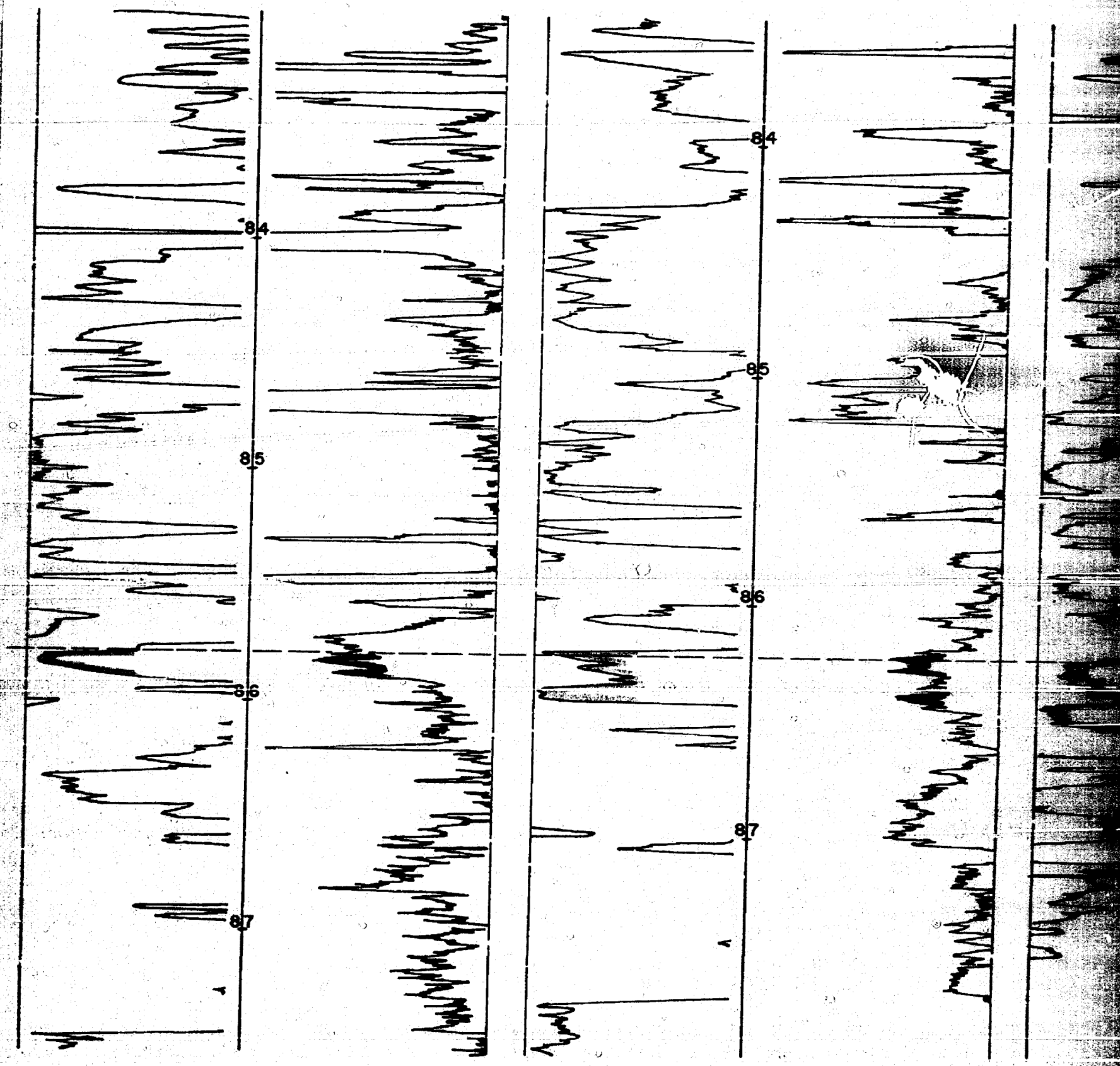
NET PAY ISOPAC MAP
~~MORROW PAY~~

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
Appl. EXHIBIT NO. 5
CASE NO. 6964

Exhibit No. 5

YATES PETROLEUM CORP.
FEDERAL "AB" #4
B-30-18-25
ELEV. 3630 KB

GULF ENERGY & MINERALS CO.
EDDY "GK" STATE COM. #1
I-19-18-25
ELEV. 3637 KB



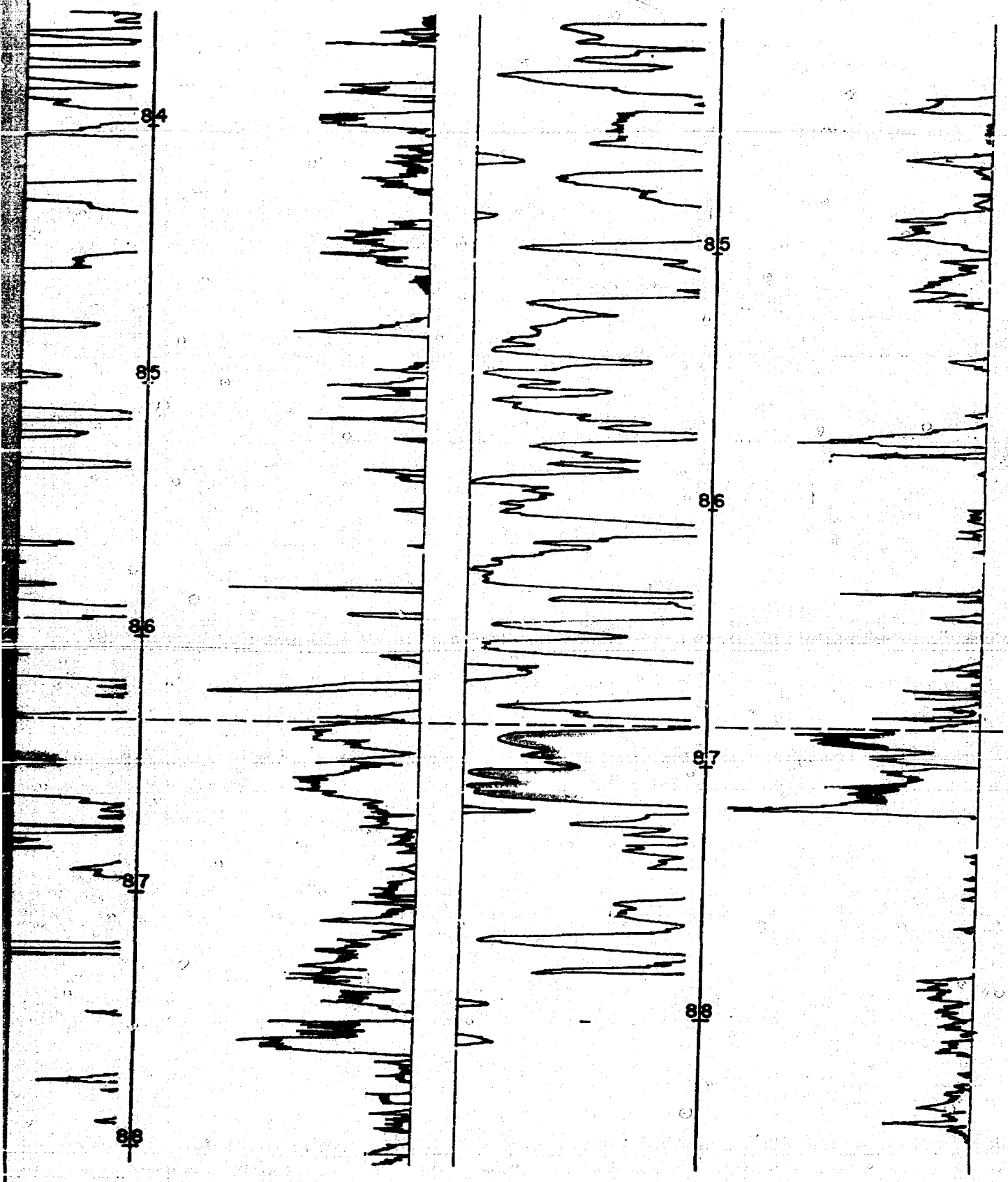
TD 8800'

TD 8825'

MORRIS R. ANTWEIL
PENASCO #1
O-20-18-25
ELEV. 3588 KB

MORRIS R. ANTWEIL
RIO #1
G-29-18-25
ELEV. 3596 KB

A' on Ex 5



TD 8830'

TD 8868'

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
Appl. EXHIBIT NO. 6
CASE NO. 6964

MORRIS R. ANTWEIL

CASE NO. 6964

CORRELATION SECTION
MORROW PAY SAND

Exhibit No. 6

PRODUCTION PERFORMANCE
PENASCO DRAW - MORROW

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BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
Appl. EXHIBIT NO. 7
CASE NO. 6964

MORRIS R. ANTWEIL
CASE NO. 6964

Exhibit No. 7

ESTIMATED RADIUS OF DRAINAGE

GULF EDDY GK STATE 1

I-19-18S-25E

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Apparent Drainage Radius:

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$$r = 933 \text{ ft.}$$

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
APPI EXHIBIT NO. 8
CASE NO. 6964

ESTIMATED RADIUS OF DRAINAGE

ANTWEIL NO. 1 RIO

G-29-18S-25E

Conditions:

