

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICOHearing Date FEBRUARY 7, 1990 Time: 8:15 A.M.

NAME	REPRESENTING	LOCATION
William L. Jan	Campbell and Block, P.A.	Santa Fe
Victor J. Lyon PE	self	"
Bobbie Huber	Beynon	Santa Fe
W. H. Hinton	Amoco	MIDLAND TX
W. R. Kellum	Kellum, Kellum & Aubrey	Santa Fe
GEORGE R. JONES	SELF	MIDLAND, TX
Leslie Bentz	Yates Pet.	Artesia, NM
Ernest Z. Conrad	Force, Cannon, Hays & Conrad	Artesia, NM
Ray Beck	Yates	"
Mike Buegel	"	"
Pat McWhorter	Yates	Artesia, NM
Dan Currons	Amoco Production Co.	Houston, TX
Jim Collier	Amoco Production Co.	HOUSTON, TX.
DAVE BONEAU	YATES PETROLEUM	ARTESIA, NEW MEXICO
Cy Cowan	" "	" "
Earl L. Padilla	Padilla & Soper	Santa Fe, NM
Paul M. Burchell	El Paso Natural Gas Co.	El Paso, TX

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NAME	REPRESENTING	LOCATION
David R. Vandiver	Fisk + Vandiver	Artesia, NM
Richard H Coats	TXO	Midland, TX
Glenn Brown	TXO	Midland TX
Randy Cate	TXO	Midland TX
James Bruce	Huntley Law Firm	Albuquerque, NM
Paul Haden	Mewbourne Oil	Midland TX
Howard Oreston	Mewbourne Oil Co.	Midland, TX
Kelly Ryan	Mewbourne Oil Co	Tyler, TX

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
CASE 9859

EXAMINER HEARING

IN THE MATTER OF:

Application of Yates Petroleum Corporation
for a Unit Agreement, Chaves County, New
Mexico

TRANSCRIPT OF PROCEEDINGS

BEFORE: DAVID R. CATANACH, EXAMINER

STATE LAND OFFICE BUILDING

SANTA FE, NEW MEXICO

February 7, 1990

ORIGINAL

CUMBRE COURT REPORTING
(505) 984-2244

A P P E A R A N C E S

FOR THE DIVISION:

ROBERT G. STOVALL

Attorney at Law

Legal Counsel to the Divison

State Land Office Building

Santa Fe, New Mexico

FOR THE APPLICANT:

DAVID R. VANDIVER, ESQ.

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Artesia, New Mexico 88210

I N D E X

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Appearances

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CY COWAN

Examination by Mr. Vandiver

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Examination by Hearing Examiner

13

LESLIE BENTZ

Examination by Mr. Vandiver

14

Certificate of Reporter

22

E X H I B I T S

APPLICANT'S EXHIBITS:

Exhibit 1

5

Exhibit 2

6

Exhibit 3

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Exhibit 4

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Exhibit 5

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Exhibit 6

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Exhibit 7

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Exhibit 8

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Exhibit 9

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1 EXAMINER CATANACH: At this time we'll call
2 Case 9859.

3 MR. STOVALL: Application of Yates
4 Petroleum Corporation for a Unit Agreement, Chaves
5 County, New Mexico.

6 EXAMINER CATANACH: Are there appearances
7 in this case?

8 MR. VANDIVER: Mr. Examiner, I'm David
9 Vandiver of Fisk & Vandiver in Artesia, appearing on
10 behalf of the Applicant, Yates Petroleum Corporation.
11 I have two witnesses to be sworn in this case.

12 EXAMINER CATANACH: Any other appearances?
13 Will the two witnesses please stand to be sworn in.

14 (Thereupon, the witnesses were sworn.)

