

CASE 4434: Application of UNION
OIL OF CALIF. FOR NEW GAS POOL &
SPECIAL POOL RULES.

Case. Number.

4434

Application,
Transcripts.

Sm all Exhibts.

ETC.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
OIL CONSERVATION COMMISSION CONFERENCE ROOM
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO
Wednesday, April 11, 1973

EXAMINER HEARING

IN THE MATTER OF:

In the matter of Case 4434 being
reopened pursuant to the
provisions of Order No. R-4058,
which order established special
rules and regulations for the
La Rica-Morrow Gas Pool, Lea
County, New Mexico, including a
provision for 640-acre proration
units.

Case No. 4434

BEFORE: Elvis A. Utz

TRANSCRIPT OF HEARING

1 THE UTZ: Case 4434.

2 MR. CARR: Case 4434, in the matter of Case 4434 being
3 reopened pursuant to the provisions of Order No. R-4058,
4 which order established special rules and regulations for
5 the La Rica-Morrow Gas Pool, Lea County, New Mexico,
6 including a provision for 640-acre proration units.

7 MR. JENNINGS: I'm James T. Jennings of Jennings,
8 Christy and Copple from Roswell, and I'd like to appear
9 on behalf of Union Oil Company of California to show
10 cause why the pool should not be developed on a 320-acre
11 spacing. And we will offer two witness. One, Mr. Jordan
12 who has been sworn; and Mr. Alan Smith.

13 MR. UTZ: Will Mr. Smith stand and be sworn, please.)

14 (Whereupon, Mr. Smith was sworn.)

15 MR. UTZ: Let the record show that Mr. Jordan was
16 sworn.

17 J.B. JORDAN

18 called as a witness, and having been previously sworn according
19 to law, testified as follows:

20 DIRECT EXAMINATION

21 BY MR. JENNINGS:

22 Q Mr. Jordon, you are the same J.B. Jordan who just previously
23 testified in the case number 4927?

24 A Yes, I am.

25 Q Mr. Jordan, are you familiar with the La Rica field area

1 and in particular with the Union Oil Company's Pipeline
2 Federal Number 1 Well Eureka?

3 A Yes, I am.

4 Q I hand you or you have a plat before you a plat that
5 has been marked as Exhibit 1. Would you identify that
6 and tell what it is, please?

7 A Exhibit 1 is a land plat in the La Rica pine area showing
8 the lease ownership union acreage positions colored in
9 yellow; and yellow is 100 percent and the shaded is deep
10 rights only.

11 Q Would you locate the Union Pipeline Federal Number 1 Well?

12 A The Union Pipeline Number 1 Federal is located in the
13 Southwest, Southwest of Section 4.

14 Q Was that well originally drilled as a wildcat well?

15 A Yes. It was originally drilled as a wildcat well to
16 the devonian. The devonian was dry, and we plugged back
17 and completed from the lower morrow.

18 Q Mr. Jordan, what is the general type of acreage in the
19 area; do you know?

20 A Most of it is Federal. In the Union's acreage, most of
21 it is Federal. There is some State acreage on to the
22 right, and in Section 4 is one 140-acre field piece in
23 the Southeast, Southeast which has been communitized by
24 the owner.

25 Q Are Sections 4, 5, 8, and 9 part of a working-interest

1 unit agreement?

2 A Yes, they are. The Union has approximately 90 percent
3 and Getty has approximately 10 percent.

4 Q Mr. Jordan, referring to what has been marked as Plaintiff's
5 Exhibit 2, would you identify that and explain it to the
6 Examiner, please?

7 A Exhibit 2 is a structure contour map, contoured to the
8 lower morrow pay sand. Contoured interval is 50 feet
9 and the scale of the map is one inch equals 1,000 feet.

10 On the left side of the map is a type log showing
11 the lower morrow pay zone which produces in the Number 1
12 Pipeline Federal. The sand is colored in yellow. The
13 perforation is red.

14 The original color is a porosity which has not been
15 tested. The red is gas porosity.

16 Q Referring to that, what is that grey in there?

17 A The grey is a thin shale stringer which I could carry
18 across from and serve other wells in the area there.

19 Q Does your structure map show the general outline of the
20 morrow sand under this?

21 A No. It does not. As you can see, we drilled the Pipeline
22 Federal 1 in the Northeast quarter of Section 8 and that
23 well was tied in all the morrow sands. We circled
24 different zones with negative results.

25 Oh, you can see that the sand itself does not lie

1 under this structural part of it.

2 Q In your opinion is the major portion of the sand in this
3 pool underlying Section 4?

4 A In all probability it does.

5 Q Referring to what has been marked Exhibit Number 3, Mr.
6 Jordan, would you identify that and explain it to the
7 Commission?

8 A Exhibit Number 3 is a two-well structure cross section
9 between Union's Number 1 Pipeline Federal in Section 4
10 and the Number 1 Pipeline Federal in Section 8. You
11 could find the correlative zone as shown here in the
12 Pipeline Federal A, but it is tied on the left to the
13 perforations of all zones which we tested in the Pipeline
14 Federal A and the perforations on the Pipeline Federal
15 Number 1. This certainly shows that the sand does not
16 go down to this well.

17 Q How many zones did you perforate in that well in Section 8?

18 A I believe there is a total of 6.

19 Q It was completed as a dry hole?

20 A It was completed as a Wolfcamp oil well from approximately
21 10,850 feet.

22 Q When was the Federal or the Pipeline Federal Number 1
23 completed?

24 A I don't remember the exact date. I don't remember the
25 exact date there. It was in, well --

1 Q Mr. Smith will testify to that.

2 A Yes.

3 Q Mr. Jordan, were Exhibits 1 through 3 prepared by you
4 or under your supervision?

5 A Yes, they were.

6 MR. JENNINGS: We would offer these exhibits at this
7 time.

8 MR. UTZ: Without objection --

9 MR. JENNINGS: We have nothing further of that witness.

10 MR. UTZ: --Exhibits 1, 2, and 3 will be entered into
11 the record of this case. Are there questions of the
12 witness?

13 CROSS-EXAMINATION

14 BY MR. UTZ:

15 Q Mr. Jordan, what is the original coloring under the shale?

16 A That is porosity which has not been tested. It wasn't
17 drill stem tested or it hasn't been perforated.

18 MR. UTZ: The witness may be excused.

19 ALAN SMITH

20 called as a witness, and having been previously sworn according
21 to law, testified as follows:

22 DIRECT EXAMINATION

23 BY MR. JENNINGS:

24 Q Would you state your name and occupation, please, sir?

25 A My name is Alan Smith. I'm a petroleum engineer. I work

1 for Union Oil Company in the Midland District Office.

2 MR. UTZ: How is the first name spelled?

3 THE WITNESS: A-L-A-N.

4 Q (By Mr. Jennings) Mr. Smith, have you appeared and
5 testified before the Oil Conservation Commission in the
6 state of New Mexico on many occasions in the past?

7 A On one occasion, yes, sir.

8 Q What is your training, Mr. Smith?

9 A I graduated from the Colorado School of Mines with a
10 degree of Petroleum Engineering.

11 Q When?

12 A 1966.

13 Q In what capacities have you been employed since then?

14 A Well, I worked in California for Union Oil Company for
15 two years and then went in the Army and came back and
16 worked out here in Midland about two-and-a-half years.

17 Q And you are currently employed in that same capacity?

18 A Yes, sir.

19 MR. JENNINGS: Are the witness' qualifications
20 acceptable?

21 MR. UTZ: Yes, sir. They are.

22 Q (By Mr. Jennings) Mr. Smith, are you generally familiar
23 with the Union Pipeline Federal Number 1 Well?

24 A Yes, sir.

25 Q Have you made an extensive study of this well and the

1 reservoir in which it is located?

2 A Yes, sir.

3 Q Would you just generally tell us the nature of the
4 production and what kind of a well it is and what kind
5 of a formation you have encountered there?

6 A Generally as has been previously testified to, this is
7 a morrow producer. It was tested in 1970 with a
8 calculated absolute open flow of 28 million.

9 It came on making condensate ratios in excess of
10 90 barrels per million cubic feet, and by March first of
11 this year the well had recovered almost five billion
12 cubic feet and 350,000 barrels of condensate.

13 It is currently producing rates of 10 million cubic feet
14 a day of 5,000 barrels a day of condensate.

15 Q Mr. Smith, referring to what has been marked as Exhibit
16 Number 4, would you identify that Exhibit and explain it
17 and its calculations contained therein?

18 A Exhibit Number 4 lists the reservoir and fluid properties.
19 At the time of the original hearing for a temporary rule,
20 this exhibit was printed. Generally this is exactly the
21 same data showing 10 percent porosity, 23 feet of sand
22 and 6548 PSI initial reservoir pressure.

23 Q Now, since the original hearing, have you made some
24 reserve calculations?

25 A Yes, sir.

1 Q Referring to what has been marked as Exhibit Number 5,
2 which consists of two pages which are graphs marked
3 5A and 5B, would you explain these calculations to us,
4 please?

5 A Generally what I've done on these exhibits here is try
6 to determine reserves 2 or 3 different ways. First,
7 we have courses using just straight volumetrics which
8 shows 640 acres.

9 We should have about 3 billion cubic feet. Then
10 also we have had some production history on this well.
11 This is Exhibit Number 1. We can extrapolate this down
12 to recoverable gas which would determine that we have
13 19.6 billion cubic feet recoverable wet gas and around
14 18 billion feet recoverable dry gas.

15 Of course, this well does make condensate and this
16 is the difference in these two. Referring back to
17 Exhibit 5 then using the volumetric number of 23,795
18 MCF per acre we can calculate how much acreage this gas
19 should cover, and this number is 992.

20 And of course, this can be a plus or a minus sum.
21 What we are interested in here is that generally we have
22 a well that has a large radial extent. In conjunction
23 with this also during these pressure surveys we have run
24 build-ups to determine the reservoir permeability to be
25 50 millidarcies as compared to a standard well

1 of one and a half millidarcies.

2 We see bottomhole pressure surveys have also verified
3 a drainage area of in excess of 640 acres. Now, the
4 number here (indicating) is a plot of the condensate
5 ratios versus cumulative gas production. I used this
6 to try to come up with what the condensate reserves are
7 in order to use it further for an economic analysis of
8 the well.

9 These numbers come up to about 600,000 barrels in
10 recoverable condensate ratio for the well of 33 barrels
11 per cubic feet.

12 Q Mr. Smith, referring to what has been marked Exhibit 6,
13 would you identify that and explain that?

14 A Exhibit 6 is simply the production history of the well.
15 Again noting that we have recovered almost 5 billion
16 cubic feet of gas and 350,000 barrels of condensate and
17 currently producing over 10 million to date at condensate
18 ratios in excess of 50 barrels per million.

19 Q In addition to your studies of the well and the reservoir,
20 have you made some economic studies of the cost of
21 drilling another well in the pool?

22 A Yes, sir.

23 Q Are these figures or some of the figures or your
24 calculations reflected on Exhibit 7?

25 A Yes, sir.

1 Q Would you refer to that exhibit and state generally what
2 these calculations are?

3 A This is generally what we feel that if we went out and
4 tried to drill another morrow well in that general area,
5 it is what it would cost us to drill another morrow well,
6 to set the facilities and so forth. These numbers are
7 generated from an actual well in the general area that
8 we are proposing.

9 Q What was the total cost on that?

10 A Total cost of \$435,000.

11 Q Now, that is not to the same objective depth as the
12 original Pipeline Federal, that is just to test the pay?

13 A Just to test the morrow.

14 Q Mr. Smith, please refer to what has been marked Exhibit 8.
15 This is some calculations you have prepared on the
16 economics of Union Oil Company of drilling the additional
17 well?

18 A Yes, sir.

19 Q Will you please explain that to us, please?

20 A All right. Generally what I've done on this page is
21 using the reserves we have developed from our engineering
22 studies, tried to look at the economic attractiveness
23 of drilling a second well on 640 acres.

24 The basic assumptions that we have made, of course,
25 is that the reserves are based merely on 640 acres which

1 in the case would be 15 billion cubic feet 420,000 barrels
2 of condensate, 15 billion in place which would amount
3 to 12.6 recoverable.

4 Also, I have said that the second or assumed that
5 the second well on the 640 acre tract would be as good
6 as the first well. Of course, this assumption is probably
7 a little optimistic based on the result of our Pipeline
8 Federal A Number 1 which was dry in the morrow.

9 I have also assumed that one well would recover
10 the reserves so that the second well merely accelerates
11 recovery. So what we are looking at is an income
12 acceleration.

13 Herein and about on this exhibit, I have listed the
14 income data and the cost and expense data, and then in
15 "C" we have looked at the economics again trying to make
16 an incremental comparison between two wells draining
17 640 acres and one well draining 640 acres.

18 As can be noted, we have an undiscounted loss of
19 \$473,564. This, of course, is the fact that we have to
20 drill another well to recover reserves that our first
21 well would recover.

22 Also, we have some difference in the gas price in
23 future years. Discounting this at 10 percent, we have a
24 loss of \$189,000, and, of course, the profitability
25 index of minus .42.

1 Q Generally, it would be quite uneconomic from your
2 standpoint?

3 A Yes, sir.

4 Q Mr. Smith, referring to what has been marked Exhibit 9,
5 would you identify that and tell me what it is?

6 A That is a sketch of the well elevations. This sketch
7 was also submitted with the application for the temporary
8 field rules.

9 Q Would the additional well be generally the same?

10 A Generally similar. It wouldn't be drilled this deep,
11 of course.

12 Q Based upon your studies of the reservoir and the well, the
13 reservoir and the economics, have you reached any
14 conclusions as to the practical and economic basic
15 pattern upon which this pool should be developed?

16 A We feel like it should be developed on 640 acres for
17 2 or 3 reasons. The first reason is we have, of course,
18 a real good morrow well with high reserves and high
19 permeability.

20 The second reason is that given this kind of a well,
21 the only way we can drill a second well in the tract is
22 to accelerate income. We have demonstrated through our
23 economics that it's not practical to accelerate income.
24 There is just not enough reserves, not enough gas price
25 to accelerate income.