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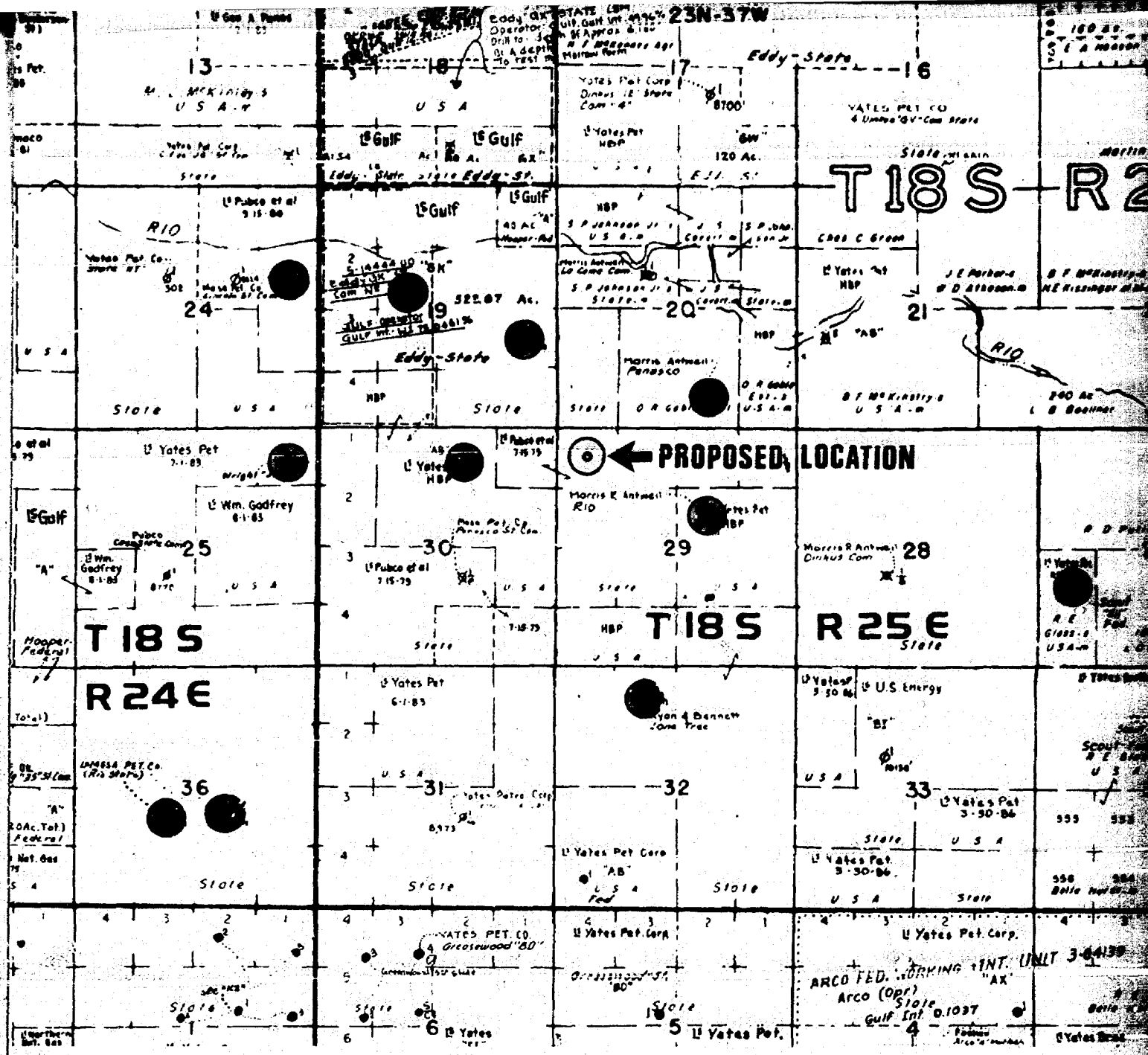


PENASCO DRAW - - MORROW POOL
EDDY COUNTY, NEW MEXICO
SCALE 1"-3000'

○ Proposed Location

● Producing Wells

Gulf Oil Corporation
Southwest District
Midland, Texas

BEFORE EXAMINER NUTTE
OIL CONSERVATION DIVISION
GULF EXHIBIT NO. 1
CASE NO. 6964

Exhibit No.
Case No.
Date

EXHIBIT 2
CASE NO. 6964
DATE 7-9-80
GULF OIL CORPORATION

PRODUCTION DATA
PENASCO DRAW MORROW POOL
T-18-S, R-25-E
EDDY COUNTY, NEW MEXICO

	YATES PETROLEUM			ANTWEIL, MORRIS R.						BENNETT & RYAN			GULF OIL CORPORATION					
	Federal AB Com.			Penasco			Rio Com.			Lonetree			GK State Com.			GK State Com.		
	4 B 30 18S 25E			1 O 20 18S 25E			1 G 29 18S 25E			1 C 32 18S 25E			1 I 19 18S 25E			2 F 19 18S 25E		
	Gas		Cond.	Gas		Cond.	Gas		Cond.	Gas		Cond.	Gas		Cond.	Gas		Cond.
	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.
1977																		
September	---	---	---	69,733	2,324	224	27,226	907	131	---	---	---	---	---	---	---	---	---
October	---	---	---	183,897	5,932	557	47,260	1,525	93	---	---	---	---	---	---	---	---	---
November	---	---	---	159,355	5,312	464	33,089	1,103	52	13,419	447	---	---	---	---	---	---	---
December	---	---	---	151,703	4,894	428	29,460	950	45	11,055	357	---	---	---	---	---	---	---
1978																		
January	---	---	---	150,037	4,840	428	25,653	828	37	6,225	201	---	29,835	962	105	---	---	---
February	---	---	---	126,387	4,514	346	19,708	704	31	4,397	157	---	62,867	2,245	170	---	---	---
March	---	---	---	141,973	4,580	350	21,467	692	31	2,882	93	---	47,087	1,519	99	---	---	---
April	239,675	7,989	1,182	134,493	4,483	336	18,483	616	6	3,732	124	---	24,102	803	61	67,284	2,243	248
May	215,384	6,948	883	130,446	4,208	285	14,511	468	2	3,885	125	---	22,343	721	68	89,340	2,882	212
June	130,669	6,022	649	129,501	4,317	287	13,117	437	---	3,054	102	---	33,214	1,107	97	112,284	3,743	311
July	151,983	4,903	476	131,463	4,241	285	14,614	471	---	---	---	---	25,195	813	48	86,470	2,789	205
August	135,370	4,367	364	137,173	4,425	325	12,076	390	---	5,430	175	---	24,261	783	52	85,085	2,745	152
September	106,911	3,564	235	124,696	4,166	265	11,203	373	---	9,432	314	---	23,958	799	65	64,489	2,150	101
October	81,079	2,615	142	132,613	4,278	315	20,643	666	---	6,428	207	---	25,840	834	31	67,069	2,164	106
November	68,970	2,299	130	131,019	4,367	279	18,623	621	---	6,473	216	---	28,508	950	75	45,522	1,517	70
December	49,819	1,607	24	133,816	4,317	302	16,047	518	---	6,293	203	---	37,990	1,225	62	23,973	773	44

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
GULF EXHIBIT NO. 2
CASE NO. 6964

EXHIBIT 6
CASE NO. 6964
DATE 7-9-80
GULF OIL CORPORATION
Page 2-A

PRODUCTION DATA
PENASCO DRAW MORROW POOL
T-18-S, R-25-E
EDDY COUNTY, NEW MEXICO

	YATES PETROLEUM Federal AB Com. 4 B 30 18S 25E			ANTWEIL, MORRIS R. Penasco 1 O 20 18S 25E			ANTWEIL, MORRIS R. Rio Com. 1 G 29 18S 25E			BENNETT & RYAN Lonetree 1 C 32 18S 25E			GULF OIL CORPORATION GK State Com. 1 I 19 18S 25E			GULF OIL CORPORATION GK State Com. 2 F 19 18S 25E		
	Gas		Cond.	Gas		Cond.	Gas		Cond.	Gas		Cond.	Gas		Cond.	Gas		Cond.
	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.
1979																		
January	23,331	753	2	127,949	4,127	266	11,163	360	---	4,031	130	---	32,777	1,057	50	4,020	130	7
February	1,197	43	---	117,072	4,181	229	12,382	442	---	2,264	81	---	24,490	875	39	1,228	44	---
March	1,861	60	5	---	---	---	---	---	---	2,475	80	---	20,584	664	28	2,168	70	---
April	9,225	308	20	120,940	4,031	208	8,620	287	---	2,341	78	---	22,828	761	36	2,337	78	---
May	477	15	---	125,049	4,034	199	5,686	183	---	2,171	70	---	19,618	633	40	2,935	91	---
June	906	30	---	131,239	4,375	241	9,020	301	---	2,589	86	---	16,749	558	28	1,796	60	---
July	1,590	51	---	131,918	4,255	266	8,493	274	---	2,291	74	---	17,635	569	11	7,539	243	---
August	698	23	---	128,789	4,154	194	8,418	272	28	2,306	74	---	17,799	574	34	22,177	702	---
September	602	20	---	121,530	4,051	181	7,890	263	2	2,181	73	---	13,678	456	14	8,558	285	---
October	453	15	---	122,010	3,936	197	8,312	268	---	2,490	80	---	4,534	146	---	2,958	95	---
November	1,209	40	---	114,192	3,806	182	5,417	181	---	2,193	73	---	2,269	76	---	---	---	---
December	876	28	---	115,315	3,720	167	7,443	240	---	2,153	69	---	21,251	686	25	4,567	147	8
1980																		
January	15,283	493	58	101,602	3,277	183	9,237	298	---	1,861	60	---	13,725	443	28	4,032	130	---
February	28,829	994	39	101,331	3,494	155	7,585	262	---	2,089	72	---	8,220	283	33	3,116	107	---
March	27,397	884	49	107,567	3,470	190	7,013	226	---	1,926	62	---	9,295	300	17	6,272	202	---
April*	24,766	894	---	101,688	3,390	---	5,919	246	---	1,640	58	---	3,284	127	---	5,545	203	---
May*	22,609	970	---	95,329	3,199	---	7,606	254	---	1,555	54	---	3,023	117	---	5,582	187	---
Cum. (4-1-80)	1,343,794		4,258	3,834,808		8,334	459,859		458	117,796			630,652		1,316	714,819		1,464
(6-1-80)	1,391,169			4,031,825			473,384			120,991			636,959			725,946		

