

**NEW MEXICO OIL CONSERVATION COMMISSION
EXAMINER HEARING
SANTA FE, NEW MEXICO
NOVEMBER 19, 1992 -- 8:15 A.M.**

NAME	REPRESENTING	LOCATION
Curtis D. Smith	Santa Fe Energy	Midland, TX.
Donald G. Eckerty	Santa Fe Energy	Midland, TX
James K. ...	Huntley Law Firm	Santa Fe
Maurice ...	Pyramid Co	"
DEXTER ...	MEWBOURNE OIL	MIDLAND TX
William F. ...	Empire ...	Santa Fe
D.
Monty ...	self	Midland, TX
Paul ...	Newbourn Oil Co.	Midland, TX.
D. ...	MERIDIAN OIL	SPRINGSTON, NM
JIM FULLERTON	56 ...	DIXON, NM

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

CASE 10,598

EXAMINER HEARING

IN THE MATTER OF:

Application of Santa Fe Energy Operating Partners,
L.P., for an unorthodox gas well location, Eddy
County, New Mexico

TRANSCRIPT OF PROCEEDINGS

ORIGINAL

RECEIVED

DEC 07 1992

BEFORE: MICHAEL E. STOGNER, EXAMINER

OIL CONSERVATION DIVISION

STATE LAND OFFICE BUILDING

SANTA FE, NEW MEXICO

November 19, 1992

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A P P E A R A N C E S

FOR THE DIVISION:

ROBERT G. STOVALL
Attorney at Law
Legal Counsel to the Division
State Land Office Building
Santa Fe, New Mexico 87504

FOR THE APPLICANT:

HINKLE, COX, EATON, COFFIELD & HENSLEY
Attorneys at Law
By: JAMES G. BRUCE
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P.O. Box 2068
Santa Fe, New Mexico 87504-2068

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1 WHEREUPON, the following proceedings were had
2 at 8:21 a.m.:

3 EXAMINER STOGNER: This hearing will come to
4 order for today's docket, 39-92. Please note today's
5 date, November 19th, 1992. I'm Michael E. Stogner,
6 appointed hearing officer for today's cases.

7 At this time I'll call Case Number 10,598.

8 MR. STOVALL: Application of Santa Fe Energy
9 Operating Partners, L.P., for an unorthodox gas well
10 location, Eddy County, New Mexico.

11 EXAMINER STOGNER: Call for appearances.

12 MR. BRUCE: Mr. Examiner, my name is Jim
13 Bruce from the Hinkle Law Firm in Santa Fe,
14 representing the Applicant. I have two witnesses to be
15 sworn.

16 EXAMINER STOGNER: Any other appearances?
17 Will the witnesses please stand to be sworn?

18 (Thereupon, the witnesses were sworn.)

19 EXAMINER STOGNER: Mr. Bruce, before we get
20 started on this particular case, due to my error, or
21 due to me, in preparing the ad there was an error.
22 This case will be continued to the December 17th, 1992
23 hearing, but we can go ahead and hear today's cases, or
24 today's case, but an Order will not be issued until
25 that time.

1 You may proceed.

2 CURTIS D. SMITH,

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

5 DIRECT EXAMINATION

6 BY MR. BRUCE:

7 Q. Okay, would you please state your name for
8 the record?

9 A. My name is Curtis Smith.

10 Q. And where do you reside?

11 A. I reside in Midland, Texas.

12 Q. Who are you employed by and in what capacity?

13 A. I'm employed by Santa Fe Energy, and I'm a
14 landman.

15 Q. Have you previously testified before the
16 Division?

17 A. Yes, I have.

18 Q. And are you familiar with the land matters
19 involved in this case?

20 A. Yes, I am.

21 MR. BRUCE: Mr. Examiner, I would tender Mr.
22 Smith as an expert petroleum landman.

23 EXAMINER STOGNER: Mr. Smith is so qualified.

24 Q. (By Mr. Bruce) Mr. Smith, briefly, what does
25 Santa Fe seek in this Application?

1 A. Santa Fe seeks an unorthodox location for its
2 Sheep Dip "28" State Com Number 1 well to test the
3 Strawn formation.

4 Q. And referring to Exhibit Number 1, would you
5 discuss its contents for the Examiner?

6 A. Exhibit 1 is a land plat which outlines the
7 proration unit for the Sheep Dip State Com Number 1,
8 the north half of Section 28, Township 23 South, Range
9 26 East, of Eddy County, New Mexico. And the location
10 of the well is 660 from the north line and 660 from the
11 west line of Section 28.

12 Q. And is the requested location based on
13 geological factors?

14 A. Yes, it is.

15 Q. And the next witness will discuss those?

16 A. Yes.

17 Q. Who are the offset operators to the north, to
18 the northwest and to the west?

19 A. Okay, to the north, the east half of Section
20 21 is American National Petroleum, and the west half of
21 Section 21 is Pacific Enterprises Oil Company.

