

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 DAN A. HUGHES COMPANY, CASE NO. 14199
LP FOR APPROVAL OF A UNIT AGREEMENT,
HIDALGO COUNTY, NEW MEXICO

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REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: DAVID K. BROOKS, Legal Examiner
WILLIAM V. JONES, Technical Examiner
TERRY G. WARNELL, Technical Examiner

December 4, 2008

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, DAVID K. BROOKS, Legal Examiner, WILLIAM V. JONES, Technical Examiner, and TERRY G. WARNELL, Technical Examiner, on Thursday, December 4, 2008, at the New Mexico Energy, Minerals and Natural Resources Department, 1220 South Saint Francis Drive, Room 102, Santa Fe, New Mexico.

REPORTED BY: JOYCE D. CALVERT, P-03
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FOR THE APPLICANT:

William F. Carr, Esq.
HOLLAND & HART, LLP
110 North Guadalupe, Suite 1
Santa Fe, New Mexico 87501

1 MR. JONES: Okay. Let's go back on the record this
2 morning. Let's call Case No. 14199, Application of Dan A.
3 Hughes Company, LP for Approval of Unit Agreement, Hidalgo
4 County, New Mexico.

5 Call for appearances.

6 MR. CARR: May it please the Examiner, my name is
7 William F. Carr, with the Santa Fe office of Holland &
8 Hart, LLP. We represent Dan A. Hughes Company, LP in this
9 matter. And I have two witnesses.

10 MR. JONES: Any other appearances?

11 Will the witnesses please stand and state your names?

12 MR. HOLDER: Robert Holder.

13 MR. KORNEGAY: Gary Kornegay.

14 [Witnesses sworn.]

15 MR. CARR: May it please the Examiner, initially I
16 need to point out there is an error in what I filed. The legal
17 ad in this case notes that we're seeking approval for a unit
18 comprised of 42,107.69 acres. That was an earlier number. The
19 actual number, the number of acres, is 39,667.69.

20 I would be happy to file a new advisement if you
21 think that is necessary, but the way we advertise these, we've
22 actually advertised more. And only those who have signed are
23 actually committed to the units, since it's completely
24 voluntary. But there is that discrepancy, and we'll do
25 whatever you please.

1 MR. BROOKS: Well, I think it's a fairly well
2 established -- I assume, except for the acreage, the legal
3 description is correct?

4 MR. CARR: The legal description in -- the legal
5 description in the ad is correct. There is a quarter section
6 adjustment in between what we're now unitizing in the
7 application. I can re-file that as well. But as you'll see,
8 we've been chasing for several years with people in and out.

9 MR. BROOKS: Now, the legal description probably does
10 need to be corrected. What I was --

11 MR. CARR: It's correct, Mr. Brooks, in the ad.

12 MR. BROOKS: The legal description is correct in the
13 ad.

14 MR. CARR: Yes.

15 MR. BROOKS: Where is there a discrepancy, then?

16 MR. CARR: There is -- in the long list of
17 descriptions, they are in there as to the S/2 of one quarter
18 section in the application that was filed.

19 MR. BROOKS: But not in the ad?

20 MR. CARR: But not in the ad.

21 MR. BROOKS: Okay. I think that's -- then it's okay.
22 Because my understanding is that it's a well established
23 principle of land descriptions that you ignore the recitation
24 of the quantity of acreage if it's incorrect and you go by the
25 legal description. So if the legal description is right, I'm

1 not concerned about --

2 MR. CARR: So either we -- you know, if we
3 re-advertise, we'd just be advertising less.

4 MR. BROOKS: Well. I'm not concerned about an error
5 in the stated quantity of acreage if the legal description is
6 correct.