* Preliminary Production Figures

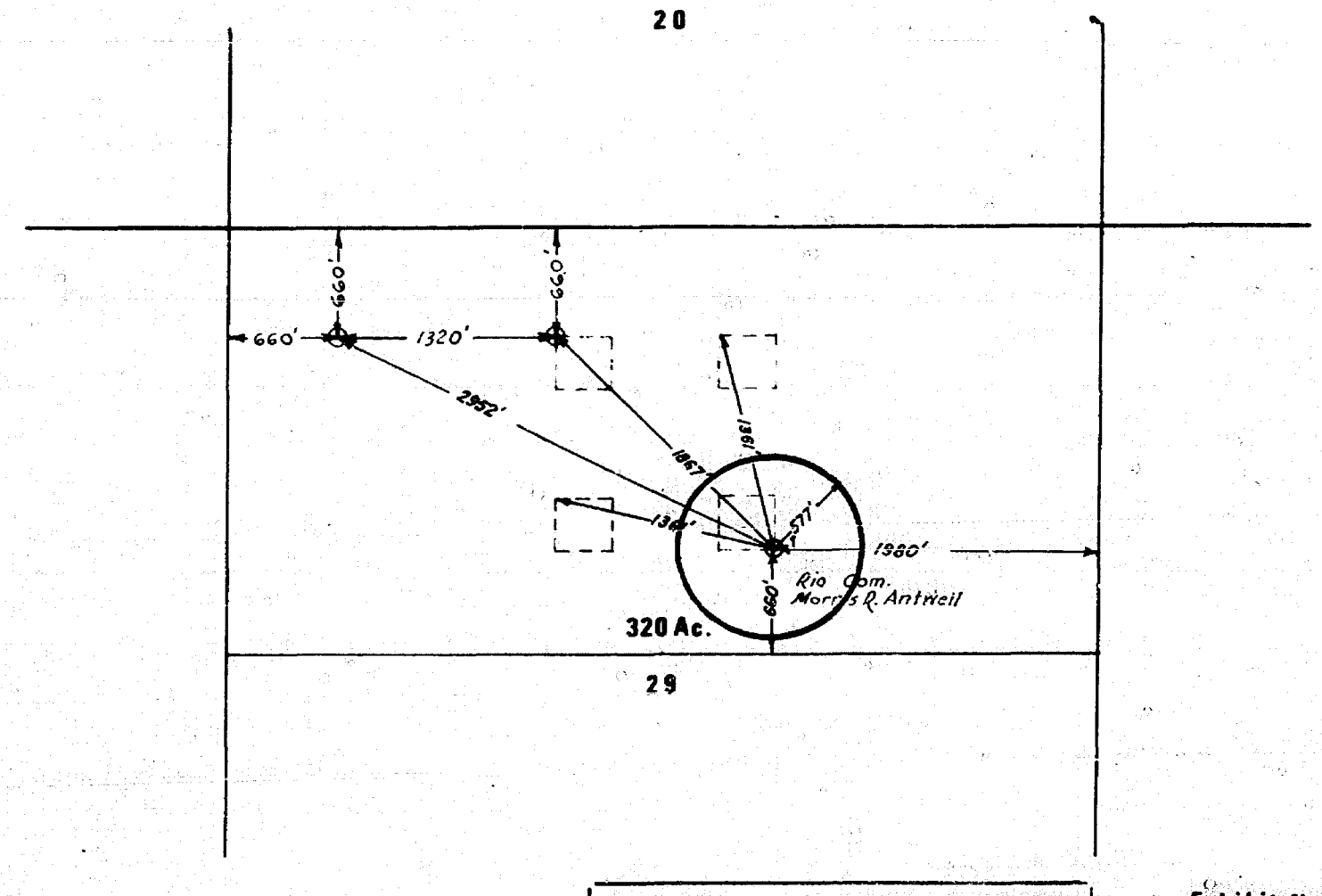
EXHIBIT 2
CASE NO. 6964
DATE 7-9-80
GULF OIL CORPORATION

Page 2-B

PRODUCTION DATA
PENASCO DRAW MORROW POOL
T-18-S, R-25-E
EDDY COUNTY, NEW MEXICO

	MESA PETROLEUM COMPANY									YATES PETROLEUM CORP.					
	Lincoln State Com. 1 H 24 18S 24E			Rio State 1 K 36 18S 24E			Rio State 2 J 36 18S 24E			Scout EH Fed. 4 L 27 18S 25E			Scout JM Com. 1 A 25 18S 24E		
	Gas		Cond.	Gas		Cond.	Gas		Cond.	Gas		Cond.	Gas		Cond.
1979	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.
January	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
February	7,228	258	67	---	---	---	---	---	---	---	---	---	---	---	---
March	30,498	984	108	---	---	---	---	---	---	---	---	---	---	---	---
April	28,816	961	10	---	---	---	---	---	---	---	---	---	---	---	---
May	9,869	318	---	---	---	---	---	---	---	---	---	---	---	---	---
June	26,640	888	3	---	---	---	---	---	---	---	---	---	---	---	---
July	16,175	522	28	---	---	---	---	---	---	---	---	---	---	---	---
August	19,212	620	42	---	---	---	---	---	---	---	---	---	---	---	---
September	21,425	714	45	5,449	182	8	35,542	1,185	15	---	---	---	---	---	---
October	15,220	491	12	30,389	980	24	268,460	8,660	88	---	---	---	---	---	---
November	11,804	393	15	27,928	931	18	97,043	3,235	---	---	---	---	---	---	---
December	16,062	518	10	26,159	844	6	101,269	3,267	10	---	---	---	---	---	---
1980															
January	10,770	347	---	26,450	853	---	74,937	2,417	13	---	---	---	2,070	67	---
February	9,087	313	---	23,312	804	4	76,433	2,636	18	---	---	---	71	2	---
March	19,335	624	17	22,943	740	7	79,291	2,558	12	257	8	---	---	---	---
April *	11,832	398	---	26,475	883	---	115,654	3,855	---						
May *				27,651	950	---	138,143	4,651	---						
Cum (4-1-80)	242,141		357	162,630		67	732,975		156	257			2,141		
(6-1-80)				216,756			986,772								

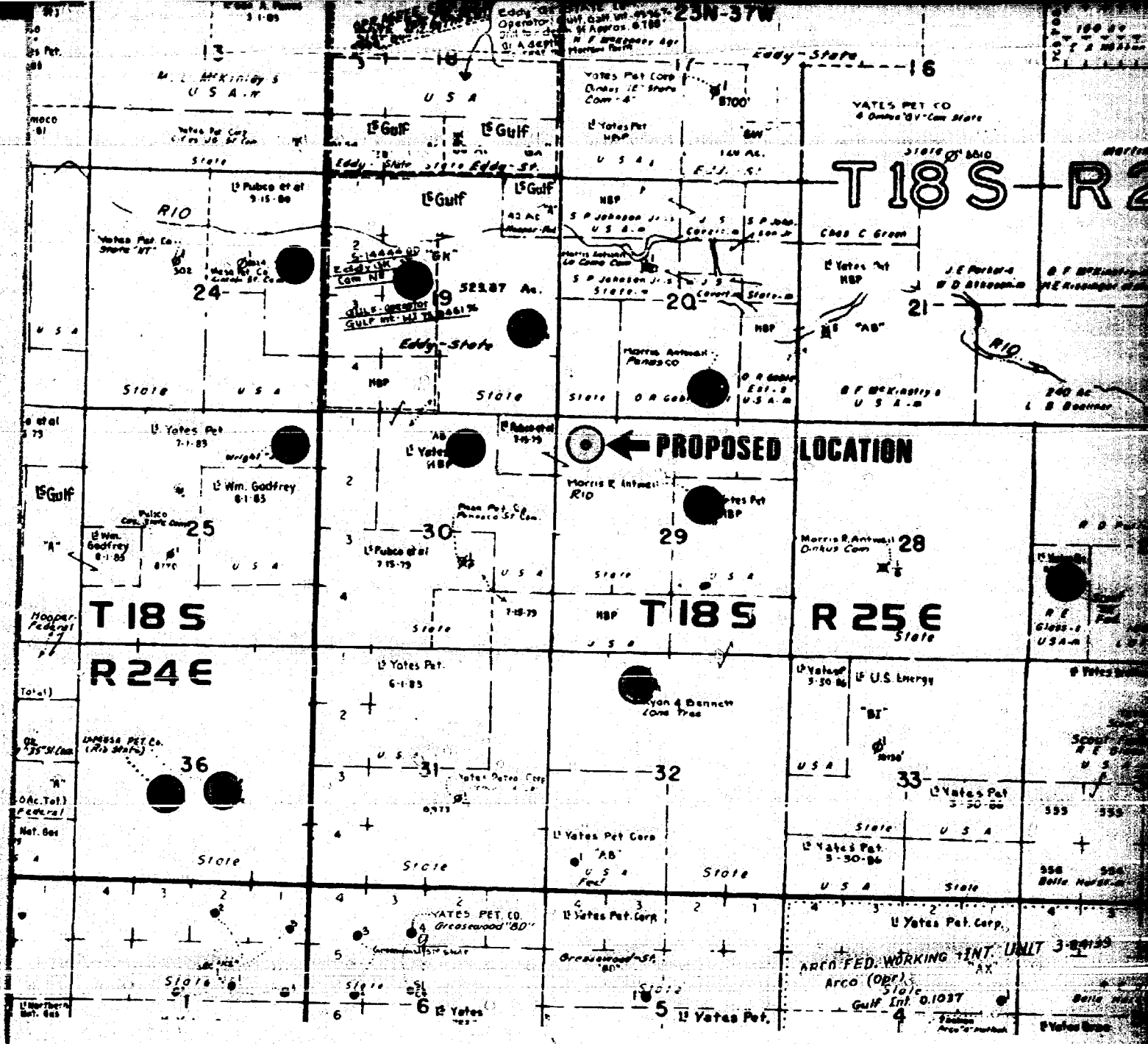
* Preliminary Production Figures



18-S, R-25-E
ea County, New Mexico
Scale - 1" = 1000'

