

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:)

CASE NO. 13,296

APPLICATION OF YATES PETROLEUM)
 CORPORATION FOR APPROVAL OF A UNIT)
 AGREEMENT, CHAVES COUNTY, NEW MEXICO)

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: WILLIAM V. JONES, JR., Hearing Examiner

July 8th, 2004

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, WILLIAM V. JONES, JR., Hearing Examiner, on Thursday, July 8th, 2004, 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.

* * *

WVJ
7/25/04

I N D E X

July 8th, 2004
Examiner Hearing
CASE NO. 13,296

	PAGE
EXHIBITS	3
APPEARANCES	3
APPLICANT'S WITNESSES:	
<u>CHARLES E. MORAN</u> (Landman)	
Direct Examination by Mr. Carr	4
Examination by Examiner Jones	10
<u>TIM MILLER</u> (Geologist)	
Direct Examination by Mr. Carr	11
Examination by Examiner Jones	23
REPORTER'S CERTIFICATE	28

* * *

E X H I B I T S

Applicant's	Identified	Admitted
Exhibit 1	6	10
Exhibit 2	6	10
Exhibit 3	7	10
Exhibit 4	8	10
Exhibit 5	13	22
Exhibit 6	13	22
Exhibit 7	14	22
Exhibit 8	15	22
Exhibit 9	18	22
Exhibit 10	21	22
Exhibit 11	21	22

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A P P E A R A N C E S

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 By: WILLIAM F. CARR

* * *

1 WHEREUPON, the following proceedings were had at
2 8:51 a.m.:

3 EXAMINER JONES: And at this time let's call Case
4 13,296, Application of Yates Petroleum Corporation for
5 approval of a unit agreement, Chaves County, New Mexico.
6 Call for appearances.

7 MR. CARR: May it please the Examiner, my name is
8 William F. Carr with the Santa Fe office of Holland and
9 Hart, L.L.P. I represent Yates Petroleum Corporation in
10 this matter, and I have two witnesses.

11 EXAMINER JONES: Any other appearances? Will the
12 witnesses please stand to be sworn?

13 (Thereupon, the witnesses were sworn.)

14 EXAMINER JONES: I notice you brought the usual
15 suspects, Mr. Carr.

16 MR. CARR: Culprits.

17 CHARLES E. MORAN,
18 the witness herein, after having been first duly sworn upon
19 his oath, was examined and testified as follows:

20 DIRECT EXAMINATION

21 BY MR. CARR:

22 Q. Could you state your name for the record, please?

23 A. My name is Charles Moran.

24 Q. Mr. Moran, where do you reside?

25 A. In Artesia, New Mexico.

1 Q. By whom are you employed?

2 A. Yates Petroleum Corporation as a landman.

3 Q. And have you previously testified before the Oil
4 Conservation Division and had your credentials as an expert
5 in petroleum land matters accepted and made a matter of
6 record?

7 A. Yes, I have.

8 Q. Are you familiar with the Application filed in
9 this case?

10 A. Yes, I am.

11 Q. Are you familiar with the proposed Stingray
12 Exploratory Unit and the status of the lands in the
13 proposed unit area?

14 A. Yes, I am.

15 MR. CARR: Are the witness's qualifications
16 acceptable?

17 EXAMINER JONES: They are acceptable.

18 Q. (By Mr. Carr) Mr. Moran, would you briefly
19 summarize for the Examiner what it is that Yates seeks in
20 this case?

21 A. Yates Petroleum Corporation seeks approval of the
22 Stingray State Unit agreement in Chaves County, New Mexico.

23 Q. This is a voluntary exploratory unit?

24 A. Correct.

25 Q. How many acres are in the unit area?

1 A. The unit is composed of 1913.22 acres, composed
2 of four tracts, being state acreage, totaling 1716.09 and
3 one tract of fee composed of 197.13 acres.

4 Q. Under this unit plan, does Yates propose to test
5 all formations from the surface to the base of the
6 Silurian-Devonian?