7 MR. CARR: It is.

8 MR. BROOKS: You always go by the legal description
9 and not by the quantity of acreage.

10 MR. CARR: May it please the Examiner, with that, I
11 would call our land witness, Robert Holder.

12 ROBERT HOLDER

13 after having been first duly sworn under oath,
14 was questioned and testified as follows:

15 DIRECT EXAMINATION

16 BY MR. CARR:

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

18 A. Robert Holder.

19 Q. Mr. Holder, where do you reside?

20 A. Beeville, Texas.

21 Q. And by whom are you employed?

22 A. Dan A. Hughes Company, LP.

23 Q. And what is your relationship with Dan A. Hughes
24 Company?

25 A. A petroleum landman.

1 Q. Have you previously testified before the
2 New Mexico Oil Conservation Division?

3 A. I have.

4 Q. At that time, were your credentials as an expert
5 in petroleum land matters accepted as a matter of record?

6 A. Yes, they were.

7 Q. Are you familiar with the application filed in
8 this case on behalf of Dan A. Hughes?

9 A. I am.

10 Q. And are you familiar with the proposed North Big
11 Hatchet exploratory unit, including the status of the lands in
12 the proposed unit area?

13 A. I am.

14 MR. CARR: We tender Mr. Holder as an expert in
15 petroleum land matters.

16 MR. JONES: Mr. Holder is so qualified as an expert
17 in land matters.

18 Q. (By Mr. Carr) Mr. Holder, could you briefly
19 summarize for the Examiners what it is that Dan A. Hughes
20 Company seeks in this application.

21 A. Well, we seek approval of the proposed unit,
22 which is a voluntary unit, State fee acreage unit.

23 Q. And where is this located?

24 A. This is in Hidalgo County, New Mexico.

25 Q. Have you prepared exhibits for presentation here

1 today?

2 A. I have.

3 Q. Would you identify what has been marked as Hughes
4 Exhibit No. 1?

5 A. Exhibit No. 1 is the State fee exploratory unit
6 agreement.

7 Q. And the Dan A. Hughes Company is the designated
8 operator in this unit agreement?

9 A. We are.

10 Q. And what formations are you proposing to test?

11 A. There are several formations that we are looking
12 to test from the Horquilla Sandstone, Epitaph, Percha Shale, El
13 Paso, Montoya, all of these formations.

14 Q. And you are intending and seeking to unitize all
15 formations from the surface to the base?

16 A. We are.

17 Q. Let's go to Exhibit No. 2. Would you explain
18 what this is?

19 A. This is a plat showing the acreage unit boundary.

20 Q. And this is a copy of Exhibit A to the unit
21 agreement?

22 A. Yes.

23 Q. And there's a clear copy in the unit agreement.
24 Exhibit 2 did not copy well. It's hard to read.

25 Would you refer to this exhibit and just review the

1 status of the acreage in the proposed unit for the Examiners?

2 A. The status is there are 73 State of New Mexico
3 leases, one fee acreage lease with Pacific Western Land
4 Company. The ownership of the entire land within the unit
5 boundary are held in that manner.

6 Q. And is Exhibit No. 3 a copy of the Exhibit B to
7 the unit agreement that identifies those leases and the
8 ownership of each?

9 A. It is.

10 Q. How many working interest owners are there in
11 this unit?

12 A. There are two; Dan A. Hughes Company, LP, Fort
13 Worth Operating, and then of course, we have the Pacific
14 Western as lessor on the fee acreage.

15 Q. And since this is a voluntary unit, you do have
16 100 percent commitment on working interest?

17 A. We do.

18 Q. And would you identify what is marked as Pacific
19 Western -- or Dan A. Hughes Exhibit No. 4?

20 A. This is a letter from Pacific Western Land
21 Company stating that they have executed a fee acreage lease
22 covering the 1120 acres as well as a surface use agreement over
23 the entire acreage within the unit boundary.

24 Q. How long has Dan A. Hughes been actually working
25 this unit?

1 A. We've been working on this unit since 2003, 2005.

2 Q. Okay. And who owns the royalty in the unit?

3 A. A hundred percent State of New Mexico and Pacific
4 Western.

5 Q. And is 100 percent of the royalty interest also
6 committed to the unit plan?

7 A. It is.

8 Q. Would you identify Exhibit No. 5?

9 A. Exhibit No. 5 is the initial preliminary approval
10 from the Commissioner of Public Lands for the Big Hatchet North
11 unit.

