

1 STATE OF NEW MEXICO

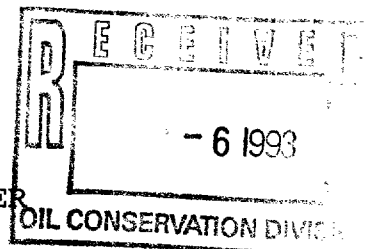
2 ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

3 OIL CONSERVATION DIVISION

4 CASE 10,765

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6 EXAMINER HEARING7
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9 IN THE MATTER OF:10
11 Application of Blackwood & Nichols Co., a Limited
12 Partnership, for directional drilling and an
13 unorthodox bottomhole Fruitland Coal gas well
14 location, Rio Arriba County, New Mexico15
16 **ORIGINAL**17
18 TRANSCRIPT OF PROCEEDINGS

19 BEFORE: DAVID R. CATANACH, EXAMINER

20
21
22
23 STATE LAND OFFICE BUILDING

24 SANTA FE, NEW MEXICO

25 July 15, 1993

A P P E A R A N C E S

FOR THE DIVISION:

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* * *

I N D E X

Page Number

Appearances

2

CURT McKINNEY

Direct Examination by Mr. Carr

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Examination by Examiner Catanach

15

AL RECTOR

Direct Examination by Mr. Carr

17

Certificate of Reporter

22

* * *

E X H I B I T S

APPLICANT'S EXHIBITS:

Exhibit 1

7

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 10:40 a.m.:

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6 EXAMINER CATANACH: At this time we'll call
7 Case 10,765.

8 MR. STOVALL: Application of Blackwood &
9 Nichols Co., a Limited Partnership, for directional
10 drilling and an unorthodox bottomhole Fruitland Coal
11 gas well location, Rio Arriba County, New Mexico.

12 EXAMINER CATANACH: Are there appearances in
13 this case?

14 MR. CARR: May it please the Examiner, my
15 name is William F. Carr with the Santa Fe law firm,
16 Campbell, Carr, Berge and Sheridan.

17 I represent Blackwood and Nichols Company, a
18 limited partnership, and I have two witnesses.

19 EXAMINER CATANACH: Any other appearances?
20 Would the two witnesses please stand to be
21 sworn in?

22 (Thereupon, the witnesses were sworn.)

23 MR. CARR: At this time we call Mr. Curt
24 McKinney.

25 EXAMINER CATANACH: Okay, Mr. Carr.

1 CURT MCKINNEY,
2 the witness herein, after having been first duly sworn
3 upon his oath, was examined and testified as follows:

4 DIRECT EXAMINATION

5 BY MR. CARR:

6 Q. Would you state your name for the record?

7 A. Curt McKinney.

8 Q. Where do you reside?

9 A. Edmond, Oklahoma.

10 Q. By whom are you employed and in what
11 capacity?

12 A. I'm a petroleum geologist for Devon Energy
13 Corporation, general operating partner of Blackwood and
14 Nichols, a limited partnership.

15 Q. Mr. McKinney, have you previously testified
16 before this Division?

17 A. Yes, I have.

18 Q. At the time of that prior testimony were your
19 credentials as a petroleum geologist accepted and made
20 a matter of record?

21 A. Yes, they were.

22 Q. Are you familiar with the Application filed
23 in this case on behalf of Blackwood and Nichols?

24 A. Yes.

25 Q. Have you made a geological study of the area?

1 A. Yes.

2 Q. And are you familiar with the proposed well?

3 A. Yes, I am.

4 MR. CARR: Are the witness's qualifications
5 acceptable?

6 EXAMINER CATANACH: They are.

7 Q. (By Mr. Carr) Would you briefly state what
8 Blackwood and Nichols seeks with this Application?

9 A. We seek the approval of directional drilling
10 an unorthodox bottom well location in the Basin
11 Fruitland Coal Gas Pool.

12 Q. Are you familiar with the rules that govern
13 development of the Basin Fruitland Coal Gas Pool?

14 A. Yes, I am. They provide 320-acre spacing,
15 wells to be located in the northeast quarter or
16 southwest quarter of a section, 790 feet from the outer
17 boundary and 130 feet from the quarter quarter section
18 lines.

19 Q. Have you prepared certain exhibits which
20 explain why Blackwood and Nichols is seeking this
21 bottomhole location?

