

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

CASE 9989, CASE 9990, CASE 9991

EXAMINER HEARING

IN THE MATTER OF:

Application of Mesa Operating Limited Partnership
for Compulsory Pooling, San Juan County, New
Mexico

TRANSCRIPT OF PROCEEDINGS

BEFORE: DAVID R. CATANACH, EXAMINER

STATE LAND OFFICE BUILDING

SANTA FE, NEW MEXICO

June 27, 1990

A P P E A R A N C E S

FOR THE DIVISION:

RAND L. CARROLL
Attorney at Law
Natural Gas Programs
P.O. Box 2088
Room 206, State Land Office Building
Santa Fe, New Mexico 87504

FOR THE APPLICANT:

MILLER, STRATVERT, TORGERSON & SCHLENKER, P.A.
Attorneys at Law
By: J. SCOTT HALL
125 Lincoln Avenue
Suite 303
Santa Fe, New Mexico 87501

FOR AMOCO PRODUCTION COMPANY:

CAMPBELL & BLACK, P.A.
Attorneys at Law
By: WILLIAM F. CARR
Suite 1 - 110 N. Guadalupe
P.O. Box 2208
Santa Fe, New Mexico 87504-2208

* * *

I N D E X

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Appearances

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Exhibits

3

MARK W. SEALE

Examination by Mr. Hall

5

Examination by Examiner Catanach

9

STEWART SAMPSON

Examination by Mr. Hall

10

THOMAS L. HAHN

Examination by Mr. Hall

12

Examination by Examiner Catanach

18

Certificate of Reporter

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* * *

E X H I B I T S

APPLICANT'S EXHIBITS:

Exhibit 1

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Exhibit 2

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Exhibit 3

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Exhibit 4

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Exhibit 5

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Exhibit 6

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Exhibit 7

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* * *

1 WHEREUPON, the following proceedings were had
2 at 3:05 p.m.:

3 EXAMINER CATANACH: At this time we'll call
4 Case 9989.

5 MR. CARROLL: Application of Mesa Operating
6 Limited Partnership for compulsory pooling, San Juan
7 County, New Mexico.

8 EXAMINER CATANACH: Appearances in this case?

9 MR. HALL: Mr. Examiner, Scott Hall from
10 Miller, Stratvert, Torgerson and Schlenker, on behalf
11 of the Applicant Mesa.

12 We would request that this matter be
13 consolidated with Cases 9990 and 9991.

14 EXAMINER CATANACH: Okay, appearances in this
15 case or the other two cases?

16 MR. CARR: May it please the Examiner, my
17 name is William F. Carr with the law firm Campbell and
18 Black, P.A., of Santa Fe. I'd like to enter our
19 appearance on behalf of Amoco Production Company in
20 each of these cases.

21 EXAMINER CATANACH: Okay, and at this time
22 we'll call Case 9990.

23 MR. CARROLL: Application of Mesa Operating
24 Limited Partnership for compulsory pooling, San Juan
25 County, New Mexico.

1 EXAMINER CATANACH: And call Case 9991.

2 MR. CARROLL: Application of Mesa Operating
3 Limited Partnership for compulsory pooling, San Juan
4 County, New Mexico.

5 EXAMINER CATANACH: Okay, you may proceed.

6 MR. HALL: May we stipulate to credentials on
7 the basis of the other cases and go straight to
8 questions?

9 EXAMINER CATANACH: Yes, sir. Let the record
10 reflect that the witnesses have previously been sworn
11 in and been qualified as expert witnesses, and you may
12 proceed.

13 MARK W. SEALE,
14 the witness herein, after having been first duly sworn
15 upon his oath, was examined and testified as follows:

16 EXAMINATION

17 BY MR. HALL:

18 Q. Mr. Seale, let's look at Exhibits 1, 2 and 3
19 for each of the three wells. Why don't you summarize
20 those, and also explain your efforts to secure the
21 voluntary joinder of the parties you're seeking to pool
22 today?

23 A. Okay. Exhibit 1 in each case is a plat
24 depicting the section in which the well is to be
25 drilled.

1 Taking these one at a time, for Case 9989
2 Mesa's proposed well is named the FC Decker Primo Com.
3 Number 2, to be located 2025 feet from the north line,
4 1330 feet from the east line of Section 19, Township 32
5 North, Range 10 West, San Juan County.