1 Q In your opinion, Mr. Smith, would the Pipeline Federal
2 Number 1 Well effectively drain 640 acres?

3 A Yes, sir.

4 Q Do you feel that it will drain all of the gas producable
5 from this formation under Section 4?

6 A Yes, sir.

7 Q In your opinion would it be wasteful to drill wells in
8 this pool on a 320-acre spacing?

9 A Yes, sir.

10 Q Does Union Oil Company desire and recommend that the
11 temporary field rules be made permanent?

12 A Yes, sir.

13 Q Do you feel that the development of the pool on a 640-acre
14 spacing basis would impair the correlative rights of any
15 other operator or royalty owner in the area?

16 A No, sir.

17 Q Were Exhibits 4 through 9 prepared by you or under your
18 supervision?

19 A Yes, sir.

20 MR. JENNINGS: We would like to offer these exhibits.

21 MR. UTZ: Without objection, Exhibits 4 through 9
22 will be entered into the record of this case.

23 MR. JENNINGS: We have nothing further on this.

24 * * * * *

25

CROSS-EXAMINATION

BY MR. UTZ:

Q Mr. Smith, is this a one-well gas pool?

A Yes, sir. From what our pressure surveys tell us, it's a one-well gas pool.

Q What's the well in the Northeast quarter of Section 8?

A That's the Pipeline Federal A Number 1 which was a dry hole in the morrow zone.

Q Dry hole in the morrow?

A Right.

Q It's shown here as an oil well.

A Well, it is an oil well in the Wolfcamp now, but it was dry in the morrow.

Q I notice on your Exhibit 5A, I believe it is, your completion curve, you have cut off 1,000 pounds bottom-hole pressure. Do you think this is a reasonable pressure?

A For the depth that we are looking at, it's probably as good as we can do.

Q What kind of surface pressure? Have they been 1,000 pounds bottomhole?

A Well, generally you would be looking at about 500, 600 pounds, somewhere in that range. We might be able to get down a little bit lower if we put a compressor on it.

Of course, you would be looking at gas recovered way

1 out in the future; and any compressor installation would
2 probably balance out with the additional gas you get.

3 Q What kind of bottomhole pressures does it have at the
4 present time?

5 A The latest bottomhole pressure we ran on it in June of
6 '72 is 1,560 pounds.

7 Q So by the time you get down to 1,000 pounds in the well,
8 the price of gas may be where you will complete it further?

9 A It probably will.

10 MR. UTZ: Other questions of the witness? He may
11 be excused.

12 MR. JENNINGS: I might before we close ask if the
13 Commission received any communication in this case from
14 Getty.

15 MR. UTZ: Yes, they did, and in favor of 640-acre
16 spacing.

17 MR. JENNINGS: Fine. We have nothing further.

18 MR. UTZ: Are there statements in this case? If
19 there are none, the case will be taken under advisement.

20 * * * * *

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1 STATE OF NEW MEXICO)
2) ss.
3 COUNTY OF BERNALILLO)

4 I, JANET RUSSELL, a Notary Public, in and for the
5 County of Bernalillo, State of New Mexico do hereby certify
6 that the foregoing and attached Transcript of Hearing before
7 the New Mexico Oil Conservation Commission was reported by
8 me and that the same is a true and correct record of the
9 said proceedings to the best of my knowledge, skill and
10 ability.

11 Janet Russell
12 Notary Public
13
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23 I do hereby certify that the foregoing is
24 a complete record of the proceedings in
25 the Examiner hearing of Case No. 4434
heard by me on 4-11-73 19

Thos. O. [Signature] Examiner
New Mexico Oil Conservation Commission

I N D E XWITNESSPAGE

J.B. JORDAN

Direct Examination by Mr. Jennings

3

Cross-Examination by Mr. Utz

7

ALAN SMITH

Direct Examination by Mr. Jennings

7

Cross-Examination by Mr. Utz

16

E X H I B I T S

Exhibit #1

7

Exhibit #2

7

Exhibit #3

7

Exhibit #4

15

Exhibit #5

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Exhibit #6

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Exhibit #7

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Exhibit #8

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Exhibit #9

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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO

October 28, 1970

EXAMINER HEARING

IN THE MATTER OF:

Application of Union Oil Company
of California for the creation
of a new gas pool and special pool
rules, Lea County, New Mexico.

Case No. 4434

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case No. 4434.

MR. HATCH: This is the application of Union Oil Company of California for creation of a new gas pool and special rule rules, Lea County, New Mexico.

MR. BUELL: Mr. Examiner, my name is Sumner Buell with the firm of Montgomery, Federici, Andrews, Hannahs and Morris of Santa Fe, appearing on behalf of the applicant, Union Oil Company of California.

We have two witnesses and we ask that they be sworn.

J. B. JORDAN,

a witness, having been first duly sworn according to law, upon his oath, testified as follows:

MR. BUELL: Mr. Examiner, we would like to make a few amendments in this application.

In the application we ask that the proposed new pool be designated the Pipeline Morrow Pool. This appears at the second line of paragraph 2 of the application. We would like to change the designation to La Rica Morrow Pool.

In addition, Mr. Examiner, in the next to the last line of paragraph 2 we ask that well locations be set to be within one thousand three hundred twenty feet of the center of any spacing unit which will consist of the governmental

section. We would like that to be amended to read that well locations will be no closer than one thousand three hundred twenty feet to the exterior boundaries of any governmental section subject to certain qualifications and exceptions that are in the proposed rules and regulations which we will submit.

DIRECT EXAMINATION

BY MR. BUELL:

Q Would you state your name, please?

A J. B. Jordan.

Q And by whom and where are you employed?

A I am employed by the Union Oil Company of California in Roswell, New Mexico as a Development Geologist.

Q Have you testified before the Commission or one of its examiners before and had your qualifications accepted?

A Yes. I have.

MR. BUELL: Are the witness' qualifications acceptable?

MR. UTZ: Yes, sir. They are.

Q Are you familiar with what Union Oil Company seeks in its application in Case No. 4434?

A Yes. I am.

Q Would you briefly outline for the Examiner what is sought?

A Union Oil Company seeks the establishment of a new

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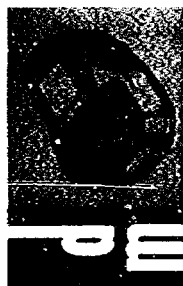
Morrow Pool for its No. 1 Pipeline located in the southwest quarter of Section 4, Township 19 South, Range 34 East. We also seek the establishment of field rules to provide for temporary six hundred forty acre spacing and well locations to be located no nearer than thirteen hundred twenty feet from the outer boundaries.

Q Mr. Jordan, I refer you to what has been marked as Exhibit No. 1. Would you describe what is shown on this exhibit?

A Exhibit No. 1 is a land plat which shows the ownership within the two mile radius of Union No. 1 Pipeline Federal. It also shows all the wells and dry holes drilled within that two mile radius and shows the line of cross section AA prime.

You will note in Section 6 there is a deep dry hole drilled by Humble. This well penetrated the entire Morrow section and was not able to complete. It had no shows.

In Section 7, the El Paso drilled the No. 1 Mescalero Ridge. This well was completed as a middle Morrow producer. After very limited production of approximately ninety million cubic feet and two thousand eight hundred barrels of condensate the well was abandoned.



The drainage area indicated by that well was probably less than ten acres.

Q Referring you to what has been marked as Exhibit No. 2, would you describe what is shown on this?

A Exhibit No. 2 is an electric log straight line structural cross section. This shows the relation between Union Pipeline Federal and the well in the southwest quarter of Section 16 and the one in the northwest quarter of Section 21 as shown by Exhibit 1. This shows the sand development in yellow. It is the lower Morrow sand from which Union No. 1 Pipeline Federal produces; the correlation to these two wells to the south and it shows the testing of the Morrow section there and the well in 16 and 21 both produced water with some gas from the lower Morrow, so from that I have established an approximate oil-water contact or gas-water contact.

The well in Section 21 produced from the middle Morrow sand which you will notice is not present in the Union Oil Co. No. 1 Pipeline Federal. The lower Morrow sand is wet in this area. The middle Morrow sand is not present in Union's well and this establishes a separation between these two fields.

MR. BUELL: I have no other questions of this

witness, Mr. Examiner.

CROSS EXAMINATION

BY MR. UTZ:

Q Usually we try to stay off of the quarter-quarter lines.
Now, what other figure would you like to throw in there?

A Well, I think probably sixteen-fifty would be a good figure.

Q Thirteen-thirty would do the job, so far as we are concerned.

A Thirteen-thirty then.

Q We don't like to see a well drilled on a quarter-quarter section line. Sometimes it presents problems.

A Yes.

Q 26.4 million open flow.

A That is calculated absolute open flow.

Q You must have some pretty good permeability.

A Our next witness will have the permeability calculations.

MR. UTZ: Are there any other questions?

You may be excused.

MR. BUELL: Excuse me. Were Exhibits 1 and 2 prepared by you or under your supervision?

THE WITNESS: Yes, sir. They were.

MR. BUELL: All right. That is all.



HENRY R. WILLIS,

a witness, having been first duly sworn according to law,
upon his oath, testified as follows:

DIRECT EXAMINATION

BY MR. BUELL:

Q Would you state your name, please?

A Henry R. Willis.

Q By whom are you employed, where and in what capacity?

A Union Oil Company of California; District Engineer,
residing in Midland, Texas.

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

A Yes, sir. I have.

MR. BUELL: Are the witness' qualifications still
acceptable?

MR. UTZ: Yes, sir. They still are.

Q Are you familiar with what Union seeks in Case No. 4434?

A Yes, sir.

Q Referring you to what is marked as Exhibit 3, would you
explain what is shown on that?

A Exhibit 3 presents a diagrammatic sketch of our current
completion, the Pipeline Federal No. 1, which is
located in Section 4, Township 19 South, Range 34 East,

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Lea County, New Mexico.

In this schematic we have set forth the completion mode of the well as it now stands, setting forth the various casing strings that were involved in the drilling of the well and in completing the well; also the cement amounts and tops that were used in cementing the casing; the position of the production tubing with the packer set at 13,225 feet and the perforated interval being located from 13,420 to 13,442. This interval was shot with one shot per foot. We have a plug-back total depth cemented in this particular well of 14,435 feet with a retainer set at 14,495 feet to plug off the open hole interval below our current completion.

I'd like to point out that this well was drilled to the Devonian. The Devonian was tested and found non-commercial prior to plugging-back and testing the Morrow zone. The total cost of this particular well is in excess of some four hundred thousand dollars because it was a Devonian test.

Q Referring you to what has been marked as Exhibit 4, would you explain that, please?

A We created Exhibit 4 utilizing our actual experience gained in the drilling of the Pipeline Federal No. 1

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to develop a typical thirteen thousand four hundred foot Morrow development well in the proposed La Rica Field. You will see we have included the specific items we think would be encountered in drilling this well and have come up with a total cost anticipated to be three hundred ninety-two thousand two hundred-fifty dollars. Referring you to Exhibit 5, now, would you please describe what is shown on that?

Q

A Exhibit 5 sets forth the reservoir and fluid property that we have measured in the Pipeline Federal No. 1. Item A sets forth the gas and condensate properties. The gas was actually analyzed from a separator sample. It sets forth the initial producing gas-oil ratio of nine thousand eighty MCF per barrel. It also sets forth, in Item B, the reservoir property that we have calculated or have measured relating to the Morrow horizon.

The porosity is indicated to be 10.3 percent which was obtained from log analyses.

We also utilized the analysis of logs to determine the water saturation to be twenty-five percent. The net pay thickness is twenty-three feet. The reservoir temperature was measured -- excuse me -- was estimated to be one hundred ninety degrees Fahrenheit and the

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PAGE 10

initial reservoir pressure was measured to be six thousand five hundred forty-eight pounds per square inch absolute.

Utilizing this data we have made some reserve calculations as shown in Item C and basically we have come up with a reserve recoverable reserve estimate of five thousand seven hundred ten million cubic feet of gas utilizing three hundred twenty acre drainage or eleven thousand four hundred twenty million cubic feet of gas utilizing six hundred forty acre drainage area, assuming the zone is productive under the entire interval and the twenty-three feet pay also exists in this area.

We have also calculated the condensate reserves on a three hundred twenty acre basis to be one hundred eighty-eight thousand five hundred barrels and under a six hundred forty acre drainage situation, three hundred seventy-seven thousand barrels.

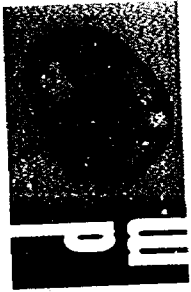
Q Referring you to Exhibit No. 6, would you please explain what is shown there.

A Exhibit 6 sets forth the economics we have calculated in the development of the Morrow formation in the proposed La Rica Pool and Item A sets out the commodity

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PAGE 11

prices that could be anticipated to generate income for these particular ventures. Item B sets forth the cost and expense data we would anticipate. The economics are then summarized under Item C and are set forth as three hundred twenty acre spacing and six hundred acre spacing.

The crux of the situation, I believe, is that under three hundred twenty acre spacing the profitability criteria we would generate would include a rate of return of seventeen percent. Under six hundred forty acre spacing it would generate a rate of return of forty-four percent.

The next item listed below the rate of return profitability index is a parameter we used and is described as the present worth of the cash flow discounted at ten percent divided by the present worth of the investment discounted at ten percent and you can see under three hundred twenty acre spacing we would generate a profitability index of .29 and under six hundred forty acres spacing we would generate a profitability index of 1.28.

Q What is considered a minimal profitability index in the industry on which a well could be drilled or developed?

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- A My experience has been that industry standards would generally set a minimum criteria of a rate of return of twenty percent and a profitability index of .5.. This means roughly you get fifty cents on your dollar invested discounted at ten percent.
- Q If that is the minimum generally in the industry, what is the acceptable profitability index?
- A The acceptable profitability index would be 1.0.
- Q In other words, under three hundred twenty acre spacing based upon the reservoir characteristics as you know them at this time, three hundred twenty acre spacing does not give you anywhere near a minimum or acceptable profitability index in the industry?
- A That is correct.
- Q Now, look at Exhibit No. 7. Would you just briefly summarize what this exhibit is?
- A Exhibit 7 sets forth the proposed temporary special rules and regulations for the La Rica Morrow Gas Pool. The highlight of this exhibit I think would basically contain the fact that under Rule 2 each well would be located on the standard unit containing six hundred forty acres more or less and would consist of a governmental section.