12 Q. And could you just explain to the Examiners what
13 is the basis for the unit boundary?

14 A. There is a set of land and geologic issues.
15 Mr. Kornegay will get into the geologic issues.

16 Q. And you've been responsible for the land portion
17 of the case?

18 A. I have.

19 Q. And the unit is somewhat irregular in terms of
20 its boundary, at least off to the northeast; is that not right?

21 A. It is.

22 Q. And have you been negotiating with the State Land
23 Office for the inclusion of State of New Mexico lands?

24 A. We have.

25 Q. What is the status of the federal lands in the

1 area?

2 A. There are federal lands within the area. And as
3 we testified last year on the Waco South unit, we had looked to
4 take some federal leases, which we have done. They have been
5 unwilling to commit that acreage to either unit at this time.
6 So should there be exploration production, we would protect and
7 develop federal acreage on a lease basis.

8 Q. All right. Is your Exhibit No. 6 a letter
9 confirming with the BLM their decision not to commit their
10 acreage to the unit plan?

11 A. It is.

12 Q. Do you have leases expiring in this area?

13 A. We do. We have leases expiring in June of '09.

14 MR. BROOKS: It looks to me you have two Exhibit 6's
15 here because the Land Office letters -- no. It's marked
16 Exhibit 5 on the bottom and Exhibit 6 at the top.

17 MR. CARR: We did that to be sure you're reading
18 them. It's the sticker at the bottom. Yesterday we did change
19 the exhibit somewhat because we had the AFE and moved it to the
20 second witness.

21 MR. BROOKS: Sorry.

22 Q. (By Mr. Carr): Could you identify Exhibit No. 7,
23 Mr. Holder?

24 A. This is the draft of the proposed order for
25 approval.

1 Q. This is basically drawn from the order the
2 Division entered a year ago for the Waco unit to the south?

3 A. It is.

4 Q. Okay. And Dan A. Hughes does request to be
5 designated operator of the unit?

6 A. Yes, we do.

7 Q. Does the unit agreement provide for the filing of
8 the periodic plans of development?

9 A. It does.

10 Q. Will these be filed with the Oil Conversation
11 Division the same time they are filed with the New Mexico State
12 Land Office?

13 A. Yes, they will.

14 Q. And how often are these to be filed?

15 A. Preliminary would be six months after initial
16 well and subsequent a year after.

17 Q. And every 12 months thereafter?

18 A. Every twelve months thereafter.

19 Q. Were Dan A. Hughes Exhibits 1 through 7 either
20 prepared by you or compiled under your direction?

21 A. They were.

22 Q. And we will be calling a geological witness to
23 review the technical portions of the case?

24 A. Yes, sir.

25 MR. CARR: We move the admission into evidence of Dan

1 A. Hughes' Exhibits 1 through 7.

2 MR. JONES: Exhibits 1 through 7 will be admitted.

3 [Applicant's Exhibits 1 through 7 admitted into
4 evidence.]

5 MR. CARR: And that concludes my direct examination
6 of Mr. Holder.

7 EXAMINATION

8 BY MR. JONES:

9 Q. Mr. Holder, the lease terms, can you just, for my
10 layman's perspective, explain what a typical -- like a State
11 land lease out here would have conditions? The lease length
12 and the bonus length and the --

13 A. Well, it's a dual term -- initial five years and
14 secondary term of another five years, at which time really the
15 only thing that changes is the rental is doubled. There is, of
16 course, a fixed royalty. And basically, you know, the key word
17 is conservation. And there are State leases which, from time
18 to time, are withdrawn for certain reasons, and these have come
19 up for auction from time to time and moved on and off.

20 Q. But the five years and five years what would be
21 the break? What would --

22 A. Right in the middle.

23 Q. Why would they do that?

24 A. I really don't know. But that is, you know --
25 it's basically a ten-year lease, but it is split in the middle,

1 right in the middle, of the term. And like I said, the only
2 difference being is that the rentals double from 25 cents an
3 acre to 50 cents an acre.

4 Q. Does the State -- on those State leases, does the
5 State own the surface also?

6 A. In this particular unit boundary, there are three
7 different sets of ownership. The majority is owned by Pacific
8 Western Land Company, surface only. In other words, we have
9 Pacific Western who has surface, we have the State of
10 New Mexico which has some surface, and we have the BLM which
11 has some surface.