22 To the northwest in Section 20 is Santa Fe
23 Energy.

24 And to the west, Section 29, is Santa Fe
25 Energy.

1 Q. And you notified American National and
2 Pacific Enterprises?

3 A. Yes, I did.

4 Q. And did you notify any additional parties?

5 A. We notified Exxon to the east in Section 27.
6 We notified J.M. Huber, which owns 40 acres -- or 80
7 gross acres, 40 net acres -- to the south in Section
8 28. We notified National Energy Group, which operates
9 the south half of Section 22. And --

10 Q. Is Santa Fe also an operator to the south?

11 A. Yes, Santa Fe owns the balance of the acreage
12 in the south half of Section 28 that Huber does not
13 own.

14 Q. And is Exhibit 2 your affidavit regarding
15 notice which contains your notice letter and certified
16 return receipt?

17 A. Yes.

18 Q. And briefly, what is Exhibit 3?

19 A. Exhibit 3 are the waiver letters received by
20 Exxon, J.M. Huber Corporation and National Energy
21 Group.

22 Q. Were Exhibits 1 through 3 prepared by you?

23 A. Yes.

24 Q. And in your opinion is the granting of this
25 Application in the interest of conservation and the

1 prevention of waste?

2 A. Yes, it is.

3 MR. BRUCE: And Mr. Examiner, I move the
4 admission of Exhibits 1 through 3.

5 EXAMINER STOGNER: Exhibits 1 through 3 will
6 be admitted into evidence.

7 EXAMINATION

8 BY EXAMINER STOGNER:

9 Q. Now, as far as all the properties in the
10 north half, are they communitized, or what kind of
11 agreement --

12 A. Yes, the north half, the west half of Section
13 21 is. And the east half of 21 I don't believe is
14 communitized.

15 Q. No, I'm sorry, I'm talking about the acreage
16 that is the subject today, the north half of 28.

17 A. Oh, we will communitize that if it's a
18 successful well.

19 Q. You haven't reached voluntary unit agreement?

20 A. Oh, okay, I didn't understand your question.
21 We have a farmout from Huber, which -- Huber owns the
22 northwest of the northwest, the northwest of the
23 northeast, and the southeast of the northeast. We have
24 a farmout from them. They're the only other working-
25 interest owner in that section.

1 Pacific Enterprises also owned a 50-percent
2 interest in the acreage I've described that Huber owns.
3 We purchased their leasehold.

4 EXAMINER STOGNER: Okay. Any other questions
5 of this witness?

6 MR. STOVALL: Huh-uh.

7 EXAMINER STOGNER: You may be excused.

8 DON ECKERTY,

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

11 DIRECT EXAMINATION

12 BY MR. BRUCE:

13 Q. Would you please state your name and city of
14 residence for the record?

15 A. My name is Donald Eckerty. I live in
16 Midland, Texas.

17 Q. And who are you employed by and in what
18 capacity?

19 A. I'm employed by Santa Fe Energy as a senior
20 geophysicist.

21 Q. Have you previously testified before the OCD
22 in that capacity and had your credentials accepted as a
23 matter of record?

24 A. I have.

25 Q. And are you familiar with the geological

1 matters applying to this case?

2 A. I am.

3 MR. BRUCE: Mr. Examiner, is the witness
4 considered acceptable?

5 EXAMINER STOGNER: He is.

6 Q. (By Mr. Bruce) Mr. Eckerty, please refer to
7 both Exhibits 4 and 4A together and discuss their
8 contents for the Examiner.

9 A. Exhibit 4 is an isopach map of the clean
10 carbonates in the Strawn formation, the lower and
11 middle portions of the Strawn. And this portion of the
12 Strawn formation builds into algal mounds along a shelf
13 edge in Eddy County, New Mexico.

14 Exhibit 4B [sic] is a cross-section through
15 this particular field which we are showing, the field
16 being the Frontier Hills Strawn, which is located now
17 in Sections 16 and 21 of this Township 23 South, 26
18 East.

19 The cross-section indicates that the mound
20 will build to over 300 feet in thickness, and can lead
21 to highly prolific production from the Strawn.

22 Immediately adjacent to these mounds along
23 the shelf edge, we have a detrital or precipitate in
24 place, carbonate, that is thickest adjacent to the
25 mounds and tends to form the best reservoirs adjacent

1 to the mounds.

2 The reservoirs are not necessarily continuous
3 within and without the mounds. In other words, you can
4 have a reservoir within a mound that is separate from
5 the reservoir in the thinner carbonate adjoining it;
6 you can have reservoirs within the mound which are not
7 connected.