There has been some discussion earlier about the spacing from the outer boundary and this would be found in Rule 4 and should be corrected to read each well shall be located no nearer than three hundred thirty feet to the outer boundary of the section.

It also provides for exceptions to the existing well, namely the Pipeline Federal No. 1 and any other well that might be drilled to the well location requirement that we have just talked about and it further states that the case would be re-opened for hearing one year after the date that a pipe line connection was first obtained for a well in the La Rica Morrow Gas Pool at which time we would show cause why this pool should not be developed on three hundred twenty acre spacing units.

Q Is it correct at this time that this well has neither been connected to a pipe line nor flared?

A That is correct. The only flaring, if you could consider it as such, would be the simple clean up after the perforating and then the four point tests that was conducted over about a four hour period.

Q The results of that has been available to the Commission?

A That is right.

Q Were Exhibits 3 through 7 prepared by you or under your



supervision?

A Yes, sir.

Q Is it your opinion that the granting of this application would prevent waste and protect correlative rights?

A Yes, sir.

MR. BUELL: I have no other questions.

MR. UTZ: You want to introduce your exhibits?

MR. BUELL: Yes, sir. I move the introduction of Exhibits 1 through 7.

MR. UTZ: Without objection, Exhibits 1 through 7 will be entered into the record in this case.

CROSS EXAMINATION

BY MR. UTZ:

Q Have you connected this well yet?

A No, sir. We have not.

Q Do you have a contract yet?

A No, sir. Our gas department is currently trying to negotiate a contract at this time.

Q Have you tested the well?

A Just the four point open flow test which was twenty-six point four million.

MR. UTZ: Are there any other questions of the witness?



CROSS EXAMINATION

BY MR. HATCH:

Q Is it common for a six hundred forty acre gas pool in the southeast to have their well locations no nearer than nineteen hundred eighty from the outer boundary of the section?

A I have seen some orders where this has been in effect, yes, sir.

Q I think probably a number of others may be sixteen hundred fifty.

A Sixteen hundred fifty is really the more common distance that I observed in my review of the records.

Q Is there some reason for needing closer for the outer boundary in this particular case?

A No, sir. It would fit a little better into three hundred twenty acre spacing, of course, if we did go to that spacing in the future. Basically we did discuss this with other operators in the area and, as you remember, we had a different location in our application and this was called to our attention and because of these calls we more or less came up with the thirteen hundred twenty or thirteen hundred thirty since we had no objection to spacing it that way and they seemed to prefer it



that way.

MR. HATCH: That is all.

MR. UTZ: Any other questions?

THE WITNESS: I think the open flow potential does indicate that this well should be capable of draining six hundred forty acres.

MR. UTZ: You didn't core this section, did you?

THE WITNESS: No, sir. We did not.

MR. UTZ: The case will be taken under advisement.

Any statements in the case?

All right, the case will be taken under advisement.

MR. HATCH: Gulf Oil Corporation concurs with the application of Union and Getty Oil Company concurs; W. P. Duncan; Perry R. Bass by W. P. Duncan, Jr., supports.

I have a letter from David Sorenson. He has no objection. That is all.

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STATE OF NEW MEXICO)
COUNTY OF BERNALILLO) ss.

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

Peter A. Lumia
Peter A. Lumia, C.S.R.

I do hereby certify that the foregoing is
a true and correct record of the proceedings in
the case of *4434*
10-28-70
Theresa M. [Signature]
New Mexico Oil Conservation Commission

dearnley-meier reporting service, inc.

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I N D E X

WITNESS:

PAGE:

J. B. JORDAN

Direct Examination by Mr. Buell

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Cross Examination by Mr. Utz

6

HENRY R. WILLIS

Direct Examination by Mr. Buell

7

Cross Examination by Mr. Utz

14

Cross Examination by Mr. Hatch

15

E X H I B I T S

APPLICANT'S

OFFERED AND
ADMITTED

Nos. 1 through 7

14

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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
September 30, 1970

EXAMINER HEARING

IN THE MATTER OF:)

Application of Union Oil)
Company of California for)
the creation of a new gas)
pool and special pool rules,)
Lea County, New Mexico.)

Case No. 4434

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: We will call the next case,
Case No. 4434.

MR. HATCH: Case No. 4434. Application of
Union Oil Company of California for the creation of a
new gas pool and special pool rules, Lea County, New Mexico.

The Commission has received a request from
the Applicant in this case that it be continued to
October 28th.

MR. NUTTER: Case No. 4434 will be continued
to the Examiner Hearing to be held at this same place at
9:00 A.M., October 28, 1970.

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PAGE 3

STATE OF NEW MEXICO)
COUNTY OF SANTA FE) SS.

I, RICHARD L. NYE, Court Reporter, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

Richard L. Nye
RICHARD L. NYE, Court Reporter

My Commission expires April 8, 1971.

I do hereby certify that the foregoing is a complete record of the proceedings in the hearing of case no. 4434 held by me on 9/30 1970.

James, Secretary
New Mexico Oil Conservation Commission



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

P. O. BOX 2088 - SANTA FE

87501

May 21, 1973

GOVERNOR
BRUCE KING
CHAIRMAN

**LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER**

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

Mr. James T. Jennings
Jennings, Christy & Copple
Attorneys at Law
Post Office Box 1180
Roswell, New Mexico 88201

Re: Case No. 4434
Order No. R-4523
Applicant:
OCC

Dear Sir:

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

Very truly yours,

A. L. Porter

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC _____ x
Artesia OCC _____
Aztec OCC _____

Other _____

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE NO. 4434
Order No. R-4523

IN THE MATTER OF CASE 4434 BEING
REOPENED PURSUANT TO THE PROVISIONS
OF ORDER NO. R-4058, WHICH ORDER
ESTABLISHED SPECIAL RULES AND REGULATIONS
FOR THE LA RICA-MORROW GAS POOL, LEA
COUNTY, NEW MEXICO, INCLUDING A PROVISION
FOR 640-ACRE PRORATION UNITS.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on April 11, 1973,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 17th day of May, 1973, the Commission, a
quorum being present, having considered the testimony, the
record, and the recommendations of the Examiner, and being
fully advised in the premises,

FINDS:

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

(2) That by Order No. R-4058, dated November 10, 1970,
temporary special rules and regulations were promulgated for
the La Rica-Morrow Gas Pool, Lea County, New Mexico, estab-
lishing temporary 640-acre spacing units.

(3) That pursuant to the provisions of Order No. R-4058,
this case was reopened to allow the operators in the subject
pool to appear and show cause why the La Rica-Morrow Gas Pool
should not be developed on 320-acre spacing units.

(4) That the evidence establishes that one well in the
La Rica-Morrow Gas Pool can efficiently and economically drain
and develop 640 acres.

(5) That the Special Rules and Regulations promulgated by
Order No. R-4058 have afforded and will afford to the owner of
each property in the pool the opportunity to produce his just
and equitable share of the gas in the pool.

-2-

Case No. 4434
Order No. R-4523

(6) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, the Special Rules and Regulations promulgated by Order No. R-4058 should be continued in full force and effect until further order of the Commission.

IT IS THEREFORE ORDERED:

(1) That the Special Rules and Regulations governing the La Rica-Morrow Gas Pool, Lea County, New Mexico, promulgated by Order No. R-4058, are hereby continued in full force and effect until further order of the Commission.


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

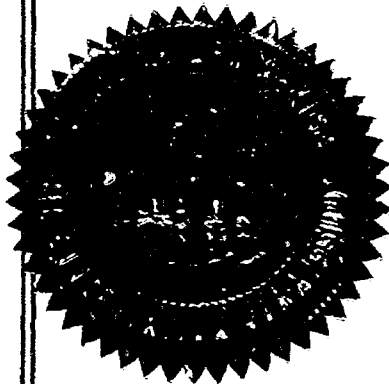
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


I. R. TRUJILLO, Chairman


ALEX J. ARMILLO, Member


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



S E A L

dr/

Case 4434

Heard 4-11-73

Rec. 4-25-73

Grant, Union of Cal. permanent
pool Rules for the special
Morrow Gas Pool. Order 4058
Case. 4434.

John B. Mc

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE No. 4434
Order No. R-4058
NOMENCLATURE

APPLICATION OF UNION OIL COMPANY
OF CALIFORNIA FOR THE CREATION OF
A NEW GAS POOL AND SPECIAL POOL
RULES, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 28, 1970, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 10th day of November, 1970, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Union Oil Company of California, seeks the creation of a new gas pool for Morrow production in Lea County, New Mexico, and the promulgation of special rules and regulations governing said pool, including a provision for 640-acre spacing and proration units and fixed well location requirements.

(3) That the Union Oil Company of California Pipeline Federal Well No. 1, located 660 feet from the South line and 760 feet from the West line of Section 4, Township 19 South, Range 34 East, NMPM, Lea County, New Mexico, having its top perforations at 13,420 feet, has discovered a separate common

-2-

CASE No. 4434

Order No. R-4058

source of supply which should be designated the La Rica-Morrow Gas Pool; that the vertical limits of said pool should be the Morrow formation and that the horizontal limits of said pool should be all of said Section 4.

(4) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, temporary special rules and regulations providing for 640-acre spacing units should be promulgated for the La Rica-Morrow Gas Pool.

(5) That the temporary special rules and regulations should provide for limited well locations in order to assure orderly development of the pool and protect correlative rights.

(6) That special rules and regulations should be established for a temporary period to expire one year from the date that a pipeline connection is first obtained for a well in the pool; that during this temporary period all operators in the subject pool should gather all available information relative to drainage and recoverable reserves.

(7) That this case should be reopened at an examiner hearing one year from the date that a pipeline connection is first obtained for a well in the La Rica-Morrow Gas Pool, at which time the operators in the subject pool should appear and show cause why the La Rica-Morrow Gas Pool should not be developed on 320-acre spacing units.

(8) That the first operator to obtain a pipeline connection for a well in the La Rica-Morrow Gas Pool should notify the Commission in writing of such fact, and that the Commission should thereupon issue a supplemental order designating an exact date for reopening this case.

IT IS THEREFORE ORDERED:

(1) That a new pool in Lea County, New Mexico, classified as a gas pool for Morrow production, is hereby created and designated the La Rica-Morrow Gas Pool, with vertical limits comprising

-3-

CASE No. 4434

Order No. R-4058

the Morrow formation and horizontal limits comprising the following-described area:

LEA COUNTY, NEW MEXICO
TOWNSHIP 19 SOUTH, RANGE 34 EAST, NMPM
Section 4: All

(2) That temporary Special Rules and Regulations for the La Rica-Morrow Gas Pool, Lea County, New Mexico, are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE
LA RICA-MORROW GAS POOL

RULE 1. Each well completed or recompleted in the La Rica-Morrow Gas Pool or in the Morrow formation within one mile thereof, and not nearer to or within the limits of another designated Morrow gas pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. Each well shall be located on a standard unit containing 640 acres, more or less, consisting of a governmental section.

RULE 3. The Secretary-Director of the Commission may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit and the unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the United States Public Land Surveys, or the following facts exist and the following provisions are complied with:

- (a) The non-standard unit consists of quarter-quarter sections or lots that are contiguous by a common bordering side.
- (b) The non-standard unit lies wholly within a governmental section and contains less acreage than a standard unit.
- (c) The applicant presents written consent in the form of waivers from all offset operators and from all operators owning interests in

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CASE No. 4434
Order No. R-4058

the section in which the non-standard unit is situated and which acreage is not included in said non-standard unit.

- (d) In lieu of paragraph (c) of this rule, the applicant may furnish proof of the fact that all of the aforesaid operators were notified by registered or certified mail of his intent to form such non-standard unit. The Secretary-Director may approve the application if no such operator has entered an objection to the formation of such non-standard unit within 30 days after the Secretary-Director has received the application.

RULE 4. Each well shall be located no nearer than 1650 feet to the outer boundary of the section and no nearer than 330 feet to any governmental quarter-quarter section line.

RULE 5. The Secretary-Director may grant an exception to the requirements of Rule 4 without notice and hearing when an application has been filed for an unorthodox location necessitated by topographical conditions or the recompletion of a well previously drilled to another horizon. All operators offsetting the proposed location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all operators offsetting the proposed location or if no objection to the unorthodox location has been entered within 20 days after the Secretary-Director has received the application.

IT IS FURTHER ORDERED:

(1) That the locations of all wells presently drilling to or completed in the La Rica-Morrow Gas Pool or in the Morrow formation within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall notify the Hobbs District Office of the Commission in writing of the name and location of the well on or before December 1, 1970.

(2) That, pursuant to Paragraph A. of Section 65-3-14.5, NMSA 1953, contained in Chapter 271, Laws of 1969, existing wells in the La Rica-Morrow Gas Pool shall have dedicated thereto

-5-

CASE No. 4434

Order No. R-4058

640 acres in accordance with the foregoing pool rules; or, pursuant to Paragraph C. of said Section 65-3-14.5, existing wells may have non-standard spacing or proration units established by the Commission and dedicated thereto.

Failure to file new Forms C-102 with the Commission dedicating 640 acres to a well or to obtain a non-standard unit approved by the Commission within 60 days from the date of this order shall subject the well to cancellation of allowable. Until said Form C-102 has been filed or until a non-standard unit has been approved, and subject to said 60-day limitation, each well presently drilling to or completed in the La Rica-Morrow Gas Pool or in the Morrow formation within one mile thereof shall receive no more than one-half of a standard allowable for the pool.

(3) That this cause shall be reopened at an examiner hearing one year from the date that a pipeline connection is first obtained for a well in the La Rica-Morrow Gas Pool, at which time the operators in the subject pool may appear and show cause why the La Rica-Morrow Gas Pool should not be developed on 320-acre spacing units.

(4) That the first operator to obtain a pipeline connection for a well in the La Rica-Morrow Gas Pool shall notify the Commission in writing of such fact, and that the Commission will thereupon issue a supplemental order designating an exact date for reopening this case.

