

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
State Land Office Building
Santa Fe, New Mexico
25 July 1979

EXAMINER HEARING

IN THE MATTER OF:)
Application of Gulf Oil Corporation for) CASE
downhole commingling, Lea County, New) 6599
Mexico.)

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel for the Division
State Land Office Bldg.
Santa Fe, New Mexico 87503

For the Applicant: Terry I. Cross, Esq.
The Gulf Companies
P. O. Box 1150
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I N D E X

BETHEL S. STRAWSER

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Applicant Exhibit Six-A, Tabulation 6

Applicant Exhibit Six-B, Tabulation 6

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1 MR. NUTTER: Call next Case Number 6599.

2 MR. PADILLA: Application of Gulf Oil Cor-
3 poration for downhole commingling, Lea County, New Mexico.

4 MR. CROSS: Terry Cross for Gulf Oil Cor-
5 poration, and Mr. Sperling has also entered an appearance
6 in this case.

7 MR. NUTTER: We have that appearance.

8 MR. CROSS: Do you consider this witness
9 still under oath?

10 MR. NUTTER: The witness is still under
11 oath.

12
13 BETHEL S. STRAWSER
14 being called as a witness and having been previously sworn
15 upon her oath, testified as follows, to-wit:

16
17 DIRECT EXAMINATION

18 BY MR. CROSS:

19 Q Would you please state your name, your
20 employer, and your position, for the record, please?

21 A Once again, my name is Bethel Strawser,
22 with Gulf Oil Corporation as a petroleum engineer in Mid-
23 land, Texas.

24 MR. CROSS: In view of the fact that this
25 witness just qualified in the preceding case, is she qual-

1 ified now?

2 MR. NUTTER: The witness is qualified.

3 Q. Would you please state what Gulf is seeking
4 in this application?

5 A. Gulf is seeking authority to downhole com-
6 mingle production from the North Justis-Montoya Pool and
7 the North Justis-Fusselman Pool in the wellbore of our
8 W. A. Ramsey NCT-C Well No. 4, which is located in Unit
9 M, Section 36, Township 24 South, Range 37 East, in Lea
10 County, New Mexico.

11 Q. Would you please explain your Exhibit
12 Number One?

A. Exhibit Number One is a plat of the area. It shows the W. A. Ramsey Lease outlined by a dashed line. The Well No. 4 has been colored red.

16 Q. Do you have an exhibit showing the down-
17 hole particulars of this well?

18 A. Yes. Exhibit Number Two is a diagrammatic
19 sketch showing the details of the completion and the down-
20 hole equipment both presently in use and proposed for use
21 after authority to commingle has been granted.

22 Q. Would you please give the history of this
23 well?

24 A. Well history as per Exhibit --

25 MR. NUTTER: And you're reading from Ex-

hibit Three, right?

A. As per Exhibit Three, yes.

MR. NUTTER: I think you don't have to read the whole thing, just summarize it, since you do have it on record here as an exhibit.

A. Okay. The well was spudded in 1962. Total depth is 8155 feet with 7-inch production casing at that depth.

It was originally triply completed with North Justis-Fusselman, North Justis-Montoya, and North Justis-Waddell under the Order Number R-2430.

Waddell has since been temporarily abandoned and we are now dually completed between the Montoya and the Fusselman.

Montoya zone is perforated 7104 to 14 and was treated with acid, squeezed and re-perforated and treated again with acid. It initially flowed 188 barrels of oil per day.

Fusselman was perforated 6988 to 6996 and treated with acid. Its initial production was 166 barrels of oil per day.

The most recent C-116s are Exhibits Number Four-A and Four-B.

Q. Do you have exhibits setting out the production performance of this well?

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1 A. Yes, the Exhibits Five-A and Five-B plot
2 the average daily production on an annual basis and the
3 last one-and-a-half years on a monthly basis.

4 These curves show the production between
5 the two zones is fairly equivalent at the present time. The
6 latest averages that I have show the Fusselman zone pumping
7 12 barrels of oil and 90 barrels of water per day, with 3
8 Mcf of gas, while the Montoya zone pumps 10 barrels of oil,
9 20 barrels of water, and 3 Mcf gas.

10 Exhibits Six-A and Six-B tabulate the same
11 data in numerical form.

12 Q. Have precedents been set in the immediate
13 area to downhole commingle the North Justis-Fusselman and
14 North Justis-Montoya Pools?

15 A. Yes. Under Order Number R-4895, dated
16 October 29th, 1974, Texaco was granted authority to down-
17 hole commingle production from the two subject pools, to-
18 gether with the North Justis-Ellenburger Pool in their
19 G. L. Erwin "B" Federal NCT-2 Well No. 5. This is located
20 in Unit P of Section 35, Township 24 South, Range 37 East.

21 This well offsets the Gulf W. A. Ramsey
22 NCT-C Well No. 4 to the west, and I have marked it in yellow
23 on your Exhibit Number One plat.

24 Q. What problems have been encountered as a
25 result of dual completion in this well?

1 A. We have experienced corrosion problems in
2 this well. Historically, tubing leaks and packer failures
3 have been a problem. Protection against this corrosion,
4 however, is very difficult to accomplish with the dual
5 equipment in the wellbore. A single string of tubing
6 would facilitate the circulation which is required to ef-
7 fectively apply corrosion treatment chemicals. We believe
8 that it is no longer feasible to effectively produce the
9 well as a dual.

