

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO

25 May 1983

EXAMINER HEARING

IN THE MATTER OF:

Application of Texaco, Inc., for
downhole commingling, Lea County,
New Mexico.

CASE 7878
CASE 7879
CASE 7880

BEFORE: Richard L. Stamets, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation
Division:

W. Perry Pearce, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant:

Ken Bateman, Esq.
WHITE, KOCH, KELLY, & McCARTHY
220 Otero Street
Santa Fe, New Mexico 87501

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

2

I N D E X

RUSSELL S. POOL

Direct Examination by Mr. Bateman

4

Cross Examination by Mr. Stamets

11

E X H I B I T S

REPORTER'S NOTE: For each numbered exhibit listed there are three; one for each case which is consolidated in this hearing.

Applicant Exhibit One, Plat (3)

6

Applicant Exhibit Two, Data Sheet (3)

6

Applicant Exhibit Three, Allocation Formula (3)

8

Applicant Exhibit Four, Production Plot (3)

9

Applicant Exhibit Five, Schematic (3)

9

Applicant Exhibit Six, Schematic (3)

10

1
2 MR. STAMETS: The hearing will please
3 come to order.

4 We'll call next Case 7878.

5 MR. PEARCE: That case is on the appli-
6 cation of Texaco, Inc., for downhole commingling, Lea County,
7 New Mexico.

8 MR. BATEMAN: Mr. Examiner, I'm Ken
9 Bateman, with White, Koch, Kelly, and McCarthy, appearing on
10 behalf of Texaco.

11 At this time I would request that we
12 combine for the purpose of hearing Case 7878, 7879, and 7880,
13 inasmuch as they involve a common reservoir.

14 MR. STAMETS: I believe the call in each
15 of those cases is identical, and if I hear of no objection,
16 they will be consolidated for purposes of testimony.

17 MR. BATEMAN: I have one witness, and
18 ask that he be sworn, please.

19
20 (Witness sworn.)

21
22 MR. BATEMAN: Mr. Examiner, we have
23 prepared the exhibits in all three of these cases and have
24 tabulated them as Exhibit One for each of the three wells in
25 sequence, and so on throughout the testimony.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

RUSSELL S. POOL,

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

DIRECT EXAMINATION

BY MR. BATEMAN:

Q All right, sir, would you state your full
name and place of employment for the record?

A Russell S. Pool. I work in Hobbs, New
Mexico.

Q And how are you employed? And by whom?

A As a petroleum engineer for Texaco.

Q Have you previously testified before the
Division and made your credentials a matter of record?

A No, I have not.

Q All right. Would you state for the record --

MR. STAMETS: What is the witness' last
name? Neither one of us got it down.

MR. BATEMAN: Oh, I'm sorry.

A Pool, P-O-O-L.

MR. STAMETS: Okay, thank you.

Q All right, Mr. Pool, would you briefly re-

late for

5

late for the record what your educational and work experience has been?

A. Yes. I received a BS in civil engineering in 1977 at Texas A&M and have since been employed by Texaco for approximately five and a half years.

Q. And you've worked in the Hobbs district, have you?

A. Yes, for approximately two years.

Q. Are you a registered engineer?

A. No, I am not.

Q. And are you familiar with the wells in the area in question in these three applications?

A. Yes, sir, I am.

Q. And are those wells in your area of responsibility?

A. Yes, they are.

Q. In your employment?

A. Yes, they are.

MR. BATEMAN: I offer Mr. Pool as an expert witness.

MR. STAMETS: Mr. Pool, your experience with Texaco, has all been in the area of petroleum engineering?

A. Yes, sir.

MR. STAMETS: The witness is considered

1
2 qualified.

3 Q Mr. Pool, would you refer first to what's
4 been marked Exhibit One in each of these cases and identify
5 the location of the wells in question and state for the re-
6 cord what Texaco seeks by its applications?

7 A Yes. Exhibit One is -- well, all three
8 Exhibits Ones are plats showing the locations and the proration
9 units for the various fields in question.