7 A. Yes.

8 Q. Have you prepared exhibits for presentation here
9 today?

10 A. Yes, I have.

11 Q. Would you refer to what has been marked for
12 identification as Yates Exhibit Number 1?

13 A. Yates Exhibit Number 1 is the standard state/fee
14 exploratory unit agreement.

15 Q. This is on a state form?

16 A. Yes, it is.

17 Q. Let's go to Yates Exhibit Number 2. What is
18 this?

19 A. Yates Exhibit Number 2 is the Exhibit to A attach
20 to the unit agreement, identifying the lands in Chaves
21 County, New Mexico, being Township 10 South, Range 26 East
22 and 27 East. Shaded in gray are the leasehold to be
23 included within the unit boundaries.

24 Q. And this shows the four state leases and the one
25 fee lease?

1 A. Correct.

2 Q. What percentage of the working interest ownership
3 has been voluntarily committed to the unit plan?

4 A. 100 percent of the working interest unit has been
5 voluntarily committed.

6 Q. What is Exhibit 3?

7 A. Exhibit 3 is a list of the leasehold and the
8 ownership thereof for the lands committed to the unit.

9 Q. It shows the working interest ownership
10 throughout the unit area?

11 A. Yes.

12 Q. That's all Yates or Yates-related entities?

13 A. Correct.

14 Q. The only non -- or the only different interest is
15 the Malcom C. Harral and Loretta Fay Harral royalty
16 ownership in Tract 5; is that correct?

17 A. Correct, that lease is represented by one lease
18 with various royalty owners through inheritance and
19 conveyances of the property.

20 Q. Has that royalty interest also been committed to
21 the unit plan?

22 A. The working interest owners under the oil and gas
23 lease have the right to commit the interest to an
24 exploratory unit, and so yes, it is committed.

25 Q. So we have 100-percent working interest and 100-

1 percent royalty interest committed?

2 A. Yes.

3 Q. Would you identify what has been marked Yates
4 Exhibit Number 4?

5 A. Yates Exhibit Number 4 is a letter received from
6 the Commissioner of Public Lands granting preliminary
7 approval of the Stingray Unit.

8 Q. Does Yates Petroleum Corporation seek to be
9 designated operator of the unit?

10 A. Yes, we do.

11 Q. And how soon do you plan to commence the drilling
12 of the initial unit well?

13 A. We need to commence drilling of the initial unit
14 well as soon as possible. We have a lease expiring on
15 8-1-2004.

16 Q. Does the unit agreement provide for the periodic
17 filing of plans of development?

18 A. Yes, it provides for an initial plan of
19 development to be filed six months after completion of the
20 well and then on an annual basis thereafter.

21 Q. Will these plans be filed with the Oil
22 Conservation Division at the same time they're filed with
23 the Commissioner of Public Lands?

24 A. Yes, they will.

25 Q. What horizons are being unitized in the Stingray

1 exploratory unit?

2 A. We anticipate unitizing all formations from the
3 surface down to the base of the Silurian-Devonian.

4 Q. Could you identify for the Examiner the location
5 of the initial unit well?

6 A. The initial unit well will be at a location of --
7 I believe it's 1980 from the -- or no, 1660 from the north
8 line, 1980 from the east, in Section 18 of Township 10
9 South, Range 27 East.

10 Q. Do you know the total depth projected for that
11 well?

12 A. Approximately 6700 feet.

13 Q. And that well will be deep enough to test the
14 Silurian-Devonian formation?

15 A. Yes, we -- the practice in this drilling program
16 out here is drilling everything down to the basement, so we
17 will drill all the way through the Silurian-Devonian
18 formation.

19 Q. Were Exhibits 1 through 4 prepared by you or
20 compiled under your direction?

21 A. Yes, they were.

22 Q. Will Yates call a geological witness to review
23 the technical portion of the case?

24 A. Yes, we will.

25 MR. CARR: May it please the Examiner, at this

1 time we'd move the admission into evidence of Yates
2 Exhibits 1 through 4.