22 A. Yes.

23 Q. Will a subsequent witness be called to review
24 the actual directional drilling portion of the case?

25 A. Yes.

1 Q. Let's refer to what has been marked for
2 identification as Blackwood and Nichols Exhibit Number
3 1. I'd ask you to identify this and then review it for
4 Mr. Catanach.

5 A. This is essentially an area plat with the
6 well locations pertinent to this Application
7 superimposed on a topographic map of the area.

8 The red line that you see on the map
9 represents the boundary of the Northeast Blanco Unit,
10 which is located primarily west and north of that line
11 on this plat.

12 The reddish-tinted area would be the Navajo
13 Reservoir.

14 Section 20 in the northwest quarter, see that
15 open circle superimposed on a gas well symbol? The
16 open circle is the surface location for the well that
17 we are applying for approval on, the line trending to
18 the northwest and the red circle being the proposed
19 bottomhole location, said well being the Northeast
20 Blanco Unit 479R well.

21 I would point out that the surface location
22 as originally applied for was recently resurveyed. We
23 did not move the location but we had it resurveyed, and
24 it's changed slightly. And I'll give you those
25 footages. It would be 1166 feet from the north line --

1 EXAMINER CATANACH: Sorry, again?

2 THE WITNESS: 1166 feet from the north line,
3 and 2315 feet from the west line. I believe that's
4 correct. And that was due to a resurvey, and it's a
5 slight change.

6 The proposed bottomhole location is -- as
7 applied, was 100 feet from the north line and 590 feet
8 from the west line.

9 These all refer to Section 20.

10 Other things to note would be the proximity
11 of this well to Navajo Dam which is in Section 19 to
12 the west.

13 And regarding offsetting ownership, the only
14 offsetting owner relevant to this Application would be
15 Meridian, who operates wells in Section 30 in the
16 southwest corner of the map.

17 The spacing unit for this well would be the
18 west half of Section 20.

19 Q. (By Mr. Carr) All right, Mr. McKinney, let's
20 move to Blackwood and Nichols Exhibit Number 2. Would
21 you identify and review that, please?

22 A. This is a structure map drawn on the
23 Huerfanito Bentonite marker, time equivalent marker
24 that you can correlate across the Basin, and it's
25 useful for determining structural relationships in the

1 Fruitland and Pictured Cliffs. It is included
2 primarily for completeness' sake, for the testimony.

3 As you know, structure is not particularly
4 relevant to production from the Fruitland Coal, but
5 again for completeness' sake I included this.

6 Q. All right, let's move on to Exhibit Number
7 6 -- I'm sorry, Exhibit Number 3, your net coal isopach
8 map.

9 A. Number 3 is a net coal isopach, indicating
10 the aggregate footage of Fruitland Coal that was
11 penetrated by wells in the area.

12 The item to note would be that the coals in
13 this area have a -- thickness trends are primarily to
14 the northwest-southeast. And at our proposed surface
15 location there's an old Mesa Verde well there which
16 penetrated the Fruitland, and we count 51 feet of net
17 coal in that well.

18 And you'll note that the proposed bottomhole
19 location, out under the lake of -- blue line being the
20 shore of the line shown on the map -- would not be
21 expected to encounter significantly greater footage.

22 So the purpose of directionally drilling this
23 well is not necessarily to gain footage of coal but
24 rather to increase our -- the actual reserves that
25 we'll recover, and that will be addressed in the next

1 exhibit.

2 Q. All right, let's go on to Exhibit Number 4,
3 your average gas content plat, and I'd ask you to
4 review that for Mr. Catanach.

5 A. This map demonstrates the trends of measured
6 average gas, desorbed gas content from the Fruitland
7 Coal, from empirical measurements that we've made in a
8 number of wells in the area.

9 And as you see, trending to the north across
10 the mapped area, the gas content increases from a low,
11 as shown on the map to the south in Section 29, of 102
12 standard cubic feet per ton of coal, to a high of in
13 excess of 400 standard cubic feet per ton in the mapped
14 area.

15 And this map demonstrates perhaps better why
16 we would like to directionally drill this well more to
17 the northwest corner of this section.

18 We anticipate that we will increase the SCF
19 per ton by something in excess of an additional 100 SCF
20 per ton by directionally drilling the well.

