

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICOHearing Date JANUARY 20, 1988 Time: 8:15 A.M.

NAME	REPRESENTING	LOCATION
Bob Hahn	Bryan	Santa Fe
Keith Williams	Texaco	MIDLAND, TX.
Fred Huntington	Texaco	Midland, TX
Curtis D. Smith	Texaco	midland, Tx.
Scott Hall	Campbell & Black	SF
Loren Aubrey	Kellahan, Kellahan & Aubrey	Santa Fe
W. D. Kellahan	Kellahan Kellahan Aubrey	Santa Fe
William F. Carr	Campbell and Black, P.C.	Santa Fe
Ala Wood	Amoco	Denver
Daryl Erickson	Amoco	Denver
KENT LUND	"	"
Lawrence A. Lamin	MARATHON OIL CO	HOUSTON
Steve Daniels	Marathon Oil Co.	Midland
DAVID POAGE	MERIDIAN OIL	FARMINGTON
DON WALKER	MERIDIAN OIL	FARMINGTON
J. Bruce	Hinkle Law Firm	S.F.
M.E. Cuba	AMOCO	DENVER

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REPRESENTING

LOCATION

*Ed Walsh**Merch Medt**Walsh Engineering
Penroc Oil**Farmington
14055, NM*

LARRY SHANNON

THE PETROLEUM CORP/
PRESIDIO OIL CO.

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

20 January 1988

EXAMINER HEARING

IN THE MATTER OF:

Application of Texaco Producing, Inc. CASE
for an unorthodox oil well location, 9300
Lea County, New Mexico.

BEFORE: David R. Catanach, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division:

For the Applicant:

Scott Hall
Attorney at Law
CAMPBELL & BLACK P.A.
P. O. Box 2208
Santa Fe, New Mexico 87501

I N D E X

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KEITH WILLIAMS

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Cross Examination by Mr. Catanach 21

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E X H I B I T S

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Texaco Exhibit One, Plat

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Texaco Exhibit Two, Letters

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Texaco Exhibit Three, Letters

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Texaco Exhibit Four, C-101 & 102

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Texaco Exhibit Five, Diagram

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Texaco Exhibit Six, Structure Map

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Texaco Exhibit Seven, Cross Section

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MR. CATANACH: Call next Case Number 9300, the application of Texaco Producing, Incorporated, for an unorthodox oil well location, Lea County, New Mexico.

Are there appearances in this case?

MR. HALL: Mr. Examiner, Scott Hall from the Campbell & Black law firm on behalf of the applicant, Texaco Producing, Inc., and I have three witnesses this morning.

MR. CATANACH: Will the witnesses stand and be sworn in, please?

(Witnesses sworn.)

CURTIS SMITH,
being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. HALL:

Q For the record, please state your name.

A Curtis Smith.

Q Mr. Smith, where do you live and how are

1 you employed?

2 A I live in Midland, Texas, and I'm em-
3 ployed as a landman for Texaco, Inc.

4 Q Mr. Smith, have you previously testified
5 before the Division and had your credentials accepted?

6 A Yes, I have.

7 Q And are you familiar with Texaco's appli-
8 cation and the subject lands today?

9 A Yes, I am.

10 Q What is it that Texaco seeks by its ap-
11 plication?

12 A Well, we seek an unorthodox location,
13 being 1350 feet from the south line and 2410 feet from the
14 east line of Section 32 of Township 16 South, Range 37 East,
15 of Lea County, New Mexico.

16 Q All right, have you prepared exhibits in
17 conjunction with your hearing today?

18 A Yes, I have. I have this Exhibit One,
19 which is the ownership plat. It shows the proposed 80-acre
20 proration unit and the proposed location of the State P No.
21 13 Well.

22 We also show the -- our working interest
23 partners through operating agreement of the acreage that is
24 shaded in Section 32. That is a state lease to, through
25 mergers and acquisitions, to Texaco Producing, Inc.

1 Q Would you give the Examiner a brief run-
2 down on the offset ownership situation?

3 A Okay. The offset ownership to the west,
4 of course, is the same as our proposed proration unit. If
5 there's an encroachment it will be on the same working in-
6 terest owners that want to drill this well. The state is a
7 royalty owner offsetting this well, also.

8 Q All right, and have you provided notice
9 to all the offsetting interest owners?

10 A Yes, I have. Exhibit Two, the offset
11 owner, the offset operator besides Texaco Producing, Inc.
12 out here is Chevron, which is in the east half of the north-
13 east quarter of Section 5 and we notified them with a letter
14 dated December 16th of 1987.