15 CY COWAN

16 the witness herein, after having been first duly sworn
17 upon his oath, was examined and testified as follows:

18 EXAMINATION

19 BY MR. VANDIVER:

20 Q. Mr. Cowan, state your full name, your
21 occupation and by whom you are employed, please.

22 A. My name is Cy Cowan. I'm a landman for
23 Yates Petroleum Corporation in Artesia, New Mexico.

24 Q. You've previously testified as a petroleum
25 landman before the New Mexico Oil Conservation

1 Division and had your qualifications as a landman
2 accepted and your qualifications are a matter of
3 record, are they not?

4 A. Yes, they are.

5 Q. Are you familiar with the title to the land
6 within the proposed Bittersweet Unit?

7 A. Yes, I am.

8 MR. VANDIVER: Mr. Examiner, I tender Mr.
9 Cowan as a petroleum landman.

10 EXAMINER CATANACH: He is so qualified.

11 Q. Mr. Cowan, briefly summarize the purpose of
12 Yates' application in Case 9859.

13 A. Yates Petroleum wishes to unitize the
14 proposed Bittersweet Unit area so that we can
15 efficiently and effectively explore and develop the
16 area.

17 Q. Mr. Cowan, if you would refer to what we
18 have submitted as Applicant's Exhibit 1, and orient
19 the Examiner with respect to the location of the
20 proposed unit.

21 A. Exhibit No. 1 is a land plat showing the
22 proposed outline of the Bittersweet Unit in Township 9
23 South, Range 26 East. The unit is outlined in red.

24 Q. And that covers what lands in Township 9
25 South?

1 A. It covers portions of lands in Section 21,
2 Sections 28, 29 and 33.

3 Q. Mr. Cowan, who owns the minerals within the
4 proposed unit boundaries?

5 A. The minerals are owned by the State of New
6 Mexico and the federal government.

7 Q. What percentage does the federal government
8 own?

9 A. The federal government owns approximately
10 23 percent of the minerals, and the State of New
11 Mexico owns approximately 77 percent.

12 Q. The location of the initial well, I notice,
13 is not marked on this plat, but what is the location
14 of the initial well in the proposed unit?

15 A. The proposed location is 1980 feet from the
16 south line and 1980 feet from the east line. This is
17 going to be a 6,500--

18 Q. Of which Section?

19 A. Excuse me, Section 28. This is going to be
20 a 6,500 foot Ordovician test.

21 Q. Mr. Cowan, identify Applicant's Exhibit 2,
22 the Unit Agreement, and describe what that is and its
23 contents.

24 A. Exhibit 2 is a standard form Unit Agreement
25 of federal lands which comply with the Mineral Leasing

1 Act and BLM regulations covering the Bittersweet Unit
2 Area in Chaves County, New Mexico.

3 Q. Under the terms of this Unit Agreement,
4 what formations will be unitized?

5 A. All formations will be unitized under this
6 agreement.

7 Q. And that's found where in the Unit
8 Agreement?

9 A. On page 3.

10 Q. Paragraph 3?

11 A. Paragraph 3 on page 3.

12 Q. Who's designated as the unit operator?

13 A. The unit operator is designated as Yates
14 Petroleum Corporation.

15 Q. Is this an exploratory unit?

16 A. Yes, it is.

17 Q. Since federal land is involved and it's a
18 federal form unitization agreement, production will be
19 allocated an among the leases within participated
20 areas established according to the procedures set
21 forth in paragraph 11, is that correct?

22 A. That's correct.

23 Q. Refer to Exhibit A of the Unit Agreement
24 and tell the Examiner what information is contained in
25 that exhibit.

1 A. Exhibit A is a plat showing the outline of
2 the proposed Bittersweet Unit in the dotted line, and
3 inside the plat the information given is the name of
4 the leaseholders, the lease number, expiration date of
5 the particular leases, and also the tract numbers.

6 Also, in the lower left-hand corner it
7 shows the percentage of federal lands is 22.8 percent,
8 and the percentage of state lands is 77.1 percent, for
9 1,400 acres, which make up a hundred percent of the
10 proposed unit area.

