

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO

28 August 1985

EXAMINER HEARING

IN THE MATTER OF:

Case 5385 being reopened on the motion CASE
of the Oil Conservation Division and 5385
pursuant to the provisions of Order
No. R-4951, as amended.

BEFORE: Michael E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division: Jeff Taylor
Attorney at Law
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant: Chad Dickerson
Attorney at law
DICKERSON, FISK, & VANDIVER
Seventh and Mahone/Suite E
Artesia, New Mexico 88210

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

I N D E X

RAY BECK

Direct Examination by Mr. Dickerson	5
Cross Examination by Mr. Stogner	13

E X H I B I T S

Yates Exhibit One, Cross Section	6
Yates Exhibit Two, Reports	10
Yates Exhibit Three, Cross Section	10

1
2 MR. STOGNER: Call next Case
3 Number 5385.

4 MR. TAYLOR: In the matter of
5 Case 5385 being reopened on the motion of the Oil Conserva-
6 tion Division pursuant to the provisions of Order No. R-
7 14951, which order created the High Hope-Abo Gas Pool in Ed-
8 dy County, and promulgated temporary special rules and regu-
9 lations therefore, including a provision for 320-acre spac-
10 ing.

11 Operators in said pool may ap-
12 pear and show cause why the pool should not be developed on
13 160-acre spacing units.

14 MR. STOGNER: Call for appear-
15 ances in this matter.

16 Going once, going twice, the
17 case will be taken under advisement.

18
19 * * * * *

20
21 MR. DICKERSON: Mr. Stogner?

22 MR. STOGNER: Mr. Dickerson?

23 MR. DICKERSON: Excuse me,
24 we're here in Case 5385 and we were temporarily lost and
25 missed your call of that case.

1 MR. STOGNER: Who's "we"?

2 MR. DICKERSON: Yates Petroleum
3 Corporation.

4 MR. STOGNER: We will go back
5 and recall at this time Case Number 5385.

6 MR. DICKERSON: I'm sorry, Mr.
7 Examiner.

8 I'm Chad Dickerson on behalf of
9 Yates Petroleum Corporation, appearing on behalf of Yates.

10 MR. STOGNER: By way of the re-
11 cord, I will not take this case under advisement until I
12 hear the additional testimony.

13 MR. DICKERSON: Mr. Examiner, I
14 have one witness.

15 MR. STOGNER: Are there any
16 other appearances in this matter?

17 Being none, will the witness
18 please stand and be sworn.

19

20 (Witness sworn.)

21

22

RAY BECK,

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

25

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

DIRECT EXAMINATION

BY MR. DICKERSON:

Q Would you state your name, your occupation, and by whom you're employed, please?

A Ray Beck, geologist, Yates Petroleum, Artesia, New Mexico.

Q Mr. Beck, have you previously testified as a geologist before this Division and your credentials are -- had your credentials made a matter of record?

A Yes.

MR. DICKERSON: Is this witness qualified, Mr. Examiner?

MR. STOGNER: He is so qualified.

Q Mr. Beck, will you state the purpose of Yates Petroleum Corporation's appearance in this case?

A Yates Petroleum Corporation is appearing in reopened Case 5385 to show cause why the High Hope Gas Pool in Township 17, 23, should not be developed on 160-acre spacing but should remain on 320-acre spacing.

Yates is operator of the only two wells in the pool; namely, the No. 1 High Hope Federal "DJ" and the No. 1 Federal "GI" in Sections 13 and 23, respectively.

Q What approach have you taken, Mr. Beck,

1 in organizing your testimony?

2 A By assembling some good sample data,
3 lithology-determining petrophysical log data, previously pub-
4 lished work, and most importantly, paleontologic age data,
5 into a cross section which includes the wells in the subject
6 pool, we will show that the two wells do not produce from
7 the Abo formation; that the pool name of High Hope Abo Gas
8 Pool is incorrect; that the two wells have been perforated
9 in and produce from the Wolfcamp formation; that the pool
10 should be renamed the High Hope Wolfcamp Gas Pool; ;and that
11 the pool should remain on 320-acre spacing.

12 Q Will you refer to Exhibit Number One, Mr.
13 Beck, and describe what is shown on that exhibit?

14 A Exhibit Number One is a west/southwest to
15 east/northeast stratigraphic cross section, with this index
16 map.

17 The reason for the length of this cross
18 section is to bring in wells on the east side that have
19 paleontological information.