21 Q. All right, let's now move to Exhibit Number
22 5, your production map.

23 When you refer to this map, would you explain
24 to Mr. Catanach Blackwood and Nichols' prior efforts to
25 develop the Fruitland Coal on this property?

1 A. All right. The original well which formed
2 the unit well for the west half of Section 20 was the
3 479, which is shown very near the center of the section
4 and marked.

5 On this exhibit, we have noted all of the
6 Fruitland Coal wells in red. You'll see a number of --
7 and they are larger gas well symbols in red.

8 The smaller black symbols would be primarily
9 Mesa Verde wells that predate the coal play up there.

10 We drilled the 479 original well in 1989 and
11 attempted -- this being the overpressured portion of
12 the Fruitland Coal -- we attempted the stress cavity
13 completion technique after setting seven-inch above the
14 Fruitland Coal, drilled the well out and got the TD,
15 did not really experience any of the earmarks of a good
16 overpressured Fruitland Coal section. The well would
17 not produce any water or any gas or any coal fines
18 necessarily.

19 So we did attempt the stress cavity
20 completion. It essentially failed.

21 We then proceeded to run a 4-1/2-inch liner
22 to total depth, total depth being 3310 feet. We ran
23 the 4-1/2-inch liner to TD, the well was subsequently
24 perf'd and frac'd, again resulting in an ineffective
25 and uneconomic completion. The actual IP, which was

1 shown on the plat, which was taken in January of 1990,
2 was 27 MCF a day and three barrels of water a day,
3 which we considered uneconomic. And the well actually,
4 during its productive life, which was sporadically over
5 the ensuing year, only made 1206 MCF, an uneconomic
6 well.

7 By moving to the north, we feel that we will
8 find better quality coal, coal that will perform and
9 produce economic reserves.

10 And to demonstrate that further, we had
11 similar experience with other wells in the southern
12 margin of the Northeast Blanco Unit. And we had,
13 approximately a year ago -- well, excuse me, two years
14 ago -- had gotten approval to drill a similar
15 directional well, the number 475, which is in the same
16 vicinity on the map, which was the unit well for the
17 west -- excuse me, the east half of Section 19.

18 Again, it was -- That portion of the unit
19 would be under the lake, so we had to directionally
20 drill that well, 475.

21 Just moving that much farther to the north,
22 we managed to make a well that IP'd for over 3 million
23 cubic feet of gas a day. And since that time, in
24 approximately two years, that well has made about 1 1/2
25 BCF and is still productive.

1 We feel by moving to the north, we can get a
2 productive well in the west half unit of Section 20,
3 and that is really the point of this exhibit.

4 Q. What are Blackwood and Nichols' plans for the
5 original 479 well?

6 A. At present we are considering attempting to
7 complete that well in the Pictured Cliffs. The well
8 was drilled deep enough, and we do have open hole logs
9 across the pictured cliffs.

10 We had drilled a well, also in this portion
11 of the unit, in Section 21, which is in the southwest
12 quarter of Section 21, shown in black, the number 405.
13 That was also a Fruitland Coal well, which was an
14 economic failure, so we converted it or -- we
15 recompleted it to the Pictured Cliffs and made a fair
16 well, and we are currently monitoring production on
17 that well.

18 There is no Pictured Cliffs production other
19 than that in this area, so it's somewhat new. We want
20 to observe that well for a period of time.

21 And based on our conclusions on the
22 performance of that well, we potentially will attempt a
23 similar recompletion in the old 479 well.

24 Q. In your opinion, is the proposed bottomhole
25 location necessary to produce the reserves in the

1 Fruitland Coal under this portion of the Northeast
2 Blanco Unit?

3 A. Yes, I do. It's really the only way to get
4 the reserves that will be left in the ground under the
5 lake. There's really no other way to do that.

6 Q. Was notice of this Application provided to
7 Meridian?

8 A. Yes.

9 Q. And is Exhibit Number 6 an affidavit
10 confirming that notice has been so provided?

11 A. Yes.

12 Q. In your opinion, Mr. McKinney, will approval
13 of this Application be in the best interest of
14 conservation, the prevention of waste and the
15 protection of correlative rights?