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
GULF EXHIBIT NO. 3
CASE NO. 6964

Exhibit No. 3
Case 6964
Date 7-9-80
Gulf Oil Corporation



PENASCO DRAW - - MORROW POOL
EDDY COUNTY, NEW MEXICO
SCALE 1"-3000'

Proposed Location

Producing Wells

Gulf Oil Corporation
Southwest District
Midland, Texas

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
GULF EXHIBIT NO. 1
CASE NO. 6964

Exhibit No.
Case No.
Date

EXHIBIT NO. 2
CASE NO. 6964
DATE 7-9-80
GULF OIL CORPORATION

PRODUCTION DATA
PENASCO DRAW MORROW POOL
T-18-S, R-25-E
EDDY COUNTY, NEW MEXICO

	YATES PETROLEUM			ANTWEIL, MORRIS R.						BENNETT & RYAN			GULF OIL CORPORATION					
	Federal AB Com.			Penasco			Rio Com.			Lonetree			GK State Com.			GK State Com.		
	4 B 30 18S 25E			1 O 20 18S 25E			G 29 18S 25E			1 C 32 18S 25E			1 I 19 18S 25E			2 F 19 18S 25E		
	Gas		Cond.	Gas		Cond.	Gas		Cond.	Gas		Cond.	Gas		Cond.	Gas		Cond.
	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.
1977																		
September	---	---	---	69,733	2,324	224	27,226	907	131	---	---	---	---	---	---	---	---	---
October	---	---	---	183,897	5,932	557	47,260	1,525	93	---	---	---	---	---	---	---	---	---
November	---	---	---	159,355	5,312	464	33,089	1,103	52	13,419	447	---	---	---	---	---	---	---
December	---	---	---	151,703	4,894	428	29,460	950	45	11,055	357	---	---	---	---	---	---	---
1978																		
January	---	---	---	150,037	4,840	428	25,653	828	37	6,225	201	---	29,835	962	105	---	---	---
February	---	---	---	126,387	4,514	346	19,708	704	31	4,397	157	---	62,867	2,245	170	---	---	---
March	---	---	---	141,973	4,580	350	21,467	692	31	2,882	93	---	47,087	1,519	99	---	---	---
April	239,675	7,989	1,182	134,493	4,483	336	18,483	616	6	3,732	124	---	24,102	803	61	67,284	2,243	248
May	215,384	6,948	883	130,446	4,208	285	14,511	468	2	3,885	125	---	22,343	721	68	89,340	2,882	212
June	180,669	6,022	649	129,501	4,317	287	13,117	437	---	3,054	102	---	33,214	1,107	97	112,284	3,743	311
July	151,983	4,903	476	131,463	4,241	285	14,614	471	---	---	---	---	25,195	813	48	86,470	2,789	205
August	135,370	4,367	364	137,173	4,425	325	12,076	390	---	5,430	175	---	24,261	783	52	85,085	2,745	152
September	106,911	3,564	235	124,696	4,166	265	11,203	373	---	9,432	314	---	23,958	799	65	64,489	2,150	101
October	81,079	2,615	142	132,613	4,278	315	20,643	666	---	6,428	207	---	25,840	834	31	67,069	2,164	106
November	68,970	2,299	130	131,019	4,367	279	18,623	621	---	6,473	216	---	28,508	950	75	45,522	1,517	70
December	49,819	1,607	24	133,816	4,317	302	16,047	518	---	6,293	203	---	37,990	1,225	62	23,973	773	44

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
GULF EXHIBIT NO. 2
CASE NO. 6964

EXHIBIT 2
CASE NO. 6967
DATE 7-9-80
GULF OIL CORPORATION
Page 2-A

PRODUCTION DATA
PENASCO DRAW MORROW POOL
T-18-S, R-25-E
EDDY COUNTY, NEW MEXICO

	YATES PETROLEUM Federal AB Com. 4 B 30 18S 25E			ANTWEIL, MORRIS R. Penasco 1 O 20 18S 25E			ANTWEIL, MORRIS R. Rio Com. 1 G 29 18S 25E			BENNETT & RYAN Lonetree 1 C 32 18S 25E			GULF OIL CORPORATION GK State Com. 1 I 19 18S 25E			GULF OIL CORPORATION GK State Com. 2 F 19 18S 25E		
	Gas		Cond.	Gas		Cond.	Gas		Cond.	Gas		Cond.	Gas		Cond.	Gas		Cond.
	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.
1979																		
January	23,331	753	2	127,949	4,127	266	11,163	360	---	4,031	130	---	32,777	1,057	50	4,020	130	7
February	1,197	43	---	117,072	4,181	229	12,382	442	---	2,264	81	---	24,490	875	39	1,228	44	---
March	1,861	60	5	---	---	---	---	---	---	2,475	80	---	20,584	664	28	2,168	70	---
April	9,225	308	20	120,940	4,031	208	8,620	287	---	2,341	78	---	22,828	761	36	2,337	78	---
May	477	15	---	125,049	4,034	199	5,686	183	---	2,171	70	---	19,618	633	40	2,935	91	---
June	906	30	---	131,239	4,375	241	9,020	301	---	2,589	86	---	16,749	558	28	1,796	60	---
July	1,590	51	---	131,918	4,255	266	8,493	274	---	2,291	74	---	17,635	569	11	7,539	243	---
August	698	23	---	128,789	4,154	194	8,418	272	28	2,306	74	---	17,799	574	34	21,177	702	---
September	602	20	---	121,530	4,051	181	7,890	263	2	2,181	73	---	13,678	456	14	8,558	285	---
October	453	15	---	122,010	3,936	197	8,312	268	---	2,490	80	---	4,534	146	---	2,958	95	---
November	1,209	40	---	114,192	3,806	182	5,417	181	---	2,193	73	---	2,269	76	---	---	---	---
December	876	28	---	115,315	3,720	167	7,443	240	---	2,153	69	---	21,251	686	25	4,567	147	8
1980																		
January	15,283	493	58	101,602	3,277	183	9,237	298	---	1,861	60	---	13,725	443	28	4,032	130	---
February	28,829	994	39	101,331	3,494	155	7,585	262	---	2,089	72	---	8,220	283	33	3,116	107	---
March	27,397	884	49	107,567	3,470	190	7,013	226	---	1,926	62	---	9,295	300	17	6,272	202	---
April*	24,766	894	---	101,688	3,390	---	5,919	246	---	1,640	58	---	3,284	127	---	5,545	203	---
May*	22,609	970	---	95,329	3,199	---	7,606	254	---	1,555	54	---	3,023	117	---	5,582	187	---
Cum. (4-1-80)	1,343,794		4,258	3,834,808		8,334	459,859		458	117,796			630,652		1,316	714,819		1,464
(6-1-80)	1,391,169			4,031,825			473,384			120,991			636,959			725,946		

