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

IN THE MATTER OF THE HEARING)
CALLED BY THE OIL CONSERVATION)
DIVISION FOR THE PURPOSE OF)
CONSIDERING:)
) CASE NO. 10319
APPLICATION OF WOODBINE PETROLEUM,)
INC. FOR AN UNORTHODOX OIL WELL)
LOCATION, EDDY COUNTY, NEW MEXICO.)
)

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: JIM MORROW, Hearing Examiner

May 30, 1991

Santa Fe, New Mexico

This matter came on for hearing before the Oil Conservation Division on May 30, 1991, at 9:00 a.m. at Oil Conservation Division Conference Room, State Land Office Building, 310 Old Santa Fe Trail, Santa Fe, New Mexico, before Freda Donica, RPR, Certified Court Reporter No. 417, for the State of New Mexico.

FOR: OIL CONSERVATION DIVISION BY: FRED DONICA, RPR
Certified Court Reporter
CCR No. 417

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I N D E X

May 30, 1991
Examiner Hearing
CASE NO. 10319

PAGE

APPEARANCES

3

WOODBINE PETROLEUM'S WITNESSES:

TOM MAIRS

Direct Examination by Mr. Pearce

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REPORTER 'CERTIFICATE

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E X H I B I T S

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A P P E A R A N C E S

FOR THE DIVISION: ROBERT G. STOVALL, ESQ.
 General Counsel
 Oil Conservation Commission
 State Land Office Building
 310 Old Santa Fe Trail
 Santa Fe, New Mexico 87501

FOR THE APPLICANT: MONTGOMERY & ANDREWS
 Attorneys at Law
 BY: W. PERRY PEARCE, ESQ.
 325 Paseo de Peralta
 Santa Fe, New Mexico 87504-2307

1 HEARING EXAMINER: Call case 10319.

2 MR. STOVALL: Application of Woodbine Petroleum, Inc.
3 for an unorthodox oil well location, Eddy County, New
4 Mexico.

5 HEARING EXAMINER: Call for appearances.

6 MR. PEARCE: May it please the Examiner, I am W. Perry
7 Pearce of the Santa Fe office of the law firm of Montgomery
8 & Andrews, appearing in this matter on behalf of Woodbine.
9 And I have one witness who needs to be sworn.

10 HEARING EXAMINER: Please stand and be sworn.

11 (Witness sworn.)

12 TOM MAIRS

13 the witness herein, having been first duly sworn, was
14 examined and testified as follows:

15 DIRECT EXAMINATION

16 BY MR. PEARCE:

17 Q. For the record, would you please state your full
18 name and place of residence?

19 A. Yes. My name is Tom Mairs. I'm a consulting
20 geologist, living in Dallas, Texas.

21 Q. Mr. Mairs, have you previously appeared before
22 the division and its examiners and had your qualifications
23 as an expert in the field of petroleum geology accepted and
24 made a matter of record?

25 A. Yes, I have.

1 Q. Are you familiar with the application under
2 consideration today that has been filed on behalf of
3 Woodbine Petroleum?

4 A. Yes, I am.

5 MR. PEARCE: Mr. Examiner, I would ask that the witness
6 be recognized as an expert in the field of petroleum
7 geology.

8 HEARING EXAMINER: He's recognized and accepted, his
9 qualifications.

10 Q. (By Mr. Pearce) Very briefly, Mr. Mairs, would
11 you describe for the record what Woodbine is seeking in the
12 case today?

13 A. Yes. Woodbine is seeking exception to Rule 104
14 for an unorthodox location for the Hadson Federal Number 3
15 well.

16 Q. Let's begin and look quickly, please, at what
17 we've marked as Exhibit Number 1. And would you describe
18 that exhibit for the Examiner and those in attendance?

19 A. Yes. Exhibit Number 1 is a land map showing the
20 lease ownership. It's on a scale of one inch equals one
21 thousand feet, and it shows Woodbine Petroleum's lease block
22 located in Section 11 of Township 19 South, Range 31 East.
23 The red arrow is pointing to the subject well, the Hadson
24 Federal Well Number 3, which is the unorthodox location
25 subject of this hearing.