15 We've also notified the State of New Mex-
16 ico, being the royalty interest owner.

17 Q All right. Does Exhibit Two consist of
18 letters sent by certified by Texaco to --

19 A Yes.

20 Q -- the offsets?

21 A Yes, right.

22 Q And the State of New Mexico, as well?

23 A Right.

24 Q All right. Let's look at Exhibit Three.

25 What is that, please?

1 A Okay. Exhibit Three are support letters
2 from our working interests, two of our working interest own-
3 ers. Hondo Oil and Gas Company having a 36 percent, just
4 over a 36 percent working interest owner, and they support
5 our proposed location and our unorthodox location, as well
6 as Coates Energy, and they have just over 1-1/2 percent
7 working interest. And we talked to Conoco over the tele-
8 phone and they said that they, they support our location,
9 also.

10 Q All right. Is there anything further you
11 wish to add?

12 A Well, I think that our location, where it
13 is, is to the best interest of the working interest part-
14 ners. Of course the working interest partners in the pro-
15 posed proration unit are the same as the working interest
16 partners to the west.

17 It's also to the benefit of the State of
18 New Mexico, since they're the royalty interest owner sur-
19 rounding the well.

20 Q All right, in your opinion would the
21 granting of Texaco's application be in the interest of con-
22 servation, the protection of correlative rights, and preven-
23 tion of waste?

24 A Yes.

25 Q Were Exhibits One by -- through Three

1 prepared by you or at your direction?

2 A Yes.

3 MR. HALL: We'd move the ad-
4 mission of One through Three and that concludes our direct
5 of this witness.

6 MR. CATANACH: Exhibits One
7 through Three will be admitted into evidence.

8

9 CROSS EXAMINATION

10 BY MR. CATANACH:

11 Q Mr. Smith, who are the other working in-
12 terest owners in this and the percentages?

13 A Okay, it's -- Texas Producing, Inc. being
14 the operator, just over 43 percent.

15 Hondo Oil and Gas, 36.6 percent.

16 Conoco, Inc., with just over 14.3 per-
17 cent.

18 Sun Exploration and Producing Company,
19 with just over 2.4 percent.

20 Osborn Heirs Company, with just over 1.6
21 percent.

22 And as I mentioned, Coates Energy Trust,
23 with just over 1.7 percent.

24 I might add that we had a location staked
25 that was a standard location. Our geophysicist and Hondo's

1 geophysicist decided that this unorthodox location would be
2 a better location.

3 At that time, when we had the standard
4 location, we sent out AFE's and all the working interest
5 partners agreed to join in the drilling of the well and we
6 anticipate the same with this location.

7 Q Okay, your other working interest owners
8 haven't objected to it at any rate.

9 A No, they haven't.

10 Q Okay. That's all I have.

11 MR. CATANACH: The witness may
12 be excused.

13 MR. HALL: At this time we call
14 Mr. Fred Huntington.

15
16 FRED HUNTINGTON,
17 being called as a witness and being duly sworn upon his
18 oath, testified as follows, to-wit:

19

20 DIRECT EXAMINATION

21 BY MR. HALL:

22 Q Mr. Huntington, for the record, where do
23 you live and by whom are you employed?

24 A I am -- I live in Midland, Texas. I am
25 employed by Texaco, Inc., in their office at 500 North Lor-

1 raine Street in Midland, Texas.

2 Q All right, and what do you do for Texaco?

3 A I am a petroleum engineer. I am current-
4 ly filling the position of Commission Engineer for the Mid-
5 land Division.

6 Q All right, have you previously testified
7 before the Division or one of its examiners?

8 A I have not testified as yet.

9 Q All right. Would you give the Examiner a
10 brief rundown of your educational background and work exper-
11 ience?

12 A I received a degree, a Bachelor of
13 Science in petroleum engineering from the University of Ok-
14 lahoma.

15 I have been continuously employed by Tex-
16 aco as a petroleum engineer for 26 years in positions of
17 field engineering, reservoir engineering, and in oil and gas
18 regulatory affairs.

19 My present position, as I stated before,
20 is Commission Engineer for Texaco's Midland Division, whose
21 administration includes all of New Mexico.

22 I am a registered professional engineer
23 in the State of Colorado.

24 Q All right, does your area of responsibil-
25 ity now include west Texas and eastern New Mexico?

1 A Yes, sir.

2 Q And are you familiar with the subject
3 lands in Texaco's application here today?

4 A Yes, sir.

5 MR. HALL: Mr. Examiner, we
6 tender Mr. Huntington as a qualified witness.

7 MR. CATANACH: He is so quali-
8 fied.

9 Q Mr. Huntington, let's look at Exhibit
10 For, if you would identify that, please, and explain what
11 that's intended to reflect.

