

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  
7  
8 9 November 1988

9 EXAMINER HEARING

10 IN THE MATTER OF:

11 Application of M. Brad Bennett, Inc. CASE  
12 for an unorthodox gas well location, 9519  
13 Lea County, New Mexico.

14 BEFORE: David R. Catanach, Examiner

15 TRANSCRIPT OF HEARING

16 A P P E A R A N C E S

17 For the Division: Robert G. Stovall  
18 Attorney at Law  
19 Legal Counsel to the Division  
20 State Land Office Bldg.  
21 Santa Fe, New Mexico

22 For the Applicant: Chad Dickerson  
23 Attorney at Law  
24 DICKERSON, FISK & VANDIVER  
25 Seventh & Mahone/Suite E  
Artesia, New Mexico 88210

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I N D E X

M. BRAD BENNETT

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1 MR. CATANACH: Call next  
2 Case 9519.

3 MR. STOVALL: Application of  
4 M. Brad Bennett, Inc., for an unorthodox gas well location,  
5 Lea County, New Mexico.

6 MR. CATANACH: Are there ap-  
7 pearances in this case?

8 MR. DICKERSON: Mr. Examiner,  
9 I'm Chad Dickerson of Artesia, New Mexico, on behalf of the  
10 applicant and I have one witness.

11 MR. CATANACH: Any other ap-  
12 pearances? Will the witness please stand and be sworn in.

13

14 (Witness sworn.)

15

16 M. BRAD BENNETT,  
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. DICKERSON:

22 Q Mr. Bennett, will you please state your  
23 name, your occupation, and where you reside, and in what  
24 capacity do you appear at this hearing?

25 A My name is M. Brad Bennett. I reside at

1 4904 Heather in Midland, Texas. I'm employed by M. Brad  
2 Bennett, Inc.

3 Q And what is your occupation?

4 A My occupation is petroleum engineer.

5 Q Mr. Bennett, you have not previously  
6 testified before this Division as an engineer, have you?

7 A No, I have not.

8 Q Will you review for Mr. Catanach your  
9 educational and employment background?

10 A Yes. I graduated from LSU in 1971 with  
11 a BS in petroleum engineering; went to work as a petroleum  
12 engineer for Cities Service Oil Company in Hobbs, New  
13 Mexico; worked there for approximately four years and since  
14 have been an independent petroleum engineer since that  
15 time.

16 Q And are you familiar with the available  
17 geological and engineering data supporting your application  
18 for an unorthodox location in Case 9519?

19 A Yes, I am.

20 MR. DICKERSON: Is Mr. Bennett  
21 qualified, Mr. Catanach?

22 MR. CATANACH: He is.

23 Q Mr. Bennett, will you summarize the  
24 purpose of your application in Case 9519 for us?

25 A In this case we seek approval for an un-

1 orthodox gas well location being 660 from the south line,  
2 660 from the east line of Section 6, Township 16, Range 34  
3 East, to test primarily the Pennsylvanian formation. The  
4 dedicated acreage will be the south 303 acres of said Sec-  
5 tion 6.

6 Q That is the south half of the irregular  
7 section?

8 A This is a definitely irregular section  
9 and it contains quite a bit more than the normal 640, so it  
10 is actually the south 303 acres, the entire south 303.

11 Q Okay. Mr. Bennett, identify what we  
12 have submitted as Exhibit Number One and review this map  
13 for the examiner.

14 A Okay. Exhibit Number One is a land plat  
15 showing the proposed location in the southeast quarter of  
16 Section 6, being 660 from the south, 660 from the east.

17 The proposed acreage dedicated to this  
18 well is outlined in yellow, being the south 303 acres of  
19 Section 6.

20 This map also shows in the southeast  
21 quarter of Section -- excuse me, the southwest quarter of  
22 Section 6, is the State "E" No. 1, which was drilled by  
23 Mewbourne Oil Company in 1977. It was completed in the  
24 Morrow formation and recompleted in the Atoka in 1978. It  
25 has produced to date approximately 500-million cubic feet

1 through October of 1986. It has recently been recompleted  
2 as a marginal well in the Wolfcamp formation.

3 Q So that --

4 A Also the land map shows the offset oper-  
5 ators and in the northeast quarter of Section 7 is the Mew-  
6 bourne State "H" No. 1-Y, which is the only producing well  
7 in the area in the Hume Morrow Field.

8 Q Mr. Bennett, directing your attention to  
9 the well you referred to in the southeast quarter of Sec-  
10 tion 6, so the current status of that well is currently  
11 completed in the Wolfcamp formation?

12 A Southwest quarter.

13 Q Southwest quarter, I'm sorry.

14 A Yes, it is.

15 Q And the spacing, that is a Wolfcamp oil  
16 well?

17 A That is correct.

18 Q 4-acre spacing?

19 A It would be 160-acre spacing.

20 Q Okay. The -- your well symbol in the  
21 southeast quarter of Section 6 is your proposed unorthodox  
22 well location?