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

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



STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

David F. Cargo
DAVID F. CARGO, Chairman

Alex J. Armijs
ALEX J. ARMIJS, Member

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

Docket No. 19-73

DOCKET: EXAMINER HEARING - WEDNESDAY - APRIL 11, 1973

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

The following cases will be heard before Elvis A. Utz, Examiner, or Richard L. Stamets, Alternate Examiner:

- ALLOWABLE: (1) Consideration of the allowable production of gas for May, 1973 from seventeen prorated pools in Lea, Eddy, Roosevelt and Chaves Counties, New Mexico.
- (2) Consideration of the allowable production of gas from nine prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico for May, 1973.

CASE 4927: (Continued from the March 28, 1973, Examiner Hearing)

Application of Union Oil Company of California for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation in the perforated interval from 12,000 feet to 12,010 feet in its Federal "D" Well No. 2 located in Unit J of Section 31, Township 9 South, Range 36 East, West Crossroads-Devonian Pool, Lea County, New Mexico.

CASE 4434: (Reopened)

In the matter of Case 4434 being reopened pursuant to the provisions of Order No. R-4058, which order established special rules and regulations for the La Rica-Morrow Gas Pool, Lea County, New Mexico, including a provision for 640-acre proration units. All interested parties may appear and show cause why said pool should not be developed on 320-acre units.

CASE 4928: (Continued from the March 28, 1973, Examiner Hearing)

Application of Union Oil Company of California 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 all of Section 11, Township 21 South, Range 25 East, Catclaw Draw-Morrow Gas Pool, Eddy County, New Mexico, to be dedicated to the Atlantic Richfield Oil Company Pure-Federal Well No. 11 located in Unit K of said Section 11. Applicant further seeks a provision for the payment of proper costs to be borne by applicant for such well and the related well equipment, a provision for allocation of actual operating costs, and the establishment of charges for supervision of such well and the designation of an operator thereof; and for such other relief as proper. Also to be considered will be the risk involved in drilling the subject well.

- CASE 4932: Application of Atlantic Richfield Company for a non-standard proration unit, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for a 340.94-acre non-standard gas proration unit comprising the W/2 of Section 11, Township 21 South, Range 25 East, Catclaw Draw-Morrow Gas Pool, Eddy County, New Mexico, to be dedicated to its Pure Federal Well No. 1 located in Unit K of said Section 11.
- CASE 4933: Application of Texaco Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Delaware formation through the perforated interval from 4280 feet to 4288 feet in its R. T. Wilson Federal Well No. 5 located in Unit J of Section 24, Township 26 South, Range 31 East, North Mason-Delaware Pool, Lea County, New Mexico.
- CASE 4934: Application of Texaco Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation in the open-hole interval from 12,172 feet to 12,581 feet of its U. D. Sawyer Well No. 3 located in Unit I of Section 34, Township 9 South, Range 36 East, Crossroads-Devonian Pool, Lea County, New Mexico.
- CASE 4935: Application of Texaco Inc. for dissolution of a unit and approval of another unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the dissolution of the State "JD" Unit Area approved by Commission Order No. R-3886 and the approval of the Rhodes Yates Unit Area comprising 520 acres, more or less, of State and Federal lands in Township 26 South, Range 37 East, Lea County, New Mexico.
- CASE 4936: Application of Texaco Inc. for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its Rhodes Yates Unit Area by the injection of water into the Yates-Seven Rivers formations through seven injection wells located in Sections 21, 27 and 28, Township 26 South, Range 37 East, Rhodes-Yates Pool, Lea County, New Mexico.
- CASE 4923: (Continued and Readvertised)
- Application of Continental Oil Company for a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for a 360-acre non-standard gas proration unit comprising Lots 14, 15, and 16 and the SE/4 and E/2 SW/4 of Section 4, Township 21 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico, to be dedicated to its Meyer B-4 Well No. 4 located in Unit S of said Section 4.

CASE 4937: Application of Continental Oil Company for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Bell Lake-Bone Spring Pool, Lea County, New Mexico, including a provision for 160-acre proration units.

CASE 4683: (Reopened)

In the matter of Case 4683 being reopened pursuant to the provisions of Order No. R-4286, which order established special rules and regulations for the West Tres Papalotes-Pennsylvanian Pool, Lea County, New Mexico, including a provision for 160-acre proration units. All interested parties may appear and show cause why said pool should not be developed on less than 160-acre units.

CASE 4938: Application of Hanson Oil Corporation for an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a producing oil well at an unorthodox location 990 feet from the South line and 1650 feet from the West line of Section 2, Township 9 South, Range 33 East, Vada-Pennsylvanian Pool, Lea County, New Mexico.

CASE 4939: Application of Penroc Oil Corporation for compulsory pooling, a non-standard proration unit, an unorthodox gas well location, and a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Atoka and Morrow formations underlying the E/2 W/2 and the W/2 E/2 of Section 11, Township 24 South, Range 34 East, Antelope Ridge Gas Field extension, Lea County, New Mexico, to form a 320-acre non-standard gas proration unit in said pools to be dedicated to a well to be drilled at an unorthodox location 660 feet from the North line and 1980 feet from the West line of said Section 11. Also to be considered will be the cost of drilling said well, a charge for the risk involved, a provision for the allocation of actual operating costs, and the establishment of charges for supervision of said well. Applicant further seeks authority to dually complete said well in the above-named formations.

CASE 4940: Application of Pennzoil Company for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks to dually complete its Mobil 12-Federal Well No. 1 located in Unit B of Section 12, Township 23 South, Range 26 East, Eddy County, New Mexico, in such a manner as to produce gas from the South Carlsbad-Canyon Pool extension and from the South Carlsbad-Morrow Gas Pool through parallel strings of tubing.

CASE 4941: Application of Pennzoil Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill a producing gas well at an unorthodox location 1980 feet from the North line and 660 feet from the East line of Section 13, Township 18 South, Range 25 East, West Atoka-Morrow Gas Pool, Eddy County, New Mexico, the N/2 of said Section 13 to be dedicated to said well.

CASE 4497: (Reopened)

Application of Twinlakes Oil Company for the reinstatement of pool rules, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks the reinstatement of the special pool rules for the Twin Lakes-San Andres Pool, Chaves County, New Mexico, as promulgated by Order No. R-4102, provided however, that the limiting gas-oil ratio would be 2000 to one.

CASE 4942: Application of Texas West Oil & Gas Corporation for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its State "2" Com Well No. 1 at a point 2310 feet from the North line and 660 feet from the West line of Section 2, Township 24 South, Range 34 East, Antelope Ridge-Atoka Gas Pool extension, Lea County, New Mexico, the N/2 of said Section 2 being dedicated to the well.

CASE 4943: Application of M. W. Staples for an unorthodox oil well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to produce oil from his Vanderventer Well No. 2 located 1310 feet from the North line and 1330 feet from the East line of Section 20, Township 18 South, Range 28 East, Artesia Pool, Eddy County, New Mexico. Said well was drilled as an injection well at said location pursuant to authority granted by Order No. R-3341.



OIL CONSERVATION COMMISSION

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

GOVERNOR
DAVID F. CARGO
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER

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

November 10, 1970

Mr. Sumner Buell
Montgomery, Federici, Andrews,
Hannahs & Morris
Attorneys at Law
Santa Fe, New Mexico

Re: Case No. 4434
Order No. R-4058
Applicant:
Union Oil Company of California

Dear Sir:

POCKET MAILED
Date 3/28/73

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

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x

Artesia OCC

Aztec OCC

Other _____

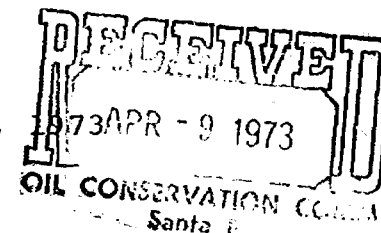


Getty Oil Company

P.O. Box 1231, Midland, Texas 79701

North American Exploration and Production Division R. J. Starrak, District Production Manager

April 5,



New Mexico Oil Conservation
Commission
Santa Fe, New Mexico

Re: La Rica-Morrow Gas Pool
Rules Review (Case 4434)
(Reopened) Lea County,
New Mexico

Attention: Mr. Elvis A. Utz

Gentlemen:

Getty Oil Company is of the opinion that the temporary rules allowing 640 acre spacing units in the captioned Field should be retained as permanent rules. Production history and pressure data from the Pipeline Federal No. 1, located 660' FSL and 760' FWL, Section 4, T-19-S, R-34-E indicate that the reservoir is of sufficient quality to permit drainage of 640 acres. We, therefore, urge the Commission to make the special temporary rules permanent to provide for Field-wide 640 spacing.

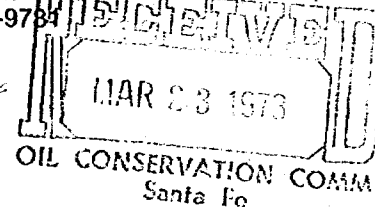
Yours truly,

EFG:nh

cc: Union Oil Company of California

Union Oil and Gas Division: Central Region

Union Oil Company of California
500 North Marienfeld, Midland, Texas 79701
Telephone (915) 682-9784



Midland District

March 20, 1973

File

Mr. D. S. Nutter
Chief Engineer
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Dear Mr. Nutter:

This is to advise that Union Oil Company of California has been selling gas from its Pipeline Federal lease, well No. 1, La Rica Morrow Pool, Unit M, Section 4, 19-S, 34-E, Lea County, New Mexico, with first sales being delivered October 12, 1971. The La Rica Morrow Gas Pool is currently operating under temporary special rules and regulations, and, since sales have continued in excess of one year, it is our understanding that this cause will now be reopened for an examiner hearing to show cause why the La Rica Morrow Gas Pool should not be developed on 320 acre spacing units in accordance with Rule 3 of Order No. R-4058 setting forth rules and regulations pertaining to the La Rica Morrow Gas Pool. As discussed in phone conversation this date, it is our further understanding that this cause will be reopened on April 11, 1973, at which time we will endeavor to demonstrate that 640 acre spacing is advantageous for continued exploitation and development in this pool.

As you are aware, we are currently scheduled for an examiner hearing on March 28, 1973 (Case 4927) seeking approval to utilize our No. 2 Federal "D" well, Unit J, Section 31, T-9-S, R-36-E, West Crossroads-Devonian Pool, Lea County, for disposal of produced water into the Devonian formation. In order that these cases might be heard the same day, we would appreciate this latter hearing being rescheduled for April 11, 1973 if such meets with your approval.

Your favorable consideration in this matter would be most appreciated.

Very truly yours,

John R. Gray
Acting District Operations Manager

HRW:rb

Case 9434

Heard 10-25-70

Rec. 11-4-70

Grant Union an order for special
pool rules for their newly discovered
~~pool~~ La Rica-Morrow gas pool.

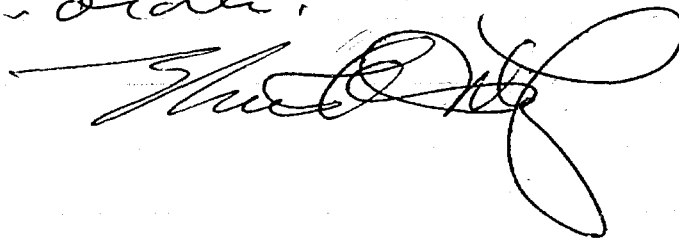
Discovery well was operators, Pipeline
Ded #1 Unit M-4-19.3-34E.

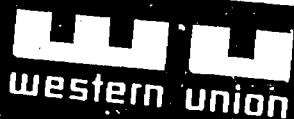
Use Indian Basin Rules.

640 ac. spacing. 1650' from outer.

boundary 330' from 1/4' lines.

1 year term order.





Telegram

KA029 NSB036 SSB100

(850).

NS MDA010 RS PDF=MIDLAND TEX 29 840A CDT=
A L PORTER JR, SEC DIR=

1970 SEP 29 AM 8 37

NMOCC SANTA FE NMEX=

RE EXAMINER HEARING SEPT 30 1970. NEW POOL AND SPECIAL
RULES (CASE 4434) GETTY OIL COMPANY CONCURS WITH
PROVISIONS AS OUTLINED IN UNION OIL CO OF CALIFORNIA
PROPOSAL FOR THE CREATION OF A NEW GAS POOL AND THE
ADOPTION OF TEMPORARY POOL RULES FOR UNION'S #1 PIPELINE
FEDERAL WELL LOCATED IN SECTION 4 T-19-S R-34-E LEA
COUNTY. GETTY OIL OWNS 9.56 PERCENT OF THIS WELL=
J E PIERCE DIST PROD MGR GETTY OIL CO=

WU 1201 (R 5-69)



Telegram

KA025 SSK025

(822)

K RWA002 HO PDB=ROSWELL NMEX 29 813A MDT=
OIL CONSERVATION COMMISSION=

SANTA FE NMEX=

1970 SEP 29 AM 8 31

ATTENTION: A. L. PORTER, JR.

RE CASE NO. 4434, EXAMINER HEARING SEPTEMBER 30,
1970 GULF OIL CORPORATION CONCURS WITH UNION OIL COMPANY
OF CALIFORNIA IN THEIR APPLICATION FOR NEW GAS POOL FOR
THE PIPELINE FEDERAL WELL NO. 1, SECTION 4, T-19-S,
R-34-E, LEA COUNTY, NEW MEXICO, AND FOR PROMULGATION OF
SPECIAL RULES INCLUDING 640 ACRE SPACING=
GULF OIL CORP M I TAYLOR=

WU 1201 (R 5-69)

DAVID J. SORENSON
OIL AND GAS

70 SEP 28 PM 1 17

P. O. BOX 1453
301 J. P. WHITE BLDG.
ROSSELL, NEW MEXICO
88201
September 25, 1970

TELEPHONE 805
OFFICE 622-6311
HOME 622-4025



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

Re: Case No. 4434
(Union Oil Co. of California)
September 30, 1970

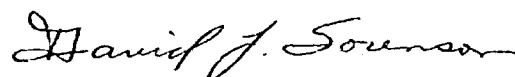
Attention: Mr. A. L. Porter, Jr.
Secretary-Director

Gentlemen:

The undersigned is the owner of State of New Mexico Oil & Gas Lease No. L-2375 which covers, among other lands, the NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 34, Township 18 South, Range 34 East, Lea County, New Mexico.