1 Woodbine operates -- is the operator for two
2 leases in Section 11, the Hadson Federal lease, which is
3 located in the southeast quarter of Section 11 and the south
4 half of the northeast quarter of Section 11. Through
5 farmout with Hadson, Hadson reserved two 40-acre units as
6 shown here. And also in the southwest quarter of Section
7 11, Woodbine operates the Yates Federal lease, which
8 resulted from a farmout from Yates petroleum.

9 On the lease block also shown are all the
10 producing wells. Woodbine operates seven wells total,
11 including six producing oil wells and the subject well,
12 which is waiting on completion. There are two completed oil
13 wells in the Hadson Federal lease, the Hadson Federal Number
14 1 and 2 and 4. Completed oil wells on the Yates lease,
15 Yates Federal lease, the 1, 2, 3 and 4.

16 This field was discovered in October of 1990,
17 with the completion of the Yates Federal Number 1 from a
18 Seven River dolomite. I think it was completed October
19 22nd, 1990. So this field is still in the developmental
20 stage. Field has been -- the reservoirs are Delaware, Seven
21 Rivers and the Delaware/Seven Rivers formation, which in
22 this area are interbedded sandstones, dolomites and
23 anhydrites. The field has been classified in the
24 Shugart-Yates-Seven Rivers-Queen-Grayburg field, and the
25 spacing is 40 acres.

1 The -- with the exception of the Yates Federal
2 Number 4, all of the oil wells are completed in a Seven
3 Rivers dolomite reservoir, at an average depth of 2,650
4 feet. The Yates Federal Number 4 is completed in the Yates
5 sand reservoir at approximately 2,575 feet.

6 The Hadson Federal Number 3 subject location is
7 shown here with the red arrow, and the circle is the surface
8 location, and the cross is the bottom hole location.

9 Q. Let's look now, if you would, please, at what
10 we've marked as Exhibit Number 2 to this proceeding. Would
11 you describe that for us?

12 A. Yes. Exhibit Number 2 is a survey location plat
13 for the unorthodox location which shows the surface location
14 to be 2,540 feet from north line and 2,310 feet from the
15 east line of Section 11. This is also 330 feet from the
16 west line and 100 feet from the south line of the quarter
17 quarter section.

18 Q. And it is by that 100 feet from the south line of
19 the quarter quarter section that this location is
20 unorthodox; is that correct?

21 A. That's correct.

22 Q. And looking back at Exhibit Number 1, it is in
23 the same lease in which Woodbine holds a farmout, so that
24 the well is actually crowding other Woodbine acreage; is
25 that correct?

1 A. That's true. It's 100 feet north of the Hadson
2 Federal Number 2 40-acre unit, and this is a common lease
3 with the same royalty and working interest.

4 Q. Let's look, please, at Exhibit Number 3.

5 A. Also on Exhibit 2 is the approved permit to drill
6 the well.

7 Exhibit Number 3 is an Eastman Christensen
8 directional survey which shows the bottom hole location to
9 be approximately six feet south and 25 feet east of the
10 surface location. So at the bottom hole location, the well
11 is 2,546 feet from the north line and 2,285 feet from the
12 east line of Section 11, which is also 355 feet from the
13 west line and 94 feet from the south line of the quarter
14 quarter section.

15 Q. And this information is reflected by the circle
16 and cross shown for the well on Exhibit 1; is that correct?

17 A. Yes, sir, it is. The circle is the surface
18 location, and the bottom hole location is the cross.

19 Q. Let's look, please, at Exhibit Number 4. And
20 would you describe that for us?

21 A. Yes. Exhibit Number 4 is a structural contour
22 map, contoured on the top of the Seven Rivers formation.
23 The scale is one inch equals 1,000. This also shows
24 Woodbine's lease block and shows the producing wells colored
25 in green.