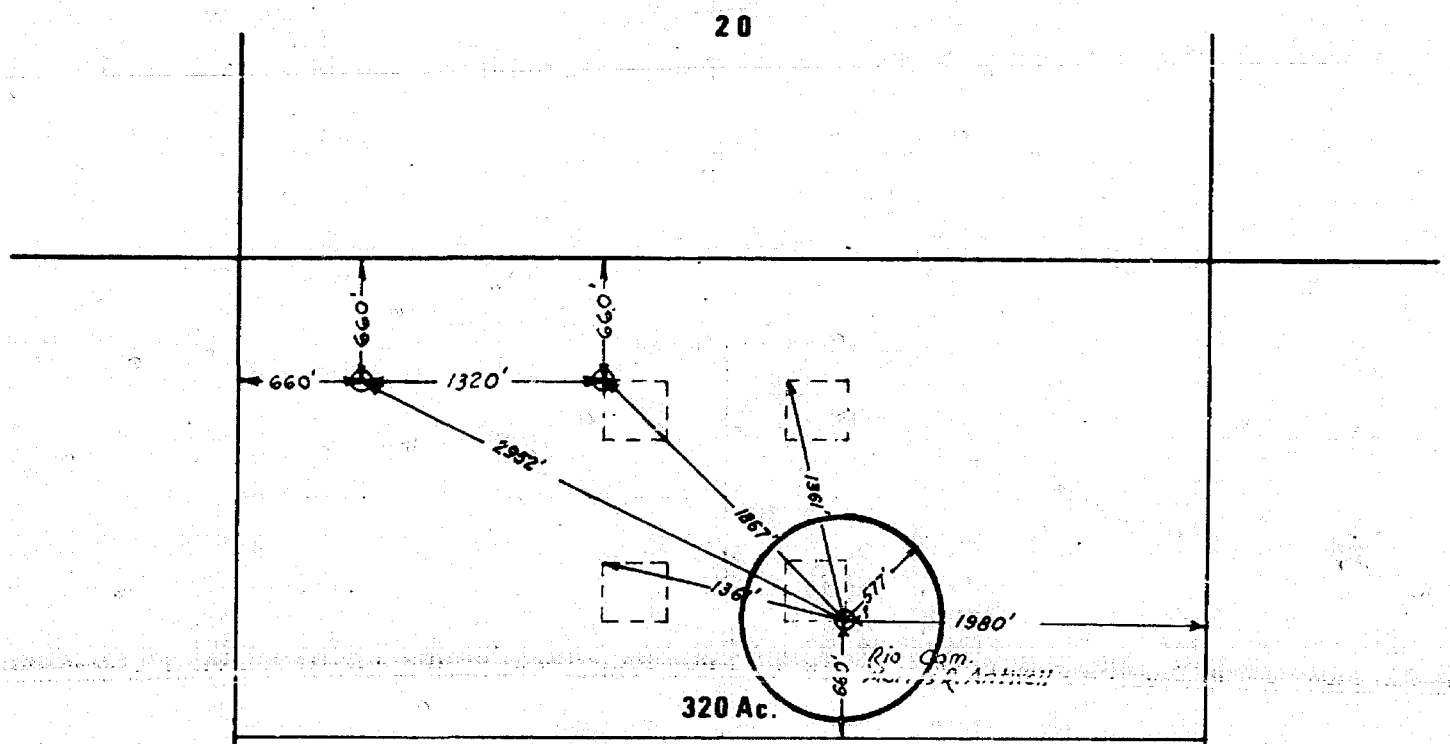
* Preliminary Production Figures

EXHIBIT E
CASE NO. 6364
DATE 7-9-80
GULF OIL CORPORATION

PRODUCTION DATA
PENASCO DRAW MORROW POOL
T-18-S, R-25-E
EDDY COUNTY, NEW MEXICO

	MESA PETROLEUM COMPANY									YATES PETROLEUM CORP.					
	Lincoln State Com. 1 H 24 18S 24E			Rio State 1 K 36 18S 24E			Rio State 2 J 36 18S 24E			Scout EH Fed. 4 L 27 18S 25E			Scout JM Com. 1 A 25 18S 24E		
	Gas		Cond.	Gas		Cond.	Gas		Cond.	Gas		Cond.	Gas		Cond.
1979	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.
January	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
February	7,228	258	67	---	---	---	---	---	---	---	---	---	---	---	---
March	30,498	984	108	---	---	---	---	---	---	---	---	---	---	---	---
April	28,816	961	10	---	---	---	---	---	---	---	---	---	---	---	---
May	9,869	318	---	---	---	---	---	---	---	---	---	---	---	---	---
June	26,640	888	3	---	---	---	---	---	---	---	---	---	---	---	---
July	16,175	522	28	---	---	---	---	---	---	---	---	---	---	---	---
August	19,212	620	42	---	---	---	---	---	---	---	---	---	---	---	---
September	21,425	714	45	5,449	182	8	35,542	1,185	15	---	---	---	---	---	---
October	15,220	491	12	30,389	980	24	268,460	8,660	88	---	---	---	---	---	---
November	11,804	393	15	27,928	931	18	97,043	3,235	---	---	---	---	---	---	---
December	16,062	518	10	26,159	844	6	101,269	3,267	10	---	---	---	---	---	---
1980															
January	10,770	347	---	26,450	853	---	74,937	2,417	13	---	---	---	2,070	67	---
February	9,087	313	---	23,312	804	4	76,433	2,636	18	---	---	---	71	2	---
March	19,335	624	17	22,943	740	7	79,291	2,558	12	257	8	---	---	---	---
April *	11,832	398	---	26,475	883	---	115,654	3,855	---						
May *				27,651	950	---	138,143	4,651	---						
Cum (4-1-80)	242,141		357	162,630		67	732,975		156	257			2,141		
(6-1-80)				216,756			986,772								

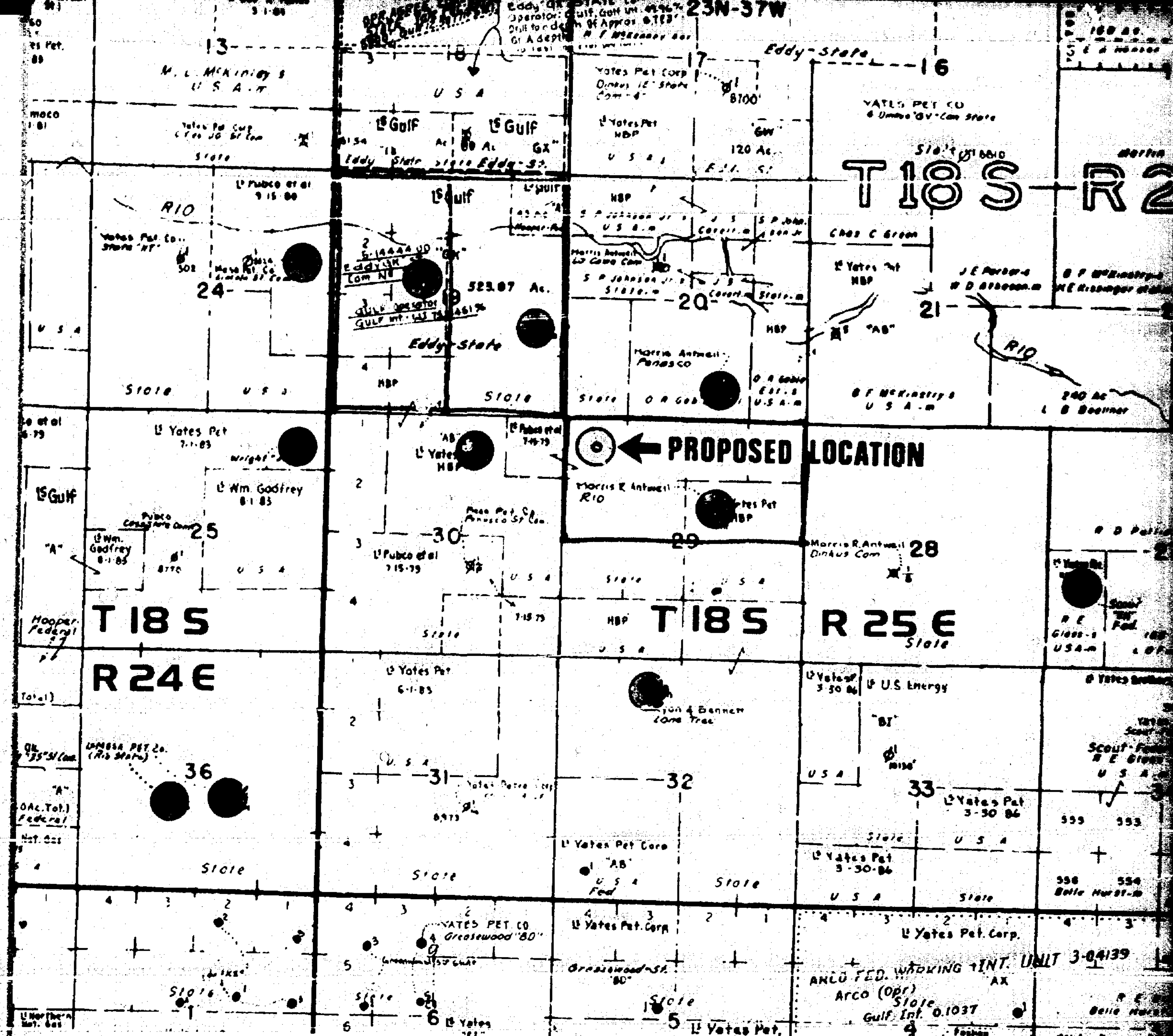
* Preliminary Production Figures



-18-S, R-25-E
ca County, New Mexico
cale - 1" = 1000'

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
GULF EXHIBIT NO. 3
CASE NO. 6964

Exhibit No. 3
Case 6964
Date 7-9-80
Gulf Oil Corporation



PENASCO DRAW - - MORROW POOL
EDDY COUNTY, NEW MEXICO
SCALE 1"-3000'

○ Proposed Location

● Producing Wells

Gulf Oil Corporation
Southwest District
Midland, Texas

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
GULF EXHIBIT NO. 1
CASE NO. 6964

Exhibit No.
Case No.
Date

EXHIBIT 2
CASE NO. 6964
DATE 7-9-80
GULF OIL CORPORATION

PRODUCTION DATA
PENASCO DRAW MORROW POOL
T-18-S, R-25-E
EDDY COUNTY, NEW MEXICO

	YATES PETROLEUM			ANTWEIL, MORRIS R.						BENNETT & RYAN			GULF OIL CORPORATION					
	Federal AB Com.			Penasco			Rio Com.			Lonetree			GK State Com.			GK State Com.		
	4 B 30 18S 25E			1 O 20 18S 25E			1 G 29 18S 25E			1 C 32 18S 25E			1 I 19 18S 25E			2 F 19 18S 25E		
	Gas		Cond.	Gas		Cond.	Gas		Cond.	Gas		Cond.	Gas		Cond.	Gas		Cond.
	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.
1977																		
September	---	---	---	69,733	2,324	224	27,226	907	131	---	---	---	---	---	---	---	---	---
October	---	---	---	183,897	5,932	557	47,260	1,525	93	---	---	---	---	---	---	---	---	---
November	---	---	---	159,355	5,312	464	33,089	1,103	52	13,419	447	---	---	---	---	---	---	---
December	---	---	---	151,703	4,894	428	29,460	950	45	11,055	357	---	---	---	---	---	---	---
1978																		
January	---	---	---	150,037	4,840	428	25,653	828	37	6,225	201	---	29,835	962	105	---	---	---
February	---	---	---	126,387	4,514	346	19,708	704	31	4,397	157	---	62,867	2,245	170	---	---	---
March	---	---	---	141,973	4,580	350	21,467	692	31	2,882	93	---	47,087	1,519	99	---	---	---
April	239,675	7,989	1,182	134,493	4,483	336	18,483	616	6	3,732	124	---	24,102	803	61	67,284	2,243	248
May	215,384	6,948	883	130,446	4,208	285	14,511	468	2	3,885	125	---	22,343	721	68	89,340	2,882	212
June	180,669	6,022	649	129,501	4,317	287	13,117	437	---	3,054	102	---	33,214	1,107	97	112,284	3,743	311
July	151,983	4,903	476	131,463	4,241	285	14,614	471	---	---	---	---	25,195	813	48	86,470	2,789	205
August	135,370	4,367	364	137,173	4,425	325	12,076	390	---	5,430	175	---	24,261	783	52	85,085	2,745	152
September	106,911	3,564	235	124,696	4,166	265	11,203	373	---	9,432	314	---	23,958	799	65	64,489	2,150	101
October	81,079	2,615	142	132,613	4,278	315	20,643	666	---	6,428	207	---	25,840	834	31	67,069	2,164	106
November	68,970	2,299	130	131,019	4,367	279	18,623	621	---	6,473	216	---	28,508	950	75	45,522	1,517	70
December	49,819	1,607	24	133,816	4,317	302	16,047	518	---	6,293	203	---	37,990	1,225	62	23,973	773	44

