

Case No.

4803

Application, Transcripts,

Small Exhibits, Etc.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
STATE LAND OFFICE
SANTA FE, NEW MEXICO
Wednesday, August 23, 1972 at 1:15 P. M.

EXAMINER HEARING

IN THE MATTER OF:

Application of Yates Petroleum
Corporation to directionally drill
and an unorthodox location, Eddy
County, New Mexico.

Case No. 4803

BEFORE: RICHARD L. STAMETS, Examiner

TRANSCRIPT OF HEARING

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PROCEEDINGS

MR. STAMETS: The hearing will come to order, please.
We will call next case 4803.

MR. HATCH: Case 4803, Application of Yates Petroleum Corporation to directionally drill and an unorthodox location, Eddy County, New Mexico.

MR. LOSEE: Mr. Examiner, I am A. J. Losee, Artesia, representing the applicant. We have two witnesses.

(Whereupon, Mr. Ray H. Beck was called to the stand and sworn.)

MR. RAY H. BECK

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

DIRECT EXAMINATION

BY MR. A. J. LOSEE:

Q State your name, please.

A Ray H. Beck.

Q Where do you live and what is your occupation?

A I live in Artesia, New Mexico. I am a petroleum geologist.

Q Employed by?

A Yates Petroleum.

Q You have not previously testified before this Commission and had your qualifications made a part of the record?

A No.

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- 1 Q Where did you take your undergraduate work?
- 2 A Texas Tech University.
- 3 Q What degree did you obtain?
- 4 A B. S. degree.
- 5 Q What was your major?
- 6 A Petroleum geology.
- 7 Q Did you obtain a higher degree?
- 8 A Yes, I obtained a master's degree subsequently.
- 9 Q In the same field?
- 10 A Yes.
- 11 Q You are also at this point working on your doctorate?
- 12 A That's right.
- 13 Q Have you had any practical experience prior to your employ-
- 14 ment with Yates?
- 15 A Yes. I worked for Shell Oil Company for eight years.
- 16 Q In what field?
- 17 A Petroleum geology.
- 18 Q In what areas?
- 19 A West Texas.
- 20 Q Where were you living?
- 21 A Midland.
- 22 Q Working out of Midland office?
- 23 A Yes.
- 24 Q How long have you been with Yates?
- 25 A Six months.

1 MR. LOSEE: Are Mr. Beck's qualifications acceptable?

2 THE EXAMINER: They are.

3 Q (By Mr. Losee) What is the purpose of the application of
4 Yates Petroleum Corporation in this case number 4803?

5 A Yates wishes to drill and end up in an unorthodox location
6 in the North Half of Section 25 and they wish to direc-
7 tionally drill at that point from an abandoned hole nine-
8 teen-eighty from the north and six-sixty from the east of
9 Section 25, 18 South, 25 east.

10 Q What is the bottom-hole unorthodox location to be, Mr.
11 Beck?

12 A It is to be 500 feet from the north line and 600 feet
13 from the east line of Section 25, Township 18 south,
14 Range 25 East.

15 Q To dedicate the North Half of 25 to that well?

16 A That's right.

17 Q And the proposed bottom is then at the Atoka West Morrow?

18 A Atoka West Morrow field.

19 Q Please refer to what has been marked Exhibit 1 and explain
20 what is shown on this exhibit.

21 A Exhibit 1 is a land ownership map and this marks off the
22 North Half of Section 15, 18 South, 25 East. It is on
23 acreage dedicated to the proposed well.

24 Q It also shows the offset operators and the wells within
25 the two mile radius of this acreage dedication, does it

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1 not?

2 A Yes, sir.

3 Q Please refer to what has been marked as Exhibit 2, the
4 isopach map, and explain what is portrayed by this exhibit.

5 A Exhibit 2 is an isopach map of the Atoka B Sand interval
6 which covers the Atoka Penn field in eighteen twenty-six
7 and the Atoka Morrow West field which is in eighteen
8 twenty-five in the extreme western portion of eighteen
9 twenty-six. The blue lines indicate isopach values of
10 interconnected shoreline strike sands such as beaches,
11 laguna beaches, barrier island beaches and a channel
12 system which cuts across the field indicated in orange.
13 It indicates a river bar channel system and it is inter-
14 connected and reservoir connected with the shoreline strike
15 sands. To the left in the Atoka Morrow West field red
16 indicates the shoreline strike sands, the thicknesses of
17 them, and the yellow indicates the thicknesses of the
18 channel sands which cross-cut the shoreline strike sands.
19 Now, we wish to draw an analogy between the Atoka Penn
20 well on the right and the Atoka Morrow field on the left.
21 Geological studies such as these on isopach map in the
22 cross sections presented later indicate along with
23 pressure data that the partially completed Atoka Penn gas
24 field is a reservoir consisting of a thick channel sands
25 cross-cutting but reservoir connected to thinner shoreline

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- 1 strike sand bodies. Geologic studies, this map and cross
 2 sections to be shown later indicate along with pressure
 3 data to be introduced by Mr. Mahfood similarly indicate that
 4 the newly developing Atoka Morrow West gas field in
 5 eighteen twenty-five is also a reservoir consisting of a
 6 thick channel sands body cross-cutting but reservoir
 7 connected to thinner shoreline strike sand bodies. The
 8 Fasken Brown Yates well in the Southwest Quarter of
 9 Section 24, eighteen twenty-five and the Mountain States
 10 McCaw well in Section--in the Northwest Quarter of
 11 Section 19, eighteen twenty-six are in the Atoka Morrow
 12 West field. The Fasken Brown Yates well Section 24 is
 13 producing from the channel sand stone and the Mountain
 14 States McCaw is producing from interconnected shoreline
 15 strike sand and beach deposit. The pressure information
 16 indicates that these wells are in the same reservoir
 17 system even though one is in a thinner sand stone body
 18 and the other is in a thicker channel sand stone body.
- 19 Q Now, those are the only producing wells in Morrow West
 20 field, are they not?
- 21 A That's right.
- 22 O Would you point out the other wells that have been drilled
 23 to the Morrow in this field?
- 24 A In the Northwest Quarter of Section 25 there is a well,
 25 Fasken Number 1 Yates Federal Comm which was drilled to

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1 the Morrow and the operator decided not to complete the
2 well, but we believe that it is connected geologically and
3 we present pressure information later supporting this.
4 Also in the Northeast Quarter of Section 25 there is a
5 well drilled, a Fasken Number 1 Yates Hornbaker E, which
6 penetrated the extreme left-hand or western side of the
7 channel sand stone. The operator found the Morrow B sand
8 channel there to be the edge of the channel and a natural
9 levy environment and was indicated to be tied on drill
10 system. They sidetracked the hole 310 feet to the east
11 and 83 feet south or about 321 feet from the original hole
12 and found the channel, whereas the channel was 45 feet
13 thick in the original hole, it was 106 feet thick in the
14 well, only 321 feet of well.

15 THE EXAMINER: Let me get a clarification on this.
16 The original Fasken Yates Hornbaker is that the one you are
17 referring to?

18 THE WITNESS: Yes.

19 THE EXAMINER: That is represented by the small circle?

20 THE WITNESS: Yes, sir.

21 THE EXAMINER: To the right of the well as you have
22 drawn it on your map?

23 THE WITNESS: Yes, sir.

24 Q (By Mr. Losee) What is the bottom-hole location of the
25 sidetrack well?

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1 A The bottom-hole location of the sidetrack is 310 feet
2 from the east of the original surface location and 83
3 feet south.

4 Q Now, there is one other well in the field that we were
5 talking about that has been drilled.

6 A This is the Bates Number 1 Linck in the Southwest Quarter
7 of Section 23, eighteen twenty-five. This well is also
8 near the channel edge and again it is in the unfavorable
9 natural levy environment rather than being in the cleaner
10 sands of the channel. Near the edge of the channel you
11 run into lesser permeability than you do in the channels
12 themselves. We have an article here written by Wayne
13 Prior of the University of Cincinnati. It was a study
14 conducted for the A.P.I. and it was published in the
15 Journal of Petroleum Engineers and his results indicate
16 that the permeability on the channel edges is less than
17 the permeability in the channel proper. That is, you
18 lose permeability as you approach the natural levy or
19 edge of the channel.

20 Q Do you have any further comments on the isopach map?

21 A No, I believe not.

22 Q Please refer to what has been marked as Exhibit 3 and
23 explain what is shown by this exhibit.

24 A Exhibit 3 is a stratigraphic cross section extending from
25 location A, as you see on the index map, to location A-Prime.

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1 It goes from the Atoka Morrow West field on the left to
2 the Atoka Penn field on the right and tends to supplement
3 the original Exhibit Number 2, the isopach map. The wells
4 included are the Fasken Number 1, Yates Federal Comm 25,
5 Fasken Yates Hornbaker Number 1, Fasken Hornbaker Number
6 1 and the whipstock hole. That is in the Atoka West field.
7 Starting into the Atoka Penn field there is the Marathon
8 Nicks Number 1 and the Ohio Nicks Number 1 and the Ohio
9 Noel Number 1 and the Yates-UA Number 1. On the cross
10 section it is located at the top of the Morrow Clastics.
11 This is the horizon on which the structural contours which
12 are on Exhibit 2 are taken from. On the left of the cross
13 section the beds in red match the beds of the isopach's
14 map in red. The yellow would be the channel going through
15 the Atoka Morrow West field and then the blue on the
16 right corresponds to the shoreline strike sands of the
17 Atoka Penn field and the orange corresponds to the cross-
18 cutting channel. Each well is indicated and the drill
19 stem test data and perforations.

20 Q Do you wish to comment on the drill stem test data on either
21 of these Fasken wells in the North Half of 25?

22 A No. I would just point out that speaking from a geological
23 standpoint the stratigraphic relationships that the
24 isopach indicates, we see that the shoreline strike sands
25 on the Atoka west are intercepted by the channel. The

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1 channel of the Fasken Yates Hornbaker well indeed
2 has been deviated only a short distance into a channel
3 much like the channel that the Chic Nicks is in and the
4 same stratigraphic relationships apply from the Atoka
5 Penn which is a pool that is about 12 years old to the
6 newly developing Atoka Morrow West field which we would
7 like to develop more.

8 Q Were Exhibits 1 through 3 prepared by you or under your
9 direction?

10 A Yes, sir.

11 MR. LOSEE: We move the introduction of Exhibits 1
12 through 3 and I have no more direct examination of this witness.

13 MR. STAMETS: Without objection applicant's Exhibits
14 1 through 3 are admitted into evidence.

15 Are there questions of the witness?

16 Now, speaking about the Fasken Yates Hornbaker well,
17 this was sidetracked and did encounter the channel?

18 THE WITNESS: Yes, sir.

19 MR. STAMETS: That a substantial amount of pay in
20 there, 106 feet or at least of sand?

21 THE WITNESS: 106 feet of channel sands, yes, sir.

22 MR. STAMETS: Can you tell me why that well didn't
23 produce and why you are seeking, at least according to your
24 map, to drill a location which would encounter the channel at
25 about the same thickness?

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1 THE WITNESS: Yes, sir. Mr. Mahfood may expand on
2 this later, but they found after they had drilled into the
3 channel 78 feet, they attempted to drill stem test, and in
4 this drill stem test they obtained gas to surface nine and a
5 half minutes at a maximum of 692,000 but then in 49 minutes
6 the mud and formation water flowed to the surface and recovered
7 5650 feet of salt water and they had it--it indicates that we
8 believe that they drilled too far into the channel before they
9 drill stem tested. Subsequent tests also obtained water but
10 they did finally have good pressure and we are of the opinion
11 that had they not penetrated as far as they did that perhaps
12 they would have found the gas above the water or that they
13 might be in a transition zone where the cut may be a little bit
14 too high. They thought it would be not good from a mechanical
15 standpoint to complete the well because of the water problems.

16 THE EXAMINER: According to Exhibit 2 it would appear
17 that substantially most of the reservoir that you would be
18 producing from would lie outside the boundaries of Section 25;
19 is that correct?

20 THE WITNESS: Would you say that again?

21 THE EXAMINER: Well, the reservoir that you propose
22 to tap--

23 THE WITNESS: Yes.

24 THE EXAMINER: --With your well, the channel appears
25 to be mostly outside Section 25.

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1 THE WITNESS: Well, the channel does cross through
2 Section 24 there, yes, more than it does in 25. However, we
3 believe, and we tried to point out by analogy with the Atoka
4 Penn West field, that even though the channel would be a likely
5 place to go, you can still drain from the same reservoir by
6 interconnected strike sands so that the entire half of 25 is
7 still part of the system.

8 THE EXAMINER: For the record would you run over the
9 results of the drill stem tests on the Yates--Fasken Yates
10 Comm which is the well which was not completed in the North
11 Half of the Northwest Quarter of Section 25?

12 THE WITNESS: Yes, sir. Drill stem test number 2
13 eighty eighty-eight, thirty eighty-eight, ninety-two. Conden-
14 sate 450 foot of gas cut mud. Flowed gas at 2.65 million and
15 decreased 2.4 million at the end of the test. Flow pressures
16 twenty-two ninety-one to twenty eighty-nine. Shut-in pressures
17 thirty-four eighty at one hour and final shut-in pressure was
18 thirty eighty-one in six hours.

19 THE EXAMINER: Do you feel that the entire North
20 Half of the Section 25 can reasonably be presumed to be pro-
21 ductive of gas?

22 THE WITNESS: From the geologic standpoint, I believe
23 that's true.

24 THE EXAMINER: The well at the bottom-hole location
25 that you propose, will that efficiently and economically drain

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1 the entire half of the north section?

2 THE WITNESS: I believe it will.

3 THE EXAMINER: Are there any other questions of this
4 witness?

5 MR. HATCH: It is proposed to dedicate the North
6 Half rather than the East Half. Is there any reason?

7 MR. LOSEE: I can offer one. Looking at their isopach
8 I suppose one is that it is more logical that those beach sands
9 will drain in the channel across the North Half than it will
10 across the East Half. Another reason which may be the fore-
11 most reason is that Yates is the owner of the entire North
12 Half. Although they have a good part of the East Half they
13 don't have it all, as I understand it.

14 THE EXAMINER: The witness may be excused.

15 (Whereupon, Mr. Eddie Mahfood was called to the
16 stand and sworn.)

