

STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO

4 November 1987

EXAMINER HEARING

IN THE MATTER OF:

Application of Yates Petroleum Cor- CASE
poration for a unit agreement, 9246
Chaves County, New Mexico.

BEFORE: Michael E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division:

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Legal Counsel to the Division
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Santa Fe, New Mexico 87501

For the Applicant:

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MR. STOGNER: Call next Case
9246.

MR. TAYLOR: The application of
Yates Petroleum Corporation for a unit agreement, Chaves
County, New Mexico.

MR. DICKERSON: Mr. Examiner,
I'm Chad Dickerson of Artesia, New Mexico, on behalf of the
applicant, and I have two witnesses.

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

Will the witnesses please stand
and be sworn?

Oh, I'm sorry, I just noticed
that we have --

MR. DICKERSON: Both have been
previously sworn, Mr. Examiner.

MR. STOGNER: Okay, let the
record so show that Ms. Bentz and Ms. Colbert have been
previously sworn.

LESLIE BENTZ,
being called as a witness and being previously sworn and
remaining under oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. DICKERSON:

Q Ms. Bentz, will you state your name, your occupation, and where you reside?

A Yes. My name is Leslie Bentz. I'm employed by Yates Petroleum Corporation as a petroleum geologist.

Q And you have previously qualified as an expert petroleum geologist, have you not?

A Yes, I have.

Q You are familiar, are you not, Ms. Bentz, with the geological situation surrounding the proposed Dragonfly Unit?

A Yes, I am.

MR. DICKERSON: Tender Ms. Bentz as a petroleum geologist, Mr. Examiner.

MR. STOGNER: Let the record so show that Ms. Bentz is so qualified.

Q Will you briefly state the purpose of Yates' application in Case 9246?

A To seek approval of the proposed Dragonfly State Unit, Chaves County, New Mexico.

Q And where geographically is this proposed unit located?

1 A The proposed unit is comprised of Section
2 30 and Section 31 of Township 9 South, Range 27 East.

3 Q What objectives do Yates seek by the for-
4 mation of this unit?

5 A The primary objective of the test well
6 within the proposed Dragonfly State Unit is to extend pro-
7 duction in the Ordovician age dolomite reservoir.

8 Secondary objectives could include Penn-
9 sylvanian age alluvial sandstones, Wolfcamp dolomite poro-
10 sity, and alluvial channel sandstones in the Abo formation.

11 Q Will you direct Mr. Stogner's attention
12 to Exhibit Number One and summarize for him what you show on
13 that map?

14 A Exhibit Number One is a structural con-
15 tour map. The mapping horizon is the PrePennsylvanian un-
16 conformity. The contour interval is 50 feet.

17 The proposed unit is marked by a dashed
18 line and the proposed location and TD of the test well are
19 shown. Datum points are noted by circles and the appro-
20 priate datum is listed. Wells colored in red indicate Ordo-
21 vician producers.

22 The red outline and the green line mark
23 the termination of the Mississippian formation and Ordovi-
24 cian, respectfully.

25 Q Okay. Refer to -- or no, continue with

1 Exhibit Number One.

2 A The structure map shows a horst block
3 which is completely fault bounded. Throw on the bounding
4 faults varies from nearly 400 feet to a slight displacement
5 of less than 50 feet. Erosion on the uplifted area has re-
6 sulted in areas where Mississippian and Ordovician sediments
7 have been completely stripped away leaving Pennsylvanian
8 sediments lying unconformably on the PreCambrian. The Pre-
9 Pennsylvanian section on the remainder of the horst blocks
10 consists of ordovician on PreCambrian. A normal sequence of
11 Pennsylvanian resting reconfomably on Mississippian occurs
12 on the down thrown side of the bounding faults. The subcrop
13 pattern of the Mississippian is identical to the fault
14 scarps, but the Ordovician subcrop is slightly offset from
15 the structural crest. This suggests that the horst block
16 may have adjusted slightly by tilting in a northward
17 direction at a subsequent date.

18 Gas production from the uplifted fault
19 block results from porosity development along the unconfor-
20 mity surface of the Ordovician, which is truncated against
21 the PreCambrian.