6 The proration unit Mesa is dedicating to the
7 well is identified as the east half on the plat, and
8 the well location is identified with the red dot.

9 Page 2 of the exhibit for that case reflects
10 the parties that are committed to the well and the
11 parties which Mesa is requesting to be pooled.

12 38.43 percent has been committed to the well,
13 and Mesa is requesting the OCD to pool Amoco with 24.63
14 percent; Conoco with 24.63 percent; and Unicon
15 Producing Company -- which I understand is now, as of
16 last Friday, Meridian Oil, Inc. -- for 12.31 percent.

17 Q. And you're referring to the FC Decker Primo
18 Com. Number 2; is that correct?

19 A. That is correct.

20 Q. Okay, go ahead.

21 A. Okay, for Case 9990, the well name is the FC
22 Federal Com. Number 5. It is to be located in Section
23 32, Township 32 North, Range 11 West. The footage
24 location is 790 feet from the north line, 1430 feet
25 from the east line, and it is to be spaced on the east

1 half.

2 Page 2 of that exhibit reflects the interest
3 that is committed and those which Mesa is requesting be
4 pooled.

5 For this well 62-1/2 percent has been
6 committed to the well, and Mesa is requesting that
7 Amoco with 18.75 percent and Conoco with 18.75 percent
8 be pooled.

9 For Case 9990 [sic], Mesa's proposed well is
10 named the FC Barnes Com. Number 1. Is it to be located
11 in Township 32 North, Range 11 West, in Section 15. It
12 will be located 790 feet from the south line, 1745 feet
13 from the west line of said Section 15. The well is
14 identified by the red dot on the plat, and the west
15 half of the section will be dedicated to the well.

16 Page 2 of this exhibit reflects the interests
17 which have been committed to the well.

18 Thus far, 65.375 percent is committed, and
19 Mesa is requesting that Amoco with 12-1/2 percent,
20 Conoco with 12-1/2 percent, Arco with 6-1/4 percent,
21 and Coastal with 3.375 be pooled.

22 Each of these wells were proposed by Mesa to
23 the partners through a letter dated April 6, 1990.
24 With each letter an AFE cost estimate and operating
25 agreement was submitted to the partners for their

1 review and approval. The letter and the JOA are
2 identified as Exhibit 2, and the AFE is Exhibit 3 in
3 each of the cases.

4 Q. All right. And in each case, for each of the
5 interest owners to whom you proposed the well, you do
6 not have written commitment form them joining the well,
7 do you?

8 A. No, we do not.

9 Q. All right. Your objective for each of the
10 wells is Fruitland Coal; is that correct?

11 A. Yes, it is.

12 Q. And you are also seeking 156 percent as a
13 risk penalty?

14 A. Yes, we are.

15 Q. Were Exhibits 1 through 3 prepared by you or
16 at your direction?

17 A. Exhibits 1 and 2 were. Exhibit 3 was
18 prepared by Mesa's drilling department.

19 Q. All right, you believe it to be accurate?

20 A. Yes.

21 Q. Mr. Seale, in your opinion will granting the
22 Application in each of the cases be in the interests of
23 conservation, the prevention of waste, and the
24 protection of correlative rights?

25 A. Yes.

1 MR. HALL: We move the admission of Exhibits
2 1 through 3.

3 That concludes our direct of this witness.

4 EXAMINER CATANACH: Exhibits 1 through 3 will
5 be admitted as evidence.

6 EXAMINATION

7 BY EXAMINER CATANACH:

8 Q. Mr. Seale, approximately at what time did --
9 or what date did the Unicon interests become
10 Meridian's?

11 A. I believe it was last Friday, which is --

12 MR. HALL: Last Friday.

13 THE WITNESS: Last Friday. I don't know the
14 exact date.

15 (Off the record)

16 THE WITNESS: About maybe Friday the 22nd?

17 MR. HALL: That's good.

18 Q. (By Examiner Catanach) So you've had no
19 communication with Meridian --

20 A. Yes, we have.

21 Q. Yes, you have?

22 A. Yes, we have.

23 Q. Okay. So they are --

24 MR. HALL: Mr. Examiner, we've notified both
25 Meridian and Unicon throughout. That will be shown on

1 Exhibit 7.

2 THE WITNESS: I've had conversations with
3 Meridian when they were in Houston doing their due
4 diligence for the acquisition of Unicon. They called
5 and we discussed, and I was advised that it did close
6 last Friday.

