

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICO

Hearing Date SEPTEMBER 15, 1994 Time: 8:15 A.M.

NAME	REPRESENTING	LOCATION
J.C. Johnson	K&T. Gas. Corp	Alb, NM
Maurice Trimmer	R.W. Byrum	SF
Charles Lundeen	Anson Gas Corp	OKla. City
Al Swanson	" " " "	" "
William L. Carr	Campbell, Lee, Foye + Jordan	Monte TX
Jerry Egan	Nearburg Prod CO	Midland TX
Jay Cook	Leach Oil Inc.	Farmington, NM
Ken Cook	Meridian Oil Inc	FARMINGTON, NM
Mal Hawthorne	Anson	OKla. City
Rick LUMER	ANM	SANTA FE
Scott P. Davis	Meridian Oil Inc	FARMINGTON, NM
Tom J. [unclear]	[unclear]	[unclear]
Ed [unclear]	Meridian Oil Inc	Midland
Rod Steward	Manathon Oil	midland
KURT MILLER	" "	" "

STATE OF NEW MEXICO
 ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
 OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING)	
CALL BY THE OIL CONSERVATION)	
DIVISION FOR THE PURPOSE OF)	
CONSIDERING:)	CASE NOS. 11,082
)	11,083
APPLICATION OF PETROLEUM)	11,084
DEVELOPMENT CORPORATION)	(Consolidated)
)	

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Hearing Examiner

September 15th, 1994

Santa Fe, New Mexico

NOV 20 1994

This matter came on for hearing before the Oil Conservation Division on Thursday, September 15th, 1994, at Morgan Hall, State Land Office Building, 310 Old Santa Fe Trail, Santa Fe, New Mexico, before Deborah O'Bine, RPR, Certified Court Reporter No. 63, for the State of New Mexico.

ORIGINAL

* * *

I N D E X

September 15th, 1994
 Examiner Hearing
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A P P E A R A N C E S

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By: ANNIE-LAURIE COOGAN

* * *

1 EXAMINER STOGNER: This hearing will come to
2 order for Docket Number 26-94.

3 I'm Michael Stogner, appointed hearing officer
4 for today's cases.

5 Please note today's date, September 15th, 1994.

6 And at this time I'll call Case Number 11,082.

7 MR. CARROLL: Application of Petroleum
8 Development Corporation for a high-angle/horizontal
9 directional drilling pilot project and for special
10 operating rules therefor, Chavez County, New Mexico.

11 EXAMINER STOGNER: Call for appearances.

12 MS. COOGAN: Mr. Hearing Officer, I'm Annie-
13 Laurie Coogan from the Kegel law firm in Espanola, and I
14 represent Petco, the Applicant.

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

17 Ms. Coogan, do you have any witnesses to be
18 sworn?

19 MS. COOGAN: Yes, Mr. Johnson.

20 (Thereupon, the witness was sworn.)

21 MS. COOGAN: I'd just like to point out to the
22 Hearing Officer that the Applications for 11,082, 11,083
23 and 11,084 are very similar.

24 11,082 calls for two wells, -83 for three wells,
25 and -84 for five wells.

1 The -- It's a horizontal directional drilling
2 pilot project, similar to one that was applied for here in
3 1993 and for which orders were entered on.

4 The orders entered in a project very similar to
5 this were R-9969, R-9970, R-9971 and R-9972.

6 Would you like exhibits entered at this point,
7 Mr. Hearing Officer?

8 EXAMINER STOGNER: Yes, or at least given to us
9 and then we'll enter them into the record at the conclusion
10 of the examination, cross-examination. Thank you.

11 Ms. Coogan, you mentioned that Cases 11,083 and
12 11,084 were very similar in nature. Do you wish to
13 consolidate those cases for ease in testimony?

14 MS. COOGAN: Yes, we would like to.

15 EXAMINER STOGNER: Okay. At this time, then,
16 I'll call Case 11,083 and 11,084.

17 MS. COOGAN: Examiner, we have given you exhibits
18 that also cover both of those cases.

19 Exhibit Number 1 -- We have an Exhibit Number 1
20 for each case. If that is confusing to the Commission, we
21 can put 1, 2 and 3 now that they're consolidated.

22 EXAMINER STOGNER: No, that will be fine. The
23 case number is on there, and they'll go in each individual
24 packet.

25 MS. COOGAN: The top exhibit is the map and

1 schematic, and that applies to all three cases.