12 A This is an Oil Conservation Division Form
13 C-101 and 102, Application for a Permit to Drill.

14 Texaco has filed these forms to drill the
15 proposed State P No. 13 with the Hobbs District of the Oil
16 Conservation Division.

17 On this application we have shown the
18 field and pool as Shipp Strawn and have designated a verti-
19 cal 80-acre standup spacing unit consisting of the northwest
20 quarter quarter and the southwest quarter quarter of the
21 southeast quarter of Section 32, 16 South, 37 East, of Lea
22 County.

23 Exhibit Four is a copy of this applica-
24 tion.

25 Approval of this orthodox -- unorthodox

1 location is sought because the proposed location is not
2 within 150 feet of the center of a governmental quarter
3 quarter section as required by the field rules established
4 for the Shipp Strawn Pool.

5 Q Mr. Huntington, let me ask you, what is
6 the closest pool boundary to the well location?

7 A The closest pool boundary to the location
8 is the East Lovington Pennsylvanian Pool in which the field
9 rules to specify 40-acre drilling units. If you will refer
10 to -- can we refer to Exhibit Five now?

11 Q Yes, please.

12 A You will see in Exhibit Five that the
13 proposed well is very close to the East Lovington Penn Pool;
14 however, we believe that the proposed drilling unit in the
15 intervening land should be designated as an extension of the
16 Shipp Strawn Pool for the following reasons: The proposed
17 well location is believed to be an extension of the same al-
18 gal mound deposition in the Shipp Strawn Pool. The Shipp
19 Strawn Pool boundary is less than one mile from the proposed
20 well. It's about one-half mile from the nearest boundary of
21 the Shipp Strawn Pool.

22 In Case Number 8790, which amended the
23 Division order operating rules to the Shipp Strawn Pool, it
24 was found that the Shipp Strawn Pool rules should apply to
25 areas within one mile and further found that the northwest

1 quarter of the northwest quarter of Section 4, 17 South, 37
2 East, should be included in the Shipp Strawn Pool limits an
3 excluded from the East Lovington Pennsylvanian Pool.

4 The East Lovington Penn Pool was adopted
5 in 1951. All the wells within that pool have been economi-
6 cally depleted and are now shut-in or plugged or recom-
7 pleted.

8 Finally, 80-acre well density better re-
9 cognizes the drilling depths to the Strawn Pool. For in-
10 stance, the estimated total depth for this well is 11,315
11 feet, and the attendant high costs. Texaco engineers esti-
12 mate that the cost to drill, complete, and equip this well
13 will be about \$805,000. All of the other designated Strawn
14 pools in the close vicinity are being depleted with 80-acre
15 well density and these pools are designated as the Shipp
16 Strawn, which this well is within one mile, the West Casey
17 Strawn Pool, which is within one mile, and other Pennsyl-
18 vanian Strawn pools, such as the Casey Strawn Pool, and not
19 shown in this map is the Northeast Lovington Pennsylvanian
20 Pool, which included in the north half of Sections 28 and
21 29, 16 South, 37 East, as shown on your map.

22 Q Is there currently any economic produc-
23 tion from the East Lovington Penn?

24 A No, sir.

25 Q All right. Mr. Huntington, in your opin-

1 ion is there a greater likelihood that additional hydrocar-
2 bon reserves will be recovered at the proposed nonstandard
3 location than would be recovered at a standard location?

4 A Yes, sir.

5 Q In your opinion can the area be
6 economically developed on 40-acre spacing?

7 A No, sir.

8 Q Okay. Were Exhibits Four and Five
9 prepared by you or at your direction?

10 A Yes.

11 MR. HALL: We'd move the
12 admission of Exhibits Four and Five, Mr. Examiner.

13 MR. CATANACH: Exhibits Four
14 and Five will be admitted into evidence.

15 Q Do you have anything further you wish to
16 add?

17 A No, sir.

18 MR. HALL: That concludes our
19 direct of this witness.

20

21 CROSS EXAMINATION

22 BY MR. CATANACH:

23 Q Mr. Huntington, you said that this area
24 could not be economically developed on 40-acre spacing. How
25 have you reached that conclusion?

1 A We -- there's a large risk involved in
2 drilling these wells. The type of geological occurrence is
3 known as an algal mound development and it is very important
4 that you find this algal mound.