17
18 MR. EDDIE MAHFOOD

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

21 DIRECT EXAMINATION

22 BY MR. A. J. LOSEE:

23 Q State your name, please.

24 A Eddie Mahfood.

25 Q Where do you live and what is your occupation?

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1 A Artesia, New Mexico, petroleum engineer employed with
2 Yates Petroleum Corporation.

3 Q Have you previously testified before this Commission and
4 had your qualifications made a part of the record?

5 A Yes.

6 Q Please refer to what has been marked as Exhibit 4 and
7 explain the data that is shown on this exhibit.

8 A Exhibit 4 is a pressure build-up and supporting data log
9 of the Fasken Yates Federal Number 1. The purpose of this
10 is to show that there is gas reserves in this area and
11 that it is not a limited reservoir and that there is com-
12 munication with the rest of the West Atoka field. You
13 will note that the extrapolated pressure is thirty-seven
14 seventy-one on the initial test period and also on the
15 frontal test period. You will note that the well is very
16 tight and that the well is some three feet away from the
17 well bore and to extend state conditions would have
18 yielded only 100 MCF per day. This is just not enough quan-
19 tity sufficient to justify most operators' completion of the
20 well. For that reason I believe the well was not completed.

21 Q Would you compare the pressure, initial pressure, on this
22 well with other wells in the field?

23 A Yes. I would like to refer back to Exhibit 2. You will
24 notice that the McCaw Number 1 well in Section 19 of
25 eighteen twenty-six was the discovery well of the West

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1 Atoka field. In October of '70 the top hole pressure
2 test was 3600 pounds. Two months later the Brown Yates
3 well in the Southeast Quarter of Section 24 eighteen
4 twenty-five was completed and tested with a bottom-hole
5 pressure of thirty-five ninety-nine. Three months later
6 the one twenty-five in Section 25 was drilled and its
7 pressure was thirty-seven seventy-one after extrapolation
8 shown in Exhibit 4. The Linck well in Section 24 was
9 approximately thirty-six ten by extrapolation and the
10 Baker well drilled some 12 months later was thirty-five
11 seventy-nine and thirty-five eighty-one. These pressures
12 are all very close to one another and would indicate
13 communication to me. I would direct your attention to the
14 log on this Yates Federal one twenty-five. You will notice
15 in the red in the Morrow B section the porosities. That
16 portion of the pay is what I consider to have reserves.
17 This would suggest a fingering effect. The log suggests
18 beach phases or a trough between sand bars such as you
19 will find down there. You can wade three-quarters of a
20 mile or a mile from the shore and you go through several
21 troughs and come up on sand bars. I think that this will
22 just happen to be in a bad location. It was drilled in
23 that local tight spot.

24 Q Please refer to what has been marked as Exhibit 5 and
25 explain what is shown by this exhibit.

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1 A Exhibit 5 is a pressure build-up on the Hornbaker Number
2 1, the original hole to the left and the deviated hole on
3 the right top side of the graph. Supporting data is
4 drill stem test data on both holes and the electric log of
5 each hole. We notice that drill stem test number 1 of the
6 original hole shows a very tight formation. The well flows
7 90 MCF per day with no fluid but it just didn't have it
8 because as Mr. Beck stated earlier, this well is located
9 on the levy of the channel. I ask you to look at the
10 gamma ray side of the log. This would indicate to me that
11 it was outside of a beach area and that this is in a
12 channel. Then we have a deviated hole, this great thick
13 channel, in there and you note again on the gamma ray
14 side there how thick and low activity is. It is our con-
15 clusion from the several drill stem tests run on this
16 deviated hole that a transition zone exists in this channel
17 and I refer you back to Exhibit 3. Drill stem test
18 number 4 was first run through the A and B zone and it
19 flowed 652 MCF per day with a salt water recovery of 5650
20 feet. Drill stem test number 6 tested the bottom part
21 of this interval in the B zone and it flowed 240,000 cubic
22 feet per day and recovered 5300 feet of salt water. The
23 drill stem test number 5 was taken at the upper part of
24 the B zone and it flowed 600 MCF per day and recovered
25 only 2700 feet of gas cut water. Drill stem test number

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1 9 was taken still a half part of that B zone and a quarter
2 or one-quarter million cubic feet a day, recovering very
3 little water. Only after five hours of flow did that
4 water--did it produce any water. It seems to me that if we
5 can get up dip from this location, say approximately 400
6 feet, that we can complete in this channel free of water.
7 Furthermore, this channel will drain the beach sands much
8 more effectively than would a well in the beach sand
9 because of the greater permeability in the channel sands
10 and the greater surface area of the beach sands exposed
11 to the channel sands. I also draw your attention back
12 to Exhibit 2 that the pool's location is approximately
13 the same elevation, subsea elevation, as the McCaw Number
14 1 well. McCaw Number 1 was in nineteen eighteen twenty-
15 six and the McCaw well is free of water.

16 Q Have you found any evidence of the transition zone in your
17 study of the older Atoka Penn field in the channel?

18 A We know of two wells in the channel in the old Atoka
19 field which is not included in this cross section. I am
20 referring to the Haukins well and the Everest well. It
21 is not included in this cross section, but I believe our
22 examiner is familiar with them.

23 Q Explain what water was encountered in those wells.

24 A The Haukins well which was located on top of this transi-
25 tion zone there, produced gas for some ten years before

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1 it was finally voided out and the Everest well, produced
2 several years later than that. Also there was a Pan-
3 American well in there between the Hawkins and the Everest
4 but the point that I am making here is that a well can be
5 at the top of this transition zone although it may produce
6 some water it will effectively drain the gas.

7 Q Please refer to what has been marked as Exhibit 6 and
8 explain what is shown on this exhibit.

9 A Exhibit 6 is a pressure build-up on the Brown Yates Number
10 1 well which is in this channel. It is located in the
11 Southeast Quarter of Section 24. You will observe the
12 pressure came up rapidly and stabilized at thirty-five
13 ninety-nine on the initial charts. This just supports the
14 previous testimony about the pressures in these other wells
15 that are in the West Atoka field.

16 Q How do these compare with a one twenty-five well that is
17 in the Northwest Quarter of 25?

18 A The pressure is higher but it was a well that was drilled
19 three months earlier and I believe is already in production
20 at the time that the one twenty-five was drilled.

21 Q What about the pressure in the Hornbaker?

22 A The pressure in the Hornbaker is a little less than the
23 Brown Yates, although it is in a channel and in the tran-
24 sition zone which would probably explain for it being a
25 little bit higher than the one twenty-five.

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- 1 Q Please refer to what has been marked Exhibit 7.
- 2 A Exhibit 7 is the drill stem test data on McCaw Number 1
- 3 well in Section 19 of eighteen twenty-six. You will note
- 4 that the original shut-in pressure was 3600 pounds.
- 5 Q That is a beach sands well. How does that pressure com-
- 6 pare with the one twenty-five?
- 7 A It compares very well considering that this was a dis-
- 8 covery well in that beach sands and was drilled several
- 9 months before the one twenty-five was penetrated.
- 10 Q So that the two wells in the field that are producing are
- 11 this McCaw and the Brown Yates well?
- 12 A That is correct.
- 13 Q How much gas approximately have they produced since
- 14 discovery?
- 15 A It has been around three billion cubic feet of gas.
- 16 Q In your company's studies of the reserves in this field,
- 17 have you reached any estimate as to what might be the
- 18 reserves in the total field?
- 19 A Yes. I would estimate 40 billion cubic feet as the
- 20 reserves in the Atoka field just from the draw on these
- 21 two wells. That is a lot more gas in dedicated acreage
- 22 to these two wells. It is a lot more gas than there is
- 23 in that channel, so it must be draining the beach also.
- 24 Q Mr. Mahfood, do you have an opinion as to whether the
- 25 entire North Half of Section 25 will contribute gas to a

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1 well located 500 feet from the north line and 600 feet
2 from the east line?
3 A Yes. I definitely think it would.
4 Q Do you think that a well at that location will sufficiently
5 and economically drain the North Half of the section?
6 A Yes.
7 Q Do you have anything further to add?
8 A I think to enter this old well would prevent economic
9 waste insofar that it is \$30,000 cheaper to deviate the
10 old well than to drill a new well. It would protect
11 correlative rights since it would afford drainage of that
12 entire North Half and it would prevent waste insofar as
13 the channel completion and will afford us better recovery
14 from the beach sands at a more economic rate.
15 Q Were Exhibits 4 through 7 prepared by you or under your
16 direction?
17 A Yes.
18 MR. LOSEE: We move the introduction of Exhibits 4
19 through 7.
20 THE EXAMINER: Without objection the exhibits will
21 be admitted.
22 MR. LOSEE: I have no further direct examination.
23 THE EXAMINER: Other questions of the witness?
24 Mr. Mahfood, how do you propose to directly drill
25 this well?

dearnley, meier & mc cormick

209 SIMMS BLDG., P.O. BOX 1092, PHONE 243-6691, ALBUQUERQUE, NEW MEXICO 87103
1216 FIRST NATIONAL BANK BLDG. EAST, ALBUQUERQUE, NEW MEXICO 87108

1 THE WITNESS: We will set a whipstock at 5400. We
2 would set a target space probably 50 feet east of where we
3 want to wind up which is, I believe, what our docket says.

4 THE EXAMINER: You say 5400 or 5500?

5 THE WITNESS: 5400 feet. We will set this whipstock
6 and we will aim 50 feet east of the objective and the objective
7 is 600 feet from the east line and 500 feet from the north
8 line. We feel that the permeability trends and the dip of the
9 channel will carry the tubing back on to target.

10 THE EXAMINER: Do you propose to follow the course of
11 the hole during the time of drilling?

12 THE WITNESS: Yes, sir. We intend to do that.

13 THE EXAMINER: By running deviation directional
14 surveys?

15 THE WITNESS: That's correct. We will probably have
16 to reset the whipstock several times.

17 THE EXAMINER: Do you know if a directional survey
18 has been run by the previous operator which would already show
19 us the location of the bottom of the hole 5400 feet?

20 THE WITNESS: This is correct.

21 THE EXAMINER: So you would go ahead and use that one
22 rather than running a completely new directional survey?

23 THE WITNESS: This is correct, yes.

24 THE EXAMINER: Upon completion of the drilling, you
25 would run a directional survey.

1 THE WITNESS: Directional survey.

2 THE EXAMINER: From the 5400 point on down?

3 THE WITNESS: This is correct.

4 THE EXAMINER: Has Yates Petroleum to your knowledge

5 discussed this proposal with the offset operators in the field?

6 THE WITNESS: Yes. They are familiar with our

7 intention.

8 THE EXAMINER: Do you know if they have expressed

9 any opposition to this?

10 THE WITNESS: They just thought we were crazy.

11 THE EXAMINER: So they are not objecting to the final

12 location?

13 THE WITNESS: I don't believe they are.

14 THE EXAMINER: But they have been advised as to this

15 and they could be here if they did object?

16 THE WITNESS: Yes.

17 THE EXAMINER: Does Yates Petroleum propose a penalty

18 for this non-standard location?

19 THE WITNESS: No, sir.

20 THE EXAMINER: Referring to Exhibit Number 5 and to

21 previous testimony, I believe it has been stated that along the

22 margins of this channel the porosity development is somewhat

23 less than in the center?

24 THE WITNESS: Yes, it is.

25 THE EXAMINER: Would this act as any type of a barrier

dearnley, meier & mc cormick

209 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO 87103
1216 FIRST NATIONAL BANK BLDG. EAST • ALBUQUERQUE, NEW MEXICO 87108

1 to migration of the gas between the beach sands and the
2 channel sands?

3 THE WITNESS: I would not think so. We know there
4 is a decrease in permeability as we go back from the channel.
5 This is rarely observed today in all big rivers, but it does
6 not eliminate the porosity. It just decreases it as shown in
7 that original hole.

8 THE EXAMINER: Do you propose some sort of a tolerance
9 on the target area or do you anticipate any problem?

10 THE WITNESS: No, sir. I would ask a clearance of
11 at least 50 feet.

12 THE EXAMINER: Are there any other questions? The
13 witness may be excused.

14 Are there any statements in this case?

15 The case will be taken under advisement. Call next
16 case 4804.

17 * * * * *

I N D E XWITNESSPAGE

MR. RAY H. BECK

Direct Examination by Mr. A. J. Losee

3

MR. EDDIE MAHFOOD

Direct Examination by Mr. A. J. Losee

14

E X H I B I T SPAGE

Exhibit Number 1 -

Land ownership map

11

Exhibit Number 2 -

Isopach map

11

Exhibit Number 3 -

Stratigraphic cross section map

11

Exhibit Number 4 -

Pressure build-up and supporting data log
of Fasken Yates Federal Number 1

21

Exhibit Number 5 -

Pressure build-up on Hornbaker Number 1

21

Exhibit Number 6 -

Pressure build-up on the Brown Yates
Number 1 well

21

Exhibit Number 7 -

Drill stem test data on McCaw Number
1 well

21

dearnley, meier & mc cormick

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

4 I, MARCIA J. HUGHES, Court Reporter, do hereby certify
 5 that the above and foregoing pages are a true and correct
 6 transcript of the proceedings had before the New Mexico Oil
 7 Conservation Commission on Wednesday, August 23, 1972.

8 *Marcia J. Hughes*
 9
 10
 11
 12
 13
 14
 15
 16
 17
 18
 19
 20
 21

22 I do hereby certify that the foregoing is
 23 a true and correct transcript of the proceedings in
 24 the hearing of Case No. 1803,
 25 heard by me on Aug 23, 1972.
Richard L. Starnes
 New Mexico Oil Conservation Commission

dearnley, meier & mc cormick

209 SIMMS BLDG. • P.O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO 87103
 1216 FIRST NATIONAL BANK BLOC. EAST • ALBUQUERQUE, NEW MEXICO 87108

Told Bessett over the
phone to remind Yates
Petroleum when approving
the C-103 that a hearing
to amend R 4391 would be
necessary before
producing the well,
provided production
is obtained

Jim

BEST AVAILABLE COPY

Case 4803

Memo

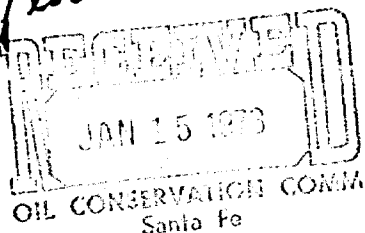
From

W. A. Gressett, Supervisor and
Oil & Gas Inspector

To Dan Mutter
They did not hit the target as
approved by Order R-4391
However it doesn't look like they
have a well, so it may not make
any difference.
What do you think.