2 (Off the record)

3 MS. COOGAN: Okay, each one is listed as Exhibit
4 1.

5 (Off the record)

6 MS. COOGAN: As I stated, the Applicant seeks
7 authority to institute a short-radius/directional drilling
8 pilot project in the areas designated in 11,082, 11,083 and
9 11,084.

10 The only difference between this Application and
11 the one in 1993 is the radius they're requesting, and there
12 are a few other difference.

13 At this time, I'd like to call Mr. Jim Johnson.

14 (Off the record)

15 JAMES C. JOHNSON,

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

18 DIRECT EXAMINATION

19 BY MS. COOGAN:

20 Q. What is your full name, Mr. Johnson?

21 A. James C. Johnson.

22 Q. And what is your occupation?

23 A. I'm president of Petroleum Development
24 Corporation, Albuquerque, New Mexico.

25 Q. Can you tell the Commission briefly what your

1 experience is in this area?

2 A. I've worked in the oil and gas business as a
3 petroleum engineer for 38 years.

4 Q. What are you seeking today in Cases 11,082,
5 11,083 and 11,084.

6 A. We're seeking to horizontally drill in the San
7 Andres formation short-radius arcs, which we still classify
8 as a short-radius arcs, to recover additional reserves that
9 have not been recovered to date.

10 Q. Have you done this in previous reserves?

11 A. Yes, we have. They may -- Do you guys want to
12 accept me as a witness or --

13 Q. First let me just ask you, you've done this in
14 previous reserves?

15 A. Yes, I have.

16 MS. COOGAN: Okay. Will the Commission accept
17 Mr. Johnson as an expert, or shall we go into further
18 background?

19 EXAMINER STOGNER: No, Mr. Johnson has testified
20 here before, and it's on the record and his credentials are
21 acceptable.

22 Q. (By Ms. Coogan) Mr. Johnson, would you explain
23 to the Commission your Application?

24 A. Okay, I'll start here with Case 11,082. This is
25 a project on the State 32 lease. Petroleum Development

1 Corporation is the owner.

2 Exhibit 1 has a -- shows a map of the area. I've
3 highlighted the two horizontal well acreages we're going to
4 be drilling.

5 The Number 2 well will be drilled, hopefully, in
6 a northwesterly direction, cutting all the way across the
7 40-acre spacing unit.

8 The Number 4 well will be drilled from across the
9 40 acres it's on to the west 40 acres offsetting it, which
10 is the same lease, and to cover a longer area.

11 Also I've highlighted the offset operators,
12 generally, in that area around these leases.

13 In this particular one, there are Yates
14 Petroleum, Yates Energy and Murphy Operating.

15 Exhibit 2 lists the offset operators.

16 Exhibit 3 is a breakdown on the horizontal
17 drilling procedure for the State 32-2.

18 We will set a cement retainer and squeeze off
19 existing perforations. We will then mill the 4-1/2-inch
20 casing from approximately 3498 to 3573. We'll set a cement
21 plug and drill out to approximately 3548 feet.

22 We'll also run -- At that time we'll run a
23 directional survey of the wellbore to determine the bottom
24 of the existing well.

25 We'll go in with horizontal tools and kick off

1 the cement plug at approximately 3548. We'll drill a 220-
2 plus-or-minus-foot radius curve at an inclination of
3 approximately 85 to 90 degrees and conduct surveys every 35
4 feet of the arc.

5 The earlier wells that we drilled out here in
6 horizontal holes, we drilled 60- to 80-foot-radius arcs.
7 We ran into several problems. One was a problem of
8 control, both to vertical depth and hitting a designated
9 point.

10 A 200-foot-radius arc has been drilled out here
11 on one of those existing wells, and we had much better
12 control. In the true vertical depth we stayed within a
13 window of five feet, and we hit our designated point within
14 ten feet.

15 Also, we were allowed to go out much farther on
16 the wells. We could go out 1500 foot rather than 800 to
17 1000 feet.

18 This particular well is just on a 40-acre tract.
19 It will be drilled diagonally across the 40-acre spacing
20 unit. We'll drill the lateral approximately 800-plus-or-
21 minus feet in the direction of our choice, which our choice
22 is going to be to go to the northwest since the well is
23 located in the -- 330, 330 from the southeast of the 40-
24 acre spacing unit. In the lateral we'll conduct surveys
25 every 70 feet. We also -- We'll request that we can go

1 within 100 foot of existing lease lines.

