

1 STATE OF NEW MEXICO
2 ENERGY AND MINERALS DEPT.
3 OIL CONSERVATION DIVISION
4 STATE LAND OFFICE BLDG.
5 SANTA FE, NEW MEXICO
6 25 April 1984

7 EXAMINER HEARING

8 IN THE MATTER OF:

9 Application of Southland Royalty CASE
10 Company for downhole commingling, 8169
11 Rio Arriba County, New Mexico.

12 BEFORE: Michael E. Stogner, Examiner

13
14 TRANSCRIPT OF HEARING

15
16 A P P E A R A N C E S

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19 For the Oil Conservation W. Perry Pearce
20 Division: Attorney at Law
21 Legal Counsel to the Division
22 State Land Office Bldg.
23 Santa Fe, New Mexico 87501

24 For the Applicant: William F. Carr
25 Attorney at Law
CAMPBELL, BYRD & BLACK P.A.
Jefferson Place
Santa Fe, New Mexico 87501

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I N D E X

C. TERRY HOBBS	
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3 MR. STOGNER: We'll call now
4 Case Number 8169.

5 MR. PEARCE: That case is on
6 the application of Southland Royalty Company for downhole
7 commingling, Rio Arriba County, New Mexico.

8 MR. CARR: May it please the
9 Examiner, my name is William F. Carr, with the law firm
10 Campbell, Byrd and Black, P. A., of Santa Fe, appearing on
11 behalf of Southland Royalty Company.

12 I have one witness.

13 MR. PEARCE: Are there other
14 appearances?

15 (Witness sworn.)

16 C. TERRY HOBBS,
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. CARR:

22 Q Will you state your name and place of
23 residence?

24 A C. Terry Hobbs, Hesperus, Colorado.

25 Q By whom are you employed and in what
capacity?

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A Southland Royalty Company as a petroleum engineer.

Q Have you previously testified before this Commission or one of its examiners?

A No.

Q Would you summarize for Mr. Stogner your educational background and your work experience?

A I'm a 1961 graduate of Texas Tech University as a petroleum engineer; worked eight years as a petroleum engineer in the oil industry for Amoco or Stephens Engineering as a consulting engineer, with Texaco and Southland Royalty.

Also fourteen years as an engineer and also in management in nonwoven textile industry.

And I'm a Registered Professional Engineer in the State of Texas.

Q When did you -- when were you last employed by Southland Royalty Company?

A I've been with them two years.

Q And does your area of responsibility include northwestern New Mexico?

A Yes.

Q Are you familiar with the application filed in this case on behalf of Southland?

A Yes.

Q And are you familiar with the subject well?

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A Yes.

MR. CARR: We tender Mr. Hobbs as an expert witness in petroleum engineering.

MR. STOGNER: Mr. Hobbs is so qualified.

Q Mr. Hobbs, would you briefly state what Southland seeks with this application?

A Yes. Southland seeks to commingle the Gallup Dakota and the Mesaverde formations in the Johnson No. 1.

Q Have you prepared or has there been prepared under your direction certain exhibits for introduction in this case?

A Yes.

Q Would you refer to what's been marked as Southland Exhibit Number One and review this for the Examiner?

A No. 1 is a plat with the well shown by the arrow, the Johnson No. 1, and the dashed marks outlining the proration unit. The offset operators are shown and the adjoining leases.

Q Is the land involved State, Federal or fee land?

A Fee land.

Q Are there other wells in the immediate area for which downhole commingling of these zones has been approved by this Commission?

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2 A Yes. The three most recent ones being
3 the Getty No. 3-A and 6-A in Section 18 to the south.

4 MR. CARR: Mr. Examiner, those
5 were approved by the Oil Conservation Division by Order R-
6 7139, entered November 30, 1982, in Case 7723.

7 Q Mr. Hobbs, what pools is it that you're
8 proposing to downhole commingle?

9 A The Ojito Gallup Dakota and Blanco Mesa-
10 verde.

11 Q Is the ownership of both of these zones
12 common in the proposed --

13 A Yes.

14 Q In the subject well? Would you refer to
15 what has been marked as Exhibit Number Two and review this
16 for Mr. Stogner?

17 A This is a two page exhibit, a schematic
18 of the hole, the wellbore, the first page being the well as
19 it is set up now with a packer and two strings of tubing;
20 the packer separating the Ojito Gallup Dakota and the Mesa-
21 verde production.

22 And then page -- this also shows the per-
23 forations, the frac treatment on each zone, and the initial
24 flow test on each zone.

25 And page two would be the proposed well-
bore configuration after commingling.

Q What is the current status of this well?

A The Mesaverde zone is producing but the

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Ojito Gallup Dakota is logged off because of oil (not understood.)

Q Are there any current gas/oil ratio tests on this well?

A No current tests. We have one in May of -- well, in April of '83, the only time this well produced last year.

Q And that's been marked as Southland Exhibit Number Three?

A Yes.

Q And that's the only production during 1983 to your knowledge?

A Yes, sir.

Q Would you now identify Exhibit Number Four for the Examiner?

A This is a two page exhibit of the production curves from this well, the first page being the Mesa-verde production curve and the only curve shown on here is the gas production curve. The oil production has been one to two barrels per day during this period.

And page number two is the Ojito Gallup Dakota production curve with the solid curve being the gas production and the long dashed mark being the oil production in 1982.

