

1 STATE OF NEW MEXICO
2 ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
3 OIL CONSERVATION DIVISION
4 STATE LAND OFFICE BUILDING
5 SANTA FE, NEW MEXICO

6 15 February 1989

7 EXAMINER HEARING

8 IN THE MATTER OF:

9 Application of Yates Petroleum Company CASE
10 for an unorthodox gas well location, 9604
11 Eddy County, New Mexico.

12
13
14 BEFORE: Michael E. Stogner, Examiner

15
16 TRANSCRIPT OF HEARING

17
18 A P P E A R A N C E S

19 For the Division:

20
21 For Yates Petroleum Company: Chad Dickerson
22 Attorney at Law
23 DICKERSON, FISK & VANDIVER
24 Seventh and Mahone/Suite E
25 Artesia, New Mexico 88210

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I N D E X

RAY BECK

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E X H I B I T S

Yates Exhibit One, Land Plat 5

Yates Exhibit Two, Structural and Isolith Map 5

Yates Exhibit Three, Cross Section 6

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1 MR. STOGNER: We'll call next
2 Case 9604, which is the application of Yates Petroleum
3 Company for an unorthodox gas well location in Eddy County,
4 New Mexico.

5 Call for appearances.

6 MR. DICKERSON: Mr. Examiner,
7 I'm Chad Dickerson of Artesia, New Mexico, on behalf of the
8 applicant and I have one witness.

9 MR. STOGNER: Are there any
10 other appearances in this matter?

11 Will the witness please stand
12 to be sworn?

13
14 (Witness sworn.)

15
16 MR. STOGNER: Mr. Dickerson?

17
18 RAY BECK,
19 being called as a witness and being duly sworn upon his
20 oath, testified as follows, to-wit:

21
22 DIRECT EXAMINATION

23 BY MR. DICKERSON:

24 Q Mr. Beck, will you state your name, your
25 occupation, and by whom you're employed, please?

1 A Ray Beck, geologist, Yates Petroleum
2 Corporation, Artesia.

3 Q And, Mr. Beck, you have testified on
4 numerous occasions before this Division as a petroleum geo-
5 logist and your credentials are a matter of record, are
6 they not?

7 A That's true.

8 Q Have you examined the available geologi-
9 cal information which is available surrounding this appli-
10 cation and are you familiar with that?

11 A Yes, I am.

12 MR. DICKERSON: Tender Mr.
13 Beck as an expert geologist.

14 MR. STOGNER: Mr. Beck is so
15 qualified.

16 Q Mr. Beck, will you state the purpose of
17 Yates application in this case?

18 A In Case 9604 Yates Petroleum Corporation
19 respectfully requests approval of the unorthodox gas well
20 location of its proposed Pierre "AGF" State No. 1, to be
21 drilled 660 feet from the north and east lines of Section
22 26, Township 18 South, Range 27 East, Eddy County.

23 The north half of Section 26 would be
24 dedicated to the well. The necessity for this nonstandard
25 location is based on geologic conditions prevailing in the

1 primary objective Morrow Clastics formation.

2 Q Okay, Mr. Beck, refer to the map
3 submitted as Exhibit Number One and orient us with respect
4 to the location of your proposed well.

5 A Exhibit Number One is a land plat. The
6 proposed location is a red spot. Yellow colored acreage is
7 that acreage in which Yates has full or partial interest in
8 operating rights. The proration unit is outlined in red.

9 Q Okay, identify Exhibit Number Two and
10 tell us what information you show on that exhibit.

11 A Exhibit Number Two is a combined
12 structure and sand isolith map. The solid lines are struc-
13 tural contours on top of the Morrow Clastics. The contour
14 interval is 50 feet.

15 The dashed lines are isolith contours
16 showing the varying thickness of total clean Morrow sand in
17 the area. Clean is defined as sand with less than 50 gamma
18 ray API units. The contour interval is 20 feet for the
19 isolith.

