

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

6
7 17 September 1986

8 EXAMINER HEARING

9
10 IN THE MATTER OF:

11 Application of Union Texas Petroleum Corporation for downhole commingling, CASE
12 Rio Arriba County, New Mexico. 8994

13 BEFORE: David R. Catanach, Examiner

14
15 TRANSCRIPT OF HEARING

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

18
19
20 For the Division: Jeff Taylor
21 Legal Counsel for the Division
22 Oil Conservation Division
23 State Land Office Bldg.
24 Santa Fe, New Mexico 87501

25 For the Applicant: William F. Carr
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I N D E X

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MR. CATANACH: Call Case 8994
now.

MR. TAYLOR: Application of
Union Texas Petroleum Corporation for downhole commingling,
Rio Arriba County, New Mexico.

MR. CATANACH: Are there
appearances in this case?

MR. CARR: May it please the
Examiner, my name is William F. Carr, with the law firm
Campbell & Black P. A., of Santa Fe.

We represent Union Texas
Petroleum Corporation and have one witness.

MR. CATANACH: Are there other
apeparances?

(Witness sworn.)

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

DIRECT EXAMINATION

BY MR. CARR:

Q Will you state your full name and place

1 of residence?

2 A Mike Pippin, that's P-I-P-P-I-N. I live
3 in Farmington, New Mexico.

4 Q By whom are you employed and in what ca-
5 pacity?

6 A I'm employed by Union Texas Petroleum as
7 a petroleum engineer.

8 Q Mr. Pippin, have you previously testified
9 before this Division and had your credentials accepted and
10 made a matter of record?

11 A Yes.

12 Q And you were qualified as an expert wit-
13 ness in petroleum engineering at that time?

14 A Yes.

15 Q Are you familiar with the application
16 filed in this case?

17 A Yes.

18 Q Are you familiar with the subject well
19 and the general area in which it is located?

20 A Yes.

21 MR. CARR: Are the witness'
22 qualifications acceptable.

23 MR. CATANACH: He is so quali-
24 fied.

25 Q Will you briefly state what Union Texas

1 Petroleum Corporation seeks with this application?

2 A By this application Union Texas Petroleum
3 Corporation is requesting an order from the New Mexico Oil
4 Conservation Division to give us approval to commingle the
5 Blanco Mesaverde, B.S. Mesa Gallup, and Basin Dakota produc-
6 tion in our Jicarilla G No. 9, located in Unit letter B of
7 Section 1, Township 26 North, Range 5 West, of Rio Arriba
8 County, New Mexico.

9 Q Have you prepared certain exhibits for
10 introduction in this case?

11 A Yes.

12 Q Would you refer to what is marked as page
13 one of Union Texas Exhibit Number One, identify this, and
14 review it for Mr. Catanach?

15 A Page one is a map of the sections sur-
16 rounding our Jicarilla G No. 9 Well, which is located in the
17 middle of the map designated by the big arrow.

18 This map shows all of the Dakota wells,
19 and their ownership, surrounding the subject well. I should
20 note that the surface land here is all Jicarilla Apache
21 Tribe.

22 There are five wells in the vicinity that
23 have already been approved for downhole commingling. The
24 Jicarilla G Number 8-E was approved for downhole commingling
25 in the Gallup Dakota. It is located in Unit letter J of

1 Section 2 of 26 North, 5 West.

2 The Jicarilla G No. 1-E is approved for
3 Gallup Dakota commingling. It's located in Unit letter F,
4 Section 1 of 26 North, 5 west.

5 Northwest Number 3 is approved for Gallup
6 Dakota commingling. It's located in Unit letter C of Sec-
7 tion 6, 26 North, 4 Westdd.

8 And the Northwest Number 3-E is approved
9 for Gallup Dakota commingling, located in Unit letter L,
10 Section 6 of 26 North, 4 West.

11 Approved for Mesaverde-Dakota commingling
12 is the Jicarilla 119 N No. 4 located in Unit letter H, Sec-
13 tion 6, 26 North, 4 West.

14 The acreage dedication to the subject
15 well is the east standup 320 acres in Section No. 1 in both
16 the Mesaverde and Dakota.

17 The subject well is currently a dual
18 Mesaverde/Dakota gas well.

19 Q Will you now go to page two of Exhibit
20 Number One and identify that, please?

21 A Page two is very similar to page one ex-
22 cept this map designates all of the Mesaverde wells and
23 their ownership.

24 Q And page number three?

25 A Again page three is similar to Exhibit

1 One, it's a map in Rio Arriba County, New Mexico, except
2 this map designates all the Gallup wells. It designates the
3 subject well as a proposed Gallup well.