12 We also have Pacific Western which has 1120 acres
13 within the unit boundary is fee. So a very small amount of
14 their actual surface area is fee acreage. Some of the
15 remainder is BLM, some is State of New Mexico, as far as
16 minerals are concerned.

17 Within the unit boundary, it is all State of New
18 Mexico minerals except for that fee acreage.

19 Q. Okay. The Pacific Western, are they just a huge
20 ranch?

21 A. Pacific Western is an arm of Phelps Dodge,
22 Freeport-McMoRan, and this is a portion of a very large ranch
23 that it's my understanding is mortgaged, if you will, with the
24 State of New Mexico against their cleanup of the Tyrone Mine.

25 Q. Okay. In terms of this State unit, can you

1 explain those just real briefly besides the plan of development
2 that you have to turn in in six months and then every year, I
3 guess, but the drilling schedule, what do they require?

4 A. Upon final approval 60 days, we go underneath the
5 60-day close to spud in our first well. After TD on that well,
6 it's 180 days subsequent continuously -- a continue drilling
7 provision, basically. Every 180 days a new one must be begun.

8 Q. Spud?

9 A. Spud.

10 Q. Okay.

11 MR. JONES: That's all the questions I have. Any
12 questions?

13 MR. BROOKS: No questions.

14 MR. JONES: Thank you very much.

15 MR. CARR: May it please the Examiners, at this time,
16 we call our geological witness, Mr. Gary Kornegay.

17 GARY KORNEGAY

18 after having been first duly sworn under oath,

19 was questioned and testified as follows:

20 DIRECT EXAMINATION

21 BY MR. CARR:

22 Q. Would you state your full name for the record,
23 please?

24 A. Gary Kornegay.

25 Q. Where do you reside?

1 A. Houston, Texas.

2 Q. By whom are you employed?

3 A. I'm an independent consultant, and I'm contracted
4 to Dan Hughes.

5 Q. Have you previously testified before the Oil
6 Conservation Division?

7 A. Yes, I have.

8 Q. Did you testify as the geological witness in the
9 case last year for approval of the Waco unit?

10 A. Yes, I did.

11 Q. Are you familiar with the application filed in
12 this case?

13 A. Yes, I am.

14 Q. Mr. Kornegay, have you made a geological study of
15 the area that's the subject of this application?

16 A. Yes, I have.

17 Q. And are you prepared to share the results of your
18 work with the Oil Conservation Division?

19 A. I am.

20 MR. CARR: We tender Mr. Kornegay as an expert
21 witness in petroleum geology.

22 MR. JONES: Mr. Kornegay is qualified as an expert in
23 petroleum geology.

24 Q. (By Mr. Carr): Let's start by just identifying
25 your primary objective.

1 A. The primary objective for the unit is going to be
2 the Percha Shale which is equivalent to the Woodford. It's
3 Devonian in age. It's an organic-rich shale, and we're
4 anticipating that it will be a shale gas play similar to what
5 we see in the Barnett.

6 Q. And what is the anticipated depths in which you
7 will encounter in the Percha Shale?

8 A. Within the unit we will see the Percha. The top
9 of it will come in as shallow as 5,000 feet, and we'll continue
10 to exploit it below 10,000.

11 Q. Generally what is the thickness of this shale?

12 A. It is between 350 and 450 feet there.

13 Q. Has this formation ever been tested in the
14 immediate area?

15 A. No, it hasn't. It has been drilled through, but
16 no wells have been tested. There have been a total of five
17 wells in the region that penetrated the Percha, but there have
18 been no tests of the unit.

19 Q. Now far would you have to go to find a well?

20 A. The closest well was a quarter mile to the
21 northwest of our location -- closer to half mile, and we're
22 going to utilize it as a go-by for depth for drilling.

23 Q. The Percha Shale is the primary objective?

24 A. Absolutely.

25 Q. And what are the secondary objectives?

1 A. We have some uphold potential in the Epitaph,
2 which is Permian in age, and the Horquilla, which is
3 Pennsylvanian. We also have potential in Montoya and the El
4 Paso, which are underneath the Percha Shale.

5 Q. Let's refer to what's been marked Dan A. Hughes
6 Exhibit No. 8. And using this exhibit, could you describe the
7 regional setting for the unit?