11 Q. Now, refer to Exhibit B of the Unit
12 Agreement and summarize the information contained in
13 that exhibit.

14 A. Exhibit B denotes the tract numbers of each
15 tract, the land descriptions, the number of acres in
16 each tract, the serial numbers and expiration dates,
17 basic royalty and ownership, lessee of record,
18 overriding royalty owners and working interest owner
19 and percentage, from the surface to the base of the
20 Abo formation and then below the Abo formation.

21 Q. Mr. Cowan, what is the earliest expiration
22 date of the leases to be committed to this proposed
23 unit?

24 A. The earliest expiration date is an Enron
25 lease, and it expires 2/1/90.

1 Q. What lands are included in that lease?

2 A. The land included in this lease are
3 portions of Section 28, looks like the north half of
4 Section 28, the northeast of the southwest, and the
5 south half of the southeast.

6 Q. And you've already commenced drilling
7 operations on the initial unit well, have you not?

8 A. That is correct. We spudded this well on
9 January 30, 1990.

10 Q. And you've not yet reached the objective
11 depth?

12 A. That is correct.

13 Q. And the well is not physically located on
14 LG-7642, is it?

15 A. That is correct.

16 Q. That's the expired lease?

17 A. That is correct.

18 Q. But you have submitted a communitization
19 agreement to the Commissioner of Public Lands and a
20 short-term communitization agreement, and that was
21 approved by the Commissioner?

22 A. That is correct. And the communitization
23 agreement was approved on January 30, 1990.

24 Q. So you commenced your operations under the
25 communitization agreement, but the well will be a unit

1 well?

2 A. That is correct.

3 Q. Assuming it produces in sufficient
4 quantities?

5 A. That's correct.

6 Q. What is the status of joinder of the
7 working interest owners in the lands within the
8 proposed unit area?

9 A. A hundred percent of the working interest
10 owners have joined.

11 Q. Now identify Exhibit 3, Mr. Cowan, and
12 describe what that is?

13 A. Exhibit No. 3 is an A.A.P.L. Form 610 dated
14 1977, Model Form Operating Agreement, for the
15 Bittersweet Working Interest Unit and the Bittersweet
16 Exploratory Unit. This Operating Agreement is dated
17 January 10, 1990, designating Yates Petroleum
18 Corporation as the operator and the contract areas for
19 Township 9 South, Range 26 East, in Chaves County, New
20 Mexico.

21 Q. Mr. Cowan, this is a Working Interest Unit
22 Operating Agreement and covers more land than the land
23 within the proposed unit boundaries, does it not?

24 A. That is correct.

25 Q. And you've submitted the Unit Operating

1 Agreement along with the Unit Agreement to all parties
2 owning leases within the proposed unit boundaries, and
3 all parties have signed the agreements?

4 A. Yes.

5 Q. If you would, refer to Exhibit A of the
6 Unit Operating Agreement and review the manner in
7 which the initial test well will be paid for.

8 A. Exhibit A is a breakdown of all the working
9 interest owners that are participating in the
10 Bittersweet Unit #1 well, and all working interest
11 owners have been pooled throughout the unit and each
12 working interest owner will pay for their
13 proportionate share and costs to drill this well.

14 Q. And all customary contractual provisions of
15 the Joint Operating Agreement are contained in this
16 Unit Operating Agreement submitted for joinder and
17 approval by the working interest owners?

18 A. That is correct.

19 Q. Now identify Exhibit 4, Mr. Cowan, and
20 describe its contents for the Examiner.

21 A. Exhibit 4 is a letter from the Commissioner
22 of Public Lands dated January 25, 1990, to Yates
23 Petroleum Corporation, regarding the Proposed
24 Bittersweet Unit in Chaves County, New Mexico. And in
25 this letter the Commissioner of Public Lands is

1 granting us preliminary approval to the Bittersweet
2 Unit.