2 Exhibit 4, this particular exhibit, is a
3 schematic going over exactly what I went through.

4 Exhibit 5 is the horizontal drilling procedure
5 for the State 32 Number 4. It's the same procedure we're
6 using before. The only difference is, we're going to be
7 cutting across the undrilled 40-acre spacing unit, and we
8 would drill laterally approximately 1500 foot, plus or
9 minus, rather than the 800 foot I showed in the other well.

10 Again, we'll be conducting surveys, 35 foot in
11 the arc and every 75 foot in the lateral.

12 This procedure has been very mechanically
13 successfully done. And as I said before, we have very good
14 control.

15 Also, we're requesting in these -- Do you want me
16 to go ahead and go through 11,083 and -84, Mike, or --

17 EXAMINER STOGNER: However you feel comfortable,
18 Mr. Johnson.

19 THE WITNESS: Okay. I mean, do you want to go
20 through each well, or how do you want to do it? They're
21 all similar.

22 EXAMINER STOGNER: I'll tell you what, let's take
23 administrative notice of the previous four orders that you
24 had mentioned, Ms. Coogan.

25 Is there anything in the other wells in this area

1 that's out of the ordinary, that you haven't covered in the
2 two wells that you just mentioned? Are they all completed
3 somewhat similarly?

4 THE WITNESS: Yes, they're all completed in the
5 San Andres formation. We'll -- In each case we'll be doing
6 the same procedure. We're going to squeeze off existing
7 perfs, we'll be milling out in 4 1/2 or 5 1/2 casing, which
8 -- of these ten wells listed in here, four wells out of 5
9 and four wells out of 4 1/2, six of the wells will be out
10 of 5 1/2.

11 We'll mill out approximately 75 foot of casing in
12 each of the wells, and then we'll cut about a 220, plus or
13 minus, arc and go out -- In all those cases, all the
14 additional cases, we're going to be trying to go out about
15 1500 foot in the lateral on all those wells, in Case Number
16 11,083 and 11,084.

17 EXAMINER STOGNER: I don't think it will be
18 necessary, Ms. Coogan, to go through all the separate
19 wells --

20 MS. COOGAN: Okay.

21 EXAMINER STOGNER: -- considering the exhibits
22 and Mr. Johnson's testimony. So you may proceed however
23 you feel is necessary at this point to cover any of the
24 other items that need to be covered at this time.

25 MS. COOGAN: Right. As I mentioned, Case 11,082

1 has two, Case 11,083 has three wells, and Case 11,084 has
2 five wells.

3 In the previous orders, the allowable assigned to
4 each project area was equal to 80 BOPD times the number of
5 standard 40-acre proration units within the project area.
6 And that's also the same request we have here today for the
7 three cases.

8 Q. (By Ms. Coogan) Mr. Johnson, does this -- the
9 Applications before this Commission promote the interest of
10 conservation and the prevention of waste?

11 A. In my opinion, yes.

12 Q. Have you notified all the offset operators or
13 interest owners in the immediate areas in -- that are
14 appropriate to be notified with respect to each of the
15 Applications?

16 A. Yes.

17 Q. Have you received any opposition from any of
18 them?

19 A. No.

20 Q. Have you received any comments from any of them?

21 A. No.

22 Q. Is there anything about these Applications,
23 11,082, 11,083 and 11,084, that would result in the
24 violation of correlative rights or of any interest owners'
25 rights in the project areas?

1 A. The only change we're making here is, on a
2 spacing unit, a normal 40-acre spacing unit, we are
3 required to stay 330 feet from lease lines. In these
4 Applications we're applying to go within 100 feet from the
5 lease lines, which will allow us to completely drain the
6 40-acre spacing units that we feel are not drained at the
7 present time.

8 The correlative rights will be protected by the
9 offset operators because they will also be able to drill
10 wells 100 feet from our lease lines, if necessary, if they
11 feel like it's necessary, and allow both of us to possibly
12 completely drain the 40-acre spacing units.

13 Q. Mr. Johnson, was that also the case in the
14 previous orders entered by the Commission?

15 A. Yes.

16 Q. You put -- You went within 100 feet of those
17 lines --

18 A. Yes.

19 Q. -- lease lines?

20 Is there anything else in these Applications,
21 11,082, 11,083 or 11,084, that is different or additional
22 to the previous orders entered by the Commission in 1993?