8 A. This is a map that shows the location of where
9 the proposed unit is going to be. It is the yellow square on
10 the map. It's in southwest New Mexico right on the Arizona,
11 New Mexico, Mexican border. It is within the Pedregosa Basin,
12 the northern portion of the Pedregosa Basin. That basin
13 extends into Mexico as well.

14 It is a relatively unexplored basin; very few wells
15 have drilled in the basin. It's depositionally the same as the
16 Midland, the Delaware and the Orogrande Basins in Texas and
17 New Mexico, and we're anticipating similar sedimentary sections
18 to that.

19 And that draws the analogy between the Percha and the
20 Woodford Shale. So they're exactly the same, exactly the same
21 age, same depositional system.

22 Q. Mr. Kornegay, what information have you used to
23 prepare your geologic interpretation?

24 A. I've utilized surface control outcrop, subsurface
25 well control, and we do have some seismic in the area that

1 we've utilized as well. It's 2-D data.

2 Q. Why don't we go to what has been marked Dan A.
3 Hughes Company Exhibit No. 9, the Mississippian structure map,
4 and explain to the Examiners what this shows?

5 A. Okay. Exhibit No. 9 is a Mississippian structure
6 map. The contours are in there. What we can see from the
7 contouring is that there is a north/south trending plateau in
8 here. There are some faults in here that are extensional type
9 faults that we have block, et cetera.

10 Within that north/south trending plateau, we have
11 some isolated structural features that develop, one of which is
12 where we're proposing our location up on the north side of
13 this, and it's on the same east plunging anticline that the
14 Cockrell Playa State 114 is located, which is our control well
15 for the units that we're looking at.

16 There's a second well that has been drilled in the
17 unit. It's in the southern portion of the unit. That's the
18 Cockrell State 1 dash -- several numbers. And it has a TD that
19 did not reach the Percha Shale.

20 Q. Okay. Let's go to Exhibit 10. And using this
21 exhibit, could you review for the Examiners the shale
22 distribution?

23 A. We have limited control on the thickness of the
24 shale. We have control to the east of this map, and the Big
25 Hatchet Mountains and the outcrop. We have a single point

1 within the map of the Cockrell Playa State well that's up in
2 Section 14 of 30 South, 17 West. And then we have an
3 additional well off to the southeast.

4 Within that area, we see very little variation in the
5 thickness of the unit. It's going to be between 350 and 400
6 feet, 450 feet. The particular well, the Cockrell well that
7 we're going to be referencing, the Percha Shale comes in at
8 5150 and is 430 feet.

9 Q. Let's go to the next exhibit, the log section,
10 Exhibit 11.

11 A. This is the log section of the Cockrell well that
12 we're using as our control well. In there you can see the
13 Percha Shale as developed. I've got the top of it. The
14 numbers in the center column are obscured, but it basically
15 comes in at 5150. And you can see the top of Montoya there at
16 5570, roughly, 5570 to 5580. That is the Percha, and that will
17 be our main objective.

18 Q. And this is the well that you referenced that is
19 approximately a half mile from the initial unit well?

20 A. Yes.

21 Q. And that initial test well, where is it going to
22 be drilled?

23 A. It is going to be drilled in the NW of the SE of
24 Section 14, Township 30 South, Range 17 West, and it's in the
25 northern portion of the unit.

1 Q. To what approximate depth are you going to drill?

2 A. We will drill to a depth of 6600 feet.

3 Q. What do you anticipate the cost of the drilling
4 to be?

5 A. We have an AFE that shows \$2.75 million for the
6 initial well.

7 Q. And is that AFE included in the exhibits as
8 No. 12?

9 A. It is.

10 Q. How soon does Dan Hughes plan to commence
11 drilling?

12 A. We'd like to start as soon as possible, but we
13 must commence by June the 1st.

14 Q. Is Dan Hughes' Exhibit 13 a written summary of
15 your geological presentation?

16 A. Yes.

17 Q. Would you summarize for the Examiner why it is
18 that Dan Hughes is proposing to develop this area under the
19 proposed unit plan?

20 A. First off, the primary objective, the Percha
21 Shale, is a laterally pervasive unit. It is a shale gas play
22 similar to what we see in the Barnett and a number of the other
23 shale gas plays across the country.