3 EXAMINER JONES: Exhibits 1 through 4 will be
4 admitted to evidence.

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

7 EXAMINATION

8 BY EXAMINER JONES:

9 Q. Mr. Moran, when you file those six-month reports,
10 do you also file them with the Harral family or --

11 A. Typically, you don't --

12 Q. Okay.

13 A. -- you're not required to report to the royalty
14 owners. They have no right to that information in their
15 oil and gas lease.

16 Q. Okay.

17 A. Their interest is solely non-working, and they
18 have no decision-making authority.

19 Q. Okay. But you said you do report to the --

20 A. To the State Land Office.

21 Q. -- State Land Office.

22 A. That is a part of the unit agreement that they
23 require, and it is found in the unit agreement. It is a
24 requirement that they impose upon us in order to unitize.

25 EXAMINER JONES: Okay, thank you very much. I

1 have no further questions.

2 MR. CARR: May it please the Examiner, at this --

3 EXAMINER JONES: Gail?

4 MS. MacQUESTEN: No questions.

5 MR. CARR: I'm sorry. Trying to get out of here.

6 May it please the Examiner, at this time we'd
7 call Tim Miller.

8 EXAMINER JONES: Okay.

9 TIM MILLER,

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

12 DIRECT EXAMINATION

13 BY MR. CARR:

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

15 A. My name is Tim Miller.

16 Q. Where do you reside?

17 A. I reside in Carlsbad, New Mexico.

18 Q. By whom are you employed?

19 A. Yates Petroleum Corporation.

20 Q. And what is your position with Yates Petroleum
21 Corporation?

22 A. I'm a petroleum geologist.

23 Q. Mr. Miller, have you previously testified before
24 this Division and had your credentials as an expert in
25 petroleum geology accepted and made a matter of record?

1 A. Yes, I have.

2 Q. Are you familiar with the Application filed in
3 this case on behalf of Yates?

4 A. Yes, I am.

5 Q. Have you made a geological study of the area that
6 is the subject of this Application?

7 A. Yes, I have.

8 Q. And are you prepared to review the results of
9 this study with the Examiner?

10 A. Yes, I am.

11 MR. CARR: Are the witness's qualifications
12 acceptable?

13 EXAMINER JONES: They are.

14 Q. (By Mr. Carr) Mr. Miller, what is the primary
15 objective in this well?

16 A. The primary objective in the Stingray exploratory
17 unit is the Wolfcamp-Spear zone, and it is a wildcat well.
18 And in the unit outline, as you can see, there are no
19 Wolfcamp penetrations in the unit area.

20 Q. Are there secondary objectives in the unit area?

21 A. Yes, the secondary objective will be the
22 Silurian-Devonian dolomite.

23 Q. Let's talk initially about the Wolfcamp-Spear
24 zone, and I'd ask you to refer to what has been marked
25 Yates Exhibit Number 5, identify the exhibit and review the

1 information on this exhibit for Mr. Jones.

2 A. Exhibit Number 5 is a geophysical seismic time-
3 structure map on top of the Wolfcamp-Spear zone itself.
4 Now, the Spear zone is a Yates Petroleum in-house term of a
5 local producing limestone in the area, but it's Wolfcamp in
6 age, so that's why we call it the Spear zone, after a
7 former well we drilled many years ago.

8 Looking at where the proposed location is, down
9 in the northeast quarter of Section 18 in 10 South, 27
10 East, as Chuck Moran alluded to, 660 from the north, 1980
11 from the east, the seismic time-structure map shows that --
12 on the flank of a southeastward-trending nose.

13 We have found out in our drilling here in the
14 last four to five years that this Wolfcamp-Spear zone has
15 porosity developed on the flanks or on the sides of a
16 structure. It very rarely produces on the top or the crest
17 of a structure. I'm not saying it doesn't, but most of the
18 wells that have been very productive, it produces off the
19 flanks of the structure, and this Exhibit 5, which is the
20 seismic time map on top of the Spear zone illustrates this
21 idea. And that's why we are proposing the location at 660
22 north, 1980 from the east, in Section 18.