8 Q. And is it necessary -- Or do these mounds
9 drop off precipitously?

10 A. They drop off very precipitously. The most
11 critical dropoff is basinwards, which will be to the
12 southeast in this case. As you can see on the cross-
13 section in Section 21, in one spacing unit, between the
14 second and third wells, in the cross-section from the
15 right, the Coquina Philly Fed 1 and the Philly Fed 2
16 the -- you just lose the mound going into the basin.

17 Q. Is the Coquina Philly Fed Number 1 well an
18 economic well?

19 A. The Philly Fed Number 1 is a Morrow well. It
20 did not produce from the Strawn and was not tested from
21 the Strawn.

22 Q. Also, noticing on Exhibit 4 in the northeast
23 quarter of Section 28, there's a well indicated there
24 in the southwest of the northeast. What is that well?

25 A. That is the Gulf GN State well. As you can

1 see from the isopach, it only had 12 feet of clean
2 carbonate in the Strawn, using the criteria that I used
3 to build this map.

4 It is definitely on the basinward side of the
5 shelf edge. So we -- We know from our work along the
6 shelf edge that we need to stay updip and to the west
7 and -- well, shelfward of this well.

8 Q. And you would like to move a considerable
9 distance away from the well and -- the dry hole in
10 Section 28; is that correct?

11 A. We want to stay as close to the thickest
12 trend that we can map in the Frontier Hills complex.
13 We feel that a location east or south of where we
14 intend would be very dangerous, reservoirwise.

15 We want to stay either in the core of the
16 mound or in the best part of the fringing carbonate
17 detritus which we anticipate to extend southwesterly
18 from the mound.

19 Q. Moving on to Exhibit 5, would you discuss the
20 significance of the structure in this --

21 A. Okay, Exhibit 5 is a structure map on top of
22 the middle Strawn, which is also the top of the units
23 isopached in Exhibit 4.

24 As you can see, Frontier Hills does have some
25 structural expression at the top of the Strawn, in the

1 Philly Fed 2 well, which was in the mound core, and in
2 the PEOC Fed "21" to the west in 21. These wells are
3 in the core.

4 To the south, we anticipate the core and the
5 surrounding material to give rise to some structure.
6 As you can see, we -- On a structural basis, we feel
7 that we're actually, if anything, pushing the structure
8 into Section 28.

9 In any event, if the structure is high in 28,
10 it's going to be high in the northwest -- extreme
11 northwest quarter, as we show it, because the Gulf well
12 in the southwest of the northeast of Section 28 is
13 definitely lower.

14 Also, we want to come updip in general on the
15 Strawn, and the regional dip is to the southeast. So
16 we feel that a location as far northwest as possible
17 will both be the best structural location, as well as
18 giving rise to the thickest carbonate.

19 Q. Okay. Please move on to Exhibit 6 and
20 discuss the production in the area of interest.

21 A. Okay. Exhibit 6 is a cumulative production
22 map to May of this year. The wells of most interest,
23 of course, are those in the Strawn.

24 The three best ones are the Bettis Brothers
25 well in Section 16, which is in the fringing detritus

1 on the north edge of the mound. The other two Strawn
2 producers in the core of the Frontier Hills mound have
3 made -- well, 2.73 billion -- that's in the Philly --
4 that's at the PEOC well, excuse me -- and 1.8 billion
5 and 16,000 barrels of oil in the Coquina Philly Fed.
6 These are wells in the core of the mound.

7 There are some scattered Morrow production
8 through the area. About the best well is the Philly
9 Fed 1 in Section 21, which, as I previously said, was
10 dry in the Strawn, or not tested in the Strawn, but did
11 produce in the Morrow.

12 There are two other Strawn producers in
13 Sections 27 and 34, indicated in blue. The best one in
14 Section 27 made 1.08 BCF of gas from the Strawn.

15 It is our interpretation that the Strawn in
16 this well is a slough block or a detrital flow off the
17 Frontier Hills core. We feel that the -- from our
18 other mapping in this area, that the shelf edge in the
19 Strawn goes to the southwest and not to the south or
20 southeast.

21 As you can also see from the production map,
22 there is really no production south or west immediately
23 adjacent to Frontier Hills field. This is another
24 reason that we want to stay as close to the proven
25 production in Frontier Hills as reasonably possible.

1 you know it?

2 A. The present producing intervals are as shown
3 in the PEOC Fed "21".

4 If you notice in the Philly Fed 2, there's a
5 bridge plug above the lower set of perms. Those perms
6 were made earlier, failed to produce, and the well from
7 its inception was plugged back to the upper perms that
8 you see.

9 Q. That's quite an extensive perforated
10 interval.

11 A. They perfed the -- basically the whole mound
12 when they started, and then immediately plugged back.

13 Q. And you're hoping that mound extends down to
14 the southwest in your area?

15 A. We anticipate either the mound core or a
16 combination of the core and the surrounding detrital
17 reservoir, which you see producing in the Bettis well
18 up in Section 16, out of a clean carbonate, but a very
19 thin carbonate compared to that in the mound itself.