22 The bounding faults also serve as a trap-
23 ping mechanism as they place the tite Mississippian lime-
24 stone in juxtaposition with the porous Ordovician dolomite.
25 Therefore a definite relationship exists between the produc-

1 tion and the structural position. The better Ordovician
2 producers occur above a -2200 subsea datum on top of the Or-
3 dovician.

4 Pertinent cumulative production from the
5 Ordovician has been noted to substantiate this relationship.

6 The parts of the horst block which have
7 not been exploited or are not HBP by other production con-
8 stitutes the justification for the unit outline. It is be-
9 lieved that all four proration units, inclusive, are produc-
10 tive. The placement of the well locations is critical. And
11 unorthodox location was chosen as the best allowable loca-
12 tion in the north half of Section 30. This would enable the
13 borehole to encounter the structure at its highest point
14 possible. It is anticipated that structurally high penetra-
15 tion of the Ordovician formation would enhance earlier and
16 greater recovery of gas reserves. The unorthodox location
17 has been submitted to the Oil Conservation Division for ad-
18 ministrative approval.

19 Q Identify what you have submitted as Exhi-
20 bit Number Two, Ms. Bentz, and summarize for us what you
21 show on that cross section.

22 A Exhibit Number Two, stratigraphic cross
23 section A-A', is located north to south/southeast across the
24 proposed unit and the proposed location.

25 Q And what wells have you shown on that

1 cross section?

2 A The first well, the Campbell State No. 1,
3 is located on the downthrown side of the fault. The bore-
4 hole encountered a Mississippian section which further docu-
5 ments that the Mississippian subcrop coincides with the
6 fault scarp.

7 The Seymour State No. 1, located on the
8 edge of the horst block, does not exhibit any Mississippian
9 section. The Ellenburger porosity is laterally connected
10 with Ordovician porosity on the downthrown side of the
11 fault. This well was found to be nonproductive in the Ordo-
12 vician.

13 The third well, the Meredith State No. 1,
14 is the structurally highest well that has an Ordovician se-
15 quence. It also has the best cumulative production from the
16 Ordovician to date. The unorthodox location, the Yates Pet-
17 roleum Dragonfly State Unit No. 1, should encounter a sec-
18 tion which is very similar to the Meredith State No. 1.

19 The final well, Sun Production Diablo
20 State No. 1, is downthrown. Again, the Mississippian forma-
21 tion is present. An oil/water contact has been chosen where
22 it is believed that there is porosity connection in the Or-
23 dovician between the horst block and the adjacent downthrown
24 side.

25 Q Ms. Bentz, can you briefly summarize for

1 us the geological basis for the formation of this proposed
2 Dragonfly Unit?

3 A The proposed Dragonfly State Unit is
4 located on a fault-bounded horst block which has great
5 potential in the Ordovician. Every proration in the
6 proposed outline should be productive, but to insure that
7 the reservoir is properly drained, extreme care must be
8 given to the exact well locations. The proposed unorthodox
9 location is the best allowable location in the proposed unit.

10 Information from this initial test well
11 will be invaluable in synthesizing seismic control and well
12 data so that the rest of the proposed unit can be prudently
13 developed to prevent waste.

14 Q And in your opinion will approval of
15 this application be in the interest of conservation, the
16 prevention of waste, and the protection of correlative
17 rights?

18 A Yes, it will.

19 Q And were Exhibits One and Two prepared
20 by you?

21 A Yes, they were.

22 MR. DICKERSON: Mr. Examiner, I
23 move admission of Yates Exhibits One and Two and I have no
24 further questions of Ms. Bentz.

25 MR. STOGNER: Exhibits One and

1 Two will be admitted into evidence at this time.

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CROSS EXAMINATION

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BY MR. STOGNER:

6

Q Ms. Bentz, your proposed location is an
7 unorthodox location based on geological evidence which
8 you've presented today and approved administratively -- I
9 mean have been submitted administratively for our approval,
10 is that correct?

11

A Yes, sir.

12

Q Okay.

13

MR. STOGNER: No further ques-

14

tions of Ms. Bentz.

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KATHY COLBERT,

17

being called as a witness and being previously sworn and
18 remaining under oath, testified as follows, to-wit:

19

20

DIRECT EXAMINATION

21

BY MR. DICKERSON:

22

Q Ms. Colbert, will you state your name, by
23 whom you're employed, and where you reside?

