

1 STATE OF NEW MEXICO
2 ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
3 OIL CONSERVATION DIVISION
4 STATE LAND OFFICE BUILDING
5 SANTA FE, NEW MEXICO

6 9 November 1988

7 EXAMINER HEARING

8 IN THE MATTER OF:

9 Application of Pennzoil Exploration and Production Company for the amend- CASE
10 ment of Division Order No. R-8716, 9522
11 Lea County, New Mexico.

12
13 BEFORE: David R. Catanach, Examiner
14
15

16 TRANSCRIPT OF HEARING

17
18 A P P E A R A N C E S

19
20 For the Division: Robert G. Stovall
21 Attorney at Law
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I N D E X

JIM L. BARR

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1 MR. CATANACH: Call next Case
2 9522.

3 MR. STOVALL: Application of
4 Pennzoil Exploration and Production Company for an amend-
5 ment of Division Order No. R-8716, Lea County, New Mexico.

6 MR. CATANACH: Are there
7 appearances in this case?

8 MR. KELLAHIN: Mr. Examiner,
9 I'm Tom Kellahin of the Santa Fe law firm of Kellahin,
10 Kellahin & Aubrey. I'm appearing on behalf of the appli-
11 cant and I have one witness to be sworn.

12 MR. CATANACH: Any other ap-
13 pearances in this case?

14 Will the witness please stand
15 and be sworn in?

16
17 (Witness sworn.)

18
19 MR. KELLAHIN: Mr. Catanach,
20 our witness is Mr. Jim Barr. He spells his last name
21 B-A-R-R. Mr. Barr is a petroleum geologist with Pennzoil
22 Company.

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1 JIM L. BARR,

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

4
5 DIRECT EXAMINATION

6
7 BY MR. KELLAHIN:

8 Q Mr. Barr, for the record would you
9 please state your name and occupation?

10 A My name is Jim Barr. I'm Senior Explor-
11 ation with Pennzoil Exploration and Production Company.

12 Q You're a Senior Exploration Geologist
13 with company, sir?

14 A Correct.

15 Q And where do you reside?

16 A I reside in The Woodlands, Texas, which
17 is north of Houston.

18 Q Are you familiar with the geologic facts
19 surrounding Pennzoil's application in this case?

20 A I certainly am.

21 Q And, in fact, you were the geologic wit-
22 ness before the Commission in Case 9449 in which the Divi-
23 sion entered the order that you're now seeking to amend.

24 A Correct.

25 Q In preparation for your testimony today,

1 Mr. Barr, have you completed your geologic study of this
2 area?

3 A Yes, I have.

4 Q And we're dealing in the Shipp Strawn
5 Pool and looking for Strawn mounds that are productive of
6 oil.

7 A That's correct.

8 Q Based upon your studies have you reached
9 geologic opinions and conclusions about the orientation of
10 the spacing unit and the location for your well?

11 A Yes, I have.

12 MR. KELLAHIN: Mr. Examiner,
13 we tender Mr. Barr as an expert petroleum geologist.

14 MR. CATANACH: He is so qual-
15 ified.

16 Q Mr. Barr, let me direct your attention
17 to your Exhibit Number One. Do you have a copy of that
18 before you, sir?

19 A Yes.

20 Q Would you take a moment and explain to
21 the examiner approximately where in the Shipp Strawn Pool
22 your spacing unit is located?

23 A Okay. If you'll notice on Exhibit One
24 I've shown the regional map on your left and then a more
25 specific map on your right and it gives you more or less a

1 geographical location of the unit relative to Lovington and
2 to Hobbs, which would be to the south.

3 We are in the eastern part of the Shipp
4 Field in the Township 17 South, Range 37 East. Specific-
5 ally, the unit that we are proposing before the Commission
6 is in the south half of the southwest quarter of Section 1
7 and on the specific map on your right there, Section 1 is a
8 full square mile.

9 Q Let's look at the area that's enlarged
10 in the upper right margin of your display. When we look at
11 Section 1 and confine ourselves to the west half of that
12 section --

13 A Right.

14 Q -- that will be the area that's contain-
15 ed within all this shading, the outline of colors?

16 A Yes.

17 Q That represents the west half of the
18 section.

19 A The total enlarged map here is the
20 yellow that is on the left map. That's the area that it
21 encompasses, and Section 1 is part of the yellow that you
22 see on the left map there.