24 What we'd like to do is have the units so that we can
25 have a very uniform development and not be jumping around from

1 lease to lease based on expirations. Ultimately, we may need
2 to do horizontals. There may be some differences, so having
3 the unit in place facilitates getting that done in a timely
4 fashion.

5 Q. Is it Dan A. Hughes Company's hope that there are
6 multiple untested intervals in this unit that may contain
7 commercial hydrocarbons?

8 A. Yes, it is.

9 Q. If the initial well is successful, what
10 additional wells -- or what are you going to gain from that
11 that will aid you in further development of this?

12 A. The initial well will help us define what sort of
13 drilling technology and treatments will be effective on this
14 shale and establish its produceability. From there we can
15 design our programs on how we will drill subsequent wells. We
16 anticipate that there will be a number of wells drilled in
17 here.

18 Q. In your opinion, will approval of the unit
19 agreement result in efficient development and production of the
20 hydrocarbons in this area?

21 A. Yes, it will.

22 Q. Will approval of this application otherwise be in
23 the best interests of conservation and prevention of waste and
24 the protection of correlative rights?

25 A. Yes.

1 Q. Were Dan A. Hughes Company Exhibit 8 through 13
2 prepared by you?

3 A. Yes, they were.

4 MR. CARR: May it please the Examiners, at this time,
5 we move the admission into evidence of Dan A. Hughes Company
6 Exhibit 8 through 13.

7 MR. JONES: Exhibits 8 through 13 will be admitted.

8 [Applicant's Exhibits 8 through 13 admitted into
9 evidence.]

10 MR. CARR: That concludes my direct of Mr. Kornegay.

11 EXAMINATION

12 BY MR. JONES:

13 Q. You're not bringing an engineer? You listed one
14 on the --

15 A. We do have an engineer here who is ready to be
16 able to talk about --

17 MR. CARR: If you have questions that are engineering
18 in character, we do have an engineer. I think it might only be
19 as to the details of the AFE, since really the unit is formed
20 based on the geology.

21 Q. (Mr. Jones): What temperature are you looking at
22 in the Percha?

23 A. We're probably at 230 to 2 -- it's a fairly
24 hot --

25 Q. It's pretty warm?

1 A. Yeah. Our thermal maturities are in the late
2 gas, late condensate, late gas stage.

3 Q. So you've got a danger of running into CO₂, then?

4 A. That we do not know. It is a possibility with
5 the carbonates in this section. But we just don't know what to
6 anticipate. There have been no -- we have done some sample
7 work. We have no ~~cores~~ ^{OK}. But it does appear that it has
8 sufficient ~~TDC~~, and the terminal maturity puts it in a realm to
9 where we think we'll get dry gas to maybe low condensate.

10 Q. Okay. You're going for the source rock?

11 A. Right.

12 Q. Which should reduce your risk a little bit.

13 A. It's an exciting play, particularly when you
14 consider the thickness of the unit here as compared to where
15 they're making decent Woodford shale wells, and we're
16 substantially thicker. So it's an exciting play.

17 Q. It is. I remember you saying that last year.

18 A. Yeah. Well, we did drill the well in the
19 Waco south unit to the south, and we -- because of the delay we
20 had, we were not able to get the original rig that we had
21 scheduled, and we ended up getting a rig that we can only drill
22 to 10,000 feet, and we were not able to reach the Percha. So
23 we just couldn't get there.

24 Q. So it's difficult to really know where you're
25 right on those fault blocks.

1 A. Yeah. You're in wildcat country. That's why
2 we've decided to come up here to the north, get close to a well
3 that we really know. We know what we've got, where we're at,
4 and test our shale concept.

5 Q. The fracturing, is that -- do you have an opinion
6 or a theory about orientation and the frequency?

7 A. I anticipate fractures are going to be oriented
8 primarily north/south parallel to the elongate axis of that
9 structural feature that's in there. Other than that, there may
10 be some nuances that -- but that's what I primarily anticipate.

11 So if we were to drill horizontal, I'd drill
12 east/west, you know. That would be kind of the approach right
13 now. But, you know, this initial well is going to tell us a
14 whole lot about what we need to do.