16 A. Yes.

17 Q. Were Exhibits 1 through 5 prepared by you or
18 under your direction?

19 A. They were.

20 Q. Exhibit Number 6 is the affidavit?

21 A. That's correct.

22 MR. CARR: At this time, Mr. Catanach, we
23 would move the admission of Blackwood and Nichols
24 Exhibits 1 through 6.

25 EXAMINER CATANACH: Exhibits 1 through 1 will

1 be admitted as evidence.

2 MR. CARR: That concludes my examination of
3 this witness.

4 EXAMINATION

5 BY EXAMINER CATANACH:

6 Q. Mr. McKinney, the 479 was drilled in 1990,
7 produced a very short time under the coal; is that
8 correct?

9 A. That's correct.

10 Q. Cumulative production was 1206 MCF?

11 A. That's correct.

12 Q. And that's going to be -- What are your plans
13 for that well again?

14 A. It's currently temporarily abandoned, and the
15 well will be, I would say, potentially recompleted to
16 the Pictured Cliffs, again based upon the results of
17 the 405, which is sort of a similar situation.

18 Q. Okay, and the Well Number 475 is currently
19 dedicated to the east half of Section 19?

20 A. I believe that's correct. These are short
21 sections over here, but I think that section 19 and 18
22 and on to the north are still divided in a north-south
23 fashion. I believe that's correct.

24 Because they dedicate 320 acres to each one
25 of these units, they'll overlap section boundaries. So

1 when I say east half of Section 19, I believe that it
2 incorporates some portion of Section 18 as well.

3 I did not bring a land plat with those units,
4 exactly, to demonstrate it.

5 Q. Okay. So within Section 20 there's no other
6 producing coal well?

7 A. There is, but it's the east half unit well,
8 which is in the far northeast corner, the 413R.

9 Q. Okay.

10 A. There is no existing well productive now in
11 the west half of Section 20.

12 Q. Okay. Do you believe that the 479 well will
13 recover reserves that the 475 well will not?

14 A. Yes, that's our contention. That's why we
15 want to drill that well.

16 Q. What's the -- How's the gas content arrived
17 for that proposed location?

18 A. We desorb these on site, in the initial, say,
19 four to five hours. They desorb rapidly. And we take
20 those measurements, making measurements of the pressure
21 differentials about every ten minutes or as quickly as
22 they develop maximum pressure for the devices that we
23 use.

24 And then we'll transport samples. We've been
25 transporting them to Denver. We finish the desorption;

1 it takes several more days after that to finish it out.

2 It's the manometric method. It's a US Bureau
3 of Mines method; it's a standard procedure.

4 EXAMINER CATANACH: That's all I have of the
5 witness.

6 MR. CARR: We have nothing further of Mr.
7 McKinney.

8 THE WITNESS: Thank you.

9 MR. CARR: At this time we would call Al
10 Rector.

11 AL RECTOR,
12 the witness herein, after having been first duly sworn
13 upon his oath, was examined and testified as follows:

14 DIRECT EXAMINATION

15 BY MR. CARR:

16 Q. Would you state your name for the record,
17 please?

18 A. Al Rector.

19 Q. By whom are you employed and in what
20 capacity?

21 A. I'm employed by Blackwood and Nichols as the
22 district superintendent of the Northeast Blanco Unit.

23 Q. Are you a petroleum engineer?

24 A. Yes, I am.

25 Q. In fact, are you the operations engineer for

1 the wells that are under discussion in this case today?

2 A. Yes, I am.

3 Q. Have you previously testified before this
4 Division?

5 A. Yes, I have.

6 Q. At the time of that prior testimony, were
7 your credentials as a petroleum operations engineer
8 accepted and made a matter of record?

9 A. Yes, they were.

10 Q. Are you familiar with the Application filed
11 in this case and the proposed well?

12 A. Yes.

13 MR. CARR: Are the witness's qualifications
14 acceptable?

15 EXAMINER CATANACH: Yes.

16 Q. (By Mr. Carr) Now, Mr. Rector, Blackwood and
17 Nichols is seeking authority to directionally drill
18 this well because the bottomhole location is under
19 Navajo Lake; is that correct?

20 A. Yes, it is.

21 Q. Could you refer to what has been marked for
22 identification as Blackwood and Nichols Company, Ltd.,
23 Exhibit Number 7, identify that and then review for the
24 Examiner how you propose to actually drill this well?