23 A. No.

24 MS. COOGAN: Unless the Commission has questions,
25 I believe that's all we have.

1 EXAMINATION

2 BY EXAMINER STOGNER:

3 Q. Mr. Johnson, since you have done some of these
4 out there, or several of these out in this Chaveroo area,
5 have you had any discussions with our district office in
6 Hobbs, perhaps, how these wells are to be plugged and
7 abandoned at any such time, or has there been any thought
8 on that?

9 A. No, I have not.

10 Q. Do you have any feelings on that, how these wells
11 should be plugged and abandoned at the time of depletion?

12 A. In all cases, just pump -- we'll be -- just pump
13 a cement plug in the well to bring it -- bring the cement
14 plug in the well back up into the casing. You may want to
15 do it with a cement retainer set in the casing and just,
16 you know, pump the well to squeeze it off, is what I would
17 recommend.

18 Q. So you would recommend fill the hole, open-hole
19 interval and the curved interval up with cement back to the
20 casing; is that what you're saying?

21 A. Yes.

22 Q. Okay. On the previous horizontal wells out here,
23 you have been allowed to get up to 100 feet of the
24 boundary. What is the closest that you have measured up to
25 those, up to the boundary line?

1 A. About 110 feet in possibly two cases. Normally
2 -- Again, I'd have to look. But I'd say two or three cases
3 we have gone where we're going, you know, sort of direct
4 into -- within 110.

5 Most of them have stopped because of mechanical
6 problems or some other problem, we had to stop 200 or 300
7 feet or more from the lease lines.

8 Q. As far as controlling, once you get your
9 horizontal portion started, controlling the direction in
10 which it is going --

11 A. I --

12 Q. -- has that been difficult?

13 A. What a lot of people -- Cutting the 60 foot/80
14 foot, we had many problems. We've had wells that we want
15 to go, say, in a northeasterly direction, they got out
16 there 300 or 400 or 500 foot, and they were going off to
17 the left, they turned it right, turned a full 90, and ended
18 up 600 foot from our designated point.

19 That's why I decided after five wells to change
20 this particular procedure and go to the 200-foot radius.

21 With a 200-foot-radius arc, we have much more
22 control, and there are other advantages too. You can run
23 production tools in it much easier for completions. We can
24 actually run electric logs in the well if we want to. So
25 that's why we changed to the 200.

1 I felt very comfortable having pretty good
2 control.

3 However, I've seen other horizontal wells and,
4 you know, sometimes you get up there and you can hit a
5 change of formation for some reason or other. Most of
6 those are just turns, and you just have an awfully hard
7 time getting the turn back.

8 So if they do, you just go out, you know, your
9 maximum distance you can go, staying within these
10 parameters, and have to stop.

11 Q. And what makes the window philosophy that we've
12 sort of adopted here in this state helpful in your case?

13 A. What?

14 Q. The window philosophy that we have adopted. In
15 other words --

16 A. Yeah.

17 Q. -- setting up a window that you can stay within.
18 That has helped in your case?

19 A. Yes, it has.

20 Q. Okay. The thing about 11,082 that differs from
21 the previous ones is the non-contiguous acreage. But
22 you're planning on drilling two wells, and that one that's
23 in that -- the Number 2 well being within the single 40-
24 acre tract that's sitting off by itself, you're going to
25 stay within 100 foot of that 40-acre proration unit; is

1 that correct?

2 A. That is correct.

3 Q. And then the other portion is an 80-acre laydown
4 in the southwest quarter. You're going to be traversing
5 from the east to the west and consolidating those two 80-
6 acre -- or that two 40-acre units to make one 80-acre unit;
7 is that correct?

8 A. That is correct.

9 Q. But all the others, your window will be around
10 the circumference of the project itself, which are made up
11 of contiguous 40-acre tracts?

12 A. That is correct.

13 Q. What has some of the production, your best
14 production on these wells in this area, your horizontal
15 wells -- Have they even come close to the allowable, or
16 what's some of the best production?

17 A. Up to this time we've had some that came in
18 fairly good. At the present time they're at an 80-acre
19 spacing -- I mean, 80 barrels a day, we have not exceeded
20 that except in two cases. And they fell off pretty
21 rapidly, though.

22 So this has not been a situation that we needed
23 additional allowables. However, after doing a lot of work
24 on where we drill wells to date, where we're drilling them
25 at this present time, we still feel like that -- well, we

1 especially cut across a 40-acre undrilled location, that we
2 could get wells that could make more than 160 barrels a
3 day.