5 There are -- there are wells that are
6 drilled in this -- in this Pennsylvanian Strawn mound
7 development which are very good wells and can produce 400 or
8 500 barrels a day and 40 acres away there have been drilled
9 dry holes or very poor wells. So it's extremely important
10 that you drill in the -- in the proper location and, of
11 course, Texaco does not intend to develop this area on 40-
12 acre spacing.

13 Q Mr. Huntington, what is the No. 1-P Well
14 in the southeast southeast quarter of Section 32?

15 A What is the well?

16 Q Is -- that's -- that's not a producing
17 well, is it?

18 A No, and I don't know why that's on there.
19 The 1-P is a -- is the -- should have been a 1-D, and that
20 was the discovery well for the Pennsylvanian Strawn Field
21 and -- and it was later called East Lovington Penn.

22 Q Okay, that was the discovery well?

23 A That was the discovery well, which is now
24 depleted.

25 MR. CATANACH: I have no fur-

1 ther questions of the witness. He may be excused.

2 MR. HALL: Brief follow-up.

3

4

REDIRECT EXAMINATION

5

BY MR. HALL:

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8

Q Mr. Huntington, should Texaco's application be granted, do you believe that a production restriction or penalty should be applied?

9

A No.

10

11

12

13

Q All right. In your opinion would the granting of Texaco's application be in the interest of conservation, the prevention of waste, and protection of correlative rights?

14

A Yes.

15

Q Thank you, Mr. Huntington.

16

17

MR. HALL: At this time we call Mr. Keith Williams.

18

19

KEITH WILLIAMS,

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being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

23

DIRECT EXAMINATION

24

BY MR. HALL:

25

Q Mr. Williams, for the record, where do

1 you live and by whom are you employed?

2 A I'm employed by Texaco, Inc., in Midland,
3 Texas, as a development geologist.

4 Q All right. Have you previously testified
5 before the Division?

6 A Yes.

7 Q And are you familiar with the subject
8 lands in the application here today?

9 A Yes.

10 Q All right. Have you prepared certain ex-
11 hibits in conjunction with your testimony?

12 A Yes.

13 Q Let's look at Exhibit Number Six, if you
14 could identify that and explain that to the hearing officer.

15 A Okay. Exhibit Six is a structure map on
16 top of the Strawn reservoir in the Lovington East and Shipp
17 Strawn Field area.

18 The pink denotes all the -- all the
19 Strawn producers and completions. The ones with the slashes
20 through them are the plugged out Strawn zones.

21 The brown wells are Strawn penetrations.

22 The rest of the wells are -- are much
23 shallower completions.

24 In general this map shows a dip on the
25 Strawn to the northeast and basically in Section 4 is the

1 Shipp Strawn Field, which shows a northwest/southeast tren-
2 ding build-up of these algal mounds that we believe extends
3 into Section 32.

4 The red is our State P No. 13 proposed
5 location.

6 The orange dotted lines are the high-
7 lighted areas of seismic surveys that we've done through
8 here that -- that we believe represents the thickest part of
9 this algal reservoir, based on seismic control.

10 The reason for our unorthodox location is
11 to -- is to put it on a specific shotpoint on the Line 2
12 that runs east/west across the location. We believe this is
13 the apex of this algal mound trend coming up to the north-
14 west in Section 32.

15 Q Could you elaborate a little on just what
16 exactly is an algal mound?

17 A These -- these reservoirs are algae that
18 have built up on little Paleo highs and basically it's the
19 porous, permeable facies that you -- that you find good
20 wells in out here.

21 The brown (sic) just don't have much of
22 that facies developed and therefor are tight and dry holes,
23 most of them.

24 Q Are the mounds continuous throughout the
25 reservoir or are they interspaced?

1 A There are -- there is definite some con-
2 tinuity through -- through these reservoirs, yes.

3 Q Do -- does the nature of the reservoir
4 pose any risk in drilling in terms of missing the algal
5 mound?

6 A Yes. They pretty much most -- have been
7 successful with -- with seismic, and where you pinpoint it
8 there is a fairly good success ratio, yes.

9 Q Now, is your nonstandard location closer
10 to your seismic control point than your standard location
11 would have been?

12 A Definitely.

13 Q All right. Let's look at Exhibit Seven,
14 if you'd identify that, please, and explain what that's in-
15 tended to show.

16 A Okay. Exhibit Seven is a stratigraphic
17 cross section. It is hung on top of the Strawn lime inter-
18 val or bank interval. It goes from east to west starting at
19 the Tipperary -- Tipperary 4 No. -- State No. 1 in the
20 northeast of the northwest of Section 4.