23 Q. Mr. Miller, let's go to the gross isopach map,
24 Yates Exhibit Number 6. Could you review the information
25 on this exhibit for the Examiner?

1 A. This is a gross isopach of the Wolfcamp-Spear
2 zone itself. The Wolfcamp-Spear zone is a limestone rock,
3 and as you can see by the unit outline and the various
4 wells in the area with the gross thickness of the Spear
5 zone in red, where we propose the well we are figuring that
6 we would have somewhere in excess of 35-plus gross feet of
7 the limestone while we are drilling through this primary
8 productive horizon.

9 Q. What porosity cutoff are you using to get that 35
10 feet?

11 A. That is just a gross --

12 Q. Okay.

13 A. -- just a gross count.

14 Q. Okay. Let's go, then, to Exhibit Number 7, and
15 that will give us the net feet --

16 A. Right.

17 Q. -- is that right?

18 A. Right. Yeah, in Exhibit Number 7, this is the --
19 Exhibit Number 7, I think you have -- you should have --
20 Exhibit Number 7 should be the net porosity isopach greater
21 than -- okay, or 4 percent equal to. That's the cutoff
22 we're using in most carbonates we drill. And as you see
23 where our proposed location is, Yates Petroleum is
24 contemplating we will get somewhere around 8 feet or better
25 of net porosity for the Wolfcamp-Spear zone.

1 Q. Okay. On this exhibit we have traces for cross-
2 sections A-A' and B-B'. Let's go to Yates Exhibit Number
3 8, the cross-section A-A', and I'd ask you to review that
4 for the Examiner.

5 A. And you might also want to -- just having a -- of
6 a reference, Exhibit Number 7, to see where the cross-
7 section is running. I have those cross-sections on both
8 the Wolfcamp gross isopach and net porosity map, so you can
9 use it -- have the gross isopach map or the net porosity
10 map out, just to see where the line of cross-section is
11 running through the different wells.

12 Basically, the A-A' in -- generally speaking, is
13 a west-to-east cross-section. We start out over in Section
14 11, is Elk Oil's SK State Number 1. The Wolfcamp-Spear
15 zone on this cross-section, and also on the B cross-
16 section, is highlighted in blue color. Where the
17 productive porosity zone is is colored in red, and these --
18 all these logs you are seeing are compensated neutron
19 density porosity logs.

20 As you can see in the Elk Oil, we have the gross
21 thickness of the limestone, but basically there is no
22 porosity development in this interval.

23 We move over to the East, the Elk Oil Z-28 Number
24 1. It is completed in the Wolfcamp-Spear zone, it has very
25 good porosity. That far density line goes all the way out

1 to 16-percent porosity. We have an average porosity in
2 here of around 8 or 9 percent.

3 As you can see down at the bottom, this well was
4 perforated and they production tested it at a million a
5 day, and right now it is waiting on pipeline, to be hooked
6 up to the pipeline. So that well has yet to be on
7 production.

8 Moving to the east is Yates Petroleum Sunny Side
9 State Number 2 in Section 10 of 10 South, 26 East. Again,
10 the Spear zone is highlighted in blue with the productive
11 porosity zone in red. Down at the bottom the perms are
12 noted, and as of May of 1999 when it was put on production,
13 through March of this year, it has made 744 million out of
14 the Spear zone.

15 And also as we mentioned, our secondary objective
16 in this well also has been productive out of the Siluro-
17 Devonian dolomite further downhole, and it has made 271
18 million cubic feet of gas from June of 1989 through May of
19 1999 when we set a plug up above the Siluro-Devonian to
20 recomplete up all of the Wolfcamp-Spear zone.

21 This well in the area set off our drilling for
22 this Wolfcamp-Spear zone. This basically was the initial
23 well that has started this program out here with all these
24 different wells.

25 The next well to the east is the Elk Oil

1 Company's Overeasy State Number 1. Again, you see it's --
2 Wolfcamp-Spear zone is highlighted in blue with the
3 productive porosity zone in red. Down at the bottom the
4 perfs are noted, and its cumulative production -- it is a
5 fairly new well, went on production last September, and
6 through February it has made 178 million cubic feet of gas.