File Case 4803

surf loc: 1980' FNL 660' FEL
25-18-25



over

Target area (R 4391): bottom
ft within 50 of a point 500
ft from N line 600 ft from
East line of Sec 25

NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

RECEIVED

NEW MEXICO OIL CONSERVATION COMMISSION

1973

OIL CON

NO. 10

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-75

5a. Indicate Type of Lease
State <input type="checkbox"/> Fee <input checked="" type="checkbox"/>
5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR.
USE "APPLICATION FOR PERMIT - A" (FORM C-101) FOR SUCH PROPOSALS.)

1. <input type="checkbox"/> OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER	7. Unit Agreement Name
2. Name of Operator Yates Petroleum Corporation	8. Farm or Lease Name Kincaid "BI" Com
3. Address of Operator 207 South 4th Street - Artesia, NM 88210	9. Well No. 2
4. Location of Well UNIT LETTER <u>A</u> <u>600</u> FEET FROM THE <u>North</u> LINE AND <u>610</u> FEET FROM THE <u>East</u> LINE, SECTION <u>25</u> TOWNSHIP <u>18S</u> RANGE <u>25E</u> NMPM.	10. Field and Pool, or Wildcat Atoka W. (Morrow)
15. Elevation (Show whether DF, RT, GR, etc.) 3438 GR	12. County Eddy

16.

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data
NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐
TEMPORARILY ABANDON ☐
PULL OR ALTER CASING ☐
OTHER ☐

PLUG AND ABANDON ☐
CHANGE PLANS ☐
OTHER ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐
COMMENCE DRILLING OPNS. ☐
CASING TEST AND CEMENT JOBS ☒
OTHER Directional Srvy, Perf. SF ☒

ALTERING CASING ☐
PLUG AND ABANDONMENT ☐

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Well was drilled to TD of 9029', logged and directionally surveyed. Bottom hole location at 7560 was 15' North 28' West of casing shoe, with 1/2-1 degree to TD. The Morrow "B" sand was tested at 8800-8875', flowed gas at 2# TP on 1/4" choke; tested again at 8855-8930', flowed gas at 4# TP on 1/4" choke, recovered 90' muddy formation water. Well was plugged back to 7486' as approved by Mr. Bill Gressett NMOCC, Oil & Gas Inspector, with 65 sacks Class H cement at 9010-8800' and 175 sx Class H w/15% Sd & 3/4% CFK-2 at 7800-7400', dressed to 7486' w/BH location at 17' North and 27' West of casing shoe. Well was directionally drilled to new TD of 8955'; tested at 8883-8907', GTS in 32", TSTM, rec. 280' SGCM; tested 8886-8955; GTS in 8", 14#TP on 1/2" ck, rec. 220' GCM & 1100' Fm. Wtr. Unable to log open hole. Ran 4 1/2" casing as follows: Float shoe and collar at 8962', 9 jts 11.6# N-80 (289'), 62 jts 11.6# K-55 (2005'), 193 jts 10.5# K-55 (6666'), cmtd with 100 sx Pozlite, 0.5% D60 & 0.2% D-65 followed by 150 sx expanding cement 0.2% D-74. PD 9:20 AM 12-3-72, top of cmt at 7960'. WOC 120 hrs, logged & perf. well at 8891-8898' w/10 jets, ran 2" tbg & set packer at 8850. Sand Frac W/ 7900# 20-40 & 1000# 20-40 beads in 230 bbls treated gel wtr. No recovery. BH location is 138' N & 167' East.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

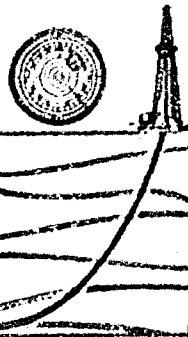
SIGNED Eddie M. Hunt TITLE Engineer DATE 1-9-73

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:



SYMBOL OF SERVICE



EASTMAN OIL WELL SURVEY COMPANY

P. O. DRAWER 102 2801 E. 17TH STREET ODDESSA, TEXAS 79760 337-3515 AREA CODE 915
CABLE ADDRESS "EASTCO" HOUSTON

December 7, 1972

THE STATE OF TEXAS

COUNTY OF ECTOR

R. J. Brinlee & Glen Harbert being duly sworn, depose and says that: They are employed by the Eastman Oil Well Survey Company, as well bore surveyors, in charge of the following described survey; and that a Magnetic Multiple Shot Survey was run from, 1100 feet to 7300 feet, and a Single Shot Survey was run from 7400 feet to 8437 feet, measured depth.

Said well more particularly described of operators, as follows:

YATES PETROLEUM COMPANY
KINCAID WELL # 2
EDDY COUNTY, NEW MEXICO

That the attached documents, namely title sheet, computation sheets, and one plan showing the True Vertical Depth of 8423.52 feet, the well being 117.84 feet, in a direction of North 48 degrees, 21 minutes, East.

This is a full, true and correct representation of the said survey, to the best of their knowledge.

R. J. Brinlee
R. J. Brinlee

Subscribed and sworn to, before me

this 7th day of December, 1972.

Glen Harbert
Glen Harbert

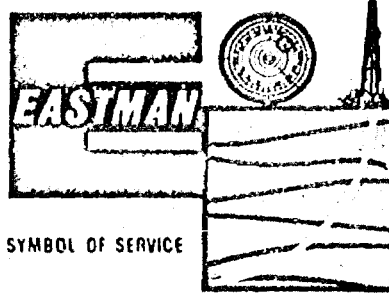
Dorothy Conklin
Dorothy Conklin, Notary Public in and for

the County of Ector, State of Texas.

RECEIVED

JAN 9 1973

O. C. C.
ARTESIA, OFFICE



REPORT of SUB-SURFACE DIRECTIONAL SURVEY

Yates Petroleum Company
COMPANY

Kincaid Well # 2
WELL NAME

Eddy County, New Mexico
LOCATION

JOB NUMBER

WTS 114772

TYPE OF SURVEY

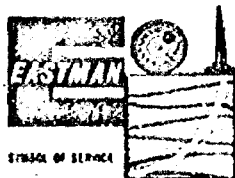
MMS / SS

DATE

December 7, 1972

SURVEY BY
R.J. Brinlee & Glen Harbert

OFFICE
Odessa, Texas



RECORD OF SURVEY

JOB NO. WTS 114772

DATE December 6, 1972

CHECKED BY _____

STATION	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH		VERTICAL SECTION		COURSE DEVIATION		DRIFT DIRECTION			RECTANGULAR COORDINATES			
												NORTH	SOUTH	EAST	WEST
1	1100	2°					80		N	85	E	07		80	
2	1200	2°					3 49		N	81	E	62		4 25	
3	1300	2°					3 49		N	79	E	1 29		7 68	
4	1400	2°					3 49		N	84	E	1 65		11 15	
5	1500	1° 45'	1499	76			3 05		N	84	E	1 97		14 19	
6	1600	1° 45'					3 05		N	86	E	2 18		17 24	
7	1700	1° 45'					3 05		N	84	E	2 50		20 28	
8	1800	1° 45'					3 05		N	88	E	2 61		23 33	
9	1900	1° 45'					3 05		N	89	E	2 66		26 38	
10	2000	1° 30'	1999	53			2 62		S	86	E	2 48		28 99	
11	2100	1° 30'					2 62		S	87	E	2 34		31 60	
12	2200	1° 15'					2 18		N	86	E	2 49		33 78	
13	2300	1°					1 75		N	89	E	2 52		35 52	
14	2400	1°					1 75		N	72	E	3 03		37 19	
15	2500	1°	2499	42			1 75		N	83	E	3 24		38 92	
16	2600	1°					1 75		N	78	E	3 60		40 63	
17	2700	1°					1 75		N	78	E	3 96		42 34	
18	2800	1°					1 75		N	82	E	4 20		44 07	
19	2900	45'					1 31		N	83	E	4 36		45 37	
20	3000	30'	2999	35			87		N	78	E	4 54		46 22	
21	3100	30'					87		N	78	E	4 72		47 07	
22	3200	30'					87		S	88	E	4 69		47 94	
23	3300	30'					87		N	77	E	4 87		48 79	
24	3400	15'					44		N	83	E	4 92		49 22	
25	3500	30'	3499	35			87		N	36	E	5 27		49 48	



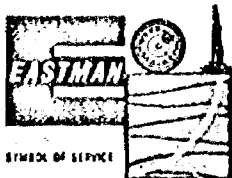
RECORD OF SURVEY

JOB NO. WTS 114772DATE December 7, 1972

CHECKED BY _____

STATION	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH		VERTICAL SECTION	COURSE DEVIATION	DRIFT DIRECTION			RECTANGULAR COORDINATES			
										NORTH	SOUTH	EAST	WEST
26	3600	15'					44	N	76 E	5 38		49 90	
27	3700	15'					44	N	16 E	5 80		50 02	
28	3800	15'					44	N	26 W	6 19		49 83	
29	3900	30'					87	N	08 E	7 05		49 95	
30	4000	15'	3999	35			44	N	33 W	7 42		49 71	
31	4100	30'					87	N	09 W	8 28		49 57	
32	4200	45'				1	31	N	40 W	9 28		48 73	
33	4300	30'					87	N	45 W	9 90		48 11	
34	4400	45'				1	31	N	55 W	10 65		47 04	
35	4500	45'	4499	32		1	31	S	89 W	10 63		45 73	
36	4600	1°				1	75	S	64 W	9 87		44 16	
37	4700	1°				1	75	S	81 W	9 60		42 44	
38	4800	45'				1	31	S	70 W	9 15		41 21	
39	4900	45'				1	31	S	66 W	8 62		40 01	
40	5000	1°	4999	24		1	75	S	82 W	8 38		38 28	
41	5100	1°				1	75	S	75 W	7 93		36 59	
42	5200	1°				1	75	S	71 W	7 39		34 93	
43	5300	1°				1	75	S	60 W	6 52		33 42	
44	5400	1° 30'				2	62	S	81 W	6 11		30 83	
45	5500	1° 30'	5499	12		2	62	S	87 W	5 97		28 22	
46	5600	1° 45'				3	05	S	89 W	5 92		25 17	
47	5700	2°				3	49	N	85 W	6 22		21 69	
48	5800	2°				3	49	N	85 W	6 52		18 21	
49	5900	2°				3	49	N	79 W	7 19		14 78	
50	6000	2°	5998	83		3	49	N	80 W	7 80		11 34	

FORM NO. D-302E



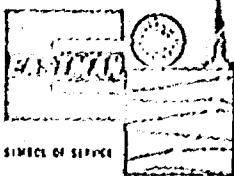
RECORD OF SURVEY

JOB NO. WTS 114772

DATE December 7, 1972

CHECKED BY _____

STATION	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH		VERTICAL SECTION		COURSE DEVIATION		DRIFT DIRECTION		RECTANGULAR COORDINATES							
											NORTH		SOUTH		EAST		WEST	
51	6100	2°					3 49		N 80 W		8 41				7 90			
52	6200	2°					3 49		N 76 W		9 25				4 51			
53	6300	2°					3 49		N 80 W		9 86				1 07			
54	6400	1° 45'					3 05		N 75 W		10 65						1 88	
55	6500	2°	6498	54			3 49		N 63 W		12 23						4 99	
56	6600	1° 45'					3 05		N 60 W		13 76						7 63	
57	6700	1° 45'					3 05		N 63 W		15 15						10 35	
58	6800	2°					3 49		N 56 W		17 10						13 24	
59	6900	2°					3 49		N 72 W		18 18						16 56	
60	7000	1° 45'	6998	27			3 05		N 73 W		19 07						19 48	
61	7100	1° 30'					2 62		N 86 W		19 25						22 09	
62	7200	1°					1 75		S 71 W		18 68						23 74	
63	7300	30'					87		S 61 W		18 27						24 51	
64	7400	1°					1 75		S 68 W		17 62						26 13	
65	7486	30'	7484	20			75		S 36 W		17 01						26 57	
66	7551	1° 30'					1 70		N 66 E		17 70						25 02	
67	7630	1° 30'					2 07		N 88 E		17 77						22 95	
68	7661	1° 30'					81		N 83 E		17 87						22 15	
69	7690	3° 15'					1 64		N 87 E		17 96						20 51	
70	7774	5° 45'	7771	67			8 42		N 79 E		19 57						12 24	
71	7837	6° 15'					6 86		N 74 E		21 46						5 65	
72	7901	6° 45'					7 52		N 73 E		23 66				1 54			
73	7998	7° 45'					13 08		N 66 E		28 98				13 49			
74	8060	8° 15'					8 90		N 60 E		33 43				21 20			
75	8118	11°	8112	26			11 07		N 62 E		38 63				30 97			



RECORD OF SURVEY

JOB NO. WTS 114772

DATE December 7, 1972

CHECKED BY _____

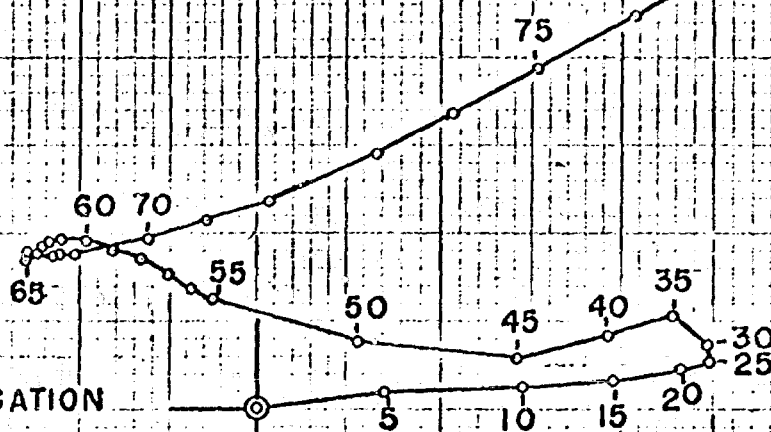
STATION	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	VERTICAL SECTION	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES			
							NORTH	SOUTH	EAST	WEST
76	8180	11° 15'			12 10	N 61 E	44 50		41 55	
77	8243	12°			13 10	N 59 E	51 24		52 78	
78	8338	13° 15'			21 77	N 53 E	64 34		70 17	
79	8437	13° 15'	8423 52		22 69	N 52 E	78 31		88 05	
Closures: 117.84' North 48° 21' East										
80	8554	13° 15'			26 82	N 53 E	94 45		109 47	
81	8677	13° 15'			27 68	N 52 E	111 49		131 28	
82	8800	12°			25 57	N 54 E	126 52		151 96	
83	8900	11° 30'			19 94	N 52 E	138 79		167 67	
Closures: 117.84' North 48° 21' East										
217 North about 50° East										

YATES PET. CO.
KINCAID NO. 2
EDDY CO. N.M.
WTS 114772

CLOSURE FROM 8437 TO 8900
NORTH 60.48
EAST 79.62
NORTH 52° 47' EAST
SCALE 1"=50'

EASTMAN

CLOSURE 117.48
NORTH 78.31 EAST 88.05
NORTH 48° 21' EAST
DEPTH 8437



HOLE LOCATION
AT 1077'
BOTTOM OF SURFACE
PIPE

SCALE 1"=20'



OIL CONSERVATION COMMISSION

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

GOVERNOR
BRUCE KING
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER

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

September 8, 1972

Mr. A. J. Losee
Losee & Carson
Attorneys at Law
Post Office Box 239
Artesia, New Mexico 88210

Re: Case No. 4803
Order No. R-4391
Applicant:

Yates Petroleum Corp.