1 As you can see, this is a structural trap. It is
2 an anticlinal closure, which is very typical of the
3 Yates/Seven Rivers fields. The fields in this area exhibit
4 a water drive. And prior to drilling the Hadson Federal
5 Number 3, there have been six wells drilled and completed in
6 the Yates/Seven Rivers reservoirs, and you can see they were
7 drilled in an east-west direction and generally are very
8 close to the crest of the anticlinal closure. There's about
9 100 feet of closure. The nearest control well that we had
10 was a well located in the southeast quarter of the northwest
11 quarter, which was non-productive in the Yates/Seven
12 Rivers.

13 The proven column prior to drilling the number 3,
14 as you can see here, the structural high was the Yates
15 Federal Number 2 at plus 1,018. The structural low was the
16 Yates Federal Number 4, plus 958, or about 60 feet of dip in
17 the proven column.

18 The Yates Federal Number 3 was spudded on May the
19 3rd, logged on May the 9th. The pipe has been set, and it's
20 shut in, awaiting completion. But it is approximately 84
21 feet low to the highest well and was a stepout well in a
22 downdip direction, significant downdip direction, toward the
23 dry hole. This is one of the reasons for the unorthodox
24 location. All the wells, producing wells, on the lease
25 block were making water at the time that this well was

1 drilled, so an orthodox location would have been considered
2 by the operators to be a high risk location. This is the
3 reason for the application for exception. The unorthodox
4 location was for more efficient production and reservoir
5 drainage and to maximize recoverable reserves, which would
6 prevent waste.

7 Q. I notice there's a line of cross-section. I'd
8 ask you now to look at what we've marked as Exhibit Number 5
9 and discuss that for us.

10 A. Yes. Exhibit Number 5 is a structural
11 cross-section, A prime location of which is shown on Exhibit
12 4 and also on the insert on Exhibit 5. The datum here is
13 sea level. The vertical scale is one inch equals 100 feet.
14 The horizontal scale is one inch equals 200 feet, so it's a
15 vertical exaggeration of two.

16 This exhibit -- the purpose of this exhibit is to
17 show the structural relationship at the time the Hadson
18 Federal Well Number 3 was drilled by comparing it to the
19 nearest producing well, which is the Hadson Federal Number
20 2, which at the time was producing oil and water from the
21 Seven Rivers dolomite. And the next control well, which is
22 the Gulf Holder well, located in the southeast of the
23 northwest quarter, which was not productive in these
24 reservoirs. As you can see, the dip is -- this is a
25 significant downdip well. And, in fact, in addition to the

1 two proven reservoirs in this field, Woodbine has
2 encountered several good oil ~~shoals~~^{shows} in two or three other
3 reservoirs in the Yates/Seven Rivers but has not completed
4 them yet. These reservoirs did not have ~~shoals~~^{shows} in the
5 Hadson Federal Number 3, so it appears that some of these
6 have watered out at this location.

7 Q. Anything else on Exhibit 5?

8 A. No, sir.

9 Q. Let's look please at Exhibit Number 6. Would you
10 describe that for us?

11 A. Yes, and I can refer you back to Exhibit Number
12 1. This is a notification letter to all of the offset
13 operators of the scheduled hearing. There are two letters
14 involved; one is the May 7th letter, which is notification
15 before the hearing was scheduled, and then the May 13th
16 letter in which they were notified of the scheduled date.
17 And these are to all the offset operators, being Hadson
18 Petroleum, Mitchell Energy, Yates Petroleum, and Conoco.

19 Q. And the exhibit shows the signed return receipt;
20 is that correct?

21 A. Yes, that's correct.

22 Q. Mr. Mairs, do you believe that the approval to
23 produce the Hadson Federal Number 3 well at this unorthodox
24 location is in the interest of the prevention of waste of
25 natural resources because it encourages the efficient and

1 effective recovery of hydrocarbons?

2 A. Yes, I do.

3 Q. Do you believe that approving the unorthodox
4 location will operate to protect correlative rights of other
5 interest owners in the area?