23 A That is correct.

24 Q Okay. Refer to your map submitted as  
25 Exhibit Number Two and review that for us, Mr. Bennett.

1           A           Okay.   Exhibit Number Two is a structural  
2    map based on 50-foot contour intervals with the structural  
3    point being the Atoka Channel, top of the Atoka  
4    Channel.   All wells colored in blue penetrated this structural  
5    point and showed a subsea depth in red normally below  
6    the well.

7                        The cross section line given in blue  
8    runs from northeast to south.   The map also shows the  
9    highest structural point within the south 303 acres of  
10   Section 6 to be in our southeast of the southeast of that  
11   said dedicated acreage.   This location should allow the optimum  
12   recovery of reserves and, actually, the minimum  
13   amount of waste.   This location also should result in our  
14   being approximately 70 to 80 feet high to the State "E" No.  
15   1 in the southwest quarter of 6, and approximately 20 feet  
16   high to the Mewbourne State "H" No. 1-Y in the northeast  
17   quarter of Section 7.

18           Q           Is that well, the Mewbourne State 1-Y in  
19   the northeast quarter of Section 7, Mr. Bennett, that appears  
20   to be an unorthodox location, as well, is it not?

21           A           That well is located 660 from the north  
22   line and 1040 from the east line.

23           Q           And so your proposed unorthodox location  
24   is also 660 feet from the south line of Section 6, so you  
25   are the same distance from the lease boundary between those

1 two tracts?

2 A That is correct. We worked that out at  
3 the request of offset operators.

4 Q Okay, let's talk about the offset oper-  
5 ators.

6 Directing your attention again briefly  
7 to Exhibit Number One, Mr. Bennett, review for us the off-  
8 set interest owners to the south and east of your proposed  
9 unorthodox location. Who are those parties?

10 A Okay, the offset owners to the south are  
11 Mewbourne Oil Company; to the east are Texaco and also  
12 Santa Fe Energy.

13 Q And Moncrief?

14 A And to the southeast is Moncrief and  
15 Coastal Oil & Gas.

16 Q Okay, Mr. Bennett, refer to your map  
17 that we submitted as Exhibit Number Three and describe the  
18 information that you've shown on this instrument for us.

19 A Exhibit Number Three is a map of the  
20 Atoka Channel isopach, showing the channel sand running  
21 from northeast to southwest. A porosity cutoff of 80 per-  
22 cent was used. This map here again shows the optimum loca-  
23 tion, being in the extreme southeast quarter of Section 6  
24 and we expect to encounter approximately 20 feet of Atoka  
25 Channel sand, resulting in reserves of an additional 1.5 to

1 1.8 BCF and 35-to-45,000 barrels of condensate.

2 Q So beginning -- or reviewing this map  
3 beginning with your well symbol for your proposed location,  
4 as you move that location to the west in a more orthodox  
5 location, you would conclude from this map that that would  
6 lead you into a thinner sandstone?

7 A It should encounter less sand section.  
8 In addition, you will be moving toward the gas/water con-  
9 tact.

10 Q Okay, Mr. Bennett, identify our Exhibit  
11 Number Four and review this for us.

12 A Exhibit Number Four is a Morrow struc-  
13 ture map using 50-foot contours, also. This was included  
14 primarily to show that the Morrow structure is close to a  
15 mirror image of the Atoka Channel and once again the opti-  
16 mum location is the extreme southeast quarter of Section 6.

17 Q Okay, now your Exhibit Number Five is  
18 your north-to-south cross section, the trace of which is  
19 shown on Exhibits Two and Three. Review the information  
20 you've shown on the cross section, please.

21 A If you'll go to Exhibit Number Two  
22 you'll see the path that the cross section follows. It  
23 goes from northeast to south.

24 It starts with the Santa Fe "NH" Federal  
25 No. 1, which is extremely low structurally.

1                   It moves up dip to the Great Western  
2 Drilling Sombrero No. 1, which is also low structurally.

3                   It then takes in the Mewbourne State "E"  
4 No. 1 in the southwest quarter of Section 6, which produced  
5 from the Atoka Channel approximately 500-million cubic  
6 feet.

7                   It then goes to the Mewbourne Oil Com-  
8 pany State "H" No. 1-Y, which is presently the only pro-  
9 ducing well in the field.

10                  It then moves to the Samedan Oil State 7  
11 No. 1 in the southeast quarter of Section 7, which is right  
12 on the gas/water contact (unclear).

13                  Q           Mr. Bennett, from your review of this  
14 information, what conclusions have you drawn insofar as the  
15 risk involved in drilling your well at the proposed unor-  
16 thodox location as compared to a well in the -- this same  
17 spacing unit with your objective at an orthodox, or stand-  
18 ard location?

19                  A           We would expect by moving to the ortho-  
20 dox location, by volumetrics, we'd probably lose about  
21 300-to-500-million cubic feet, which would most likely make  
22 the well uneconomical at today's present economic situa-  
23 tion.