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 x
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. 4803
Order No. R-4391

APPLICATION OF YATES PETROLEUM
CORPORATION TO DIRECTIONALLY
DRILL AND AN UNORTHODOX LOCATION,
EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on August 23, 1972, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 7th day of September, 1972, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Yates Petroleum Corporation, has acquired and is the owner, and operator of a well drilled at a surface location 1980 feet from the North line and 660 feet from the East line of Section 25, Township 18 South, Range 25 East, NMPM, Eddy County, New Mexico.
- (3) That the applicant proposes to dedicate the north half of said Section 25 to the well and that with such dedication the well location will be unorthodox.
- (4) That the subject well was drilled a total depth of 9150 feet into the West Atoka-Morrow Gas Pool, plugged back to a depth of approximately 7300 feet and directionally drilled to the east and south to a total depth of 9070 feet and was subsequently plugged back to a depth of 5200 feet.
- (5) That the applicant now seeks, as exceptions to Rules 104 C II(a) and 111(b), authority to re-enter and clean-out the subject well to a depth of approximately 5400 feet and to

-2-

CASE NO. 4803

Order No. R-4391

set a whipstock at said depth and directionally drill in such a manner as to bottom the well in the West Atoka-Morrow Gas Pool at an unorthodox bottom-hole location within 50 feet of a point 500 feet from the North line and 600 feet from the East line of said Section 25.

(6) That the applicant proposes to determine the sub-surface location of the whipstock point by means of a continuous multi-shot directional survey conducted prior to said directional drilling and in the same manner to determine the sub-surface location of the directionally drilled hole at its total depth.

(7) That the evidence indicates that the entire N/2 of said Section 25 is productive of gas from the West Atoka-Morrow Gas Pool.

(8) That the entire N/2 of said Section 25 can be efficiently and economically drained and developed by the subject well.

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

(10) That no offset operator or interest owner objected to the unorthodox location or directional drilling.

(11) That approval of the subject application will prevent the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Yates Petroleum Corporation, is hereby authorized to re-enter a dry hole having an unorthodox surface location 1980 feet from the North line and 660 feet from the East line of Section 25, Township 18 South, Range 25 East, NMPM, Eddy County, New Mexico, set a whipstock at approximately 5400 feet and directionally drill in such a manner as to bottom the well in the West Atoka-Morrow Gas Pool at an unorthodox bottom-hole location within 50 feet of a point 500 feet from the North line and 600 feet from the East line of said Section 25.

PROVIDED HOWEVER, that prior to commencing the aforesaid directional drilling, a continuous multi-shot directional survey shall be made of the well bore with shot points not more than 100 feet apart in order to determine the sub-surface location of the whipstock point; that the operator shall cause the surveying company to forward a copy of the survey report directly to the Santa Fe office of the Commission, Box 2088, Santa Fe, New Mexico; and that the operator shall notify the Commission's Artesia District Office of the date and time said survey is to

-3-

CASE NO. 4803

Order No. R-4391

be commenced. In the alternative, a copy of the directional survey run prior to the initial directional drilling shall be an acceptable substitute if said survey adequately locates the sub-surface whipstock point.

(2) That subsequent to the above-described directional drilling, a continuous multi-shot directional survey shall be made of the well bore from total depth to the whipstock point with shot points not more than 100 feet apart; that the operator shall cause the surveying company to forward a copy of the survey report directly to the Santa Fe Office of the Commission, Box 2088, Santa Fe, New Mexico, and that the operator shall notify the Commission's Artesia District Office of the date and time said survey is to be commenced.

(3) That Form C-105 shall be filed in accordance with Commission Rule 1108 and the operator shall indicate thereon true vertical depths in addition to measured depths.

(4) That the N/2 of said Section 25 shall be dedicated to the subject well.

(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



Bruce King
BRUCE KING, Chairman

Alex J. Armijo
ALEX J. ARMILLO, Member

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

S E A L

dr/



YATES BUILDING - 207 SOUTH 4TH ST.
ARTESIA, NEW MEXICO - 88210

S. P. YATES
PRESIDENT
MARTIN YATES, III
VICE PRESIDENT
JOHN A. YATES
VICE PRESIDENT
B. W. HARPER
SEC. TREAS.

September 15, 1972

Mr. A. L. Porter, Jr., Secretary-Director
New Mexico Oil Conservation Commission
P. O. Box 1148
Santa Fe, New Mexico

Re: Oil Conservation Commission Order No. R-4391
Case No. 4803

Dear Sir:

Herewith is Directional Survey Report for David Fasken,
Yates Hornbaker No. 1 which above Commission Order
requires.

Yours truly,

YATES PETROLEUM CORPORATION

Eddie M. Mahfood

Eddie M. Mahfood
Petroleum Engineer

EMM:jg
Attachment

cc: Oil Commission
Artesia

SPERRY-SUN

DIRECTIONAL SURVEY REPORT

FOR

DAVID FASKEN



TYPE OF SURVEY: Magnetic Multishot

SURVEY DEPTH: FROM 1200 FT. TO 9150 FT.

LEASE: Yates Hornbaker WELL NO. 1

FIELD: _____

COUNTY ~~PARISH~~ Eddy STATE New Mexico

DATE OF SURVEY April 11, 1972 JOB NO. MS-6226

OFFICE: Odessa, Texas 563-1106

STATE OF Texas
COUNTY/PARISH OF Ector

I/We, Gary Benson

_____, in the employ of the Directional Surveying Department of
Sperry-Sun Well Surveying Company, did on the 11th day of April 19 72
and the _____ day of _____ 19_____
and the _____ day of _____ 19_____
and the _____ day of _____ 19_____

respectively conduct or supervise the taking of a Multi-shot/~~Single Shot~~ Directional survey by method indicated:

from a depth of 1200 feet to 91 50 feet by ~~Gyroscopic~~/Magnetic/Oriented Survey
depth of _____ feet to _____ feet by Gyroscopic/Magnetic/Oriented Survey
depth of _____ feet to _____ feet by Gyroscopic/Magnetic/Oriented Survey
depth of _____ feet to _____ feet by Gyroscopic/Magnetic Oriented Survey

with records of inclination and direction of inclination being taken at approximately every 100 feet.

This survey was conducted at the request of David Fasken

for their Yates Hornbaker Well No. 1

_____, Survey, Eddy County/~~Parish~~

State of New Mexico, in the _____ Field.

I/We certify that this is a true and correct report of such survey and that it affords a true and correct representation of our findings as to the nature and conditions of the well at the time the survey was/surveys were made.

Gary Benson
+

STATE OF _____
COUNTY/PARISH OF _____

Before me the undersigned authority/authorities, on this day personally appeared _____,
known to me to be the person/persons whose name is/names are subscribed to this instrument, who after being by me duly sworn on oath, states that he has/they have knowledge of all the facts stated above and that the same is a true and correct statement of the facts therein recited.

Subscribed and sworn to before me this the _____ day of _____ 19_____.

Notary Public in and for _____

DAVID FASKEN 608 FIRST NAT. BANK BLDG. MIDLAND
YATES HORNBAKER WELL NO. 1
FIELD
EDDY COUNTY, NEW MEXICO
MAGNETIC MULTISHOT DIRECTIONAL SURVEY

PAGE 1
DATE OF SURVEY APRIL 11, 1972
VERTICAL SECTION COMPUTED ALONG CLOSURE
11 DEG EAST MAGNETIC CORRECTION APPLIED
MS-6226

SPERRY-SUN
RECORD OF SURVEY

MEASURED DEPTH	TRUE VERTICAL DEPTH	INCLINATION		DIRECTION	DOG-LEG SEVERITY DEG/100	VERTICAL SECTION	RECTANGULAR COORDINATES			
		DEG	MIN				DEG	NORTH	SOUTH	EAST
1200.	1200.00			ORIGIN AT 1200 FEET			.00		.00	
1300.	1299.98	1	15	N 89 E	.22	-.26	.04		2.18	
1400.	1399.95	1	15	N 79 E	.22	-.14	.45		4.32	
1500.	1499.94	1	0	S 90 E	.33	-.38	.45		6.07	
1600.	1599.91	1	15	N 64 E	.56	.30	1.41		8.03	
1700.	1699.88	1	30	N 63 E	.25	1.16	2.60		10.36	
1800.	1799.86	1	15	N 61 E	.25	1.95	3.66		12.27	
1900.	1899.83	1	15	N 65 E	.09	2.60	4.58		14.25	
2000.	1999.81	1	15	N 48 E	.37	3.82	6.04		15.87	
2100.	2099.78	1	15	N 47 E	.02	5.08	7.53		17.46	
2200.	2199.77	1	0	N 44 E	.26	6.16	8.78		18.67	
2300.	2299.75	1	0	N 40 E	.07	7.33	10.12		19.80	
2400.	2399.74	1	0	N 21 E	.33	8.86	11.75		20.42	
2500.	2499.72	1	0	N 36 E	.26	10.12	13.16		21.45	
2600.	2599.71	0	45	N 38 E	.25	11.03	14.19		22.25	
2700.	2699.69	1	15	N 19 E	.59	12.98	16.25		22.96	
2800.	2799.67	1	15	N 17 E	.04	14.96	18.34		23.60	
2900.	2899.64	1	15	N 17 E	.00	16.94	20.43		24.24	
3000.	2999.63	1	0	N 17 E	.25	18.52	22.10		24.75	
3100.	3099.61	1	0	N 16 E	.02	20.12	23.77		25.23	
3200.	3199.58	1	30	N 18 W	.87	22.69	25.26		24.42	

BEST AVAILABLE COPY

DAVID FASKEN 608 FIRST NAT. BANK BLDG. MIDLAND
YATES HORNBAKER WELL NO. 1
FIELD
EDDY COUNTY, NEW MEXICO
MAGNETIC MULTISHOT DIRECTIONAL SURVEY

PAGE 2
DATE OF SURVEY APRIL 11, 1972
VERTICAL SECTION COMPUTED ALONG CLOSURE
11 DEG EAST MAGNETIC CORRECTION APPLIED
MS-6226

SPERRY-SUN
RECORD OF SURVEY

MEASURED DEPTH	TRUE VERTICAL DEPTH	INCLINATION		DIRECTION	DOG-LEG SEVERITY DEG/100	VERTICAL SECTION	RECTANGULAR COORDINATES			
		DEG	MIN				NORTH	SOUTH	EAST	WEST
3300.	3299.53	1	45	N 12 W	.30	25.74	29.25		23.79	
3400.	3399.48	1	45	N 18 W	.18	28.74	32.15		22.84	
3500.	3499.44	1	45	N 19 W	.03	31.74	35.04		21.85	
3600.	3599.39	1	45	N 19 W	.00	34.74	37.93		20.86	
3700.	3699.33	2	0	N 23 W	.28	38.10	41.14		19.40	
3800.	3799.27	2	0	N 27 W	.14	41.40	44.25		17.91	
3900.	3899.21	2	0	N 29 W	.07	44.65	47.30		16.22	
4000.	3999.16	1	45	N 32 W	.27	47.44	49.89		14.60	
4100.	4099.08	2	15	N 33 W	.50	50.99	53.19		12.46	
4200.	4199.01	2	15	N 36 W	.12	54.45	56.36		10.15	
4300.	4298.93	2	15	N 35 W	.04	57.95	59.58		7.90	
4400.	4398.85	2	15	N 37 W	.08	61.38	62.71		5.54	
4500.	4498.76	2	30	N 30 W	.38	65.41	66.49		3.36	
4600.	4598.64	2	45	N 36 W	.37	69.64	70.37		.54	
4700.	4698.55	2	30	N 30 W	.37	73.68	74.15			1.65
4800.	4798.45	2	30	N 29 W	.04	77.75	77.96			3.76
4900.	4898.36	2	30	N 22 W	.31	81.98	82.01			5.39
5000.	4998.26	2	30	N 20 W	.09	86.24	86.11			6.89
5100.	5098.17	2	30	N 19 W	.04	90.52	90.23			8.31
5200.	5198.07	2	30	N 20 W	.04	94.79	94.33			9.80
5300.	5297.96	2	45	N 22 W	.27	99.44	98.78			11.60

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DAVID FASKEN FOR FIRST NAT. BANK BLOC. MIDLAND
 YATES HORNBAKER WELL NO. 1
 FIELD
 EDDY COUNTY, NEW MEXICO
 MAGNETIC MULTISHOT DIRECTIONAL SURVEY

PAGE 3
 DATE OF SURVEY APRIL 11, 1972
 VERTICAL SECTION COMPUTED ALONG CLOSURE
 11 DEG EAST MAGNETIC CORRECTION APPLIED
 MS-6226