20 The proposed location was chosen to en-
21 counter a maximum amount of Morrow sand in the proration
22 unit and still remain in an allowable location.

23 In addition, the proposed location is on
24 a structural nose at Morrow level, which is beneficial from
25 the standpoint of porosity enhancement and avoidance of

1 formation water.

2 Red colored well spots on the map denote
3 Morrow gas wells. Please note the Morrow penetration in
4 Section 25 southeast of the proposed location. The Section
5 25 Well had five main Morrow sands utilizing a drill stem
6 test, wireline test, and perforation information it appears
7 that two of the five sands were capable of producing gas;
8 however, the well was temporarily abandoned in 1960, which
9 was before the industry had learned better ways of
10 drilling, perforating and stimulating the Morrow gas sands
11 and now the well is a small Grayburg oil producer.

12 The proposed location should encounter
13 about 95 feet of total sand compared with the 97 feet of
14 total sand encountered in the Section 25 Well and the pro-
15 posed location should run 80 feet structurally high to the
16 Section 25 Well and at a higher position on the nose.

17 Q Okay, identify your Exhibit Number Three
18 and tell us what you show on this cross section.

19 A Exhibit Number Three is a northwest to
20 southeast stratigraphic cross section hung on the Morrow
21 Clastics. The cross section shows the pertinent correla-
22 tions and the manner in which the sand is counted for the
23 isolith map by yellow coloring.

24 The well in Section 25, mentioned in the
25 previous exhibit, is also shown on the cross section along

1 with the testing information.

2 In summary, the proposed location should
3 encounter a maximum amount of Morrow sand near the axis of
4 a structural nose and it is the best allowable location in
5 the north half of Section 26.

6 Q In your opinion, Mr. Beck, will the
7 drilling of the well at your proposed nonstandard location
8 result in less risk than drilling a well at a standard lo-
9 cation in the north half of Section 26?

10 A Yes, sir.

11 Q In your opinion will the granting of
12 this application be in the interest of conservation and the
13 prevention of waste and the protection of correlative
14 rights?

15 A Yes, it will.

16 MR. DICKERSON: Mr. Stogner,
17 Exhibit Number Four is an affidavit of mailing in accor-
18 dance with Rule 1207 prepared by my office reflecting the
19 notice to all offset operators more than 20 days in advance
20 of this hearing.

21 And I would move admission of
22 Exhibits One, Two, Three and Four at this time.

23 MR. STOGNER: Exhibits One,
24 Two, Three and Four will be admitted into evidence at this
25 point.

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CROSS EXAMINATION

BY MR. STOGNER:

Q Oh, Mr. Beck, let's look at Exhibit
Number Two.

A Okay.

Q And kind of go over this a little bit
slower here.

What are the dashed lines?

A Okay, the dashed lines are lines con-
necting up lines of -- connecting up points of equal thick-
ness of Morrow Clastic sand. We took the logs and where it
was cleaner than 50 API units we colored them in and
counted them up and plotted them on the map and this is the
way we contour them.

Q And the solid lines are the -- just the
structure contours of the top of the Morrow, is that cor-
rect?

A The top of the -- the structural con-
tours on the top of the Morrow Clastics, right, 50 foot
contour interval.

Q So this is showing me the actual, the
top of the Morrow and then the thickness underneath.

A It's showing the top of the Morrow on
the solid lines and then the dashed lines count up all the

1 Morrow sand, all the good Morrow sand.

2 Q The good Morrow sand with 50 --

3 A 50 API gamma ray units.

4 Q And naturally you're going towards the
5 east which has a -- shows more Morrow sand --

6 A That's true.

7 Q -- that meets this. Do you have an idea
8 or do you have any knowledge about is there a minimum
9 thickness in which you would encounter, say, possible pro-
10 ductive Morrow sand?

11 A Well, that's difficult to say because of
12 some of the sands are -- is tight and some of them are wet
13 in the area, so it's kind of a meaningless figure.