I have been advised by Union Oil Company of California that they are proposing 640-acre spacing, etc., in connection with their Morrow gas well located in Section 4, Township 19 South, Range 34 East, and this letter is to advise that as an offset lease owner, I have no objection to their proposal.

Yours very truly,



David J. Sorenson

DJS/ed

DOCKET MAILED

Date 10-14-70



Telegram

KA097 NSB296

1970 SEP 25 PM 3 04 (335)

NS FWB212 TM PDB 6 EXTRA=FAX FORT WORTH TEX 25 328P CDT=
OIL CONSERVATION COMMISSION, STATE OF NEW MEXICO=

PO BOX 2088 SANTA FE NMEX, 87501=

WE SUPPORT UNION OIL COMPANY OF CALIFORNIA'S REQUEST FOR
640-ACRE SPACING WITH AN ALLOWANCE OF 1320 FEET FROM
LEASE LINES FOR THEIR PIPELINE-FEDERAL NO. 1 WELL WHICH
IS SET UP FOR HEARING IN CASE (NO. 4434) ON SEPTEMBER 29,
1970=

70 SEP 25 PM 4 23

PERRY R BASS BY: W. P. DUNCAN JR.=

=640 1320 4434 29 1970.

Docket No. 22-70

DOCKET: EXAMINER HEARING - WEDNESDAY - SEPTEMBER 30, 1970

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

The following cases will be heard before Elvis A. Utz, Examiner, or Daniel S. Nutter, Alternate Examiner:

CASE 4416: (Continued from the September 16, 1970, Examiner Hearing)

Application of Robert L. Parker Trust for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a cooperative waterflood project in the Langlie Mattix Pool on its George L. Erwin Lease by the injection of water through its Erwin Well No. 2 located in Unit L of Section 35, Township 24 South, Range 37 East, Lea County, New Mexico.

CASE 4422: (Continued from the September 2, 1970, Examiner Hearing)

Application of Atlantic Richfield Company for amendment of Order No. R-3588, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-3588, which order authorized the disposal of produced salt water into the Yates and Seven Rivers formation in the perforated and open-hole interval from 3110 feet to 3300 feet in the Sinclair ARC Federal Well No. 1 located in Unit O of Section 9, Township 20 South, Range 33 East, West Teas Pool, Lea County, New Mexico. Applicant now seeks authority to dispose into said zones in the interval from 3010 feet to 3300 feet.

CASE 4222: (Reopened)

In the matter of Case 4222 being reopened pursuant to the provisions of Order No. R-3850, which order established 80-acre spacing units for the West Sawyer-San Andres Pool, Lea County, New Mexico, for a period of one year. All interested parties may appear and show cause why said pool should not be developed on 40-acre spacing units and present evidence as to whether or not the subject pool is in fact an associated reservoir.

CASE 4429: Application of Union Texas Petroleum Corporation for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Langlie-Jal Unit Area comprising 3,748 acres, more or less, of federal, state, and fee lands in Townships 24 and 25 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico.

CASE 4430: Application of Union Texas Petroleum Corporation of a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its Langlie-Jal Unit by the injection of water into the Seven Rivers and Queen formations through 46 wells in Townships 24 and 25 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico.

(Reopened)

CASE 4173: In the matter of Case 4173 being reopened pursuant to the provisions of Order No. R-3811-A, which order extended 80-acre spacing units and a limiting gas-oil ratio of 4000 cubic feet of gas per barrel of oil for the Hobbs-Drinkard Pool, Lea County, New Mexico, for a period of 90 days. All interested parties may appear and show cause why said pool should not be developed on 40-acre spacing, why the limiting gas-oil ratio should not revert to 2000 to one, and/or why all casing-head gas produced by wells in the pool should not be reinjected.

CASE 4420: (Continued and Readvertised)

Application of Xplor Company for the creation of a new gas pool and special rules therefor, a dual completion, and authority to commingle, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Pennsylvanian gas pool for its Cleveland Well No. 1 located in Unit G of Section 23, Township 12 South, Range 32 East, Lea County, New Mexico, and for the promulgation of special rules therefor, including a provision for 160-acre spacing units. In the alternative, applicant seeks approval of a non-standard 160-acre gas proration unit comprising the NE/4 of said Section 23 to be dedicated to said well. Applicant also seeks authority to dually complete said well in such a manner as to produce oil from the East Caprock-Devonian Pool and gas from said Pennsylvanian formation and to commingle on the surface the liquids from said zones.

CASE 4431: Application of William A. and Edward R. Hudson for unorthodox well locations and a dual completion, Lea County, New Mexico. Applicants, in the above-styled cause, seek authority to drill a well at an unorthodox location (off pattern) 660 feet from the South line and 1980 feet from the West line of Section 15, Township 17 South, Range 32 East, Lea County, New Mexico, for the production of oil from the Baish-Wolfcamp and Maljamar-Abo Pools and to dually complete said well in the subject pools.

CASE 4432: Application of MWJ production Company for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the rules governing the Baum-Upper Pennsylvanian Pool to permit the drilling of an oil well at an unorthodox location 2310 feet from the South line and 990 feet from the West line of Section 5, Township 14 South, Range 33 East, Lea County, New Mexico.

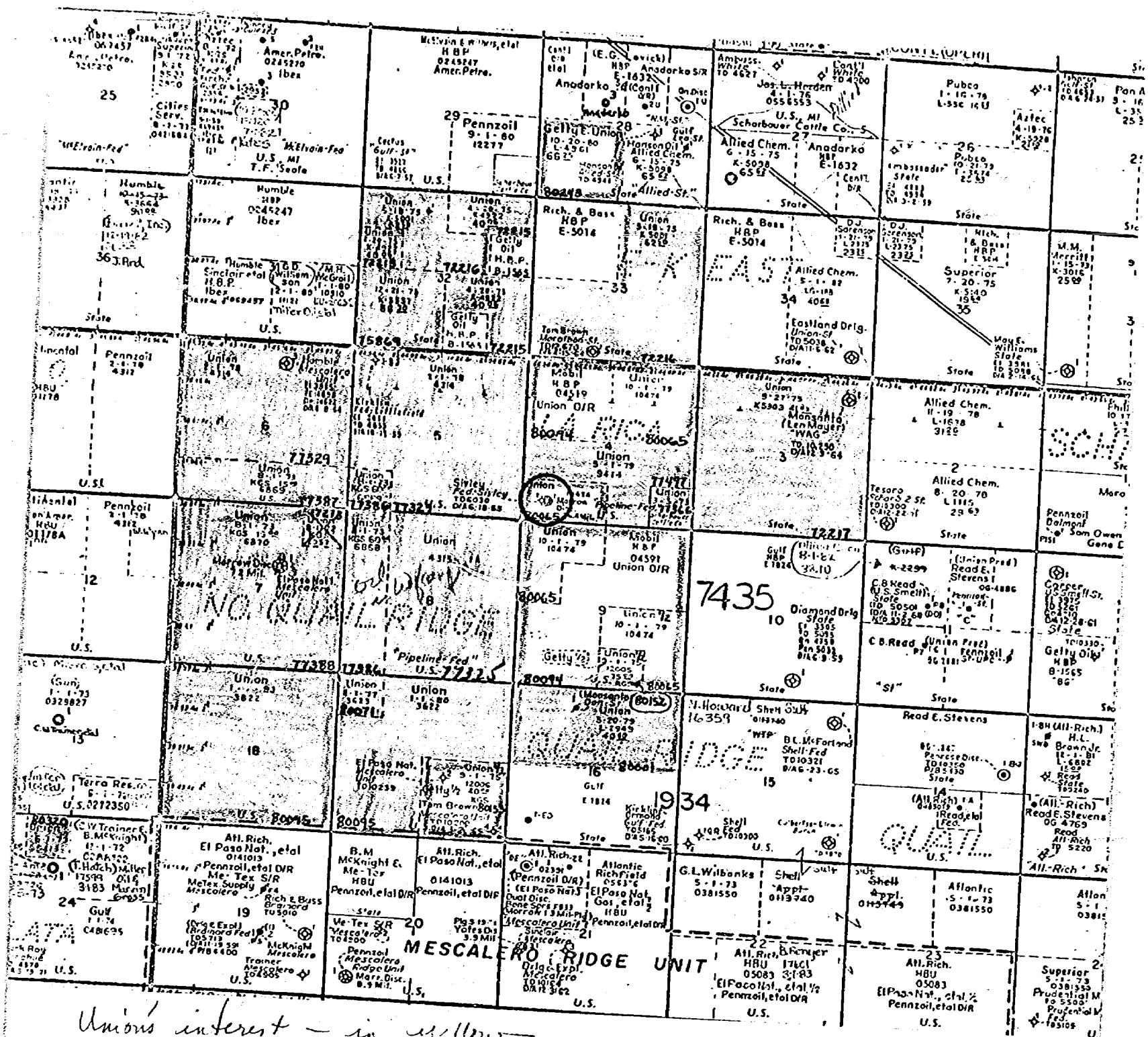
CASE 4433: In the matter of the hearing called by the Oil Conservation Commission upon its own motion to permit Allied Chemical Corporation to appear and show cause why said corporation should be permitted to institute its proposed waterflood project in its Milnesand (San Andres) Unit Area, Milnesand-San Andres Pool, Roosevelt County, New Mexico, by the injection of fresh water; said corporation testified in the hearing that authorized said waterflood project that produced salt water be used for waterflooding purposes.

CASE 4423: (Continued from the September 2, 1970, Examiner Hearing)

Application of Union Oil Company of California for compulsory pooling, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests down to and including the San Andres formation underlying the N/2 NE/4 of Section 20, Township 8 South, Range 38 East, Bluit-San Andres Associated Pool, Roosevelt County, New Mexico. Said acreage to be dedicated to a well to be drilled at an orthodox location in the NW/4 NE/4 of said Section 20. Also to be considered will be the cost of drilling said well, a charge for the risk involved, a provision for the allocation of actual operating costs, and the establishment of charges for supervision of said well.

CASE 4434: Application of Union Oil Company of California for the creation of a new gas pool and special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new gas pool for its Pipeline Federal Well No. 1 located in Section 4, Township 19 South, Range 34 East, Lea County, New Mexico. Applicant further seeks the promulgation of special rules therefor, including a provision for 640-acre spacing and proration units and fixed well location requirements.

CASE 4435: Application of Blackrock Oil Company for a dual completion and salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete its Mobil Atlantic Well No. 1 located in Unit D of Section 10, Township 9 South, Range 36 East, Lea County, New Mexico, in such a manner as to produce oil from the Pennsylvanian formation through tubing and to dispose of produced salt water into the San Andres formation from 4300 feet to 5045 feet and possibly other formations between the 8 5/8-inch casing shoe at 4153 feet and the top of the cement at 9205.



Union's interest - in yellow
 partial - in yellow box

Land Plat
 BEFORE EXAMINER
La Roca Field Area
Lea County, New Mexico
 Submitted by Union
 Hearing Date 4-11-73

RESERVOIR AND FLUID PROPERTIES
UNION OIL COMPANY OF CALIFORNIA
PIPELINE FEDERAL NO. 1
660' FSL & 760' FWL Sec. 4, T-19-S, R-34-E
LEA COUNTY, NEW MEXICO

A. GAS & CONDENSATE PROPERTIES

1. GAS ANALYSIS

	Mol-%
Carbon Dioxide	0.60
Nitrogen	0.64
Methane	85.87
Ethane	8.26
Propane	3.22
Iso-butane	0.40
N-butane	0.72
N-pentane	0.14
Hexanes	0.10
Heptanes	0.05
	100.00

2. GAS GRAVITY .668 (meas.)

3. G.P.M.

Propane	0.876
Butanes	0.314
Pentanes	0.177
TOTAL	1.367

4. BTU PER SCF 1148 (dry)
1128 (wet)

5. HYDROGEN SULFIDE Sweet

6. CONDENSATE GRAVITY 53.2° API

7. INITIAL PRODUCING GOR 9.08 MCF per BBL

8. CALC. MIX GRAVITY .9395

B. RESERVOIR PROPERTIES

- | | |
|-------------------------------|-------------------|
| 1. Porosity, ϕ | 10.3% (logs) |
| 2. Water Saturation, Sw | 25% (logs) |
| 3. Pay Thickness | 23 feet |
| 4. Reservoir Temperature | 190°F (est.) |
| 5. Initial Reservoir Pressure | 6548 psia (meas.) |

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION

EXHIBIT NO. 4

CASE NO. 4434

Submitted by H. A. D. C.