SPERRY-SUN
 RECORD OF SURVEY

MEASURED DEPTH	TRUE VERTICAL DEPTH	INCLINATION		DIRECTION	DOG-LEG SEVERITY DEG/100	VERTICAL SECTION	RECTANGULAR COORDINATES			
		DEG	MIN				NORTH	SOUTH	EAST	WEST
5400.	5397.84	2	45	N 23 W	.05	104.07	103.20			13.47
5500.	5497.73	2	45	N 21 W	.10	108.74	107.68			15.19
5600.	5597.61	2	45	N 20 W	.05	113.43	112.18			16.83
5700.	5697.53	2	15	N 20 W	.50	117.27	115.87			18.17
5800.	5797.46	2	15	N 20 W	.00	121.11	119.56			19.52
5900.	5897.41	1	45	N 14 W	.54	124.14	122.53			20.25
6000.	5997.39	1	15	N 20 W	.52	126.27	124.58			21.00
6100.	6097.35	1	30	N 4 W	.46	128.89	127.19			21.18
6200.	6197.33	1	15	N 4 W	.25	131.06	129.36			21.34
6300.	6297.30	1	15	N 3 W	.02	133.24	131.54			21.45
6400.	6397.30	0	30	N 4 W	.75	134.11	132.41			21.51
6500.	6497.30	0	30	N 37 W	.28	134.87	133.11			22.04
6600.	6597.29	0	45	N 34 W	.25	136.04	134.19			22.77
6700.	6697.28	0	45	N 36 W	.03	137.20	135.25			23.54
6800.	6797.27	0	45	N 65 W	.39	137.91	135.81			24.72
6900.	6897.26	0	45	S 87 W	.36	138.02	135.74			26.03
7000.	6997.26	0	30	S 61 W	.37	137.70	135.31			26.79
7100.	7097.24	1	0	S 50 W	.52	136.77	134.19			28.13
7200.	7197.22	1	15	S 51 W	.25	135.64	132.82			29.83
7300.	7297.20	1	0	S 53 W	.25	134.79	131.77			31.22
7400.	7397.20	0	45	S 65 W	.31	134.41	131.22			32.41

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DAVID LASKEN 608 FIRST NAT. BANK BLDG. MIDLAND
YATES HORNBAKER WELL NO. 1
FIELD
EDDY COUNTY, NEW MEXICO
MAGNETIC MULTISHOT DIRECTIONAL SURVEY

PAGE 4
DATE OF SURVEY APRIL 11, 1972
VERTICAL SECTION COMPUTED ALONG CLOSURE
11 DEG EAST MAGNETIC CORRECTION APPLIED
MS-6226

SPERRY-SUN
RECORD OF SURVEY

MEASURED DEPTH	TRUE VERTICAL DEPTH	INCLINATION		DIRECTION	DOG-LEG SEVERITY DEG/100	VERTICAL SECTION	RECTANGULAR COORDINATES			
		DEG	MIN				NORTH	SOUTH	EAST	WEST
7500.	7497.20	0	0	N 11 E	.75	134.41	131.22			32.41
7600.	7597.12	2	15	S 78 E	2.25	133.08	130.40			28.57
7700.	7697.07	1	45	S 70 E	.57	131.65	129.36			25.70
7800.	7797.02	1	45	S 90 E	.61	131.23	129.36			22.64
7900.	7896.96	2	0	S 83 E	.34	130.34	128.93			19.18
8000.	7996.93	1	30	S 67 E	.69	129.00	127.91			16.77
8100.	8096.91	1	0	S 67 E	.50	128.11	127.23			15.16
8200.	8196.91	0	45	S 76 E	.29	127.62	126.91			13.89
8300.	8296.90	0	30	N 59 E	.53	127.96	127.36			13.14
8400.	8396.90	0	0	N 11 E	.50	127.96	127.36			13.14
8500.	8496.90	0	0	N 11 E	.00	127.96	127.36			13.14
8600.	8596.90	0	0	N 11 E	0.00	127.96	127.36			13.14
8700.	8696.90	0	15	N 50 W	.25	128.29	427.64			13.48
8800.	8796.89	0	45	N 59 W	.50	129.11	128.31			14.60
8900.	8896.88	0	45	N 60 W	.01	129.91	128.97			15.73
9000.	8996.88	0	30	N 61 W	.25	130.43	129.39			16.50
9100.	9096.88	0	30	N 62 W	.01	130.94	129.80			17.27
9150.	9146.87	0	45	S 52 W	1.42	130.61	129.40			17.78

BEST AVAILABLE COPY

THE CALCULATION PROCEDURES ARE BASED ON THE USE OF THE TANGENTIAL OR CHORD METHOD
HORIZONTAL DISPLACEMENT = 130.61 FEET AT NORTH 7 DEG. 0 MIN. WEST (TRUE)

140
7000
MD 9150
TVD 9146.87
9000
6000
8000

DAVID FASKEN
YATES HORNBAKER WELL NO.1
EDDY COUNTY, NEW MEXICO
MAGNETIC MULTISHOT SURVEY
4-11-72
JOB NO. MS-6226
1200 TO 9150 FT.

100
80
5000

HORIZONTAL DISPLACEMENT = 130.61 FT. AT
NORTH 7 DEG. 0 MIN. WEST (TRUE)

60
40
4000

SPERRY-SUN WELL SURVEYING COMPANY

HORIZONTAL PROJECTION
SCALE 1" = 20'

20
3000

0
2000
ORIGIN AT 1200 FT.

40 20 0 20 40



DOCKET: EXAMINER HEARING-- WEDNESDAY - AUGUST 23, 1972

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

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

CASE 4775: (Continued from the July 26, 1972 Examiner Hearing)

Application of Continental Oil Company for amendment of special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks amendment of the special rules and regulations governing the Blinebry Pool, Lea County, New Mexico, to provide for annual bottom-hole pressure, gas-oil ratio, and gas-liquid tests in the pool. Applicant further seeks the designation of oil areas and gas areas in the pool with allowables within each area equalized on a per-acre basis and total withdrawals from the gas area to be volumetrically equivalent to the total withdrawals from the oil area.

Applicant further seeks to extend the vertical limits of the Blinebry Pool down to the top of the Tubb Pool.

Also to be considered by the Commission on its own motion will be amendment of the special rules and regulations to require that intermediate- or low-pressure gas be charged against a well's allowable; elimination of the requirement to conduct bottom-hole pressure, gas-oil ratio, and gas-liquid tests; and to require that all gas production be reported on Form C-111.

CASE 4779: (Continued from the July 26, 1972, Examiner Hearing)

Application of Merrion & Bayless for a non-standard proration unit, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 160-acre non-standard gas proration unit comprising the SE/4 of Section 35, Township 30 North, Range 12 West, within one mile of Flora Vista-Mesaverde Pool, San Juan County, New Mexico, to be dedicated to its Carnahan Well No. 1 located in Unit P of said Section 35.

CASE 4798: In the matter of the hearing called by the Oil Conservation Commission on its own motion to consider revision of Rule 701 E of the Commission Rules and Regulations to provide for unrestricted allowables for water-flood projects and to eliminate the necessity of response for administrative approval of additional injection wells.

CASE 4799: In the matter of the hearing called by the Oil Conservation Commission on its own motion to amend Rule 306 of the Commission Rules and Regulations to incorporate therein the provisions of Order No. R-4070 which regulate the flaring or venting of casinghead gas.

CASE 4807: In the matter of the hearing called by the Oil Conservation Commission on its own motion for the amendment of Rule 104 C. I of the Commission Rules and Regulations to permit the drilling of development oil wells as close as 330 feet to another well on the same unit drilling to or capable of producing from the same pool.

CASE 4800: Application of Mobil Oil Corporation for waterflood expansion and capacity allowable, Lea County, New Mexico. Applicant, in the above-styled cause, seeks to expand its Bridges State Waterflood Project, Vacuum Grayburg-San Andres Pool, Lea County, New Mexico, by the addition of its Bridges State Wells Nos. 12 and 174 located, respectively, in Unit P of Section 26 and Unit J of Section 15, Township 17 South, Range 34 East.

Applicant further seeks the assignment of capacity allowable to said Well No. 12.

CASE 4801: Application of The Petroleum Corporation for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Parkway West Unit Area comprising 3840 acres, more or less, of State lands in Sections 20, 21, 22, 27, 28, and 29 of Township 19 South, Range 29 East, Eddy County, New Mexico.

CASE 4802: Application of Crown Central Petroleum Corporation for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Grayburg formation in the open-hole interval from 4011 feet to 4083 feet in its Fred Turner Well No. 2 located in Unit O of Section 6, Township 20 South, Range 38 East, Skaggs (Grayburg) Pool, Lea County, New Mexico.

CASE 4803: Application of Yates Petroleum Corporation to directionally drill and an unorthodox location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to re-enter a dry hole having an unorthodox surface location 1980 feet from the North line and 660 feet from the East line of Section 25, Township 18 South, Range 25 East, Eddy County, New Mexico, and to directionally drill in such a manner as to bottom the well in the West Atoka-Morrow Gas Pool at an unorthodox bottom hole location 500 feet from the North line and 600 feet from the East line of said Section 25. The N/2 of said Section 25 to be dedicated to the well.

CASE 4804: Application of Dugan Production Corporation for downhole commingling and a non-standard proration unit, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks as an exception to Rule 303 of the Commission Rules and Regulations, authority to commingle oil production from the Amarillo-Gallup Oil Pool and gas from the

(Case 4804 continued)

Basin-Dakota Pool in the wellbore of its Fullerton Well No. 1 located 1850 feet from the North and West lines of Section 34, Township 28 North, Range 13 West, San Juan County, New Mexico. Applicant further seeks approval for a non-standard 160-acre gas proration unit for the Basin-Dakota Pool comprising the NW/4 of said Section 34 to be dedicated to the subject well.

CASE 4805: Application of W. C. Montgomery for a non-standard proration unit, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks approval for an 80-acre non-standard oil proration unit comprising the NE/4 NE/4 of Section 20 and the NW/4 NW/4 of Section 21, Township 8 South, Range 38 East, Bluit-San Andres Associated Pool, Roosevelt County, New Mexico, to be dedicated to a well to be drilled in the NE/4 NE/4 of said Section 20.

CASE 4806: Southeastern New Mexico nomenclature case calling for an order for the creation, extension, contraction and abolishment of certain pools in Lea, Chaves, Eddy and Roosevelt Counties, New Mexico.

(a) Create a new pool in Eddy County, New Mexico, classified as a gas pool for Cisco production and designated as the Boyd-Cisco Gas Pool. The discovery well is the David Fasken Arco "9" Morrison No. 1 located in Unit B of Section 9, Township 19 South, Range 25 East, NMPM. Said pool would comprise:

TOWNSHIP 19 SOUTH, RANGE 25 EAST, NMPM
SECTION 9: N/2

(b) Create a new pool in Chaves County, New Mexico, classified as an oil pool for Queen production and designated as the South Lucky Lake-Queen Pool. The discovery well is the Dalport Oil Corporation Todhunter Federal No. 1 located in Unit F of Section 22, Township 15 South, Range 29 East, NMPM. Said pool would comprise:

TOWNSHIP 15 SOUTH, RANGE 29 EAST, NMPM
SECTION 22: SE/4 NW/4

(c) Create a new pool in Lea County, New Mexico, classified as a gas pool for Devonian production and designated as the East Ranger Lake-Devonian Gas Pool. The discovery well is the Union Texas Petroleum Corporation Shell State Com No. 1 located in Unit E of Section 6, Township 13 South, Range 35 East, NMPM. Said pool would comprise:

TOWNSHIP 13 SOUTH, RANGE 35 EAST, NMPM
SECTION 6: W/2

(d) Abolish the Penrose Skelly-Grayburg Pool in Lea County, New Mexico, described as:

TOWNSHIP 21 SOUTH, RANGE 36 EAST, NMPM
 SECTION 13: E/2
 SECTION 24: E/2
 SECTION 25: NE/4 and E/2 SE/4

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM
 SECTION 4: Lots 3, 4, 5, 6, 11, 12
 13, 14 and SW/4
 SECTION 7: S/2
 SECTION 8: S/2 and NE/4
 SECTION 9: W/2
 SECTION 16: S/2 and NW/4
 SECTION 17: All
 SECTION 18: All

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM
 SECTION 19: All
 SECTION 20: All
 SECTION 21: All
 SECTION 27: All
 SECTION 28: All
 SECTION 29: All
 SECTION 30: All
 SECTION 31: All
 SECTION 32: All
 SECTION 33: All
 SECTION 34: All
 SECTION 35: All

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM
 SECTION 2: All
 SECTION 3: All
 SECTION 4: All
 SECTION 5: All
 SECTION 6: E/2
 SECTION 7: NE/4
 SECTION 8: All
 SECTION 9: All
 SECTION 10: All
 SECTION 11: All
 SECTION 14: All
 SECTION 15: All
 SECTION 16: All
 SECTION 17: E/2

(Case 4806 continued)

(e) Extend the vertical limits of the Langlie-Mattix Pool in Lea County, New Mexico, to include the Grayburg formation. Also, extend said Langlie-Mattix Pool to include therein:

TOWNSHIP 21 SOUTH, RANGE 36 EAST, NMPM

SECTION 13: E/2

SECTION 24: E/2

SECTION 25: NE/4 and E/2 SE/4

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPMSECTION 4: Lots 3, 4, 5, 6, 11, 12,
13, 14 and SW/4

SECTION 7: S/2

SECTION 8: S/2 and NE/4

SECTION 9: W/2

SECTION 16: S/2 and NW/4

SECTION 17: All

SECTION 18: All

SECTION 19: All

SECTION 20: All

SECTION 21: All

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM

SECTION 27: All

SECTION 28: All

SECTION 29: All

SECTION 30: All

SECTION 31: All

SECTION 32: All

SECTION 33: All

SECTION 34: All

SECTION 35: All

TOWNSHIP 22 SOUTH, RANGE 37 EAST, NMPM

SECTION 2: All

SECTION 3: All

SECTION 4: All

SECTION 5: All

SECTION 6: E/2

SECTION 7: NE/4

SECTION 8: All

SECTION 9: All

SECTION 10: All

SECTION 11: All

SECTION 14: All

SECTION 15: All

SECTION 16: All

SECTION 17: E/2

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

TOWNSHIP 11 SOUTH, RANGE 33 EAST, NMPM
SECTION 35: N/2 NW/4

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

TOWNSHIP 11 SOUTH, RANGE 33 EAST, NMPM
SECTION 35: N/2 NW/4

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

TOWNSHIP 9 SOUTH, RANGE 36 EAST, NMPM
SECTION 17: NW/4

(i) Extend the North Banson Queen-Grayburg Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 30 EAST, NMPM
SECTION 26: S/2 SW/4