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
GULF EXHIBIT NO. 2
CASE NO. 6964

EXHIBIT 2
CASE NO. 6964
DATE 7-2-80

PRODUCTION DATA
PENASCO DRAW MORROW POOL
T-18-S, R-25-E
EDDY COUNTY, NEW MEXICO

GULF OIL CORPORATION

	YATES PETROLEUM Federal AB Com. 4 B 30 18S 25E			ANTWEIL, MORRIS R. Penasco 1 O 20 18S 25E			ANTWEIL, MORRIS R. Rio Com. 1 G 29 18S 25E			BENNETT & RYAN Lonetree 1 C 32 18S 25E			GULF OIL CORPORATION GK State Com. 1 I 19 18S 25E			GULF OIL CORPORATION GK State Com. 2 F 19 18S 25E		
	Gas		Cond.	Gas		Cond.	Gas		Cond.	Gas		Cond.	Gas		Cond.	Gas		Cond.
	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.
1979																		
January	23,331	753	2	127,949	4,127	266	11,163	360	---	4,031	130	---	32,777	1,057	50	4,020	130	7
February	1,197	43	---	117,072	4,181	229	12,382	442	---	2,264	81	---	24,490	875	39	1,228	44	---
March	1,861	60	5	---	---	---	---	---	---	2,475	80	---	20,584	664	28	2,168	70	---
April	9,225	308	20	120,940	4,031	208	8,620	287	---	2,341	78	---	22,828	761	36	2,337	78	---
May	477	15	---	125,049	4,034	199	5,686	183	---	2,171	70	---	19,618	633	40	2,935	91	---
June	906	30	---	131,239	4,375	241	9,020	301	---	2,589	86	---	16,749	558	28	1,796	60	---
July	1,590	51	---	131,918	4,255	266	8,493	274	---	2,291	74	---	17,635	569	11	7,539	243	---
August	698	23	---	128,789	4,154	194	8,418	272	28	2,306	74	---	17,799	574	34	21,177	702	---
September	602	20	---	121,530	4,051	181	7,890	263	2	2,181	73	---	13,678	456	14	8,558	285	---
October	453	15	---	122,010	3,936	197	8,312	268	---	2,490	80	---	4,534	146	---	2,958	95	---
November	1,209	40	---	114,192	3,806	182	5,417	181	---	2,193	73	---	2,269	76	---	---	---	---
December	876	28	---	115,315	3,720	167	7,443	240	---	2,153	69	---	21,251	686	25	4,567	147	8
1980																		
January	15,283	493	58	101,602	3,277	183	9,237	298	---	1,861	60	---	13,725	443	28	4,032	130	---
February	28,829	994	39	101,331	3,494	155	7,585	262	---	2,089	72	---	8,220	283	33	3,116	107	---
March	27,397	884	49	107,567	3,470	190	7,013	226	---	1,926	62	---	9,295	300	17	6,272	202	---
April*	24,766	894	---	101,688	3,390	---	5,919	246	---	1,640	58	---	3,284	127	---	5,545	203	---
May*	22,609	970	---	95,329	3,199	---	7,606	254	---	1,555	54	---	3,023	117	---	5,582	187	---
Cum. (4-1-80)	1,343,794		4,258	3,834,808		8,334	459,859		458	117,796			630,652		1,316	714,819		1,464
(6-1-80)	1,391,169			4,031,825			473,384			120,391			636,959			725,946		

* Preliminary Production Figures

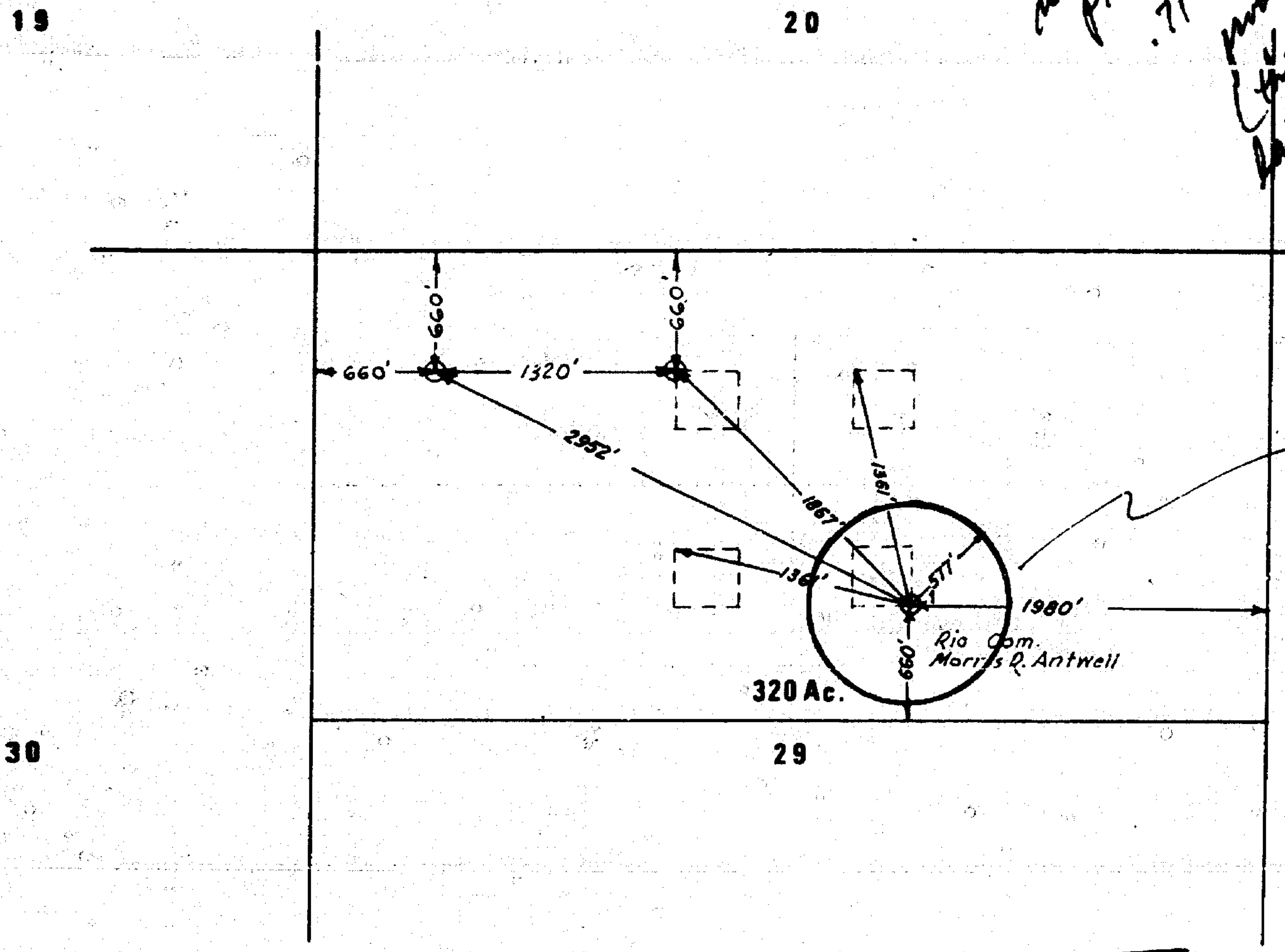
EXHIBIT 2
CASE NO. 6964
DATE 7-9-80

PRODUCTION DATA
PINASOO DRAW MORROW POOL
T-18-S, R-25-E
EDDY COUNTY, NEW MEXICO

GULF OIL CORPORATION

	MESA PETROLEUM COMPANY									YATES PETROLEUM CORP.					
	Lincoln State Com. 1 H 24 18S 24E			Rio State 1 K 36 18S 24E			Rio State 2 J 36 18S 24E			Scout EH Fed. 4 L 27 18S 25E			Scout JM Com. 1 A 25 18S 24E		
	Gas		Cond.	Gas		Cond.	Gas		Cond.	Gas		Cond.	Gas		Cond.
1979	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.	MCF	MCF/D	BBLS.
January	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
February	7,228	258	67	---	---	---	---	---	---	---	---	---	---	---	---
March	30,498	984	108	---	---	---	---	---	---	---	---	---	---	---	---
April	28,816	961	10	---	---	---	---	---	---	---	---	---	---	---	---
May	9,869	318	---	---	---	---	---	---	---	---	---	---	---	---	---
June	26,640	888	3	---	---	---	---	---	---	---	---	---	---	---	---
July	16,175	522	28	---	---	---	---	---	---	---	---	---	---	---	---
August	19,212	620	42	---	---	---	---	---	---	---	---	---	---	---	---
September	21,425	714	45	5,449	182	8	35,542	1,185	15	---	---	---	---	---	---
October	15,220	491	12	30,389	980	24	268,460	8,660	88	---	---	---	---	---	---
November	11,804	393	15	27,928	931	18	97,043	3,235	---	---	---	---	---	---	---
December	16,062	518	10	26,159	844	6	101,269	3,267	10	---	---	---	---	---	---
1980															
January	10,770	347	---	26,450	853	---	74,937	2,417	13	---	---	---	---	---	---
February	9,087	313	---	23,312	804	4	76,433	2,636	18	---	---	---	2,070	67	---
March	19,335	624	17	22,943	740	7	79,291	2,558	12	257	8	---	71	2	---
April *	11,832	398	---	26,475	883	---	115,654	3,855	---				---	---	---
May *				27,651	950	---	138,143	4,651	---						
Cum (4-1-80)	242,141		357	162,630		67	732,975		156	257			2,141		
(6-1-80)				216,756			986,772								