23 Q All right. Find for us the Pennzoil
24 Price Family Trust No. 1 Well.

25 A Okay. The Price Family Trust on the

1 enlarged map would be in the northwest quarter of the
2 Section. Actually it would be in the southwest of the
3 northwest of Section 1. If you look on the small scale map
4 over here you can see Section 1 and the total of Section 1
5 would be the small writing that you see there in the
6 yellow.

7 Q The Price Family Trust No. 1 Well is
8 that one shown at an isopach location of 254, is it?

9 A 254 feet, that's the isopach thickness
10 of the Lower Strawn Lime.

11 Q And what is the orientation of the
12 80-acre spacing unit for that well? 54, is it?

13 A 254 feet, that's the isopach thickness
14 of the Lower Strawn Lime.

15 Q And what is the orientation of the
16 80-acre spacing unit for that well?

17 A It is north/south.

18 Q When we presented in August of this year
19 to Examiner Stogner the case for the Price Family No. 2
20 Well, and that was the Case 9449 --

21 A Correct.

22 Q -- what were you proposing to do at that
23 time, Mr. Barr?

24 A We were proposing to drill an unorthodox
25 location situated where I have shown in the enlarged map.

1 You'll see a small circle there with a slashed line through
2 it. That was the original location that we had proposed to
3 do.

4 Q At the time of the hearing in August,
5 Mr. Barr, what was your seismic control lines that you were
6 utilizing to help you define the porosity mound in the
7 Strawn formation?

8 A We were using a north/south line that
9 goes right through the No. 1 Price Family Trust, and then
10 we were using a northwest/southeast line that -- excuse me,
11 is going through the proposed location that had applied for
12 at that time.

13 Q That proposed location was an unorthodox
14 location for the Shipp Strawn Pool?

15 A Yes, sir, it was.

16 Q And a standard location for that pool
17 requires a well to be located where, Mr. Barr?

18 A In the center of a quarter quarter
19 section within 150 foot radius.

20 Q And the orientation of the spacing unit
21 at the August hearing was what, sir?

22 A We had it as a north/south.

23 Q It would be a stand-up west half of the
24 southwest quarter?

25 A Correct.

1 Q All right. Since then what additional
2 seismic information has been developed and have you uti-
3 lized to re-evaluate this prospect?

4 A We have an additional seismic line that
5 runs through the east half of the southwest quarter, just
6 east of the proposed location.

7 We also have an east/west line that is
8 just south of the proposed location and these have aided us
9 in identifying and delineating the mound that you see por-
10 trayed here.

11 Q What is the location for the Price No. 2
12 Well that you're proposing today?

13 A It's 900 feet from the south line, 750
14 feet from the west line.

15 Q And that's an unorthodox location, is
16 it?

17 A That is correct. An orthodox location
18 would be the open circle that you see there with 150 foot
19 degree radius.

20 Q And the orientation of the spacing unit
21 now is what?

22 A Is an east/west, or a laydown.

23 Q All right, you would propose the south
24 half, then, of the southwest quarter?

25 A Correct.

1 Q Define for us geologically the reasons
2 that you believe the proposed unorthodox location is a more
3 optimum location in the south half over the closest
4 standard location.

5 A When we drill for the Lower Strawn Lime
6 out here, primarily we're picking these mounds on seismic
7 and we're going for what we consider to be the crest or
8 near the crest of the mound; essentially the association
9 there, where we have a thicker Lower Strawn isopach we tend
10 to have a greater development of porosity.

11 In the standard location that you see
12 there, the open circle, we would be around an isopach in-
13 terval of 240 feet. We think that we will encounter some-
14 thing like on the order of 260 feet based upon the No. 1
15 Price Family Trust up there in the northwest. Based upon
16 our seismic and our previous experience in working with the
17 Lower Strawn Lime out here, we feel that the location that
18 we have selected here would be the most optimum location to
19 get near the crest of this mound.

20 Q When we look at the original approved
21 location for the Price Family 2 Well --

22 A Right.

23 Q -- from the August hearing, what was
24 your geologic opinion about the location of that well at
25 that time?

1 A We were trying to get to as thick a part
2 of the mound as we could and that was the reason for re-
3 questing an unorthodox location that we requested there.

4 Q Has your opinion with regards to the
5 shape and size of that mound where the Price No. 1 Well
6 produces, has that changed?

7 A It has not changed.

8 Q What has occurred, then, with regards to
9 the Price No. 1 Well that causes you now to seek a reorien-
10 tation of the spacing unit in another location?