(j) Extend the Bluitt-San Andres Associated Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 8 SOUTH, RANGE 38 EAST, NMPM
SECTION 8: NW/4

(k) Extend the South Carlsbad-Atoka Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 27 EAST, NMPM
SECTION 7: W/2
SECTION 18: N/2

(l) Extend the South Carlsbad-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 27 EAST, NMPM
SECTION 7: S/2
SECTION 18: N/2

(m) Extend the Dos Hermanos-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 30 EAST, NMPM
SECTION 22: All
SECTION 27: All

(n) Extend the South Empire-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

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

(o) Extend the Fowler-Upper Yeso Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 37 EAST, NMPM
SECTION 10: SE/4
SECTION 11: SW/4

(p) Extend the Golden Lane-Strawn Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 29 EAST, NMPM
SECTION 4: Lot 9, 10, 11, 12, 13, 14,
15 and 16

(q) Extend the Grayburg-Jackson Pool in Eddy County New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 30 EAST, NMPM
SECTION 9: S/2

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

TOWNSHIP 21 SOUTH, RANGE 36 EAST, NMPM
SECTION 2: SW/4

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

TOWNSHIP 13 SOUTH, RANGE 36 EAST, NMPM
SECTION 33: SE/4

(t) Extend the Sand Dunes-Cherry Canyon Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 31 EAST, NMPM
SECTION 26: NW/4 NE/4

(u) Extend the Sulimar-Queen Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 15 SOUTH, RANGE 29 EAST, NMPM
SECTION 27: SE/4 SE/4
SECTION 34: NE/4 NE/4

(v) Extend the Vada-Pennsylvanian Pool in Roosevelt County, New Mexico, to include therein:

(v continued from page 7 - Case 4806)

TOWNSHIP 8 SOUTH, RANGE 34 EAST, NMPM
SECTION 34: SE/4

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

TOWNSHIP 14 SOUTH, RANGE 30 EAST, NMPM
SECTION 21: SE/4

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

TOWNSHIP 25 SOUTH, RANGE 24 EAST, NMPM
SECTION 27: All
SECTION 35: W/2

TOWNSHIP 26 SOUTH, RANGE 24 EAST, NMPM
SECTION 3: All
SECTION 4: E/2

CASE 4786: (Continued from August 9, 1972, Examiner Hearing).

Application of Highland Production Company 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 in the open-hole interval from 4378 feet to 4418 feet in its Russell Federal Well No. 6 located in Unit K of Section 20, Township 26 South, Range 32 East, East Mason-Delaware Pool, Lea County, New Mexico.



YATES BUILDING - 207 SOUTH 4TH ST.
ARTESIA, NEW MEXICO - 88210

S. P. YATES
PRESIDENT
HARVEY E. YATES
VICE PRESIDENT
MARTIN YATES, III
VICE PRESIDENT
JOHN A. YATES
VICE PRESIDENT
HUGH W. PARRY
SEC. - TREAS.

October 13, 1972

Case 4803

R-4391

Mr. A. L. Porter, Jr., Secretary-Director
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

RE: Unorthodox Location, Kincaid BI Com. No. 2
OCC Order No. R-4391 Case No. 4803

Dear Sir:

Herewith is Notice of Intent to Drill, and new location plat on Kincaid BI Com. No. 2, proposed Morrow test. This letter confirms a telephone conversation between our attorney, Mr. A. J. Losee and Mr. George Hatch, Oil Conservation Commission counsel, pertaining to the change of location on our Hornbaker "BA" Com. No. 2 well from 1980 feet from the North line and 660 feet from the East line, Section 25, Township 18 South, Range 25 East to 600 feet from the North line and 620 feet from the East line of Section 25, Township 18 South, Range 25 East, Eddy County.

The reason for the change of location is that we have run into mechanical difficulties while drilling through the Pennsylvanian shales and we are unable to directionally drill into the target area.

Yours very truly,

YATES PETROLEUM CORPORATION

Eddie M. Mahfood
Eddie M. Mahfood
Petroleum Engineer

EMM:jg

Encl.

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LAND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

Form O-101
Revised 1-1-65

5A. Indicate Type of Lease
STATE <input type="checkbox"/> FEDERAL <input checked="" type="checkbox"/>
5. State Oil & Gas Lease No.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work	7. Unit Agreement Name
b. Type of Well OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>	8. Farm or Lease Name Kincaid BI Com.
2. Name of Operator Yates Petroleum Corporation	9. Well No. 2
3. Address of Operator 207 So. 4th St., Artesia, New Mexico 88210	10. Field and Pool, or Wildcat Atoka West Morrow
4. Location of Well UNIT LETTER <u>A</u> LOCATED <u>600</u> FEET FROM THE <u>North</u> LINE AND <u>620</u> FEET FROM THE <u>East</u> LINE OF SEC. <u>25</u> TWP. <u>18S</u> RGE. <u>25E</u> NMPM	12. County Eddy
19. Proposed Depth 9000'	19A. Formation Morrow
20. Rotary or C.T. Rotary	
21. Elevations (Show whether DT, RT, etc.) 3438 GR	21A. Kind & Status Plug. Bond Blanket
21B. Drilling Contractor Ard Drlg. Co.	22. Approx. Date Work will start 10-13-72

23.

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
17½	13-3/8	48#	400	Circ.	Surface
12¾	8-5/8	24#	1150	Circ.	Surface
7-7/8	4½	10.5 & 11.6#	9000	250	8100'

Unorthodox location approved in OCC Rule No. R-4391, Case No. 4803. Unable to sidetrack in Pennsylvania shales, obtained verbal approval to skid rig to above location and drill straight hole for Morrow test. If commercial, will run 4½" casing to total depth and cement with 250 sx cement. BOP's and prudent engineering practice will be employed throughout the drilling and completion procedure.

Note: This unorthodox location was previously named Yates-Hornbaker "BA" Com. No. 2 with surface location 1980/N and 660/E line of Sec. 25, 18S, 25E.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Signed Eddie L. Wally Title Engineer Date 10-13-72
(This space for State Use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

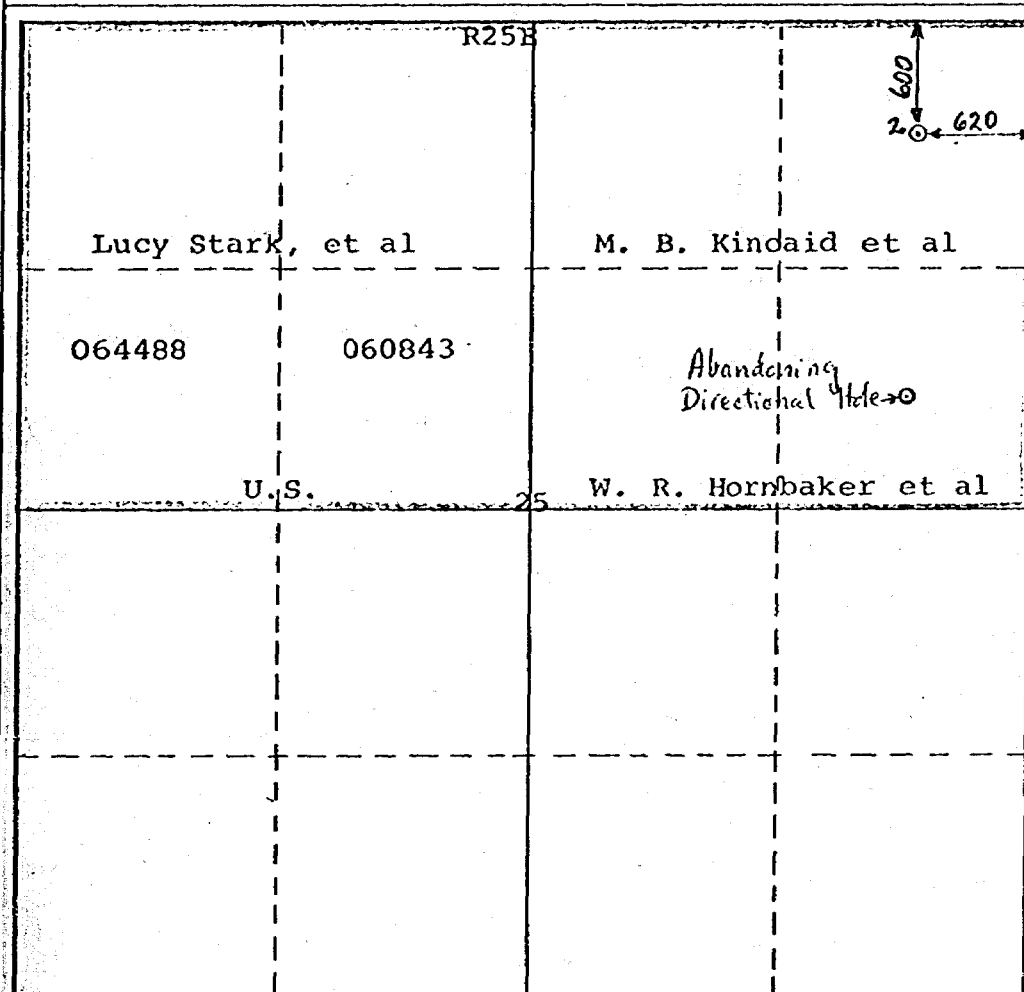
Operator Yates Petroleum Corporation		Lease Kincaid BI Com.		Oil Co. Yates	Well No. 2
Unit Letter A	Section 25	Township 18 South	Range 25 East	County Eddy	
Actual Footage Location of Well: 600 feet from the North line and 620 feet from the East line.					
Ground Level Elev. 3438	Producing Formation Morrow		Pool W. Atoka	Dedicated Acreage 320 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☒ No If answer is "yes," type of consolidation Being Communitized

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Name

Eddie M. Mahfood

Position

Engineer

Company

Yates Petroleum Corp.

Date

10-12-72

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

10-12-72

Date Surveyed

Registered Professional Engineer and/or Land Surveyor

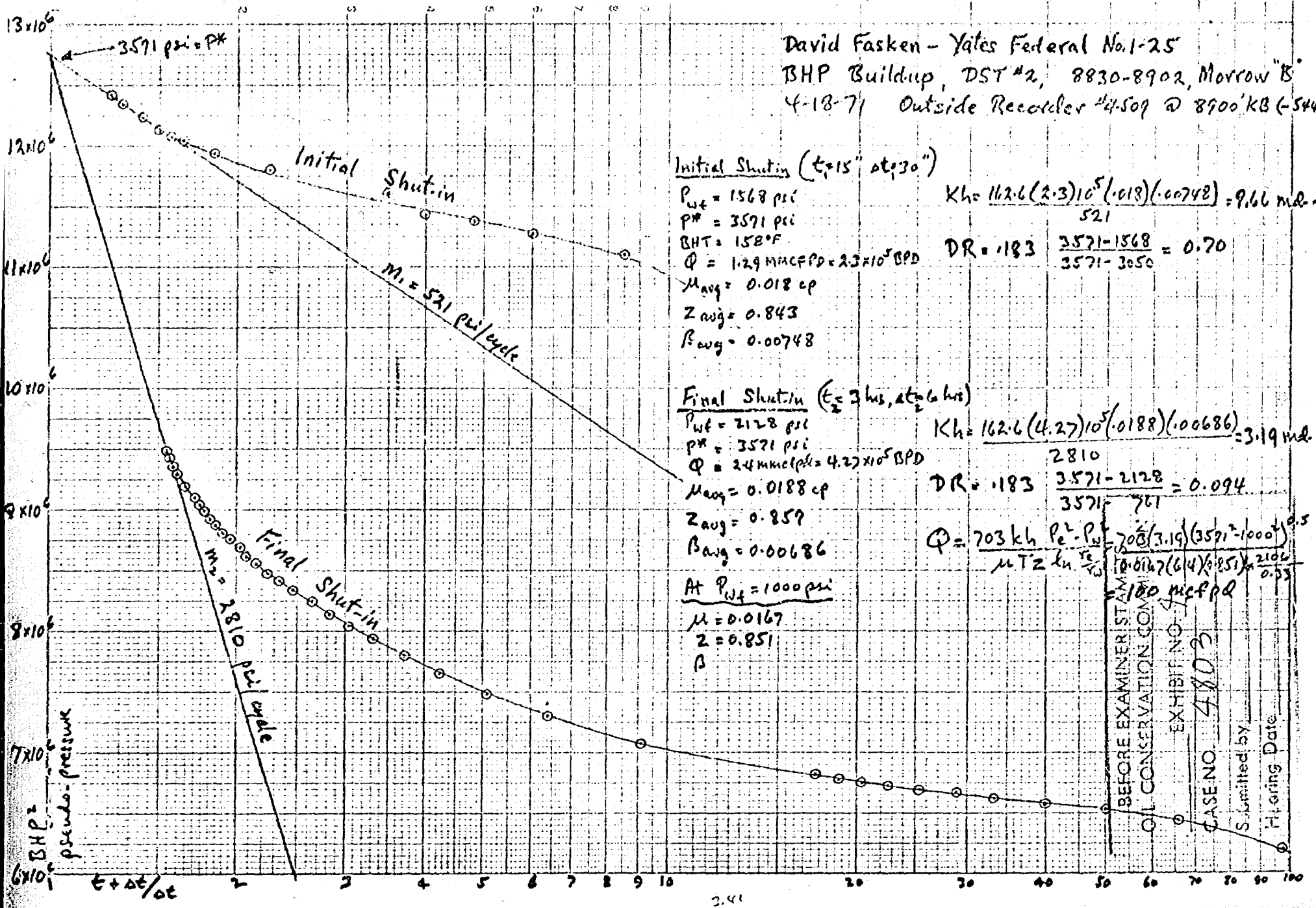
Certificate No.

4605

[illegible]

Exhibit 4

David Fasken - Yates Federal No. 1-25
 BHP Buildup, DST #2, 8830-8902, Morrow "B"
 4-18-71 Outside Recorder #4509 @ 8900' KB (-5441)



0041 0000 0000 0000 0000 0000 0000 0000

43-DST-174

Notes Fed #1025

not over 6 ft.

References

1990-1991

Customer's Representation

Types of Responses

0-6 months: 100% (100%)

2511596

.....