7 To the east is where our proposed location is
8 going to be, the Stingray State Unit Number 1, has cross-
9 section running through it.

10 As you can see, this cross-section is -- I forgot
11 to mention that -- is a structural cross-section, so you
12 can see we are essentially moving downdip. Or if you look
13 basically at the seismic time-structure map, the Stingray
14 unit is down on the flank of that nose, the southern flank,
15 and the structural cross-section depicts it as you are
16 going downdip. Once again, we hope to have 35-plus feet of
17 gross limestone with, hopefully, 8 feet-plus of net
18 porosity.

19 The last one on the cross-section is Yates
20 Petroleum's Moalbo well, and basically that -- again, it
21 has the limestone gross thickness, but it did not have any
22 net-porosity productive zone.

23 And then again is -- looking at the time-
24 structure map, which is Exhibit 5, it shows it's sort of
25 close to the crest of the nose, and this kind of enhances

1 the idea that if you're on the top of the structure, or off
2 close to the top, that the porosity does not develop.

3 This is an aside. You may wonder what that
4 Moalbo well name -- I thought when our landman proposed it,
5 it would mean something in Africa. It has nothing to the
6 point. It's a stock-market term, it means mother of all
7 buying opportunities, which in this case it didn't work
8 because it's a dryhole. So the gamble didn't pay off.

9 Q. All right, Mr. Miller, let's go to cross-section
10 B-B'.

11 A. Once again, if you have one of the gross isopach
12 maps, you'll just have a point of reference to see how the
13 cross-section is running.

14 The B-B' cross-section is a north-to-south cross-
15 section. If you start on the left-hand side of the paper,
16 the first well on it is Yates Petroleum's Houston BDH State
17 Number 1 in Section 31 of 9 South, 27 East. Basically, we
18 had net porosity of 9 feet and, as you could see, it's
19 pretty good-looking porosity zone. Again on this cross-
20 section, as on cross-section A-A', the Spear zone is
21 highlighted in blue with the productive porosity zone
22 colored in red.

23 This well, which is fairly new, pretty new, went
24 on production February of this year, and this is basically
25 just a month's production, and it has made 48 million feet

1 of gas.

2 The next well on the cross section to the south
3 of the Yates well number 1 is Elk's Overeasy, which was on
4 the A-A' cross-section. Again, the depiction of the blue
5 carbonate limestone, the Spear zone, the red highlighted
6 for the neutron density productive porosity with the perfs
7 on it, and as mentioned before, it has made 178 million
8 cubic feet of gas from September of last year through
9 February of this year.

10 This again, this B-B' cross-section, is a
11 structural cross-section, and as we're going to the east
12 we're going downdip. We go through our proposed location,
13 the Stingray State Unit Number 1 in Section 18 of 10 South,
14 27 East, with a location of 660 north, 1980 east. Once
15 again, as I said on the A-A', we're hoping to encounter 35-
16 feet-plus of gross limestone thickness with hopefully 8
17 feet or more of 4-percent or better neutron density
18 porosity in it.

19 The next well to the south of the proposed
20 location would be the Loretta Number 2 that Yates Petroleum
21 drilled. Once again, as you can see, it's highlighted --
22 the interval is highlighted in blue, with the productive
23 porosity in red. Basically since August of last year
24 through February, it has made 44 million cubic feet of gas.
25 And this well, like we plan on the Stingray Exploratory

1 Unit well, was drilled down into the Siluro-Devonian.
2 We've tested it on this well, but basically the Siluro-
3 Devonian was tested at 27,000 a day and made three barrels
4 of water, of non-productive Siluro-Devonian dolomite.

5 The next well, the Loretta 1 to the south of the
6 2, has the Spear zone in it, as you could see. And down at
7 the bottom, this is one of the better wells out there,
8 production from February of 2003 through March of 2004, it
9 has made 594 million cubic feet of gas.

