

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

IN THE MATTER OF THE HEARING CALLED BY)
THE OIL CONSERVATION DIVISION FOR THE)
PURPOSE OF CONSIDERING:)

APPLICATION OF HIGH PLAINS OPERATING)
COMPANY, LLC, FOR RESCISSION OF THE)
SPECIAL POOL RULES FOR THE SOUTHEAST)
ARENA BLANCA-ENTRADA POOL, SANDOVAL)
COUNTY, NEW MEXICO)

CASE NO. 13,917

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner

May 10th, 2007

Santa Fe, New Mexico

2007 MAY 24 AM 11 35

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID R. CATANACH, Hearing Examiner, on Thursday, May 10th, 2007, at the New Mexico Energy, Minerals and Natural Resources Department, 1220 South Saint Francis Drive, Room 102, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

* * *

I N D E X

May 10th, 2007
Examiner Hearing
CASE NO. 13,917

| | |
|---|------|
| | PAGE |
| APPEARANCES | 3 |
| APPLICANT'S WITNESS: | |
| <u>ARTHUR W. "BUTCH" BUTLER, III, (Geologist)</u> | |
| Direct Examination by Ms. Munds-Dry | 4 |
| Examination by Examiner Catanach | 21 |
| REPORTER'S CERTIFICATE | 28 |

* * *

E X H I B I T S

| Applicant's | Identified | Admitted |
|-------------|------------|----------|
| Exhibit A | 8 | 21 |
| Exhibit 1 | 10 | 21 |
| Exhibit 2 | 11 | 21 |
| Exhibit 3 | 11 | 21 |
| Exhibit 4 | 12 | 21 |
| Exhibit 5 | 14 | 21 |
| Exhibit 6A | 16 | 21 |
| Exhibit 6B | 16 | 21 |
| Exhibit 7 | 17 | 21 |
| Exhibit 8 | 19 | 21 |
| Exhibit B | 19 | 21 |

* * *

A P P E A R A N C E S

FOR THE DIVISION:

DAVID K. BROOKS, JR.
Assistant General Counsel
Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

FOR THE APPLICANT:

HOLLAND & HART, L.L.P., and CAMPBELL & CARR
110 N. Guadalupe, Suite 1
P.O. Box 2208
Santa Fe, New Mexico 87504-2208
By: OCEAN MUNDS-DRY

* * *

1 WHEREUPON, the following proceedings were had at
2 10:40 a.m.:

3 EXAMINER CATANACH: All right, at this time I'll
4 call Case Number 13,971, the Application of High Plains
5 Operating Company, LLC, for rescission of the special pool
6 rules for the Southeast Arena Blanca-Entrada Pool, Sandoval
7 County, New Mexico.

8 Call for appearances.

9 MS. MUNDS-DRY: Mr. Examiner, Ocean Munds-Dry
10 with the law firm of Holland and Hart, here representing
11 High Plains Operating Company, LLC, this morning, and I
12 have one witness.

13 EXAMINER CATANACH: Any additional appearances?
14 There being none, swear in the witness please.
15 (Thereupon, the witness was sworn.)

16 ARTHUR W. "BUTCH" BUTLER, III,
17 the witness herein, after having been first duly sworn upon
18 his oath, was examined and testified as follows:

19 DIRECT EXAMINATION

20 BY MS. MUNDS-DRY:

21 Q. Good morning, would you please state your name
22 for the record?

23 A. Good morning, my name is Butch Butler; my full
24 legal name is Arthur W. Butler, III.

25 Q. Mr. Butler, where do you reside?

1 A. In Buena Vista, Colorado.

2 Q. And by whom are you employed?

3 A. High Plains Operating Company, LLC.

4 Q. What's your current position with High Plains?

5 A. I'm one of the owners and the
6 geologist/geophysicist.

7 Q. And have you previously testified before the
8 Division?

9 A. No, I have not.

10 Q. Would you briefly review for the Examiner your
11 educational and work experience?

12 A. I have a bachelor's degree in natural resources
13 from the University of Rhode Island and a master's degree
14 in exploration geophysics from Stanford University. I've
15 worked in the oil industry for about 30 years. I started
16 with Amoco and worked for a number of different companies
17 in Denver for many years, including Valero Producing
18 Company and Wacker Oil.

19 I'm also a Wyoming certified petroleum geologist,
20 and I did do a lot of testifying in North Dakota, in front
21 of the North Dakota Industrial Commission.