14 What we're trying to do here is to -- is
15 to do two things at the same time and one is to get on the
16 structural nose and get where we think that we have a
17 higher sand count and more or less in line with the well in
18 25, which we think was a bypassed well back in -- 28 years
19 ago and the well was originally drilled as a Devonian well,
20 anyway, back in those days, and we think that could have
21 made a well and we're just -- we're getting up dip from it
22 and it had a lot of sand in it and we'd like to get close
23 to that sand.

24 The well in Section 23 there has only
25 had 56 feet and it's a well which has made 350-million

1 cubic feet of gas and it's down to about 89 MCF a day now,
2 so we'd like to do better than that, if possible, by
3 getting more sand.

4 Q Let's look at the well up to the north
5 of you in Section 23. That's the Beauregard?

6 A Yes, sir.

7 Q Is that Well No. 56?

8 A That's -- well, that's 56 foot of clean
9 sand in it.

10 Q 56 foot of clean sand, and that's still
11 a producing well.

12 A Yes, sir.

13 Q What is the designated acreage on that?

14 A That, I believe, is -- that was orig-
15 inally drilled by Hondo Oil & Gas and they elected not to
16 run pipe and Yates took the well over.

17 Q When was -- how long has this well been
18 completed for a Morrow producer?

19 A I can find out for you in just a second.
20 It was originally spudded in March of '79 and completed in
21 July of '79.

22 Q And that was completed in the Red Lake
23 Atoka Morrow Gas Pool?

24 A Yes, sir.

25 Q Is there any particular reason you chose

1 a north half dedication as opposed to an east half dedica-
2 tion for your proposed well?

3 A Yes, sir, the Yates leases shown on Ex-
4 hibit One are 80 acres in the northwest northwest and
5 southeast northwest of Section 26. That constrained us to
6 either pick a north half location or a west half location.
7 We chose the north half location because we think that we
8 could find more sand by drilling at an unorthodox location
9 in the north half than we could by drilling anywhere in the
10 west half of Section 26.

11 We're attempting to either get other
12 lease owners to farmout to us or join us in that well and
13 that work is going on in progress right now. We have been
14 told, as far as I know, that they will either join or
15 farmout to us, so we think we'll have all the leases in
16 hand.

17 Q Now when I look at Exhibit Number Three
18 and the -- when I look at the portions on the right -- no,
19 the lefthand side of your well log, painted or colored in
20 yellow?

21 A Yes, sir.

22 Q Does that correspond with some of these
23 figures on your Exhibit Number Two?

24 A Yes, sir, that shows how the clean
25 Morrow sand is counted up. We take the 50 API line and we

1 color everything that has less gamma rays than 50 API, it's
2 clean Morrow sand. That's pretty close to the thickness of
3 these things and it just makes it a little quicker to do.
4 It's a process that I've used for many years and found it
5 pretty satisfactory for counting up the thickness of sands.

6 So that's exactly, if you count up each
7 one of these in front of you, I think you'll find in the
8 well on the righthand side that you can count up 97 feet of
9 sand is colored yellow there.

10 And the well on the left you can count,
11 I believe, 56 feet.

12 Q And what is the red marks on the right-
13 hand side of the Beauregard Com Well No. 1?

14 A Okay, that log is a compensated neutron
15 formation density log and there is a gas effect on that
16 particular porosity log and we color those in with red to
17 see the -- to help see the sands better.

18 The reason there's not any on the right-
19 hand side is because that well was drilled in 1960 before
20 the advent of these logs and that log is a sonic log, so
21 there's no gas effect colored in.

22 Q I want to ask one more question about
23 your north half designation.

24 Barring -- I take that back. Let me --
25 let me go back and build to this.

1 Whenever I look at your Exhibit Number
2 One and down in the southeast quarter of Section 26 there
3 is a bordered yellow line. Now is that Yates acreage or
4 Yates controlled or what is that, actually?