11 A During the approximately three months of
12 production we have seen a rapid decline in the reservoir
13 pressure within the No. 1 Price Family Trust.

14 Q And what does that tell you?

15 A It essentially says that although we had
16 good vertical porosity, we are dealing with a limited re-
17 servoir, have limited areal extent, and with this rapid
18 decline in pressure we are not drawing from as large a
19 sponge as we had hoped that we would have.

20 Q Are you concerned that that mound in
21 which the Price 1 Well produces is not sufficient in order
22 to to support the drilling of a second well at this time?

23 A It is our feeling that it would not sup-
24 port a second well in the unorthodox location that we had
25 requested earlier.

1 MR. KELLAHIN: Mr. Examiner, I
2 share with you a copy of the order entered in 9449. It's
3 Order No. R-8716, and that is the order that Pennzoil seeks
4 to have amended.

5 Q Do you have any opinion, Mr. Barr, as to
6 whether the approval of this application today by Pennzoil
7 will give the operators and the working interest owners in
8 this particular area an opportunity to potentially recover
9 oil that might not otherwise be recovered?

10 A Yes, and the only thing I would like to
11 point out here is the request of the unorthodox location,
12 we are encroaching on no one but ourselves in both sides,
13 the west half and the east half.

14 Q The ownership interest in the southwest
15 quarter of this section, regardless of the orientation of
16 the spacing unit, is going to remain the same?

17 A Yes.

18 Q And do you have concurrence of your
19 other working interest owners with regards to this amend-
20 ment?

21 A Yes. The latest I've heard from our
22 land people is that we have not received any opposition and
23 one company intends to farmout to us.

24 MR. KELLAHIN: That concludes
25 my examination of Mr. Barr.

1 We move the introduction of
2 his Exhibit Number One.

3 MR. CATANACH: Exhibit Number
4 One will be admitted as evidence.

5 MR. KELLAHIN: In addition,
6 Mr. Catanach, we have marked as Exhibit Number Two a certi-
7 ficate which I have signed, showing that we have sent a
8 copy of the application, the notice letter for hearing, to
9 the various parties that might be affected by the applica-
10 tion.

11 We'd request that that also be
12 admitted into the record.

13 MR. CATANACH: Mr. Kellahin,
14 who are these parties? What -- what interest do they have?

15 MR. KELLAHIN: These are all
16 the working interest owners in the southwest quarter of the
17 Section 1 and so they will be interest owners that partici-
18 pate in the well and they would also be interest owners to-
19 wards whom we would potentially be encroaching should there
20 be a north half/southwest quarter proration unit developed
21 after the drilling of the Price No. 2 Well.

22 MR. CATANACH: But at this
23 time have all these working interest owners agreed to par-
24 ticipate in the well?

25 MR. KELLAHIN: In some fashion

1 we believe that's true, either by farmout or participation.

2

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CROSS EXAMINATION

4

BY MR. CATANACH:

5

Q Mr. Barr, was seismic used in the deter-

6

mination of the well location in the northwest quarter of

7

this section?

8

A Yes, sir, it was.

9

Q So you've used seismic out here before

10

successfully?

11

A Especially since about 1983 with the new

12

advances in seismic and our own proprietary processing and

13

acquisition, seismic, I think, has become a very useful

14

tool in the selection and delineation of the mounds.

15

Q Did your seismic also tell you the

16

orientation of the pod in the southwest quarter?

17

A Primarily we base that upon the differ-

18

ent seismic lines there, where we see it on the different

19

seismics and that's where we see the -- like on the north-

20

west of the southeast it goes right through the location

21

there. We see things on the seismic that leads us to be-

22

lieve that we're at or near the apex of the mound, and

23

based upon the other lines and the signature, then we use

24

-- then you might say we take a contouring option and

25

that's the way we've contoured the units.

1 Q Is that a pretty good well in the north-
2 west quarter?

3 A I would like to have it. It's still at
4 it's allowable, full allowable.

5 Q When was it drilled?

6 A Approximately -- it was completed appro-
7 ximately three months ago.

8 MR. CATANACH: I believe
9 that's all I have.

10 The witness may be excused.

11 Is there anything further in
12 this case?

13 MR. KELLAHIN: No, sir.

14 MR. CATANACH: If not, then it
15 will be taken under advisement.

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17 (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. 9522, heard by me on November 9, 1988:

David R. Catanant, Examiner
Oil Conservation Division