22 Q. Are you familiar with the application filed in
23 this case?

24 A. Yes, I am.

25 Q. Are you also familiar with the development of the

1 Entrada formation in the area surrounding the southeast
2 Arena Blanca-Entrada Pool?

3 A. Yes, I am. We've been looking at this project
4 for about a year, and I've been doing a lot of study on
5 this.

6 MS. MUNDS-DRY: We would tender Mr. Butler as an
7 expert in petroleum geology.

8 EXAMINER CATANACH: He is so qualified.

9 Q. (By Ms. Munds-Dry) Mr. Butler, would you briefly
10 state what High Plains seeks with this Application?

11 A. We would like to have the order rescinded that
12 put in place the special pool rules and regulations for the
13 Southeast Arena Blanca-Entrada Pool.

14 Q. Would you review for the Examiner what the
15 special rules now require?

16 A. The current rules, the pool boundaries are the
17 north half of Section 8 in Township 19 North, Range 4 West,
18 Sandoval County. The rules also define 160-acre spacing
19 with all wells being 660 feet from a boundary and no closer
20 than 10 feet to any quarter quarter section.

21 Q. And let's briefly review the history of how these
22 rules were adopted, for Mr. Catanach. Who brought the
23 initial application for the special pool rules?

24 A. The original application was filed by Penwell
25 Energy. Case Number was 12,387. This was in the year

1 2000. They did drill a discovery well in the Entrada. It
2 was the Eagle Springs 8 Federal Number 1. It was located
3 -- It was at a nonstandard location in the northwest of the
4 northeast of Section 8 of this township.

5 Q. And did that result in an order?

6 A. Yeah, that resulted in Order Number R-11,374. It
7 created temporary rules on May 17th, 2000.

8 Q. And did the temporary rules become permanent?

9 A. No, they did not. Penwell actually came back
10 several times requesting extensions of those rules. I'm
11 reading through the testimony there. They say they were
12 negotiating with Jemez Electric to get power in, and the
13 power -- they just could never basically make a deal, is
14 what the -- or at least a deal that was commercially
15 satisfactory, I guess we would say. And so there was an
16 Order R-11,374-A which extended it for one year.

17 They came back again the next year, basically
18 said we still can't make a deal with Jemez, and so it was
19 again extended another year with Order R-11,374-B, and
20 those temporary orders are in essence still in place,
21 although both wells that were drilled by Penwell have been
22 plugged at this point.

23 MS. MUNDS-DRY: Mr. Examiner, we'd ask you to
24 take administrative notice of that Case Number 12,387 and
25 the Orders R-11,374-A and -B.

1 EXAMINER CATANACH: I will take administrative
2 notice of that Case 12,387 and Orders Number R-11,374 as
3 amended.

4 MS. MUNDS-DRY: Thank you.

5 Q. (By Ms. Munds-Dry) And Mr. Butler, are there any
6 other pools nearby the Southeast Arena Blanca-Entrada Pool?

7 A. Yeah, there are several other pools. The closest
8 pool to us is just called the Arena Blanca-Entrada Pool,
9 and that's about two miles to the northwest.

10 There's also Eagle Mesa field, which a lot of the
11 exhibits are going to refer to, which was really a pretty
12 good producing Entrada pool. It's about three and a half
13 miles to the east-southeast.

14 So those are the two closest Entrada pools to us.

15 Q. And do you know what rules apply to those pools?

16 A. It's just the standard statewide rules, apply for
17 those fields, those pools.

18 Q. Mr. Butler, have you prepared exhibits for
19 presentation in this hearing?

20 A. Yes, I have.

21 Q. Would you please turn to Exhibit Number A and
22 identify and review that for the Examiner?

23 A. Okay, Mr. Examiner, this Exhibit A shows the
24 location of the High Plains Operating Company re-entry
25 wells in the very northwest of the northeast of Section 8.

1 It also shows our leases, and then to the east southeast it
2 shows the Eagle Mesa field.

3 And then actually right on the very edge of this
4 on the left side, there's one producing well in Section 36
5 in the township to the northwest of us, and that is the
6 well that was in the Arena Blanca-Entrada Pool. That well
7 produced about 34,000 barrels and a lot of water. And then
8 you can see, there's been quite a bit of drilling around
9 it. But they never made much in that one.