* Preliminary Production Figures



Kellahin would not object to a prod limitation factor of .71 of Rio Com #1

Gulf estimates Rio Com #1 drains 24 acres with a 577' rad. of drainage

GK #1: 52 ac; 849'

GK #2: 6 ac

Penasco #1: 455 ac

18-S, R-25-E
a County, New Mexico
ale - 1" = 1000'

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
Gulf EXHIBIT NO. 3
CASE NO. 6964

Exhibit No. 3
Case 6964
Date 7-9-80
Gulf Oil Corporation

Morris R. Antweil
OIL OPERATOR
P. O. Box 2010
HOBBS, NEW MEXICO 88240

July 1, 1980

File No Case 6964

Yates Petroleum Corp.
207 South 4th
Artesia, New Mexico 88210

RE: Application for Unorthodox Gas Well
Location - Section 29-T18S-R25E
Eddy County, New Mexico

Gentlemen:

Enclosed is a copy of New Mexico Oil Conservation Division Docket No. 20-80 for cases to be heard 9 July 1980. Your attention is directed to Case No. 6964, our application for an unorthodox gas well location in Section 29-T18S-R25E, Eddy County, New Mexico, for the drilling of the No. 2 Rio as a Morrow well.

Yours Very Truly,

MORRIS R. ANTWEIL

R M Williams

R. M. Williams

RMW:pa

Enclosure

cc: New Mexico Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Morris R. Antweil
OIL OPERATOR
P. O. Box 2010
HOBBS, NEW MEXICO 88240

July 1, 1980

Mesa Petroleum Company
1000 Vaughn Bldg.
Midland, Texas 79701

RE: Application for Unorthodox Gas Well
Location - Section 29-T18S-R25E
Eddy County, New Mexico

Gentlemen:

Enclosed is a copy of New Mexico Oil Conservation Division Docket No. 20-80 for cases to be heard 9 July 1980. Your attention is directed to Case No. 6964, our application for an unorthodox gas well location in Section 29-T18S-R25E, Eddy County, New Mexico, for the drilling of the No. 2 Rio as a Morrow well.

Yours Very Truly,

MORRIS R. ANTWEIL

R. M. Williams

R. M. Williams

RMW:pa

Enclosure

cc: New Mexico Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Morris R. Antweil
OIL OPERATOR
P. O. Box 2010
Hobbs, New Mexico 88240

July 1, 1980

Gulf Energy & Minerals Company
P.O. Box 670
Hobbs, New Mexico 88240

RE: Application for Unorthodox Gas Well
Location - Section 29-T18S-R25E
Eddy County, New Mexico

Gentlemen:

Enclosed is a copy of New Mexico Oil Conservation Division Docket No. 20-80 for cases to be heard 9 July 1980. Your attention is directed to Case No. 6964, our application for an unorthodox gas well location in Section 29-T18S-R25E, Eddy County, New Mexico, for the drilling of the No. 2 Rio as a Morrow well.

Yours Very Truly,

MORRIS R. ANTWEIL

R M Williams

R. M. Williams

RMW:pa

Enclosure

cc: New Mexico Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Morris R. Antweil
Oil Operator
P. O. Box 2010
Hobbs, New Mexico 88240

July 1, 1980

H. L. Brown, Jr.
323 W. Missouri
Midland, Texas 79701

RE: Application for Unorthodox Gas Well
Location - Section 30-T19S-R30E
Eddy County, New Mexico

Gentlemen:

Enclosed is a copy of New Mexico Oil Conservation Division Docket No. 20-80 for cases to be heard 9 July 1980. Your attention is directed to Case No. 6963, our application for an unorthodox gas well location in Section 30-T19S-R30E, Eddy County, New Mexico, for the drilling of a Morrow well.

Yours Very Truly,

MORRIS R. ANTWEIL

R. M. Williams

RMW:pa

Enclosure

cc: New Mexico Oil Conservation Division
Box 2088
Santa Fe, New Mexico 87501

Morris R. Antweil
OIL OPERATOR
P. O. Box 2010
HOBBS, NEW MEXICO 88240

July 1, 1980

Gulf Energy & Minerals Company
P. O. Box 670
Hobbs, New Mexico 88240

RE: Application for Unorthodox Gas Well
Location-Section 30-T19S-R30E
Eddy County, New Mexico

Gentlemen:

Enclosed is a copy of New Mexico Oil Conservation Division Docket No. 20-80 for cases to be heard 9 July 1980. Your attention is directed to Case No. 6963, our application for an unorthodox gas well location in Section 30-T19S-R30E, Eddy County, New Mexico, for the drilling of a Morrow well.

Yours Very Truly,

MORRIS R. ANTWEIL

R. M. Williams

R. M. Williams

RMW:pa

Enclosure

cc: New Mexico Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Morris R. Antweil
OIL OPERATOR
P. O. Box 2010
HOBBS, NEW MEXICO 88240

July 1, 1980

Yates Drilling Company
207 South 4th
Artesia, New Mexico 88210

RE: Application for Unorthodox Gas Well
Location - Section 30-T19S-R30E
Eddy County, New Mexico

Gentlemen:

Enclosed is a copy of New Mexico Oil Conservation Division Docket No. 20-80 for cases to be heard 9 July 1980. Your attention is directed to Case No. 6963, our application for an unorthodox gas well location in Section 30-T19S-R30E, Eddy County, New Mexico, for the drilling of a Morrow well.

Yours Very Truly,

MORRIS R. ANTWEIL

R. M. Williams

R. M. Williams

RMW:pa

Enclosure

cc: New Mexico Oil Conservation Division
Box 2088
Santa Fe, New Mexico 87501

CASE 6943: (Continued from June 25, 1980, Examiner Hearing)

Application of Benson-Montin-Greer Drilling Corporation for a unit agreement, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the East Puerto Chiquito-Mancos Unit Area, comprising 9,769 acres, more or less, of Federal, Indian, and fee lands in Townships 26 and 27 North, Ranges 1 East and 1 West.

CASE 6944: (Continued from June 25, 1980, Examiner Hearing)

Application of Benson-Montin-Greer Drilling Corporation for a pressure maintenance project, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pressure maintenance project by the injection of gas, air, LPG, water, or chemicals into the Mancos formation thru 7 wells on its East Puerto Chiquito-Mancos Unit Area.

CASE 6963: Application of Morris R. Antweil for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 660 feet from the North line and 1980 feet from the East line of Section 30, Township 19 South, Range 30 East, MC-Morrow Gas Pool, the E/2 of said Section 30 to be dedicated to the well.

CASE 6964: Application of Morris R. Antweil for an unorthodox gas well location and simultaneous dedication, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Rio Com. Well No. 2, to be drilled 660 feet from the North and West lines of Section 29, Township 18 South, Range 25 East, Penasco Draw-Morrow Gas Pool, to be simultaneously dedicated with its Rio Com. Well No. 1 in Unit G to the N/2 of said Section 29.

****

Docket No. 21-80

DOCKET: EXAMINER HEARING - WEDNESDAY - JULY 16, 1980

9 A.M. - OIL CONSERVATION DIVISION 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 August, 1980, from fifteen prorated pools in Lea, Eddy, and Chaves Counties, New Mexico.

(2) Consideration of the allowable production of gas for August, 1980, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.

DRAFT

dr/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 6964

ORDER No. R-6468

APPLICATION OF MORRIS R. ANTWEIL

FOR AN UNORTHODOX WELL LOCATION AND

SIMULTANEOUS DEDICATION, ~~LEA~~ EDDY COUNTY,

NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on July 9 19 80, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this ______ day of ~~July~~ August, 19 80, the Division Director, 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 Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Morris R. Antweil seeks approval of an unorthodox gas well location for/ his Rio Com Well No. 2 to be drilled at a point xxxxxxxxxx xlocated 660 feet from the North line and 660 feet from the West line of Section 29, Township 18 South, Range 25 East, NMPM, Penasco Draw-Morrow Gas Pool, Eddy County, New Mexico

(3) That the applicant further seeks to simultaneously dedicate the N/2 of said Section 29 to the above-described well and to his Rio Com. Well No. 1, located in Unit G of said Section 29.

(4) That the proposed unorthodox location and simultaneous dedication were opposed by Gulf Oil Corporation, which operates two Morrow gas wells in Section 19 of Township 18 South, Range 25 East, immediately to the Northwest of the proposed location.

(5) That this matter was the subject of Case No. 6213, heard by a Division Examiner on May 17, 1978, whereupon Order No. R-5856 was entered, and of a de novo hearing on January 24, 1979, whereupon Order No. R-5856-A was entered.