Q So the solid line at the top is the gas --

A Yes.

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Q -- and everything else is the oil.

A Right.

Q What is the source of the data presented on this exhibit?

A The monthly statistical report by the State.

Q Are both zones in this well capable of only marginal production?

A Yes, sir.

Q Are they flowing or being artificially lifted?

A Flowing.

Q Would you now refer to Exhibit Number Five, identify this, and explain what it shows?

A This is a three page exhibit with the first page being a computation of the bottom hole pressures. The second and third page are the graphs of bottom hole pressures taken by the wireline service.

And then the first page states this data and extrapolates the measured bottom hole pressures to the mid point of the producing intervals.

Q What does this exhibit show as far as the pressures and the pressure differentials that you expect to experience across the perforations in each of those zones?

A Well, it shows the downhole pressures being very close within 15 percent of each other.

Q Do you believe that these pressure dif-

ferentials will result in migration of hydrocarbons between the zones?

A No.

Q Have you taken this production data, the data that you have available, and calculated an average rate of production to be attributed to each of the zones in this well?

A Yes, I have.

Q Would you refer to Exhibit Number Six and explain how you reached your recommended figures?

A Yes, sir. The A section is the 1982 production data and then the B, I compared these and which indicated that the oil production from the Mesaverde would be approximately 17 percent of the oil production and the gas production from the Mesaverde would be approximately 87 percent of the gas production of the commingled production.

The Dakota oil would be 83 percent with its gas production being 13 percent of production, and just this week I dug out the order on the Getty well and these -- these recommendations agree very closely with the same -- or to the recommendations that they made.

Q And you didn't see the Getty order or were unaware of it at the time you made these calculations?

A Right, yes, sir.

Q Do you recommend that these figures be incorporated into the order which results from this hearing?

A Yes, I do.

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2 Q Do you anticipate any problems with the
3 compatibilities of the fluids produced from the well?

4 A No, I don't. The gases have similar BTU
5 contents of 1240 for the Mesaverde and 1239 for the Gallup
6 Dakota.

7 The gallons per thousands of liquids in
8 the gas analysis, the Mesaverde is 5.1 and the Dakota is
9 5.07.

10 The condensate that is produced has a
11 48.1 API gravity for the Mesaverde and a 56.6 API gravity
12 for the Dakota. They're both sweet crudes and they --

13 Q So you anticipate no problem.

14 A -- will be compatible. Right.

15 Q Are the reservoir characteristics of the
16 two pools such that underground waste will not be caused by
17 the proposed commingling?

18 A Yes.

19 Q In your opinion would granting this ap-
20 plication result in the increased recovery of hydrocarbons?

21 A Yes.

22 Q Will the value of the commingled produc-
23 tion exceed the sum of the values of the production from the
24 individual streams?

25 A Yes, it will.

Q Will the economic savings -- will econo-
mic savings result from this proposed downhole commingling?

A Yes.

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2 Q Mr. Hobbs, in your opinion will granting
3 this application be in the best interest of conservation,
4 the prevention of waste and the protection of correlative
5 rights?

6 A Yes, it will.

7 Q Were Exhibits One through Six prepared by
8 you?

9 A Yes.

10 MR. CARR: At this time, Mr.
11 Stogner, we would offer into evidence Southland Royalty Com-
12 pany Exhibits One through Six.

13 MR. STOGNER: Exhibits One
14 through Six will be admitted in evidence.

15 MR. CARR: I have nothing fur-
16 ther on direct.

17 CROSS EXAMINATION

18 BY MR. STOGNER:

19 Q Mr. Hobbs, your pressures that you give
20 us on Exhibit Number Five, are those flowing?

21 A No, they're shut-in.

22 Q Those are shut-in pressures? Both of
23 them?

24 A Yes.

25 Q Do you know what the present status of
the Mesaverde production is at this time as far as the mar-
ginal status is or nonmarginal?

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2 A It is marginal on the Number One. The
3 One-A is nonmarginal.

4 Q How about this particular well that
5 you're asking for to be commingled today?

6 A It's marginal, Number One.

7 Q I've got a note here from Frank Chavez,
8 our District Supervisor up in Aztec Office, telling me that
9 the this well is overproduced by 2-1/2 times for the March
allowable.

10 You're aware if you get six times over-
11 produced those wells will be shut in.

12 A That's right. I'm not aware of that per-
13 sonally, that the Number One is even shut-in because of al-
14 lowable. And my -- our records indicate it to be a marginal
well.

15 Q Would you foresee any problems if the
16 Mesaverde formation, the production from the Mesaverde is
17 such that the well is shut-in, that it would cause any hard-
18 ship to the Gallup Dakota zone, if it happened to be shut in
19 because of the production?

20 A No, I don't.

21 Q Does either one of these zones produce
22 any water?

23 A Very, very little of water.

24 MR. STOGNER: I have no ques-
25 tions of Mr. Hobbs.

Are there any other questions

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2 of this witness?

3 MR. CARR: Nothing further.

4 MR. STOGNER: If not, he may be
5 excused.

6 MR. CARR: I have nothing fur-
7 ther in this case, Mr. Stogner.

8 MR. STOGNER: Does anybody have
9 anything else in Case Number 8169?

10 If not, this case will be taken
11 under advisement.

12 (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 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. 8169
heard by me on April 25 1984.
Michael P. Steiner, Examiner
Oil Conservation Division