4 Q Now, Mr. Pippin, if this application is
5 approved, how soon do you anticipate Union Texas would com-
6 mence working on the well?

7 A We have funds available in 1986 and with
8 approval from the Division we will work this well over,
9 opening the Gallup and commingling the three zones this
10 year.

11 Q Now you're proposing to triple downhole
12 commingle the Dakota, Mesaverde, and Gallup production. Is
13 the ownership in each of these zones common?

14 A Yes, it is.

15 Q Would you now refer to page four of
16 Exhibit Number One, first identify this exhibit and then
17 review the pertinent information?

18 A Page four is a wellbore diagram of the
19 subject dual Mesaverde-Dakota well. The well is Jicarilla G
20 No. 9. It indicates that the Dakota producing formation
21 from 8312 feet to 8526 feet was completed with a two-stage
22 frac job.

23 The Mesaverde, located from 5774 feet
24 through 6352 feet was also completed with a two-stage frac
25 job.

1 It also designates the pipe sizes, the
2 casing and tubing.

3 We are proposing to remove the packer,
4 which is currently at 8181 feet, and open the Gallup from
5 7885 feet through 7892 feet by perforating and stimulating
6 with a frac job.

7 Q And so after you've worked on the well
8 the diagrammatic sketch would look just like this with the
9 exception of Gallup perforations and the packer removed.

10 A That's correct. There would be just one
11 string of tubing in the hole then.

12 Q And all three of the zones we're talking
13 about are gas zones.

14 A Yes, all three are gas.

15 Q Would you now go to page five of this ex-
16 hibit and identify this and review it?

17 A Page five is a production decline curve
18 for the Mesaverde in the Jicarilla G No. 9.

19 It indicates that the Mesaverde has ex-
20 perience a rather normal decline for a San Juan Basin Mesa-
21 verde well, to about 50 MCF per day currently with some er-
22 ratic production during the last two years due to pipeline
23 curtailment.

24 Q Will you now review page six?

25 A Page six is a production decline curve

1 for the Dakota in our Jicarilla G No. 9.

2 It indicates that the Dakota has also ex-
3 perience a rather normal decline for a Basin Dakota well in
4 San Juan Basin, to a current capacity of about 50 MCF per
5 day, with some erratic production during the last two years
6 due to pipeline curtailment and fluid logging.

7 The well logs off due to a small amount
8 of oil and water, which is difficult for the well's small
9 gas volume to lift.

10 We believe that the removal of the packer
11 will increase the life of this well by increasing the
12 annular volume, along with the gas volume, which are both
13 necessary to lift the Dakota fluids.

14 The Gallup completion will further
15 enhance the life of this well due to additional gas.

16 Q Will you now go to page seven and review
17 that for Mr. Catanach?

18 A Page seven is a table showing the
19 calculated bottom hole pressure of each of the three zones
20 proposed for commingling. We were able to obtain pressures
21 in the Mesaverde and Dakota from the subject well, Jicarilla
22 G No. 9.

23 From the Gallup we obtained our pressures
24 from the Jicarilla G No. 9-A, located in Unit letter O of
25 Section 1, 26 north, Range 5 West.

1 We anticipate no problem due to the
2 slight difference in pressures.

3 Q You would not anticipate migration
4 between zones due to these pressure differentials?

5 A No, we anticipate producing bottom hole
6 pressures will be far below any of the individual reservoir
7 pressures and that will not allow for cross flow to occur.

8 Q Now, Mr. Pippin, are the zones that are
9 proposed to be commingled in the subject well capable of
10 only marginal production?

11 A Yes. They're capable of only economical
12 -- economic marginal production.

13 Q And are they currently flowing or are
14 they being artificially lifted?

15 A They're currently flowing; however,
16 artificial lift is a possibility in the future if
17 commingling is approved because the well would not have the
18 packer to contend with.

19 Q Are you prepared to make a recommendation
20 to the Examiner as to the allocation of production from each
21 of the commingled zones?

22 A We would recommend that the District
23 Supervisor be consulted and an allocation for the subject
24 well be mutually agreed upon after the well is worked over
25 in the Gallup and tested in each zone.

1 Q Would you now go to what has been marked
2 page eight in Exhibit Number One, identify page eight
3 through ten and review this information with the Examiner?

4 A Pages eight, nine, and ten are gas
5 analyses from each of the zones we propose to commingle,
6 that Gallup from the Jicarilla G No. 9-A, Mesaverde from the
7 subject well, Jicarilla G No. 9, and Dakota from Jicarilla G
8 No. 9.