10 Eagle Mesa field cum'd about a million and a half
11 barrels of oil. And it --

12 Q. And --

13 A. Yeah, it's --

14 Q. -- I'm sorry.

15 A. -- Eagle Mesa, we think, is the best analog,
16 really, for what we're looking at here.

17 Q. And after you've studied the lands here, are
18 there any affected offset operators?

19 A. No, there are not. Actually, all of these wells
20 have all been plugged out at this point.

21 Q. What is the status of the royalty interest?

22 A. The royalty interest, actually in both of the
23 leases, in 99704 -- and these are both federal BLM leases
24 -- and in 99705 are the same.

25 Q. Thank you. Mr. Butler, would you please turn to

1 High Plains Exhibit Number 1 and review that for Mr.
2 Catanach?

3 A. Well, you may be familiar with this. This
4 actually comes from Case Number 12,387. This was the
5 exhibit based on 3-D seismic mapping of the Entrada
6 structure subsequent to their drilling the Eagle Springs 8
7 Federal Number 1 well.

8 And that well was an Entrada discovery. It has,
9 you know, a nice oil column in it. They IP'd it in March
10 of 2000 for about 220 barrels a day and no water initially.

11 Subsequent to them drilling the Number 1 well, as
12 they were drilling that, they had some mud log shows, lost
13 circulation zones in the Mancos, and they elected to drill
14 the Eagle Springs 8 Federal Number 2M with a TD of 3850 in
15 an attempt to establish production from the Mancos
16 interval. That was not successful.

17 And so this does show the structure on the dune.
18 You see the area in red -- and again, this is just a copy
19 of their exhibit, this is what they had submitted -- it
20 shows 194 acres within the productive area. And at this
21 point -- again, this was based on 3-D data -- we think this
22 is still a very valid map for the potential accumulation
23 that we want to pursue.

24 Q. Now Penwell didn't seek to include in the pool
25 that section above there, did they? It was only, I

1 believe, the north half of Section 8?

2 A. Right.

3 Q. And I believe you also said that the Eagle
4 Springs 8 Federal Number 1 was at an unorthodox location,
5 which is --

6 A. Yes, it was.

7 Q. If you would please turn to Exhibit Number 2 and
8 review that for the Examiner.

9 A. Okay, Mr. Examiner, this is just a production
10 plot from the Eagle Springs 8 Federal Number 1. If you
11 look kind of down in the right-hand corner on this, it has
12 the cumulative oil. This produced about 30,000 barrels of
13 oil and about 78 1/2 thousand barrels of water. That is
14 about a 27.6-percent oil cut.

15 And because they never got power in this, they
16 never were able to do any high-volume fluid production in
17 this well, which was done in all the other Entrada pools to
18 make them commercial. So they ended up selling the
19 property to some other operators, and it ended up being
20 plugged by -- Synergy was the last operator in this, in
21 November of 2005, and they plugged both of these wells in
22 November of 2005.

23 Q. What is Exhibit Number 3?

24 A. This is a little more regional picture. This
25 actually comes from *IHS Energy's* website, and you can do

1 queries on that, looking for Entrada producers.

2 What you do see is, you know, our area, the Arena
3 Blanca southeast, which for some reason *IHS* has as kind of
4 a gas accumulation, but anyway -- and then immediately to
5 the east southeast is Eagle Mesa field. A little further,
6 another, you know, five miles to the east from that is
7 Media, good Entrada-producing field. And then to the west
8 of us, or kind of the west southwest, is Papers Wash.

9 And so in the Entrada there are really three good
10 fields, that is, Papers Wash had a cumulative of about 1.6
11 million barrels, Eagle Mesa about 1.5 million barrels, and
12 the Media complex about 2 million barrels from the Entrada.

13 You will see some other kind of scattered dots
14 indicating Entrada production. Arena Blanca immediately
15 northwest of us, I've already mentioned, that produced
16 about 34,000 barrels of oil. The Ojo Encino in
17 accumulation was about 70,000 barrels. And then the other,
18 you know, dots, magenta dots that are up to the northeast
19 from us, really never produced anything, a couple of
20 thousand barrels from one of those wells.

21 But that kind of just shows you regionally, you
22 know, where we sit relative to the other good Entrada
23 producers at Papers Wash, Eagle Mesa and Media.

24 Q. Let's turn to Exhibit Number 4 and review that
25 for the Examiner.

1 A. Okay, this is a figure that I put together, and
2 just got looking at Eagle Mesa and, you know, with the
3 activity that was in there it could be a little confusing.
4 But the black lines that are connecting wellbores are
5 horizontal wells that were drilled by Merrion in 1994 and
6 1995.