(6) That the applicant in this case, who was also the applicant in the previous Case No. 6213, upon filing for hearing in the instant case, stated that, "Applicant's request that the Division consider this matter again....is based on the belief and contention that the production and depletion of surrounding Morrow wells has significantly changed the considerations in regard to the protection of correlative rights."

(7) That at the hearing of the instant case, Gulf requested dismissal of the case on the grounds that it is res judicata.

(8) That no ruling was made on Gulf's motion at the hearing and evidence was taken both from the applicant and from Gulf concerning the proposed location.

(9) That while to some extent the matter is res judicata, conditions in the reservoir have changed since the matter was first heard, and in the interest of obtaining all the facts in

this particular case and rendering a decision based on current conditions, Gulf's motion for dismissal should be denied.

(10) That at the hearing of the instant case it was ruled that the Division would take administrative notice of the record in the previous hearings on this matter.

(11) That there are gas reserves in the NW/4 of Section 29 which the applicant will apparently be unable to produce through his existing well in the NE/4 of Section 29.

(12) That in order to produce his just and equitable share of the reserves in the pool, particularly those reserves underlying the NW/4 of Section 29, the applicant should be permitted to drill a well thereon and simultaneously dedicate the N/2 of said section to the new well and to his Rio Com. Well No. 1.

(13) That said Rio Com. Well No. 1 is apparently draining only a very limited area probably confined to the SW/4 NE/4 of Section 29, and in all probability is not affecting the Gulf acreage in Section 19.

for applicant's Rio Com Well No. 2, [illegible] the North line and 660 feet from the [illegible] Section 29.

(14) That a well at the proposed location is at a standard location relative to the North and South lines of said Section 29.

(15) That a well at the proposed location is 67 percent closer to the West line of said Section 29 than permitted by Division Rules and Regulations.

(16) That a well at the proposed location will have an area of drainage in the Morrow formation which extends 67.2 net acres outside Section 29, an amount of acreage equivalent to 21 percent of a standard proration unit in said pool.

(17) That to offset the advantage gained over the ~~protecting~~ offset operators resulting from the drilling of a well at the proposed unorthodox location, ~~and the production of two wells on the proration unit,~~ production from the N/2 of said Section 29 should be limited from the Morrow formation.

(18) That ~~in the case where only said Rio Well No. 2 is produced,~~ such limitation should be based upon the variation of the location from a standard location and the 67.2 net-acre encroachment described in Finding No. (15) above, and may best be accomplished by assigning the proration unit an allowable limitation factor of 0.71 (100 percent North/South factor plus 33 percent East/West factor plus 79 percent net-acre factor, divided by 3).

(19) That in the absence of any special rules and regulations for the prorationing of production from said ~~undesignated~~ Penasco Draw - Morrow Gas Pool, the aforesaid production limitation factor should be applied against ~~said well's or wells'~~ the proration unit's ability to produce into the pipeline as determined by periodic well tests.

(20) That considering the risks involved in drilling to the Morrow formation, each proration unit should have a reasonable minimum calculated allowable.

(21) That at a sustained flowing rate of 500,000 cubic feet per day, a Morrow well in this area would pay-out in approximately 2.5 years.

(22) That 2.5 years is a reasonable pay-out period for a Morrow well in this area.

23 ~~(17)~~ That the minimum calculated allowable for the subject proration unit should be ~~reasonable, and~~ 500,000 cubic feet of gas per day. ~~is a reasonable figure for such minimum allowable.~~

24 ~~(18)~~ That approval of the subject application subject to the above provisions and limitations and to the special provisions for the application of a "Production [illegible] [illegible] set forth" will afford the applicant the opportunity to produce its just and equitable share of the gas in the subject pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That an unorthodox gas well location for the Morrow formation is hereby approved for the Morris R. Antweil Rio Well No. 2 to be located at a point 660 feet from the North line and 660 feet from the West line of Section 29, Township 18 South, Range 25 East, NMPM, ~~Undesignated~~ Penasco Draw - Morrow Gas Pool, Eddy County, New Mexico.

(2) That a 320-acre proration unit consisting of the N/2 of said Section 29 shall be simultaneously dedicated to the above-described well and to the Rio Well No. 1 located in Unit G of said Section 29.

Russia - Draw

(4) That in the absence of any Special Rules and Regulations prorating gas production in said ~~undesignated~~ Morrow Gas Pool, the Special rules hereinafter promulgated shall apply.

(5) That the following Special Rules and Regulations for a non-prorated gas well at an unorthodox location shall apply to the subject well or wells:

SPECIAL RULES AND REGULATIONS
FOR THE
APPLICATION OF A "PRODUCTION LIMITATION FACTOR"
TO A NON-PRORATED GAS WELL OR WELLS

APPLICATION OF RULES

RULE 1.(A) These rules shall apply to the proration unit consisting of the N/2 of Section 29, Township 18 South, Range 25 East, Eddy County, New Mexico, upon completion and connection as a Morrow formation producing well of the Morris R. Antweil Rio Well No. 2 located 660 feet from the North line and 660 feet from the West line of said Section 29.

RULE 1.(B) A Production Limitation Factor of 0.71 shall be applied to the proration unit's deliverability (as determined by the hereinafter set forth procedure) to determine its maximum allowable rate of production.

RULE 1.(C) Any deliverability determined by any of the hereinafter described procedures shall be the total deliverability of any Morrow producing wells on such proration unit as determined by adding such deliverabilities.

ALLOWABLE PERIOD

RULE 2. The allowable period for the subject unit shall be six months.

RULE 3. The year shall be divided into two allowable periods commencing at 7:00 o'clock a.m. on January 1 and July 1.

DETERMINATION OF DELIVERY CAPACITY

RULE 4. Immediately upon connection of the Rio Well No. 2 the operator shall determine the open flow capacity of producing wells on the proration unit in accordance with the Division "Manual for Back-Pressure Testing of Natural Gas Wells" then current, and the well's or wells' initial deliverability shall be calculated against average pipeline pressure.

Case No. 6464
Order No. R-5[illegible]

RULE 5. The well's or wells' "subsequent deliverability" shall be determined twice a year, and shall be equal to its or their highest single day's production during the months of April and May or October and November, whichever is applicable. Said subsequent deliverability, certified by the pipeline, shall be submitted to the appropriate District Office of the Division not later than June 15 and December 15 of each year.

RULE 6. The Division Director may authorize special deliverability tests to be conducted upon a showing that the well or wells have been worked over or that the subsequent deliverability determined under Rule 5 above is erroneous. Any such special test shall be conducted in accordance with Rule 4 above.

RULE 7. The operator shall notify the appropriate district office of the Division and all offset operators of the date and time of initial or special deliverability tests in order that the Division or any such operator may at their option witness such tests.

CALCULATION AND ASSIGNMENT OF ALLOWABLES

RULE 8. The unit's allowable as determined by these rules shall commence upon the date of connection to a pipeline of said Rio Well No. 2 and when the operator has complied with all appropriate filing requirements of the Rules and Regulations and any special rules and regulations.

RULE 9. The unit's allowable during its first allowable period shall be determined by multiplying its initial deliverability by its production limitation factor.

RULE 10. The unit's allowable during all ensuing allowable periods shall be determined by multiplying its latest subsequent deliverability, as determined under provisions of Rule 5, by its production limitation factor. If the unit shall not have been producing under these rules for at least 60 days prior to the end of its first allowable period, the allowable for the second allowable period shall be determined in accordance with Rule 9.

RULE 11. Revision of allowable based upon special well tests shall become effective upon the date of such test provided the results of such test are filed with the Division's district office within 30 days after the date of the test; otherwise the date shall be the date the test report is received in said office.

RULE 12. Revised allowables based on special well tests shall remain effective until the beginning of the next allowable period.

RULE 13. In no event shall the unit receive an allowable of less than 500,000 cubic feet of gas per day.

BALANCING OF PRODUCTION

RULE 14. January 1 and July 1 of each year shall be known as the balancing dates.

RULE 15. If the unit has an underproduced status at the end of a six-month allowable period, it shall be allowed to carry such underproduction forward into the next period and may produce such underproduction in addition to its regularly assigned allowable. Any underproduction carried forward into any allowable period which remains unproduced at the end of the period shall be cancelled.

RULE 16. Production during any one month of an allowable period in excess of the monthly allowable assigned to the unit shall be applied against the underproduction carried into the period in determining the amount of allowable, if any, to be cancelled.

RULE 17. If the unit has an overproduced status at the end of a six-month allowable period, it shall be shut in until such overproduction is made up.

RULE 18. If, during any month, it is discovered that the unit is overproduced in an amount exceeding three times its average monthly allowable, it shall be shut in during that month and during each succeeding month until it is overproduced in an amount three times or less its monthly allowable, as determined hereinabove.

RULE 19. The Director of the Division shall have authority to permit the unit, if it is subject to shut-in pursuant to Rules 17 and 18 above, to produce up to 500 MCF of gas per month upon proper showing to the Director that complete shut-in would cause undue hardship, provided however, such permission shall be rescinded for the unit if it has produced in excess of the monthly rate authorized by the Director.

RULE 20. The Division may allow overproduction to be made up at a lesser rate than permitted under Rules 17, 18, or 19 above upon a showing at public hearing that the same is necessary to avoid material damage to the well or wells.

GENERAL

RULE 21. Failure to comply with the provisions of this order or the rules contained herein or the Rules and Regulations of the Division shall result in the cancellation of allowable assigned to the unit. No further allowable shall be assigned to the unit until all rules and regulations are complied with. The Division shall notify the operator of the unit and the purchaser, in writing, of the date of allowable cancellation and the reason therefor.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY
Director

S E A L

fd/