10 Q What does Texaco seek by its application
11 today?

12 A We would like to downhole commingle the
13 Drinkard, Tubb, and Blinebry zones in all three of these
14 wells.

15 Q Have all three of these wells produced at
16 least at one time from those three zones?

17 A That's correct.

18 Q All right, would you proceed, then, with
19 what's been marked Exhibit Two and explain that to the Exa-
20 miner?

21 A Exhibit Two is a data sheet which contains
22 information required by the Railroad Commission for downhole
23 commingling of wells.

24 Q You're speaking of the Oil Conservation
25 Division.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

A. Excuse me.

Q. Oil Conservation Division.

A. Oh, what did I say?

Q. Railroad Commission but --

A. Oh.

Q. -- we understand.

A. Okay.

Q. I presume we understand.

All right, why don't you just briefly relate what -- what is shown on these exhibits?

A. Okay, the A.H. Blinebry NCT-4 No. 1, the Blinebry is the only producing zone right now and it's flowing 5 oil, GOR of 21,400. The Tubb has ceased to flow and is currently shut in, and the Drinkard has been abandoned in favor of the two previously mentioned zones.

The A. H. Blinebry NCT-2 Well No. 5, the Blinebry is currently shut in, the Tubb is flowing 160 Mcf per day, and the Drinkard is also flowing 6 barrels of oil per day with a GOR of 65,000.

The A. H. Blinebry NCT-1 Well No. 3, the Blinebry and Tubb zones were both abandoned. The Drinkard is presently pumping 3 barrels of oil with a GOR of 12,333.

Q. Mr. Pool, has the production from these three zones been commingled in any way at any time?

1
2 A. Yes. In these fields any combination of
3 two of these zones have been commingled and these zones have
4 been commingled on surface in all three zones.

5 Q Do you anticipate any problem or incompatibility with the fluids?
6

7 A. No, we sure don't.

8 Q Would you proceed, then, with what's been
9 marked Exhibit Three?

10 A. Exhibit Three is our proposed allocation
11 formula for the three zones in question for all three wells.
12 And these are based on our estimated total recoveries from
13 the three various zones.

14 Q If I understand your testimony correctly,
15 at least one zone in each well is not currently being produced
16 and could not be produced unless it's commingled, is that
17 correct?

18 A. This is correct.

19 Q How would you anticipate allocating the
20 GOR ratios among these zones?

21 A. I would propose that after production has
22 been allocated to each zone a GOR limitation be imposed on
23 each zone according to the existing field rules.

24 Q These as to each zone individually?

25 A. As to each zone.

1
2 Q Would you proceed, then, with what's been
3 marked Exhibit Four?

4 A Exhibit Four A through C is the latest 1-
5 year production plotted barrels versus time for all three
6 zones, with the decline rates as shown.

7 Q Incidentally, is the ownership of these
8 three zones common?

9 A Yes, it is.

10 Q In each well, is that --

11 A Correct.

12 Q -- correct? Would you describe, then,
13 what's shown on Exhibit Five with respect to the present com-
14 pletion of these wells?

15 A Exhibit Five is the present downhole well-
16 bore schematic for each well. On the A. H. Blinebry NCT-4
17 the Blinebry is currently flowing and the Tubb, which was
18 flowing below a packer, had ceased to flow, and the Drinkard
19 is presently abandoned with the retrievable bridge plug
20 shown at 6350 feet, and there is no room in this wellbore to
21 produce each zone separately. We cannot run another string
22 of tubing.

23 Q All right, what about NCT-2 No. 5?

24 A The Blinebry will not flow so they cannot
25 produce it up the casing. The Tubb is currently flowing be-

1
2 neath a packer, and so is the Drinkard. We currently have no
3 way of producing the Blinebry zone.

4 The A. H. Blinebry NCT-1 No. 3, the Bline-
5 bry and Tubb zones have previously been squeezed off and we
6 are now pumping the Drinkard formation, and we would propose
7 to open the Blinebry and Tubb back up.

8 Q Proceed with Exhibit Six, then, and de-
9 scribe how you propose to recomplete these wells.

10 A Exhibit Six is simply our proposed downhole
11 wellbore schematics showing the -- all three with the three
12 with the three zones open and the one string of tubing, pro-
13 duction tubing.