7 The original field was discovered by Filon
8 Exploration in August of 1975. And Filon drilled four
9 wells in succession. They were completed in August,
10 September, October and November, and that was the well in
11 Section 12 was the first one, the well in Section 11 was
12 the second, then they came over and drilled the well in
13 Section 13, and then the well in Section 14, again just --
14 they had a rig out there, it seems to me that's apparent,
15 and they just successively drilled those four wells. And
16 those were the four producers that existed until, you know,
17 the mid-1990s.

18 The numbers in red that you see there are the
19 distances between those wells. And that is on statewide
20 spacing rules which allow wells to be drilled 330 feet from
21 a spacing unit boundary. And not exactly but pretty much
22 these wells were drilled about 330 and 330 from the common
23 section corner that you see between 11, 12, 13 and 14.
24 Again, this is in the same township that we are in, 19
25 north, 4 west.

1 Merrion came in, then, later and drilled some
2 vertical wells. Down at the bottom you'll see vertical
3 wells, the EMU Number 5 and Number 7, and those were
4 vertical wells. And they also drilled three horizontal
5 wells on the EMU Number 3H, 2H and 1H.

6 If you go to the bottom part of this exhibit, you
7 know, what I've done in the software, the mapping software
8 that I've got, I've just said, you know, make a 40-acre box
9 -- this is 1320 on a side -- and you know, I've laid that
10 40-acre outline over those wells. And in essence, those
11 wells are drilled on 10-acre spacing.

12 Q. And I believe you said this, Mr. Butler, but the
13 distances in red on the top part of the map, they're
14 between the vertical wells, right?

15 A. Correct, they are between the vertical wells.
16 And so if you look in Section 13, the 1744, that would be
17 between the Navajo 13C Number 1 and then the EMU Number 7
18 to the south.

19 Q. Let's turn to Exhibit Number 5. What does this
20 show?

21 A. Okay, Exhibit Number 5, then, is showing the oil
22 cumulative for each of these wells. And you know, what we
23 see is within that 40-acre box that I've put on there. You
24 know, we really have three very good wells. And you know,
25 you might want to refer back to Figure Number 4 for the

1 well names.

2 But in Section 12, interestingly, that well only
3 cum'd 36,000 barrels. Yet it has a good log. I think
4 there's a production issue, I think that's what happened
5 for that well.

6 Completion technique. If you look at the other
7 wells and the well in Section 13, the vertical well cum'd
8 259,000 barrels. In Section 14 the vertical well cum'd
9 610,000 barrels. And in Section 11 that well cum'd about
10 254,000 barrels. So a lot of oil was recovered out of that
11 40-acre tract.

12 When Merrion then came in, they did a 3-D seismic
13 survey in -- I'm going to say about '93, '94, they drilled
14 their first horizontal well, and it was the well that was
15 kind of right in the middle of those existing vertical
16 producers. It only cum'd 3.8 thousand barrels, so it was
17 not -- that was not very successful.

18 If you look at the other two horizontals that
19 they drilled off to the south, one cum'd 112.6 thousand
20 barrels, the other 115.8 thousand barrels. So those were
21 reasonably successful horizontal wells.

22 And then, you know, their vertical well, which is
23 the EMU Number 5, cum'd 131.2 thousand barrels.

24 And then they actually fell off the structure,
25 and they fell out of the trap in the EMU Number 7. It only

1 cum'd 2.9 thousand barrels, and that's pretty obvious from
2 looking at the geology.

3 Q. Okay, let's turn to Exhibit Number 6A and review
4 that for Mr. Catanach.

5 A. This is just a production plot. This is a
6 combination of both the Navajo 14C Number 1, the original
7 Filon well, and then the Merrion EMU Number 3H, which is
8 the horizontal Entrada well. Together, those two wells
9 cum'd 725,000 -- 726,000 barrels of oil. If you look at
10 the cumulative water, 28 million barrels of water.

11 So overall in this field, the overall oil cut at
12 the end of the life of the field is approximately 2.5-
13 percent oil. So it is a water-moving operation.

14 If you look at that plot, you can see when
15 Merrion came in in the '90s, then, and drilled the
16 horizontal well. They actually had, you know, pretty high
17 rates, but it declined fairly quickly. Again, they did end
18 up getting a cumulative out of there of about 115,000
19 additional barrels recovered. But this was a very good
20 well, and, you know, we hope we can go drill one similarly.