25 A. This is a wellbore profile prepared by

1 Halliburton Energy Services, our directional drilling
2 company.

3 And what we intend to do is to get --

4 MR. STOVALL: Excuse me, Mr. Rector, you're
5 going to have to speak up so the --

6 THE WITNESS: Oh, I'm sorry.

7 MR. STOVALL: -- we can -- the court reporter
8 can hear you.

9 THE WITNESS: What we intend to do is to set
10 300 feet of surface pipe, drill a hundred feet below
11 that surface pipe vertically, and then at that point
12 kick out at an angle.

13 We'll start build rate at six degrees per
14 hundred and build to approximately 48 degrees, have a
15 long section, as shown on this plat, at 48 degrees and
16 then start the drop angle.

17 So when we reach -- when we are about 50 feet
18 above the Fruitland Coal, we'll be back to vertical
19 again.

20 And at that point we will run seven-inch
21 casing, cement back to surface, and then we'll drill
22 through the coal vertically so we can do our open-hole
23 completion or cavitation completion methods and be
24 vertical through the coal sections.

25 Q. Behind the schematic drawing in Exhibit 7 are

1 several additional pages. Could you identify those for
2 Mr. Catanach?

3 A. Yes, this is our operational plan, as
4 submitted with our APD, showing formation tops, our mud
5 programs for the drilling, our casing sizes, weights,
6 setting depths, float equipment, and our cement program
7 for the casing.

8 Q. Mr. Rector, would it be satisfactory to
9 Blackwood and Nichols for the Order resulting from this
10 hearing to authorize completion of the well within the
11 target area with a radius of 50 feet around the
12 proposed bottomhole location?

13 A. Yes, it would, yes.

14 Q. And will Blackwood and Nichols run a
15 directional survey on the well location as required by
16 Oil Conservation Division Rule 111?

17 A. Yes, it will.

18 Q. This is going to be a well that is internal
19 to the Northeast Blanco Unit, correct?

20 A. Yes, it will.

21 Q. And so you will not be gaining an advantage
22 on any other operator in the area?

23 A. No, we will not.

24 Q. In your opinion, will approval of this
25 Application be in the best interest of conservation,

1 the prevention of waste and the protection of
2 correlative rights?

3 A. Yes.

4 Q. Was Exhibit Number 7 prepared by you or at
5 your direction?

6 A. Yes, it was.

7 MR. CARR: At this time, Mr. Catanach, we
8 move the admission of Blackwood and Nichols Company,
9 Ltd., Exhibit Number 7.

10 EXAMINER CATANACH: Exhibit Number 7 will be
11 admitted as evidence.

12 MR. CARR: And that concludes my direct
13 examination of Mr. Rector.

14 EXAMINER CATANACH: I don't have anything.

15 MR. CARR: We have nothing further in this
16 case.

17 EXAMINER CATANACH: Okay, there being nothing
18 further in this case, Case 10,765 will be taken under
19 advisement.

20 (Thereupon, these proceedings were concluded
21 at 11:00 a.m.)

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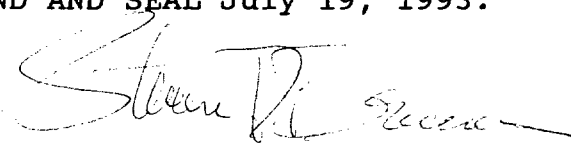
1 CERTIFICATE OF REPORTER

2
3 STATE OF NEW MEXICO)
4) ss.
COUNTY OF SANTA FE)

5
6 I, Steven T. Brenner, Certified Court
7 Reporter and Notary Public, HEREBY CERTIFY that the
8 foregoing transcript of proceedings before the Oil
9 Conservation Division was reported by me; that I
10 transcribed my notes; and that the foregoing is a true
11 and accurate record of the proceedings.

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

16 WITNESS MY HAND AND SEAL July 19, 1993.

17 
18 STEVEN T. BRENNER
19 CCR No. 7

20 My commission expires: October 14, 1994

21
22 I do hereby certify that the foregoing is
23 a complete record of the proceedings in
the Examiner hearing of Case No. 10765,
heard by me on July 15, 1993.

24 , Examiner
25 Oil Conservation Division