

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, 9248  
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:

Jeff Taylor  
Attorney at Law  
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  
Number 9248.

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, both of whom have pre-  
viously been sworn.

MR. STOGNER: Let the record so  
show that Mr. Beardemphl and Ms. Bentz have been previously  
sworn and credentials have been accepted.

Please proceed, Mr. Dickerson.

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

DIRECT EXAMINATION

BY MR. DICKERSON:

Q Ms. Bentz, will you state for the record  
your name, your occupation, and by whom you're employed?

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

1 Q And are you familiar with the geological  
2 basis for the formation of the proposed Hard As Nails State  
3 Unit?

4 A Yes, I am.

5 Q What is the purpose in general terms of  
6 the application by Yates in Case 9248?

7 A To seek approval of the proposed Hard As  
8 Nails State Unit, Chaves County, New Mexico.

9 Q And what lands does Yates propose to com-  
10 mit to that unit?

11 A The proposed unit comprises the following  
12 lands: Section 27, Section 33, less the northwest quarter,  
13 and Section 34 of Township 9 South, Range 26 East; and the  
14 north half of section 3, Township 10 South, Range 26 East,  
15 Chaves County, New Mexico.

16 Q Generally speaking, what is the geograph-  
17 ic location of this proposed unit?

18 A The proposed unit is located on the south-  
19 ern end of the South Pecos Abo Field. The field produces  
20 gas from a sequence of prograding alluvial channel sand-  
21 stones in the Lower Permian Leonard Abo formation.

22 Q Identify what we've submitted as Exhibit  
23 Number One, Ms. Bentz, and tell us what you show on that  
24 map.

25 A Exhibit Number One is an Isopach map of

1 the McConkey sandstone, a sandstone occupying a stratigraphic  
2 ic interval approximately 350 feet below the top of the Abo  
3 formation. The contour interval is 5 feet.

4 The Hard As Nails Unit outline is marked  
5 by a dashed line and the proposed location of the test well  
6 is shown.

7 Datum points utilized are noted with  
8 circles and the appropriate value is labeled.

9 Abo gas producers are marked in red. A  
10 stratigraphic cross section A-A' is shown by a solid line  
11 and its wells are labeled by names.

12 The Isopach map shows the extent of the  
13 McConkey sandstone reservoir. Alluvial channel deposits  
14 constitute the reservoir in the north. Deltaic distributary  
15 mouth bar deposits are common in the south.

16 The upper McConkey channel has been  
17 successfully exploited and over 4 BCF of gas has been  
18 produced to date, but the lower reaches of this channel and  
19 its corresponding delta as of yet have not been developed.  
20 Therefor, the Isopach thickness of 10 feet, or greater, of  
21 the lower McConkey channel and its delta is the justification  
22 for the proposed unit.

23 Q Refer to exhibit Number Two and describe  
24 to Mr. Stogner the information that you show on that cross  
25 section.

1           A           Stratigraphic cross section A-A', is lo-  
2 cated across the proposed unit and also the proposed drill  
3 site.

4           A Yeso shale marker above the top of the  
5 Abo serves as a stratigraphic datum. The McConkey strati-  
6 graphic interval, the mapping horizon and the justification  
7 for the proposed unit, is so noted. Producing perforations  
8 are colored in red.

9           The Nortex "WM" State No. 1 is located  
10 north of the proposed unit. The well encountered 18 feet of  
11 the McConkey sandstone. A fining upward sequence indicates  
12 that the deposits are entirely alluvial channel deposits.  
13 The Nortex has a cumulative production of 589-million cubic  
14 feet of gas.

15           Immediately adjacent to the northeast  
16 corner of the unit, the Marathon South Dallas Unit No. 1,  
17 recompleted by Elk Oil as an Abo producer, penetrated 20  
18 feet of the McConkey interval. The upper 10 feet is an al-  
19 luvial channel deposit, which was deposited over a deltaic  
20 distributary mouth bar as the channel system prograded sea-  
21 ward.

22           The deltaic distributary mouth bar sedi-  
23 ments are distinguished from the channel deposits by a coar-  
24 sening upward sequence rather than a fining upward pattern.

25           It has a cumulative production of 309-

1 million cubic feet of gas.

2                   The Yates Petroleum Witz "VN" State No. 1  
3 exhibits a similar package of sediments as the Dallas Ranch  
4 Well, but the entire sandstone is thinner. This well has a  
5 cumulative production of 176-million cubic feet.

6                   The proposed location of the unit well,  
7 1980 feet from the south and 1980 from the east line of Sec-  
8 tion 27, 9 South, 26 East, was chosen as the optimum loca-  
9 tion in an attempt to penetrate a thick alluvial channel.  
10 Production indicates that the channel deposits may have bet-  
11 ter reserves than the distributary mouth bar deposits.

12                   The Pennzoil Allied State No. 1 encoun-  
13 tered no productive sandstones in the entire Abo section.  
14 The McConkey interval indicates that the well was drilled in  
15 an overbank shale facies.