7 Q. (By Examiner Catanach) So you were aware
8 even back when you first started trying to get Unicon
9 that this --

10 A. No, I found out maybe about three weeks ago
11 that Unicon was going to be purchased by Meridian.

12 Q. I see. But at that point you contacted
13 Meridian?

14 A. Actually, they contacted me.

15 Q. I see. So they were aware of what you were
16 attempting to do?

17 A. Yes.

18 EXAMINER CATANACH: Okay. No further
19 questions of the witness.

20 STEWART SAMPSON,
21 the witness herein, after having been first duly sworn
22 upon his oath, was examined and testified as follows:

23 EXAMINATION

24 BY MR. HALL:

25 Q. Mr. Sampson, for each of the three cases,

1 let's look at Exhibits 4, 5 and 6, and with respect to
2 the risk penalty that Mesa is seeking why don't you
3 explain what all of those exhibits are intended to
4 show?

5 A. Exhibit 4 in each case is an isopach map
6 showing the total thickness of Fruitland Coal in the
7 Basin, with the red dot indicating the location of the
8 well in question.

9 I might point out that all of these wells are
10 within about two-mile radius of each other, and that's
11 why we have consolidated them as having essentially the
12 same geologic conditions.

13 Exhibit 5 in each case is a pressure map
14 showing the bottom-hole pressure anticipated in the
15 area. We expect to have 1300 to 1400 pounds of bottom-
16 hole pressure in this area.

17 And Exhibit 6 shows the location of the well
18 in the offset Fruitland Coal completions in the area.
19 All proration units have not been drilled to date, but
20 we do have several close offsets.

21 We feel that any risk in this area would not
22 be in encountering sufficient Coal or pressure; it
23 would be in having adequate permeability and fracturing
24 to establish commercial rates.

25 Q. So in your view, there is a risk in each case

1 that the well will not be commercial; is that correct?

2 A. That's correct.

3 Q. Anything further you wish to add with respect
4 to the exhibits?

5 A. No.

6 Q. Were Exhibits 4, 5 and 6 prepared by you or
7 at your direction?

8 A. Yes, they were.

9 MR. HALL: We would move the admission of
10 Exhibits 4, 5 and 6.

11 EXAMINER CATANACH: Exhibits 4, 5 and 6 will
12 be admitted as evidence.

13 I have no questions.

14 THOMAS L. HAHN,

15 the witness herein, after having been first duly sworn
16 upon his oath, was examined and testified as follows:

17 EXAMINATION

18 BY MR. HALL:

19 Q. Mr. Hahn, in each case let's refer back to
20 Exhibit 3, the AFE. Would you review those costs for
21 the Examiner, please?

22 A. Okay. In Case 9989, Exhibit 3 is a detailed
23 cost estimate of drilling, completing and equipping the
24 FC Decker Primo Com. Number 2. This well will be
25 drilled and completed as a cavity-type completion.

1 Total cost for this procedure is \$307,700.

2 In Case 9990, Exhibit 3, we have a detailed
3 cost estimate for drilling, completing and equipping
4 the FC Federal Com. Number 5. The total cost in this
5 well, \$412,500.

6 You should note that this cost estimate is
7 for a cased, perforated and fracture-stimulated Coal
8 completion. The cost is approximately \$100,000 greater
9 than an open-hole completion.

10 Under Case 9991, Exhibit 3 is once again a
11 detailed cost estimate for drilling, completing and
12 equipping the FC Barnes Com. Number 1. Total cost of
13 \$411,000. Once again, this will be a cased, perforated
14 and fracture-stimulated Coal well completion.

15 Q. All right. What are the drilling and
16 production supervision rates you're requesting for each
17 of the wells?

18 A. The drilling overhead rate is \$3831 per
19 month; the production overhead rate is \$382 per month.

20 Q. Okay. Now, are those rates and the costs
21 shown on the AFE's in line with what's being charged by
22 other operators in the area?