20 It's hung on top of the Abo formation.
21 Wells 3, 17, 20, and 22 have good sample descriptions and
22 the top of the first limestone in the samples is shown in
23 the depth column. This first limestone is contracted with
24 the overlying tight anhydritic dolomite.

25 The contact between these two lithologies

1 is generally used by industry geologists to pick the top of
2 the Wolfcamp limestone. The limestone is commonly fossiliferous
3 and many times contains fusulinids, which are age-
4 diagnostic.

5 Please note that the top of the first
6 lime in the samples is near the depth where I have picked
7 the top of the Wolfcamp. 6080, and about 15 feet above is
8 where I picked it; 6085, about 10 feet above; 4880, I picked
9 it 4860; 4800, I picked it 4775.

10 Samples from these same three wells, or
11 four wells, contained fusulinids, which were studied by the
12 Paleontological Laboratory of Midland, Texas. This well,
13 this well, I should -- the Well 22, the Well 20, Well 17,
14 and Well 3, had paleo dope -- paleontological information.

15 They have picked the top of the Wolfcamp
16 by fusulinids and they're reasonably close to where the
17 first limestone comes in.

18 This well here is especially close, 6405
19 to 6110 feet, all Wolfcamp fusulinids on top of (not under-
20 stood clearly.)

21 The first Wolfcamp fossils come in
22 reasonably close to the first limestone samples and to where
23 I picked the top of the Wolfcamp. For documentation the
24 Paleontological Laboratory reports will be submitted later.

25 A report published by the State Bureau of

1 Mines and Mineral Resources in Socorro in 1966 contains a
2 cross section including the Continental Duffield Federal No.
3 1, which is also my well number 22.

4 My Wolfcamp top and the Wolfcamp top
5 shown in the the cross section of the above report are vir-
6 tually identical. I will submit that in a later exhibit.

7 Modern compensated neutron-formation
8 density logs have a bulk density curve graduated in grams
9 per cubic centimeter, which is very useful in picking the
10 contact between the overlying Abo anhydritic dolomite beds
11 and the underlying Wolfcamp limestone beds.

12 The Abo anhydritic dolomites have bulk
13 densities ranging from 2.8 to over 3 grams per cubic centi-
14 meter, whereas the Wolfcamp limestones have bulk densities
15 ranging from less than 2.7 to 2.8 grams per cubic centi-
16 meter.

17 Taking into consideration differences in
18 calibration of the logs, the limestone is generally at or
19 near the depth where the bulk density curve drops consis-
20 tently below 2.8 grams per cubic centimeter.

21 All these modern logs on here, you can
22 see that this line right here, 2.75 --

23 MR. STOGNER: What line where?

24 A Right where my finger is pointing.

25 MR. STOGNER: Well, what well.

1 cerned here today.

2 Q Next will you refer to Exhibit Number Two
3 and state what you have shown on that exhibit?

4 A Exhibit Number Two consists of four re-
5 ports issued by the Paleontological Laboratory of Midland,
6 Texas, between the years of 1964 through 1972, which docu-
7 ments in more detail the paleontological information drafted
8 on the cross section.

9 Q Please refer to what we have marked and
10 submitted as Exhibit Number Three and describe what it
11 shows.

12 A Exhibit Number Three consists of a
13 xeroxed portion of a cross section contained in Memorir 17,
14 published in 1966 by the State Bureau of Mines and Mineral
15 Resources in Socorro, New Mexico. It is entitled Geology of
16 Pennsylvanian and Wolfcampian Rocks in Southeastern New Mex-
17 ico, by Richard F. Meyer of the U. S. G. S.

18 The published cross section named Plate 4
19 contains the Continental Duffield No. 1 well log and the
20 formation tops picked thereon.

21 This well is also on my cross section as
22 well number 22.

23 The published cross section shows the
24 same depth for the top of the Wolfcamp as does my cross sec-
25 tion.

1 Q Mr. Beck, can you briefly summarize your
2 testimony in this case?

3 A In summary, correlation of sample data,
4 petrophysical log data, and paleontologic age date in the
5 two wells in the High Hope Gas Pool in Township 17 South,
6 Range 23 East, shows that the wells in the High Hope Gas
7 Field do not produce from the Abo formation; that the pool
8 name of High Hope-Abo Gas Pool is incorrect; that the two
9 wells produce from the Wolfcamp formation and that the pool
10 should be renamed the High Hope Wolfcamp Gas Pool.
11

12 Because the wells are producing from the
13 Wolfcamp formation the pool should remain on 320-acre spac-
14 ing and cause is shown why the pool should not be developed
15 on 160-acre spacing.