21 It goes through a Tidewater well, the
22 State U, in the northwest of the northwest of Section 4.

23 It goes through the State P No. 1 in the
24 southeast of the southeast in Section 32, up to our proposed
25 location.

1 This shows the Tipperary well having a
2 modern day log. It shows good algal facies development
3 through the -- the red is the porous interval. The green
4 represents the perforated interval. The well was completed
5 in November of '85 and to -- till recently it's cumed over
6 309,000 barrels and is still a top rate well.

7 The next well, the State U, was completed
8 in 1951; has a cumulative production of just under 20,000
9 barrels, and you can see by what's colored in red it has
10 slightly less permeability in the facies but that facies is
11 there and is slightly continuous across -- across the cross
12 section here.

13 The State P No. 1 again was completed in
14 '51 and cumed 456,000 barrels until it was abandoned and it
15 has a good permeable (unclear) section shown. We're hoping
16 to extend this to the P No. 13 on the -- on the end of the
17 cross section.

18 Q All right. Is there anything further you
19 wish to add?

20 A The -- other than the -- basically the
21 whole purpose is to tie the -- tie the well location to the
22 shotpoint, which we believe is the -- is the apex of the
23 mound, and that will significantly reduce the risk.

24 Q All right. In your opinion, Mr. Wil-
25 liams, is there a greater likelihood that additional hydro-

1 carbon reserves will be recovered from the nonstandard loca-
2 tion than from a standard location?

3 A Yes.

4 Q In your opinion will the granting of Tex-
5 aco's application be in the interest of conservation, the
6 prevention of waste, and the protection of correlative
7 rights?

8 A Yes.

9 Q And were Exhibits Six and Seven prepared
10 by you?

11 A Yes.

12 MR. HALL: At this time, Mr.
13 Examiner, we'd move the admission of Exhibits Six and Seven
14 and that concludes our direct of this witness.

15 MR. CATANACH: Exhibits Six and
16 Seven will be admitted into evidence.

17
18 CROSS EXAMINATION

19 BY MR. CATANACH:

20 Q Mr. Williams, why is it so important that
21 you drill the location on a -- on a shotpoint, on that shot-
22 point?

23 A Well, like I said, the width of that ano-
24 maly is approximately three shotpoints, the east/west orange
25 line through that location, and that is the highest part.

1 The highest, structurally highest part of that mound is the
2 best -- is mostly the thickest reservoir, best reservoir
3 facies in the area. It's a very narrow trend.

4 Q Do you have any idea what the north/south
5 extent of it is?

6 A Well, it looks like it doesn't go much
7 farther or it really tails out before you get to, say, the
8 center of the section, just about, you know, where the
9 orange -- the orange is colored on both the north/south line
10 and the diagonal line there.

11 Q If I understand correctly, you're just
12 trying to get to the center of the structure.

13 A Yes.

14 Q As close as you can.

15 A Right. We think that one -- and that's
16 -- that's the reason for the 80-acre proration unit, is one
17 well centrally located on that anomaly should -- should do
18 fairly well at draining that -- that anomaly.

19 Q Did that Tidewater State P No. 1, did
20 that produce from the Strawn?

21 A Yes, sir. That's shown on the cross sec-
22 tion. That is -- has an upper and lower porosity section
23 that was well developed.

24 Q So is it your opinion that that's a dif-
25 ferent structure in the Tidewater?

1 A We believe that the -- that there may be
2 some -- some continuity in the specific porosity intervals
3 but there's also a likelihood of a different porosity zone.

4 But we do think that it's probably --
5 we're hopefully showing a little bit different porosity so
6 that depletion won't be a problem.

7 Q What leads you to believe that your loca-
8 tion would recover more oil than a standard location?

9 A Basically the seismic. Basically how --
10 the profile of the mound on the seismic line. If you look
11 in, say, Section 4, you see the Tipperary well in the north-
12 east of the northwest, like I said, that's already produced
13 over 300,000 barrels and still is a top rate well.

14 Q You go just to the east, just to the east
15 is the Pennzoil No. 1 BE Shipp and that's just a classic
16 case of falling off that mound and that thing is about 60
17 feet less bank interval and no algae facies and real tight.

18 MR. CATANACH: I think that's
19 all the questions I have of the witness.

20 MR. HALL: Nothing further.

21 MR. CATANACH: Is there any-
22 thing further in this case?

23 If not, Case 9300 will be taken
24 under advisement.

25

(Hearing concluded.)

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 certify that the foregoing is
a correct copy of the proceedings in
the said hearing of Case No. 9300,
heard by me on Jan 20 19 88.

David R. Catanach, Examiner
Oil Conservation Division