24

A My name is Kathy Colbert. I'm a landman
25 with Yates Petroleum Corporation, Artesia, New Mexico.

1 Q And you have previously testified as a
2 landman before this Division, have you not?

3 A Yes, I have.

4 Q And are you familiar with the proposed
5 Dragonfly Unit and the acreage ownership situation within
6 that unit?

7 A Yes, I have.

8 MR. DICKERSON: Tender Ms.
9 Colbert, Mr. Examiner.

10 MR. STOGNER: Let the record so
11 show.

12 Q Ms. Colbert, will you identify for us
13 what we submitted as Exhibit Number Three and tell the
14 Examiner what that exhibit is?

15 A Exhibit Number Three is the standard
16 form unit agreement for the development and operation of a
17 state unit.

18 Q And again paragraph 2 of this form pro-
19 vides that all unitized substances and all formations under
20 the unit area will be pooled by this unit?

21 A Yes, it does.

22 Q And paragraph 11, as required, allocates
23 production of the unitized substances on a surface acreage
24 basis?

25 A That's correct.

1 Q What is provided to be the depth of your
2 unit well?

3 A Approximately 6000 feet.

4 Q Direct Mr. Stogner's attention, Ms. Col-
5 bert, to Exhibit A to that unit agreement and summarize for
6 him what that map shows.

7 A Exhibit A to the unit agreement is a plat
8 that outlines our proposed Dragonfly State Unit. There are
9 only two tracts in this unit, both State leases making up
10 100 percent of the unit.

11 Q And Exhibit B to that unit agreement
12 shows what information?

13 A Exhibit B to the unit agreement details
14 the lease description, expiration date, all burdens, current
15 working interest, and lessee of record.

16 Q And what is the earliest expiration date
17 of a lease within this proposed unit?

18 A December 1st, 1987.

19 Q And it will be necessary that Yates have
20 final approval and be actually drilling on the unit well on
21 or before that date, is that correct?

22 A That's correct.

23 Q Identify, Ms. Colbert, for us Exhibit
24 Number Four and tell us what it is.

25 A Exhibit Four is our proposed operating

1 agreement. It is on the standard AAPL Form 610, 1977. It
2 does deseguate Yates Petroleum Corporation as operator.

3 Q And that instrument obligates Yates to
4 commence its drilling operations on the unit well on or be-
5 fore December 1st, 1987, does it not?

6 A Yes, it does.

7 Q Will you direct the Examiner's attention
8 to Exhibit A to the unit operating agreement, briefly de-
9 scribe for him the ownership of the interest within the unit
10 area and tell him the status of the commitment of those in-
11 terests.

12 A Exhibit A to this operating agreement
13 lists all the parties, their percentages under the unit and
14 under the initial test well.

15 100 percent of this unit has been commit-
16 ted; therefor, the initial test well will be paid for by the
17 four participating parties.

18 Q And ratifications reflecting that commit-
19 ment are included with the unit agreement admitted as Exhi-
20 bit Number Three, are they not?

21 A Yes, they're attached.

22 Q Okay. Identify for us Exhibit Number
23 Five and tell us what that is?

24 A Exhibit Number Five is a copy of the
25 Commissioner of Public Lands Letter giving us preliminary

1 approval of our Dragonfly State Unit as proposed.

2 Q And it requested certain changes. Those
3 changes have been made and are reflected in the exhibits
4 previously submitted, are they not?

5 A Yes, they are.

6 Q Ms. Colbert, were Exhibits Three, Four,
7 and Five either prepared by or under your direction and
8 supervision?

9 A Yes, they were.

10 MR. DICKERSON: Mr. Examiner,
11 move admission of Yates Exhibits Three, Four, and Five, and
12 I have no further questions of Ms. Colbert.

13 MR. STOGNER: Exhibits Three,
14 Four, and Five will be admitted into evidence, nor do I have
15 any questions.

16 Is there anything further in
17 this case, Mr. Dickerson?

18 MR. DICKERSON: No, sir.

19 MR. STOGNER: The witness may
20 be excused and Case Number 9246 will be taken under
21 advisement.

22

23 (Hearing concluded.)

24

25

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 correct record of the proceedings in
the said hearing of Case No. 9246,
heard by me on 4 November 1987.

Mahmud E. Stojanovic, Examiner
Oil Conservation Division