23 A. Yes, they are.

24 Q. And Mesa is operating other Fruitland wells
25 in the area, are they not?

1 A. Yes, in this area we have drilled one well
2 ourselves and participated in two outside-operated
3 wells.

4 Q. All right. And these costs have also been
5 compared with the Ernst and Whinney published figures,
6 and they compare favorably, do they not?

7 A. Yes, they do.

8 Q. With respect to the 156-percent risk penalty,
9 could you outline for the Examiner why you think that
10 risk is justified for each of the wells?

11 A. Okay, in each of these cases, I will speak
12 about the exhibits separately. They are in the same
13 general area but none of the three wells are in the
14 same section, so the exhibits are slightly different.

15 In Case 9989, Exhibit 6-2, page 2, is the
16 detailed offset production for the completed Fruitland
17 Coal wells shown on page 1 of Exhibit 6.

18 In each of these cases we believe there are
19 two major risk factors to be considered. One is the
20 variability of offset production. The second risk
21 factor is the risk associated with drilling and
22 completing a Fruitland Coal well.

23 In Case 9989, Exhibit 6-2, if you'll examine
24 the surface shut-in pressures and the current
25 production rates, you will note that the surface shut-

1 in pressures appear to be overpressured for the area.
2 This is favorable.

3 When we look at the current production
4 offsetting this well, we have some variability in
5 production rates. Some of the rates are very
6 attractive, exceeding 1 million a day. And then in
7 certain cases, the rates are less than 200 MCF per day.

8 In all of the Fruitland Coal wells, once
9 again, you have a chance of encountering a great deal
10 of water. When you have a large volume of water, this
11 adds tremendously to the operating costs and makes it
12 extremely difficult to operate a commercial Fruitland
13 Coal well.

14 In Case 9990 we have the same type of
15 exhibit. Page 2, surface shut-in pressures once again
16 show an overpressured-type reservoir.

17 The production rates offsetting this well do
18 vary quite a bit. You'll see rates less than 100 MCFD,
19 which is less than attractive for a \$320,000 well -- if
20 it's fracture-stimulated, over a \$400,000 well.

21 I might note that the water-production
22 information shown on Dwight's cannot always be counted
23 on. You'll note that the second well, the Vanderslice
24 Number 100, produces 586 MCF per day and 377 barrels of
25 water. This is probably a correct volume of water.

1 And some of the other wells, when you see water volumes
2 of zero, I would expect that they are producing water
3 but the Dwight's information does not show that.

4 So we feel like there's a great deal of risk
5 in the production capacity of some of the offset wells.

6 You might note the Fields LS Number 4A
7 produces 29 MCFD and one barrel of water. So there is
8 a great deal of risk inherent with drilling and
9 completing a Coal well in this area.

10 In addition, on this well it will be
11 fracture-stimulated. To enhance the fracturing and the
12 permeability in this well, we feel like we need a very
13 large fracture stimulation. That requires high pump
14 rates, large volumes of sand, and consequently large
15 pump pressures.

16 We've been stimulating these wells about 60
17 barrels per minute down the casing, using about 5000
18 pounds of sand per foot of Coal interval. With the 70-
19 foot Coal, you're looking at an average of 350,000
20 pounds of sand at 60 barrels per minute.

21 In certain cases, we have been stimulating at
22 about 2400 p.s.i. surface pump pressure, and the well
23 will instantly screen out, and within a period of about
24 three seconds you'll see 5500 p.s.i. on the surface.

25 With these type of stimulation pressures

1 there is a great deal of risk, and we feel like we need
2 to be compensated when you consider the risk penalty.

3 In the next case, 9991, the same type of
4 exhibit, page 2 is the offset production for the FC
5 Barnes Com. Number 1. You see here that we have very
6 little production information offsetting the well. The
7 information that we do have is quite different: 2.4
8 million a day for the Primo Mudge Number 100 compared
9 to the Fields LS Number 4A at 29 MCF per day.

10 So I think this gives you a pretty good idea
11 of the variability and the production rates. This well
12 will be fracture-stimulated, and the same type of risk
13 with this high-pressure-type procedure is inherent in
14 this well also.

15 Q. The F.C. Decker Primo Com. Number 2 will be
16 open-hole; is that correct?

17 A. Yes, the first case, Case 9989, I believe.

18 Q. Yes.

19 A. Yes. Yes, this well will be an open-hole-
20 type completion.

21 Q. So your comments with respect to the risks
22 involved with open-hole completions in Cases 9987 and
23 9988 are applicable here, are they not?