14 Q You would recomplete them all in the same
15 way, is that correct?

16 A Essentially.

17 Q Do you expect any cross flow between the
18 zones?

19 A No, we will pump all three wells to minimize
20 cross flow.

21 Q All right, Mr. Pool, do you believe the ap-
22 proval of these applications will be in the best interest of
23 conservation, the protection of correlative rights, and the
24 prevention of waste?

25 A Yes, I do.

1
2 Q Were all these exhibits, Exhibits One
3 through Six in each case, either prepared by you or under
4 your direction?

5 A Yes, they were.

6 MR. BATEMAN: I offer Exhibits One
7 through Six at this time.

8 MR. STAMETS: These exhibits will be
9 admitted.

10 MR. BATEMAN: That completes our direct.
11

12 CROSS EXAMINATION

13 BY MR. STAMETS:

14 Q Mr. Pool, as far as the allocation of pro-
15 duction, it's your intention that the -- any order issuing
16 from this, or any final allocation, allocate both oil pro-
17 duction and gas production to the individual zones, and then
18 on a percentage basis --

19 A Yes.

20 Q -- and then the resulting gas/oil ratio
21 will be the GOR for that well, in essence, from there on out
22 in that zone. Would that be correct?

23 A For each zone for the current field rules,
24 if I understand you.

25 I would like the current -- the GOR limita-

1
2 tion to be kept as it is right now.

3 Q On a well to well basis?

4 A Yes, sir.

5 Q I notice in the NCT-5 -- NCT-2 5, NCT-1 3,
6 that you plan to test the Blinebry and the Tubb when you go
7 back into these separately.

8 A Yes, sir.

9 Q Is there any reason that you have not done
10 the same thing relative to the NCT-4 Well No. 1, or not pro-
11 posed the same thing?

12 A Well, we can do this. I think we have a
13 better handle on our production figures for the NCT-4 No. 1.

14 Q Perhaps it would be just as well in each
15 of these formations to let you work with the District Super-
16 visor to establish methods for allocation.

17 A Okay.

18 Q Now, on the form for the A. H. Blinebry
19 NCT-4 No. 1, Exhibit Two, you show the pressures, indicate
20 that the Blinebry -- or the Drinkard zone in that well, the
21 pressure should be 400 pounds. That's estimated. What is
22 that estimate based on?

23 A For the Blinebry zone?

24 Q For the Drinkard zone.

25 A Oh, for the Drinkard zone. I must be

1
2 looking at the wrong exhibit.

3 Q It would be the first exhibit.

4 A First exhibit. NCT-4 Well No. 1?

5 Q Uh-huh.

6 A Okay. Well, this would just be from off-
7 set wells.

8 Q And would the same thing be true with those
9 estimates that are shown, then, on the next two exhibits, too?

10 A All our wells which are currently pumping
11 we would shoot a fluid level and estimate our bottom hole
12 pressure from that. From the wells which are shut in, that
13 would be taken from offset production -- offset wells.

14 And we have run bombs in the wells that are
15 flowing.

16 Q In the last Exhibit Two, the one in Case
17 7880, you show an estimated bottom hole pressure of 290 pounds
18 in the Drinkard. Now is that based on a shooting of the fluid
19 level in that well or is that some other basis?

20 A That would be from offset wells.

21 Q Is that an unusual pressure differential in
22 that area? 110 pounds?

23 A I'm not sure.

24 Q I'm not sure, if you answered my last ques-
25 tion, I missed it. I was wondering if this variation in esti-

1
2 mated Drinkard pressure from the 400 pounds or 426 down to
3 290, is that variation in such proximity demonstrated by --

4 A Oh, I'm not sure. I cannot answer that.

5 MR. STAMETS: Are there other questions
6 of the witness? He may be excused.

7 Do you have anything further in this
8 series of cases?

9 MR. BATEMAN: Nothing further.

10 MR. STAMETS: They will be taken under
11 advisement.

12
13 (Hearing concluded.)
14
15
16
17
18
19
20
21
22
23
24
25

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

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 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 Extraordinary Hearing of Cause No. _____ heard by me on _____ 19____.

_____, Examiner
Oil Conservation Division

SALLY W. BOYD, C.S.R.
Rt. 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409