9 These gas analyses indicate that all the
10 gas is sweet gas; that it's all simila. in specific gravity,
11 in BTU content with few, but similar impurities. We would
12 not anticipate any compatibility problems due to these
13 analyses.

14 Q All right, Mr. Pippin, if you'd now go to
15 pages eleven through eighteen in Exhibit Number One,
16 identify this information and then review for Mr. Catanach
17 what it shows.

18 A These pages are a summary of the water
19 and oil analyses from the three zones proposed for
20 commingling.

21 We were able to obtain water samples in
22 the Mesaverde and Dakota, although the water production from
23 these zones was very small.

24 We were unable to obtain a water sample
25 from the Gallup zone, since it just does not make any water.

1 We were able to obtain -- we were not
2 able to obtain any oil from the Mesaverde since it does not
3 make oil.

4 The results were that no precipitation of
5 materials was observed from the mixture of oils or waters
6 under investigation.

7 Emulsion testing was performed and 100
8 percent breakout of oil and water occurred within ten
9 minutes of each combination of possible oil/water mixtures.

10 Paraffin deposition due to temperature
11 and pressure reduction is not a fear due to the small amount
12 of paraffin component in each oil.

13 Q In your opinion, Mr. Pippin, are the
14 reservoir characteristics of these pools such that under-
15 ground waste will not be caused by the proposed commingling?

16 A Yes.

17 Q In fact, the zones which you're proposing
18 to commingle are commingled in other wells in the immediate
19 area, is that not true?

20 A That is correct.

21 Q In your opinion will granting this appli-
22 cation result in the increased recovery of hydrocarbons?

23 A Yes. We anticipate an increase from the
24 working over of the Gallup and a production increase due to
25 the increased Dakota production efficiency when the packer

1 is removed.

2 I'd like to add that without the approval
3 of this proposal the Gallup may never be tested in this
4 quarter section, since drilling a single Gallup well would
5 be very risky.

6 Q Will the value of the commingled produc-
7 tion exceed the sum of the values of production from each of
8 the individual zones?

9 A Yes.

10 Q In your opinion will economic savings re-
11 sult from the proposed downhole commingling?

12 A Yes.

13 Q In your opinion will granting this appli-
14 cation be in the best interest of conservation, the preven-
15 tion of waste, and the protection of correlative rights?

16 A Yes.

17 Q Would you now go to pages nineteen and
18 twenty of Exhibit Number One and just identify those,
19 please?

20 A Pages number nineteen and twenty are
21 copies of the letters sent to offsetting owners advising
22 them of today's hearing.

23 Q Do you have anything further to add to
24 your testimony?

25 A I don't believe so.

1 Q Were Exhibits -- was Exhibit Number One
2 prepared by you or under your direction and supervision?

3 A Yes.

4 MR. CARR: At this time, Mr.
5 Catanach, we would offer into evidence Union Texas Petroleum
6 Corporation Exhibit Number One.

7 MR. CATANACH: Exhibit Number
8 One will be admitted into evidence.

9 MR. CARR: That concludes my
10 direct examination of Mr. Pippin.

11
12 CROSS EXAMINATION

13 BY MR. CATANACH:

14 Q Mr. Pippin, there are some Gallup comple-
15 tions in the general area.

16 A Yes, that's correct.

17 Q Are they pretty good wells, do you know?
18 Are any of them yours?

19 A The Gallup completions are very spotty.
20 There is one, two good wells and several very bad wells.
21 That's why I believe that a single completion would be too
22 risky.

23 Q Mr. Pippin, do you have any idea of the
24 total reserves remaining in the Dakota and the Mesaverde
25 formations? Is it substantial or --

1 A I would not have a number at this time.
2 It could definitely be calculated.

3 I would say that the reserves remaining
4 in both the Mesaverde and Dakota in the Jicarilla G No. 9
5 are economically marginal. This well is approaching its
6 economic limit very rapidly at the present time.

7 We will extend these reserves,
8 definitely, by commingling.

9 Q The interest ownership in the three
10 formations, is it the same?

11 A Yes, sir.

12 MR. CATANACH: I have nothing
13 further of Mr. Pippin.

14 MR. CARR: We have nothing
15 further, Mr. Examiner.

16 MR. CATANACH: Okay, there
17 being nothing further in Case 8984, Case 8994 will be taken
18 under advisement.

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(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 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. 8994,
heard by me on September 17, 1986.

David R. Catamb, Examiner
Oil Conservation Division