3 Q. One of the requirements of the Commissioner
4 of Public Lands for approval of the unit will be that
5 an order be issued by the Oil Conservation Division
6 approving the unit?

7 A. That is correct.

8 Q. And as previously stated, you've already
9 commenced drilling operations and you would request
10 the earliest possible consideration of your proposed
11 unit?

12 A. Yes, please.

13 Q. Now, if I could refer you to Applicant's
14 Exhibit 5, I would ask you to describe what that is,
15 please?

16 A. Exhibit 5 is a Bureau of Land Management
17 letter from the Roswell District Office to Fisk and
18 Vandiver Law Firm in Artesia, New Mexico. In this
19 letter the BLM designates the Bittersweet Unit area as
20 logically subject to exploration and development under
21 the unitization provisions of the Mineral Leasing Act
22 as amended, for all formations.

23 Q. Mr. Cowan, were Exhibits 1 through 5
24 prepared by you or under your direction and
25 supervision, and maintained as business records by

1 Yates Petroleum Corporation?

2 A. Yes, that is correct.

3 MR. VANDIVER: Mr. Examiner, I would move
4 the admission of Applicant's Exhibits 1 through 5 and
5 I have no further questions of the witness.

6 EXAMINER CATANACH: Exhibits 1 through 5
7 will be admitted as evidence.

8 EXAMINATION

9 BY EXAMINER CATANACH:

10 Q. Mr. Cowan, do you know what acreage you
11 have dedicated to the well that's currently drilling?

12 A. It's a 320-acre dedication in the south
13 half of Section 28.

14 Q. In that is that expired lease that you got
15 a communitization agreement for?

16 A. That is correct.

17 Q. That com. agreement actually kept that
18 lease from expiring and enabled you to put it in the
19 unit, is that correct?

20 A. Yes, that is correct.

21 EXAMINER CATANACH: That's all the
22 questions I have of the witness. You may be excused.

23 THE WITNESS: Thank you.

24 EXAMINER CATANACH: You may call your next
25 witness.

1 LESLIE BENTZ
2 the witness herein, after having been first duly sworn
3 upon her oath, was examined and testified as follows:

4 EXAMINATION

5 BY MR. VANDIVER:

6 Q. Ms. Bentz, please state your name, your
7 occupation, and by whom you're employed.

8 A. Yes. My name is Leslie Bentz. I'm
9 employed as a petroleum geologist by Yates Petroleum
10 Corporation of Artesia, New Mexico.

11 Q. Ms. Bentz, you've previously testified on
12 numerous occasions before the Oil Conservation
13 Division as a petroleum geologist and had your
14 qualifications accepted, and your qualifications are a
15 matter of record, are they not?

16 A. Yes, they are.

17 Q. Have you made a study of the available
18 geological data regarding the Proposed Bittersweet
19 Unit for purposes of your testimony here today, and
20 are you familiar with the geological basis for the
21 formation of this exploratory unit?

22 A. Yes, I am.

23 Q. And you've prepared certain exhibits in
24 connection with your testimony today?

25 A. Yes, I have.

1 MR. VANDIVER: Mr. Examiner, I tender Ms.
2 Bentz as an expert petroleum geologist.

3 EXAMINER CATANACH: Ms. Bentz is so
4 qualified.

5 Q. Ms. Bentz, summarize the geological factors
6 that dictate the formation of this unit?

7 A. Starting with Exhibit 6, we show the
8 outline of the proposed unit and it shows the
9 relationship of the proposed unit to its surrounding
10 production.

11 The proposed unit is located on the
12 southeastern edge of the Pecos Slope Abo Field,
13 produces gas from Abo-H alluvial channel sandstones.
14 That is shown by the green shading. The blue shading
15 shows Ordovician production at Foor Ranch in the
16 Pre-Permian. Cumulative production in this area, from
17 the Ordovician through December 31, 1988, is 5.9 Bcf.
18 There is also Wolfcampian-age production and
19 Pennsylvanian-age production in the area.