6 A. Yes, I do.

7 MR. PEARCE: Mr. Examiner, at this time I would move
8 the admission of Woodbine Exhibits 1 through 6, and I have
9 no further questions for the witness at this time.

10 HEARING EXAMINER: Exhibits 1 through 6 are admitted.

11 You indicated the interests are common between
12 the 40-acre tract where the well has been drilled and
13 280-acre tract in the south half of the section there. Are
14 there interests exactly the same, or the same percentages,
15 or do you know?

16 THE WITNESS: This is one lease. The south half of the
17 northeast quarter and all of the southeast quarter are under
18 one lease, Hadson Petroleum, and Woodbine acquired the lease
19 through farmout. Yes, these are common interests, both
20 royalty and working interests.

21 HEARING EXAMINER: The reason it's unorthodox is
22 because it's too close to a quarter section boundary; is
23 that correct?

24 THE WITNESS: That's correct. It's too close to the
25 unit for the Hadson Federal Number 2, which is just

1 immediately south and contiguous with the Hadson Federal
2 Number 3 unit, which is 40 acres. It is not unorthodox to
3 any other offset operator.

4 HEARING EXAMINER: On Exhibit 3, where is the bottom
5 hole location indicated on that exhibit?

6 THE WITNESS: That well was 2,744 feet, so on that
7 survey, 2,744 feet, the well was 5.79 feet south and 24.69
8 feet east of the surface location, which is indicated by the
9 cross on Exhibit Number 1 and Exhibit 4.

10 Q. (By Mr. Pearce) So the actual footage numbers do
11 not appear on Exhibit 3; is that correct? It just shows the
12 deviation from surface.

13 A. Right. This is just strictly a deviation from
14 the surface location.

15 HEARING EXAMINER: So subtract those, or add them,
16 whichever the case may be, what was approved as a location
17 and come up with the numbers you've testified to?

18 THE WITNESS: Yes.

19 HEARING EXAMINER: You said that Delaware and Seven
20 Rivers and Queen and Yates are interbedded sand and shale.
21 They're not interbedded with each other?

22 THE WITNESS: No. As a matter of fact, the only two
23 formations that exist here on -- we're at the very
24 northeastern edge of the Capitan Reef, and the Queen and
25 Grayburg are not even present in this area. The only two

1 formations that are are the Yates and Seven Rivers. And the
2 heavy lines that show the -- the upper heavy line shows the
3 -- the heavy line shows the top of the Yates formation, and
4 also the one colored purple at the top is the Seven Rivers
5 formation. All the producing reservoirs in this field are
6 within those two formations, and they're interbedded
7 sandstones and dolomites and even a few anhydrites. Very
8 little shale in this section.

9 HEARING EXAMINER: All seven wells have been drilled
10 since October?

11 THE WITNESS: Yes, of 1990, that's correct.

12 HEARING EXAMINER: The witness may be excused.

13 MR. PEARCE: I have nothing further, Mr. Examiner.

14 HEARING EXAMINER: Case 10319 will be taken under
15 advisement.

16 (The foregoing hearing was adjourned at the
17 approximate hour of 9:20 a.m.)

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STATE OF NEW MEXICO)
:
COUNTY OF SANTA FE)

I, FREDA DONICA, RPR, a Certified Court Reporter, DO
HEREBY CERTIFY that I stenographically reported these
proceedings before the Oil Conservation Division; and that
the foregoing is a true, complete and accurate transcript of
the proceedings of said hearing as appears from my
stenographic notes so taken and transcribed under my
personal supervision.

I FURTHER CERTIFY that I am not related to nor employed
by any of the parties hereto, and have no interest in the
outcome hereof.

DATED at Santa Fe, New Mexico, this 30th day of
June, 1991.

Freda Donica
Freda Donica
Certified Court Reporter
CCR No. 417

I do hereby certify that the foregoing is
a complete and true transcript of the proceedings
before me on May 30, 1991,
James J. ... Examiner
Oil Conservation Division