21 If you look at 6B, this is the Navajo 13C, along
22 with the EMU Number 2H. Again, these two wells together
23 cum'd 371.6 thousand barrels of oil. And it just -- I
24 included these to show you an example of the type of
25 decline curve that you can expect in the Entrada.

1 Obviously, these are both very good wells. But this is
2 pretty typical looking at other fields also in terms of the
3 nature of the production.

4 Q. Great, let's turn to Exhibit Number 7.

5 A. Exhibit 7 is comparing on the left the Eagle
6 Springs 8 Federal Number 1, which was drilled by Penwell
7 Energy, and the Navajo 13 C Number 1. And this section at
8 the bottom, you'll see a kind of a yellow line, and this is
9 flattened on a marker within the Entrada section. Overall,
10 the Entrada is up to, you know, 200 feet thick, and so the
11 production is from typically an oil column of 20 to 30 feet
12 at the top of that full package of Entrada, and below is
13 all water.

14 And on both of these -- and it's maybe a little
15 hard to see, but you will see a 4-ohm line that's kind of a
16 little thicker blue line, and then a 10-ohm line, which is
17 in red. And we feel that, you know, the 10 ohms or greater
18 is where you definitely get better wells.

19 You will note that the Eagle Springs A Federal
20 Number 1 IP'd for 219 barrels of oil and zero barrels of
21 water in March of two thousand -- and that's actually -- I
22 see I made a typo. That should say March of 2000, not
23 2001. I apologize for that.

24 And then the Navajo 13C I'd for 195 barrels of
25 oil and zero barrels of water, and it cum'd 259,000

1 barrels.

2 And the point, really, with this display is that
3 the log response is very similar. We think we've got a
4 real similar type of accumulation as what they had at Eagle
5 Mesa, and so that's the main point of that exhibit.

6 Q. Mr. Butler, after studying the Entrada formation
7 and the subject pool and comparing well performance in
8 other project areas, what is your conclusion?

9 A. In regards to the spacing issue, which is really
10 what we're here about, it seems very evident that 160-acre
11 spacing is too large, that you will not drain the reserves
12 in the accumulation. This is due to the nature of the
13 production and the high water volumes that are produced.
14 An in essence what happens, I think, with these is, you
15 develop a cone that doesn't allow you to drain a large
16 area.

17 And so at Eagle Mesa field, you know, we see that
18 -- you know, four wells within a 40-acre block, actually,
19 produced 1.1 million barrels of oil.

20 And so our conclusion is that the 160-acre
21 spacing should be rescinded, and we would like to just go
22 back to the normal state 40-acre spacing at this point in
23 time.

24 Q. And in fact, the Eagle Mesa wells show that it
25 may even be -- I mean, less than that, not that you're --

1 A. Well --

2 Q. -- arguing that today?

3 A. -- yeah, I think the evidence is in front of you,
4 and I think it certainly seems like they were fortuitous,
5 and that accumulation was centered around a section corner
6 or just could be a spacing unit boundary, allowing them to
7 drill optimum locations on these wells, move a lot of fluid
8 in the wellbores and recover a lot of oil.

9 Q. Mr. Butler, what is Exhibit Number 8?

10 A. Again, this comes from, you know, the hearing.
11 This is basically just another figure out of the original
12 hearing by Penwell, and they had put 40-acre outlines on
13 this. I did not do that. That is right out of the
14 documentation, the record from their hearing.

15 And so if you look at that, I would just say
16 envision Eagle Mesa field with that 40-acre box on this
17 structure. And so we certainly again think that the
18 evidence is that you need a higher well density than 160
19 acres to drain this accumulation.

20 Q. And in your opinion, will the granting of this
21 Application be in the best interest of conservation, the
22 protection of correlative rights, and the prevention of
23 waste?

24 A. Yes, we do.

25 Q. And is High Plains Exhibit Number B the affidavit

1 of publication that was given for this Application?

2 A. Yes, it is.

3 Q. And was there any other notice given of this
4 Application?

5 A. No, there was not. There was nothing else
6 required.

7 MS. MUNDS-DRY: And Mr. Examiner, you were asking
8 Mr. Bruce earlier.

9 We're looking at a different part of 1210.A.(4),
10 as we believe we're affecting the acreage of the pool, and
11 so we looked at whether there were any Division-designated
12 operators in the pool, and if there were any mineral
13 interest owners in spacing units with current producers,
14 and there were none. And so the only notice that we gave
15 was notice by publication.