24 A. They do apply.

25 Q. All right, Exhibit 6, the offset production

1 detail attached to Exhibit 6 in each of the three
2 cases, was prepared by you or at your direction, was it
3 not?

4 A. Yes, it was.

5 Q. Mr. Hahn, in your opinion will granting the
6 Application be in the interests of conservation, the
7 prevention of waste, and the protection of correlative
8 rights?

9 A. Yes, it will.

10 MR. HALL: Mr. Examiner, Exhibit 6 was
11 previously admitted.

12 That concludes our direct of this witness.

13 We'd also move the admission of Exhibit 7,
14 which is the Affidavit of Notice.

15 EXAMINER CATANACH: Exhibit Number 7 in each
16 of the cases will be admitted as evidence.

17 EXAMINATION

18 BY EXAMINER CATANACH:

19 Q. Mr. Hahn, what criteria do you use in
20 deciding whether to complete open-hole or cased-hole in
21 these wells?

22 A. Basically what we're looking for is
23 overpressuring in an area.

24 We look at the drilling records of offset
25 wells, and if there is not pressure information

1 available other than the drilling records, we look at
2 those drilling records as wells were drilled with deep
3 horizons -- Pictured Cliffs, Mesa Verde, Dakota -- and
4 we examine what mud weights were needed to drill
5 through the Coal.

6 If those mud weights were greater than a
7 normally pressured reservoir, then we infer that the
8 Fruitland Coal in the area is overpressured.

9 When we see an overpressured reservoir, it
10 seems to indicate a great deal of fracturing and, in
11 effect, better permeability, and we feel like the
12 cavity-type completion is the best application in that
13 type of reservoir condition.

14 We feel like the reduction of near wellbore
15 damage and the increased permeability from the induced
16 cavity greatly enhances the production capability of
17 the wells.

18 Q. So you've decided, based on that evidence,
19 that the wells in Case Number 9990 and 9991 should be
20 cased completions?

21 A. Yes. We have looked at the drilling records,
22 like I said, right through this area, and there appears
23 to be a -- You can draw kind of a contour line, and to
24 the west, which these two cases are, 9990 and 9991,
25 they appear to be west of that line, and they appear to

1 be normal-pressured reservoirs.

2 To the east where the Case 9989 well lies, it
3 appears to be overpressured.

4 EXAMINER CATANACH: I see. I have no further
5 questions of this witness.

6 MR. HALL: I have nothing further.

7 EXAMINER CATANACH: Mr. Carr?

8 MR. CARR: Mr. Catanach, Amoco again would
9 request that a risk penalty of 156 percent be imposed.
10 We have nothing further.

11 EXAMINER CATANACH: There being nothing
12 further, Case 9989, 9990, and 9991 will be taken under
13 advisement.

14 (Thereupon, these proceedings were concluded
15 at 3:28 p.m.)

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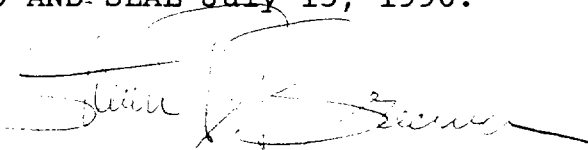
CERTIFICATE OF REPORTER

STATE OF NEW MEXICO)
) SS.
 COUNTY OF SANTA FE)

I, Steven T. Brenner, Certified Shorthand Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Division was reported by me; that I transcribed my notes; and that the foregoing is a true and accurate record of the proceedings.

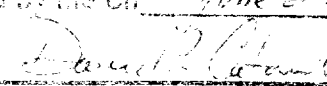
I FURTHER CERTIFY that I am not a relative or employee of any of the parties or attorneys involved in this matter and that I have no personal interest in the final disposition of this matter.

WITNESS MY HAND AND SEAL July 15, 1990.


 STEVEN T. BRENNER
 CSR No. 106

My commission expires: October 14, 1990

(I hereby certify that the foregoing is a true and accurate record of the proceedings in the Oil Conservation Division of Case No. 9849, 9850, 9851 heard by me on June 27 1990.)

, Examiner
 Oil Conservation Division