Hearing Date 4-11-73

RESERVE CALCULATIONS
UNION OIL COMPANY OF CALIFORNIA
PIPELINE FEDERAL NO. 1
660' FSL & 760' FWL SEC. 4, T-19-S, R-34-E
LEA COUNTY, NEW MEXICO

1. Volumetrics

$$\text{Gas in place} = \frac{43,560(h)(\phi)(1-S_w)T_{sc} P_i}{P_{sc} T_r Z_i \times 10^3}$$

$$= 23,795 \text{ MCF/Acre}$$

$$= 7,614 \text{ MMCF for 320 Acres}$$

$$= 15,229 \text{ MMCF for 640 Acres}$$

43,560 sq. ft. per acre

$h = 23 \text{ ft.}$

$\phi = 10.3\%$

$S_w = 25\%$

$T_{sc} = 60^\circ\text{F or } 520^\circ\text{R}$

$P_i = 6548 \text{ psia}$

$P_{sc} = 15.025 \text{ psia}$

$T_r = 190^\circ\text{F or } 650^\circ\text{R}$

$Z_i = 1.134$ compressibility of reservoir fluid

2. Gas reserves for Pipeline Federal No. 1 from P/Z versus cumulative gas production (Figure 1)

Gas in place = 23.6 BCF

Recoverable gas = 19.6 BCF at abandonment pressure

Recovery factor = 83%

Recoverable dry gas = 18 BCF at abandonment pressure

Acres drained by Pipeline Federal using volumetrics & P/Z Curve

$$\frac{23,600,000}{23,795} = 992 \text{ Acres}$$

3. Condensate reserves for Pipeline Federal No. 1 using condensate ratio versus cumulative gas production (Figure 2)

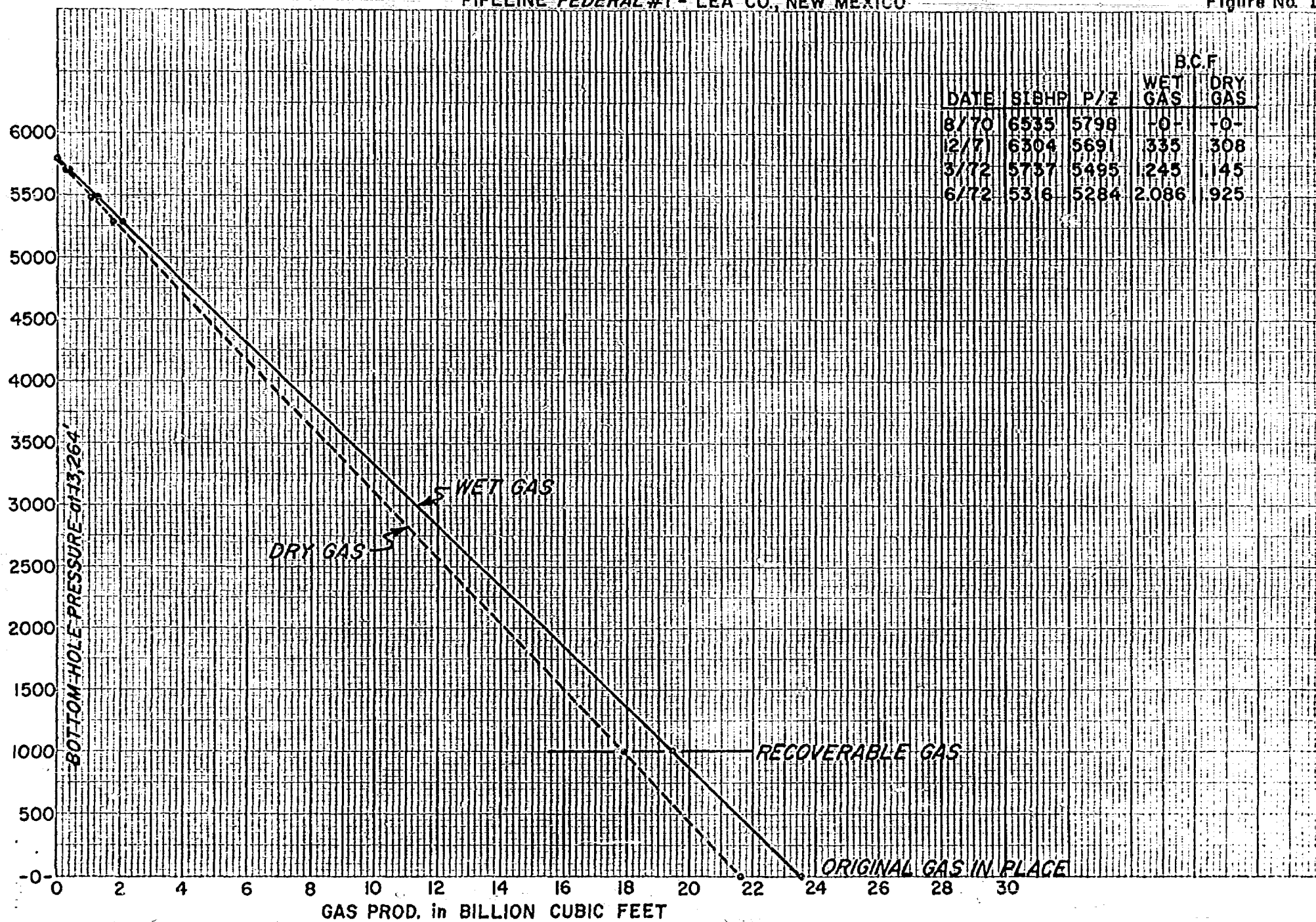
Recoverable condensate = 600,000 barrels

$$\text{Recoverable condensate ratio} = \frac{600,000 \text{ Barrels}}{18,000 \text{ MMCF}} = 33.3 \frac{\text{Barrels}}{\text{MMCF}}$$

BEFORE EXAMINER UTZ	
OIL CONSERVATION COMMISSION	
EXHIBIT NO.	5
CASE NO.	44341
Submitted by	Union
Hearing Date	4-11-73

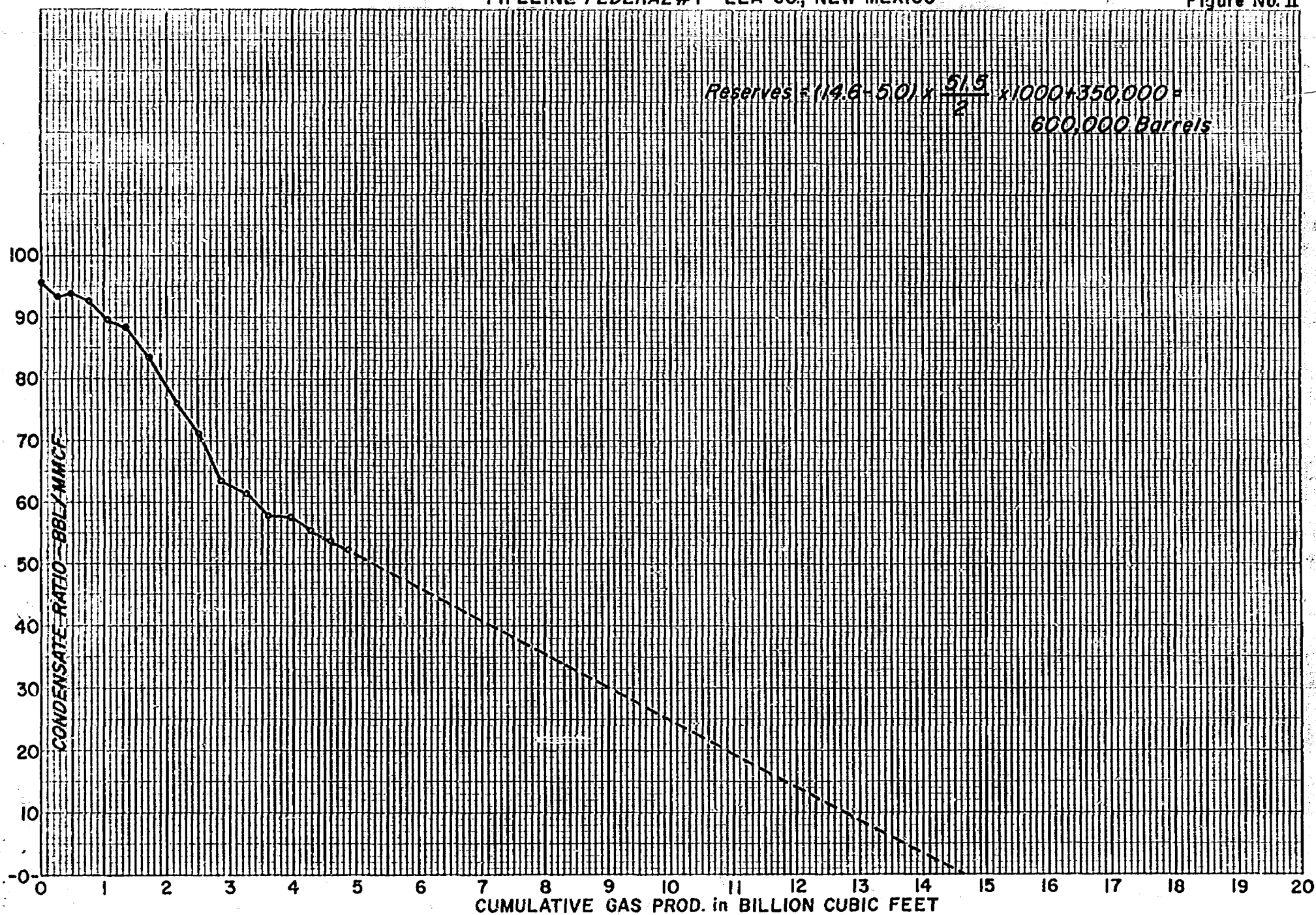
LA RICA FIELD
P/Z Vs CUMULATIVE GAS PRODUCTION
PIPELINE FEDERAL #1 - LEA CO., NEW MEXICO

Figure No. 34



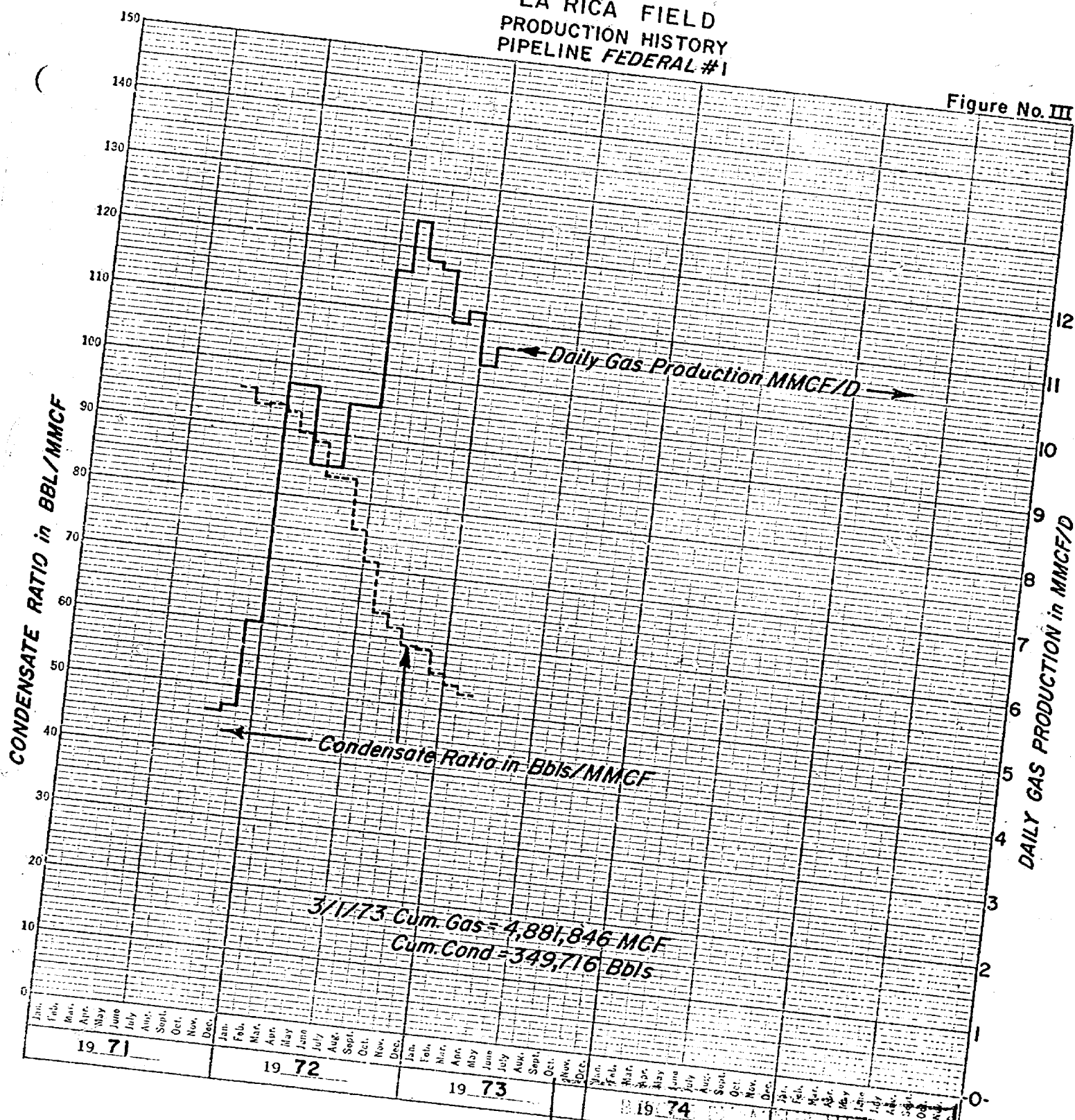
LA RICA FIELD
CONDENSATE RATIO Vs CUMULATIVE GAS PRODUCTION
PIPELINE FEDERAL #1 - LEA CO., NEW MEXICO

Figure No. II



LA RICA FIELD
PRODUCTION HISTORY
PIPELINE FEDERAL #1

Figure No. III



OIL COMPANY PRODUCTION

TABLE NO. 6

CASE NO. 4434

Submitted by 7/1/02

Hearing Date 4-11-73

1973 COMPLETED WELL COST
UNION OIL COMPANY OF CALIFORNIA
13,600' MORROW DEVELOPMENT DRILLING
LEA COUNTY, NEW MEXICO

A. DRILLING AND COMPLETION COST

Footage and Daywork	\$ 160,250
Mud, Brine, Chemical and Diesel	25,000
Cement and Cementing Services	10,500
Logging and Perforating	13,900
Treating	7,000
Trucking	3,000
Rental Equipment	Included in Footage
Bits and Reamers	Included in Footage
Road, Location, Clean-up	15,000
Miscellaneous Services	2,200
Supervision	18,900
Pulling Unit	Included in Footage
Damages	2,000
TOTAL INTANGIBLES	\$ 257,750
Casing, Float Equipment & Centralizers	98,000
Well Head	7,200
Tubing and Packer	36,250
TOTAL TANGIBLES	\$ 141,450

TOTAL DRILLING AND COMPLETION COST \$ 399,200

B. PRODUCING FACILITIES

2 MM BTU HEATER AND GAS PRODUCTION UNIT	\$ 20,000
Tanks	9,600
H.P. Flow Line, Installed with Fittings and Valves	3,000
Trucking, Dirtwork and Labor	3,500
TOTAL PRODUCING FACILITIES	\$ 36,100

C. PIPELINE INVESTMENT

None - Assume purchaser will install line and measuring equipment.