10 The last one on the cross-section, the furthest
11 one south, is the Yates Petroleum Corporation's Canner
12 Number 2. Again, the Spear zone is depicted in blue with
13 the neutron density porosity colored in red with the perms.
14 From January of 2003, when it first went on production,
15 through March of this year, it has produced 333 million
16 cubic feet of gas.

17 This well is another one of the wells that was
18 tested in some of the deeper formations, basically the
19 Siluro- -- which is called Siluro-Ordovician on here,
20 Siluro-Devonian, similar rock. It had fair to good gas, no
21 measurement, but it was making 15 barrels of water per
22 hour, and we tested some other zones up in the Strawn
23 interval and Cisco interval. They had a fair amount of gas
24 but not enough to be economic.

25 Q. Mr. Miller, let's now go to the Siluro-Devonian

1 dolomite. Would you identify Yates Petroleum Corporation
2 Exhibit Number 10, the seismic time-structure map, and
3 review the information on that map?

4 A. Okay, the -- Exhibit Number 10 is the seismic
5 time-structure map on top of the Siluro-Devonian dolomite,
6 which would be our secondary objective out here, as opposed
7 to the primary one, which is the Wolfcamp-Spear.

8 As you can see by the seismic time map, we are
9 looking that to be on the top of a structure for the
10 Siluro-Devonian dolomite, and most wells out here in the
11 area that produce out of the dolomite produce better
12 towards the crest of a structure.

13 Q. The initial well, the proposed location, where
14 does that location lie in respect to other producing
15 Siluro-Devonian fields in the area?

16 A. Our proposed Stingray unit lies within about
17 three miles southeast of the Foor Ranch field, which is to
18 the northwest of the location about three miles. That
19 field has produced -- we have some wells that have produced
20 over 10 BCF.

21 There is another field to the southeast, about
22 two and a half miles away, the Diablo-Siluro-Devonian
23 field. Some of the wells have produced over 2 BCF and have
24 made 150,000 barrels of oil.

25 Q. Is your Exhibit Number 11 a summary of your

1 geological conclusions?

2 A. Yes, it is.

3 Q. Could you explain to the Examiner why it is that
4 Yates is proposing to develop this area under the proposed
5 unit plan?

6 A. Yates Petroleum is proposing to develop it under
7 the unit plan because we feel we have two potentially
8 productive horizons, and the formation of the unit will
9 result in more reasonable development of these reserves,
10 and a pool can be effectively developed under the unit
11 plan.

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

16 A. Yes, it will.

17 Q. Were Exhibits 5 through 11 prepared by you?

18 A. Yes, they were.

19 MR. CARR: May it please the Examiner, we move
20 the admission of Yates Petroleum Corporation Exhibits 5
21 through 11.

22 EXAMINER JONES: Exhibits 5 through 11 will be
23 admitted.

24 MR. CARR: That concludes my direct examination
25 of Mr. Miller.

EXAMINATION

BY EXAMINER JONES:

Q. Mr. Miller, you answered my main question there at the end, but can you put it in your own words one more time, why you want to form a unit to -- It looks to me like you already know all about the Wolfcamp-Spear from the successful wells to the north, and I'm not sure you know -- the Siluro-Devonian seems to be more of a new concept, but maybe not. And so you're basically forming the unit for -- say again what reason?

A. Well, we're basically forming the unit because we basically have leases under the unit which have similar expiration dates. And they're not all the same lease, so you'd have to drill each one -- you know, one well here producing is not going to save the rest. Plus we feel that developing the unit for the Wolfcamp-Spear zone and possibly the Siluro dolomite would help save the acreage, and then we would go out and develop with the proceeding locations.

Q. Okay, Yates seems to be taking this unit concept to better develop a resource, but how long ago did you guys start doing this? Has it been ever since you worked for Yates or --

A. Well, basically. We started a drilling program up in Chaves County, not in this immediate area, for this

1 regime, going on in November of 1999. But that encompasses
2 30 miles north of Roswell, 24 miles east. This is closer
3 to Roswell, about 15 miles east of town. And of course it
4 also depends on rig availability and trying to get to them,
5 and if you're delayed on some wells that take longer than
6 others because of technical problems, then you start slowly
7 running out of time.