[illegible]

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1500

FORM 13

4

WELL IDENTIFICATION NO. 2 - 10
 WELL NO. 2

DATE, NO. 13-10-1971 *Hydr 4-12-71*

$t_p = 15 \text{ min. } Q = 1.3 \text{ mmcf/d, } 2180 \text{ psi}$

$t_p = 180 \text{ min. } Q = 2.4 \text{ mmcf/d } (1.15 \times 180 = 193)$

WELL IDENTIFICATION NO. 2 - 10

WELL NO. 2

TIME	DEPTH	$\frac{t+\Delta t}{\Delta t}$	TIME	DEPTH	$\frac{t+\Delta t}{\Delta t}$
1968	0	∞	2123	0	∞
1989	1	16	5.0 2236	1	196
3332	2	8.5	6.20 2309	2	98
3356	3	6.0	6.44 2330	3	66
3372	4	4.8	6.53 2356	4	50
3391	5	4.0	6.53 2363	5	40
3408	6	3.5	6.67 2371	6	33.5
3435	12	2.25	6.67 2382	7	28.9
3455	18	1.83	6.69 2387	8	25.4
3471	24	1.63	6.73 2391	9	22.7
3484	30	1.50	6.75 2398	10	20.5
3498	36	1.42	6.78 2404	11	18.7
3504	42	1.36	6.82 2412	12	17.3
3513	48	1.31	7.07 2459	21	9.1
3520	54	1.28	7.30 2702	30	6.4
3525	60	1.25	7.49 2737	40	5.1

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PSI 2 FINAL SHUT IN - CONTINUED

PSI	TIME	DEPTH	$\frac{t+\Delta t}{\Delta t}$	PSI	TIME	DEPTH	$\frac{t+\Delta t}{\Delta t}$
8.93, 10 ⁶	2989	240	1.81	7.93	2316	34	3.32
9.00	3000	252	1.77	8.04	2336	50	3.03
9.04	3006	264	1.74	8.14	2351	105	2.81
9.11	3018	276	1.71	8.25	2372	120	2.63
9.16	3027	288	1.68	8.34	2388	132	2.48
9.20	3033	300	1.65	8.41	2391	144	2.35
9.25	3042	310	1.625	8.48	2392	150	2.25
9.30	3049	324	1.60	8.55	2394	165	2.16
9.35	3058	336	1.58	8.61	2395	180	2.08
9.41	3067	348	1.56	8.64	2396	192	2.02
9.47	3078	360	1.54	8.76	2360	204	1.96
				8.81	2369	210	1.90
				8.87	2378	222	1.85

DAVID TROIAN 10/1/71

YATES FEMUR # 1 - 25
Test No. 2

Job No. 43-DST-174 hynes 4-18-71

INSIDE ROD-1012 5012

60 MIN. INITIAL SHUT IN

360 MIN. FINAL SHUT IN

<u>PSI</u>	<u>TIME</u>
1577	0
1788	1
3364	2
3374	3
3381	4
3389	5
3397	6
3420	12
3441	18
3455	24
3467	30
3480	36
3490	42
3498	48
3504	54
3510	60

<u>PSI</u>	<u>TIME</u>
2113	0
2228	1
2388	2
2517	3
2535	4
2542	5
2550	6
2554	7
2559	8
2564	9
2567	10
2568	11
2569	12
2606	24
2633	36
2660	48
2681	60

FINAL SHUT IN - CONTINUED

2867	252
2873	264
2880	276
2888	288
2892	300
2896	312
2901	324
2907	336
2913	348
2917	360

2699	72
2718	84
2735	96
2753	108
2764	120
2776	132
2788	144
2799	156
2811	168
2820	180
2830	192
2846	216
2851	228
2859	240

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David Fasten V. 105. F. 100 Comp. 11/ - 25
 1650/W 1490/N Sec 25 188-251
 Alaska Perm., E. 104 County, N.M. Elev. 3459' K.B.
 11-22-71 5% Oil

8800

20 18 16 14 12 10 5

DST #2

8900

9000

Morrow "A" Sd

"A" Shale

Morrow "B" Sd

"B" Shale

Morrow "C" Sd

Caliper

GR

SONIC

Porosity

3579 psi

12.0

11.0

10.0

9.0

8.0

7.0

6.0

5.0

4.0

3.0

2.0

1.0

0.9

0.8

BHP Squared, psi^2 (millions)

GTS - 18 min.
CP = 90 mcfpd, no fluid
BHFP = 137 psi

$$kh = \frac{1626 (1403) 10^3 (0.18) (0.080)}{3485} = 0.1 \text{ md-ft}$$

$$DR = 183 \left(\frac{3579 - 161}{3579 - 94} \right) = 0.18$$

Dimensionless Time, $t + \Delta t / \Delta t$

3581 psi

DST #5, Deviated Hole, 8954 - 8982'

GTS - 6 min.
Q = 20 BWPH + 144 mcfpd
BHFP = 1491 psi

$m = 83 \text{ psi/cycle}$

Original Hole, 8816 - 8948'

David Faskins - Yates Hornbaker No.1
BHP Build-ups, Morrow "B" Sd.

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BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
EXHIBIT NO. 5

CASE NO. 4803

Submitted by
Hedding Date

Exhibit #5

BHP, psi

卷之六

April 5, 1972

DATE OF TEST

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DAVID FASKEN ESTATE

YATES HORNBAKER #1
Test No. 1

Job No. 43-DST-206 *hymer 4-5-72*

OUTSIDE RECORDER # 705

$t_w = 60 \text{ min}$ $t = t_1 + t_2 = 75 \text{ min}$

$t_i = 15 \text{ min}$
60 MIN. INITIAL SHUT IN

120 MIN. FINAL SHUT IN

$\frac{p_{si}^2}{\text{PSI}}$	PSI	$\frac{(1.415)}{2t}$	TIME	$\frac{p_{si}^2}{\text{PSI}}$	PSI	$\frac{t + \Delta t}{2t}$
	161	∞	0		137	∞
	202	16	1		259	76
	268	8.5	2		401	38.5
	363	6.0	3		502	26.0
	459	4.75	4		618	19.75
	562	4.0	5		751	16.0
	654	3.5	6	0.719	848	15.17
	755	3.14	7	0.904	951	11.71
0.78	886	2.88	8	1.107	1052	10.37
0.95	976	2.67	9	1.37	1170	9.33
1.18	1086	2.50	10	1.70	1303	8.50
2.35	1532	2.00	15	3.16	1777	6.00
4.45	2109	1.75	20	4.31	2076	4.75
7.81	2794	1.50	30	5.57	2361	3.50
9.70	3115	1.37	40	6.22	2494	2.87
10.34	3215	1.30	50	6.71	2590	2.50
10.63	3260	1.25	60	7.11	2666	2.25
			70	7.47	2733	2.07
			80	7.78	2790	1.94
			90	8.13	2851	1.83
			100	8.44	2905	1.75
			110	8.75	2950	1.68
			120	9.04	3006	1.625

#5

David Farber - Yates Hornbaker #1
West Atoka - Original Hole - BHC Sonar
Blow - 3475 KB

Cl-B. 72

8800

Marrow "A"

16 14 12 10 8

DST
#1

Marrow "B"

8900

9000

DRILL STEM TEST SERVICE REPORT

Field <u>West Atoka</u> Formation <u>Morrison</u>	Job No. <u>W-DST-448</u> Test No. <u>5</u> Customer Test No. <u>5</u>
Location <u>3 mi. S.W. of Artesia</u>	Net Feet of Pay <u> </u> Elevation <u> </u>
County <u>Eddie</u> State <u>New Mexico</u>	Test Interval <u>8954</u> T. <u>8982</u> T.O. <u>9070</u>
Division <u>West Texas District</u> <u>Midland</u>	Type Test <u>Inflatable Straddle DST</u>
Address <u>Henry Engineering</u>	Customer's Representative <u>Jim Henry</u>
<u>807 First Nat. Bank Bldg.</u> <u>Midland</u>	Lynes' Representative <u>Don Johnston</u>
No. Reports To: <u>5 copies to above</u>	

TESTING TIME

Started in hole at <u>12:30 AM</u>
Initial flow <u>360</u> Mins. Initial shut-in <u>120</u> Mins.
Second flow <u> </u> Mins. Second shut-in <u> </u> Mins.
Third flow <u> </u> Mins. Third shut-in <u> </u> Mins.

TEST DESCRIPTION	TIME
Opened tool for Initial First Flow	4:28 a
Closed tool for First Shut-In	10:28 a
Re-opened tool for Second Flow	
Closed tool for Second Shut-In	
Opened for Third Flow	
Closed for Third Shut-In	
Unset	12:23 p

REMARKS

BLOW: Strong gas to surface in 6 minutes.

Mud to surface in 2 hours & 2 minutes.

710 PSI in sampler

2475 cc of water in sample chamber with 304 thousands of 1 cu. ft. of gas.

Sampler capacity 2650 cc

Est. gas and water to flare at 20 BOPH gas @ 1,000 MCF/Day (JBH)

MUD AND HOLE DATA

Mud Type <u>Salt Gel 2 1/2 KAL</u>	Top Packer OD <u>6 5/8</u>
Weight <u>9.1</u>	Bot Packer OD <u>6 5/8</u>
Viscosity <u>55</u>	Bot Hole Choke Size <u>3/4</u>
Water Loss <u>12</u>	Bot Hole Temp. <u>152°</u>
Filter Cake <u>3/32</u>	Caliper Hole Size <u> </u>
Hole Size <u>7 7/8</u>	Rot Hole Size <u> </u>
Casing Size <u>3 5/8</u>	Set At <u>1208</u>
Drill Pipe Size <u>4 1/2 XH</u>	Weight <u>16.60</u> I.D. <u> </u>
Drill Collar Size <u>4 1/2 XH</u>	Feet Run <u>720</u> I.D. <u>2 1/2</u>
Cushion <u>None</u>	Amount <u> </u> Feet <u> </u>

TEST RECOVERY DATA

Flow			
TIME	SURF. CHOKE	PSIG/INCHES	AMOUNT
4:34 a	1/2	70	GTS - Flare
4:38 a	"	70	520 MCF
4:48 a	"	78	520 "
4:58 a	"	75	550 "
5:28 a	"	40	350 "
6:28 a	"	10	144 "
6:33 a	3/4	10	MTS - WPTS
6:53 a	"	80	Gas & WTR. Est 203PH
7:28 a	"	60	" "
8:28 a	"	70-120	" "
9:28 a	"	70-100	" "
10:28 a	"	60-180	" "

RECOVERY Test was not reversed out

10 Ft. of Mud cut condensate

2700 Ft. of Gas cut water

Ft. of

Ft. of

Ft. of

Oil recovery °API Resistivity

Pit Chlorides 18,000 PPM Test Chlorides 34,600 PPM

PRESSURE READINGS

DESCRIPTION	Inside # 2477		Outside # 6851			
	Cap.	Hrs.	Cap.	Hrs.	Cap.	Hrs.
	Depth		Depth		Depth	
1. Initial Hydrostatic	4379	p.s.i.	4366	p.s.i.		p.s.i.
2. Initial First Flow	489	p.s.i.	489	p.s.i.		p.s.i.
3. Final First Flow	1491	p.s.i.	1482	p.s.i.		p.s.i.
4. First Shut-In	3531	p.s.i.	3548	p.s.i.		p.s.i.
5. Second Initial Flow		p.s.i.		p.s.i.		p.s.i.
6. Second Final Flow		p.s.i.		p.s.i.		p.s.i.
7. Second Shut-In		p.s.i.		p.s.i.		p.s.i.
8. Final Hydrostatic	4370	p.s.i.	4366	p.s.i.		p.s.i.
		p.s.i.		p.s.i.		p.s.i.
		p.s.i.		p.s.i.		p.s.i.
		p.s.i.		p.s.i.		p.s.i.
		p.s.i.		p.s.i.		p.s.i.

FORM 13

45

COMPANY

LEASE AND WELL NO.

TEST NO.

DEPTH

DATE OF TEST

DAVID EASSEN SERVICES

YATES HORNBAKER #1

5

8954 - 8982

MAY 4, 1972

DAVID FACKEN ESTATES

YATES HORNMAKER #1
Test No. 5

Job No. 41-DST-448 *hymer 5-4-72*

INSIDE RECORDER #2477

120 MIN. INITIAL SHUT IN

<u>PSI</u>	<u>TIME</u>	<u>$\frac{t + \Delta t}{\Delta t}$</u>
1491	0	
3452	1	361
	2	181
3472	3	121
3490		
	4	91
3506	5	73
3510		
	6	61
3517	7	52
3526		
	8	46.0
3528	9	41.0
3532		
	10	37.0
3537	15	25.0
3550		
	20	19.0
3557	30	13.0
3563		
	40	10.0
3568	50	8.2
3572		
	60	7.0
3575	70	6.14
3577		
	80	5.5
3579	90	5.0
3579		
	100	4.6
3579	110	4.27
3581	120	4.0

#5

David Fasten Yates Hornbaker #1

West Piton

BHC Source

Elev. 3475.16B

5-2-72

Deviated Hole

Morran "A"

0068

"A" Shale

Morran "B"

8960 Deviated Hole = 8902 KB

DST
#5

(-5427)

GR

CR-TR

0006

FR-GR

16 14 12 10 8

15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

1-21-71

t ₁ = 60 MIN. INITIAL SHUT IN				t ₂ = 240 MIN. INITIAL SHUT IN			
INSIDE PSI	OUTSIDE PSI	TIME	TEMP	INSIDE PSI	OUTSIDE PSI	TIME	TEMP
879	897	0		2861	2861		
994	1038	1		3185	3108		
1500	1275	2		3572	3298		
3334	1597	3		3582	3527		
3580	2336	4		3588	3561		
3597	3004	5		3591	3572		
3602	3527	6		3593	3578		
3605	3565	7		3595	3583		
3608	3576	8		3596	3585		
3610	3587	9		3597	3587		
3611	3592	10		3597	3590		
3613	3601	20		"	3594		
3613	3600	30		"	"		
3612	3599	40		"	"		
3611	3599	50		"	"		
3611	3599	60		"	"		
		70		"	"		
		80		"	"		
		90		"	3593		
		100		"	3592		
		110		"	"		
		120		"	"		
		140		"	"		
		160		"	3591		
		180		"	3590		
		200		"	"		
		220		"	"		
		240		"	"		
		260		"	"		
		280		"	"		
		300		"	"		
		320		"	"		
		330		"	"		

BEST AVAILABLE COPY

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
EXHIBIT NO. 6
CASE NO. 4803
Submitted by
Hearing Date

Exhibit 6

COMPANY MOUNTAIN STATES PETR. CORP. LEASE MCCAM GAS CONN. WELLS 1

FIELD ATOKA PENN GAS COUNTY EDDY STATE NEW MEXICO TEST NO. 1

MAIL CHARTS TO AS DIRECTED

MAIL INVOICE TO MOUNTAIN STATES PETR. CORP., BOX 1936, ROSWELL, NEW MEXICO.