TOTAL COST \$ 435,300

SPECIAL EXAMINER	
OIL CONSERVATION COMMISSION	
EXHIBIT NO.	7
CASE NO.	4434
Submitted by	Union
Hearing Date	4-11-73

ECONOMICS
UNION OIL COMPANY OF CALIFORNIA
13,400' MORROW DEVELOPMENT DRILLING
LEA COUNTY, NEW MEXICO

*12-1-73 (Drill) additional
well on
LAD 2211*

A. Income Data

1. Gross gas price: \$.265/MCF with .35¢/MCF escalation per year
2. Gross condensate price: \$3.44/bbl (after trucking)
3. Royalty 12.5%
4. Working interest 100%
5. State taxes 6.16% of value

B. Cost and Expense Data

1. Total cost of completed well: \$435,300
(including surface production and storage equipment)
2. Dry hole cost: \$271,500
3. Estimated annual operating cost: \$3,000

C. Economics

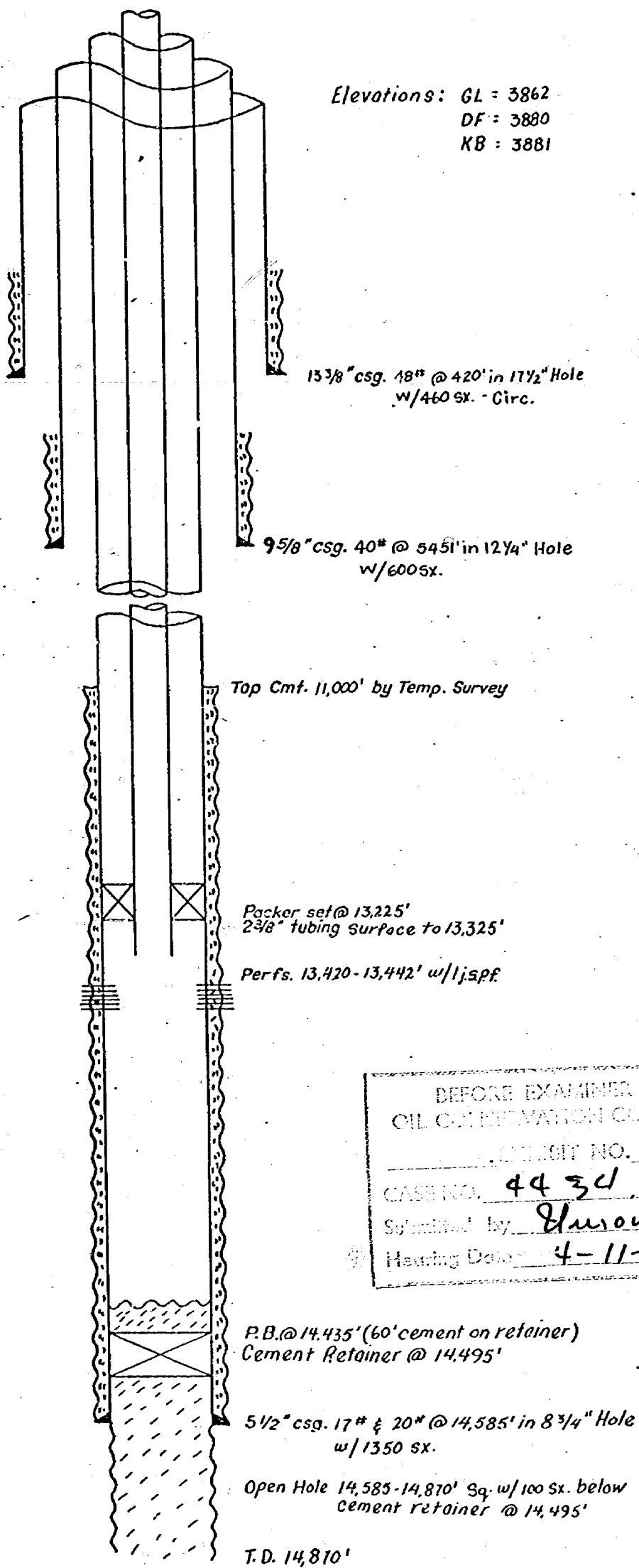
	640 Acres	320 Acres
Gas Reserve, MMCF (33% recovery factor)	12,640	6,320
Condensate Reserve (33.3 Bbl/MMCF)	420,000	210,000

Incremental comparison between two wells draining 640 acres and one well draining 640 acres. (All numbers before Federal income tax)

Undiscounted WI profit, \$	-478,564
WI profit @ 10%, \$	-189,059
Rate of return, %	22.8
Profitability Index	-.42
Payout, Yrs.	.6

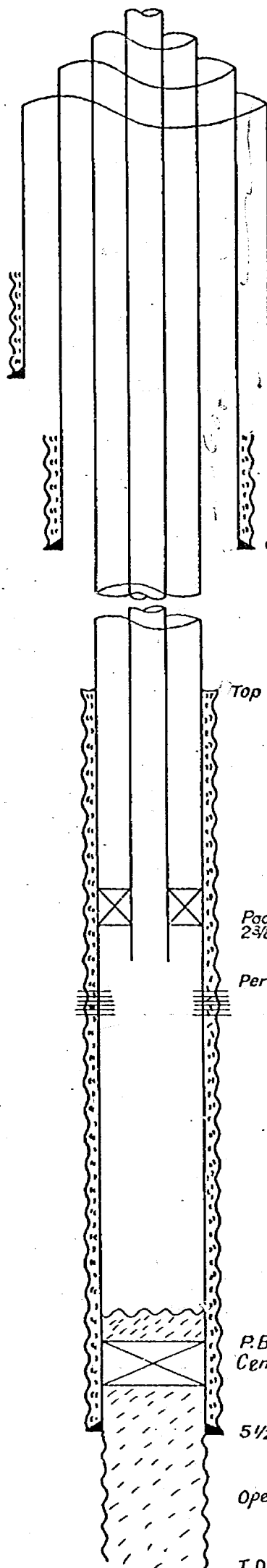
BEFORE EXAMINER UTZ	
OIL CONSERVATION COMMISSION	
EXHIBIT NO.	8
CASE NO.	4434
Submitted by	Union
Hearing Date	4-11-73

Diagrammatic Sketch
 Union Oil Company of California's Pipeline Federal No. 1
 660' FSL & 760' FWL Sec. 4, T-19-S, R-34-E
 Lea County, New Mexico



BEFORE EXAMINER UTZ	
OIL COMMISSION	
EXHIBIT NO.	9
CASE NO.	4434
Submitted by	Union
Hearing Date	4-11-77

Diagrammatic Sketch
 Union Oil Company of California's Pipeline Federal No. 1
 660' FSL & 760' FWL Sec. 4, T-19-S, R-34-E
 Lea County, New Mexico



Elevations: GL = 3862
 DF = 3880
 KB = 3881

13 3/8" csg. 48" @ 420' in 17 1/2" Hole
 w/460 SX. - Circ.

9 5/8" csg. 40" @ 5451' in 12 3/4" Hole
 w/600 SX.

Top Cmf. 11,000' by Temp. Survey

Packer set @ 13,225'
 2 3/8" tubing surface to 13,325'

Perfs. 13,420 - 13,442' w/13 spf.

BEFORE EXAMINER UTZ

OIL CONSERVATION COMMISSION

EXHIBIT NO. 3

CASE NO. 4434

P.B. @ 14,435' (60' cement on retainer)
 Cement Retainer @ 14,495'

5 1/2" csg. 17" & 20" @ 14,585' in 8 3/4" Hole
 w/1350 SX.

Open Hole 14,585 - 14,870' Sq. w/100 SX. below
 Cement retainer @ 14,495'

T.D. 14,870'

COMPLETED WELL COST
UNION OIL COMPANY OF CALIFORNIA
13,400' MORROW DEVELOPMENT DRILLING
LEA COUNTY, NEW MEXICO

A. DRILLING AND COMPLETION COST

Footage and Daywork	154,800
Mud, Brine, Chemical and Diesel	28,000
Cement and Cementing Services	6,000
Logging and Perforating	10,200
Treating	3,000
Trucking	2,000
Rental Equipment	Included in Footage
Bits and Reamers	3,000
Road, Location, Clean-up	7,500
Miscellaneous Services	2,000
Supervision	12,000
Pulling Unit	Included in Footage
Damages	500
TOTAL INTANGIBLES	229,000

Casing, Float Equipment, & Centralizers	77,950
Well Head	5,000
Tubing and Packer	30,300
TOTAL TANGIBLES	113,250

TOTAL DRILLING AND COMPLETION COST 342,250

B. PRODUCING FACILITIES

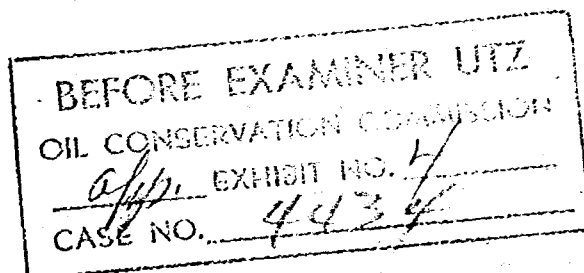
Indirect Line Heater	4,000
H.P. Separator	4,000
Condensate Stabilizer	10,000
Glycol Dehydrator	10,000
Tanks	15,000
H.P. Flow Line, Installed	3,000
Miscellaneous Fittings and Lines	1,000
Trucking, Dirtwork and Labor	3,000

TOTAL PRODUCING FACILITIES 50,000

C. PIPELINE INVESTMENT

None: Assume purchaser will install line and measuring equipment.

TOTAL COST 392,250



RESERVOIR AND FLUID PROPERTIES
UNION OIL COMPANY OF CALIFORNIA
PIPELINE FEDERAL NO. 1
660' FSL & 760' FWL Sec. 4, T-19-S, R-34-E
LEA COUNTY, NEW MEXICO

A. GAS & CONDENSATE PROPERTIES

1. GAS ANALYSIS

	Mol-%
Carbon Dioxide	0.60
Nitrogen	0.64
Methane	85.87
Ethane	8.26
Propane	3.22
Iso-butane	0.40
N-butane	0.72
N-pentane	0.14
Hexanes	0.10
Heptanes	0.05
	<u>100.00</u>

2. Gas Gravity .668 (meas.)

3. G.P.M.

Propane	0.876
Butanes	0.314
Pentanes	0.177
Total	<u>1.367</u>

4. BTU per SCF 1148 (dry)
1128 (wet)

5. Hydrogen Sulfide Sweet

6. Condensate Gravity 53.2° API

7. Initial Producing GOR 9.08 MCF per Bbl

8. Calc. Mix Gravity .9395

B. RESERVOIR PROPERTIES

1. Porosity, ϕ	10.3% (logs)
2. Water Saturation, S_w	25% (logs)
3. Pay Thickness	23 feet
4. Reservoir Temperature	190°F (est.)
5. Initial Reservoir Pressure	6548 psia (meas.)

C. RESERVE CALCULATION

$$\begin{aligned} \text{Gas Reserve} &= \frac{(43,560)(h)(\phi)(1-S_w)(T_{sc})(P_i)(R.F.)}{(P_{sc})(T_r)(Z_i)} \times 10^3 \\ &= 17,846 \text{ MCF/Acre} \\ &= 5,710 \text{ MMCF @ 320 acres} \\ &= 11,420 \text{ MMCF @ 640 acres} \end{aligned}$$

43,560 sq. ft. per acre

$h = 23$ feet

$\phi = 10.3\%$

$S_w = 25\%$

$T_{sc} = 60^\circ\text{F}$ or 520°R

$P_i = 6548$ psia

$R.F. = 75\%$, recovery factor

$P_{sc} = 15.025$ psia

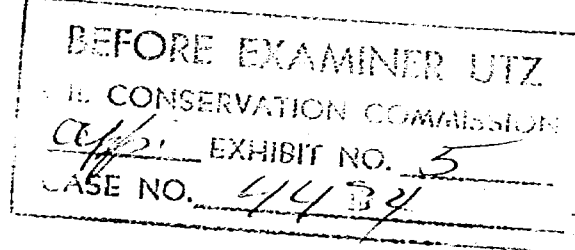
$T_r = 190^\circ\text{F}$ or 650°R

$Z_i = 1.134$, compressibility of reservoir vapor

Condensate Reserve* = 320 acres: 188,500 Bbl

640 acres: 377,000 Bbl

*Quick estimate of oil recovery from gas-condensate reservoirs, A.M. (Sam) Sarem, Union Oil Company of California, The Oil and Gas Journal, October 24, 1966, pp 122-124



ECONOMICS
UNION OIL COMPANY OF CALIFORNIA
13,400' MORROW DEVELOPMENT DRILLING
LEA COUNTY, NEW MEXICO

A. Income Data

1. Gross Gas Price: \$0.165/MCF (area rate)
2. Gross Condensate Price: \$3.20/Bbl (after trucking)
3. Royalty: 12.5%
4. Working Interest: 100%
5. State Taxes: 6.16% of value
6. Daily Contract Quantity: 1 MMCFD per 8,000 MMCF reserves

B. Cost and Expense Data

1. Total Cost of Completed Well: \$392,250
(including surface production and storage equipment)
2. Dry Hole Cost: \$262,000
3. Estimated Annual Operating Cost: \$3,600

C. Economics

	<u>320 Ac. Spacing</u>	<u>640 Ac. Spacing</u>
Gas Reserve, MMCF	5,710	11,420
Average Daily Gas, MMCFD	.714	1.428
Condensate Reserve, Bbls	188,500	377,000
Gross W.I. Income, \$	1,352,181	2,704,362
After Tax		
Undisc. W.I. Profit, \$	511,933	1,282,916
W.I. Profit @ 10%, \$	114,615	501,398
Rate of Return, %	17	44
Profitability Index	.29	1.28
Payout, Yrs.	4.9	2.3

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 6
CASE NO. 4434

C. Anderson - 10/72

1.28 then 1.50

SPECIAL RULES AND REGULATIONS
FOR THE
LA RICA - MORROW GAS POOL

RULE 1. Each well completed or recompleted in the La Rica-Morrow Gas Pool or in the Morrow formation within one mile of the La Rica-Morrow Gas Pool, and not nearer to or within the limits of another designated Morrow pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. Each well shall be located on a standard unit containing 640 acres, more or less, consisting of a single governmental section.