16 Q Mr. Beck, were Exhibits One, Two, and
17 Three prepared by you or under your direction and supervi-
18 sion?

19 A Yes, they were.

20 MR. DICKERSON: Mr. Examiner,
21 at this time move admission of Yates Exhibits One, Two, and
22 Three.

23 MR. STOGNER: Exhibits One,
24 Two, and Three will be admitted into evidence at this time.

25 MR. DICKERSON: Mr. Examiner,
we understand the report has been submitted to your office

1 by one of the field geologists in the Artesia Office.

2 Would there be any reason that
3 we could not receive a copy of that report?

4 MR. STOGNER: The only thing I
5 could foresee you not receiving a copy of the report is it's
6 so big and we have no machine that could bring it down.

7 I would suggest that you might
8 talk to Mr. Larry Brooks, which is our geologist in the Ar-
9 tesia Office, and see if he might have an extra copy that
10 you might could borrow from him to make a copy from.

11 MR. DICKERSON: Okay.

12 MR. STOGNER: However, I will
13 take administrative notice of his report which was received
14 in this office last week, and I take it that Yates has been
15 in contact with Mr. Brooks, is that right?

16 MR. DICKERSON: Mr. Beck has
17 talked to him, yes, but I don't think we've ever seen the
18 report.

19 A No, we've never seen the report. He came
20 over to the office and showed me his cross section which is
21 virtually close to where I picked the Wolfcamp, but what
22 we'd like to know, you know, I guess his written report,
23 what he recommended.

24 MR. STOGNER: Well, the written
25 report that he recommended is on the map and in order, in

1 short, it seems that he concludes with your findings that
2 the perforations in your two wells, Number Six and Seven on
3 Exhibit Number One, does correlate with the Wolfcamp and not
4 the Abo.

5 If Mr. Brooks does not have a
6 copy of that report --

7 A I believe we can get that, sir.

8 MR. STOGNER: If not, let me
9 know and we'll see if we can get this, a copy of this down
10 to you so you can make a copy of it.

11
12 CROSS EXAMINATION

13 BY MR. STOGNER:

14 Q However, Mr. Beck, in your communications
15 with Mr. Larry Brooks, did he seem to agree with your find-
16 ings?

17 A Yes, sir, he did.

18 Q Are you familiar with Order No. R-4951
19 that formed this pool?

20 A I think it was so long ago that I can't
21 remember it but I may have testified on the case ahead of
22 time, ahead of the order.

23 MR. DICKERSON: We attempted,
24 Mr. Examiner, to get a transcript of those proceedings.
25 They were being microfilmed and were unavailable. They were

1 1975.

2 MR. STOGNER: For the record,
3 I'll take administrative notice of that. I believe we got a
4 batch of those back from the institution that was microfilm-
5 ing those yesterday and they will be sorted and I will take
6 administrative notice of that Case Number 5385.

7 The order was written itself in
8 January 22nd, 1975, with Yates Petroleum Corporation being
9 the applicant.

10 Q You were not aware of why the Abo tops
11 and the Wolfcamp tops were chosen at that time putting these
12 perforations in the Abo formation instead of the Wolfcamp?

13 A Yes, sir, I am aware of how it happened.

14 Q Could you explain?

15 A It's just been kind of a loose industry
16 practice to call that the base of the Abo over the years and
17 we just went with the flow. When we get into it and really
18 look into it, you can see that it really is not the base of
19 the Abo. It's the top of the Wolfcamp and we can show this
20 by further wells, in further pools that came in later in the
21 same formation, and those have been called Wolfcamp pools
22 correctly.

23 This is just one of the earlier ones and
24 incorrectly called the base of the Abo.

25 These are some of the other pools that

1 have been called Wolfcamp that came on later after we found
2 out the error of our ways; not only me, but the rest of the
3 industry.

4 The Donald R. Thigpen, it's the name of a
5 well; it's in Unit F of Section 7, 16, 25. It's called Eddy
6 Undesignated Wolfcamp Gas.