15 Q. It seems like sometimes drilling vertical wells
16 for fractures, you might hit one that pays off the previous
17 ten.

18 A. Right.

19 Q. You know, if you finally hit that fracture --

20 A. Right. Now, you know, with a lot of the
21 conventional things that are happening in shales, fractures
22 don't necessarily control the production. You get -- in fact,
23 fractures in Barnett are negative because they segregate the
24 reservoir. They create avenues for fluid production which
25 inhibits the gas.

1 Q. What -- the gas needs to be held somewhere.

2 A. Yeah. It's in the matrix. It is almost like
3 coal bed methane.

4 Q. So you're talking about frac jobs, big frac jobs,
5 here?

6 A. And they are effective in getting gas out. Our
7 technology has evolved tremendously.

8 Q. Okay. Is this area -- it's so old, Devonian age,
9 has it been uplifted and subsided?

10 A. There's been quite of a bit of activity in here.
11 In fact, the horizons we're going to be looking at depth
12 between 5 and 10,000 feet are 4,000 feet above the basin, the
13 Palayas valley. Those units are 4,000 feet above that. So
14 there's dramatic elevation differences right now.

15 Q. Do you have -- do you use an ^{"AERO"} ~~air~~ mag or anything
16 like that to look at the basement rock?

17 A. We have done that. We've done gravity. We've
18 utilized every scientific thing we can get. We've even talked
19 about shooting 3-Ds. The problem with that is we just don't
20 have enough well control to really tie things down yet.

21 Q. I notice this unit is extended over to the east,
22 but your -- is your Percha deeper in that area?

23 A. Yes, it is. We are moving into the U-Bar
24 syncline which is -- the syncline will act basically as the
25 Pedregosa basin as it plunges off to the south. It is narrow

1 mostly because we want to stay close to or up on that platform,
2 that higher area.

3 Q. Okay.

4 A. And we don't want to get into the Big Hatchet
5 Mountains in the east.

6 Q. Yeah. Okay.

7 MR. JONES: You guys have anymore questions?

8 MR. BROOKS: No questions.

9 MR. JONES: Thanks very much. And good luck.

10 MR. CARR: Thank you.

11 MR. JONES: With that, we'll take Case 14199 under
12 advisement.

13 * * *

14
15 I do hereby certify that the foregoing is
16 a complete record of the proceedings in
17 the Examiner hearing of Case No. _____
18 heard by me on _____, Examiner
19 _____
20 Oil Conservation Division
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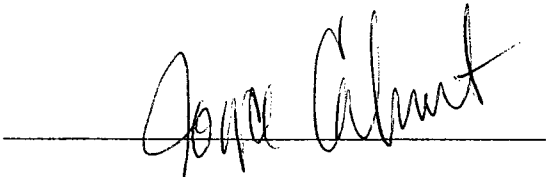
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REPORTER'S CERTIFICATE

I, JOYCE D. CALVERT, Provisional Court Reporter for the State of New Mexico, do hereby certify that I reported the foregoing proceedings in stenographic shorthand and that the foregoing pages are a true and correct transcript of those proceedings and was reduced to printed form under my direct supervision.

I FURTHER CERTIFY that I am neither employed by nor related to any of the parties or attorneys in this case and that I have no interest in the final disposition of this proceeding.

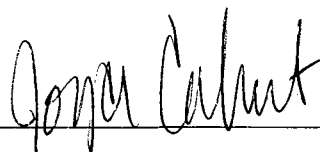
DATED this 4th day of December, 2008.


JOYCE D. CALVERT
New Mexico P-03
License Expires: 7/31/09

1 STATE OF NEW MEXICO)
2)
3 COUNTY OF BERNALILLO)

4 I, JOYCE D. CALVERT, a New Mexico Provisional
5 Reporter, working under the direction and direct supervision of
6 Paul Baca, New Mexico CCR License Number 112, hereby certify
7 that I reported the attached proceedings; that pages numbered
8 1-27 inclusive, are a true and correct transcript of my
9 stenographic notes. On the date I reported these proceedings,
10 I was the holder of Provisional License Number P-03.

11 Dated at Albuquerque, New Mexico, 4th day of
12 December, 2008.

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