10 Q. Do you anticipate any crossflow problems
11 as a result of commingling?

12 A. No crossflow problems are anticipated.
13 We do expect to keep the well pumped off.

14 Q. Are you currently surface commingling
15 Montoya and Fusselman production on the subject lease?

16 A. Yes. Production from the North Justis-
17 Fusselman and the North Justis-Montoya is being commingled
18 in surface storage facilities under administrative order
19 PC-72.

20 We have seen no evidence of fluid incom-
21 patibility to date and we do not anticipate any future
22 problems.

23 Q. Will the value of the production from this
24 well be adversely affected as a result of downhole com-
25 mingling?

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1 A. No. The oil and gas pricing classifications
2 will not be changed as a result of proposed downhole com-
3 mingling and the production is already surface commingled.
4 We do not anticipate any change in value of production.

5 Q. How does Gulf propose to allocate production
6 between the Montoya and Fusselman Pools?

7 A. Based on recent C-116s, we propose to al-
8 locate 50 percent of the oil and 50 percent of the gas to
9 each zone, with 90 percent of the water allocated to the
10 Montoya and 10 percent of the water to the Fusselman.

11 We suggest that details on this matter be
12 worked out with the District Director of the New Mexico
13 Oil Conservation Division, together with Gulf personnel
14 after authority to downhole commingle has been granted.

15 Q. What does Gulf propose in the event
16 secondary recovery operations are undertaken in this area
17 in these pools?

18 A. We will recommend separation of the zones
19 as deemed necessary for efficient secondary recovery oper-
20 ations.

21 Q. What do you anticipate regarding the pro-
22 duction capabilities of this well under commingled condi-
23 tions?

24 A. We do expect to slightly increase the ef-
25 ficiency of artificial lift operations as a result of down-

1 hole commingling. This may slightly increase the total
2 production from both zones; however, we anticipate that
3 combined production in the near future will not exceed 25
4 barrels of oil, 10 Mcf gas, and 120 barrels of water per
5 day.

6 Q Would you again please summarize what
7 Gulf is seeking in this application?

8 A In order to prevent waste and obtain maxi-
9 mum oil recovery in the most efficient and feasible manner,
10 we request authority to downhole commingle the North Justis-
11 Fusselman and the North Justis-Montoya production in our
12 W. A. Ramsey NCT-C Well No. 4, located in Unit M, Section
13 36, Township 24 South, Range 37 East, Lea County, New
14 Mexico.

15 Q Were Exhibits One through Six-B prepared
16 under your supervision?

17 A Yes, they were.

18 MR. CROSS: I move they be admitted into
19 evidence.

20 MR. NUTTER: Gulf Exhibits One through Six
21 will be admitted in evidence.

22 MR. CROSS: I have no further questions.
23
24
25

CROSS EXAMINATION

BY MR. NUTTER:

Q. Ms. Strawser, inspection of Exhibit Number Five-A would indicate there was a temporary increase in gas production from both zones in 1972 and '73; then it went back to a comparatively low level, and also that there was a temporary increase in the amount of water that was produced from the Montoya just for a period of a few years, and it declined, then, in 1978, and has since risen.

Do you have any explanation for these anomalies on these decline curves?

A. No, sir, I would have to suppose that it stems from who was recording the figures at the time, and unfortunately there's no way of checking that now.

Q. You mean some of the recording may have been at variance with the reporting at other times, huh?

A. That is correct. I've been party to enough field operations to know just how accurate these numbers really are.

Q. With Gulf?

A. With any oil company.

Q. Okay. Now, your production from the Montoya, your oil production, starts off at a level that is somewhat comparable with the original completion data as given on Exhibit Two, but the Fusselman shows from the

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1 beginning here only about, maybe, 15 to 20 barrels of oil
2 per day.

3 A Okay. What you are looking on the Exhibit
4 Number Five-A is a daily average. If the Fusselman oil
5 dropped off rapidly over the first six months that it pro-
6 duced, that will be shown as a daily average rather than
7 a daily average over six-months time.

8 Q These are annual averages, though, for
9 the points on the graph, aren't they?

10 A Annual averages except where I had a short
11 short year.

12 Q And although it came in with a potential
13 of 166 barrels per day in the Fusselman, the first pro-
14 duction figures for the average was only 15 barrels per
15 day.

16 A Yes, sir.

17 Q And as far as you know, the pressures in
18 both zones are equivalent and approximately 1000 pounds at
19 bottom hole.

20 A To my knowledge.

21 Q Now, you gave us a proposal for allocation
22 of oil and water. What about gas?

23 A I believe I proposed 50 percent on the
24 gas, as well, 50 percent to each.

25 Q Okay, which is the same as oil.

1 A. Yes. You'll notice on the Exhibit Number
2 Five-A that the points nearly overlap.

3 Q. Uh-huh, and have for some period of time.

4 A. Yes.

5 Q. Okay.

6 MR. NUTTER: Are there any further ques-
7 tions of the witness? She may be excused.

8 Do you have anything further, Mr. Cross?

9 MR. CROSS: No, sir.

10 MR. NUTTER: Does anyone have anything
11 they wish to offer in Case Number 6599?

12 We'll take the case under advisement.

13
14 (Hearing concluded.)

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REPORTER'S CERTIFICATE

I, SALLY WALTON BOYD, a Court Reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, knowledge, and skill, from my notes taken at the time of the hearing.

Sally W. Boyd C.S.R.
Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is
a complete and correct transcript of the proceedings in
the hearing of Case No. 6599,
heard by me on 7/25 1979.
[Signature], Examiner
Oil Conservation Division

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