7 Also Eddy Undesignated Wolfcamp Gas,
8 Yates Petroleum Divide Federal Well in Unit K, Section 4,
9 17, 24.

10 Also a Yates Petroleum well, Niles "KA",
11 Section -- Unit N, excuse me, of Section 24, 17, 24.

12 The Cottonwood Creek Wolfcamp Gas Pool,
13 Yates Petroleum Well Terry "FU", Unit F of Section 21 of 16
14 South, 25 East.

15 Cottonwood Creek Wolfcamp East Gas Pool,
16 Yates Petroleum Lennie Howard in Unit K of Section 13, 16,
17 25.

18 Cottonwood Creek Wolfcamp West, Yates
19 Petroleum Collins "HS", excuse me, Unit G, Section 35 of 16,
20 24.

21 Yates Petroleum Robinson "HW", Unit K,
22 25, 16, 24.

23 All these wells are producing from the
24 same formation and are correctly called Wolfcamp.

25 Q Are any of those within a designated

1 Wolfcamp Pool?

2 A All of these are designated Wolfcamp.

3 Q Well, you mentioned the first one as
4 being in Undesignated Eddy Wolfcamp.

5 A Yes, sir, the first -- the first three I
6 mentioned were called by the New Mexico Engineering Commit-
7 tee Eddy Undesignated Wolfcamp Gas.

8 Q Okay.

9 A And the rest of them I called were desig-
10 nated pools, which were Cottonwood Creek Wolfcamp, Cotton-
11 wood Creek Wolfcamp East, Cottonwood Creek Wolfcamp West.

12 These were subsequently determined by the
13 right stratigraphic horizon.

14 Q Let me rephrase my question. Within the
15 present boundaries of the so-called High Hope Abo Pool, is
16 there a Wolfcamp, designated Wolfcamp pool within a mile of
17 those boundaries?

18 A Let me see. Here's a pool in Section 13,
19 23, 17, 23, and -- okay, in Section 4 of 17, 24, is the
20 Divide Federal -- Yates Petroleum Divide Federal in Unit K
21 of Section 4 of 17, 24, and that's an Eddy Undesignated
22 Wolfcamp Well, and that is about one, four miles away.

23 Q Okay. Thank you, sir.

24 If this order was changing the pool to
25 the High Hope Wolfcamp Pool, what's your recommendations on

1 the special pool rules or should there be any special pool
2 rules in that pool?

3 A I think that the name should be changed
4 to High Hope Wolfcamp Gas Pool and that the spacing should
5 remain 320-acre spacing for each well.

6 Q That would correspond with today's state-
7 wide pool rules for the Wolfcamp age formation, is that
8 right?

9 A That is correct, sir.

10 Q How about the location for a well within
11 the pool, how would you propose that?

12 A The normal locations that have been in
13 effect for years; 660 from the north, 1980 from the west;
14 660 north, 1980 from the east; as long as it's 660 from the
15 long line and 1980 from the short line of the section.

16 Q Okay. Mr. Beck, are you familiar with
17 the order in paragraph number three of Order No. R-4951?

18 A No, sir, not unless I could hear it.

19 Q That the operator in the High Hope Abo
20 Gas Pool first obtaining a gas connection shall notify the
21 Secretary-Director of the Commission of such connection in
22 writing and following in paragraph number four that this
23 case shall be reopened in an examiner hearing approximately
24 one year from the date of first connection at which time the
25 operators in the High Hope Gas Pool may appear and show

1 cause why said pool should not be developed on 160-acre
2 spacing.

3 Do you know why that was not --

4 A The only reason I can think of, sir, is
5 that we weren't called.

6 Q Was Yates not the applicant on that ap-
7 plication?

8 A They probably were.

9 Q Is it or has it been the practice of the
10 Oil Conservation Division to notify the applicant when they
11 should come back and reopen a hearing?

12 A I have no answer for that.

13 MR. DICKERSON: If it was not
14 done, Mr. Examiner, it was obviously inadvertently stuck in
15 a file somewhere and Yates was unaware that it should have
16 been done. It was certainly, not intentional nor trying to
17 cause this Division any problems.

18 MR. STOGNER: Thank you, Mr.
19 Dickerson.

20 I have no further questions of
21 this witness.

22 Are there any other questions
23 of Mr. Beck?

24 If not, he may be excused.

25 Anything further in Case Number

1 5385?

2 There being none, this case
3 will be taken under advisement.

4

5 (Hearing concluded.)

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

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 and correct transcript of the proceedings in the Examiner hearing of Case No. 5385 (reopened) heard by me on 18 August 1985.
Michael P. Rogers, Examiner
Oil Conservation Division