16                   The final well on the cross section, the  
17 Harper South Dallas Unit No. 1, is located immediately out-  
18 side the southwest corner of the proposed unit. The well  
19 penetrated 15 feet of the McConkey interval. The section  
20 has both deltaic deposits and channel deposits. The channel  
21 is believed to be an abandoned channel which is not connect-  
22 ed to the main McConkey channel.

23                   Q           Ms. Bentz, will you briefly summarize for  
24 us the geological basis for the formation of this proposed  
25 unit?

1           A           History has shown that the McConkey chan-  
2 nel sandstone is a prolific gas reservoir in areas that hav  
3 ebeen exploited. The acreage dedicated to the proposed Hard  
4 As Nails State Unit encompasses all of what is believed to  
5 be the southern extension of the channel and its correpon-  
6 ding delta facies.

7           Q           And in your opinion will approval of this  
8 application be in the interest of conservation, the preven-  
9 tion of waste, and the protection of correlative rights?

10          A           Yes, sir.

11          Q           And were Exhibits One and Two prepared by  
12 you?

13          A           Yes, sir.

14                       MR. DICKERSON: Mr. Stogner, I  
15 move admission of Yates Exhibits One and Two and I have no  
16 further questions of Ms. Bentz.

17                       MR. STOGNER: Exhibits One and  
18 Two will be admitted into evidence at this time.

19                       Ms. Bentz may be excused.

20  
21                       KEN BEARDEMPHL,  
22 being called as a witness and being previously sworn and  
23 remaining under oath, testified as follows, to-wit:  
24  
25



## DIRECT EXAMINATION

BY MR. DICKERSON:

Q Mr. Beardemphl, will you state your name, your occupation, and by whom you're employed?

A Ken Beardemphl, landman for Yates Petroleum Corporation.

Q And are you familiar with the ownership situation regarding the acreage proposed by Yates to be committed to this unit?

A Yes, sir.

Q Mr. Beardemphl, identify for the Examiner Exhibit Number Three, and tell him what it is.

A This is the standard State unit agreement for the development and operation of the Hard As Nails State Unit.

Q And this instrument proposes to unitize all production in whatever formations encountered and also to allocate the ownership of that production among the parties on a surface acreage basis, does it not?

A That is correct.

Q What is the anticipated depth of your unit well?

A 5,200 feet.

Q Refer to Exhibit A, the map attached to the unit agreement, Mr. Beardemphl, and summarize for the

1 Examiner the various tracts committed to the unit.

2 A Exhibit A is a plat of the leases  
3 involved in the Hard As Nails State Unit, and they are all  
4 State leases. They have the ownership, the expiration date,  
5 and the lease number on them.

6 Q Summarize for us the information shown on  
7 Exhibit A, or Exhibit B.

8 A Exhibit B? Exhibit B to the unit  
9 agreement is the description of the lease acreage, the  
10 number of acres, the serial numbers, and expiration date of  
11 the leases, basic royalty owner and percentage, the lessee  
12 of record, the overriding royalty owner percentage, the  
13 working interest owner and their percentage.

14 Q And what is the expiration date of the  
15 earliest expiring lease committed to the unit?

16 A December 1, 1987.

17 Q And Yates seeks both final approval of  
18 this proposed unit and actually commencing its drilling  
19 operations prior to December 1st?

20 A That is correct.

21 Q Describe Exhibit Number Four to us, Mr.  
22 Beardemphl.

23 A Exhibit Four is the model form operating  
24 agreement, AAPL Form 610, 1977, for the Hard As Nails State  
25 Unit, with Yates Petroleum as the operator.

1           Q           And that instrument again provides for  
2 the commencement of the first well on or before December  
3 1st, 1987?

4           A           That's correct.

5           Q           Refer to Exhibit A to the operating  
6 agreement, Mr. Beardemphl, and summarize for Mr. Stogner the  
7 ownership of the various parties within the unit area and  
8 the status of their interest as far as whether or not they  
9 are committed.

10          A           Right now there is 100 percent of the  
11 working interest committed and I have ratifications for the  
12 100 percent of the working interest owners, except for Depco  
13 and Nicor, who have farmed out. Their ratifications are in  
14 the mail.

15          Q           Mr. Beardemphl, identify what we've sub-  
16 mitted as Exhibit Number Five for us.

17          A           Exhibit Number Five is a letter from the  
18 Commissioner of Public Lands granting preliminary approval  
19 as to the form and content of this State Unit.

20          Q           And were Exhibits Three, Four, and Five  
21 prepared or compiled by you or under your direction and sup-  
22 ervision?

23          A           Yes, sir.

24                       MR. DICKERSON: Move admission  
25 of Yates Exhibits Three, Four, and Five, Mr. Stogner, and I

1 have no further questions of this witness.

2 MR. STOGNER: Exhibits Three,  
3 Four, and Five will be admitted into evidence at this time.

4 No further questions.

5 Is there anything further in  
6 this case, Mr. Dickerson?

7 MR. DICKERSON: No, sir.

8 MR. STOGNER: The witness may  
9 be excused and Case Number 9248 will be taken under advise-  
10 ment.

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12 (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. 9148  
heard by me on 4 November 1987

Michael E. Stogor, Examiner  
Oil Conservation Division