16 Q. (By Ms. Munds-Dry) And Mr. Butler, were Exhibits
17 A, B and 1 through 8 prepared by you or compiled under your
18 supervision?

19 A. Yes, they were.

20 MS. MUNDS-DRY: Mr. Catanach, we would ask that
21 the Exhibits A, B and 1 through 8 be admitted into
22 evidence.

23 EXAMINER CATANACH: Exhibits A, B and -- what
24 other ones, Ms. --

25 MS. MUNDS-DRY: 1 through 8.

1 EXAMINER CATANACH: -- 1 through 8, will be
2 admitted as evidence.

3 MS. MUNDS-DRY: I have no further questions for
4 Mr. Butler.

5 EXAMINATION

6 BY EXAMINER CATANACH:

7 Q. Mr. Butler, did you review the case file in that
8 original case?

9 A. Yes, I did, I have gone through all those
10 dockets.

11 Q. And what did you find in terms of evidence that
12 was presented to substantiate the 160-acre spacing request?

13 A. From a technical standpoint, I did not really see
14 anything that would -- in terms of reservoir engineering
15 studies that would document that. They had their 3-D
16 seismic survey, they -- you know, as you can see from their
17 structure map, they had a bull's eye, and they came in and
18 said, We feel we can drain this with one well.

19 So there was never any comparison with other
20 fields in the area. You know, this is our opportunity, I
21 guess I would say right now, we think.

22 But I have pondered why they would have done
23 this, and I don't have an answer. It's a large federal
24 lease, one well would have -- is going to hold the whole
25 lease, so it's -- I think the common thought is that, well,

1 they were trying to hold more acreage, but that doesn't
2 apply in this situation. So I can't -- I really don't
3 understand why they would do that.

4 Q. Okay.

5 A. But they did, and it was granted, and now we
6 would just like to have that order rescinded based on what
7 we think is very compelling evidence. I am showing you
8 Eagle Mesa field. That 40-acre box that I'm showing you,
9 you could lay over at Papers Wash, at Media, and you're
10 going to have multiple wells --

11 Q. Hm.

12 A. -- within a 40-acre box. So again, I think the
13 evidence would be that you may need even higher density
14 than 40 acres. Again, at this point in time that's not
15 what we're asking.

16 Q. Okay. So you've looked at the geology, and the
17 geology in this pool is similar to the ones --

18 A. Yes.

19 Q. -- to the geology in the surrounding pools?

20 Now the 160-acre spacing, they were required to
21 come back in and present data that they had acquired
22 through production to kind of justify the 160-acre spacing.
23 They never did that, right?

24 A. No.

25 Q. They --

1 A. When they came back in those subsequent hearings,
2 in reading through the testimony what they say is, We just
3 -- we need to get electric out here. Now, they actually
4 recognized they needed to move a lot of fluid, so that's in
5 the testimony. And they say, you know, We know we need to
6 put a submersible pump, we think we can get a tenfold
7 increase.

8 That well over the period of about 15 months went
9 from about 220 barrels of oil with no water to about 20
10 barrels of oil and 200 barrels of water. Now what the
11 evidence shows is, that's typical. That is very typical
12 for this Entrada. And where you made a lot of oil is where
13 they were moving, in some cases, up to 4000 to 5000 barrels
14 of fluid a day and getting, you know, 3- or 4-percent oil.
15 Well, you know, do the math. It's pretty good daily rate.

16 And if you look at the decline curve for the well
17 that cum'd, you know, 600,000 barrels, I mean, it held up
18 at a reasonable rate, 5- or 6-percent oil, for many years.
19 And so they recognize that, but really their only argument
20 was -- asking for the temporary orders to be extended was,
21 We just can't make a deal with Jemez.

22 Q. Uh-huh.

23 A. You know, that's an economic thing, that's a
24 commercial-type question, right? And I visited with Jemez
25 in the last week, and I don't think they really deal. I

1 think they tell you, This is what it is. And since -- you
2 know, in the last seven years the cost of running an
3 electric out here has gone up probably an order of
4 magnitude. They had a 280-percent increase, they told me,
5 this spring.