4 I feel like -- I think the last order actually
5 gave the head of the OCC in Hobbs -- If we applied for the
6 additional 80-barrels-a-day allowable, we would get it
7 based on the project area.

8 Whereas, I've actually not done that on this last
9 program because I haven't -- I've just turned in a test
10 by -- well by well, and take the allowable accordingly.

11 EXAMINER STOGNER: I have nothing further of Mr.
12 Johnson at this time.

13 Ms. Coogan, I'll turn him back over to you, if
14 you have any other questions.

15 FURTHER EXAMINATION

16 BY MS. COOGAN:

17 Q. Is there anything, Mr. Johnson, that I haven't
18 covered that you would like to add regarding these
19 Applications?

20 A. Not at this time.

21 Q. Is there anything in the prior orders that you
22 are seeking to change or adjust, that were entered in 1993?
23 Were there any provisions of the orders in 1993 that you
24 would like to see changed or modified in this Application?

25 A. I feel like the only one that's in the

1 Application was that -- I believe in the Application we
2 stated that additional horizontal wells could be drilled in
3 the project area with an admin approval.

4 I think I have a copy of that in front of me, b
5 the way.

6 Q. The prior order?

7 A. Yeah.

8 EXAMINER STOGNER: Yeah, it's included in each of
9 them.

10 Is there any --

11 THE WITNESS: Yes.

12 EXAMINER STOGNER: -- plans at this time, or just
13 in case one of the wells triggers on you and you can drill
14 another one?

15 MS. COOGAN: That's a very good plan, because
16 we'd be under the same rules, we'd still have to file an
17 admin approval in -- but that would be for a well only
18 drilled in each prospect area, right -- project area.

19 EXAMINER STOGNER: While I've got Mr. Johnson on
20 the stand, I'd like to also add, I foresee probably within
21 the next six months, perhaps, the Division either on its
22 own motion or have some operator come in and request some
23 rule changes, general rule changes, to Rule 111 to include
24 an administrative procedure for horizontal wells.

25 That's a long time coming, but Mr. Johnson, I'd

1 like for you -- I'd like to ask you to keep watch of it and
2 perhaps participate in that.

3 THE WITNESS: Yes, sir.

4 EXAMINER STOGNER: You have, as far as down in
5 the southeast, drilled quite a few of these oil test cases,
6 but the general rules would include for gas pools and gas
7 wells and for other purposes.

8 But I would like to ask in particular yourself to
9 look out for it and maybe perhaps come up and support it,
10 offer some testimony if you could. It would be greatly
11 appreciated. And these cases that you have brought forth,
12 I'm sure, will be mentioned in that rule-change hearing.
13 But I'd like to ask your cooperation in that.

14 If there's nothing further, Mr. Johnson, you may
15 be excused.

16 Ms. Coogan, is there anything further?

17 MS. COOGAN: No, nothing else, sir.

18 EXAMINER STOGNER: At this time I'll take Cases
19 11,082, 11,083 and 11,084 under advisement.

20 (Off the record)

21 EXAMINER STOGNER: Let me re-open those three
22 cases because I did forget forget something, to admit all
23 the exhibits into evidence in these three cases. Those are
24 marked Exhibits 1 in each case, and then an Exhibit 2.

25 Now, there was mention of other exhibits included

1 in Exhibit 1. We'll just call those sub-exhibits, and I'll
2 get with the reporter and get that straightened out.

3 MS. COOGAN: If you want, Hearing Officer, we
4 could put Exhibit 1 and then A, B, C, D, if that would make
5 it easier.

6 EXAMINER STOGNER: I think that probably would.

7 MS. COOGAN: I'll be glad to re-mark them.

8 EXAMINER STOGNER: With that, again, I'll take
9 these three cases under advisement.

10 * * *

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CERTIFICATE OF REPORTER

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

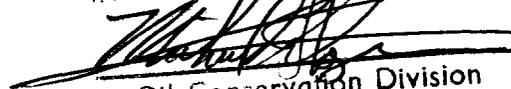
I, Deborah O'Bine, Certified Court Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Division was reported by me; that my notes were transcribed under my supervision; and that the foregoing is a true and accurate record of the proceedings.

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.



DEBORAH O'BINE
 CCR No. 63

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case Nos. 11082-84 heard by me on 9 September 1994.



Examiner
 Oil Conservation Division