RULE 3. The Secretary-Director may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit and the unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the United States Public Lands Survey, or the following facts exist and the following provisions are complied with:

a) The non-standard unit consists of quarter-quarter sections or lots that are contiguous by a common bordering side.

b) The non-standard unit lies wholly within a single governmental section and contains less acreage than a standard unit.

c) The applicant presents written consent in the form of waivers from all offset operators and from all operators owning interests in the section in which the non-standard unit is situated and which acreage is not included in said non-standard unit.

d) In lieu of Paragraph (c) of this rule, the applicant may furnish proof of the fact that all of the aforesaid operators were notified by registered or certified mail of his intent to form such non-standard unit. The Secretary-Director may approve the application if no such operator has entered an objection to the formation of such non-standard unit within 30 days after the Secretary-Director has received the application.

RULE 4. Each well shall be located no nearer than ~~1320~~ feet to the outer boundary of the section.

1336

RULE 5. The Secretary-Director may grant an exception to the requirements of Rule 4 without notice and hearing when an application has been filed for an unorthodox location necessitated by topographical conditions or the recompletion of a well previously drilled to another horizon. All operators offsetting the proposed unorthodox location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all offset operators or if no offset operator has entered an objection to the unorthodox location within 20 days after the Secretary-Director has received the application.

BEFORE HANNAH UTZ	
OIL COMMISSIONER	
app.	EXHIBIT NO. 7
CASE NO.	4434

IT IS FURTHER REQUESTED:

- 1) That the Pipeline Federal No. 1, located 660 feet from south line and 760 feet from west line of Section 4, Township 19 south, Range 34 east, NMPM, Lea County, New Mexico, is hereby granted an exception to the well location requirements contained herein.
- 2) That the operator of the aforesaid Pipeline Federal No. 1 shall file a new Form C-102 outlining thereon the acreage dedicated to said well within 10 days after receipt of this order.
- 3) That this case shall be reopened at an examiner hearing one year from the date that a pipeline connection is first obtained for a well in the La Rica-Morrow Gas Pool, at which time the operators in the subject pool may appear and show cause why the La Rica-Morrow Gas Pool should not be developed on 320-acre spacing units.
- 4) That the first operator to obtain a pipeline connection for a well in the La Rica-Morrow Gas Pool shall notify the Commission in writing of such fact, and that the Commission will thereupon issue a supplemental order designating an exact date for reopening this case.
- 5) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

J. O. SETH (1883-1963)

A. K. MONTGOMERY
WM. FEDERICI
FRANK ANDREWS
FRED C. HANNAHS
RICHARD S. MORRIS
SUMNER G. BUELL
SETH D. MONTGOMERY

FRANK ANDREWS III
OWEN M. LOPEZ

MONTGOMERY, FEDERICI, ANDREWS, HANNAHS & MORRIS

ATTORNEYS AND COUNSELORS AT LAW

350 EAST PALACE AVENUE
SANTA FE, NEW MEXICO 87501

September 10, 1970

POST OFFICE BOX 2307
AREA CODE 505
TELEPHONE 982-3876

SEP 11 AM 8 19

Mr. George A. Hatch
Oil Conservation Commission
Land Office Building
Santa Fe, New Mexico 87501

Case 4434

Re: Application of Union Oil Company
of California for creation of a
new gas pool and special pool
rules, Lea County, New Mexico

Dear George:

I am enclosing an application for the creation of a new gas pool in Lea County, New Mexico and the creation of special pool rules for its operation. We would respectfully request that this application be set for hearing on September 30. On that date, as you know, we have another application pending, and the two matters will use the same witnesses.

Union Oil Company has applied to the Hobbs office for permission to flare the well involved in the present application. If the permit is granted, Union Oil Company will have much additional information to present to the Commission on the reservoir characteristics of this gas pool. Consequently, if the permit is granted, we will flare the well and gather the information which will involve some amount of time. In that event, we will request that the hearing on this application for September 30 be continued to a later date until all the material can be compiled and presented.

If I can give you any additional information, please feel free to call on me.

Very truly yours,

SGB:rmb
Enclosure

c.c. Mr. William M. Petmecky
Union Oil Company
300 North Carrizo Street
Midland, Texas 79701

Sumner G. Buell

DOCKET MAILED

Date 10-14-70

DOCKET MAILED

Date 9-18-70

70 SEP 11 AM 8 15

BEFORE THE OIL CONSERVATION COMMISSION OF THE
STATE OF NEW MEXICO

APPLICATION OF THE UNION OIL COMPANY
OF CALIFORNIA FOR THE CREATION OF A
NEW GAS POOL AND FOR SPECIAL POOL RULES
AND REGULATIONS, LEA COUNTY, NEW MEXICO

Case No. 4434

A P P L I C A T I O N

Comes now the UNION OIL COMPANY OF CALIFORNIA, by its attorneys, and applies to the New Mexico Oil Conservation Commission for the creation of a new gas pool and for special pool rules and regulations therein, and in support of its application, states:

1. The Union Oil Company of California has drilled its Union No. 1 Pipeline Federal Well located in Section 4, T. 19 S., R. 34 E., Lea County, New Mexico, said well being located 660 feet from the South line of said Section 4 and 760 feet from the West line, and the well has been completed in the Morrow Formation as a discovery well.

2. The Union Oil Company of California seeks the creation of a new gas pool to be designated as the *La Risa* Pipeline-Morrow Pool and also seeks the establishment of special pool rules and regulations for the pool to include provisions for 640-acre spacing units and well location requirements specifying that the initial well on any 640-acre spacing unit shall be located within 1,320 feet of the center of the spacing unit which shall consist of a governmental section.

3. On the basis of the information available at this time it appears that one well in the proposed pool is capable of

efficiently and economically draining and developing an area of at least 640 acres.

4. Approval of the subject application will prevent waste and protect correlative rights.

WHEREFORE, the Union Oil Company of California requests that this application be set for hearing before the Commission or one of its examiners, and that the Commission enter its Order creating the pool and establishing special pool rules and regulations therein, as set forth in this application.

MONTGOMERY, FEDERICI, ANDREWS,
HANNAHS & MORRIS

By: 

Post Office Box 2307
Santa Fe, New Mexico 87501

Attorneys for Union Oil
Company of California

DRAFT

GMH/esr

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

RECORDS CENTER

CASE No. 4434

Order No. R-4058

NOMENCLATURE

APPLICATION OF UNION OIL COMPANY
OF CALIFORNIA FOR THE CREATION OF
A NEW GAS POOL AND SPECIAL POOL
RULES, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on October 28, 1970
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this _____ day of November, 1970, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

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

(2) That the applicant, Union Oil Company of California,
seeks the creation of a new gas pool for Morrow production in
Lea County, New Mexico, and the promulgation of special rules
and regulations governing said pool, including a provision for
640-acre spacing and proration units and fixed well location
requirements.

(3) That the Union Oil Company of California Pipeline
Federal Well No. 1, located 660 feet from the South line
and 760 feet from the West line of Section 4, Township 19
South, Range 34 East, NMPM, Lea County, New Mexico, having its

top perforations at 13,420 feet, has discovered a separate common source of supply which should be designated the La Rica Morrow Gas Pool; that the vertical limits of said pool should be the Morrow formation ~~as found in the interval from~~ feet to ~~feet on the log of the aforesaid Union Oil Company of California Pipeline Federal Well No. 157~~ and that the horizontal limits of said pool should be all of said Section 4.

(4) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, temporary special rules and regulations providing for 640-acre spacing units should be promulgated for the La Rica -Morrow Gas Pool.

(5) That the temporary special rules and regulations should provide for limited well locations in order to assure orderly development of the pool and protect correlative rights.

(6) That special rules and regulations should be established for a temporary period to expire one year from the date that a pipeline connection is first obtained for a well in the pool; that during this temporary period all operators in the subject pool should gather all available information relative to drainage and recoverable reserves.

(7) That this case should be reopened at an examiner hearing one year from the date that a pipeline connection is first obtained for a well in the La Rica -Morrow Gas Pool, at which time the operators in the subject pool should appear and show cause why the La Rica -Morrow Gas Pool should not be developed on 320-acre spacing units.

(8) That the first operator to obtain a pipeline connection for a well in the La Roca -Morrow Gas Pool should notify the Commission in writing of such fact, and that the Commission should thereupon issue a supplemental order designating an exact date for reopening this case.

IT IS THEREFORE ORDERED:

(1) That a new pool in Lea County, New Mexico, classified as a gas pool for Morrow production, is hereby created and designated the La Roca -Morrow Gas Pool, with vertical limits comprising the Morrow formation ~~as found in the interval from~~ feet to feet on the log of the Union Oil Company of California Pipeline Federal Well No. 1, located 660 feet from the South line and 760 feet from the West line of Section 4, Township 19 South, Range 34 East, NMPM, Lea County, New Mexico, and horizontal limits comprising the following-described area:

LEA COUNTY, NEW MEXICO
TOWNSHIP 19 SOUTH, RANGE 34 EAST, NMPM
Section 4: see

(2) That temporary Special Rules and Regulations for the La Roca -Morrow Gas Pool, Lea County, New Mexico, are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS

FOR THE

La Roca -MORROW GAS POOL

RULE 1. Each well completed or recompleted in the La Roca -Morrow Gas Pool or in the Morrow formation within one mile thereof, and not nearer to or within the limits of another designated Morrow gas pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. Each well shall be located on a standard unit containing 640 acres, more or less, consisting of a governmental section.

RULE 3. The Secretary-Director of the Commission may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit and the unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the United States Public Land Surveys, or the following facts exist and the following provisions are complied with:

- (a) The non-standard unit consists of quarter-quarter sections or lots that are contiguous by a common bordering side.
- (b) The non-standard unit lies wholly within a governmental section and contains less acreage than a standard unit.
- (c) The applicant presents written consent in the form of waivers from all offset operators and from all operators owning interests in the section in which the non-standard unit is situated and which acreage is not included in said non-standard unit.
- (d) In lieu of paragraph (c) of this rule, the applicant may furnish proof of the fact that all of the aforesaid operators were notified by registered or certified mail of his intent to form such non-standard unit. The Secretary-Director may approve the application if no such operator has entered an objection to the formation of such non-standard unit within 30 days after the Secretary-Director has received the application.

✓ RULE 4. Each well shall be located no nearer than 1650 feet to the outer boundary of the section and no nearer than 330 feet to any governmental quarter-quarter section line.

RULE 5. The Secretary-Director may grant an exception to the requirements of Rule 4 without notice and hearing when an application has been filed for an unorthodox location necessitated by topographical conditions or the recompletion of a well previously drilled to another horizon. All operators offsetting the proposed location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all operators offsetting the proposed location or if no objection to the unorthodox location has been entered within 20 days after the Secretary-Director has received the application.

IT IS FURTHER ORDERED:

(1) That the locations of all wells presently drilling to or completed in the La Roca -Morrow Gas Pool or in the Morrow formation within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall notify the Hobbs District Office of the Commission in writing of the name and location of the well on or before December 1, 1970.

(2) That, pursuant to Paragraph A, of Section 65-3-14.5, NMSA 1953, contained in Chapter 271, Laws of 1969, existing wells in the La Roca -Morrow Gas Pool shall have dedicated there- to 640 acres in accordance with the foregoing pool rules; or, pursuant to Paragraph C. of said Section 65-3-14.5, existing wells may have non-standard spacing or proration units estab- lished by the Commission and dedicated thereto.

Failure to file new Forms C-102 with the Commission dedicating 640 acres to a well or to obtain a non-standard unit approved by the Commission within 60 days from the date of this order shall subject the well to cancellation of allowable. Until said Form C-102 has been filed or until a non-standard unit has been approved, and subject to said 60-day limitation, each well presently drilling to or completed in the La Roca -Morrow Gas Pool or in the Morrow formation within one mile there- of shall receive no more than one-half of a standard allowable for the pool.

(3) That this case shall be reopened at an examiner hearing one year from the date that a pipeline connection is first obtained for a well in the La Roca -Morrow Gas Pool, at which time the operators in the subject pool may appear and show cause why the La Roca -Morrow Gas Pool should not be developed on 320-acre spacing units.

(4) That the first operator to obtain a pipeline con- nection for a well in the La Roca -Morrow Gas Pool shall notify the Commission in writing of such fact, and that the Commission will thereupon issue a supplemental order designating an exact date for reopening this case.

(5) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem neces- sary.

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

DRAFT

dr/

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE NO. 4434

Order No. R-4523

IN THE MATTER OF CASE 4434 BEING
REOPENED PURSUANT TO THE PROVISIONS
OF ORDER NO. R-4058, WHICH ORDER
ESTABLISHED SPECIAL RULES AND REGULATIONS
FOR THE LA RICA-MORROW GAS POOL, LEA
COUNTY, NEW MEXICO, INCLUDING A PROVISION FOR
640-ACRE PRORATION UNITS.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on April 11, 1973,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this May day of April, 1973, the Commission,
a quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

- (1) That due public notice having been given as required by
law, the Commission has jurisdiction of this cause and the subject
matter thereof.
- (2) That by Order No. R-4058, dated November 10, 1970,
temporary special rules and regulations were promulgated for
the La Rica-Morrow Gas Pool, Lea County, New Mexico, establishing
temporary 640-acre spacing units.

(3) That pursuant to the provisions of Order No. R-4058, this case was reopened to allow the operators in the subject pool to appear and show cause why the La Rica-Morrow Gas Pool should not be developed on 320-acre spacing units.

(4) That the evidence establishes that one well in the La Rica-Morrow Gas Pool can efficiently and economically drain and develop 640 acres.

(5) That the Special Rules and Regulations promulgated by Order No. R-4058 have afforded and will afford to the owner of each property in the pool the opportunity to produce his just and equitable share of the gas in the pool.

(6) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, the Special Rules and Regulations promulgated by Order No. R-4058 should be continued in full force and effect until further order of the Commission.

IT IS THEREFORE ORDERED:

(1) That the Special Rules and Regulations governing the La Rica-Morrow Gas Pool, Lea County, New Mexico, promulgated by Order No. R-4058, are hereby continued in full force and effect until further order of the Commission.

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

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

CASE 4435: Appli. of BLACKROCK
OIL CO. FOR A DUAL COMPLETION AND
SALT WATER DISPOSAL, LEA COUNTY.