6 I was like -- What? We started looking at this
7 last year.

8 And they said, Yeah, 280 percent early this
9 spring.

10 So power out here is going to -- Our estimate is
11 approximately \$400,000. To run power from Eagle Mesa --
12 there's three-phase power at Eagle Mesa, and to run it out
13 here is going to cost us quite a bit of money. Anyway...

14 Q. Okay. So when Synergy got to the point where
15 they were producing more water than they wanted, they just
16 plugged the wells?

17 A. Yeah, actually when Synergy took over as operator
18 on these wells they attempted to produce from the Menefee
19 coals in the Number 2M well, and their thought was, they
20 were going to try and dewater those. And they actually
21 tested in the number one well, the producing Entrada perms,
22 for injection. So there was an injection test where they
23 injected water into it, and they acidized it. We think
24 they've ruined that well, Number 1 well, for production.

25 So we are actually in process. The Number 2 well

1 is on normal 40-acre spacing. It was not at a nonstandard
2 location, the Number 2M well, and we are process of
3 deepening that well to the Entrada right now.

4 Q. Okay. So your plan is to produce the Number 2
5 well?

6 A. Correct.

7 Q. And what are you going to do with the Number 1?

8 A. If we are successful in establishing commercial
9 production in the Number 2 well -- and I'm -- you know,
10 we've got some thoughts in terms of how we want to produce
11 this thing. We feel like, you know, we could put off water
12 production maybe for a year or so, but our intention down
13 the road is going to be to re-enter the Number 1 well and
14 make it a saltwater disposal well in the Entrada, which has
15 been the standard disposal zone in these Entrada pools.

16 And again, it's a very thick zone. It does have
17 some stratigraphic layering, kind of, in it as you get down
18 to the formation that we think will provide somewhat of a
19 barrier when we inject. And this is what was done by
20 Merrion and Filon and Petro-Lewis, you know, going back to
21 the '70s, when they were producing out here.

22 Q. You didn't do any kind of drainage calculation on
23 these wells, right?

24 A. At Eagle Mesa?

25 Q. Yeah.

1 A. No.

2 Q. But these wells, it's your opinion that none of
3 them are draining -- what, more than 40?

4 A. Well, I think you could say none of them might be
5 draining, you know, more than 10 even.

6 Again, I think because of the -- you know, when
7 the water breaks through, which seems to happen fairly
8 early in the life of this, you have a cone. And what's the
9 shape of that cone? We've talked with Steve Dunn, with
10 Merrion in Farmington. You know, he said they looked real
11 hard at -- you know, at different studies. They had looked
12 at CO₂. And he said, We just came to the conclusion that
13 you just need to move a lot of fluid. And in essence, it's
14 a skimming operation.

15 Q. Now, if you guys -- Are you the owners of both
16 those federal leases?

17 A. Yes.

18 Q. So all the acreage shown on your Exhibit A that's
19 colored is owned by your company?

20 A. Yes, I just used two different colors to specify
21 the two different federal leases. So you can see that
22 99704 is actually split, we have most of the acreage in
23 Section 1, except the southeast quarter, and then Section
24 5, that's part of the same lease --

25 Q. Okay --

1 A. -- and then 99705 covers 6, 7, 8 and 9.

2 Q. So based on the geology, you're going to -- all
3 of your activity is going to be centered in the northern
4 half of Section 8, and possibly in the south half of
5 Section 5?

6 A. Yes. Basically again, we think that this 3-D
7 interpretation that's done is a very valid one.

8 Q. Okay.

9 A. And, you know, I have reviewed this seismic data.

10 EXAMINER CATANACH: Okay, I don't think I have
11 anything else.

12 Mr. Brooks, do you --

13 MR. BROOKS: Nothing, thank you.

14 MS. MUNDS-DRY: Thank you.

15 EXAMINER CATANACH: Okay.

16 THE WITNESS: Thank you, it's a pleasure to be
17 here.

18 EXAMINER CATANACH: Thank you, sir.

19 Okay, there being nothing further in Case 13,917,
20 this case will be taken under advisement.

21 (Thereupon, these proceedings were concluded at
22 11:14 a.m.)

23 I do hereby certify that the foregoing is
24 a complete record of the proceedings in
the Examiner hearing of Case No. 3817.
heard by me on 17 August 2007

25 David M. Catnach, Examiner
Oil Conservation Division

CERTIFICATE OF REPORTER

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

I, Steven T. Brenner, Certified Court 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 May 14th, 2007.



STEVEN T. BRENNER
CCR No. 7

My commission expires: October 16th, 2010