20 The main objective of the unit is to test
21 for the Ordovician-age dolomite reservoir. The
22 secondary objectives could include Pennsylvanian-aged
23 channel sandstones, Wolfcampian-aged dolomite
24 porosity, and Abo-alluvial channel sandstones.

25 Q. Now, If I could refer you to Applicant's

1 Exhibit No. 7 and ask you to identify that, please,
2 and describe what's contained in it.

3 A. Exhibit No. 7 is a regional type
4 cross-section. It shows the Siluro-Ordovician
5 formation in Chaves County to be a very productive
6 reservoir immediately east of the proposed unit.
7 Significant hydrocarbon reserves, gas in this area,
8 can result when there's adequate structural trapping,
9 coupled with localized source of gas. The west to
10 east cross-section has been constructed to illustrate
11 the structural style of the area and describe the play
12 concept and its relationship to the Bittersweet Unit.

13 The westernmost well is the McClellan
14 Penjack #1. It is located west of the subcrop of the
15 Mississippian and Ordovician formations. Their
16 Pennsylvanian sediments rest unconformably on
17 Precambrian bedrock. The subcrop is
18 fault-controlled. Seismic has indicated that this is
19 a normal down-to-the-basin fault.

20 The second well, the Boyd Blakemore #1,
21 also indicates Pennsylvanian sediments, unconformably
22 overlies Precambrian basement. However, seismic
23 indicates that this is not the normal subcrop, that
24 this structure is controlled by a reverse
25 down-to-the-west fault. It is suspected that the

1 Ordovician dolomite truncates against the Precambrian
2 structure.

3 In addition to the stratigraphic
4 truncation, the Ordovician also exhibits four-way
5 closure in the Bittersweet Unit. The trap is defined
6 to the south and the east by steep dip, or possibly
7 faulting stratigraphically. The subcrop of the
8 Mississippian formation, which is a tight impermeable
9 lime, is adjacent to the porous Ordovician dolomite.

10 A gas source is provided by the
11 Pennsylvanian clastic sediments which unconformably
12 overlies the Ordovician formation, as well as being
13 faulted in juxtaposition with the Ordovician to the
14 west. This structural trend is separated from, but
15 analogous to, the structural trend at Foor Ranch as
16 illustrated by the remainder of the wells in the
17 cross-section.

18 Q. Now, if I could refer you to Applicant's
19 Exhibit 8 in this case and ask you to identify that
20 and describe the information contained in that
21 exhibit?

22 A. Exhibit No. 8 is a structural contour map.
23 The mapping horizon is the Pre-Pennsylvanian
24 unconformity. The contour interval is 50 feet. The
25 proposed unit is noted and the proposed location of

1 the test well is shown. Datum points are noted by the
2 circles and the appropriate datums are listed.

3 Integrated seismic control is also shown on this map.

4 The pink color illustrates areas where
5 Pennsylvanian sediments rest unconformably on the
6 Pre-Cambrian. The blue color denotes where their
7 Mississippian has been eroded, and notes the areas of
8 truncation by the Ordovician. This is also identical
9 to areas of structural closure at the Ordovician
10 level. The normal faults are marked by the
11 stapled--dashed/stapled line and the reverse faults
12 are marked by the triangular shapes. Right lateral
13 wrench faults are marked with small dashed lines.

14 The structural map shows an ancestral
15 Pre-Cambrian structural high devoid of Ordovician
16 sediments. The ordovician is truncated against the
17 structure and also exhibits structural closure. The
18 minus 1950 line is the closing contour and provides
19 the justification for the unit.

20 The odd shape of the structural feature is
21 attributed to a right lateral wrench fault, dissecting
22 the north/south structural ridge at perpendicular.
23 These structures, known as flower structures, result
24 from compressional forces associated with wrenching.
25 Normally these types of structures are highly

1 fractured.