20 We see this all up and down the trend, from
21 Lusk field in northeast Eddy County through our
22 Carlsbad field, where we have -- and then on down into
23 this area, where we have, as I said, production both
24 within the core and surrounding the core.

25 Q. And that was my next question, as far as the

1 area that extends maybe a few miles outside the
2 boundaries of your exhibits.

3 Are there any other pools of this nature that
4 you were able to draw your information from or liken
5 this particular phenomenon?

6 A. There are. As I just mentioned, specifically
7 our Carlsbad field -- actually, it's the town of Otis,
8 about 7 miles east of here.

9 But to the southwest, HNG has a well in a
10 mound core almost due west in Section 32 of Township 23
11 South, 25 East.

12 We have also drilled another core in our
13 Lambchop 17 well, which is about eight miles southwest
14 of this location. It's the Lambchop 17 Number 1,
15 almost adjacent to the Caverns Park.

16 So from this information and from information
17 we derived from drilling the Muley Federal Unit well
18 three miles west with Collins and Ware this last
19 summer, where we also found not a mound but good
20 evidence that we are on the shelf edge, from this
21 information we take the shelf edge out of Frontier
22 Hills and trend it southwesterly, from this area.

23 So we are drawing on information we've
24 learned within about a three-township area here as to
25 the location of the shelf edge and the conditions along

1 and adjacent to it.

2 Q. In looking back to the south and east, I show
3 -- You have two wells, and I'm referring to Exhibit
4 Number 4.

5 A. Right.

6 Q. You have a Strawn -- two Strawn wells marked
7 to the south and east, one with a number 92 showing the
8 thickness, and the other one with a 15.

9 Are those wells presently producing?

10 A. Those wells, to my knowledge, are plugged out
11 in the Strawn at this time.

12 Q. Okay. Now, the thickness that you show here
13 on these wells -- and if I refer back to 4, Exhibit
14 Number 4A, this would be -- I see your main core of the
15 algal mound, and then it looked like in a lighter blue
16 color you show the sloughing or --

17 A. Or the adjacent material. On the actual
18 isopach map itself, I have not attempted to draw a
19 solid circle around where the core is.

20 In other words, I just mapped the carbonate
21 straight. And I realized from what I've learned in the
22 area that the core is likely to be on the order of a --
23 oh, a half section to a section in areal extent -- but
24 that the reservoirs and the fringing material tend to
25 extend along the shelf edge, along strike, and can

1 extend as far as a mile or more from the core.

2 So for this reason, we try to keep our wells
3 strikish from the cores along the shelf edge.

4 As I mentioned earlier, the wells in Section
5 27 actually are at right angles to the trend of the
6 shelf edge in this area, and they're surrounded by more
7 basinal Strawn, and I've been unable to continue the
8 shelf edge in that direction.

9 For that reason, I interpret those wells in
10 27 and 34 as being detrital remnants that were dumped
11 into deeper water off the front of the Frontier Hills
12 reef at right angles to the shelf edge, which I know to
13 extend on to the west, into the Muley Federal unit.

14 EXAMINER STOGNER: I have no other questions
15 of this witness.

16 What I would like to ask of you, Mr. Bruce --
17 I'm an engineer, not a geologist, and I would like for
18 this man's assistance to come up with some findings. I
19 think he'll be able to do it a lot more comprehensive
20 than I can, and using explanations like you have for
21 that.

22 It's very clear to me, but I think you'll be
23 able to put it in words a little bit better than I
24 would, justifying, geologically speaking, an unorthodox
25 location in this particular type of an environment.

1 That will help me. And I think in the future also, if
2 you could do that for me, Mr. Bruce, I would appreciate
3 it.

4 MR. BRUCE: Yes, Mr. Examiner. Is a couple
5 of weeks sufficient?

6 EXAMINER STOGNER: Well, considering we had
7 an advertisement error and the thing is on -- won't --
8 it will be continued again until the 17th.

9 MR. BRUCE: Okay.

10 EXAMINER STOGNER: I apologize for that.

11 MR. BRUCE: That's okay.

12 EXAMINER STOGNER: Anything else, further in
13 this matter?

14 If not, that concludes this particular case.

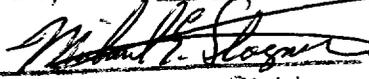
15 However, it will be continued to the December
16 17th, 1992, hearing.

17 Thank you, Mr. Bruce.

18 (Thereupon, these proceedings were concluded
19 at 8:44 a.m.)

20 * * *

21
22 I do hereby certify that the foregoing is
23 a complete record of the proceedings in
24 the Examiner hearing of Case No. 10598,
25 heard by me on 19 Nov. 1992.


Examiner
Oil Conservation Division