FORMATION TESTED MORROW SAND TOTAL DEPTH 9,000' MAIN HOLE 7 7/8" RAT HOLE -
 INTERVAL TESTED FROM 8,700 TO 9,000 PACKER TYPE B-T SIZE 6 3/4" NUMBER 2
 DRILL PIPE SIZE 4 1/2" F.H. I.D. 3,826 DRILL COLLAR SIZE 4 1/2" X.H. I.D. 2.25
 TIME PACKER SET A.M. 9:40 P.M. PACKER SET 3 HRS. 50 MIN. PRE FLO TIME 20 MINS.
 INITIAL FLOW 60 MINS. 2ND FLOW MINS. FINAL FLOW 60 MINS.
 INITIAL SHUT-IN 60 MINS. 2ND SHUT-IN MINS. FINAL SHUT-IN 90 MINS.
 RECORDER TYPE AK-1 CAPACITY 9500# 8000# NUMBER: TOP 1645 BOTTOM 1261
 TOP RECORDER DEPTH 8,715' BOTTOM RECORDER DEPTH 8,999'
 MAX. TEMP. 128° TEMP. DEPTH 8,996' CHOKE SIZE: TOP 1" ADJ. BOTTOM 5/8
 MUD TYPE OIL BASE MUD WEIGHT 8.8 VISCOSITY FILTER CAKE 2/32 WTR. LOSS 7.8
 FLUID CUSHION TYPE - AMOUNT - REVERSED OUT YES X NO
 CONVENTIONAL TEST YES STRADDLE TEST - CASING TEST - MISS RUN -
 SECOND ASSEMBLY YES ROTARY JAR YES SAFETY JOINT YES
 SAMPLER YES NO X FFE FLOW TOOL YES NO X CIRC. SUB YES X NO
 SURFACE ACTION: INITIAL OPEN WITH WEAK TO STRONG BLOW, GAS TO SURFACE IN 5 MINUTES
 ON 1" CHOKE @ 9:50 WITH 220#. SHUT IN WITH 250# P.S.I. AT 9:55.
 FINAL OPEN GAS IMMEDIATE, OPENED ON 1/2" CHOKE WEAK TO STRONG BLOW OF
 GAS ON 1" CHOKE AT 11:00 P.M.
 GAS TO SURFACE IN 5 MINUTES, FLUID IN 10 MINUTES ON FINAL FLOW.

RECOVERY: TEST ON 1" CHOKE- 35 MINUTES, ON 1/2" CHOKE 25 MINUTES. 11:00 P.M.
 1" CHOKE 50#, 1750 MCF. 11:25 24/64 CHOKE 1100#, 342 MCF.
 11:30 - 1" CHOKE 400# - 10,000 MCF. 11:45- 1/2" CHOKE, 800# -45,000 MCF.
 12:00 - 1/2" CHOKE 800#- 45,000 MCF. 45,000 mcf
 DRILL PIPE FULL GAS 8,650'. REVERSED OUT GAS. NO FLUID.
 RECOVERED 180' HEAVY CONDENSATE CUT DRILLING MUD BELOW CIRCULATING
 SUB.

REMARKS: 20 MINUTES PRE FLOW TIME.
 694' TOTAL DRILL COLLAR LENGTH.
 300' PERFORATION LENGTH.

TESTER C. E. MCCORMICK

TEST APPROVED BY K. C. HAVENOR

	RECORDER NO. 1645		RECORDER NO.		RECORDER NO.
A INITIAL HYDROSTATIC PRESSURE	4269	P.S.I.		P.S.I.	P.S.I.
B INITIAL SHUT IN PRESSURE	3600	P.S.I.	B-1	P.S.I.	P.S.I.
C INITIAL FLOW PRESSURE	1378	P.S.I.	C-1	P.S.I.	P.S.I.
D FINAL FLOW PRESSURE	1886	P.S.I.	D-1	P.S.I.	P.S.I.
E FINAL SHUT IN PRESSURE	3600	P.S.I.		P.S.I.	P.S.I.
F FINAL HYDROSTATIC PRESSURE	4065	P.S.I.		P.S.I.	P.S.I.

BEFORE EXAMINER STAMETS
 OIL CONSERVATION COMMISSION

EXHIBIT NO. 7

CASE NO. 4803

Submitted by

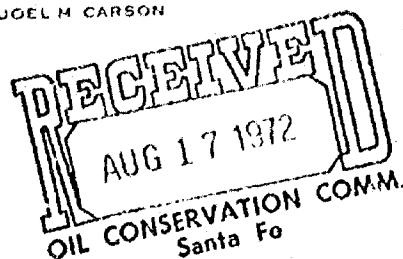
Hearing Date

Exhibit #7

A. J. LOSEE
JOEL M. CARSON

LAW OFFICES
LOSEE & CARSON
300 AMERICAN HOME BUILDING
P. O. DRAWER 239
ARTESIA, NEW MEXICO 88210

AREA CODE EOS
746-3508



16 August 1972

Case 4803

Mr. A. L. Porter, Jr., Secretary-Director
New Mexico Oil Conservation Commission
P.O. Box 2088
Santa Fe, New Mexico 87501

Re: Application of Yates Petroleum Corporation
Case No. 4803

Dear Mr. Porter:

Enclosed for filing, please find three (3) copies of the application of Yates Petroleum Corporation to directionally drill and for an unorthodox gas well location. This case has been set for hearing before an examiner on August 23, 1972.

Very truly yours,

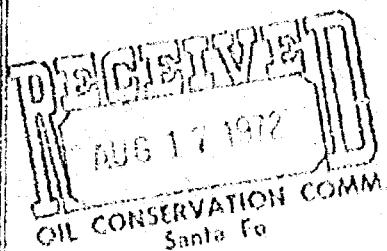
LOSEE & CARSON

A handwritten signature in dark ink, appearing to read "A. J. Losee".

A. J. Losee

AJL:gh
Enclosures

cc: Yates Petroleum Corporation



BEFORE THE OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF :
YATES PETROLEUM CORPORATION TO :
DIRECTIONALLY DRILL AND FOR AN UNORTHODOX : Case No. 4803
GAS WELL LOCATION, WEST ATOKA-MORROW GAS :
POOL, EDDY COUNTY, NEW MEXICO :

APPLICATION

COMES YATES PETROLEUM CORPORATION by its attorneys,
and in support hereof, respectfully states:

1. That applicant is the operator of the Pennsylvanian Formation underlying the North half of Section 25, Township 18 South, Range 25 East, N.M.P.M., Eddy County, New Mexico, and proposes to re-enter a dry hole at a surface location 1980 feet from the North line and 660 feet from the East line of said Section 25, and to directionally drill in such a manner as to bottom the well in the West Atoka-Morrow Gas Pool, at an unorthodox bottom hole location 500 feet from the North line and 600 feet from the East line of said Section 25.

2. Applicant seeks permission pursuant to Rule 111 (b) to intentionally deviate the re-entry operation away from vertical so that it will be bottomed 500 feet from the North line and 600 feet from the East line of said Section 25.

3. Applicant seeks an exception to the well location requirements of Rule 104 C. II(a) of the Oil Conservation Commission of New Mexico to permit the bottoming of said well at an unorthodox location 500 feet from the North line and 600 feet from the East line of said Section 25.

4. That a standard 320-acre gas proration unit comprising the North half of said Section 25, should be dedicated to such well or such lesser portion of the North half of Section 25 as is reasonably shown to be presumed to be productive of gas from said pool should be dedicated to said well.

5. The names and addresses of the operators of the leases offsetting the North half of said Section 25 follow:

Reading & Bates, Inc.
11th Floor Philtower Bldg.
Tulsa, Oklahoma 74103

Mountain States Petroleum Corp.
Security National Bank Bldg.
Roswell, New Mexico

David Fasken
Attn. Mr. Richard S. Brooks
608 First National Bank Bldg.
Midland, Texas 79701

Marathon Oil Company
Box 552
Midland, Texas 79701

6. The approval of this application will afford applicant the opportunity to produce its just and equitable share of gas in the West Atoka-Morrow Gas Pool and will protect correlative rights.

WHEREFORE, applicant prays:

A. That this application be set for hearing before an examiner and that notice of said hearing be given as required by law.

B. That upon hearing the Commission enter its order granting to applicant permission to re-enter the dry hole at a surface location 1980 feet from the North line and 660 feet from the East line of said Section 25, to deviate said hole from

vertical by directionally drilling it in such a manner as to bottom the well in the West Atoka-Morrow Gas Pool at an unorthodox location 500 feet from the North line and 600 feet from the East line of said Section 25 and to dedicate that portion of the North half of said Section 25 which is reasonably presumed to be productive of gas from said pool.

C. And for such other relief as may be just in the premises.

YATES PETROLEUM CORPORATION

By: 

A. J. Losee for
LOSEE & CARSON
P.O. Box 239
Artesia, New Mexico 88210

Attorneys for Applicant

- Aug 23 -

directional drilling and
unorthodox location -

- Jerry Looze -

- Yates -

Re-enter a dry hole (Furber) Morrow
orthodox - directional drill to
an unorthodox -

Surface

1980 - FNL

660 FEL

Sec 25 - T18S - R25E

Bottom Hole - Morrow

500 FNL

600 FEL

N/2 dedicated

- West Atoka - Gas Pool -

Eddys -

- Yates Petroleum Corporation

Foster Yates Hornbaker
#1

GMH/dr

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE NO. 4803

Order No. R-4391

APPLICATION OF YATES PETROLEUM
CORPORATION TO DIRECTIONALLY
DRILL AND AN UNORTHODOX LOCATION,
EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSIONBY THE COMMISSION:

This cause came on for hearing at 9 a.m. on August 23, 1972,
at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

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

FINDS:

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

(2) That the applicant, Yates Petroleum Corporation, has
acquired and is the owner and operator of a well drilled at ~~a~~ a
~~unorthodox~~ surface location 1980 feet from the North line and 660
feet from the East line of Section 25, Township 18 South, Range 25
East, NMPM, ^{Eddy} ~~Lee~~ County, New Mexico.

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CASE NO. 4803
Order No. R-

(3) That the applicant proposes to dedicate the north half of said Section 25 to the well and that with such dedication the well location will be unorthodox.

(4) That the subject well was drilled a total depth of 9150 feet into the West Atoka-Morrow Gas Pool, plugged back to a depth of approximately 7300 feet and directionally drilled to the east and south to a total depth of 9070 feet and was subsequently plugged back to a depth of 5200 feet.

(5) That the applicant now seeks, as exceptions to Rules 104 C II(a) and ^{III(b)} ~~III(b)~~, authority to re-enter and clean-out the subject well to a depth of approximately 5400 feet and to set a whipstock at said ^{depth} ~~depth~~ and directionally drill in such a manner as to bottom the well in the West Atoka-Morrow Gas Pool at an unorthodox bottom-hole location within 50 feet of a point 500 feet from the North line and 600 feet from the East line of said Section 25.

(6) That the applicant proposes to determine the sub-surface location of the whipstock point by means of a continuous multi-shot directional survey conducted prior to said directional drilling and in the same manner to determine the sub-surface location of the directionally drilled hole at its total depth.

(7) That the evidence indicates that the entire N/2 of said Section 25 is productive of gas from the West Atoka-Morrow Gas Pool

(8) That the entire N/2 of said Section 25 can be efficiently and economically drained and developed by the subject well.

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

-3-

CASE NO. 4803
Order No. R-

(10) That no offset operator or interest owner objected to the unorthodox location or directional drilling.

(11) That approval of the subject application will prevent the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Yates Petroleum Corporation, is hereby authorized to re-enter a dry hole having an unorthodox surface location 1980 feet from the North line and 660 feet from the East line of Section 25, Township 18 South, Range 25 East, NMPM, Eddy County, New Mexico, set a whipstock at approximately 5400 feet and directionally drill in such a manner as to bottom the well in the West Atoka-Morrow Gas Pool at an unorthodox bottom-hole location within 50 feet of a point 500 feet from the North line and 600 feet from the East line of said Section 25.

PROVIDED HOWEVER, that prior to commencing the aforesaid directional drilling, a continuous multi-shot directional survey shall be made of the well bore with shot points not more than 100 feet apart in order to determine the sub-surface location of the whipstock point; that the operator shall cause the surveying company to forward a copy of the survey report directly to the Santa Fe office of the Commission, Box 2088, Santa Fe, New Mexico; and that the operator shall notify the Commission's Artesia District Office of the date and time said survey is to be commenced. In the alternative, a copy of the directional survey run prior to the initial directional drilling shall be an acceptable substitute if said survey adequately locates the sub-surface whipstock point.

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CASE NO. 4803

Order No. R-

(2) That subsequent to the above-described directional drilling, a continuous multi-shot directional survey shall be made of the well bore from total depth to the whipstock point with shot points not more than 100 feet apart; that the operator shall cause the surveying company to forward a copy of the survey report directly to the Santa Fe Office of the Commission, Box 2088, Santa Fe, New Mexico, and that the operator shall notify the Commission's Artesia District Office of the date and time said survey is to be commenced.

(3) That Form C-105 shall be filed in accordance with Commission Rule 1108 and the operator shall indicate thereon true vertical depths in addition to measured depths.

(4) That the N/2 of said Section 25 shall be dedicated to the subject well.

(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.

Handwritten notes:
To be calculated and allowed for
as per well log
10-11-59
J. H. [unclear]

DOCKET # 1010

Date

8-11-72

To:

J. J. Green

CASE 4803: Application of YATES
PETROLEUM TO DIRECTIONALLY DRILL
AND AN UNORTHODOX LOCATION.