8 Q. I've got you.

9 A. It's not like we're delayed to do this, it's just
10 timing has caught up with us --

11 Q. Okay.

12 A. -- and we're trying to save what leases we can
13 with a unit well, and then hopefully if this is successful,
14 we'll go out and drill in the other sections in the unit.

15 Q. Okay, and the State Land Office obviously agrees
16 with this concept --

17 A. Yes.

18 Q. -- from the letter that I saw in one of your
19 exhibits from Mr. Moran.

20 You can actually see in seismic the top of the
21 Siluro-Devonian?

22 A. We think we think we can see the top of it. It's
23 -- in some areas, it's a very tricky pick on a seismic map,
24 from what we're seeing. These are 2-D lines out here,
25 they're not 3-D lines. We've had them reprocessed, which

1 has shed some more light on what we think we're seeing.

2 But really, to be honest, until we drill the well, where we
3 think we've picked the top of the Siluro-Devonian, that is
4 still in question until we only have the -- we log the well
5 after we TD it.

6 Q. The pipeline is available out here?

7 A. Yes, all these wells you see with the gas-well
8 symbols out here, the pipeline is right to the north of
9 this.

10 Q. Okay.

11 A. So it's fairly close, about two miles away from
12 the nearest pipeline.

13 Q. Okay, and that Spear porosity development, I
14 think I've asked you this before: Why does it develop on
15 the lower part of the gross interval? It looks like it's
16 developing --

17 A. I know that is -- we are still puzzled over that.
18 The only thing we think that might help that -- when this
19 was being deposited -- and this is, of course, a geological
20 concept -- that this was on the windward side of little
21 shoals, and you had the wave action and the wind,
22 grainstones deposited here. That went away, then another
23 regime where you had the rest of the limestone on top, was
24 tight as a tombstone.

25 And we think also that why it's at the bottom of

1 the interval, this was leached maybe with groundwater,
2 which opened up the porosity and permeability. And on some
3 of the wells it's more like a hot limestone, which is
4 radioactive, you do not have clean gamma-rays on some
5 wells, some you do.

6 We're still trying to figure it out, we haven't
7 really had a definite answer, but that's one of the ideas
8 that we're working with right now

9 Q. Okay, and your logs are run on a lime matrix?

10 A. Right.

11 Q. You guys always run logs on limes?

12 A. Yes, basically.

13 Q. And you've got something shaded in on this
14 Overeasy State Number 2. I guess that's your Atoka, your
15 Strawn or Morrow, Atoka?

16 A. On the Overeasy Number -- Overeasy State 1?

17 Q. State 1, I'm sorry.

18 A. Now, where are you looking at?

19 Q. Right below the Wolfcamp top.

20 A. Oh, that is -- right there -- Of course, when you
21 copy logs, pencils come off. That is -- up in the top of
22 the Wolfcamp, that is a dolomite zone that has porosity.
23 That could be a productive interval. If everything down
24 below this well peters out in production, then we would
25 move up and try that.

1 That is -- That's our way of showing when we're
2 presenting the log to management of a dolomite porosity,
3 and we just cross-hach it there with lines. In-house look.

4 Q. You seem very convincing. I'm sure you've got
5 your manager convinced.

6 A. I hope so.

7 EXAMINER JONES: Okay, I think -- Gail, do you
8 have any more?

9 MS. MacQUESTEN: No, I have no questions.

10 EXAMINER JONES: Okay, thanks a lot.

11 MR. CARR: And that concludes our presentation in
12 this case.

13 EXAMINER JONES: With that, we'll take Case
14 13,296 under advisement.

15 (Thereupon, these proceedings were concluded at
16 9:24 a.m.)

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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 July 10th, 2004.



STEVEN T. BRENNER
CCR No. 7

My commission expires: October 16th, 2006