5 A I believe that the reason that's not a
6 solid control, the solid coloring, is because it's not a
7 fully Yates Petroleum lease that -- part of it is owned by
8 Yates parties, in the same family but -- maybe we have the
9 land manager, maybe he --

10 MR. DICKERSON: It shows Yates
11 Drilling Company, Mr. Stogner, in the east half of the
12 southeast quarter, which is one of the Yates in-house cor-
13 porations.

14 MR. STOGNER: So Yates Petro-
15 leum really has no acreage and could not even drill a well
16 in the -- now I'm saying Yates Petroleum Company, could not
17 even drill a well in the west half if it was west half
18 designation, is that correct?

19 A Yes, as far as -- I'm pretty sure that's
20 correct, that it's Yates Drilling acreage and not Yates
21 Petroleum acreage.

22 I might make one point about the leases
23 colored in solid there. You might notice there's a State
24 lease that expires in March the 1st of this year, so that's
25 what precipitated us into drilling a well to save that

1 lease.

2 Q And this, you feel, is in the best loca-
3 tion to possibly hit production in the Morrow.

4 A Yes, sir.

5 Q Now it looks like there's some produc-
6 tion above the Morrow, especially back to the east, and
7 what is the formation and the production interval in that
8 area?

9 A All the solid colored little dots?

10 Q Yes.

11 A Most of that is Grayburg production in
12 the old Artesia Field. Some of it's San Andres but it's
13 real shallow. All production is very old.

14 Q Now there seems to be a well on Exhibit
15 Number One marked No. 26, which is up to the north and east
16 of your proposed location. Is that a San Andres well in
17 the Artesia, also?

18 A Oh, right in the -- right next to it
19 there?

20 Q Yeah, right next to it.

21 A That's a -- that's a Grayburg well.

22 Q That's a Graybug well?

23 A Grayburg well.

24 Q Is there possibilities that if this well
25 is not found to be productive in the Morrow, could it be

1 used as a producing well in the upper zones?

2 A As far as I know, I think it probably
3 could be.

4 Q Okay. However, Yates Petroleum doesn't
5 -- has no interest in anything smaller than a 320-acre pro-
6 ration unit, is that correct?

7 A Well, that's true. I guess, the way I
8 -- and correct me if I'm wrong, but I believe that we were
9 probably drilling this well for a Morrow location, you
10 know, on that particular lease. If they farmed out, it
11 would depend on the agreement whether they farmed out from
12 grass roots to China or they just farmed out the Morrow
13 formation.

14 Q Who operates or who owns the northeast
15 quarter?

16 A It would be Depco, et al, and then they
17 would have the opportunity to make the well into a Grayburg
18 well, I guess.

19 Q Have you been in contact with Depco on
20 these -- obviously you have, but have you been --

21 A Our Land Department has been in contact
22 with them and I was informed by our Land Department that
23 everyone in the north half has said that they would either
24 join or farm.

25 MR. DICKERSON: Mr. Stogner, I

1 do have a landman here who's familiar with the area. I
2 haven't had him sworn but Mr. Beardemphl is sitting in the
3 room.

4 MR. STOGNER: In your opinion
5 do you feel his -- if we swore him in, do you think any of
6 his testimony would be relevant or --

7 MR. DICKERSON: It would be to
8 the effect that Yates controls all of that acreage usually
9 through joint operating agreement or farmouts from all the
10 interest owners in the north half of Section 26. It's all
11 resolved by agreement with the parties.

12 MR. STOGNER: I don't think it
13 would be necessary to bring Mr. Beardemphl on for
14 testimony.

15 Are there any other questions
16 of -- of this witness?

17 MR. DICKERSON: I have none.

18 MR. STOGNER: Does anybody
19 else have anything further of Mr. Beck?

20 He may be excused.

21 Does anybody else have
22 anything further in Case Number 9604?

23 Then this case will be taken
24 under advisement.

25 (Hearing concluded.)

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C E R T I F I C A T E

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

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9604 heard by me on 15 February 1989.
Michael R. Higgins, Examiner
Oil Conservation Division