24                  Q           So approval of this unorthodox location  
25 will in your opinion lessen the risk involved in drilling a

1 well on this spacing unit?

2 A It should lessen the risk and also maxi-  
3 mize the reserve recovery.

4 Q In your opinion is your proposed unor-  
5 thodox location the best location for a spacing unit to  
6 test this Pennsylvanian formation that you're after in your  
7 well?

8 A Yes, by all means.

9 Q Mr. Bennett, identify and briefly tell  
10 us what Exhibit Number Six is.

11 A Exhibit Number Six is the affidavit of  
12 mailing in the matter of the application for the unorthodox  
13 location to all interested parties, being Texaco Producing,  
14 Inc.; Santa Fe Energy Company in the southwest quarter of  
15 Section 5; also C. B. Moncrief; W. A. Moncrief, Jr.; Mon-  
16 crief Oil; and Coastal Oil & Gas Corporation in the north-  
17 west quarter of Section 8; and Mewbourne Oil Company in the  
18 north half of Section 7; along with receipts for certified  
19 mail.

20 Q Identify Exhibit Number Seven and tell  
21 us what that packet is.

22 A Exhibit Number Seven is waivers, copies  
23 of waivers of objection from Coastal Oil & Gas Corporation;  
24 Moncrief Oil; W. A. Moncrief, Jr. and C. B. Moncrief.

25 Q Mr. Bennett, were Exhibits One through

1 Five prepared by you or under your direction and super-  
2 vision?

3 A Yes, they were.

4 Q And in your opinion will the granting of  
5 this application be in the interest of conservation, the  
6 prevention of waste, and the protection of correlative  
7 rights?

8 A Yes, it will, and if we are allowed to  
9 drill this location, and we are successful, we expect that  
10 the reserves, as I stated earlier, should be in the neigh-  
11 borhood of 1.5 to 1.8 BCF, along with the 35-to-40,000  
12 barrels of condensate, which, in addition to being econo-  
13 mical, it should also generate revenue for the State of  
14 approximately \$400-to-500,000 in royalty income.

15 Q Do you intend to commence your well  
16 prior to the end of the year?

17 A Yes, we desire to do that.

18 MR. DICKERSON: Mr. Catanach,  
19 move admission of Exhibits One through Seven and I have no  
20 further questions of Mr. Bennett.

21 MR. CATANACH: Exhibits One  
22 through Seven will be admitted as evidence.

23

24

25

## CROSS EXAMINATION

1  
2  
3 BY MR. CATANACH:

4 Q Mr. Bennett, have you heard anything  
5 from Mewbourne Oil?

6 A Yes. I talked to them on Monday and  
7 they stated that they had no opposition. We worked this  
8 out. The 660 from the south line was worked out because  
9 that is equivalent to their 660 from the north line, which  
10 is the common boundary line between the leases.

11 Q I see. When was -- do you know when the  
12 Mewbourne well was drilled?

13 A The Mewbourne well was drilled in 1985.

14 Q And it's completed in the Atoka?

15 A Yes. They call it the new Morrow Field  
16 on that cross section. I think we've pretty well estab-  
17 lished it's Atoka reservoir age. Our objective is the same  
18 channel which their State "H" No. 1-Y produces in.

19 Q As I understand it, the well in the  
20 southwest quarter of 6 was completed in the Atoka, also, or  
21 the Morrow?

22 A It was originally completed in the Mor-  
23 row, that's correct, in 1977, and then in 1978 it was re-  
24 completed in the Atoka Channel and produced until October  
25 of 1986.

1 Q And that was operated by who?

2 A That was operated originally by Mew-  
3 bourne Oil Company.

4 Q The south -- the proposed proration unit  
5 has been communitized?

6 A Yes. We do own 100 percent of the  
7 leasehold, too.

8 Q So is it your opinion that that well  
9 that was drilled, that Mewbourne well, did not recover all  
10 the reserves on that tract?

11 A No, it did not. It's approximately 50  
12 to 70 feet down dip from our proposed location. Volumet-  
13 rics estimate approximately 2.4 BCF under the 303 acres.  
14 It recovered approximately 500-million cubic feet.

15 Q Is there any production in Section 8  
16 from the --

17 A Not out of the Atoka Channel.

18 Q What do your two blue circles represent  
19 in that --

20 A They represent Devonian production. Let  
21 me back up. The one in the northeast quarter of Section 8  
22 represents Devonian production. The one in the southeast  
23 was a plugged well. The blue circle designates the -- that  
24 it did penetrate the structural pick and was used in the  
25 contour and isopach maps.

1 MR. CATANACH: I think that's  
2 all the questions we have at this time.

3 The witness may be excused.  
4 Is there anything further in  
5 this case?

6 MR. DICKERSON: No, sir.

7 MR. CATANACH: If not, it will  
8 be taken under advisement.

9

10 (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. 9519, heard by me on November 9, 1988.

David R. Cotton, Examiner  
Oil Conservation Division