2 As indicated by the overall map, the
3 Proposed Bittersweet Unit is located on a structure
4 that is ideally situated, both stratigraphically and
5 structurally, to yield spectacular reserves in the
6 Ordovician-aged dolomite.

7 Q. All right, Ms. Bentz. Identify Exhibit 9,
8 the north/south cross-section, and review the
9 information contained in that exhibit, please.

10 A. Exhibit No. 9 shows the critical well
11 control. On the north portion of the section, the
12 King Resources Phillips State #1, did penetrate the
13 Ordovician section but recorded no test and no
14 significant hydrocarbon shows.

15 The proposed location should penetrate the
16 Ordovician, or the Pre-Penn unconformity 75 to 100
17 feet higher than the Phillip State, and the Ordovician
18 should be over 150 feet higher.

19 The last well on the section, the Pennzoil
20 Allied State, is located immediately south of the
21 proposed location. This well did encounter gas shows
22 as tested on a DST, and the pertinent information is
23 listed below the well. And this suggests that we are
24 very close to a possible gas deposit. The well did
25 test water with gas. The proposed location should be

1 significantly high to the well. And as shown on the
2 cross-section, the gas column should be coincident
3 with critical closure.

4 Q. Ms. Bentz, based upon your review of this
5 data, what conclusions have you drawn with regard to
6 your study of the proposed unit area?

7 A. I believe that extant subsurface data and
8 seismic data indicates that the Bittersweet Unit is
9 located on a closed, structural feature and related
10 stratigraphy greatly enhances the chances for
11 Ordovician production. The geology at the proposed
12 unit is very analogous to Foor Ranch where significant
13 production has been achieved in the Ordovician
14 formation.

15 Q. Ms. Bentz, in your opinion, will approval
16 of this exploratory unit by the Oil Conservation
17 Division enable the parties to the Unit Agreement to
18 efficiently and effectively explore and develop the
19 unit area?

20 A. I believe it would.

21 Q. In your opinion, will the granting of this
22 application be in the interest of conservation of oil
23 and gas, the prevention of waste and the protection of
24 correlative rights?

25 A. Yes, it will.

1 Q. Ms. Bentz, were Exhibits 6 through 9 in
2 this case prepared by you or under your direction or
3 supervision?

4 A. Yes, they were.

5 MR. VANDIVER: Mr. Examiner, I would move
6 the admission of Applicant's Exhibits 6 through 9 in
7 this case, and I have no further questions of this
8 witness.

9 EXAMINER CATANACH: Exhibits 6 through 9
10 will be admitted as evidence. I have no questions of
11 the witness. She may be excused. Is there anything
12 further in this case?

13 MR. VANDIVER: No, Mr. Examiner. That
14 concludes our presentation in this case.

15 EXAMINER CATANACH: Case 9859 will be taken
16 under advisement.

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CERTIFICATE OF REPORTER

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

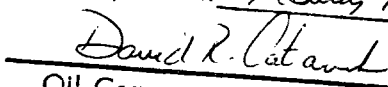
I, Carla Diane Rodriguez, Certified
Shorthand Reporter and Notary Public, HEREBY CERTIFY
that the foregoing transcript of proceedings before
the Oil Conservation Division was reported by me; that
I caused my notes to be transcribed under my personal
supervision; and that the foregoing is a true and
accurate record of the proceedings.

I FURTHER CERTIFY that I am not a relative
or employee of any of the parties or attorneys
involved in this matter and that I have no personal
interest in the final disposition of this matter.

WITNESS MY HAND AND SEAL February 23, 1990.


CARLA DIANE RODRIGUEZ
CSR No. 91

My commission expires: May 25, 1991

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiners hearing of Case No. 9859,
heard by me on February 7, 1990.
, Examiner
Oil Conservation Division